



Blue Books

Experts' views for expert investors

Southeast Asia Materials

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Edible-oil sustainability in Asia

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Keith Lee

WWF Sustainable Finance Engagement Manager Keith Lee engages finance-sector stakeholders and conducts research and capacity building on responsible lending and investment. He has published articles - on topics including climate change, agriculture and food waste - in peer-reviewed journals and book chapters. He also has prior experience in investment banking, with UBS, and holds a PhD from the University of California, Berkeley, where he specialised in sustainability theory and practice.



Jeanne Stampe

WWF Head of Asia Sustainable Finance Jeanne Stampe is part of the global finance practice leadership team. She has 21 years' experience in sustainable and mainstream finance; prior to joining WWF, she worked in investment banking and private equity for 14 years with Goldman Sachs and Apax partners, among others. She has co-authored six sustainable-finance publications, including *Sustainable Banking in Asean* (2017) and *WWF Asian Fast Moving Consumer Goods Sustainability Guide* (2016). She graduated from University of Cambridge with an MA in Economics.



Follow-up report

Foreword

The haze that engulfed much of Southeast Asia three years ago was, in hindsight, a critical inflection point. As the air cleared, major palm-oil producers began stepping up their commitment to driving industry-wide change. Today, most have improved the quality of their disclosures and embraced sustainability by slowing expansion and ensuring it takes place in accordance with the standards laid out by the Roundtable on Sustainable Palm Oil (RSPO). This multi-stakeholder initiative was formed in 2004 to promote sustainable palm oil through a certification scheme and other activities.

As the industry strives for more viable growth, CLSA U experts Keith Lee and Jeanne Stampe from the World Wide Fund for Nature (WWF) - a founding member of RSPO - follow up on our March 2016 *Sustainable path* report to give us their take on the current situation. Despite still accounting for only 23m hectares of land globally, the perennial crop produces the world's most consumed vegetable oil. Indeed, it is so ubiquitous in our daily lives that any improvement in planting practices would be a positive step forward.

Certification standards

Comparing the different certification standards, Lee and Stampe first suggest areas where further change could be implemented to boost palm-oil producers' sustainability goals. However, supply is just one part of the picture. It is also important to understand the roles of the other key stakeholders - end-buyers and financiers - and the progress that is being made in encouraging and facilitating the sector's movement towards greater accountability and transparency.

Responsible financing

Having engaged with financial institutions regarding responsible financing practices, and given their access to the WWF global conservation network's tools and expertise, our guest authors are uniquely placed to aid our comprehension of the key issues.

Greater dialogue

Considering the industry's scale and supply-chain complexity, clear blue skies will not reappear overnight, but any progress can be viewed as a triumph. Ultimately, we hope this report will equip investors with a baseline level of knowledge, and plant a seed that will grow into greater dialogue with portfolio companies.

Keep palm and read on.




Juliana Koay
Research Analyst

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Certified sustainable research



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24 January 2017

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Companies visited

Tsing

date: Apr

Rate: 0.80

Price: 101.00

Target: 100.00

Hongkong

Rate: 0.80

Price: 101.00

Target: 100.00

Wenwei

Rate: 0.80

Price: 101.00

Target: 100.00

Journalist and NGO

Rate: 0.80

Price: 101.00

Target: 100.00

China Unicom

Rate: 0.80

Price: 101.00

Target: 100.00

Green Leaders

Rate: 0.80

Price: 101.00

Target: 100.00

China Pacific

Rate: 0.80

Price: 101.00


Target: 100.00


Green Properties

Rate: 0.80

Price: 101.00

Target: 100.00





Green path

Our inspection-tour takeaways

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KEEP PALM and CARRY ON

Growth needs to follow a more sustainable path

The palm-oil industry produces a wide range of food products and consumables that the world relies upon. In the process, it provides livelihoods for millions of people and has lifted many out of poverty. However, the cultivation of this versatile and highly productive crop still threatens biodiversity and contributes to climate change.

Gold standard for sector sustainability

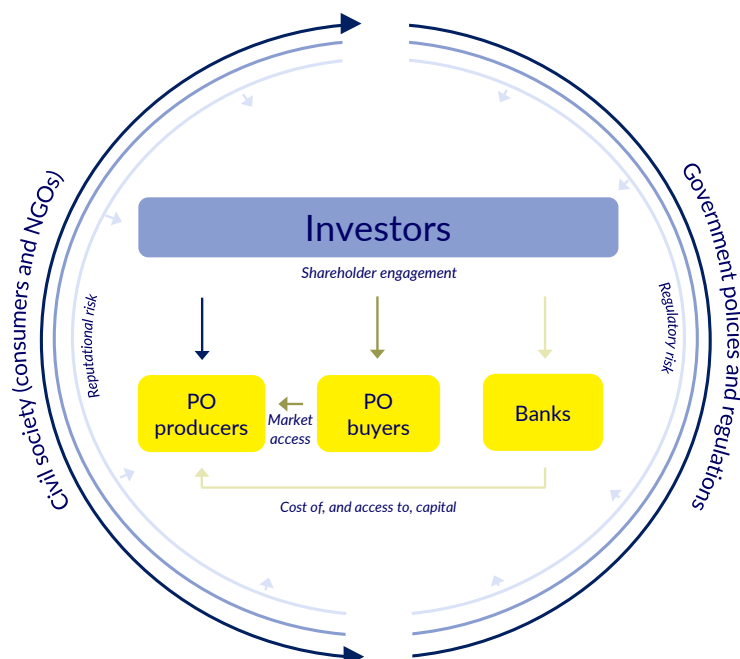
To address these issues, sector stakeholders - including civil society, industry and governments - have developed a range of schemes to certify the sustainability of palm-oil production. Given its scale and specificity, our guest authors focus on the Roundtable on Sustainable Palm Oil (RSPO), formed in 2004 by WWF, Unilever, the Malaysian Palm Oil Association and seven other founding members.¹ They argue that until the results of ongoing revisions to RSPO principles and criteria (P&Cs) - which aim to address its inadequate protection of forests and peatland - are released, current RSPO certification, combined with No Deforestation, No Peat, No Exploitation (NDPE) commitments, forms the gold standard for sustainable palm oil.

Increased risk of stranded-land assets

In response to RSPO shortcomings, in 2013 the industry developed a policy response that has come to be known as NDPE, but with no governing body, its adopters may define and implement it in different ways. The unified high-carbon stock (HCS) approach, introduced in November 2016, offers a rigorous and science-based definition of no-deforestation, while the no-peat criterion aims to curb the substantial climate-change impact of planting on peat. WWF believes these standards, combined with Indonesian peat regulations, increase the risk of stranded-land assets, which impact asset and company valuations.

Investors' and other stakeholders' role in encouraging sustainable palm oil

The role of investors and other stakeholders . . .



Source: WWF

¹ Founding organisations include Aarhus United UK Ltd., Karlshamns AB (Sweden), Malaysian Palm Oil Association (MPOA), Migros Genossenschafts Bund (Switzerland), Unilever NV (Netherlands), WWF, with Golden Hope Plantations Berhad (Malaysia), Loders Crokiaan (Netherlands), Pacific Rim Palm Oil Ltd (Singapore) and The Body Shop (UK) on the executive board.

Certification the first step towards more sustainable planting practices

To address growing sustainability requirements and ensure smallholders are not left out of the journey, regulators in the key palm-oil-producing nations have launched the Malaysia Sustainable Palm Oil (MSPO) and Indonesia Sustainable Palm Oil (ISPO) national-standard certification schemes. WWF believes that while these initiatives fall short of RSPO standards, they are useful first steps.

Indonesia's regulations outpace Malaysia's

Indonesian-government regulations bar the development of forests and peatland, while also requiring the restoration of the latter within existing concessions. Their effectiveness is of course subject to successful implementation and enforcement. Conversely, Malaysian peat regulations are less stringent, which could put its non-RSPO/NDPE-compliant producers at risk in terms of market access.

Price-sensitive consumers in Asia must not undermine sustainability drive

As Western palm-oil buyers increase their sustainability requirements and take radical steps with regard to supply-chain transparency, it is crucial that price-sensitive emerging markets also start to demand sustainable palm oil, or we risk seeing a two-tiered system.

Finance community playing a bigger role influencing the palm-oil value chain

But the pressure for more sustainable planting does not stop with buyer demand and government regulation - international banks now go beyond RSPO requirements, with requests for NDPE compliance and traceability when lending to producers. This has tightened less-compliant producers' access to capital. At the same time, some banks' new loan products enable agribusiness giants, such as Wilmar International and Olam International, to enjoy lower interest rates if they improve their sustainability ratings. Pressure from banks and investors for palm-oil-sector players to disclose against the Taskforce on Climate-related Financial Disclosures (TCFD) framework - which singles out "agriculture, food and forest products" as a high climate-risk sector - will only accelerate sustainability.

Investors have great influence along the entire supply chain. WWF recommends they encourage investees to adopt greater transparency, improve disclosures and take action to help producers towards greater sustainability. The following table shows the WWF's recommended priority points of engagement, which should be collaborative wherever possible.

Investor dialogue and engagement recommendations

Producers, traders and refiners	End-buyers	Banks
<ul style="list-style-type: none"> ❑ Improve transparency of operations and sourcing policies by disclosing against the TCFD, and UK-based environmental group CDP's forest-program disclosure framework ❑ Committing to setting science-based targets to minimise climate-risk exposure ❑ Disclose the location, size and composition of their planted and unplanted landbanks, such as land area consisting of peat, HCV and HCS areas. Where applicable, request companies disclose the number of hectares of land affected by Indonesia's forest and peat moratoria and expected peatland restoration requirements ❑ Join RSPO and develop/ disclose time-bound plans to achieving 100% RSPO certification; for more advanced companies, to make time-bound commitments to NDPE and 100% traceability to the plantation level ❑ Participate in landscape and jurisdictional approach-based projects to address illegality and unsustainability in their smallholder supply bases 	<ul style="list-style-type: none"> ❑ Commit to and disclose time-bound plans for sourcing only RSPO-certified (identity-preserved or segregated) and NDPE-compliant palm oil ❑ Commit to and disclose time-bound plans for achieving 100% supply-chain transparency and traceability to the plantation level ❑ Commit to purchasing a portion of their palm-oil supply from RSPO-certified smallholders or to supporting uncertified smallholders toward certification, preferably with a commitment to also purchase from them, through landscape or jurisdictional approach-based projects 	<ul style="list-style-type: none"> ❑ Disclose how they are managing E&S risks, including deforestation, climate change and human-rights abuses in their lending activities, especially in agriculture and forestry sectors ❑ Develop and disclose a palm-oil sector policy that requires clients to make time-bound commitments to achieving 100% RSPO certification, NDPE compliance and supply-chain traceability to the plantation level, for own operations and third-party sources ❑ Disclose the percentage of palm-oil clients' production and processing operations verified as RSPO certified and NDPE compliant

Source: WWF



A focus on RSPO and related initiatives

Age of certification approaches

There are a range of schemes developed to certify palm-oil sustainability. Major international initiatives include RSPO and the International Sustainability and Carbon Certification (ISCC). In this report, we focus specifically on RSPO - because of its scale, importance and specificity to palm oil - as well as related initiatives, like the Palm Oil Innovation Group (POIG) and RSPO Next. Unlike RSPO, ISCC was originally developed to certify the sustainable production of biomass and biofuels, and has only recently been expanded in scope to cover food and other sectors via ISCC Plus; it therefore remains much less widely recognised than RSPO.

In addition, national standards have been developed in Malaysia and Indonesia in response to sustainability concerns overseas - the Malaysian Sustainable Palm Oil standard (MSPO) and Indonesian Sustainable Palm Oil standard (ISPO). We discuss their development, and compare them against RSPO because of their potential impact on palm-oil sustainability in their respective producer countries.

RSPO Next, POIG and NDPE: What is the next step for sustainability?

Figure 1

Development timeline of key sustainability standards



Source: Respective certification standard's site

RSPO is the leading sustainability certification standard for palm oil . . .

RSPO's formation in 2004, and the subsequent introduction of its P&Cs for certification, marked an important step forward for the palm-oil industry in terms of sustainable development. It is a multi-stakeholder initiative, dedicated to promoting the sustainable production of palm oil globally, and includes growers, processors, traders, consumer-goods manufacturers, retailers, the finance sector and environmental and social NGOs. Around 20% of palm-oil production worldwide is RSPO certified.¹

. . . but has faced criticism from civil society, MNCs and investors

However, NGOs and the private sector have criticised RSPO for not doing enough to safeguard against deforestation and development on peatland. Criticism has also included not defining acceptable reduction criteria for greenhouse-gas emissions, and for providing insufficient protection of workers' and smallholders' human rights. In addition, the RSPO P&Cs do not have stringent- or explicit-enough measures to prevent haze generated from land-clearance fires. In 2015, major global brands, including five of the world's top-10 palm-oil buyers - Colgate-Palmolive, Kao, PepsiCo, Procter & Gamble and Johnson & Johnson - and a group of international investors representing US\$4tn in assets, called on RSPO to address the above issues.²

POIG, RSPO Next, and NDPE have emerged to address its shortcomings

POIG aims to support sustainability innovation among palm-oil sector players . . .

. . . and is complemented by RSPO Next, a voluntary add-on to RSPO

Amidst stakeholder dissatisfaction with the scope of RSPO P&Cs, a number of other approaches to palm-oil sustainability have emerged that attempt to address some of the shortcomings, including POIG, RSPO Next and NDPE-No Deforestation, No (Planting on) Peat and No Exploitation (of People and Local Communities).

POIG is a voluntary multi-stakeholder initiative that aims to support innovation and improvement across the palm-oil value chain, with a focus on sustainability. POIG membership is open to palm-oil growers, NGOs, retailers, manufacturers and other stakeholders in the sector. Under POIG, palm-oil companies can innovate beyond the minimum requirements of the RSPO P&Cs, and be recognised for best practices through membership and third-party verification.³ POIG is based on RSPO criteria, and companies must be 50% RSPO-certified before being eligible for POIG verification, after which they must achieve 100% RSPO certification within two years.⁴ Only three palm-oil producers have been verified globally so far.

Announced in August 2015, RSPO Next is in part based on work by POIG members and a voluntary add-on to RSPO's original P&Cs.⁵ In general, the requirements for POIG and RSPO Next raised the bar from the standard P&Cs by including stricter criteria governing deforestation, planting on peat, using fire on peatland, and traceability. The following table summarises key aspects of RSPO Next, POIG and NDPE.

Figure 2

Summary of key aspects of RSPO, RSPO Next/POIG and NDPE

	RSPO	RSPO Next/POIG	NDPE ¹
Land conversion			
Deforestation	<input type="checkbox"/> Assessment, management and monitoring of HCV areas; recommends HCS-area avoidance	<input type="checkbox"/> Assessment, management and monitoring of HCV areas <input type="checkbox"/> No development of HCS areas	<input type="checkbox"/> No deforestation, but no approach defined
Planting on peat	<input type="checkbox"/> Recommends avoiding new plantings on peat	<input type="checkbox"/> No new plantings on peat regardless of depth or extent	<input type="checkbox"/> No new plantings on peat regardless of depth or extent
Fire policy			
Use of fire	<input type="checkbox"/> No land preparation by burning except under Asean or other regional guidelines	<input type="checkbox"/> No use of fire on peatland ²	<input type="checkbox"/> No burning
Social responsibility			
Labour rights	<input type="checkbox"/> Adherence to ILO conventions	<input type="checkbox"/> Adherence to ILO conventions	<input type="checkbox"/> Protect and respect labour rights
Community rights	<input type="checkbox"/> Adherence to the principle of Free and Prior Informed Consent (FPIC)	<input type="checkbox"/> Adherence to FPIC	<input type="checkbox"/> Adherence to FPIC
Smallholder engagement	<input type="checkbox"/> Support for and inclusion of smallholders	<input type="checkbox"/> Support for and inclusion of smallholders	<input type="checkbox"/> Support for and inclusion of smallholders
Traceability & transparency	<input type="checkbox"/> Mills commit to using identified, legal and responsible sources	<input type="checkbox"/> Traceability to the plantation	<input type="checkbox"/> Traceability (extent undefined)

¹ There is no official definition of NDPE or guidance on how it should be implemented; the information in this table is indicative and based on commonly observed elements of NDPE commitments. ² RSPO Next prohibits burning entirely. Source: WWF

RSPO Next may be rolled into basic RSPO certification by November

Some stakeholders, including WWF, are pushing for RSPO Next to be integrated into the standard RSPO P&Cs; the extent of this integration is a topic of discussion under ongoing P&Cs review. Depending on the outcome, currently expected in November 2018, RSPO P&Cs may become more stringent and RSPO Next may cease to exist as a voluntary add-on. Colombia-based Daabon became the first company to be certified under RSPO Next and announced its first sale of RSPO Next credits on 1 February 2018.⁶

NDPE is the latest in palm-oil growers' and buyers' sustainability policies

Palm-oil growers and buyers are increasingly adopting a set of policies that have come to be known as NDPE. No official definition or guidance on its implementation mean there is currently no credible way to certify NDPE compliance. As such, different companies and organisations may interpret and adopt NDPE in varying ways. Some might implement NDPE via a mix of RSPO certification and commitment to additional criteria for issues not covered by RSPO's P&Cs; others may adopt NDPE without obtaining RSPO certification.

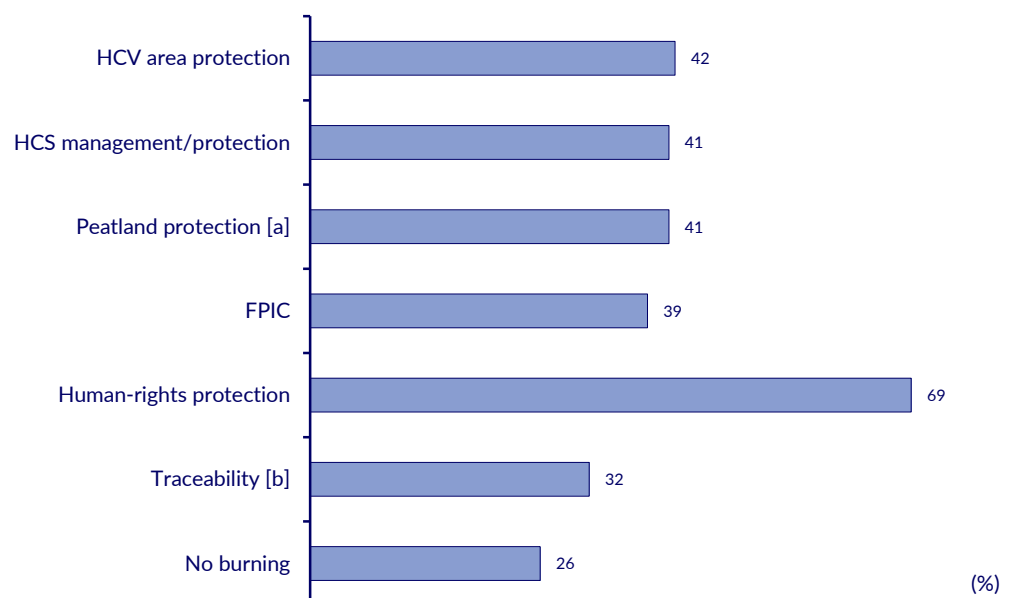
The largest producers and FMCG companies have adopted NDPE

Notwithstanding any possible differences in definitions and implementation, NDPE policies have been adopted by some of the largest palm-oil refiners and traders, including Wilmar, Cargill, Musim Mas, Archer Daniel Midlands, Bunge and Golden-Agri Resources. Some of the largest fast-moving consumer goods (FMCG) companies, too, such as Unilever and Nestle, have publicly committed to some form of NDPE. Most recently, Unilever published details of its entire palm-oil supply chain as part of its commitment to supply-chain traceability,⁷ a move that was soon followed by similar disclosures from Nestle, Colgate-Palmolive, General Mills, Mars, Mondelez, P&G and Reckitt Benckiser.⁸

Supply-Change.org, a website that tracks corporate commitments to sustainable sourcing and production of deforestation-linked agricultural commodities, offers some insight into the number of companies making commitments that are broadly relevant to NDPE. Using publicly disclosed data, the website identifies those companies producing, procuring or using palm oil as part of their core business across all stages of the value chain. As of 3 May 2018, 284 such companies had been identified, as shown in Figure 3.

Figure 3

Percentage of companies assessed by Supply-Change.org with commitments broadly relevant to NDPE



[a] Includes commitments to never plant on peat of any depth as well as limiting planting only to peat of a certain depth or composition. [b] Includes commitments to "traceability" where mentioned as-is in company commitments. Source: Supply-change.org

A growing number of banks are also making reference to NDPE in their sustainability lending criteria, which we discuss further in Section 4.

Tracking corporate commitment to sustainable sourcing and production

What should be done with planted peat?

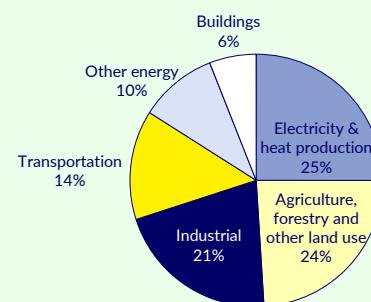
As already highlighted, standards that improve upon the prevailing RSPO P&Cs like NPDE and RSPO Next stipulate companies must not plant on peat of any depth, but less is said about what should be done for existing peat-based planting. This is problematic in relation to climate change, even without peat fires - peatland must be drained prior to planting, which leads to the decades-long release of stored carbon. In 2015 alone, around 146m tons of carbon was emitted from degraded peatland in Peninsular Malaysia, Sumatra and Borneo. To give some context, this figure is equivalent to around 65% of annual emissions in Malaysia and Indonesia from fossil-fuel burning, cement production and gas flaring.⁹ Together with deforestation, peat emissions are a major contributor to the palm-oil sector's wider climate-change impact. This falls under agriculture, forestry and other land use (AFOLU), which the Intergovernmental Panel on Climate Change (IPCC) estimates as contributing 24% of global emissions globally (Figure 4).¹⁰

Due to planted-and-degraded peatland's continued contribution to climate change, growers are exposed to the risk that end-buyers start requesting peat-restoration efforts in their sustainability-sourcing criteria. Already, several international FMCG companies recommend in their NPDE sourcing criteria that suppliers pursue peat restoration.^{11,12} These benchmarks apply new pressure to Malaysian growers and add to the existing pressure growers in Indonesia face from local peat-restoration laws (see Section 3).

The percentage of oil palms planted on peat in Southeast Asia was estimated at 20% in 2012,¹³ a figure likely to have grown since. Any uptick in peatland-restoration requirements, whether from regulation or voluntary standards, would put this proportion of Malaysian and Indonesian palm-oil production at risk. The only way to sustainably compensate for this - ie, without further land conversion - is through yield improvement. Peatland restoration costs could also translate into higher prices for Malaysian and Indonesian palm oil.

Figure 4

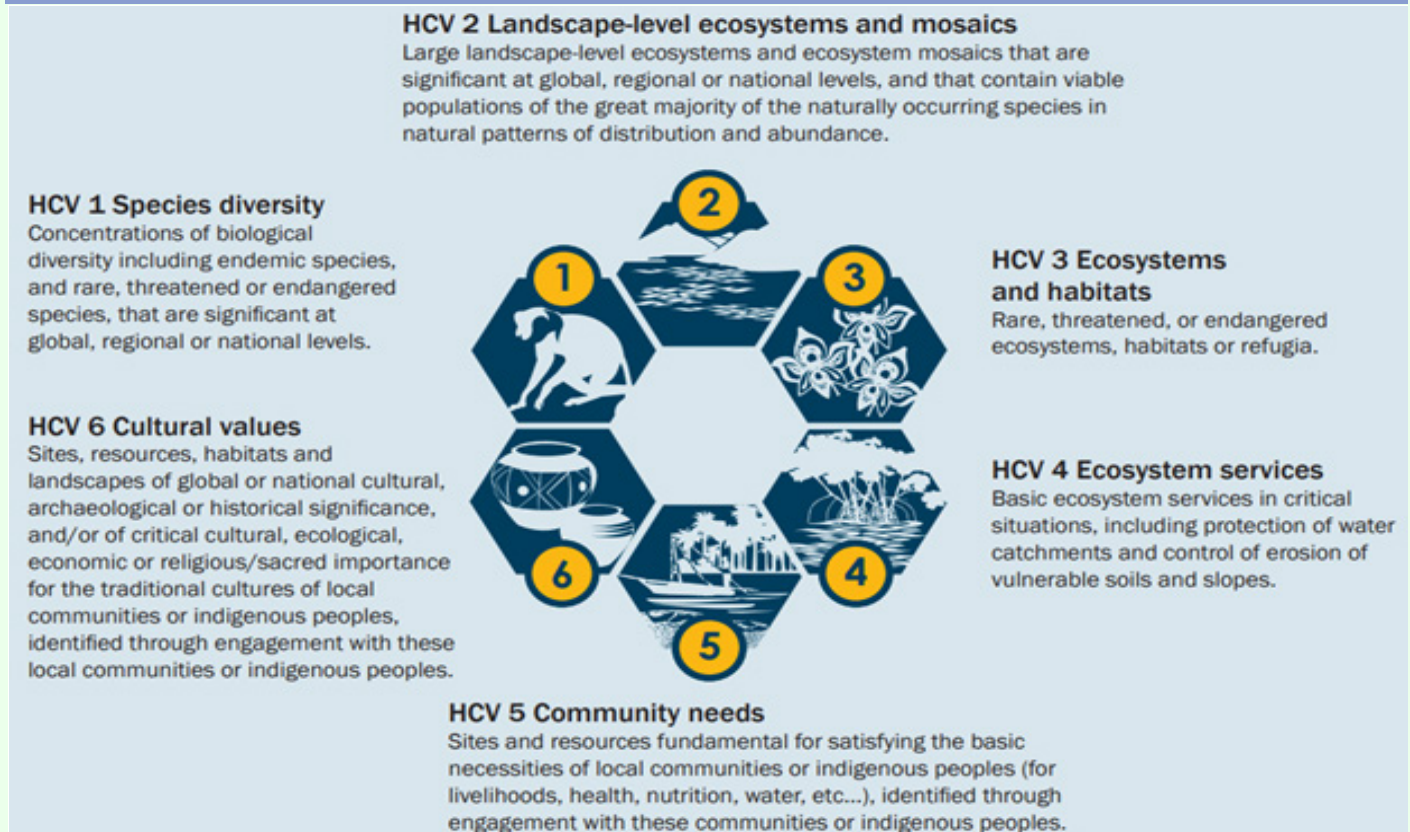
Global greenhouse-gas emissions by sector



Source: IPCC

Figure 5

High conservation value (HCV) classification system



Source: HCV Resource Network

No deforestation - What does this mean?

NDPE policies do not come with an official definition of what is meant by “no deforestation” - one is the clearing of high conservation value (HCV) and/or high carbon stock (HCS) areas. HCV and HCS are two complementary approaches used in consultation with local communities and other stakeholders to decide what kind of land cover should not be cleared. Because of its focus on biodiversity- and-ecosystem conservation, HCV may not protect forest areas with high carbon stocks, unless they are primary forest or needed to maintain HCV areas (Figure 6).¹⁴ At present, RSPO P&Cs only require companies take into account HCV areas in their activities.

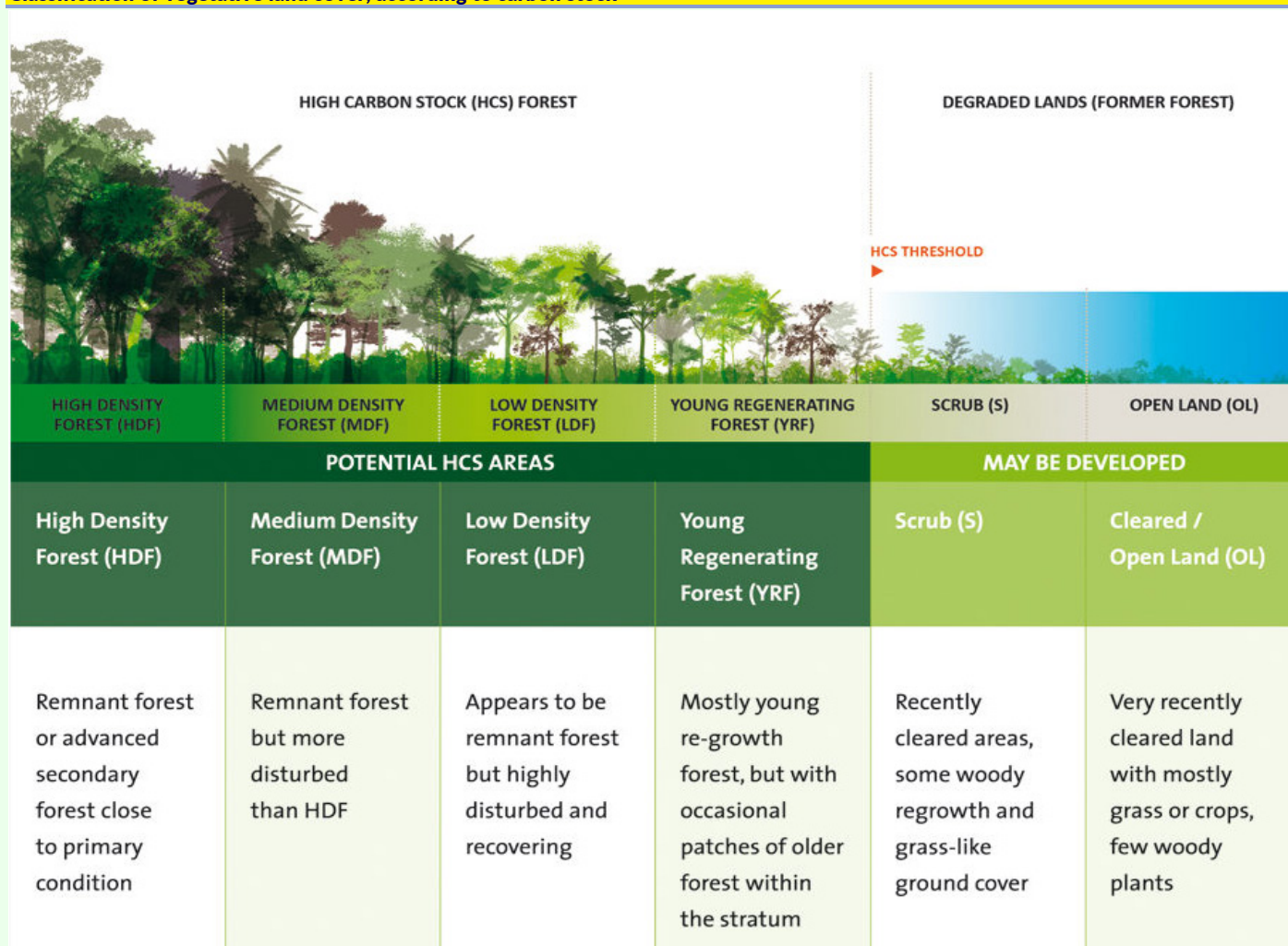
A unified approach to HCS was agreed upon by multiple companies and NGOs in November 2016.¹⁵ It defines vegetation cover using six categories, with two classified as suitable for development (Figure 6). This method also bars

planting on peatland. Its social aspects include calls for enhanced FPIC procedures and improved conflict-resolution processes. The evaluation must be performed by a licensed third-party assessor, who must also include an HCV assessment.¹⁶

If implemented rigorously by palm-oil producers, the HCS approach will help avoid emissions from deforestation in Indonesia and Malaysia, and help address barriers to conservation efforts in Indonesia caused by conflicting political, legal and biophysical definitions of forest. Carbon stock data generated by scientifically robust HCS assessments can thus be used to improve consensus over land that should be prioritised for conservation.¹⁷ Together, these benefits will improve the ability of governments, like Indonesia's, to monitor reductions in AFOLU sector emissions, and hence their ability to also meet their NDCs.

Figure 6

Classification of vegetative land cover, according to carbon stock¹⁸



Source: highcarbonstock.org

TCFD helps agriculture-sector companies identify, disclose their climate-risk exposure ...

... and setting science-based targets can offer a pathway to effectively mitigating climate risks

Progress certifying Indonesian producers under ISPO has been slow since its 2011 launch

Critical frameworks and targets to address exposure to climate risks

The Taskforce on Climate-related Financial Disclosures (TCFD) was formed by the Financial Stability Board (FSB) to develop guidance on disclosures that financial institutions and corporations should make about their exposure to climate risk. With the AFOLU sector's significant contribution to climate change - responsible for 24% of global greenhouse-gas emissions¹⁹ - it is unsurprising that the TCFD's recommendations, released in June 2017, identified agriculture, food and forest products as one of four industry groups with the greatest exposure to climate risk, and therefore most in need of decarbonisation. In particular, the TCFD recommends agricultural companies disclose their land-related greenhouse-gas emissions, as well as how they are managing climate-related risks and adapting their business strategies accordingly.

In the palm-oil sector, incorporating the HCS approach and strict protection for, and restoration of, peatland will be key to decarbonisation; this should be road-mapped by setting science-based targets. RSPO certification currently requires companies to have plans that include objectives, targets and timelines for minimising greenhouse-gas emissions. However, there is no guidance on how to set emission-reduction targets that are meaningful in terms of their contribution to achieving a climate-warming scenario well below two degrees. To help corporations set and institutionalise these targets, a collaboration between the UN Global Compact, CDP, WRI and WWF was launched in 2014 - the Science Based Targets initiative. Science-based targets signal to investors and other stakeholders that a company is minimising its exposure to these risks by decarbonising and aligning itself with a low-carbon economy. To date, 414 companies have signed up to participate, with 106 setting approved targets so far.

Impact of national standards - ISPO and MSPO

ISPO was launched in 2011 by the country's government and the Indonesian Palm Oil Producers Association (Gapki), in response to palm-oil importing countries' decision to only source CSPO and to help the country curb its greenhouse-gas emissions.²⁰ ISPO is currently mandatory for all Indonesian palm-oil growers and processors, except smallholders, and requires compliance with Indonesian economic, social and environmental laws and regulations governing the sector. Figure 7 highlights key developments in the history of ISPO certification.

Figure 7

Timeline of ISPO certification-related developments and announcements	
Date	Development
Mar 2011	ISPO is officially launched, with goal of 100% certification for plantation companies by 2014
Aug 2013	349 smallholders in Amanah co-op in Riau province, Sumatra, become second ever smallholder group to become RSPO certified
Feb 2015	Indonesian agriculture ministry starts pilot-testing guidelines for ISPO smallholder certification in partnership with grower co-ops in Riau
Mar 2016	Official ISPO training programme begins for Amanah co-op
Apr 2017	319 smallholder in Amanah co-op become first to receive ISPO certification. Indonesia's agriculture ministry announces only 12% of palm-oil plantation land is ISPO certified so far ²¹ , and targets at least 70% of palm-oil products to be certified by 2020 ²²
Aug 2017	304 out of 1,200 palm companies are reported to have received ISPO certification ²³
Feb 2018	Draft revisions to ISPO standards raise concerns over the removal of principles regarding human rights and traceability, as well as weakened protections for forests and peatland ²⁴
Apr 2018	Indonesian government reveals draft regulations that would require all smallholders to be ISPO certified by 2020 ²⁵

Source: WWF

After launching in 2015, MSPO has also seen slow uptake in Malaysia

MSPO uptake remains low despite government financial support

Similar to Indonesia, the launch of MSPO standard in 2015 reflected a need to create a sustainability brand for the country's palm oil. MSPO was developed by the Malaysian Palm Oil Board (MPOB), the government's palm-oil industry development body, and has less multi-stakeholder involvement, compared to RSPO. The next MSPO review is scheduled to take place during 2018, with the announced aim of strengthening its standard.²⁶ Figure 8 provides an overview of developments relating to MSPO since its launch.

Figure 8

Timeline of MSPO certification-related developments and announcements	
Date	Development
Jan 2015	MSPO officially launched as a fully voluntary certification standard
Feb 2017	Ministry of Plantation Industries and Commodities (MPIC) announces MSPO will become mandatory by end-2018 for RSPO-certified companies, by mid-2019 for non-RSPO-certified companies, and by end-2019 for smallholders
Aug 2017	MPIC announces allocation of RM130m to support smallholders through MSPO certification process
Sep 2017	MPOCC announces the target for total MSPO-certified palm-oil supply to hit eight tons by end-2019, to be supplied by 2m certified plantation hectares and 190 certified mills - equivalent to c.28% of Malaysia 2017 CPO production
Oct 2017	MPIC extends financial assistance with MSPO certification to non-smallholder operators in form of 30%/70% subsidisation of auditing fees, based on estate size
Mar 2018	MPOCC data indicates total MSPO-certified area was around 802,624ha, of which c.1% was held by independent smallholders. Total MSPO-certified area corresponds to c.15% of Malaysia's oil-palm estates, up from 5% in September 2017 ^{27,28}

Source: WWF

MSPO/ISPO are steps towards RSPO certification, not efforts to undermine it

Who wins/loses?

Although they share a common goal of promoting the sector's sustainable development, the MSPO and ISPO certification systems fall short of RSPO in terms of how they address the key sustainability issues this report highlights. Figure 9 indicates how the two national standards differ from RSPO in tackling these issues, but is not intended to be an exhaustive comparison.

MSPO and ISPO indicate the Malaysian and Indonesian governments recognise that, as the two leading producers of palm oil, they have a responsibility to take on a leadership role in the industry's transition towards sustainability. While their introduction can understandably be perceived as potentially confusing for buyers, these standards can play a role in raising the palm-oil sector's minimum floor with respect to legality and the path to sustainability. Ultimately, they provide stepping stones for palm-oil growers to obtain RSPO certification.

Figure 9

Comparison of standards' criteria			
	RSPO	MSPO	ISPO
Land conversion			
Deforestation	<input type="checkbox"/> Assessment, management and monitoring of HCV areas <input type="checkbox"/> Recommended avoidance of HCS areas	<input type="checkbox"/> No recognition of HCV/HCS concepts	<input type="checkbox"/> No recognition of HCV/HCS concepts <input type="checkbox"/> Legal compliance with government regulations on forests
Planting on peat	<input type="checkbox"/> Recommends avoiding new planting on peat	<input type="checkbox"/> Permitted in accordance with MPOB guidelines or industry best practice	<input type="checkbox"/> Legal compliance with government regulations on peat
Management of planted peat	<input type="checkbox"/> RSPO best management practices	<input type="checkbox"/> MPOB guidelines or industry best practice	<input type="checkbox"/> Maintenance and restoration of peatland according to Indonesian best management practices
Greenhouse-gas emissions	<input type="checkbox"/> Plantation to be designed to minimise greenhouse-gas emissions <input type="checkbox"/> Reducing greenhouse-gas emissions when running plantation	<input type="checkbox"/> Lack of detailed requirements to manage and reduce greenhouse-gas emissions	<input type="checkbox"/> Lack of detailed requirements to manage and reduce greenhouse-gas emissions
Use of fire	<input type="checkbox"/> No land preparation by burning except under Asean/other regional guidelines	<input type="checkbox"/> No land preparation by burning except where specified by regional best practices	<input type="checkbox"/> Use of fire prohibited under government regulations
Social responsibility			
Labour rights	<input type="checkbox"/> Adherence to ILO core conventions	<input type="checkbox"/> No recognition of ILO core conventions	<input type="checkbox"/> No recognition of ILO core conventions
Community rights	<input type="checkbox"/> FPIC required for all local peoples when developing new plantings	<input type="checkbox"/> FPIC required for all new plantings on land owned by indigenous peoples	<input type="checkbox"/> FPIC not explicitly mentioned <input type="checkbox"/> Local people's consultative rights defined by government laws/regulations
Smallholder engagement	<input type="checkbox"/> Consideration of smallholders in all management planning <input type="checkbox"/> Protection of smallholder rights under ILO conventions	<input type="checkbox"/> Training of smallholders <input type="checkbox"/> Development of plans to manage smallholder schemes >500ha	<input type="checkbox"/> Not mentioned
Traceability & transparency	<input type="checkbox"/> Offers certification for traceability (identity preserved, mass balance or segregated) <input type="checkbox"/> Mills commit to sourcing from identified, legal and responsible sources	<input type="checkbox"/> Offers certification for traceability (mass balance or segregated) <input type="checkbox"/> Requires standard operating procedures to ensure traceability	<input type="checkbox"/> No supply chain controls in place
Stakeholder consultation & governance	<input type="checkbox"/> Multi-stakeholder organisation with balanced structure for participation and governance <input type="checkbox"/> Accredited by third parties, according to international norms	<input type="checkbox"/> Multi-stakeholder in name, but with less balanced structure for participation and governance than RSPO <input type="checkbox"/> Accredited by national accreditation body	<input type="checkbox"/> Not multi-stakeholder <input type="checkbox"/> Accredited by national accreditation body

Source: WWF

Landscape and jurisdictional approaches for sustainable palm oil

Landscape and jurisdictional approaches to sustainable development are increasingly relevant to palm oil, involving multi-stakeholder dialogue and engagement at a wider scale than individual project sites.

Definition and concept

The landscape approach is “a conceptual framework whereby stakeholders in a physical landscape aim to reconcile competing social, economic and environmental objectives.”²⁹ It recognises individual project sites are interlinked, both with each other and the surrounding landscape, via biophysical - eg, ecological or hydrological - and socioeconomic relationships, therefore highlighting the importance of planning for development and conservation at a suitable scale. As such, this approach is important for effective protection of HCV areas, peatland, wetlands, forest ecosystems and wildlife corridors, which might otherwise become fragmented.

The jurisdictional approach is similar to the landscape approach, but instead of a biophysically defined spatial unit - ie, a landscape - it is based on administrative jurisdictions, such as a province. As a result, sustainable-development initiatives using this approach are aligned and dependent upon local governance frameworks and conditions.

The success of both landscape and jurisdictional approaches depends on strong multi-stakeholder dialogue, planning, collaboration and implementation, along with the support of good governance and access to markets. As smallholders are often central to these approaches, providing access to finance is also a critical factor. Blended finance instruments (see Section 4) can offer innovative and much-needed financing solutions to ensure project success.

Benefits to the palm-oil sector

Landscape and jurisdictional approaches can help address the challenges companies face with regard to traceability and identification of illegally grown fresh fruit bunches (FFB). Currently, palm-oil producers and buyers can only monitor their own supply chains. Pursuing this type of solo sustainability can result in unintended negative consequences - eg, an approach that ring-fences a company’s own suppliers can contribute to a deforestation “leakage” elsewhere in the same landscape - and the formation of a second-tier market for a less sustainable product.

Integrating palm-oil certification requirements (or other sustainability criteria) into landscape and jurisdictional approaches may help address the above shortcomings and offer benefits for stakeholders. Jurisdictional approaches may be especially powerful in this respect, due their engagement of local governments, which - together with private-sector firms and NGOs - can provide important support and resources, such as maps, for engaging with smallholders and other stakeholders.

Furthermore, companies collaborating in these types of initiatives can benefit from economies-of-scale and information sharing that reduce compliance or certification costs.³⁰ Securing certification at the jurisdictional scale may help local economies maintain or even improve access for exports to end-markets where sustainable sourcing requirements are tightening. For instance, Marks & Spencer and Unilever, co-chairs of the Consumer Goods Forum CGF - a group of over 400 consumer-goods manufacturers and retailers with US\$3.5tn in sales - indicated they will preferentially source from jurisdictions that satisfy particular sustainability criteria,³¹ sending producers a strong positive signal and incentive.

Landscape approaches are multi-sited and multi-stakeholder in nature

Jurisdictional approaches are similar and align with local governance conditions

Landscape and jurisdictional approaches can address shortcomings . . .

. . . especially if the right stakeholders are brought on board . . .

. . . and offer stakeholders economic benefits

Sabah rejected MSPO to push forward with jurisdiction-wide RSPO certification

Similarly, in November 2017, Sabah's government reiterated its commitment to RSPO certification for all its growers and palm-oil producers despite the Malaysian federal government's push for mandatory MSPO certification.³² While it is still too early to meaningfully assess the progress or outcomes of Sabah's commitment, the state's initiative represents an important opportunity to demonstrate the economic, environmental and social benefits of a jurisdictional approach.

Palm-oil supply-chain players are actively participating in landscape and jurisdictional projects

Landscape and jurisdictional approaches aim to implement a minimum level of sustainability criteria for a region and help define the baseline of good agricultural practice for different commodities. Figure 10 describes a number of landscape and jurisdictional projects involving the support of companies along the palm-oil supply chain.

Figure 10

Examples of landscape and jurisdictional approaches involving private sector actors			
Location	Company	Approach	Description
Aceh, Indonesia	Bunge	Landscape	<ul style="list-style-type: none"> Employs satellite mapping to identify at-risk forest areas Works with stakeholders to develop land use plans
Sabah, Malaysia	Nestle	Landscape	<ul style="list-style-type: none"> Riparian reforestation project to improve forest connectivity and avoid water pollution from agricultural runoff Goal of creating mixed landscape of reforested areas and palm oil plantations
Sabah, Malaysia	Sime Darby, Wilmar, HSBC	Jurisdictional	<ul style="list-style-type: none"> Private sector and NGOs supporting Sabah government's 10-year plan to secure RSPO certification for all growers and producers in the state Focus on zero deforestation, zero conflict and smallholder livelihoods
Central Kalimantan, Indonesia	Unilever	Jurisdictional	<ul style="list-style-type: none"> Partnership with district government of Kotawaringin Barat and Yayasan Penelitian Inovasi Bumi (INOBU) Will help smallholders in local jurisdictions achieve RSPO and ISPO certification

Source: Respective companies' site

Despite the opportunities that landscape and jurisdictional approaches offer for sustainable development in the palm-oil sector, their newness and complexity present a few considerations.

Landscape and jurisdictional approaches are still new and face challenges . . .

First, given the myriad stakeholders involved, it can be challenging to define and obtain a level of stakeholder consensus sufficient for effective decision making.^{33, 34} Another consideration is the long-term approach often required - sometimes years rather than months - to build consensus, align stakeholder objectives and shape policy mechanisms.³⁵ Governments, companies or donors may be used to shorter-term goals and payoffs.^{36, 37} Related to this is that effective monitoring, based on metrics identified using participatory approaches, is required to assess impact on the ground, support continued adaptive management and maintain project momentum.^{38, 39} Last, buyers should participate actively from the outset in order to ensure that stakeholders in the landscape or jurisdiction can meet expectations and increase the chances of a successful outcome.

. . . but promise to be powerful if used with consideration for local context

Despite these considerations and the need for further piloting on the ground, landscape and jurisdictional approaches can be powerful strategies for sustainable development in the palm-oil sector, if used in the right context and conditions. In particular, they offer scalable means for the private sector to address some of the most challenging issues with supply-chain sustainability, and improve its contribution to sustainable development.



Producers embracing more stringent standards

Beginning with the impact of the Paris climate agreement, signed in 2016, this section explores sustainability trends relevant to palm-oil production in Indonesia and Malaysia, and explores the challenge of improving yields and sustainability among smallholders.

Indonesia has been the world's largest palm-oil producer since 2006

Paris's impact on producers

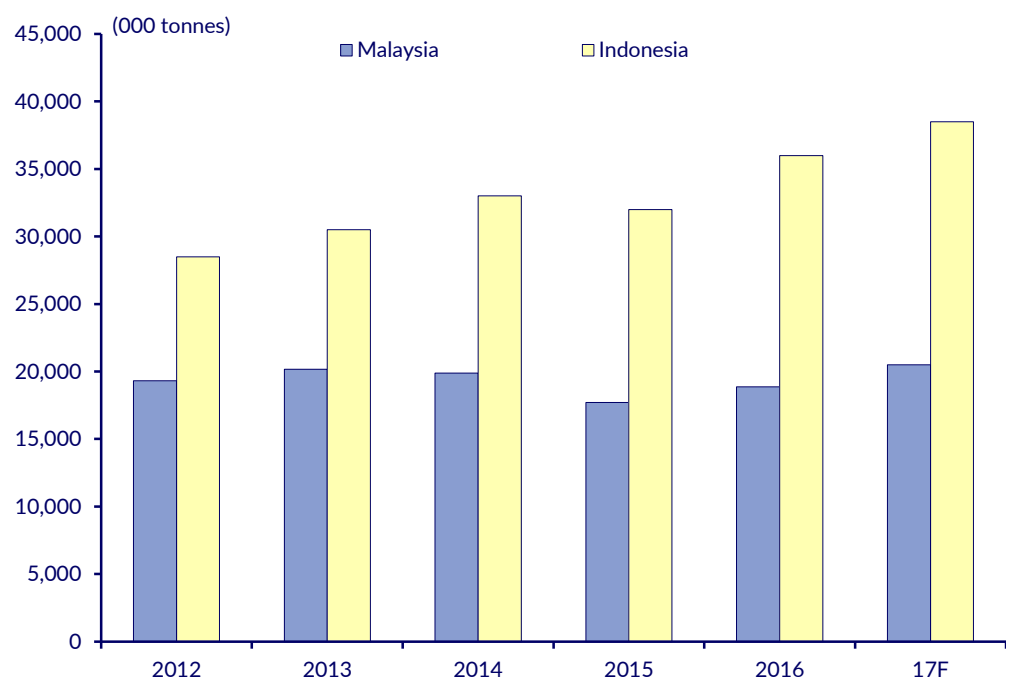
Indonesia and Malaysia are the two major palm-oil producing countries, with 55% and 29% of global production in 2016.⁴⁰ Indonesia's palm-oil sector has experienced stronger growth in recent years. In 2006, it overtook Malaysia as the world's largest producer by volume, and experienced a 6.2% Cagr in the 2012-17 period, compared to Malaysia's 1.2%.⁴¹

Global palm-oil production will grow in 2018, but faces medium-term risks

Looking ahead, palm-oil production is expected to remain healthy in 2018. Barring any unforeseen weather events, expected normalisation of tree-production yields from the El Nino of 2015/16, as well as the higher productivity expected from Indonesia's growing mature area, are expected to underpin a c.5% growth in global production. That said, Malaysia's ageing tree profile and materially slower new planting/replanting activities observed since 2015 - amid more stringent sustainability compliance from major planters - could pose a risk to palm-oil-supply's medium-term growth potential.

Figure 11

Palm-oil production in Malaysia and Indonesia



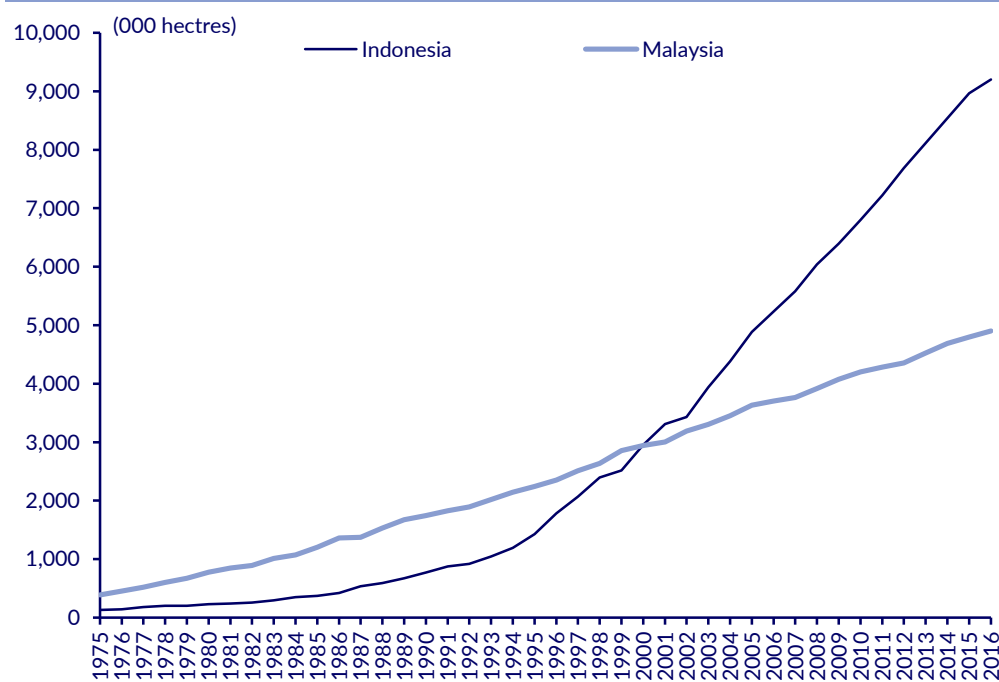
Source: USDA

Oil-palm cultivation has historically driven deforestation . . .

Since 2000, the area of land under cultivation for oil palms has more than tripled in Indonesia, and grown by 67% in Malaysia (Figure 12). The oil palm is a tropical species, and plantation expansion has mainly taken place in parts of the world with high carbon, high-biodiversity forests. This has contributed to significant deforestation, degradation of peatland, and greenhouse-gas emissions. Research estimates that in Indonesia and Malaysia, 54% and 40% of palm-oil plantation expansion over 1989-2013 came at the direct expense of cleared forests.⁴²

Figure 12

Land area harvested for palm oil in Indonesia and Malaysia



Source: USDA

. . . which is expected to continue under business-as-usual conditions

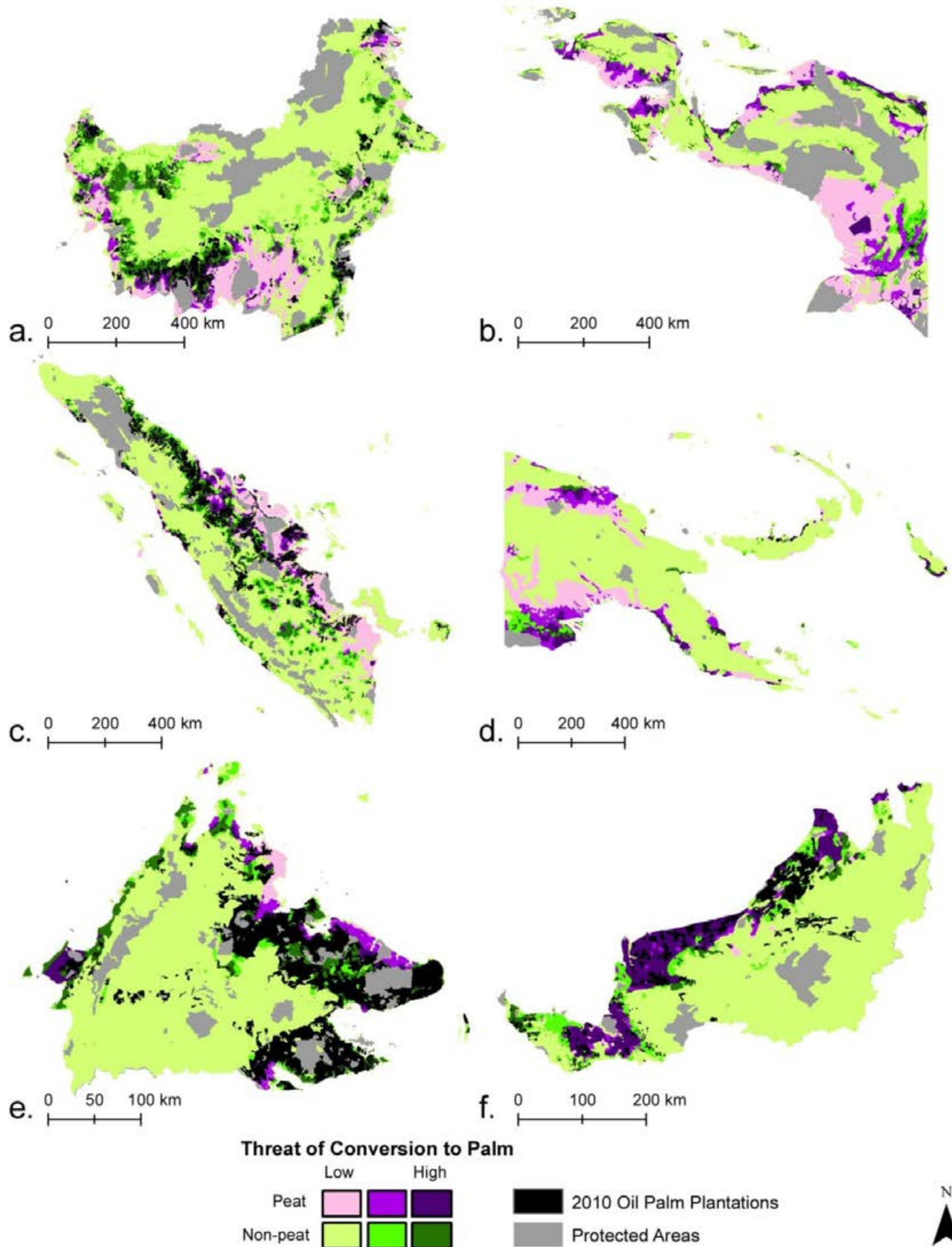
While land conversion in these countries has slowed somewhat, the risk of deforestation and peatland degradation remains, as seen from the transboundary haze that afflicted Singapore and parts of peninsular Malaysia in 2014-15. RSPO research indicates a business-as-usual scenario for palm-oil expansion will see the additional development of nearly 14mha of land in Malaysia and Indonesia by 2050. This corresponds to a 61% increase in mean annual greenhouse-gas emissions from land-use change and peat, compared to 2010-20.⁴³ Figure 13 and Figure 14 illustrate the potential for palm-oil development to expand into peat and forest/other high biomass areas over 2010-50.

Palm oil's economic contribution means sector-transformation is crucial

As a result, the Indonesian and Malaysian administrations continue to face significant pressure from international bodies, civil society and the general public to introduce policies to curb greenhouse-gas emissions associated with industry development. Given palm oil's historical and potential contribution to alleviating poverty and driving economic development in both nations, their governments are slowly seeing that sustainable production, focusing on smallholder livelihoods and yield improvement, is critical to avoiding boycotts in developed countries.

Figure 13

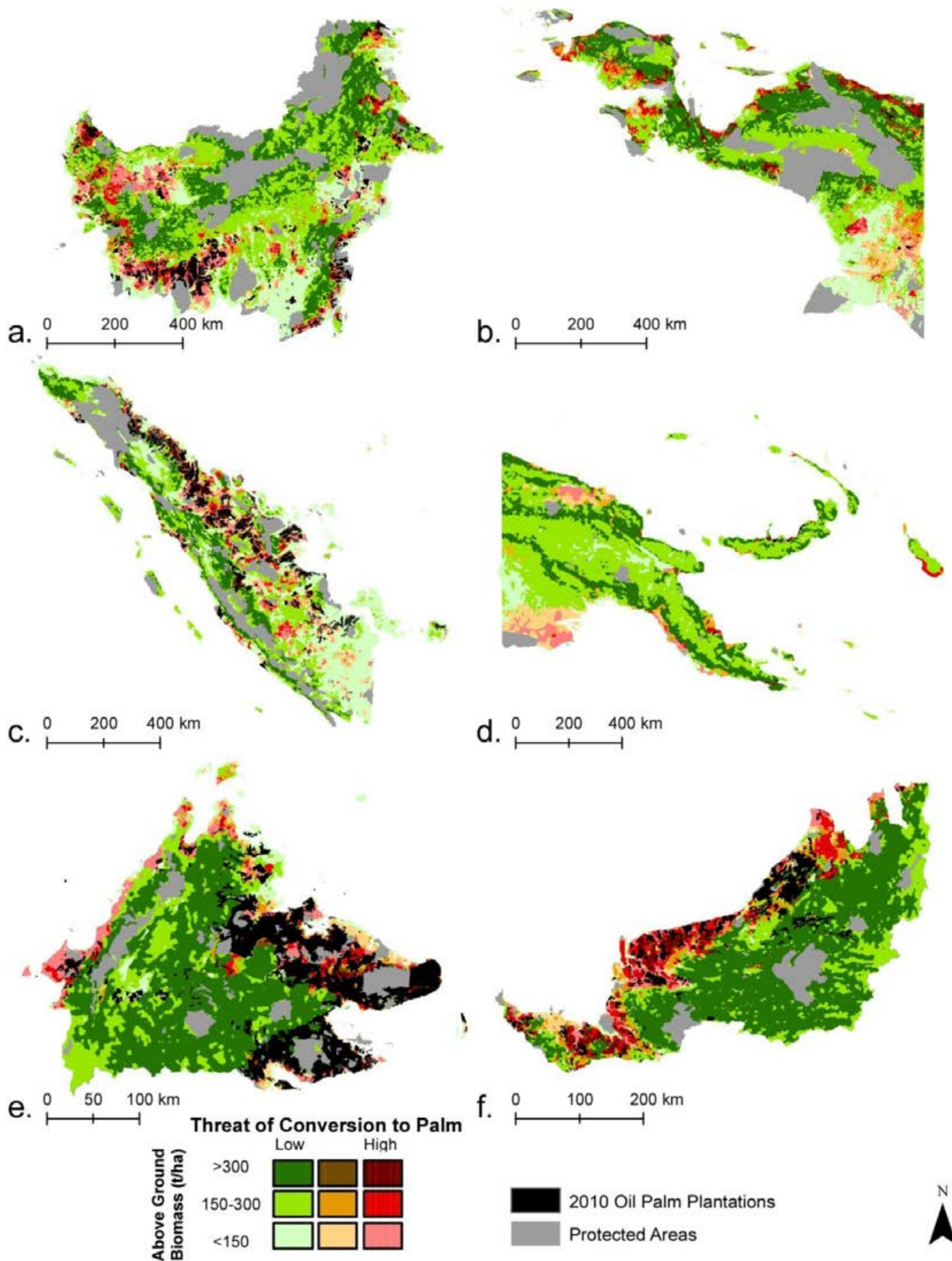
Threat maps for palm-oil expansion into peatland by region (2010-50)



Note: (a) Kalimantan, Indonesia, (b) Papua, Indonesia, (c) Sumatra, Indonesia, (d) Papua New Guinea, (e) Sabah, Malaysia, (f) Sarawak, Malaysia. Source: RSPO

Figure 14

Threat maps for palm-oil expansion into forests and other high biomass areas by region (2010-50)



Note: (a) Kalimantan, Indonesia, (b) Papua, Indonesia, (c) Sumatra, Indonesia, (d) Papua New Guinea, (e) Sabah, Malaysia, (f) Sarawak, Malaysia. Source: RSPO

Meeting Paris commitments
will require policy action on
AFOLU sector . . .

Agriculture is a primary driver of deforestation worldwide; the latest IPCC report shows that, together with forestry and other land use (AFOLU), it is responsible for 24% of all annual greenhouse-gas emissions.⁴⁴ For countries like Indonesia, where AFOLU contributes 57% of greenhouse-gas emissions,⁴⁵ meeting the objectives put forward by the Paris Agreement requires the sector to transition from being a major emitter to a net carbon sink by 2050. This will require action by stakeholders across all the supply chains in the agriculture and forestry sectors, including palm oil, which - after soya bean and maize - was the crop with the third-largest contribution to deforestation globally over 1990-2008.⁴⁶ Commitments by the Malaysian and Indonesian governments to greenhouse-gas emissions reduction are summarised in Figure 15.

Figure 15

Summary of commitments and actions by Indonesia and Malaysia on climate change		
	Indonesia	Malaysia
Greenhouse-gas reduction commitments under Paris Agreement	29% reduction below BAU by 2030 (41% with climate finance assistance)	35% reduction in greenhouse-gas intensity, compared to 2005 (45% with climate finance assistance)
Relevance of AFOLU sector to greenhouse-gas reduction	AFOLU emissions were 57% of total emissions in 2010. At least 60% of reduction will be in AFOLU sector ⁴⁷	AFOLU emissions were 6% of total emissions in 2011 ⁴⁸
AFOLU sector regulations and initiatives ⁴⁹	Sustainable forest management Forest and peat moratoria	Commitment to maintain 50% forest cover ⁵⁰ Protection and restoration of forest areas

Source: WWF

. . . which will require
different growth drivers,
such as yield improvements

As both administrations increase forest-area protection, agricultural commodities' production and export-capacity growth become increasingly restricted to yield improvements, rather than from lateral expansion. Because of the relative ease in securing new land concessions, the potential for yield improvement has never been this big a focus for palm-oil growers before. Coupled with the gap in yields between smallholders and the major players, there remains significant untapped potential for more inclusive growth via a sustainable yield-improvement-focused business model, especially at the independent smallholder level.

Indonesia's evolution

Jakarta has set ambitious
targets for palm-oil industry
growth . . .

Indonesia's commitment to reducing emissions under the Paris Agreement builds on those announced in 2009 by then president Susilo Bambang Yudhoyono. Since then, the government has pursued agricultural-sector growth through a strategy of yield improvement and land expansion. In the palm-oil sector, this included goals of increasing CPO yields from 3.5 tons to 4.5 tons per hectare, and increasing plantation land from 7.9mha to around 10mha.⁵¹ The latest data from the Indonesian agriculture ministry indicates it has already surpassed this target, with plantations occupying 12mha of land as of 2016.⁵²

. . . that conflict with its
commitments to emissions
reduction in light of
historical trends

It will be concerning if Indonesia's future growth strategy beyond 2020 continues to include land expansion, due to historical connections between commercial agriculture expansion and illegal deforestation.⁵³ Over 2000-12, an estimated 80% of forest clearance in each of the palm oil, timber and pulp-and-paper sectors in Indonesia was illegal (either through corruption via license issuances, or forest conversion without the required permits).⁵⁴ These trends reflect the difficulty the government has had enforcing regulations on commercial agriculture and forestry. Illegal land clearance contributes significant emissions in the way of peat fires and the change of land usage. In 2015, fires in Indonesia alone emitted more carbon into the atmosphere than the entire economy of Japan in 2013.⁵⁵ This complicates the country's aim of meeting its emission-reduction targets. While regulations have resulted in progress, private-sector leadership on sustainability, backed by the finance sector, is required.

Indonesia relying on a moratorium on new forest concessions to curb deforestation . . .

. . . which was extended for two years in 2017 . . .

The forest moratorium

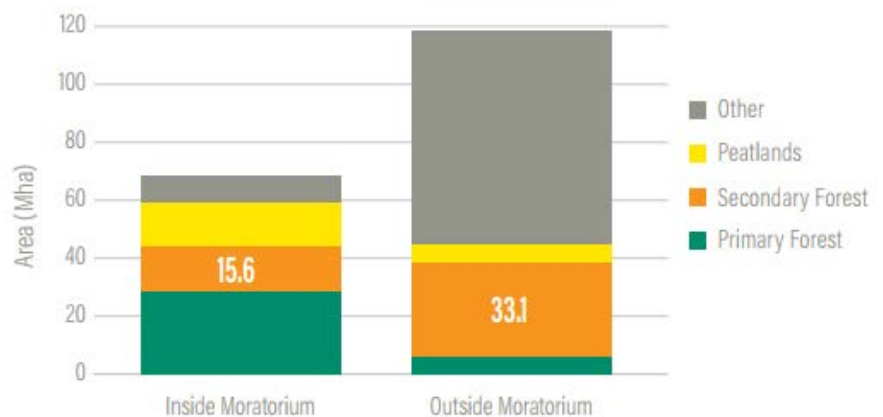
A centrepiece of Indonesia's emission-reduction plans is a moratorium on new forest concessions, mandated in May 2011 under Presidential Instruction (Inpres) No. 10/2011, which suspended the issuance of new concession licenses for 1) the conversion of primary forests and peatland to oil-palm plantations, and 2) the conversion of primary forests and peatland to fast-growing plantations for pulp and paper. The moratorium covered more than 28.4mha of primary forests and 14.9mha of peatland⁵⁶ (Figure 16), and, as of November 2016, was reported to cover an area of 66mha⁵⁷, according to the Indicative Moratorium Map (IMM), released by the forestry ministry.

The moratorium, initially expected to last for two years, was extended in 2013, in 2015 and again in May 2017. If extended until 2030, the moratorium could account for reductions of 188 MtCO₂ (or 9-11% of Indonesia's total emissions reduction targets).⁵⁸

Figure 16

Land composition inside and outside Indonesia's forest concession moratorium

Types and Amounts of Forest Area Inside and Outside Indonesia's Moratorium



Note: Mha = million hectares

Source: Austin, Stolle, and Sheppard 2012.

Source: World Resources Institute

. . . but likely will not be enough to help Indonesia meets its targets

Despite the moratorium's potential for reducing emissions, analysis suggests it may not do enough to meet Indonesia's unconditional emissions reduction target of 29%.⁵⁹ Criticism includes the fact 74% of the land protected under the moratorium is already protected under existing laws and regulations. Additionally, the moratorium exempts existing and already-approved concessions, which are estimated to contain 3.5mha of carbon-rich primary forests and peatland.⁶⁰ Overall, up to 5.8mha of peatland (29% of the country's total) and 9.6mha of primary forest (21% of remaining primary forest) remain unprotected under the moratorium.⁶¹ In addition, a significant portion of secondary forests lie outside the moratorium boundaries, and difficulties enforcing these boundaries mean the risk of deforestation in protected areas still remains.

As a result of the moratorium's shortcomings, there have been calls for an extension until 2030, preferably with an expansion of scope to also include primary and secondary forests in existing concession areas, in order to maximise its emission-reduction potential.⁶²

A 2016 moratorium on all peatland conversion is Indonesia's other regulatory centerpiece . . .

. . . and requires concession holders to restore planted peatland zoned for conservation

Formation of Peatland Restoration Agency (BRG) to oversee peat restoration

BRG's plans suggest peatland restoration to cost c.US\$26 per ha

Peat regulations are coming under legal challenge . . .

. . . but if implemented, could result in stranded assets

The peat moratorium

Peatland covers approximately 21mha of Indonesian territory, altogether sequestering around 37bn tons of carbon.^{63,64,65} It also plays a key role in preserving biodiversity. The 2011 moratorium's lack of protection for peatland has been addressed to an extent by the introduction of new regulations-; in October 2015, president Widodo officially requested that all peatland conversion be halted, even in current concession areas. This was solidified into law in December 2016 with Presidential Regulation No. 57/2016.⁶⁶

The peat moratorium is expected to last as long as it takes the government to finalise its mapping and zoning of peatland into areas for production and conservation. Plantation owners will be permitted to harvest any current batches of crops grown on land zoned for conservation, but will then be required to submit plans for the restoration of this land - restoration work must then begin within six months of the government approval.⁶⁷

In 2016, the government established the Peatland Restoration Agency (Badan Restorasi Gambut; BRG) via Presidential Regulation No. 1/2016, to oversee the restoration of burned and over-drained peatland in seven provinces across Indonesia by 2020.⁶⁸ In these provinces, 2.4mha has been targeted for priority restoration, of which 1.4m is concession land.⁶⁹ BRG will support the private sector's peat-restoration processes by helping with restoration planning and data collection. It will also work closely with private developers and local communities to ensure the effective restoration of land, and urge greater responsibility for protecting and preserving rural areas.

Peat restoration will incur costs, due to the need to block and infill thousands of kilometres of drainage canals, requiring the construction of thousands of dams.⁷⁰ Tentative plans presented by BRG suggest that restoring 20,000ha in Tahura, Jambi province will require 207 dams and cost US\$520,000, or around US\$26 per hectare of reinstated peatland.⁷¹ When applied to the entire 2.4mha of peatland earmarked by BRG for priority restoration, this translates into a total cost of US\$72m. While the Norwegian and US governments have provided initial financing,⁷² concession holders will have to bear the costs of restoring peatland in their own areas.⁷³

However, the impact of these regulations on companies will depend on the effectiveness of their implementation and the outcome of various challenges that have emerged since their announcement. For instance, in July 2017, the Indonesian parliament attempted to pass a bill, supported by Gapki, promoting industry development, which, among other measures, would protect the right of producers to plant on peat.⁷⁴ Although the bill was not passed, it received renewed support in January 2018.⁷⁵ In November 2017, the country's Supreme Court overruled a ministerial regulation that required timber companies to give up their peat-based concessions, following a lawsuit from a labour union in Riau province, Sumatra about the threat that the law posed to local livelihoods.⁷⁶

Depending on how such legal issues play out, palm-oil planters and other concession holders may face the risk of stranded assets as a result of peat regulations. Peatland within their planted landbanks may need to eventually be retired from cultivation, potentially written down in value, and the future value of their crop outputs excluded from discounted cash flow models. Undeveloped landbanks that can no longer be planted as a result of these regulations will also impact valuations.

NDPE requirements in end markets keep the risk of stranded assets alive

Land use and sustainability regulations are undermined by multiple conflicting maps

The One Map initiative aims to standardise land use maps and improve governance

Even if peat regulations prove less effective than anticipated due to challenges with implementation, the risk of stranded assets for planters active in Indonesia remains due to the increasing number of downstream and midstream palm-oil buyers who have made NDPE commitments (see Section 1 for details on NDPE).

One map to rule them all?

Indonesia's geospatial information is often limited, and the government lacks an official central geospatial database. The absence of standardised base maps for land cover, allocation and use means ministries and agencies at all levels have their own maps, which creates the potential for conflict and confusion over land use. This significantly undermines land-use regulations and government agencies' ability to enforce them. The Indicative Moratorium Map was not exempt from this problem, as seen by various government representatives' inconsistent references to land covered under the moratorium.⁷⁷

Recognising this, the One Map initiative was started c.2012 as an effort to combine disparate thematic maps from different government agencies into a single reference map.⁷⁸ President Joko Widodo revived the flagging effort in January 2016 with Presidential Resolution No. 9/2016, launching the One Map Policy. The goal is to establish a multi-stakeholder forum - involving NGOs, community groups, the government and the private sector - to build consensus on land boundaries and use, leading to clear responsibilities for each stakeholder and facilitating law enforcement. It is hoped the policy will help accelerate the resolution of conflicts over land-use and ownership, improve rural communities' livelihoods via equitable land distribution, as well as support the private sector implementing sustainability practices in their operations.

Figure 17

Timeline of major developments related to forest and peat moratoria

May 2011	Announcement of forest moratorium (Presidential Instruction 10/2011)
May 2013	First extension of forest moratorium
May 2015	Second extension of forest moratorium
Jan 2016	Formation of the Peatland Restoration Agency (Presidential Regulation 1/2016)
Apr 2016	Announcement by Joko Widodo of intended five-year moratorium on all new oil palm and mining concessions (not yet implemented)
Dec 2016	Announcement of peatland moratorium (Presidential Regulation 57/2016)
May 2017	Third extension of forest moratorium

Source: WWF

Felda had pioneered RSPO certification for smallholders . . .

Changes are afoot in Malaysia, too

Smallholders account for 40% of oil-palm plantation area in Malaysia - 16% is owned by independent smallholders and the remaining 24% is overseen by government schemes and agencies.⁷⁹ Of the various schemes and agencies overseeing smallholder production, the largest is the Federal Land Development Authority (Felda), which began commercial operations in the 1990s. Its subsidiary, Felda Global Ventures (FGV), was listed in 2012, and owns as well as operates around 340,000ha of oil-palm plantations, 72 mills and 11 refineries.⁸⁰ Felda-scheme smallholders accounted for 12% of Malaysia's planted oil-palm area in 2016.⁸¹ In 2010, Felda became the first smallholder organisation in the world to obtain RSPO certification.^{82,83}

... but withdrew from the sustainability standard in 2016

FGV had also obtained RSPO certification for 58 mills, but it voluntarily withdrew this in May 2016, due to labour and social issues in its supply chain.⁸⁴ In the interim, the group has maintained it is committed to attaining RSPO certification for all its mills by 2021.⁸⁵ As of January 2018, FGV had received certification for eight mills.⁸⁶ Its sustainability goals also involve obtaining RSPO certification for its scheme smallholders, although no definite timeframe has yet been disclosed.⁸⁷

An estimated 22% of Malaysian oil palms are grown on peat

Peatland in Malaysia

As available land in Malaysia and Indonesia diminishes, palm-oil producers - among others - have turned to draining peatland to develop new plantations. In 2015, approximately 40% of Malaysia's 2.5mha of peatland was under industrial oil-palm cultivation,⁸⁸ up from 27% in 2009.⁸⁹ This data indicates that around 22% of Malaysia's harvested oil-palm area in 2015 was peat based.⁹⁰

The country has limited regulations to protect or restore peat ...

Despite scientific evidence supporting peatland's importance as a carbon sink and the potential of drained peat to contribute to haze-producing forest fires, like those seen in 2015,⁹¹ Malaysia has yet to come up with any specific regulation that prohibits conversion of natural peatlands and peat swamp forests into other non-forest land uses. The Malaysian National Action Plan for Peatlands (Napp) includes conservation plans and best-management practices, but still allows for planting on peat. While the development of MSPO standards offers some promise for improving sustainability in the country's palm-oil sector (see Section 3), current criteria do not prohibit new or continued planting on peat. As such, there remains potential for planters to develop new plantations, as well as continue replanting, on peatland.

... which contrast with Indonesian peat regulations and developed market expectations

This contrasts with Indonesia's regulatory actions and broader trends among developed-market buyers towards no-peat policies. These trends were exemplified by recent EU dissatisfaction over the shortcomings of voluntary standards with respect to protecting peatland (see Section 1). Additionally, NDPE supply-chain commitments made by major end buyers create additional risks for Malaysian palm-oil companies with planted peat landbanks. While RSPO P&Cs currently limit new plantings on peat and require best-practice peat management, these criteria could become more stringent, depending on the outcome of the RSPO's ongoing P&Cs review, which started in November 2017.

EU regulatory trends threaten to widen the gap with growth markets

Malaysia fighting back on trade

If the European Parliament's April 2017 nonbinding resolution calling for all imported palm oil to be certified sustainable by 2020⁹² is translated into legislative measures by the European Commission, non-RSPO-certified palm-oil exports from Malaysia and Indonesia to the EU could be affected - MSPO and ISPO are not recognised by the EU as acceptable sustainability standards. Together with strengthening sustainability requirements from end-buyers in the EU and similarly progressive markets, this may create a sustainability gap between the EU and other more price-sensitive markets, such as India, China and Southeast Asia.

Malaysia's palm-oil exports face greater headwinds than Indonesia's

Competing Indonesian palm-oil exports already do better in these markets; in early 2016, lower production costs and tax structures contributed to a discount of US\$15-25 per ton of crude palm oil against the Malaysian equivalent.⁹³ Indonesian palm oil's shares in the Chinese and Indian markets in 2016 were 59% and 64% of imports to each country.⁹⁴

Malaysian government is making efforts to diversify export markets . . .

Malaysia's trade ministry has made efforts to enter other less-developed markets like Africa, the Middle East, Eastern Europe⁹⁵ and elsewhere in Asean (Vietnam and Philippines⁹⁶). We can reasonably assume that currently, such frontier markets more closely resemble India or Indonesia than the EU in terms of awareness and demand for sustainably produced palm oil. As such, it seems unlikely that Malaysian producers will experience much near-term pressure from these markets' end-buyers to take greater steps towards sustainability.

. . . in addition to defending palm-oil sustainability in the EU

To dispel negative connotations surrounding Malaysian palm oil in the EU, the Malaysian Palm Oil Council (MPOC) has responded to anti-palm-oil campaigns by launching its own initiatives. In September 2015, it launched an information campaign in Belgium and France that sought to educate consumers about sustainability initiatives in Malaysia, utilising the press, posters and digital channels for outreach.⁹⁷ In December that year, it publicly asked the Italian government for support in rejecting an Italian NGO's anti-palm-oil claims, while also launching a website to provide information to Italian consumers.⁹⁸

Figure 18

Major Malaysian palm-oil-related government and industry bodies

- The Malaysian Palm Oil Association (MPOA) is a trade association of local palm-oil companies.
- The Malaysian Palm Oil Board (MPOB) is a government agency responsible for the regulation and development of the country's palm oil industry. It is one of the agencies under the Ministry of Plantation Industries and Commodities.
- The Malaysian Palm Oil Council (MPOC) is an industry-led council, responsible for promoting the market expansion of Malaysian palm oil and its products by enhancing its image.
- The Malaysian Palm Oil Certification Council (MPOCC) is a non-profit organisation established to develop and operate the Malaysian Sustainable Palm Oil (MSPO) certification scheme.

Source: WWF

Sustainability requirements in some emerging markets may be tighter than expected

However, certain emerging markets with nascent palm-oil industries have committed to sustainability, hoping to leapfrog the issues experienced by Indonesia and Malaysia. For instance, the Tropical Forest Alliance 2020 helped form the African Palm Oil Initiative (APOI) in 2015, with the goal of facilitating sustainable development in Africa.⁹⁹ As a result, seven African nations signed the Marrakesh Declaration in November 2016, pledging to work with partners towards implementing national plans for sustainable palm-oil development.¹⁰⁰ To support national sustainability commitments, measures to protect these markets from cheaper imports of unsustainable palm oil are more likely to be introduced.

Sabah's jurisdictional programme should meet the most stringent requirements

The Malaysian state of Sabah's jurisdictional approach to RSPO certification (see Section 1) will be key to clearing any future sustainability hurdles in export markets. It produces 12% of the world's palm oil, and in November 2015 announced a jurisdictional programme under which all of its palm oil would be RSPO certified by 2025.¹⁰¹ This commitment could help secure a portion of Malaysian exports to the EU.

Palm-oil yields dwarf competing vegetable oils; potential remains for yield improvement

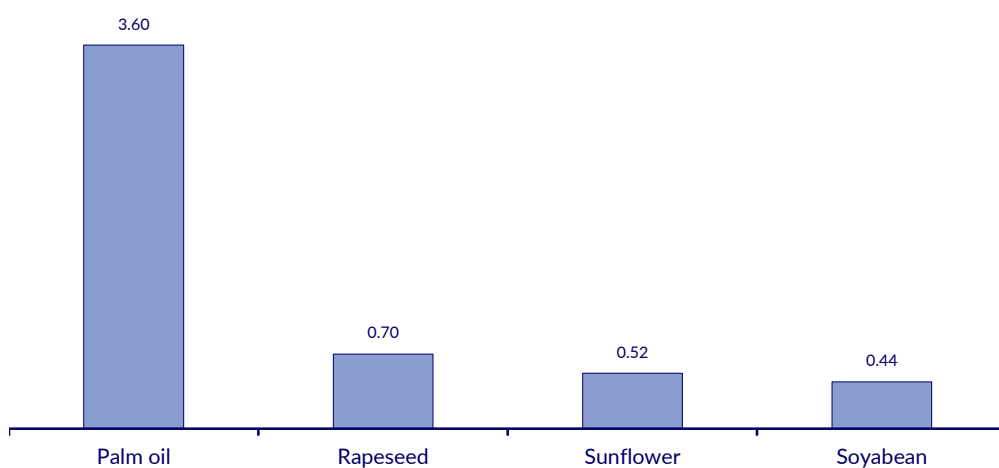
Potential to improve yield and land efficiency

Palm-oil productivity is several times greater than competing oilseeds, meaning the industry could potentially meet global vegetable-oil demand, while using much less land than other crops (Figure 19). The potential average annual oil yield from oil-palm plantations hovers around eight tons per ha, while in Southeast Asia, average palm-oil yields in top-producing plantations are presently around 5.5 tons per ha, suggesting significant room for improvement across the industry.¹⁰² This potential underscores how sustainable production is the bedrock to a sustainable food system, which in turn can help address food insecurity and support sustainable economic development. In this section we examine briefly the potential for closing the yield gap.

Figure 19

Average annual yield: Palm oil and competing vegetable oils (tons per hectare)

Potential to meet global demand



Source: F. Gunstone (2009). Average yields of the four principal vegetable oils *Lipid Technology*

Yield intensification offers better financial returns and helps avoid deforestation

Oil-palm crops respond well to agronomic management, with increased FFB (fresh fruit bunches) weight and improved yields achievable immediately after treatment. Yield intensification in existing plantations, as opposed to lateral expansion, offers better financial returns for producers.¹⁰³ The rationale for this lies in 1) how yields increase rapidly following the removal of agronomic constraints, such as input (seeds, fertiliser) quality, droughts, irregular harvesting due to lack of labour,¹⁰⁴ and 2) the lower capital intensity of investments in higher yields. Besides boosting farmers' incomes, improved yields have the advantage of sparing forests from agricultural development. With suitable land becoming scarce in Indonesia and Malaysia, yield intensification is the industry's main avenue for sustainable growth. The key lies in efficient agronomic management, estate organisation and planning with inputs.

The greatest potential to boost yields lies with smallholders...

The average annual FFB yield on independent smallholder plantations in Malaysia is reported at 17 tons per hectare, as compared to 21/23 tons for schemed smallholders/commercial plantations.¹⁰⁵ The corresponding figure among Indonesian smallholders has been estimated at around 13 tons per hectare. The FFB yield gap between independent and plasma smallholders in Indonesia has been estimated at around 10-15%.¹⁰⁶ Estimates of the yield gap between Indonesian smallholders and private and government plantations vary, with the disparity ranging from 11-14% for FFB yield¹⁰⁷ to 40% for oil yield.¹⁰⁸

... whose large share of production underscores the scale of the opportunity

The scale of opportunity available to plantation companies for boosting palm-oil production via working with smallholders is also apparent when considering that in mid-2016, smallholders in Malaysia¹⁰⁹ and Indonesia were responsible for around 40% of their countries' planted area.¹¹⁰ Around 80% of Indonesian smallholders are estimated to be independent.¹¹¹ Unlike plasma smallholders, independent smallholders do not partner with corporations and as such do not benefit from technical assistance, management and access to inputs, such as higher quality seeds and fertilisers.

Poor yields are linked to poor agronomic practices that can be fixed through training

Unsurprisingly, poor productivity is tied to poor agronomic practices. International Finance Corporation (IFC) analysis of smallholders in Indonesia found that only 31% of those surveyed spent at least three days per month on field maintenance (including weeding, pruning, and erosion control), the minimum considered as good practice. Only 63% applied enough nitrogen fertiliser, while the use of other necessary nutrients was inadequate or non-existent. Poor productivity was also caused by limited and delayed harvesting, due to difficulties in accessing the whole plantation, which contributed to FFB quality failing mill standards almost 40% of the time.

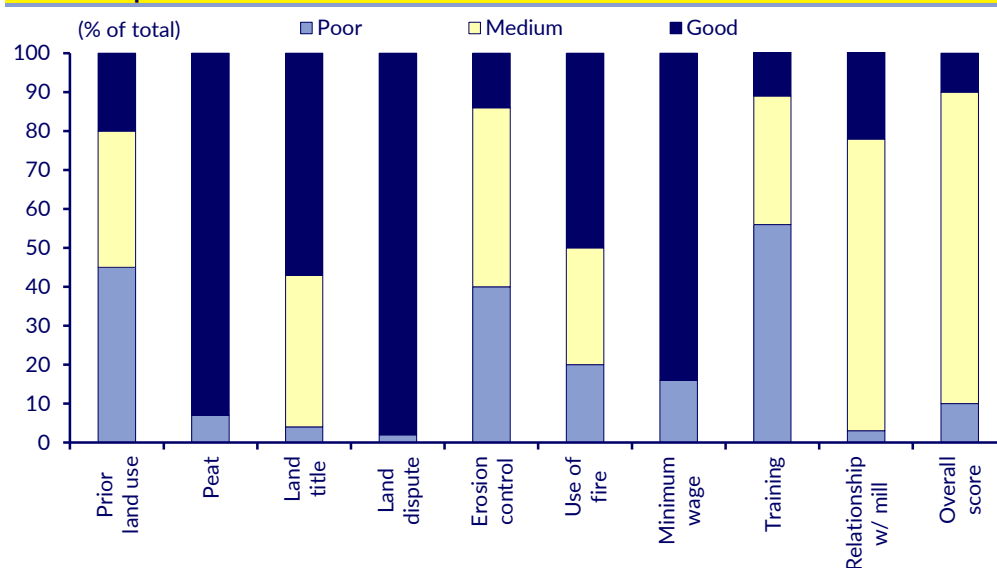
Smallholder yield improvement also produces better sustainability performance

The IFC study also found that smallholder plantations underperformed in terms of sustainability, as well as productivity. Up to 80% of those surveyed were on land originally occupied by primary and secondary forests, and only half indicated that they would not resort to burning when replanting. Poor sustainability performance is closely correlated with a lack of technical training, with only one in 10 smallholders reporting receipt of extensive capacity-building assistance from third parties. However, better sustainability performance among independent smallholders was correlated with 25% higher yields, indicating training can improve production inexpensively and in a sustainable manner.¹¹²

Training both worthwhile and inexpensive

Figure 20

Smallholder performance on a selection of RSPO criteria¹¹³



Source: IFC. 2013. Diagnostic Study on Indonesian Palm Oil Smallholders

Supporting smallholders with yield improvement can be facilitated by improving traceability

Despite efforts so far, illegality persists in supply chains . . .

. . . necessitating constant innovation on this front by traders and refiners

Innovative traceability and smallholder-engagement solutions

Improved supply-chain traceability offers palm-oil producers the opportunity to identify and engage with their independent smallholders and other suppliers on productivity and sustainability. This is particularly important because these suppliers may not yet have the technical or financial capacity to comply with major traders' sustainability requirements.

However, independently grown FFB can change hands several times before arriving at mills, and this supply base is consequently fragmented and difficult to trace. Complicating the matter is that disputes and lack of clarity over land tenures in Indonesia mean some independent smallholders grow illegally. Traceability difficulties allow illegally grown bunches to find their way into major traders' supply chains, as has repeatedly been shown by on-the-ground investigations taking place in 2011-18.¹¹⁴

As such - despite ongoing efforts by producers, large mills and refiners - traceability back to the plantation, especially for palm oil from third-party suppliers, remains a key Achilles heel that compromises near-term sustainability certification. Palm-oil companies have introduced programmes for both traceability and smallholder engagement, as shown in Figure 21.

Figure 21

Examples of producer traceability and smallholder engagement initiatives

Company/Initiative	Description
Wilmar, L'Oréal, Clariant/"Sustainable Palm Oil and Traceability with Sabah small producers" (Spots)	<ul style="list-style-type: none"> Supports 500 independent smallholders to achieve RSPO certification and 20% improvement in productivity by 2020. Guarantees better prices for FFB, agronomic advice and access fertilisers at wholesale prices
Wilmar, GeoTraceability	<ul style="list-style-type: none"> Piloting a traceability system in Sabah enabling mills to map their smallholder supply base Offers smallholders agronomic advice on yield improvement and assistance with RSPO certification in exchange for participation in the programme
Carbon Conservation	<ul style="list-style-type: none"> Uses blockchain technology and satellite data to distribute funding to Aceh villages when they successfully reduce incidences of fire
Golden-Agri Resources	<ul style="list-style-type: none"> Announced development of innovative seeds, with oil yield of 10-13 tons per ha within 24 months from planting, six months faster than the industry average of 30 months Seeds to be tested at scale over the next five years in GAR plantations in Sumatra and Kalimantan If successful, new seeds will be introduced to its independent smallholder suppliers

Source: WWF

Traceability is a means to addressing illegality and unsustainability

It is important to note that traceability should be seen primarily as a means for companies to identify and address supply-chain illegality and unsustainability. Where smallholders or other suppliers are identified as non-compliant, it is important for producers to engage with them and address the issue. Not doing so would promote a second-tier market, leaving them free to sell to less discriminating buyers. It is critical that companies address non-compliance uncovered by traceability through holistic, multi-stakeholder strategies for sustainable development, such as landscape or jurisdictional approaches, which we discussed in Section 1.

Latin America and Asia: Forest-risk commodities' production parallels

Moratoria on deforestation in the Brazilian soya and beef industries offer case studies of successful private-sector and civil-society sustainability movements supported by the national government. The success of collective action to slow Brazil's deforestation is rooted in a combination of civil-society activism and the power of FMCG companies and retailers suspending unsustainable suppliers, with the support of regulatory action and bank-financing policies. Here we take a closer look.

2000-10: Period of intense Amazon deforestation

- ❑ Between 2000-10, about 4mha of forests were destroyed annually in South America, with Brazil alone accounting for 2.6mha each year¹¹⁵
- ❑ Since the 1960s, 70-80% of the deforested areas have been used for cattle pasture and the remainder to grow feed-crops like soya.^{116,117,118}

2006: Reputational risks spark FMCG firms into taking action

- ❑ In 2006, Greenpeace report singles out end buyer demand for soya from Europe and North America as a major driving force of Amazon deforestation¹¹⁹
- ❑ Consumer protests targeting several implicated MNCs ensue, including McDonald's and Cargill
- ❑ Heightened consumer awareness leads a number of companies - including McDonald's, Marks and Spencer, Sainsbury's, Tesco, Waitrose, Carrefour, Asda, The Co-Operative Group and Royal Ahold - to form the European Soy Customer Group, with the aim of eliminating deforestation from their supply chains

2006: Brazilian soya moratorium

- ❑ Abiove (Brazilian Vegetable Oil Industries Association) and Anec (National Grain Exporters Association) sign a Soya Moratorium (SoyM), with members pledging not to trade or finance any soya grown on land deforested in the Amazon after 2006
- ❑ SoyM is renewed in 2008, gaining the support of Brazil's environment ministry
- ❑ SoyM is renewed a second time in 2010, with Banco do Brasil, a major provider of agricultural loans and one of the largest banks in Brazil, adding its signature and committing not to finance soya bean production on land deforested after 2006¹²⁰
- ❑ SoyM is renewed indefinitely in 2016 to last until all parties agree it is no longer needed

2007-08: Federal regulations activate levers for change

- ❑ 2007: Federal Decree 6321/07 restricts rural landholders' access to credit in 36 "deforestation hotspot" counties that cannot prove their property titles are legitimate¹²¹
- ❑ 2008: Brazil's central bank introduces resolution 3545, which conditions access to credit for agriculture and ranching on compliance with environmental regulations¹²²

2009: Beef comes under the spotlight

- ❑ 1 June 2009: a Greenpeace report implicates some of the world's best known consumer brands, including Nike, Unilever and Ikea, with sourcing beef and leather from cattle producers linked with illegal Amazon deforestation¹²³
- ❑ The day after, a Brazilian federal prosecutor files a billion-dollar lawsuit against the cattle industry for deforestation and resulting environmental damage;¹²⁴ leading meatpacking companies to sign legally binding agreements to stop buying cattle linked with illegal deforestation¹²⁵
- ❑ Within two weeks, Brazil's largest domestic beef buyers, including Wal-Mart, Carrefour and Pao Acucar, suspend contracts with implicated suppliers; IFC cancels a US\$90m loan to Bertin, the world's second-largest beef exporter¹²⁶

2009: Moratorium on deforestation for Brazilian beef industry

- ❑ 2009: Pressure from end-buyers leads four of the world's largest cattle producers and traders - JBS-Friboi, Bertin, Minerva and Marfrig - to permanently stop using deforestation-linked beef and leather
- ❑ Their commitments also include securing third-party certification, implementing monitoring systems, ending use of slave labour and halting illegal occupation of protected and indigenous areas

Net impact on climate change

- ❑ All of the above actions have been credited with reducing the deforestation rate by 70% between the 1996-2005 average and 2014,^{127,128} which corresponds to 3.2bn tons of avoided carbon dioxide emissions, the largest reduction in emissions from deforestation ever recorded by any country¹²⁹
- ❑ Although the Brazilian deforestation rate has worsened since, with a 29% increase between 2015-16, it is still much lower than its mid-2010s peak¹³⁰
- ❑ Brazil's beef and soya industries strongly illustrate what can be achieved through collective action by all stakeholders in the palm-oil industry

Figure 22

Overview of developments surrounding action against soy- and beef-linked deforestation in the Amazon

2006:
Reputational risks spark FMCG firms into taking action against suppliers

2006:
Facing pressure, Brazilian soya producers declare a deforestation moratorium

2007:
Federal regulations activate the finance sector's levers for change

2009:
Beef comes under the spotlight

2009:
A moratorium on deforestation for the Brazilian beef industry

Source: WWF

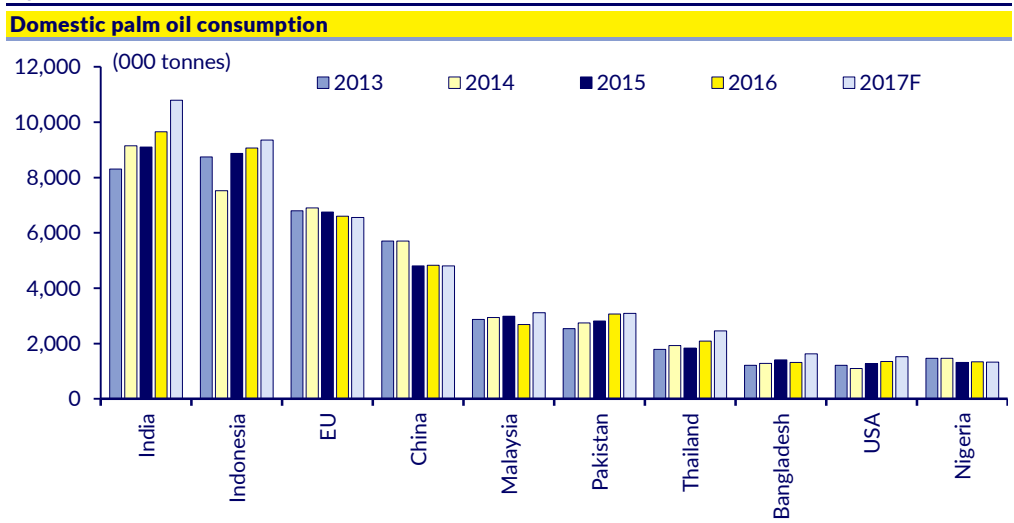


Emerging markets' growth underpinning increase in global palm-oil demand

End-markets' two-speed growth

The annual global demand for palm oil has increased by 257% over the past two decades, from 18m tons in 1998 to a projected 65m tons in 2017, representing a Cagr of 6.9%.¹³¹ Palm oil's adoption by new sectors - including energy generation and biofuel production - and the high production yields that underpin its affordability, explain the palm oil trade's rapid international expansion in recent years. It is the most common cooking oil in Asia, Africa and the Middle East, and a key input of food and personal-care products, as reflected by the upward domestic-consumption trends in the majority of the top-10 countries, by consumption.

Figure 23

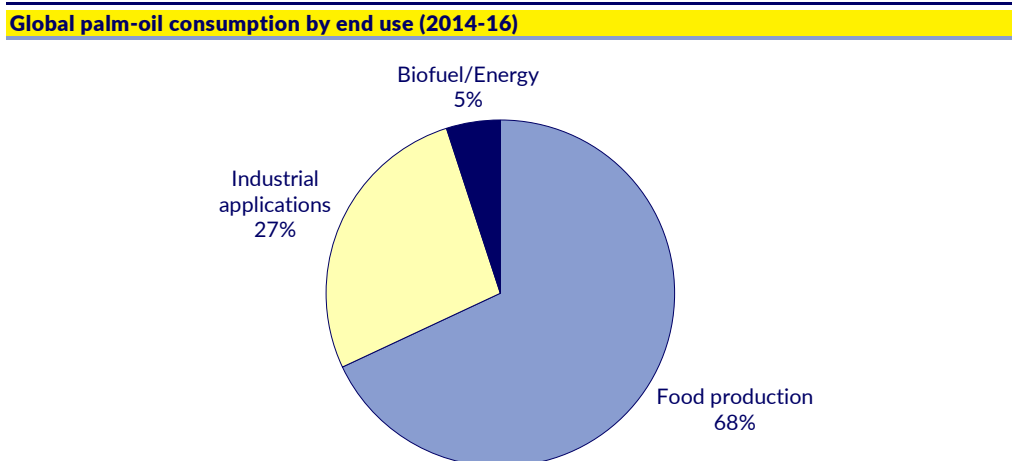


Source: USDA. Apr 2018. Oilseeds: World Markets and Trade

Palm oil mainly used in food processing and consumer-goods manufacturing

Food production and industrial applications - ie, non-food FMCG (fast-moving consumer goods) products - dominated palm oil's end uses in 2014-16; a much lower proportion was used for biofuel and other energy-related purposes (Figure 24). It is an important vegetable oil within food processing, accounting on average for 34%/61% of global vegetable oil consumption/trade in 2014-16.¹³²

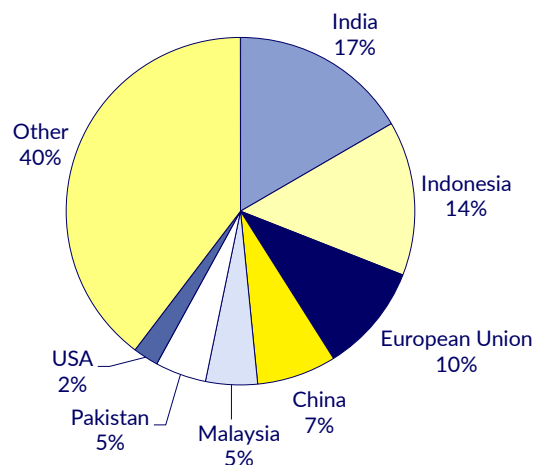
Figure 24



Source: WWF 2016 Palm Oil Report Germany: Searching for Alternatives

Vegetable oil consumption in Asia has fuelled much of palm oil's growth in demand over the past two decades, and nine Asian countries are projected to account for around 57% of global demand in the 2017 market year (Figure 25). India, Indonesia and China alone will account for almost 70% of demand in these nine Asian markets.¹³³

Figure 25

Domestic palm-oil consumption by geography (2017)


Source: USDA

**Palm-oil consumption
mainly driven by organic
demand growth in FMCG**

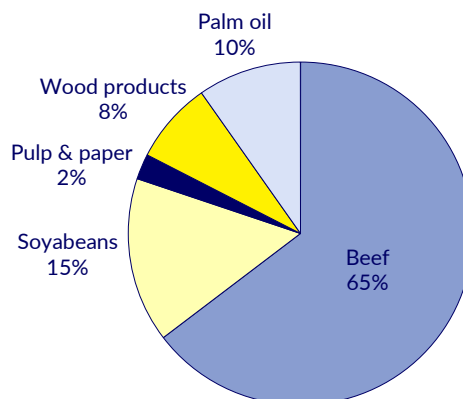
CLSA expects global organic consumption growth of c.3% to mainly drive palm-oil demand in 2018. Asia, the Middle East and Africa should remain the key growth drivers, as the demand for palm oil - used as cooking oil and in the manufacturing of everyday consumer goods, such as chocolate, lipstick and detergent - expands in line with these regions' increasing affluence and consumption. Government mandates will continue to support palm oil's use within biodiesel production, as discretionary blending remains subject to a sustained high-crude-oil-price environment to ensure economic feasibility.

**Paris Agreement galvanised
national policies/private
sector sustainability
commitments . . .**

A disruptive new political landscape

The Paris Agreement reflected strong consensus among participating countries on the need to immediately end unsustainable natural resource exploitation. The agreement represented a turning point in the fight against climate change, with long-term commitments from governments and the private sector to pursue and implement adaptation and mitigation strategies worldwide. Among the affected sectors are AFOLU (agriculture, forestry and other land use), which is responsible for 24% of global greenhouse-gas emissions (from deforestation and agricultural operations), according to the IPCC.¹³⁴ Private-sector action and national policies will increasingly incorporate zero-deforestation sourcing requirements as part of efforts to implement the Paris Agreement. This will have the biggest effect on commodities historically linked with deforestation, including beef, wood products, soya and palm oil.¹³⁵ Research estimates that in 2000-09, one-third of tropical deforestation was linked to production of these commodities in eight countries, in which palm oil was responsible for 10% of deforested land area (Figure 26).¹³⁶

Figure 26

Tropical deforestation attributed to commodities in eight major producer countries¹ as % (2000-09)


¹ Including Argentina, Bolivia, Brazil, Paraguay, Indonesia, Malaysia and Papua New Guinea. Source: Persson, M., S. Henders, and T. Kastner. 2014. Trading Forests: Quantifying the Contribution of Global Commodity Markets to Emissions from Tropical Deforestation. CGD Working Paper 384. Washington DC: Center for Global Development

... as well as influenced
biofuels production policies

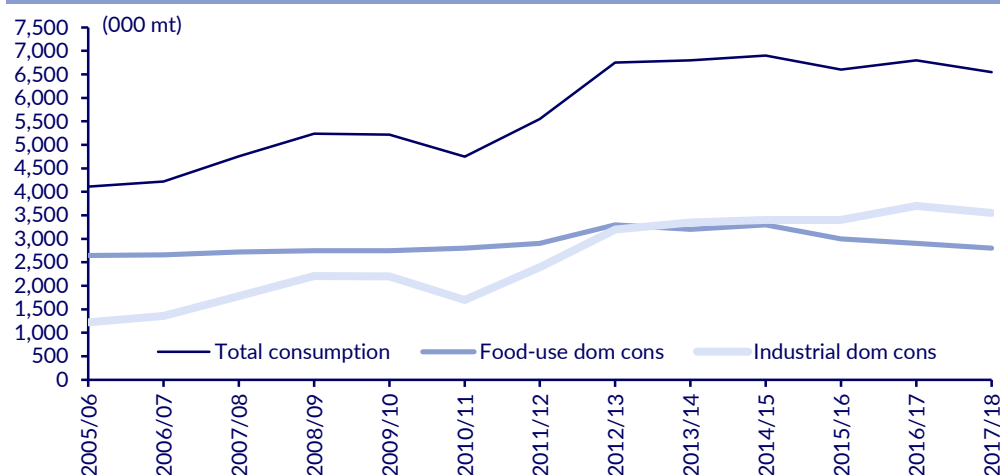
Renewable energy directives promoting biofuel use as part of the movement away from fossil fuels under the Paris Agreement could increase demand for vegetable oils such as soya bean oil and palm oil for biofuel production. Whether this leads to an increase or decrease in greenhouse-gas emissions from deforestation depends on the sustainability criteria applied to biofuel production.

... demand for palm oil in
food processing has slowed
over environmental worries

Biofuels

Total EU demand for palm oil saw a 4% decrease in 2012-17. This was mostly attributable to reduced food-manufacturing demand,¹³⁷ likely linked to growing numbers of environmentally concerned consumers. In contrast, palm-oil demand for industrial uses - including biodiesel and energy production - has remained steady, while increasing as a percentage of total use (Figure 27). In 2012, biodiesel/energy production accounted for 27%/12% of annual EU consumption, compared to 46%/9% in 2015 (Figure 28 and Figure 29). As this section shows, however, this could change, depending on the outcome of policy debates over the use of palm oil and other vegetable oils for manufacturing biofuels.

Figure 27

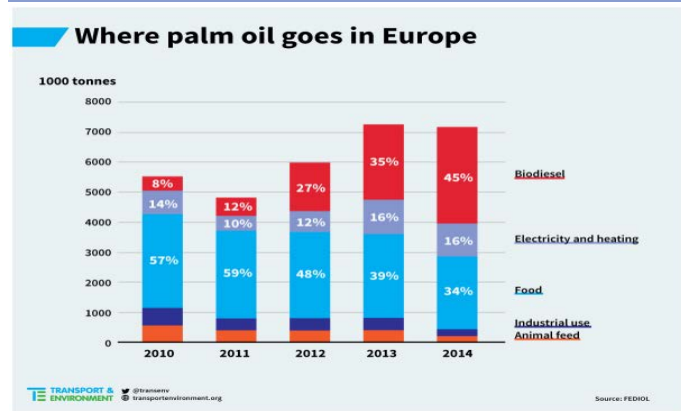
Growth in EU palm-oil consumption for key categories (food use vs other uses)


Source: USDA

EU demand for use in
biodiesel hangs in the
balance

Figure 28

EU palm-oil consumption by end-use (2010-14)



Source: transportenvironment.org

Biofuels are seen as a way to reduce transportation sector emissions . . .

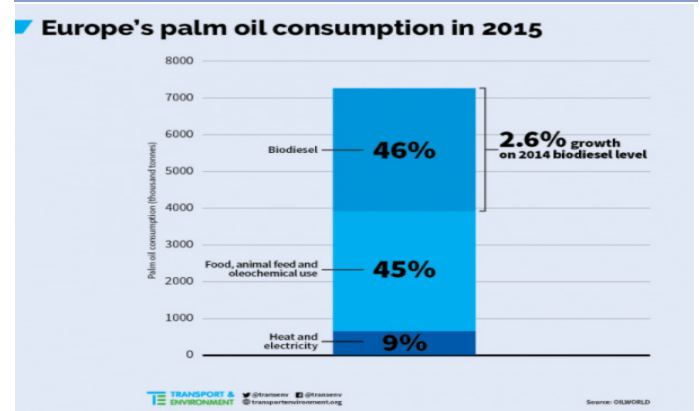
. . . but food-based biofuels come with deforestation and food security risks

Palm oil-based biodiesel previously qualified for RED if certified sustainable . . .

. . . but the EU recently announced a phase-out due to environmental concerns

Figure 29

EU palm-oil consumption by end-use (2015)



Source: transportenvironment.org

The EU's demand for palm oil and competing vegetable oils as a biofuel feedstock is related to the transportation sector's future emission-reduction efforts. With transportation responsible for 24% of CO₂ emissions from fuel combustion globally in 2015¹³⁸, and car ownership forecasted to triple by 2050,¹³⁹ biofuel blending is regarded by some as low-hanging fruit for inexpensively and quickly curbing emissions. The agenda to reduce fossil-fuel dependency and greenhouse-gas emissions has driven the EU, USA and several other countries to implement policies that require a minimum volume of biofuels to be blended with fossil fuels.

In absolute terms, the EU-28's blending mandate accounts for the largest biofuel demand and is governed and incentivised under its Renewable Energy Directive (RED). However, production has the potential to contribute towards deforestation and food insecurity, if feedstock crops are grown on deforested land or reduce crops available for human consumption.

Biodiesel manufactured from palm oil originally qualified under RED to contribute to the blending target, subject to several sustainability criteria, including minimum emission savings over traditional fossil fuels, and FFB not being grown on land converted from high carbon stock (HCS) areas or high-biodiversity grasslands and forests.¹⁴⁰ For EU biodiesel producers using palm oil as a feedstock, one way to satisfy these requirements was to source palm oil certified under a number of voluntary schemes, such as ISCC.¹⁴¹

The sustainability of using palm oil and other food crops to produce biofuels has been the basis for heated debate in Europe, and EU policymakers have proposed revisions to RED to address these issues. In June 2018, following a series of parliamentary discussions, the EU parliament announced it had set a target whereby 14% of transport fuel should come from renewable-energy sources by 2030. Member states' use of food-based biofuels to meet this target will be capped at 2020 levels, and must not exceed 7% of total transport-fuel consumption. The use of palm- and soya-based biofuels will be restricted, with a full phase-out for the former planned by 2030.¹⁴²

This follows the approval of a separate resolution in April 2017 that, among other things, called for the phase out of deforestation-linked vegetable oils, including palm oil, from EU biofuels production.¹⁴³ In both cases, the EU parliament, Commission and Council must draft and approve the final legislation before it becomes law. If finalised, the approved revisions to RED would not outright ban palm oil-based biodiesel from EU markets, but its disqualification from RED will reduce its competitiveness against traditional fossil fuels.

Norway's government has gone a step further with an outright ban

In June 2017, the Norwegian government announced a ban on the public procurement and use of palm oil-based biodiesel as part of its pledge to deforestation-free sourcing.¹⁴⁴ The ban was based on research suggesting the climate change effects from palm oil-based biodiesel are much greater than prior studies had shown, due to the effects of deforestation, peat drainage and biodiversity loss. The report also criticised the sustainability criteria employed under EU RED for not doing enough to prevent deforestation associated with feedstock production.¹⁴⁵

US Renewable Fuel Standard maintains its mandates and sustainability criteria for biodiesel

The volume of biofuel required in 2018 by the US Environmental Protection Agency (EPA) under its Renewable Fuel Standard remained almost unchanged at 19.29bn gallons, after increasing by 6% in 2016-17.¹⁴⁶ The mandated volume of biomass-based diesel, which includes that produced from palm oil, also stayed constant at 2.1bn gallons. Under the RFS, all biofuels must produce emission savings of at least 50%, compared to traditional fossil fuels.¹⁴⁷

FMCG companies are committing to science-based targets for emission reductions

End-buyers sustainability trends

Private-sector stakeholders have made significant commitments to reducing their carbon footprints. In the wake of the Paris Agreement, the number of multinational companies committing to emission reductions via the Science Based Targets initiative has grown to 414.¹⁴⁸ Of these, 68 are consumer-goods players or retailers that are taking steps to reduce emissions in their supply chains, such as making time-bound commitments to zero-deforestation.¹⁴⁹ See Section 1 for further information about the initiative.

The CGF led another private-sector initiative on deforestation. In November 2010, it announced the Deforestation Resolution,¹⁵⁰ which entails member companies pledging to achieve zero net deforestation¹⁵⁰ by 2020. This important display of leadership by FMCG companies holds much promise, given the hefty buyer influence wielded by CGF members, which collectively account for c.27% of globally produced palm oil.¹⁵¹

Progress in implementing the resolution has been slow, particularly among Asian CGF members

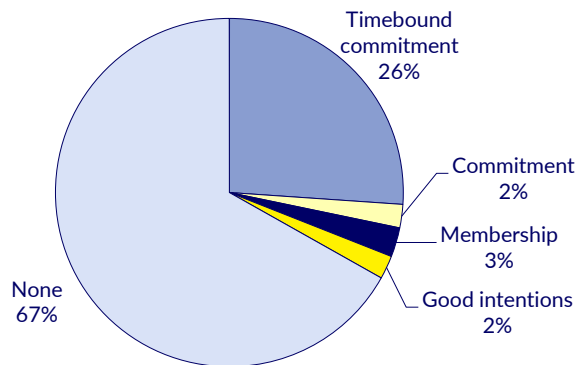
With less than three years left until 2020, these companies have made slow but steady progress - a 2016 WWF assessment¹⁵² found that of the 184 CGF members whose palm-oil reliance exposes them to deforestation risks, 52 have committed to sourcing only RSPO-certified palm oil (Figure 30) and 21 have committed to achieving full traceability in their supply chains.¹⁵³ Members with sustainability-sourcing commitments for palm oil and other forest-risk commodities (soya, pulp and paper, and beef) tended to be larger companies with bigger sourcing volumes, and were more likely to be based in Europe or North America, rather than Asia.¹⁵⁴

EU parliament resolution on palm oil and rainforest deforestation

In April 2017, the EU parliament reviewed and backed a resolution that, noting the deforestation and climate-change impact of palm-oil production, called for action to address this.¹⁵⁵ Three main recommendations made in the resolution include:

1. EU member states to sign the Amsterdam Declaration, thereby committing to 100% CSPO sourcing by 2020 (discussed later in this section)
2. Developing a single certification scheme to ensure only sustainably produced palm oil enters the EU, and that minimum sustainability criteria broadly ensure imported palm oil is NDPE compliant and inclusive of smallholders
3. Phasing out the use of deforestation-linked vegetable oils, including palm oil, in biofuel production by 2020

Figure 30

Sustainable sourcing commitments among 184 CGF member companies with a reliance on palm oil


Source: WWF

NDPE commitments extend FMCG zero-deforestation commitments to address peat and exploitation issues

There has been a trend among large FMCG companies to extend their no-deforestation commitments by making much more stringent NDPE commitments in order to address peat degradation and human rights abuses as well. These have been largely voluntary, as in the case of Unilever,¹⁵⁶ Mars¹⁵⁷ and Nestle.¹⁵⁸ Investor focus on the role played by the downstream has heightened, as seen from an increased number of shareholder resolutions - Yum! Brands adopted NDPE after a shareholder resolution in April 2015.¹⁵⁹

FMCG companies will act on supplier violations of sustainability requirements

A separate review of CGF member companies' deforestation commitments by the Global Canopy Programme and CDP¹⁶⁰ found that palm-oil buyers are very strongly driven by reputational risk, with 75% of them recognising its importance, but only about half expressing concern about regulatory risks.¹⁶¹ This suggests a high sensitivity towards consumers' sustainability-related expectations and concerns.

IOI learned lesson the hard way with a stock price drop and bottom-line hit . . .

A case in point is how CGF member companies, including Unilever, Kellogg's, Mars, Johnson & Johnson, Nestle and Colgate-Palmolive, suspended IOI Group as a palm-oil supplier in April 2016, following multiple complaints from NGOs and media coverage that it was in violation of RSPO certification requirements. IOI reported that the suspension led to a 5% volume decline at its Rotterdam refinery,¹⁶² contributing to a net loss in 2Q16 of RM59m, down from a net income in 2Q15 of RM113m.¹⁶³ Moody's cited the suspension when reviewing IOI's credit rating for a downgrade in May 2016,¹⁶⁴ and IOI underperformed the FTSE Bursa Malaysia Asian Palm Oil Plantation Index in 2016 by 11.7%.¹⁶⁵

. . . with some buyers still staying away

While IOI Group's corrective actions enabled the reinstatement of its RSPO certification in August 2016, its sales recovery took longer.¹⁶⁶ Unilever only resumed buying from IOI in August 2017.¹⁶⁷ However, as of 7 June 2018, Nestle has maintained a public statement on its website explaining its decision to stop sourcing palm oil from IOI, as well as its position on other palm oil-related controversies.¹⁶⁸

Chinese private-sector players have started moving to sustainable sourcing

China moves towards more sustainability commitments

China's private sector has made a number of sustainability commitments in collaboration with government institutions, reflecting a growing recognition of the urgent need to reduce the country's environmental footprint, both on the domestic front and through international procurement.

Figure 31

Summary of private sector sustainability commitments on deforestation in China

Initiative	Date	Description
Forest Declaration	Dec-15	<ul style="list-style-type: none"> Launched at UN Climate Conference in Paris WWF and nine leading Chinese timber producers and buyers, including China Vanke, Nature Home and Zhejiang Yoyu Bamboo Commitment to eliminating deforestation-linked timber products associated from supply chains by 2030
China Sustainable Paper Alliance (CSPA)	Sep-15	<ul style="list-style-type: none"> Promotes responsible sourcing of paper products in China Launched by WWF and Chinese Forestry Industry Association Founding members include 10 domestic and international pulp and paper companies, including China Paper and Sun Paper, China's largest public and private paper companies
China Sustainable Retail Roundtable (CSRR)	Mar-13	<ul style="list-style-type: none"> Promotes more sustainable production and sourcing among Chinese retailers Members include 13 companies with over US\$94bn in revenues from >12,000 stores, including China Resources Vanguard, one of China's largest supermarket chains Launched from partnership between WWF and the government-linked China Chain Store and Franchise Association (CCSFA)

Source: WWF

RSPO is building its presence in China . . .

Sustainability-related palm-oil initiatives in China

An estimated 70-80% of the palm oil used in China is household cooking oil and for manufacturing processed foods, such as instant noodles, with the remainder used for producing biofuels and other non-food products.^{169, 170} Certified sustainable palm oil (CSPO) uptake in China is currently low, at an estimated 50,000 tons in 2015, less than 1% of the total consumption.¹⁷¹ RSPO has recognised China's importance as a key market and set a target of 10% CSPO uptake by 2020.¹⁷² Consequently, it has attempted improve awareness and demand for CSPO in Chinese companies' supply chains, through multi-stakeholder cooperation.

. . . with the support of key industry associations and major palm-oil buyers

In July 2016, RSPO successfully hosted the first China Sustainable Palm Oil Supply Chain Forum in Chengdu. Jointly organised by the Chinese Chamber of Commerce of Foodstuffs and Native Produce (CFNA), RSPO and WWF China, the forum was attended by government and private-sector representatives, including companies like COFCO, Julong, and Mars. Most recently, in March 2018, RSPO and CFNA signed a five-year strategic partnership to promote CSPO.¹⁷³

RSPO is raising awareness among consumers in China

Consumers are also a focus of RSPO's efforts, and it and other NGOs have held multiple awareness-raising campaigns. RSPO's most recent effort, in August 2017, was its Say Yes to Sustainable Palm Oil campaign - launched in Beijing and then Shenzhen - and part of China's fifth annual Sustainable Consumption Week. It partnered with Chinese supermarket chains to raise consumer awareness about the impact of palm-oil production and secure their support for CSPO.

Chinese RSPO membership is growing

Overall, RSPO's efforts appear to be bearing some fruit. As of July 2017, there were 73 member companies in China - a 97% increase from 2016 that included the addition of key state-owned enterprises, such as Sinograins Oil Corporation.¹⁷⁴ Over the same period, there was also a near-twofold increase in the number of Chinese RSPO-certified facilities to 81.

Commitment to sustainability in competing soya bean industry lags

The demand for palm oil in China depends on the competition from soya bean oil, which is a co-product of crushing soya beans to produce meal for animal feed. This underpins overall demand for soya bean imports¹⁷⁵ and makes the oil readily available domestically, contributing to its competitiveness against palm oil.¹⁷⁶ Like palm oil, soya bean production is linked to deforestation and AFOLU emissions, but primarily in Latin America. Soya bean buyers can commit to sustainable

sourcing through the certification offered by the Round Table for Responsible Soy (RTRS), though commitment to buying RTRS remains low in China.¹⁷⁷ It is unlikely Chinese buyers will be swayed to adopt CSPO over ordinary soya bean oil on the basis of sustainability, but it may nevertheless be worth keeping an eye on how uptake and awareness of RSPO compares with RTRS in the future.

More education, awareness for price-sensitive India, Indonesia

India

Palm-oil consumption to grow with India's income and population expansion

India's vegetable oil consumption per capita has risen steadily over the last few decades, with stronger growth registered after the government lowered import duties on refined vegetable oils in 2008. Nevertheless, India's average annual consumption of 15kg per capita for 2012-14 was still lower than the world average (19kg), and significantly less than the USA (39kg), EU (24kg) and China (22kg).¹⁷⁸ In light of this data, even faster growth is expected in the coming years, on the back of increasing income levels, urbanisation and population expansion.

Palm oil is now the most widely used vegetable oil

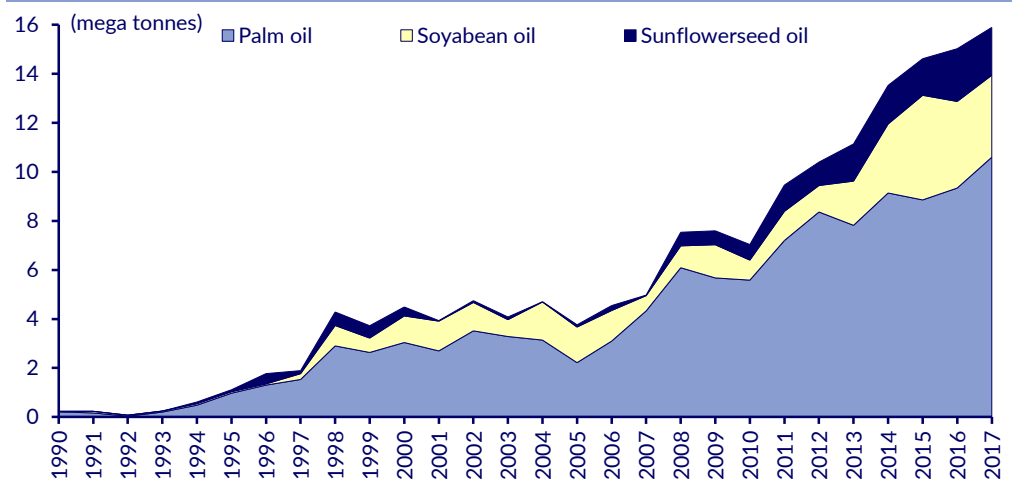
Palm oil is now the single most consumed vegetable oil in India. Around 90% is used for food and cooking, and a significant percentage is sold loosely (as opposed to branded packaging), mainly to low- and lower middle-income households.¹⁷⁹ Other buyers in the cooking segment include the government and food-and-beverage establishments. The remaining 10% is used by FMCG companies to manufacture personal-care and cosmetic products.¹⁸⁰

Besides demand, tariffs on palm imports are a key influence

Palm oil's share of India's vegetable-oil imports has risen since the 1990s, thanks to its competitive pricing against other vegetable oils. Palm-oil prices in India depend largely on imports from Indonesia and Malaysia, which account for 64% and 34% of imports.¹⁸¹

Figure 32

Indian imports of major vegetable oils



Source: USDA

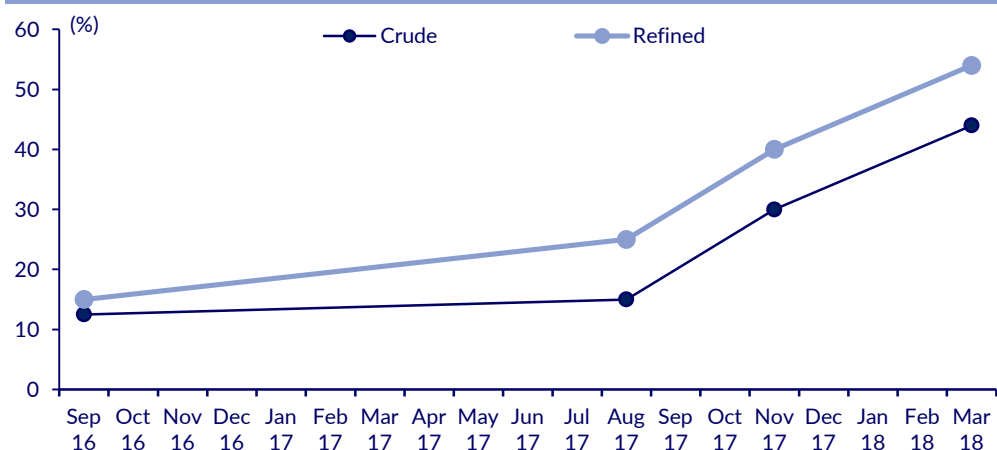
Consequently, alongside domestic demand, trade policy plays a role in the Indian palm-oil market. As protective measures for its domestic oilseeds market, Indian import duties on crude and refined palm oil have been raised repeatedly over the last 18 months, after last being cut in September 2016, culminating in decade-highs of 44% and 54%. In the near term, this is expected to slow overall palm-oil imports,¹⁸² and could affect CSPO uptake in the future if import taxes stay high.

High price sensitivity
hinders Indian uptake of
sustainable palm oil ...

Beyond trade conditions, the Indian palm-oil market presents other challenges for increased CSPO uptake. The main issue lies with households - in a country where 21% of the population live well below the poverty line, even a modest price increase can affect livelihoods, leaving little room for environmental concerns. The premium for CSPO has been estimated as ranging from US\$10-50 per ton, depending on its traceability classification.¹⁸³ The government, which in the past has subsidised the price of essential goods, like palm oil, has little incentive to bear CSPO's surplus costs as these would quickly add up. Pricing is also an issue for Indian FMCG companies. Although awareness of RSPO and the issues related to unsustainable palm oil have improved, they feel minimal pressure from consumers, civil society or shareholders on their sourcing policies, making them reluctant to switch to CSPO.

Figure 33

Indian import tariffs on palm oil



Source: WWF

... and environmental
consciousness is generally
low ...

Price concerns aside, Indian consumers, unlike their EU and US counterparts, are simply not aware or concerned enough about sustainability to pressure domestic suppliers about their palm-oil sourcing practices. In addition, brand risk has limited influence due to the small share of demand accounted for by Indian FMCGs.

... but MNCs in India may
have some ability to drive
sustainable sourcing

Despite this, hope remains that the increasing global sustainability commitments by multinational FMCG companies may have cascading effects on the Indian market, pushing local buyers and importers towards RSPO certification. An indication of this may be the growth in Indian RSPO memberships, from four to 44 over the past five years. This business-to-business engagement may help RSPO members bring knowledge about certification processes, improved environmental sustainability, social justice and conservation efforts to India.

Indonesia

Indonesian palm-oil
consumption has grown
from cooking-oil demand

In Indonesia, annual palm-oil demand has grown from around 1.3m tons in 1988, to 9m tons in 2017 - of which around 29% is biodiesel feedstock and the remaining 71% for food-related and other uses.¹⁸⁴ Historically, growth in palm-oil demand for food-related uses has been linked to Indonesian consumers' shift away from coconut oil for cooking.¹⁸⁵ Palm oil now accounts for over 90% of Indonesia's vegetable oil consumption, signalling that this substitution process is nearly complete.¹⁸⁶ As such, we expect demand for palm oil as a cooking oil will increase more slowly, and in line with population growth.

Its use in FMCG product manufacturing looks set to grow

Demand for processed foods and FMCG products, however, may take over as a driver, in light of growing middle-class incomes and increased investment in Indonesian oleochemical facilities.¹⁸⁷ These are required to refine crude palm oil into ingredients for manufacturing soap, shampoo and other personal-care products. Biodiesel production has also contributed to palm-oil demand in Indonesia, as a result of the government's mandate for biodiesel to supply 30% of the transportation, industry and electricity sectors' energy by 2020.¹⁸⁸

NGO campaigns aim to tackle low RSPO commitments and consumer awareness

At present, there is little commitment to RSPO by Indonesian corporate palm-oil buyers. A total of four consumer-goods manufacturers were listed as members on its website, as of 7 June 2018.¹⁸⁹ This tallies with low consumer awareness of RSPO, although this is changing with increasing NGO campaigns.

Government commitments and public procurement policies aim to address deforestation footprint

Tightening European government procurement policies

The EU set itself the goal of ending deforestation twice, by signing up to UN Sustainable Development Goal 15 ("Life on Land") and the 2014 New York Declaration on Forests. To contextualise these commitments, research for 1990-2008 estimates the EU imported 33% of all crops grown on deforested land, corresponding to 7.4mha of cleared forest globally. Imports of soya beans and palm oil to the EU accounted for 82% and 17% of this impact.¹⁹⁰ In recognition of this impact, the EU and its member states have developed and rolled-out sustainable public procurement policies.

Public procurement is a large source of demand for palm oil

There is plenty of potential for public-sector procurement to drive demand for more sustainable goods and services; estimates indicate that government procurement accounts for 12% of the UK's palm-oil imports.¹⁹¹ As such, public procurement policies for food and catering services could help drive demand for sustainable agricultural commodities, such as CSPO.

Green Public Procurement Plan recommends governments commit to sourcing CSPO

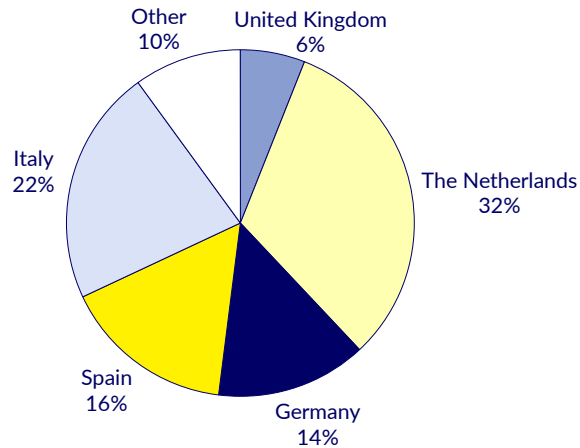
One example of sustainable public procurement policy is the EU's Green Public Procurement Plan (GPP), which offers guidelines for EU member governments to adopt in their public procurement, and includes measures deemed necessary for member countries to work towards the UN Sustainable Development Goals (SDGs) and Paris Agreement commitments. Within the GPP, food and catering criteria are specifically designed to encourage organic production, animal welfare and sustainable sourcing of forest-risk commodities. Currently under revision, the GPP's criteria for food and catering-services procurement require a minimum percentage of palm oil-containing products that must be made using CSPO. Depending on the product, the revised minimum percentages are 10-30%.¹⁹²

EU national alliances for sustainable palm oil are committing to sustainability standards

European national alliances

Besides public procurement policies, industry alliances are also driving the uptake of CSPO. National alliances and commitments to sourcing CSPO have emerged across Europe, forming in Belgium, Denmark, France, Germany, Italy, the Netherlands, Norway, the UK and Sweden. Though independent from each other, these alliances present common requirements for their member - an unconditional commitment to source 100% CSPO. Some alliances have also adopted further requirements related to traceability. Together, the EU-based alliances represent nations that together account for at least 74% of EU palm-oil imports (Figure 34).

Figure 34

EU palm-oil imports by destination country (2015)


Source: RSPO

The case of the UK illustrates the potential impact of this type of commitment - the Department for Environment, Food & Rural Affairs (Defra) reported that after its 2012 commitment,¹⁹³ the percentage of segregated and mass-balance CSPO rose, from 9% in 2009 to 60% in 2015, representing a nearly five-fold increase in the absolute tonnage imported.¹⁹⁴

Espo aims to support EU national alliances with 100% CSPO sourcing and full traceability

Cooperation between national alliances is strong; many helped establish the European Sustainable Palm Oil project (Espo), which is intended to support European national initiatives develop plans for achieving 100% CSPO by 2020, as well as for member states that aim to achieve full traceability to plantation by 2020. It will also oversee the implementation of a monitoring system to assess CSPO uptake in Europe and facilitate stakeholder dialogue.

Seven EU governments have pledged to promote sustainable palm oil via Amsterdam Declaration

RSPO played a key role in facilitating the Amsterdam Declaration in Support of a Fully Sustainable Palm Oil Supply Chain by 2020, which was signed in 2015 by Denmark, France, Germany, the Netherlands, Norway and the UK, and subsequently Italy in 2017. The Declaration reflected EU governmental support for Espo's goals and included pledges by member states to promote the goal of a fully sustainable palm-oil supply chain, to support further development of sustainability standards, and to facilitate dialogue among stakeholders.

Nine major palm-oil buyers in Singapore have pledged to 100% CSPO sourcing

Southeast Asia

In September 2017, WWF released a palm-oil buyers' scorecard report that assessed Malaysia and Singapore-based FMCG and food-services companies on the transparency and commitments regarding the sustainability of their palm-oil sourcing practices. As a result of the report and accompanying consumer campaign, nine Singapore-based companies signed pledges committing themselves to develop time-bound plans to achieve 100% sourcing of CSPO.

Launch of Saspo promises to improve CSPO procurement in the region

The pledge signed by these companies also included a commitment to join the Southeast Asia Alliance on Sustainable Palm Oil (Saspo),¹⁹⁵ which was launched in 2016 by WWF Singapore, together with five founding members, including MNCs (Unilever, Danone, Ikea) and Singapore companies (Ayam Brand, Wildlife Reserves Singapore). Saspo's launch represented a strong response to public outcry and

activism following severe occurrences of haze in Singapore in 2014-15. The alliance aims to drive sustainable procurement commitments from Southeast Asian end-buyers, with the goal of normalising CSPO procurement, so as to prevent deforestation and transboundary haze.

Sustainability requirements limiting routes to markets

Currently, five corporations, Wilmar, Musim Mas, Golden-Agri Resources, Cargill and Bunge, appear to control more than half of the global palm-oil trade.¹⁹⁶ All have committed to stringent sustainability sourcing policies, including NDPE, as a result of growing pressure from civil society, end-buyers and the finance sector.

Progressive sustainability commitments by major refiners and traders hold remarkable potential . . .

. . . but risks of a two-tier market remain

Outside of the major players, there are palm-oil refiners and traders that have not yet adopted stringent sustainability criteria, due to the perceived lack of a business case. Without their commitments to sustainability, it will be difficult to encourage the uptake of sustainable practices among smallholders and other small growers. As such, the risk remains of a formation of a secondary market for less sustainably produced palm oil, particularly when considering the growth of “softer” markets like China, India and other emerging countries in the Middle East and Eastern Europe.^{197,198}



The finance sector is a potent driver of change but has not been fully leveraged

Financial sector to raise its game

So far, we have reviewed major developments in voluntary standards and sustainable palm-oil production and sourcing certification, as well as discussed demand and supply-side sustainability trends in the palm-oil sector. The finance sector also has a crucial role to play in the industry's sustainability, given its exposure to the environmental and social risks, via lending and investment portfolios. As such, the sector has a large stake in ensuring palm oil undertakes a sustainability transition to maximise its long-term viability.

Banks and investors alike have begun to exert their influence along the entire palm-oil value chain to drive the industry's sustainable development. In this section, we offer a snapshot of sustainable palm oil-related actions lenders and investors are currently taking. We end it and our report by recommending specific action that investors can take to better assess and manage the environmental-and-social risks and opportunities within their portfolios, and the key sustainability-related engagement points to focus on with portfolio companies.

Banks are integrating sustainability requirements into their lending policies

Changing sustainability requirements from lenders

Banks are steadily tightening their palm-oil sector policies, driven by NGOs, multi-stakeholder initiatives and industry regulators. After an international NGO reported in January 2017 that HSBC was funding palm-oil companies complicit in deforestation,¹⁹⁹ the bank introduced NDPE into its lending criteria.²⁰⁰ This was an important signal since NDPE requirements exceed current RSPO criteria. Other banks, such as ABN-Amro and BNP Paribas, have gone beyond RSPO certification by including HCS and NDPE-related criteria. Asean banks are also starting to introduce palm-oil lending policies. This means unsustainable producers could be increasingly unable to meet lending banks' requirements, and may face higher borrowing costs.

Banks are taking action against clients that violate sustainability requirements

The intensifying public spotlight has also made banks more willing to swiftly act on violations of their responsible lending criteria. After NGOs wrote to HSBC and other banks in June 2017²⁰¹ about plans by a Noble Group subsidiary to clear-cut Indonesian rainforest, HSBC requested that RSPO investigate the claims. RSPO subsequently recommended the plantation development in Papua be suspended, to allow for further investigation and assessment.^{202,203} Noble halted the project.

Interest rates tied to client sustainability

Most recently, banks are using new loan products to directly tie the cost of capital to sustainability performance. ING and BNP Paribas signed first-of-their-kind deals with Wilmar in November 2017 and Olam in March 2018, with interest rates that increase/decrease in line with sustainability performances.

Banks' commitments to no deforestation

Bank-led multi-stakeholder initiatives like the Banking for the Environment Initiative²⁰⁴ (BEI) also promise to drive sustainable palm-oil production. It launched the Soft Commodities Compact in 2010 to align banks with the Consumer Goods Forum's goal of achieving zero net deforestation in member companies' supply chains by 2020. Twelve banks have adopted the Soft Commodities Compact, together accounting for around 50% of global trade finance.²⁰⁵ Adopting the agreement entails commitments to finance the transformation of supply chains and raise banks' standards across the industry.²⁰⁶

The technical guidelines for implementing the compact list key performance indicators (KPIs) that look at the percentage of a bank's customers whose operations are subject to time-bound plans for achieving compliance with the bank's commitment to the agreement, eg, obtaining RSPO certification. Another indicator is the percentage of a lender's customer's operations in soft-commodity supply chains that are already verified as being compliant, eg, the percentage of palm-oil mills or plantation hectares that are RSPO certified.

TCFD recommends banks measure and disclose the climate risk in their portfolios . . .

. . . and investors with US\$2tn in AUM have collectively called on banks to do so as well

Banks are increasingly held accountable for their clients' human rights abuses

Regulators have pressed Asean banks to introduce sustainability lending criteria

ABS issued responsible financing guidelines and recommended anti-haze lending criteria

OJK is introducing guidance on the palm-oil sector for Indonesian banks . . .

. . . and monitoring banks' implementation progress

Global momentum, led by the TCFD, is shifting greater focus to ESG issues

There has been a global shift towards improved disclosures about banks' exposure to climate risk and other environmental, social and governance (ESG) factors. The TCFD's recommendations have garnered massive investor support and offer specific guidance on the disclosures lenders should make regarding the climate change-related risks and opportunities in banks' lending portfolios. These include a bank's total carbon emissions, not just from their own operations, but also the emissions associated with their portfolios.²⁰⁷

In September 2017, a group of over 100 institutional investors, with almost US\$2tn of assets, called for the world's 60-largest banks to take action to manage climate risk.²⁰⁸ In response to this type of pressure, lenders will naturally focus more on high-carbon industry groups - such as energy and agriculture, food and forest-related products - as they take steps to manage climate risk.

Banking and human-rights violations

In June 2017, the Office of the United Nations High Commissioner for Human Rights (OHCHR) clarified that the UN Guiding Principles on Business and Human Rights (UNGPs) applied to banks,²⁰⁹ meaning they could be held accountable for any adverse impact to human rights caused by clients' activities. This means lenders must have strong human rights due-diligence policies and processes. More broadly, it illustrates the level of scrutiny banks face with regard to the impact their lending activity has on human rights.

Regulatory moves by Asean banking regulators and associations

The move towards sustainability-criteria integration is not limited to global banks, with banking-industry regulators in both Singapore and Indonesia taking action to ensure lenders are not financing unsustainable agriculture practices. In particular, they have issued guidelines for the implementation of responsible lending practices. Further information on key developments is presented below.

Singapore

Recent severe occurrences of transboundary haze from open burning in Indonesia, in concert with public exposure about Singapore banks' financing of haze-connected business activities, resulted in the Association of Banks in Singapore (ABS) taking action. Following the 2014 establishment of the Transboundary Haze Pollution Act by Singapore's government, ABS released guidelines on responsible financing in 2015, which Singapore banks implemented by 2017.²¹⁰ The guidelines identify eight high-risk sectors, including agriculture. In 2016, ABS developed a set of anti-haze sustainability criteria that local banks are advised to follow, when dealing with clients, in order to minimise the risk of haze.²¹¹

Indonesia

Indonesia's Financial Services Authority (OJK) is also drafting guidelines for its banks to follow when lending to companies in certain high-risk sectors, including palm oil. This is part of its Roadmap for Sustainable Finance in Indonesia. The guidelines cover best practices related to the development and management of oil-palm plantations, as well as interaction with local communities (Figure 35).²¹²

In August 2017, OJK issued a new regulation on sustainable finance, mandating financial institutions to develop and submit their progress against time-bound sustainability targets. This is expected to result in increasing compliance with the palm-oil lending guidelines, which are currently voluntary.

Figure 35

Highlights of OJK's voluntary guidelines on responsible palm-oil lending, compared to RSPO		
Issue	OJK Criteria	RSPO Criteria
Legality of plantation	<input type="checkbox"/> Location permit	<input type="checkbox"/> Compliance with all legal requirements
	<input type="checkbox"/> Plantation business permit	
	<input type="checkbox"/> Land cultivation permit	
Land conversion	<input type="checkbox"/> No deforestation, defined in accordance with the forest moratorium	<input type="checkbox"/> Assessment, management and monitoring of HCV areas; recommended avoidance of HCS areas
	<input type="checkbox"/> No planting on new peat	<input type="checkbox"/> Recommends avoiding new plantings on peat
	<input type="checkbox"/> Re-wetting of peat after cycle ends	<input type="checkbox"/> RSPO best management practices for planted peat
Use of fire	<input type="checkbox"/> No clearing by fire	<input type="checkbox"/> No land preparation by burning except under Asean or other regional guidelines
Local communities	<input type="checkbox"/> FPIC	<input type="checkbox"/> FPIC
<input type="checkbox"/> Safety of workers	<input type="checkbox"/> National labour rights	<input type="checkbox"/> Adherence to ILO core conventions
<input type="checkbox"/> Traceability and transparency	<input type="checkbox"/> FFB traceability to plantation	<input type="checkbox"/> Mills commit to sourcing from identified, legal and responsible sources

Source: WWF

Blended finance instruments are scalable financing solutions that palm-oil companies can tap

Impact of new funds supporting smallholder development

As reviewed in Section 2, independent smallholder oil-palm growers often lag in terms of sustainability, due to their poor technical capability, which also correlates with poor yields. Additionally, they either lack access to finance or face prohibitively high interest rates. The World Bank emphasised in a 2015 report²¹³ that 'the private sector will play a pivotal role in financing the post-2015 development agenda.' In line with this expectation, new facilities underpinned by funds from governments, donors and/or development-finance institutions have recently been launched. They offer loans for projects that draw upon private-sector capital to support more smallholder engagement and sustainable agricultural commodity production.

Palm-oil companies can take advantage of these financing mechanisms to engage with smallholder growers and sustainably improve the yield and quality of externally sourced FFB. A few recent examples include the Tropical Landscapes Financing Facility (led by BNP Paribas), the Landscape Degradation Neutrality Fund (led by Mirova) and the Kickstart Food program (led by Rabobank).

Investors play an increasingly important role in shaping the industry

Collaborative investor initiatives on deforestation and climate change

Beyond the use of shareholder resolutions, institutional investors have also signalled their intent to align their investments with sustainability goals, including the SDGs and the Paris Agreement, through a number of multi-stakeholder initiatives (Figure 36). These initiatives have grown in number, attracting a large number of signatory investors representing sizeable assets under management. Through these initiatives, investors are collectively pushing for more sustainable palm oil by encouraging companies along the supply chain to improve the transparency and sustainability of their production and sourcing.

Investors are increasingly concerned about climate change and other ESG risks in their portfolios ...

... using their influence on unsustainable companies in high-risk sectors, like palm oil ...

The UN-supported Principles for Responsible Investment (PRI) formed an investor working group on palm oil that has been working to improve the sector's sustainability since 2010. In December 2016, PRI and US-based NGO Ceres announced a collaborative initiative to tackle the risk of deforestation in supply chains for agricultural commodities, such as beef, soya, timber and palm oil.²¹⁴ Participating investors will engage with companies in these supply chains over their production/sourcing policies, benchmark them against key indicators, and conduct national and international policy advocacy.

... which will only receive more investor focus due to TCFD recommendations

The TCFD singled out “Agriculture, Food, and Forest Products” as one of four industry groups with a high exposure to climate-related risks, as highlighted in Section 1. Its recommendations also call upon investors and banks to disclose both their portfolios’ carbon intensity and efforts to engage with investee companies over their disclosures and climate-risk management. As such, investors will look to assess these companies’ decarbonisation efforts, in order to reduce their exposure to the risks posed by climate change.

Figure 36

Major investor-led multi-stakeholder initiatives relevant to palm oil		
Name	No. of supporting investors	Total AUM represented
UN PRI Sustainable Palm Oil Investor Working Group	53	US\$11tn+
Ceres Investor Network on Climate Risk and Sustainability	130+	US\$17tn+
CDP’s forest program	365	US\$22tn+
Taskforce on Climate-related Financial Disclosures	390+	US\$22tn+

Source: UN PRI, Ceres, CDP, TCFD

HCS and peat management are likely topics for investor scrutiny ...

Investors in the palm-oil sector are therefore likely to pay more attention to business models, particularly the extent of peatland and high carbon stock (HCS) forests in unplanted landbanks, management practices and restoration plans for existing peat plantations, as well as potential for yield improvement in their own plantations and smallholder supply bases.

... which will extend to buyers that continue to source unsustainable palm oil

The TCFD recommendations will also raise investor expectations of downstream palm-oil buyers, whose supply chains potentially connect them to deforestation and peat-related emissions. Investors will increasingly expect these companies to disclose what they are doing to reduce the carbon intensity of their operations and sourcing, which will require making commitments to purchasing only CSPO.

Investors join banks, downstream buyers and wider society in calls for change

Investor-led initiatives will only add to the finance sector pushing for more sustainable palm oil. Ultimately, we anticipate companies will experience greater expectations from all quarters - downstream buyers, banks, investors, NGOs - to improve their transparency on deforestation, peat management and other environmental/social risks, and to take concrete action.

Corporate environmental and social management is a key value driver ...

Anticipated impact of ESG risk on investor activities

The large number of investor-led or supported initiatives for responsible investment, and the weight of AUM they command, signals a sea-change in investors’ mindsets. Corporate environmental and social practices are increasingly acknowledged as important value drivers, alongside traditional financial metrics, as demonstrated by a growing body of studies by academic institutions and banks’ in-house research teams. A Bank of America Merrill Lynch report in 2017 pinpointed ESG integration as an important means for investors to mitigate price and earning risks,²¹⁵ while analysis from HSBC revealed that in emerging markets, 50% of companies’ value drivers are related to ESG.²¹⁶

... and managing climate risks is critical for portfolio risk management

Figure 37 details some of the key sustainability risks faced by palm-oil companies using the TCFD framework.²¹⁷ By analysing how portfolio companies are managing these risks and capturing related opportunities, investors can reduce the potential volatility related to their investments in this sector, whether upstream and downstream.

Figure 37

Environmental and social risks in the palm-oil sector

Type of risk	Manifestation for companies in palm-oil sector
Transition risks:	
Policy/legal risk	<input type="checkbox"/> Stranded land assets within concession areas due to Indonesian peat/forest moratoria, end-buyer NDPE expectations <input type="checkbox"/> Higher costs of compliance from potential peatland restoration laws or other regulations, eg, carbon pricing <input type="checkbox"/> Increased litigation for violation of laws and regulations
Market risk	<input type="checkbox"/> Reduced market access due to palm-oil buyers' sustainability sourcing criteria, eg, NDPE commitments <input type="checkbox"/> Reduced access to or higher cost of loan capital due to stricter sustainability lending criteria
Reputational risk	<input type="checkbox"/> Being targeted by NGO campaigns for role in environmental degradation or human rights abuses, leading to customer boycotts and loss of brand value
Physical risks:	
Acute risk	<input type="checkbox"/> Increased disruption to operations and damage to capital equipment from floods caused by subsidence of peat-based plantations and more frequent extreme weather events linked to climate change, such as drought
Chronic risk	<input type="checkbox"/> Adversely affected FFB yields from higher local temperatures predicted in Southeast Asia due to climate change

Source: WWF

**Investors should not divest
but engage with palm-oil
companies and their banks**

Full industry engagement needed to drive longer-term sustainable growth

NGO campaigns, especially in Europe, have seen pressure mount on FMCG and food-service companies to drop palm oil in favour of other vegetable oils. However, buyers have substantial influence over producers in the form of the market signals they can send by committing to source only CSPO, as well as working with suppliers to improve production-practice sustainability. As such, cutting palm oil from their supply chains translates into a loss of influence for greater sustainability. The same is true for investors. Rather than divest from the sector, investors should maintain a seat at the table so they can drive greater sustainability in the palm-oil sector by engaging their portfolio companies - in other words, keep palm and carry on!

Recommendations:

As shareholders, investors sit in the unique position of being able to exert their influence along the entire palm-oil supply chain, from buyers to producers - and the banks that finance them. Through their investments in these companies, investors are exposed to the material risks of deforestation and climate change. With these risks, and weighing also the importance of sustainable palm oil for global food security and sustainable economic development in producer countries, there is an imperative for investors to act and help transform the industry by engaging three groups of companies about sustainability: 1) producers, refiners and traders, 2) downstream buyers, especially in the Asian FMCG and food-service sectors, and 3) banks that finance producers.

We strongly recommend investors engage actively and directly with these groups of portfolio companies, to encourage greater transparency and disclosure, and take action that moves them further along the sustainability journey. Priority points of engagement, which should be collaborative with other investors where possible, include the following:

Figure 38

WWF's recommendations for investor dialogue and engagement

Palm-oil producers, traders and refiners	Palm-oil consumers	Banks
<ul style="list-style-type: none"> ❑ Improve on the transparency of their operations and sourcing policies by disclosing against the TCFD and CDP's forest program's disclosure frameworks ❑ Committing to setting science-based targets to minimise climate-risk exposure ❑ Disclose the location, size and composition of their planted and unplanted landbanks, such as land area consisting of peat, HCV and HCS areas. Where applicable, request that companies disclose the number of hectares of land affected by Indonesia's forest and peat moratoria and expected peatland restoration requirements ❑ Join RSPO and then develop and disclose time-bound plans to achieving 100% RSPO certification, and for more advanced companies, to make time-bound commitments to NDPE and 100% traceability to the plantation level ❑ Participate in landscape and jurisdictional approaches to address illegality and unsustainability in their smallholder supply bases 	<ul style="list-style-type: none"> ❑ Commit to and disclose time-bound plans for sourcing only RSPO-certified (identity-preserved or segregated) and NDPE-compliant palm oil ❑ Commit to and disclose time-bound plans for achieving 100% supply-chain transparency and traceability to the plantation level ❑ Commit to purchasing a portion of their palm-oil supply from RSPO-certified smallholders or to supporting uncertified smallholders toward certification, preferably with a commitment to also purchase from them, through landscape or jurisdictional projects 	<ul style="list-style-type: none"> ❑ Disclose how they are managing E&S risks, including deforestation, climate change and human rights abuses, in their lending activities, especially in the agriculture and forestry sectors ❑ Develop and disclose a palm-oil sector policy that requires clients to make time-bound commitments to achieving 100% RSPO certification, NDPE compliance and supply chain traceability to the plantation level, for own operations and third-party sources ❑ Disclose the percentage of palm-oil clients' production and processing operations verified as RSPO certified and NDPE compliant

Source: WWF

Endnotes

1. <http://www.rspo.org/certification>
2. <https://www.triplepundit.com/2015/06/consumer-brands-big-investors-call-stronger-sustainable-palm-oil-standard/>
3. http://poig.org/wp-content/uploads/2014/09/Def-POIG-Charter_English_311017.pdf
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