

HOW SINGAPORE CAN HELP STOP HAZE

The palm oil factor



PMHAZE

Palm oil position paper

February 2018

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THE HAZE IS A VERY COMPLEX ISSUE THAT INVOLVES MANY STAKEHOLDERS.

IT IS NOT ONLY AN ENVIRONMENTAL BUT ALSO A SOCIAL, ECONOMIC AND POLITICAL CRISIS.

THE EXPONENTIAL GROWTH OF THE PALM OIL INDUSTRY IS ONE OF THE MAIN DRIVERS OF HAZE-CAUSING PRACTICES SUCH AS DEFORESTATION AND BURNING.

BOYCOTTING PALM OIL WILL NOT SOLVE THE PROBLEM. INSTEAD, WE SHOULD REDUCE THE OVERALL OIL CONSUMPTION AND SWITCH TO SUSTAINABLE PALM OIL.

Summary

Haze is caused by large-scale uncontrolled fires in Indonesia and Malaysia triggered by a complex mix of factors that developed in recent decades independently from the swidden agriculture which has been practised sustainably for thousands of years.

These factors are uncontrolled burning by migrants and companies to clear land, use of fire as a weapon in response to land conflict, deforestation and peat drainage leading to fire-prone landscapes, and finally poor governance and equipment leading to failure to stop fires early.

As the most widely grown crop and the crop with the fastest rate of expansion in Indonesia and Malaysia, oil palm plays a key role. The complex supply chain with large number of growers and middlemen as well as lack of transparency and traceability allows many oil palm growers to avoid scrutiny. Many mid-level oil palm growers continue with their destructive practices and avoid repercussions by selling to less discerning markets.

Singapore is a small consumer market, although per capita consumption of palm oil is higher than the global average. Singapore is home to numerous palm oil companies, including the three largest in the world. Singapore's financial institutions are among the biggest lenders and investors in the palm oil industry.

There is little evidence to support a switch from palm oil to other types of vegetable oils for either environmental or health reasons. Our recommendation is to reduce consumption while improving the sustainability of the production. Reduction in consumption can only be effective in reducing land pressure if carried out across all types of vegetable oil.

Among the regulated standards, the Roundtable on Sustainable Palm Oil (RSPO) certification scheme remains the most effective for stopping haze, especially with the promise of jurisdictional certification. The Malaysian Sustainable Palm Oil (MSPO) and Indonesian Sustainable Palm Oil (ISPO) certification schemes hold much potential because of their landscape-wide coverage and support from their respective national governments. However, the MSPO and ISPO schemes need a lot more improvement to be credible standards. Finally, the Singapore Green Label Scheme (SGLS) can be useful as a green label on top of RSPO certification for easier recognition by Singaporean consumers.

Adoption of No Deforestation, No Peat and No Exploitation (NDPE) principles has spread much faster than any regulated standards because of its “commit first then implement” model, inclusion of suppliers and also support by large companies and non-governmental organisations (NGOs). It thus helps to propagate more widely these key principles which fit closely to the haze-free principles. However, NDPE remains reliant on NGOs for monitoring and verification and lacks a landscape approach.

While standards spell out the best practices that growers should follow, demand by the market and financiers is essential for incentivising growers to follow these standards.

Because the NDPE criteria is not standardised, it is difficult for governments and consumers to base their procurement and buying decisions on them. RSPO certification currently provides the easiest route for smaller buyers such as eateries, manufacturers and retailers in Singapore to eliminate such destructive companies from their supply chain.

Many businesses in Singapore lack awareness of sustainable palm oil, and those that do lack incentive to switch due to low awareness among consumers and perceived lack of government support.

Trade restrictions such as EU’s impending ban on unsustainable palm oil is a powerful incentive for reform.

Financial institutions can promote palm oil producers’ sustainable practices by adopting both negative and positive screening in their lending and investment decisions.

In the context of palm oil, negative screening would involve excluding companies that conduct burning, deforestation, peat drainage and other haze-causing activities, while positive screening would involve identifying companies which go beyond the norm and have verifiable achievements.

Financial institutions have the scale to implement the NDPE policy and should already be doing risk screening for companies they loan or invest in. RSPO certification can be used to supplement as a way to improve verification and tap on their grievance procedure.

Transparency from financial institutions is needed to allow stakeholders to assess whether screening policies are being implemented while transparency from palm oil producers is needed to allow investors to assess whether practices are sustainable.

RSPO IS AN INTERNATIONAL CERTIFICATION SCHEME THAT ALLOWS CONSUMERS TO DEMAND SUSTAINABLE PALM OIL.

AGRIBUSINESSES AND MANUFACTURERS ARE INCREASINGLY ADOPTING SUSTAINABILITY POLICIES BUT CREDIBILITY OF THESE POLICIES IS LACKING WHEN THEY ARE NOT CERTIFIED.

SINGAPORE IS SUPPORTING THE PALM OIL INDUSTRY VIA TRADE AND FINANCE. HOWEVER, AWARENESS OF THE CONSEQUENCES IS VERY LOW.

Chapter 1: Context of haze, palm oil and Singapore

Chapter 1 gives an overview of the problem. It reviews the causes of the haze, the role of palm oil in the haze issue, and the role of Singapore in the palm oil industry.

Key findings

- Haze is caused by large-scale uncontrolled fires in Indonesia and Malaysia triggered by a complex mix of factors that developed in recent decades independently from the swidden agriculture which has been practised sustainably for thousands of years.
- These factors are uncontrolled burning by migrants and companies to clear land, use of fire as a weapon, deforestation and peat drainage leading to fire-prone landscapes, and finally poor governance and equipment leading to failure to stop fires early.
- As the most widely grown crop and the crop with the fastest rate of expansion in Indonesia and Malaysia, oil palm plays a key role.
- The complex supply chain with a large number of growers and middlemen as well as lack of transparency and traceability allows many oil palm growers to avoid scrutiny.
- Many mid-level oil palm growers continue with their destructive practices and avoid repercussions by selling to less discerning markets.
- Singapore is a small consumer market, although per capita consumption of palm oil is higher than the global average.
- Singapore is home to numerous palm oil companies, including the three largest in the world.
- Singapore's financial institutions are among the biggest lenders and investors in the palm oil industry.

Origin of transboundary haze

Background to the haze

The Southeast Asian haze is a decades-old occurrence, and has been recorded in Singapore since 1972¹. The haze is caused by large-scale fires in Indonesia and Malaysia, where millions of hectares may be burnt in a year. The recent crisis between June and October 2015 resulted in a burnt area of 2.6 million hectares².

The haze is a toxic mix of harmful gases such as carbon monoxide, ammonia, cyanide and formaldehyde³, as well as microscopic particles coated with carcinogens such as polycyclic aromatic hydrocarbons (PAHs)⁴.

Health effects of the haze are caused when there is an irritant effect of fine dust particles on the nose, throat, airways, skin and eyes. Individuals with medical conditions like asthma, chronic lung disease and skin conditions can experience severe symptoms.

The haze not only has severe impacts on human health but also has an impact on the environment, society, and economy. The 2015 haze cost Singapore an estimated \$700 million Singapore dollars⁵.

Causes of the haze

Although fires have historically occurred in the rainforests of Indonesia during periods of extreme drought⁶, in recent decades, the fires and haze have increased in frequency and severity⁷.

Mainstream media has tended to focus on use of fire to clear land or “slash-and-burn” as the cause of haze⁸. Yet, swidden agriculture has been used traditionally by indigenous farmers on a small scale for hundreds of years. They used fire to prepare rotating swidden fields of about 1.5 hectares each in a system also known as shifting cultivation⁹.

What were the key changes that occurred in recent decades that led to large-scale fires and haze?

It is the combination of larger-scale and more frequent use of fire to clear land, claim tenure or as a weapon; emergence of fire-prone landscapes due to deforestation and peat drainage; and the inability or unwillingness to stop fires early due to poor fire-fighting capacity and lack of governance.

Large-scale use of fire to clear land, claim tenure or as a weapon

From the 1980s, road construction by logging companies and transmigration projects opened up land, making access easy for migrants. Migrant farmers used slash and burn techniques followed by tree planting to secure tenure over land¹⁰. With the development of industrial-scale plantations, fires have sometimes been used in an uncontrolled manner to clear vegetation on a large scale. Farmers use fire for the clearing of new land because it is much cheaper than the mechanical alternative where it can cost up to US\$200 for equipment and chemicals to clear one hectare of land, compared to US\$5 using fire¹¹. Starting a fire can also clear the plant materials, which kills pests, fertilises the soil and neutralises acidity at a much lower cost.

Besides companies, some also blame use of fire on poor small-scale farmers expanding their farmland, and rogue operators involved in illegal clearance to acquire more land¹². Fires started can easily go out of control, especially when used by medium-sized companies which usually lack fire management resources or rogue operators that may not stay to monitor the fires for fear of getting caught.

Land rights of communities in Indonesia are unclear and often generally unrecognised by the government. These communities do not have the ability to enforce laws and there are often competing claims over a plot of land. The arrival of new, external actors such as transmigrants and plantation operators onto land occupied by local communities increases the likelihood that fire will be used as a weapon¹³.

Fire-prone landscapes due to deforestation and peat drainage

Peat is a type of soil that is composed mainly of partially decayed plant matter formed over thousands of years in waterlogged areas known as peat swamps. The peatland ecosystem is the most efficient carbon sink on the planet, but it has taken thousands of years for peatlands to develop these deposits. About 14% of Indonesia and 8% of Malaysia are covered by peat¹⁴. Like a sponge, peat domes store water during the wet season, reducing the risk of flood, and release water slowly during the dry season, reducing the risk of drought and fires.

In order to plant conventional crops or for logging, peat swamps are drained, creating fire-prone landscapes which fuel the spread of fires. From 1990 to 2015, half of the peat swamps forest in Peninsular Malaysia, Sumatra and Borneo were cleared¹⁵.

Peatlands are carbon-rich and, while waterlogged, are not prone to fire. But dried, carbon-rich peat soil can catch fire easily. During the dry season, a single discarded cigarette can cause a fire in drained peatland⁹.

Peat fires can smoulder underground for days, or even months¹⁶. Putting out peat fire requires huge volumes of water to soak through the soil to extinguish the fire below.

In addition, continued deforestation results in fewer trees, causing a drier local climate, which in turn reduces the soil moisture level, making the area more fire prone¹⁷.

Failure to stop fire due to poor fire-fighting capacity and poor governance

Despite possessing greater financial capacity, even multinational agribusinesses have had trouble protecting their crops from fire¹⁸, let alone farmers and smallholders who often lack necessary firefighting capacity. Limitations in firefighting capacity on the ground include insufficient manpower and training, insufficient or poor equipment and lack of access to water. Early detection and suppression of fires may also be hampered by poor monitoring, for example, due to access to data such as satellite hotspots; inaccuracy of satellite hotspot data; and lack of equipment such as drones, cameras and fire lookout towers.

Land tenure in Indonesia is frequently unclear and disputed. This can lead to situations in which culpability and responsibility are difficult to establish and in which individuals or companies are rarely held accountable for fires¹⁹. Illegal land clearing, land grabbing and land transactions with illegal companies are still rampant. For example, at the village level, elites may sell land to illegal companies on a conservation area gazetted by central government or a district government might extend concessions to companies²⁰. Land concessions might also overlap, resulting in conflicts and disputes.

Why palm oil is key to stopping the haze

Palm oil is highly versatile, and is used in cooking oil and as shortening in food, for the manufacture of greases, lubricants, candles, and as feedstock for the production of biodiesel. Palm oil derivatives are used in cosmetics, pharmaceuticals, bactericides, and water-treatment products.

Global demand for palm oil has resulted in an explosion in palm oil production. Since the 1980s, palm oil production has increased tenfold, and is now the most widely used vegetable oil in the world. The first commercial palm oil plantation was established in Selangor Malaysia in 1917 and today Malaysia and Indonesia together produce about 85% of global palm oil²¹.

Much of this expansion has come at the expense of tropical rainforests and peat swamp forests. Between 2001 and 2010, half the deforestation in Indonesia and a third of deforestation in Malaysia could be attributed to expansion of oil palm plantations²².

Palm oil companies also make up a significant proportion of companies tried in court for causing fires. For example, in 2014, palm oil company PT Kallista Alam was found guilty of illegally clearing and burning forest in the Tripa peatland of Sumatra, Indonesia²³.

The palm oil industry has a complex supply chain (see Figure 1) involving multiple changes of corporate ownership as the palm oil passes from growers to mills then on to traders, processors, manufacturers and finally to the food we dine on or products that we buy.



Figure 1. Schematic of palm oil supply chain.

Within this complex supply chain, numerous mid-level palm oil operations remain obscure even as they commit blatant abuses such as clearing protected forests. Illegal oil palm plantations in Tesso Nilo National Park have been linked with widespread deforestation and fires in the national park²⁴.

Due to the difficulties in traceability, mills may not be aware exactly where their oil palm fruits originate. In this way, several large palm oil producers that made No Deforestation pledges have been found to be accepting palm oil fruits grown illegally in Tesso Nilo National Park²⁵.

Even with greater demand for sustainable palm oil from consumers, non-governmental organisations (NGOs) and companies in some countries, some producers choose to continue with their destructive practices by selling to less discerning markets. Sawit Sumbermas Sarana, which has been accused of clearing peatlands and forests, lost two buyers with strong No Deforestation, No Peat and No Exploitation (NDPE) policies²⁶. But it then found buyers less concerned with sustainability and now sells mostly to companies producing cooking oil for Indonesia’s market.

Singapore's hand in the palm oil industry

Consumption

When compared with global production of palm oil, the total amount of palm oil consumed in Singapore may seem insignificant. In 2013, Singapore's net imports of palm oil and palm kernel oil amounted to 0.4 million tonnes, out of global production of 60.7 million tonnes.

However, Singapore's per capita consumption of 0.082 tonnes/ person is about 10 times higher than the global average of 0.0085 tonnes/ person²⁷. This is because one of the largest biodiesel plants in the world is located in Singapore, and uses palm oil, palm waste and waste animal fat as feedstock²⁸.

Palm oil is also widely used as cooking oil by eateries in Singapore. According to a PM Haze survey, 46 out of 75 eateries surveyed used pure palm oil, or a blend containing palm oil for cooking.

Many of these eateries have a strong regional presence as well. Old Chang Kee, for example, has outlets in Australia, Indonesia and Malaysia, while Breadtalk Group has operations in 17 countries including China and Indonesia. This provides an opportunity for corporate practices initiated in Singapore to influence larger markets in the region that till date have not shown strong consumer demand for sustainable palm oil.

Headquarters of palm oil companies

As a regional commerce and finance hub, some of the largest palm oil growers and traders in the world are headquartered in Singapore (see Table 1). These companies can hold enormous leverage over suppliers who do not comply with best practices.

Name	Presence in SG	Listed on SGX?
Wilmar International	HQ	Yes
Olam International Ltd	HQ	Yes
Golden Agri Resources Ltd	HQ	Yes
First Resources Ltd	HQ	Yes
Bumitama Agri Ltd	HQ	Yes
Indofood Agri Resources	HQ	Yes
Kencana Agri Ltd	HQ	Yes
Mewah International Inc	HQ	Yes
Global Palm Resources Holdings Ltd	NA	Yes
Musim Mas Group PT	HQ	N.A.
Cargill Inc	Asia-Pacific hub	N.A.

Table 1. Palm oil growers, traders and processors with presence in Singapore^a

Finance

Financial institutions provide funding to the palm oil industry either as creditors (i.e. providing loans) or investors.

Singapore-listed banks DBS, OCBC and UOB are major financiers of the palm oil industry in the region. Therefore they have a key role in influencing practices on the ground such as clearing of land by fire and cultivation on peat.

Although the three banks do not publish details of their loans to palm oil and forest risk sectors, reports published by NGOs and research houses indicate clearly the level of lending of the three banks to those sectors.

A study on loans provided to 16 major palm oil companies found that OCBC, DBS and UOB were among the 15 top providers of loans to these companies²⁹.

Another study of 180 forest risk companies in palm oil, pulp & paper, timber and rubber industries revealed that OCBC and DBS were among their top 10 financiers from 2010 to 2016³⁰.

^a List may not be exhaustive. Data derived from SGX Listed Companies – Consumer Staples Sector and company websites.

Chapter 2: Reduce or boycott?

In this chapter, we explore the impact of reducing palm oil demand in food by either a) switching to other vegetable oils or b) reducing consumption of vegetable oils in general.

Key findings

- There is little evidence to support a switch from palm oil to other types of vegetable oils for either environmental or health reasons.
- Reduction in consumption can only be effective in reducing land pressure if carried out across all types of vegetable oil.

Key recommendations

- Messaging that encourages usage of other vegetable oils in place of palm oil should be avoided.
- Government, consumers, businesses and other organisations should reduce consumption of fried food.

Assessment of palm oil alternatives

As show in Figure 2, palm oil is the most productive vegetable oil crop, producing more oil per hectare than all other oil crops.

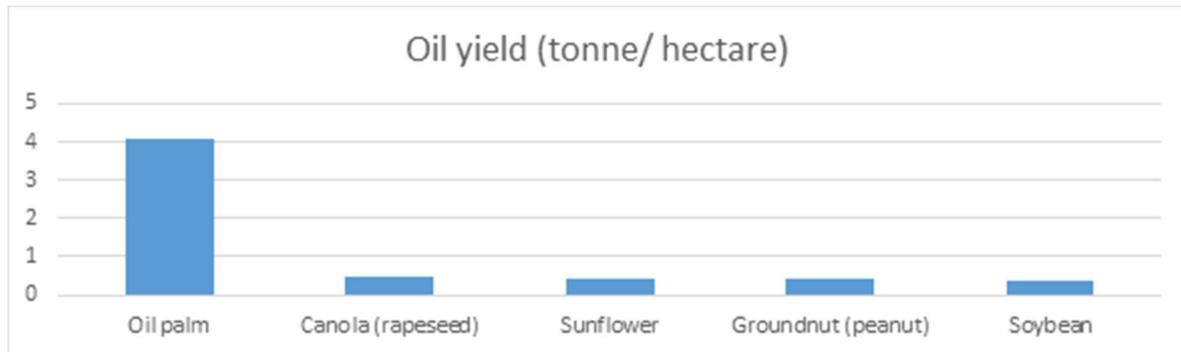


Figure 2. Oil yields of the major vegetable crops³¹.

A life cycle analysis of various oils found that palm oil has “medium” impact on greenhouse gas emissions, while rapeseed and sunflower oil have “low impact”³². However, the study also showed that peat soil decay and methane emissions from palm oil mill effluent are major contributors to palm oil’s greenhouse gas emissions – both of which can be avoided by adopting sustainable practices.

Also, a boycott of palm oil would simply drive palm oil producers to sell to less discerning markets, thus not providing any incentive for existing growers to improve their practices.

Dietary guidelines in many countries discourage the consumption of food with high saturated fat, such as palm oil. Singapore’s Health Promotion Board, for example, provides the healthier choice symbol to vegetable oils with lower saturated fat content³³. However, while saturated fat intake has been linked with higher levels of low-density lipoprotein (LDL) cholesterol³⁴, which is in turn linked to higher risk of heart disease and mortality, a recent study across 18 countries has shown that higher saturated fat intake is associated with lower cardiovascular disease and mortality³⁵. The conflicting results may be due to the overall diet intake as many studies that linked higher saturated fat intake with poor health were done in Western countries³⁵. Overall, there is lack of clear evidence to support a shift from palm oil to other types of vegetable oil.

Assessment of consumption reduction as a solution

The haze issue is mainly due to expansion of plantations, which in turn is mainly due to continuously growing demand for palm oil.

To reduce pressure to expand palm oil planted areas, there can be either increase in yield or reduction in demand.

However, as mentioned above, switching to other oil crops would lead to more land area needed to produce the same amount of oil. One solution should then be to reduce the overall consumption of all vegetable oils, not limited to palm oil.

A study showed that under a scenario in which both developed and developing countries converged to a “healthy” level of vegetable oil consumption, the demand for land would be reduced by 70%³⁶. Since food that is fried uses the most oil, possible ways to reduce consumption include reducing consumption of fried food.

Chapter 3: Analysis of haze-free standards

In this chapter we explore the best practices for palm oil growers to prevent haze i.e. those practices required for producing haze-free palm oil. We then assess various sustainability standards used for palm oil on their effectiveness in preventing haze.

Key findings

- Among the regulated standards, RSPO remains the most effective for stopping haze, especially with the promise of jurisdictional certification.
- MSPO and ISPO hold much potential because of their landscape-wide coverage and support from their respective national governments. However, MSPO and ISPO need a lot more improvement to be credible standards.
- SGLS can be useful as a green label on top of RSPO certification for easier recognition by Singaporean consumers.
- Adoption of NDPE has spread much faster than any regulated standards because of its “commit first then implement” model, inclusion of suppliers and also support by large companies and NGOs. It thus helps to propagate more widely these key principles which fit closely to the haze-free principles.
- However, NDPE remains reliant on NGOs for monitoring and verification and lacks a landscape approach.
- While standards spell out the best practices that growers should follow, demand by the market and financiers is essential for incentivising growers to follow these standards.
- Because the NDPE criteria are not standardised, it is difficult for governments and consumers to base their procurement and buying decisions on them. RSPO certification currently provides the easiest route for smaller buyers such as eateries, manufacturers and retailers in Singapore to eliminate such destructive companies from their supply chain.

Recommendations

- Academics and NGOs to regularly review and provide recommendations on palm oil standards as they evolve
- Palm oil growers, traders and processors
 - Adopt and implement a robust NDPE policy
 - Have a time-bound commitment for 100% RSPO certification for own plantations
 - Report annually on their progress on NDPE and RSPO certification in their sustainability/annual report.

Is haze-free palm oil possible?

Growers can produce “haze-free” palm oil by addressing the causes for fires to start, spread and stop:

- Prevent start of fire – Zero-burning and zero land conflict
- Prevent spread of fire – Avoid creating fire-prone landscapes
- Detect and stop fires early

To prevent the starting of fires, machines or tools should be used to clear land (mechanical clearing). When fire is not used to clear land, the method is called “zero-burning”. Companies should ensure their own plantations and those of their suppliers use zero-burning methods while assisting local communities living in and around their concessions to use zero-burning methods. To prevent fraud, land burnt by fire should be restored to its original state instead of converting it to commercial use. To reduce the risk of fire being used as a weapon in land conflicts, companies opening new plantations should respect land rights of local communities. Free, Prior and Informed Consent (FPIC) should be obtained and respected.

To avoid creating fire-prone landscapes, growers should avoid clearing forests and draining peatland, and instead develop new plantations only on non-forest land on mineral soil. For existing plantations on peatland, water levels should be maintained as high as possible. Small dams, or “canal blocks”, can be built over canals in order to retain water in peat. To avoid risk of fire, groundwater level should be no lower than 50 cm below the ground surface³⁷. Effective water management also requires a landscape approach across the entire peat hydrology unit where the water level should be kept much higher within the peat dome compared with surrounding areas.

During the dry season, the water level in peatland will continue to fall despite the presence of canal blocks due to evapo-transpiration. To eliminate the risk of fire, the peatland should ideally be restored to its wet condition. Crops suitable for growing in wet conditions may be planted instead. Companies should also conserve forests and peat swamps in and around their concession to serve as buffers and barriers to the spread of fire.

To detect and stop fires early, companies should have sufficient equipment and manpower for detecting and fighting fires within and around their concessions. Companies should also equip local communities in and around their concessions to detect and fight fires.

From the perspective of oil palm growers, adopting haze-free practices usually requires an initial investment, for example to buy machinery to clear land without fire and to identify and set aside forests and peatland³⁸. Some growers, especially smallholders, may lack the required knowledge, tools or capital to adopt such practices. Encouraging growers to go haze-free requires economic incentives for haze-free practices and disincentives for haze-causing practices. These haze-free and haze-causing practices must have clearly defined standards. Supporting systems have to be in place to communicate these standards to the growers and help them build capacity to meet these standards. Compliance then has to be verified, which also requires transparency and traceability.

Once compliance is verified, access to market and to finance can be used as incentives.

Comparison of regulated standards

In this section, we compare regulated sustainability standards for palm oil on their effectiveness in preventing haze. These standards have a regulatory body that ensures all companies comply with a set of criteria.

- **Certification standards** covered are Roundtable on Sustainable Palm Oil (RSPO) (including RSPO Next) and Rainforest Alliance (RA). They have a global reach and include end product labelling to allow consumers to verify their product.
 - **Roundtable on Sustainable Palm Oil (RSPO)** is a non-profit organisation established in 2004 that encompasses stakeholders from 7 sectors of the palm oil industry: the oil palm producers, processors or traders, consumer goods manufacturers, retailers, banks/investors, and environmental and social NGOs, to develop and implement global standards for sustainable palm oil.
 - **RSPO Next** is a voluntary add-on to the standard RSPO criteria for palm oil producers.
 - **Rainforest Alliance (RA)** is a non-profit organisation that certifies more than 100 different varieties of crops, including oil palm, based on the Sustainable Agriculture Network (SAN) standard.
- **Mandatory national standards** covered are **Indonesian Sustainable Palm Oil (ISPO)**, launched in 2011 and **Malaysian Sustainable Palm Oil (MSPO)**, launched in 2015. These standards are applicable to all oil palm plantations in their respective countries.
- **Voluntary initiative** covered is **Palm Oil Innovation Group (POIG)** which is a multi-stakeholder platform that aims to improve the RSPO standards by developing and demonstrating criteria that goes beyond the standard RSPO criteria.
- **Labelling scheme** covered is **Singapore Green Label Scheme (SGLS)** which was launched in 1992 and administered by the Singapore Environment Council. Labelling schemes have multiple criteria covering life cycle considerations and require submission of documents proving third-party verification. The SGLS certifies a wide range of products including palm oil and paper products.

We rated the standards based on four aspects:

1. **Criteria:** How well the standards' criteria fit the practices for haze-free palm oil production in terms of avoidance and early suppression of fire, protection for forest and peat and minimising land conflict.
2. **Impact:** The impact of the standard in terms of how widely the standard is currently adopted and will potentially be adopted among oil palm growers, including mid-level growers and smallholders. Traceability, while important, was not assessed due to insufficient information on traceability systems for some of the standards.
3. **Trustworthiness:** How much consumers can trust that growers really conform to the standard, i.e. whether there are provisions for third-party verification and public scrutiny.
4. **Improvement:** How much the processes and criteria can be expected to improve based on future commitments and actual improvements implemented in the past.

The results of the assessment are shown in Table 2. The methodology for this assessment is presented in Appendix A.

	RSPO		RSPO NEXT		ISPO		MSPO		POIG		Rainforest Alliance		SGLS	
Criteria (Overall)	3.3	/6	5.4	/6	2.1	/6	2.3	/6	3.9	/6	3.4	/6	3.3	/6
Fires	0.8	/2	1.8	/2	1.0	/2	0.8	/2	0.3	/2	0.8	/2	0.8	/2
Peat	1.0	/2	1.7	/2	0.3	/2	0.3	/2	1.7	/2	0.7	/2	1.0	/2
Forests	0.5	/1	1.0	/1	0.3	/1	0.3	/1	1.0	/1	1.0	/1	0.5	/1
Land conflict	1.0	/1	1.0	/1	0.5	/1	1.0	/1	1.0	/1	1.0	/1	1.0	/1
Impact	3.0	/5	1.0	/5	3.0	/5	2.0	/5	1.5	/5	1.0	/5	1.0	/5
Trustworthiness	4.0	/5	4.5	/5	2.0	/5	1.0	/5	1.5	/5	3.5	/5	0.0	/5
Improvement	4.0	/4	3.0	/4	2.0	/4	2.0	/4	1.0	/4	4.0	/4	1.0	/4
Total	14.3	/20	13.9	/20	9.1	/20	7.3	/20	7.9	/20	11.9	/20	5.3	/20

Table 2. Comparison of regulated palm oil sustainability standards

Overall assessment

Among the regulated standards, RSPO is the best overall. MSPO and ISPO hold much potential to effect change as national mandatory standards. However MSPO and ISPO need a lot more improvement to be credible standards. SGLS lacks many key elements of a robust certification system, but it is useful as an additional label on top of RSPO certification.

Criteria

RSPO Next has by far the strongest criteria, with POIG, Rainforest Alliance, RSPO/SGLS having average criteria and ISPO and MSPO having weak criteria. We assume that SGLS criteria for sourcing is RSPO certification and so have assigned the same scores to both schemes.

Most standards ban or restrict the use of fire for clearing land, although only RSPO Next requests growers to extend their fire prevention, monitoring and control efforts beyond their plantations and ensure collaboration with local communities and authorities. POIG only prohibits use of fire on peat.

RSPO Next and POIG have strong standards for peat, with a ban on new development on peat on any depth. RSPO/SGLS allows limited development on peat of 100 hectares or 20% of the planted area, whichever is higher. ISPO allows development of peat up to 3m deep, while MSPO has no restrictions on new development on peat. Rainforest Alliance does not mention peat explicitly. Peat swamp forests will be protected under the protection of natural ecosystems, but there are no provisions covering non-forested peatland and existing plantations on peat. All other standards mandate that water levels should be managed in existing plantations on peat.

RSPO Next, POIG and Rainforest Alliance have strong protection for forests, with secondary forests protected as well. RSPO/SGLS protects primary forests and high conservation value (HCV) forests, which leaves out secondary forests which are not HCV. ISPO relies on forest zoning and the Moratorium on New Forest Concessions, which has been known to shift boundaries in order to accommodate plantations³⁹. For MSPO, protection is based on vaguely defined “high biodiversity value and environmentally sensitive areas”.

All criteria except ISPO have strong protections for local communities to minimise land conflict, including use of FPIC. ISPO states that local communities’ land rights have to be respected, although there is no explicit mention of FPIC.

Impact

RSPO is the standard with the highest current and potential impact. It is the most widely adopted and recognised certification standard globally. As of August 2017, 19% of global crude palm oil is certified by RSPO⁴⁰. RSPO is also exploring a jurisdictional approach in South Sumatra, Central Kalimantan, Sabah and Ecuador⁴¹. RSPO criteria regarding new development also applies to all new plantations for RSPO members, regardless of whether there is intention for these plantations to be certified.

For RSPO however, smallholder inclusion is a challenge, with just 12% of RSPO certified area being smallholders although smallholders produce 40% of world’s palm oil^{40,42}. Challenges faced by smallholders include lack of knowledge of what the RSPO’s Principles and Criteria are and how to comply with them⁴³. Fortunately, this is an issue that RSPO is actively trying to address. For example, the RSPO Smallholder Support fund provides up to 100% of certification cost and member companies provide technical support and monitoring for the smallholders.

As mandatory national standards, ISPO and MSPO have a high potential impact, although current certification rates are still low. ISPO is mandatory for all plantation companies and voluntary for smallholders, but only 12% of planted area has been certified as of April 2017⁴⁴. MSPO is mandatory for all oil palm plantations, including smallholders, but only 4% of planted area has been certified as of January 2017⁴⁵.

RSPO Next, POIG and Rainforest Alliance have only a small number of plantations or companies certified, and none in Southeast Asia. As of September 2017, there are no products that have obtained the SGLS palm oil label⁴⁶.

RSPO is the most commonly available sustainability certification for palm oil in Singapore. There are at least 3 suppliers which can provide RSPO-certified cooking oil to eateries and 6 brands of retail-size RSPO-certified cooking oil (see Table 3).

Company	Can supply in 15-20kg tins for eateries	RSPO-certified retail brand(s) (if any)
Ngo Chew Hong Edible Oil Pte Ltd (Parent Company: Mewah Group)	Yes	Cabbage
Sime Darby Plantation Sdn Bhd	Yes	Hand, Chief, King Rooster
Hap Seng Edible Oils Pte Ltd	Yes	-
Lam Soon Edible Oils Sdn Bhd	No	Golden
Goh Joo Hin Pte Ltd	No	New Moon

Table 3. Sustainable palm oil supply in Singapore, September 2017^a

Rainforest Alliance and SGLS may however benefit from higher consumer awareness of their respective labels due to the wide range of products bearing their labels. SGLS labels over 3000 products, which would make it easier for consumers in Singapore to recognise eco-friendly products rather than learn to recognise different labels for different types of products.

In terms of actual impact, there is unfortunately a lack of academic studies measuring the impact of these standards on fire incidence.

RSPO’s willingness to suspend errant companies has been effective in compelling these companies to improve their practices. The suspension of Industrial Oxygen Incorporated (IOI)’s RSPO certification in March 2016 triggered an 18% drop in IOI’s share price and led to suspension of procurement contracts from 27 buyers. IOI thus announced it was focusing on addressing its sustainability issues⁴⁷.

^a List may not be exhaustive. Data derived from personal communications with suppliers.

Trustworthiness

The level of trustworthiness varies widely. RSPO/ RSPO Next and POIG are multi-stakeholder groupings, with a strong presence of environmental and social NGOs that provide a check and balance. SAN includes non-profit conservation organisations among its members. ISPO, MSPO and SGLS lack independent, third party oversight.

Transparency is very high for RSPO and RSPO Next, with the following publicly available on website: standard, list of companies certified, audit forms, grievance system, concession maps (with exception of Malaysia but including Sabah), board members. Most standards at least have their criteria publicly available except for MSPO which only provides broad principles and SGLS which does not have any principles or criteria publicly available.

RSPO / RSPO Next have a transparent grievance system in place that has led to suspensions of errant companies and auditors⁴⁷. For Rainforest Alliance, ISPO and MSPO, grievance systems exist but these lack transparency of grievances made. POIG and SGLS do not have grievance systems. POIG lacks accreditation, while SGLS relies on peer review.

Challenges remain regarding audit systems which may not be able to detect all cases of non-compliance and are subject to conflict of interest because audit companies are hired by the growers⁴⁸. RSPO has tried to address this issue by appointing an accreditation body to check on the auditors.

SGLS does not take into consideration uncertified products by same company. This potentially allows for a two-tiered system whereby the same company produces certified products for more discerning markets while causing environmental and social damage in uncertified areas.

Improvement

RSPO and Rainforest Alliance both commit and have implemented a review and update of their criteria every 5 years. MSPO also committed to a review every 5 years, but there is no sign of review process being implemented even though criteria is up for renewal on 2018. None of the other standards commit to a time frame for review and update of criteria although ISPO did revise its regulations once in 2015 and POIG updated its indicators once in 2016.

RSPO and Rainforest Alliance both have systems for review and improvement of procedures and processes. RSPO has numerous working groups focusing on different issues, many of them arising from resolutions adopted at Annual General Meetings. The Complaints and Appeals procedures for example was updated in 2017.

Rainforest Alliance has a learning and support programme to help members and improve certification systems and processes. There is also a SAN Quality System, which tries to improve consistency and transparency in all processes making up the SAN/Rainforest Alliance certification system. The standard contains a continuous improvement system that requires farms to gradually increase their compliance over a six-year period.

No Deforestation, No Peat and No Exploitation (NDPE)

No Deforestation, No Peat and No Exploitation started as a set of principles born out of NGOs’ demands for an absolute end to these three damaging practices. In 2009, Nestle was the first company to make an NDPE pledge⁴⁹.

Unlike the standards assessed above, NDPE does not have a regulatory body and there is no single standard set of criteria and indicators. However, the broad principles are similar and there is increasing consensus on the best practices and specific criteria to meet those principles (see Appendix B for our template of a basic NDPE policy relevant to haze and its processes).

We assessed the basic NDPE policy with the same methodology applied for regulated standards and the results are shown in Table 4 in comparison with RSPO. Note that for NDPE, the actual criteria, processes and implementation differs from company to company, so the score would differ correspondingly.

Criteria (Overall)	RSPO		NDPE	
	Score	Max	Score	Max
Criteria (Overall)	3.3	/6	4.2	/6
Fires	0.8	/2	0.5	/2
Peat	1.0	/2	1.7	/2
Forests	0.5	/1	1.0	/1
Land conflict	1.0	/1	1.0	/1
Impact	3.0	/5	2.5	/5
Trustworthiness	4.0	/5	1.5	/5
Improvement	4.0	/4	4.0	/4
Total	14.3	/20	12.2	/20

Table 4. Comparison of RSPO and NDPE standards

Criteria

While there is no one standard set of criteria and indicators, companies committing to NDPE and NGOs pushing for NDPE generally have consensus on a few essentials⁵⁰:

- No clearance of High Conservation Value (HCV) and High Carbon Stock (HCS) forests (using the High Carbon Stock Approach).
- No new development on peat of any extent^a.
- Recognizing the right of local communities to give or withhold their FPIC to any new developments.
- Complying with the fundamental conventions of the International Labour Organisation (ILO) and upholding the wider United Nations Guiding Principles on Business and Human Rights.

Many companies also have additional criteria similar to the ones below which are relevant to haze:

- No burning for land clearance.
- Best management practices on existing plantations on peat.
- Existing plantings on peat assessed by experts to be unsuitable for replanting will be rehabilitated to original vegetation and conserved.

The exact criteria used and its specificity therefore influences how relevant the NDPE policy would be to preventing haze. Combining the two sets above we thus derive a basic NDPE policy template that would be relevant to haze (see Appendix B).

In comparison with RSPO, NDPE has stronger protection for forests and peatland, by banning clearance of all secondary forests, and also all new developments on peat.

^a Definitions of peat differ. For example, RSPO defines tropical peat as “organic soils with 65% or more organic matter and a depth of 50 cm or more” in the RSPO manual on best management practices (BMPs) for existing oil palm cultivation on peat (2012).

Impact

Chain Reaction Research reported in February 2017 that 365 companies globally have deforestation-free or NDPE policies⁵¹. A study in 2016 estimated that 60% of global palm oil production is covered by NDPE policies⁵².

For traders and processors, the policy is generally expected to cover not only a company's own plantations, but also third-party suppliers, giving it more reach than traditional certification standards, including RSPO. Preferably (but not always) they should also apply to other commodities and forestry, and the other businesses of company directors.

Also, palm oil supply chain has few traders and processors, of which the largest have adopted NDPE policies. So now lots of growers are confronted by these few traders and processors when these growers may not even be RSPO members.

Whether NDPE policies adopted by traders and processors have a significant impact on the ground depends greatly on the pace of suppliers' engagement to ensure their compliance. In mid-2014, Kencana Agri was poised to clear dense forest in Indonesia. Wilmar, which owned a 20% stake in Kencana Agri, subsequently engaged with them, which resulted in Kencana Agri launching its NDPE policy and sparing the forest⁵³.

Actual implementation will take time especially when third-party suppliers, middlemen and smallholders are involved. Challenges include traceability and illegal logging by third parties⁵⁴.

Because the NDPE criteria is not standardised, it is difficult for governments and consumers to base their procurement and buying decisions on them.

Trustworthiness

Companies are expected to have their own grievance system, traceability and transparent reporting. This presents a challenge for smaller companies which lack such capacity. There is also inconsistency in the information made public. For example, Sime Darby reports on hotspots occurring within their concessions, but not on grievances, while Wilmar lists details of all grievances, but does not report on hotspots. As a result, the level of transparency and independent third-party oversight varies considerably.

Third-party oversight and audits are sometimes provided by NGOs or consultants that the company appoints, but at least one company has been accused of misleading these third-party organisations⁵⁵.

When a supplier is found to be non-compliant, the company is expected to ask the supplier to address the issue and terminate the supplier if it fails to do so.

Improvement

Consensus building on the definition and methodology of "no deforestation" has been an area of active work. Initially there were two approaches: HCS+ and HCS Approach, which was converged on November 8th, 2016. The HCS Approach steering group is working towards converging HCV, HCS and FPIC⁵⁶.

Chapter 4: Access to market as a leverage

This chapter covers how palm oil buyers as well as trade restrictions can influence palm oil producers to adopt sustainable, haze-free practices.

Key findings

- Many businesses in Singapore lack awareness of sustainable palm oil, and those that do lack incentive to switch due to low awareness among consumers and perceived lack of government support.
- Trade restrictions such as EU's impending ban on unsustainable palm oil are a powerful incentive for reform.

Recommendations

- **Eateries, manufacturers and retailers that use palm oil**
 - Adopt a time-bound plan for 100% of palm oil used for cooking oil across the company's global operations to be RSPO-certified.
 - Communicate and educate their customers about the use of sustainable palm oil products.
- **NGOs and consumers**
 - Urge businesses which use palm oil to switch to RSPO-certified palm oil, with a focus on urging businesses with a presence beyond Singapore to use RSPO-certified palm oil across all global operations.
- **Consumers**
 - Support RSPO-certified palm oil products; eateries that use no oil or RSPO-certified palm oil; and retailers that use RSPO-certified palm oil for their house brand palm oil products.
- **Government**
 - Government green procurement policy should mandate that all palm oil used in cooking oil must be sustainably produced, with RSPO certification as the current acceptable standard.
 - Support sustainable palm oil capacity-building
 - Make a time-bound national commitment to use sustainable palm oil.
 - Support SASPO and provide grants to support the transition.
 - Strengthen environmental safeguards in trade agreements/deals.
- **Singapore as chairman of ASEAN in 2018**
 - Coordinate with other ASEAN member states to develop a common palm oil certification system for ASEAN.

Palm oil buyers driving the change

Palm oil sustainability standards create the opportunity to provide economic incentives and disincentives for growers by linking their access to consumer markets with compliance with such standards.

When palm oil buyers such as traders, product manufacturers, retailers and food-service companies commit to sustainable sourcing, it helps push the palm oil growers towards adopting sustainable policies or face the risk of losing their customers. In 2010 Nestle, for example, adopted an NDPE policy, which in turn pushed one of their suppliers, Golden Agri Resources, to also adopt an NDPE policy⁵⁷.

Nevertheless the take-up rate of certified products and adoption of NDPE policies is still low. Sales of RSPO-certified palm oil is only about half the amount produced⁴⁰. Only 14 out of 55 Consumer Goods Forum (CGF) members assessed by Forest 500 in 2016 had zero or net-zero deforestation commitments across all commodities⁵⁸.

As of September 2017, 5 eateries in Singapore claim to be using RSPO-certified sustainable palm oil which is a drop in the bucket for this food-loving nation.

While availability of certified sustainable palm oil was previously a challenge in Singapore, this is no longer the case, at least for cooking oil. RSPO is the most commonly available sustainability certification for palm oil in Singapore. As of September 2017, there are at least three suppliers which can provide RSPO-certified cooking oil to eateries and six brands of retail-size RSPO-certified cooking oil.

Civil society raising awareness

Based on our outreach experience, a major barrier is low awareness among the public as well as businesses about the presence of palm oil in the products they use, as well as the option of using sustainable palm oil. Since May 2017, PM Haze has been reaching out to eatery owners/managers. The majority of eateries we have reached out to referred to the oil they were using as “vegetable oil”. Most of them were also not aware of the link between haze and the unsustainable palm oil they used for cooking. In comparison, when speaking to eateries that did not use palm oil, the majority knew the exact ingredient of the cooking oil they were using. NGO-led engagement with businesses therefore has played an important role in raising awareness. As of January 2018, six eateries use certified sustainable palm oil in Singapore. Of those, four switched after awareness raising by NGOs WWF Singapore and PM Haze.

Efforts to raise awareness of palm oil issues in Singapore have been ongoing, but with slow progress. One of the tools used to generate more public attention and pressure on companies has been scorecards. On 21 September 2017, WWF launched a Palm Oil Scorecard for companies in Singapore and Malaysia, while simultaneously launching a petition against non-responding companies. As a result, six of these companies made a commitment to source sustainable palm oil⁵⁹.

Scorecards can also be useful for consumers and investors to evaluate the companies that they are buying from. They can also serve as a tool allowing companies to compare their actions with those of their peers. However, the scorecards are not comprehensive and only evaluate the larger companies.

Consumer demand, supporting the switch

By avoiding overconsumption of vegetable oil, consumers can reduce pressure on producers to clear land to meet the demand. Consumers can choose certified sustainable palm oil products to influence businesses towards haze-free practices.

In Singapore, businesses which have switched to using sustainable palm oil, such as IKEA, are those which are already marketing themselves as being sustainable. However, many businesses are not willing to use sustainable palm oil even after gaining awareness. Challenges cited by businesses are price and lack of consumer demand⁶⁰.

Based on our exchange with one of the biggest local cooking oil suppliers, the premium for RSPO-certified cooking oil is 10% or less, which amounts to about S\$2 per tin, depending on volume purchased⁶¹. A typical Nasi Lemak stall uses one tin (18kg) of cooking oil for 400 to 600 plates⁶¹ and it costs about S\$2 more per tin to switch to RSPO-certified cooking oil, which comes down to less than 1 cent per plate.

Consumer demand would therefore need to increase sufficiently to offset the additional cost. Consumers can also urge businesses to be more transparent and adopt sustainable practices. For example, in October 2017, two teenage students ran a successful online petition urging two eatery chains to switch to sustainable palm oil⁶².

Green procurement

While there is no data available on amount of palm oil used by the public sector in Singapore, a study done for UK showed that the public sector accounted for 7-12% of total palm oil and palm kernel oil imports in the UK in 2009⁶³.

National governments can thus set an example and shift a significant proportion of the market by enacting green procurement policies which cover palm oil. For example, the UK government's buying standard for food and catering services mandates that "all palm oil (including palm kernel oil and products derived from palm oil) used for cooking and as an ingredient in food must be sustainably produced"⁶⁴. The Singapore government has a public procurement policy that includes printing paper⁶⁵ but does not cover cooking oil, even though the public sector procures food via caterers for military camps, prisons, hospitals and ad-hoc events.

National capacity building

National and regional governments and industry associations can also encourage businesses to use sustainable ingredients. Eleven European countries have made national commitments towards 100% certified sustainable palm oil⁶⁶. These national commitments are led by industry, government, or both, and actively promote sustainable palm oil among businesses and the public.

In Singapore, the Singapore Alliance for Sustainable Palm Oil (SASPO) aspires to play a similar role⁶⁷, although a nationwide time-bound commitment has yet to be made. In the context of the roadmap for a "Transboundary Haze-Free ASEAN by 2020", the Singapore government could work with SASPO to make a time-bound national commitment to 100% sustainable palm oil.

Trade-related measures / trade agreements

Finally, national governments can use trade-related measures to influence palm oil producers to improve their standards. Under World Trade Organisation rules, members can adopt trade-related measures aimed at protecting the environment, subject to certain specified conditions⁶⁸. The General Agreement on Tariffs and Trade (GATT) has an article on "General Exceptions" which allow for trade-related measures "necessary to protect human, animal or plant life or health" as long as such measures are not applied in a manner that discriminates between countries where the same conditions prevail, or serves as a disguised restriction on international trade⁶⁹.

The European Union's (EU's) stance on illegal timber is a prime example of how trade-related measures have helped to improve standards in the producing country. By banning illegal timber from entering the EU while simultaneously working with timber-producing countries to implement systems for verifying timber legality, the EU helped to motivate Indonesia to strengthen the regulations and implementation of its national mandatory timber legality certificate⁷⁰.

As chairman of ASEAN in 2018, Singapore will have the opportunity to coordinate with other ASEAN member states to develop a common palm oil certification system for ASEAN.

Chapter 5: Access to finance as a leverage

This chapter covers how access to loans and investments can be used to influence palm oil producers to adopt sustainable, haze-free practices.

Key findings

- Financial institutions can promote palm oil producers' sustainable practices by adopting both negative and positive screening in their lending and investment decisions.
- In the context of palm oil, negative screening would involve excluding companies that conduct burning, deforestation, peat drainage and other haze-causing activities, while positive screening would involve identifying companies which go beyond the norm and have verifiable achievements.
- Financial institutions have the scale to implement the NDPE policy and should already be doing risk screening for companies they loan or invest in. RSPO certification can be used to supplement as a way to improve verification and tap on their grievance procedure.
- Transparency from financial institutions is needed to allow stakeholders to assess whether screening policies are being implemented while transparency from palm oil producers is needed to allow investors to assess whether practices are sustainable.

Recommendations

- NGOs to scale up awareness outreach among public and businesses about sustainable palm oil and responsible finance
- SGX to put in a time frame for listed companies to improve their sustainability reporting standard e.g. having third party assurance, stakeholder consultation
- Palm oil growers and traders to report annually on their progress on NDPE and RSPO certification in their sustainability/ annual report
- NGOs to promote transparency and public scrutiny by analysing:
 - Financing policies of major financial institutions and funds in Singapore
 - Palm oil procurement policies of major eateries, manufacturers and retailers
 - NDPE policies and their implementation among palm oil companies which are listed and/or have HQ in Singapore
- Shareholders to urge listed palm oil companies, buyers and financial institutions to use RSPO-certified palm oil and/ or adopt robust NDPE policy
- Singapore as chairman of ASEAN in 2018, to promote responsible finance and green micro-credit e.g. financing adoption of sustainable palm oil
- Singapore government to set up the preconditions, such as proper strategies, technologies, incentives and regulations to promote responsible finance incorporating both negative and positive screening e.g. eliminating customers causing deforestation and financing adoption of sustainable palm oil, as well as forest- and peat-friendly agriculture
- Main financial institutions in Singapore (i.e. local banks OCBC, DBS and UOB; and Singapore owned institutional investors GIC and Temasek) must all adopt ESG policies with publicly disclosed sector-specific policies covering Agriculture and Forestry that requires customers who are palm oil growers, traders and processors to:
 - Adhere to NDPE (see Appendix B)
 - Have RSPO membership and a time-bound plan for 100% RSPO certification for own plantations
- Main financial institutions should publish a list of clients they lend money to in high-risk sectors including agriculture and forestry
- Main financial institutions to become members of international bodies, covenants and initiatives such as BEI, Equator Principles, and RSPO to understand industry issues and global best practices, build capacity and be part of the decision making process

Responsible financing

Financial institutions and retail investors can influence companies in the forest sector, by tying access to loans or investments with compliance with sustainability standards. This is commonly known as socially responsible investment (SRI) or simply “responsible financing”.

Responsible financing would require both negative screening and positive screening. Negative screening involves eliminating companies which adopt objectionable, unsustainable practices.

An example of a financial institution which actively monitors and addresses sustainability risks in its investments is Norges Bank Investment Management (NBIM), which manages Norway’s 900 billion USD sovereign wealth fund, the Government Pension Fund Global (GPF). This is the world’s largest sovereign fund. Between 2012 and 2015, NBIM divested from more than 30 palm oil companies due to the high risk of contributing to tropical deforestation⁷¹.

In Singapore, the Association Banks in Singapore (ABS) issued Guidelines on Responsible Financing in October 2015, with the expectation that banks are expected to fully comply with the guidelines by 2017.

The guidelines define the minimum standards on responsible financing practices to be integrated into banks’ business models in Singapore.

DBS, OCBC and UOB have announced in their 2016 Annual Reports their responsible financing frameworks, which embed environmental, social and governance factors (ESG) into deciding who they lend money to and what conditions are included in the loan.

However, only DBS has set standards for palm oil sector. DBS has specified that new borrowers should “additionally demonstrate alignment with no deforestation, no peat and no exploitation policies... We will also consider new customers who have achieved RSPO certification or are able to demonstrate that they are working towards achieving RSPO certification within a satisfactory timeframe.”⁷²

Other financial institutions in Singapore such as Singapore-owned institutional investors Temasek Holdings and GIC as well as insurers and university endowment funds have yet to announce policies for responsible financing.

Some banks such as Standard Chartered⁷³ and HSBC⁷⁴ have palm oil policies based on both NDPE and RSPO with clearly defined standards and time frames with expectations for both new and existing clients.

Financial institutions have the scale to implement the NDPE policy and should already be doing risk screening for companies they loan or invest in. RSPO certification can be used to supplement as a way to improve verification and tap on their grievance procedure. HSBC, for example, informed RSPO about allegations that one of its customers was gearing to clear pristine rainforest, thus triggering an investigation by RSPO⁷⁵.

Financial institutions that need capacity-building support can turn to groupings like United Nations Environment Programme – Finance Initiative, Banking Environment Initiative (BEI), UN Principles for Responsible Investment (PRI) and Soft Commodities Compact. NGOs can also play an important role in capacity building for businesses. For example, the Singapore Institute of International Affairs (SIIA) created the Collaborative Initiative for Green Finance in Singapore to explore green financing possibilities for banks and come up with a framework to assess green practices of borrowers⁷⁶.

Another way finance can help is by supporting sustainable activities. This is commonly known as positive screening. National and international bodies can also provide incentives and frameworks to support growth of responsible and green finance that incorporates positive screening. Under the Sustainable Shipment Letter of Credit by the BEI, the International Finance Corporation, the investment arm of the World Bank, will offer preferential terms of credit to its partner banks when they finance the import of RSPO-certified palm oil to emerging markets⁷⁷.

Indonesia has a "Roadmap for Sustainable Finance in Indonesia" to determine which measures need to be taken to improve the sustainability of finance in Indonesia, and to have these implemented by 2024⁷⁸. Singapore and ASEAN as a region have yet to develop such initiatives.

Sustainability reporting

The key to successful use of finance as a leverage is transparency - for both palm oil companies and the financial institutions. Increased transparency of financing policies and clients help stakeholders of the financial institution have oversight on how well responsible financing is being implemented, and sends a market signal to potential creditors that access to finance is increasingly tied to their sustainability performance.

NGOs have played a role in increasing transparency by conducting research and publishing research on the financing practices of financial institutions. Sustainability reports give information about the company's environmental, social and governance performance. However in 2014 and 2015, only 37.1% of 502 companies on the Singapore Stock Exchange (SGX) reported on their sustainability performance⁷⁹.

National stock exchanges have mandated sustainability reporting for listed companies eg. Indonesia's IDX, Malaysia's BURSA and Thailand's SET. In Singapore, sustainability reporting will be on a "comply or explain" basis from financial year ending on, or after 31 December 2017⁸⁰. However, the SGX guidelines currently do not require independent assurance to verify the claims on the sustainability report and do not specify factors which a company should report on.

Chapter 6: Summary of recommendations

Intergovernmental collaboration

1. Strengthen environmental safeguards in trade agreements/deals.
2. Singapore as chairman of ASEAN in 2018, to promote responsible finance and green micro-credit e.g. financing adoption of sustainable palm oil
3. Singapore as chairman of ASEAN in 2018 can coordinate with other ASEAN member states to develop a common palm oil certification system for ASEAN

Singapore government

1. Government green procurement policy should mandate that all palm oil used in cooking oil must be sustainably produced, with RSPO certification as the current acceptable standard.
2. Government support for sustainable palm oil capacity-building
 - a. Make a time-bound national commitment to use sustainable palm oil
 - b. Support SASPO and provide grants to support the transition
3. Singapore government to set up the preconditions, such as proper strategies, technologies, incentives and regulations to promote responsible finance incorporating both negative and positive screening e.g. eliminating customers causing deforestation and financing adoption of sustainable palm oil, as well as forest- and peat-friendly agriculture
4. SGX to put in a time frame for listed companies to improve their sustainability reporting standard e.g. having third-party assurance and stakeholder consultation

Civil society groups & general public

1. NGOs to scale up awareness outreach among public and businesses about sustainable palm oil and responsible finance
2. NGOs to promote transparency and public scrutiny by analysing:
 - a. Financing policies of major financial institutions and funds in Singapore
 - b. Palm oil procurement policies of major eateries, manufacturers and retailers
 - c. NDPE policies and their implementation among palm oil companies which are listed and/or have HQ in Singapore
3. Academics and NGOs to regularly review and provide recommendations on palm oil standards as they evolve
4. NGOs and consumers to urge businesses which use palm oil to switch to RSPO-certified palm oil, with a focus on urging businesses with a presence beyond Singapore to use RSPO-certified palm oil across all global operations.
5. Consumers to support RSPO-certified palm oil products; eateries that use no oil or RSPO-certified palm oil; and retailers that use RSPO-certified palm oil for their housebrand palm oil products.
6. Consumers, businesses and other organisations should reduce consumption of fried food.
7. Shareholders to urge listed palm oil companies, buyers and financial institutions to use RSPO-certified palm oil and/or adopt robust NDPE policy

Eateries, manufacturers and retailers that use palm oil

1. Adopt a time-bound plan for 100% of palm oil used for cooking oil across the company's global operations to be RSPO-certified
2. Communicate and educate their customers about the use of sustainable palm oil products

Palm oil growers, traders and processors

1. Adopt and implement a robust NDPE policy
2. Have a time-bound commitment for 100% RSPO certification for own plantations
3. Report annually on their progress on NDPE and RSPO certification in their sustainability/annual report.

Financial institutions

1. Main financial institutions in Singapore* must all adopt ESG policies with publicly disclosed sector-specific policies covering Agriculture and Forestry that require customers who are palm oil growers, traders and processors to:
 - a. Adhere to NDPE (see Appendix B)
 - b. Have RSPO membership and a time-bound plan for 100% RSPO certification for own plantations
2. Main financial institutions should publish a list of clients they lend money to in high-risk sectors including agriculture and forestry

*Scope: Main financial institutions

- Local banks: OCBC, DBS, UOB
- Singapore-owned institutional investors: GIC and Temasek

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Appendix A: Scoring methodology for palm oil sustainability standards

Each base indicator was phrased as a question and the answer scored from 0 to 1:

Answer	No	In part / Yes, but	Yes
Score	0	0.5	1

Indicators considered are in the white rows below.

Criteria: Does the standard include a requirement asking the company to:
Fire prevention, monitoring and suppression
Avoid use of fire in management unit except for pest control and with proper safeguards (Management Unit: area within their control / direct operation area)?
Support local communities to adopt zero-burning (within and around concession)?
Minimise escaped/accidental fires (e.g. via cooking fire, cigarette littering or waste burning)?
Implement fire monitoring and suppression systems?
Minimise risk of peat fire
Protect peat from drainage/development?
Maintain groundwater level in drained peatland to no more than 50 cm from soil surface (as measured by piezometer)?
Progressively restore peatland ecosystems?
Protection for forests from deforestation
Implement protection for primary forests from deforestation?
Implement protection for secondary forests from deforestation?
Minimise land conflict
Recognize local communities' land rights (including FPIC)?
Impact
Current scale: Do certified companies represent a large market size (% of palm oil production)?
Does the standard apply to the whole company? Including: the company itself (all plantations), subsidiaries, suppliers OR Is the certification mandatory within a country?
Scalability: Is there a possibility of the standard being adopted internationally by major consumer countries / Can it cover a large market share?
Potential for integration to local economic and political landscape: Is the standard suitable for landscape or jurisdiction approach?
Is the certification accessible? (i.e. the standard is adapted to both companies and smallholders, the certification cost is affordable, there is support through certification process)

Trustworthiness
Are independent third parties (e.g. NGOs) involved in governance?
Is there a proper grievance system in place? A proper grievance system must be: - Legitimate: is it independent - Accessible - Predictable: clear and known time frame for each stage - Equitable: fair and just - Rights-compatible: compliant with internationally recognised human rights - Transparent: grievance and its resolution is public
Is the grievance system efficient (Track record of grievance resolutions)? - Time for resolution is reasonable - Successful resolution of grievances (is the resolution accepted by the parties involved?)
Transparency: Are the following items publicly available? - standard - list of companies certified - audit forms - grievance system - concession maps - governance/board members
Are audits reliable? To consider: - Accreditation process, how are the auditors qualified? - Track records, mistake? Negligence? Corruption? - Clear indicators in standards/audit forms
Improvement
Are there commitment and implementation for improvement of processes?
Are there commitment and implementation of regular update of criteria?

After calculating the sum of indicators scores for sub-categories (yellow) then categories (red), we obtain the following table:

The scores are then weighted to represent a more uniform evaluation of the standard:

Maximum raw score	
Criteria (Overall)	10
Fires	4
Peat	3
Forests	2
Land conflict	1
Impact	5
Trustworthiness	5
Improvement	2
Total	22

Maximum weighted score	
Criteria (Overall)	6
Fires	2
Peat	2
Forests	1
Land conflict	1
Impact	5
Trustworthiness	5
Improvement	4
Total	20

Appendix B: NDPE Policy Template

Criteria

1. No Burning
 - a. No land clearance using fire
2. No Deforestation
 - a. No development of High Carbon Stock (HCS) forest as determined using the HCS Approach
 - b. No development of High Conservation Value (HCV) area
3. No Peat
 - a. No new development on peat of any extent, where peat is defined at least as “65% or more organic matter and depth of 50 cm or more”
 - b. Best management practices for existing plantations on peat
 - c. Existing plantings on peat assessed by experts to be unsuitable for replanting will be rehabilitated to original vegetation and conserved.
4. No Exploitation
 - a. Respect rights of indigenous and local communities to give or withhold their free, prior and informed consent (FPIC) to any new developments.
 - b. Complying with the fundamental conventions of the International Labour Organisation (ILO) and upholding the wider United Nations Guiding Principles on Business and Human Rights.

Scope

- Applied at parent company level, including all of its subsidiaries, for all upstream and downstream palm oil operations that it owns, manages, or invests in, regardless of stake.
- Applies to all third-party suppliers that it purchases from or has a trading relationship with.

Processes

- Have grievance mechanism
- Make publicly available list of suppliers and mills
- Active engagement of suppliers to verify compliance and take corrective action in case of violation