

Colophon

To cite this report: EPOA, IDH, RSPO (2022), Sustainable Palm Oil: Europe's Business

Facts, analysis, and actions to leverage impact

Research conducted in 2022 by NewForesight Consultancy for the European Palm Oil Alliance (EPOA), IDH - The Sustainable Trade Initiative and the Roundtable on Sustainable Palm Oil (RSPO).

The following staff contributed to the report:

- Joost Backer, Dylan Jongbloed, and Laure Heilbron from NewForesight Consultancy
- Eddy Esselink and Stephania Rivera Tamayo from EPOA
- Babasola Olajide, Allie Subramanian and Margaux Duchatel from IDH
- Francesca Morgante, Hun Sung Yen, Ruben Brunsveld and Divya Bajpai from RSPO

This report was made possible with the contribution of MVO - The Netherlands Oils and Fats Industry, FEDIOL - the EU Vegetable Oil and Protein Meal Industry Association, Proforest, ASPColombia, Solidaridad Colombia.

Edited by: Jonathan Kaufman, Full Circle Solutions Writing

Design by Saar de Vries and Gerjo van Dam, Sgaar

Amended October 2022

Disclaimer

Although every effort has been made to ensure that the content of this report is up to date and accurate, errors and omissions may occur. The report is provided on an 'as is' basis and is not intended as a substitute for the reader's own due diligence and inquiry. EPOA, IDH, and RSPO do not guarantee or warrant that the report or the information contained in it is complete or free of error, and accept no liability for any damage whatsoever arising from any decision or action taken or refrained from in reliance thereon, nor for any inadvertent misrepresentation made or implied.









Executive summary

This report calls upon readers to take positive action and become leaders in driving the growth of sustainable palm oil worldwide.

Palm oil is a versatile vegetable oil that has great potential to meet the rising European and global demand for edible oils. Global production of palm oil has been climbing rapidly for five decades and is expected to grow at a compound annual rate of 5.1% in terms of revenue from 2022 to 2030. These figures show the crucial role of palm oil in meeting the future demand for vegetable oils and how important sustainable production is for the people involved and the long-term health of our planet.

For the past two decades, Europe has been a frontrunner in sustainable palm oil. However, while the European market for sustainable palm oil has reached high levels, Europe's total palm oil imports are decreasing. With demand from other parts of the world growing, it is important that other markets also commit to sustainable palm oil. Europe is an important pillar of the sustainable palm oil movement, and it is crucial that European companies and stakeholders sustain and even strengthen efforts to drive the sustainable palm oil market transformation at a global level.

Manufacturers, retailers, and food service providers ('end-users') of palm oil are key to achieving this goal. Taking effective action requires a solid understanding of the state of palm oil in Europe. This report fosters that understanding, and aims to facilitate collective and individual actions companies can take to improve the sustainability of their palm oil supply chains.



For end-users, the consideration to engage in sustainable palm oil essentially depends on two factors: (1) the 'costs' of making the investment, and the (2) 'benefits' derived from supporting sustainable palm oil versus conventional palm oil. The relative value of these costs and benefits either pose a disincentive or an incentive for companies to support SPO.

There are five key action areas through which palm oil end-users can improve sustainability of their palm oil supply chains. The five action areas are: (1) improving traceability of palm oil to processor, mill or plantation, (2) committing and implementing to No Deforestation, No Peat, No Exploitation (NDPE), (3) joining a palm oil initiative for sustainable sourcing, (4) getting certified along the supply chain, (5) joining a landscape approach to address sustainability at a jurisdictional or regional scale. While these action areas constitute an initial 'cost' to companies, they offer large, long-term potential benefits. Furthermore, acting in these areas reinforces sustainable market transformation of the global palm oil sector. It ensures that the best alternative to palm oil is sustainable palm oil.

Depending on the sustainability maturity of a palm oil end-user, companies can take concrete steps within each of the five action areas. Companies that are just starting their sustainability journey may be drawn to other different actions than those well on their way, or highly mature. For each group, the report provides actionable recommendations.

The intention of this report is to inform and incentivize a wide group of readers. Organizations are therefore encouraged to communicate about the findings of this report.



Photo by: RSPO/SayanCHUENUDOMSAVA

Before you start reading:

Who is the target audience?

The principal target audience of this report are so-called 'end-users' of palm oil, palm kernel oil (PKO), and palm kernel expeller (PKE). This includes downstream Europebased retailers, and manufacturers of food, non-food, and feed that purchase and sell products that contain palm oil, PKO, PKE, and their derivatives.1

Companies that are just starting their sustainability journey will find useful evidence for why there is a business case to strengthen their efforts on sustainable palm oil (SPO) sourcing. Furthermore, they will find the necessary tools to kick-start their sustainability journey.

change."

Companies that are well on their way or mature in their sustainability journey will find valuable information to promote uptake of sustainable palm oil amongst their upstream partners or downstream buyers or consumers. Furthermore, they will find actions to take the next step in their sustainability efforts.

Sustainable transformation of the palm oil sector requires action beyond individual companies. As a result, this report is also aimed at other stakeholders including governments from producing and consuming countries or regions (e.g. Europe), NGOs active on environmental and social issues, and research institutions.

Statement by EPOA, IDH and RSPO "We proudly present the new edition of the European palm oil market report. Stimulating the production, trade and sourcing of sustainable palm oil forms an important part of our work. between our organizations to provide you with the information you need to make a difference. With this joint effort, we do not only hope to advance the understanding of the palm oil supply chain and its challenges, but also to facilitate

^{1.} This report is not focused on companies trading, refining, or selling biofuel.

How to read this report

This report is set up in a modular way - the reader is free to either read the entire report, or select specific chapters that coincide with their interests.



Glossary

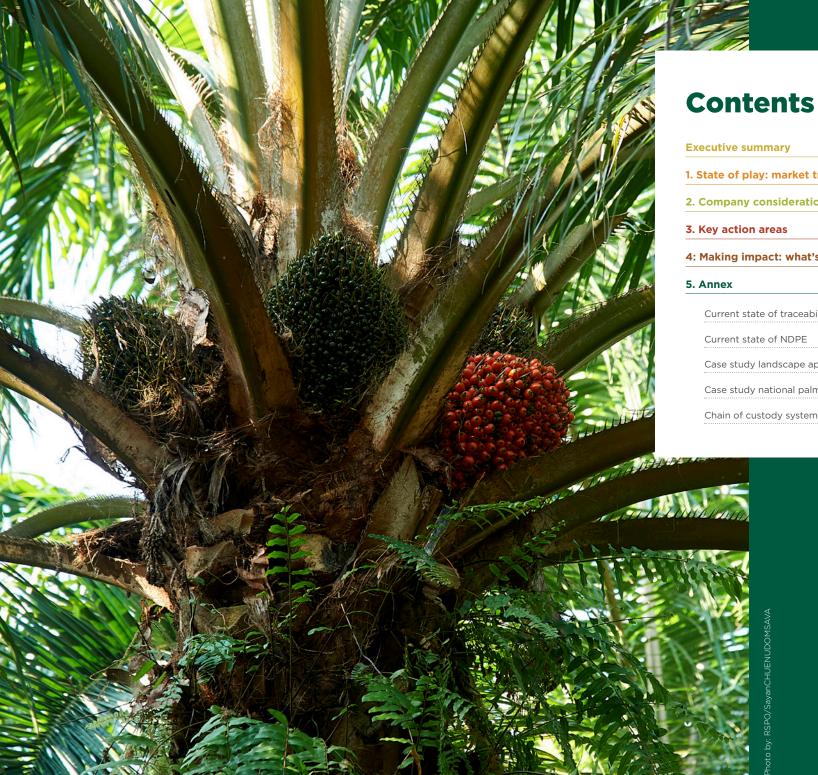
- CSPO: Certified sustainable palm oil
- CSPKE: Certified sustainable palm kernel expeller
- CSPKO: Certified sustainable palm kernel oil
- Europe: EU27, Norway, Switzerland, and United Kingdom
- FFB: fresh fruit bunches
- MT: Metric ton (1 MT = 1000 Kg)
- NDPE: No Deforestation, No Peat and No Exploitation

- PKE: Palm kernel expeller
- PKO: Palm kernel oil
- PO: Palm oil
- SPO: Sustainable palm oil
- TTM: Traceability to Mill
- TTP: Traceability to Plantation

For any questions, please feel free to reach out to the commissioners of this report:

- European Palm Oil Alliance (EPOA*): info@palmoilalliance.eu
- Roundtable on Sustainable Palm Oil (RSPO) info.eu@rspo.org
- IDH, the Sustainable Trade Initiative: office@idhtrade.org

^{*} EPOA members include Bunge Loders Croklaan, Cargill, Fedepalma, MVO, Olenex and Sime Darby Oils.



1. State of play: market trends	7
2. Company considerations: Why (not) support SPO?	14
3. Key action areas	22
company considerations: Why (not) support SPO? ey action areas aking impact: what's next nnex Current state of traceability Current state of NDPE Case study landscape approach in Sabah Case study national palm oil schemes Chain of custody systems	34
5. Annex	39
Current state of traceability	40
Current state of NDPE	40
Case study landscape approach in Sabah	42
Case study national palm oil schemes	44
Chain of custody systems	49

1 State of play 2 s

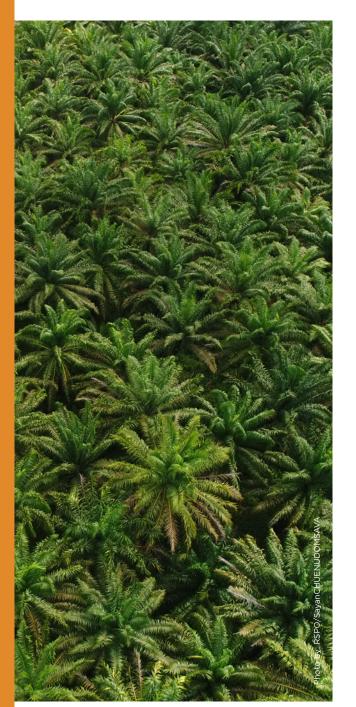
1.

State of play: market trends









KEY TAKE-AWAYS

- Palm oil is a versatile vegetable oil that has a high potential to meet the rising European and global demand for vegetable oil and derivatives.
- The global palm oil market has been climbing rapidly for five decades, and is expected to grow at a compound annual rate of 5.1% in terms of revenue from 2022 to 2030.
- Europe has been a frontrunner in sustainable palm oil. While Europe's use for CSPO has reached a high level, the markets for CSPKO and CSPKE still need to be further developed. At the same time, the total import of palm oil is in decline. The impact of the European market demand could be in decline.
- Against this background, it is imperative that Europe keeps up its supporting role in the shift to sustainable palm oil production, trade, and consumption. Furthermore, for companies already sourcing CSPO for European markets, it is pivotal these sustainability practices are extended to non-European markets as well.

1.1 Palm oil: A ubiquitous, versatile vegetable oil

Palm oil is the most widely used vegetable oil in the world. Without paying attention to it, most people consume palm oil on a daily basis. Palm oil is derived from the fruits of fresh fruit bunches (FFBs) grown on oil palms (Elaeis guineensis). In addition to palm oil, palm kernel oil (PKO) and palm kernel expeller (PKE) are produced from the same fruit.



TABLE 1 **Key information on relevant palm oil products**

	Palm oil	Palm kernel oil	Palm kernel expeller
Produced during:	Milling fruits	Crushing kernel (seed)	Co-product from crushing kernel (seed)
Typical applications (globally) ²	 Foods - 68% (of total palm oil use) Detergents - 27% (idem) Biofuels - 5% (idem) 	OleochemicalsCosmetics	Animal feed
Percentage by weight of FFB (dry basis, the other 57% is palm oil mill effluent, empty fruit bunches, and the shell) ³	21%	7%	15%
Yield per hectare of oil palm planted ⁴	1,81 - 6.35 MT/hectare	0.27 MT/hectare	0.36 MT/hectare

FFBs flow through a complex value chain as they are first converted to different oil palm products and later into ingredients that make them applicable in all sorts of products. First, FFBs are harvested from oil palm plantations. Next, they are transported to specialized mills where they are processed into crude palm oil and palm kernel. The palm kernel is further processed by kernel crushing plants, producing crude PKO and PKE. Refineries then refine the crude palm oil and crude PKO into constituents that are ready to be applied in a plethora of products.

Palm oil and PKO are versatile vegetable oils, rendering their application highly useful for manufacturers of all sorts of products. This ranges from cosmetics to cleaning agents, and from cooking oil to specialized oleochemical additives. PKE, a by-product created during the process of crushing the kernel, is often used in animal feed. Table 1 shows key information and data points that clarify the differences between oil palm derivatives, their applications, and yields at a global scale.

^{2.} Palm Oil, Our World in Data, 2021

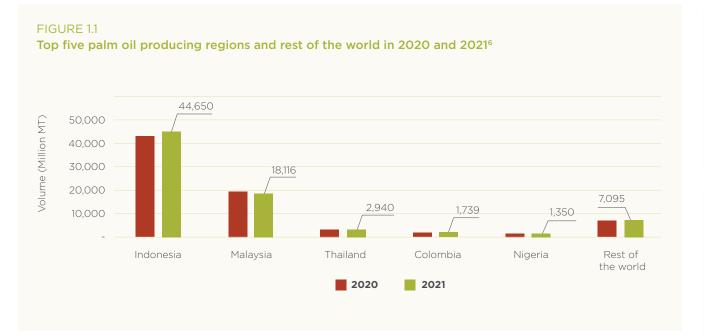
^{3.} The Oil Palm Wastes in Malaysia, N. Abdullah & F. Sulaiman, 2013

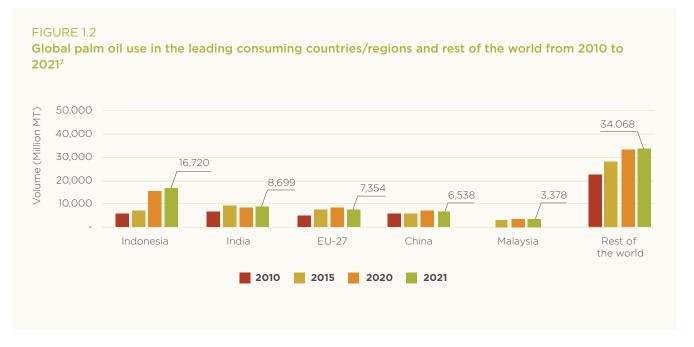
^{4.} The Business and Process, EFB Industries Limited, 2014

1.2 Global production & consumption of palm oil

Global production of palm oil has been climbing rapidly for five decades. The value of the global palm oil market was EUR 62.7 billion in 2021, and is expected to grow at a compound annual growth rate of 5.1% in terms of revenue from 2022 to 2030.5 From 2020 to 2021, global palm oil production rose by 2%, led by five countries: Indonesia and Malaysia (together responsible for 83% of global production), Thailand, Colombia and Nigeria (Figure 1.1).

Globally, the leading palm oil consuming regions (in decreasing order) are Indonesia, India, EU-27, China, and Malaysia (Figure 1.2). Of the dominant consuming regions, Indonesia (+10%) and India (+8%) show an increase in palm oil consumption between 2020-2021, whereas consumption in the EU-27 (-8%), China (-5%), and Malaysia (-2%) has decreased. Despite these trends, global palm oil use increased by 2% from 2020 to 2021, driven by increases in palm oil use in Brazil (+20%) and the United States (+16%).8





Palm Oil Market Size & Share Report: 2022 - 2030, Grand View Research, 2022

Oil World Annual 2022, Oil World, 2022

^{7.} Oil World Annual 2022, Oil World, 2022

^{8.} Oil World Annual 2022, Oil World, 2022

FIGURE 1.3
Estimated share of global CSPO consumption by region between 2019-2021¹²

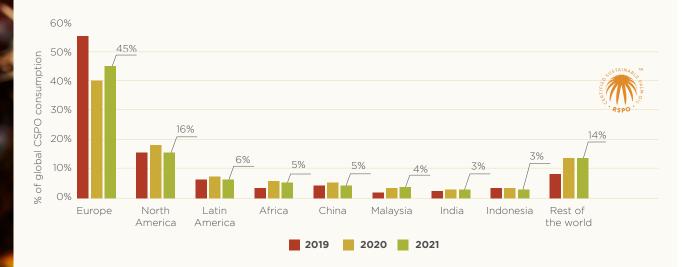
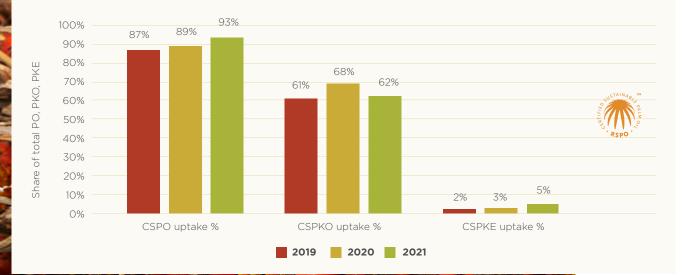


FIGURE 1.4 Estimated European progress in CSPO/CPKO/CPKE uptake from 2019 to 2021¹³



1.3 The role of Europe in sustainable palm oil

A growing palm oil market has strong economic benefits for all actors involved in the supply chain, but there are potential downsides. If not sustainably managed, demand-driven increases in palm oil production can have significant negative environmental and social effects including deforestation, peatland conversion, and poor labor and living conditions for farmers and their workers. Supporting the shift to sustainable palm oil is key to guarding against these externalities.

Europe has been an important pillar of the global sustainable palm oil movement and will have a strong role to play in driving future sustainability initiatives. European-based companies bear significant responsibility for the ongoing success of this movement.

The supporting role of Europe is reflected in two key statistics. First, Europe is the global front-runner when it comes to promoting certification in the palm oil supply chain.¹⁰ This is reflected in Europe's dominant share of global RSPO certified sustainable palm oil (CSPO) consumption.¹¹ Europe accounts for 45% of total global CSPO use and is by far the largest consumer of CSPO (Figure 1.3). This indicator illustrates the marked interest of European palm oil companies in driving sustainability in the palm oil sector.

^{9.} Read more on: palm oil-induced deforestation here, the effects of peatland conversion here, and working conditions and forced labor risks here

^{10.} Europe: EU27, Norway, Switzerland and United Kingdom

^{11.} According to the RSPO certification standard, see Chapter 3.4

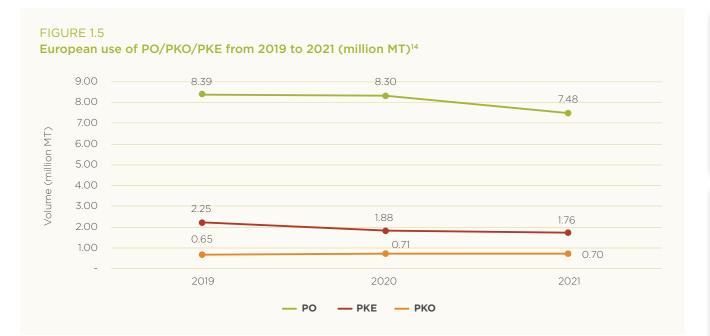
^{12.} Latest available data, RSPO Secretariat, 2022

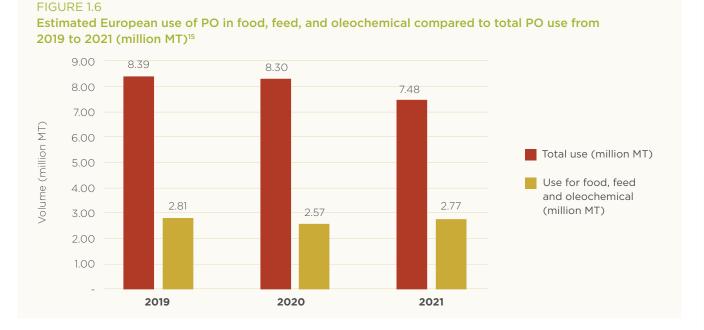
^{13.} These figures are based on indicative data from various sources, including Oil World, FEDIOL, Eurostat and RSPO. Adjustments have been made based on market observations. Please note other palm oil certification schemes are not included in the calculations.

Second, the use of CSPO and CSPKO has become mainstream in Europe. This becomes evident when observing the share of CSPO and CSPKO imports relative to the total imports of palm oil and PKO in Europe, referred to as 'uptake.' Figure 1.4 shows that of the different oil palm products used in Europe, CSPO uptake is highest (93% of total imports are certified sustainable), followed by CSPKO (62%), and CSPKE (5%). Palm oil end-users in Europe exercise their influence on sustainable market transformation of the global palm oil sector by sourcing CSPO instead of conventional palm oil.

Finally, Europe has been at the forefront of taking collective action to support SPO. An example of this is the establishment of national initiatives for sustainable palm oil across different European countries (see overview of national initiatives in the Annex). These initiatives have played a key role in stimulating the demand for sustainable palm oil and have inspired similar actions in other regions.

"Europe accounts for 45% of total global CSPO use and is by far the largest consumer of CSPO"



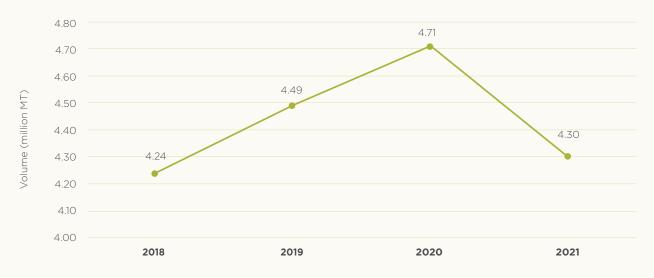


^{14.} Oil World Annual 2022, Oil World, 2022; Eurostat database, Eurostat, 2022

^{15.} These figures are based on indicative data from various sources, including Oil World, FEDIOL and Eurostat. Adjustments have been made based on market observations.

FIGURE 1.7

Palm oil feedstock used for biofuel in the EU27 from 2018 to 2021¹⁶



The impact of European market demand could be in decline. Figure 1.5 shows that Europe's total use of palm oil has decreased from 8.39 million MT in 2019 to 7.48 million MT in 2021. Demand for PKE – a common additive to animal feed – decreased from 2.25 million MT in 2019 to 1.76 million MT in 2021. For food, feed, and oleochemical (FFO) products specifically, the decline appears to be less steep. Figure 1.6 shows that the total use for FFO applications decreased from 2.81 to 2.77 million MT from 2019 to 2021

As for biofuel, after a steady increase in recent years, European use of palm oil as a biofuel feedstock sharply decreased to 4.30 million MT in 2021 (Figure 1.7). This figure will continue to fall as a result of the new EU renewable energy directive requiring PO-based fuels to be phased out by 2030 due to perceived associations with deforestation (see Chapter 2). This regulatory trend, and the resulting negative image of palm oil as a whole (beyond biofuel), could be a contributing factor to the decrease in total European PO imports .

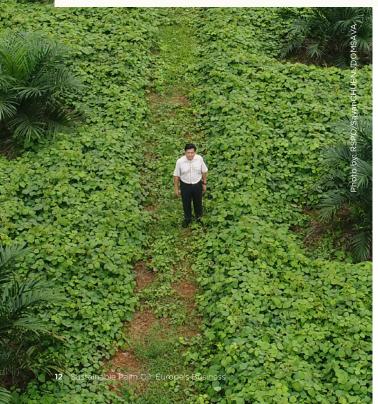
1.4 Implications of European palm oil data

The high market share of CSPO (93% in 2021) shows that companies are ready to take further actions to strengthen the impact of certification and further contribute to the transition to a sustainable palm oil sector.

As illustrated by Figure 1.4, there is still room for action when it comes to the sourcing of certified products in the CSPKO and CSPKE markets. Europe can play an important role by stimulating the market for these products. The Case Study on Market Dynamics (see below) outlines what forces play in each of these markets.

1.5 The importance of maintaining Europe's role in sustainable palm oil

For the past two decades, Europe has been a frontrunner in sustainable palm oil. While Europe's use of CSPO has reached high levels, the markets for CSPKO and CSPKE must be further developed. At the same time, total European palm oil imports are in decline. The demand for palm oil is increasingly growing in other parts of the world where the market for SPO is still in its infancy. Against this background, it is imperative that Europe keeps up its role in supporting the shift to sustainable palm oil production, trade, and consumption. Furthermore, for international companies already sourcing CSPO for European markets, it is pivotal these sustainability practices are grown in non-European markets as well. The following chapters further elaborate on why companies should support this shift and how they can engage to drive it.



Case study

Market dynamics in RSPO certified sustainable palm oil, kernel oil and kernel expeller

RSPO certified sustainable palm oil

most mature market (Figure 1.4). The CSPO market has an

RSPO certified sustainable palm kernel oil

RSPO certified sustainable palm kernel expeller

certification activity (Figure 1.4). On the physical side, there



Company considerations: Why (not) support SPO?







KEY TAKE-AWAYS

- For palm oil end-users (European based manufacturers, retailers, and food service providers), the consideration to engage in sustainable palm oil essentially depends on two factors: (1) the 'costs' of and the (2) 'benefits' from engaging in SPO.
- The relative value of these costs and benefits either pose a disincentive or an incentive for companies to support SPO.
- The 'cost' component consists of four elements required to engage in SPO: (1) an awareness of the existing solutions, (2) the required knowledge to implement solutions, (3) the costs of collaboration across the supply chain, and (4) direct financial costs.
- The 'benefit' component of engaging in SPO consists of other elements: (1) potentially positive consumer branding, (2) enhanced access to investors, (3) secured access to national or regional markets, and (4) long-term access to buyers along the supply chain.

The adverse effects of unsustainable palm oil production have become apparent to most palm oil stakeholders, but also to society at large. In recent decades, palm oil endusers have taken action to mitigate these adverse effects, assuring that their own operations are not associated with unsustainable palm oil production. Usually, companies consider one of two paths: switching to other oils, or transforming conventional palm oil production into sustainable palm oil production.



PATH I Switching to other vegetable oils

To mitigate the adversities stemming from production of palm oil, palm oil end-users may consider using alternative vegetable oils that they regard to have less potential for negative environmental and social impacts (e.g. rapeseed, soy, or sunflower). Three facts underscore why switching oils is not a future-proof path.

First, satisfying current palm oil demand would actually require more agricultural land than currently under oil palm cultivation. Oil palm has high yields compared to other crops, producing more oil from less land. Palm oil yields can range between 1.8-6.4 MT/ha, while yields for rapeseed and sunflower are only 1 MT/ha and 0.8 MT/ha respectively.¹⁷ Replacing the demand for palm oil with other vegetable oils means that more land area would have to be cultivated globally - potentially leading to increased land conversion, forest loss, or other damaging effects.

Second, oil palm cultivation provides an economic livelihood for many people in rural areas. Switching to other vegetable oils could potentially negatively affect the livelihoods of millions of smallholders. While the majority global palm oil production comes from oil palm plantations operated by large commercial estates (accounting for 60% of global palm oil production), the other 40% is

produced by over seven million smallholders.¹⁸ Moreover. as in many agricultural commodity sectors, the number of smallholders relative to large estates is increasing rapidly. In Indonesia, the area cultivated by smallholders expanded from 1.6 to 5.8 million hectares between 2001 and 2018, an increase of 262.5%.¹⁹ These smallholders could potentially lose their primary source of income if companies stop buying palm oil.

"Palm oil end-users are great levers for change, able to improve sustainability by engaging in their supply chains and by developing policies that promote SPO"

^{17.} The impacts and opportunities of oil palm in Southeast Asia, Center for International Forestry Research, 2009

^{18.} Palm oil production, consumption and trade patterns: the outlook from an EU perspective, Fern, 2022; Smallholder Certification, RSPO, 2022; The Tropical Oil Crop Revolution: Food, Feed, Fuel, and Forests, Derek Byerlee, Walter P. Falcon, & Rosamond L. Naylor, 2017

^{19.} The Mighty Impact of Smallholder Palm Oil Farmers in Indonesia, Meridian Institute, 2021

FIGURE 2.1 Company considerations determining the business case for supporting SPO Company considerations: why (not) support sustainable palm oil Costs Benefits "What you invest" Required knowledge Awareness of Consumer Access to to implement solutions branding investors Access to Direct financial Collaboration Market access across supply chain buyers costs



Third, alternative sourcing could entail disengagement from areas or supply chains where efforts to tackle sustainability risks are the most needed. Alternative sourcing is usually a strategy of last resort, often following prolonged efforts to engage in supply chains to tackle such risks.20 This is in line with the OECD Due Diligence Guidance for Responsible Business Conduct, which recommend companies exercise policies to identify, prevent, mitigate, and account for how they address sustainability risks. Palm oil end-users are great levers for change, able to improve sustainability by engaging in their supply chains and by developing policies that promote SPO (See Chapter 3 - key action areas).

PATH II Transformation of conventional palm oil production into sustainable palm oil production

Palm oil-end users can also choose to implement sustainability interventions in their existing palm oil supply chains. Working with existing producers to increase certification presents a feasible and scalable path to ensuring supply of sustainable palm oil and vegetable oils can meet growing demand. Companies can choose from at least five action areas highlighted further in this report including: improving palm oil traceability (Chapter 3.1), committing to No Deforestation, No Peat, No Exploitation (NDPE) priorities (Chapter 3.2), joining sustainable palm oil initiatives (Chapter 3.3), getting certified along the supply chain (Chapter 3.4), and joining a landscape approach to address sustainability at larger scale (Chapter 3.5).

For end-users of palm oil, there are several considerations that impact their support for SPO. Two factors stand out are: 1) the 'costs' of and (2) the 'benefits' of engaging in SPO (Figure 2.1). The relative value of these costs and benefits either pose a disincentive or an incentive for companies to support SPO. The five action areas outlined in Chapter 3 aim to minimize the costs and maximize the benefits of supporting SPO.

2.1 Costs: What companies invest

The costs are principally expressed as direct financial expenses for a company.

Awareness of solutions: Numerous activities have emerged that address sustainability issues in palm oil supply chains. However, many companies that source palm oil are not familiar with these solutions. While palm oil is used in a considerable number of products – 70% of cosmetic products and 50% of supermarket products contain palm oil – volumes are often low compared to other ingredients.²¹ Companies sourcing palm oil in relatively small amounts do not prioritize sustainable sourcing, and consequently do not become aware of solutions.

For companies more committed to sourcing sustainably, the sheer number of available options may pose a barrier to dedicating resources to one. Fortunately, there are a growing number of initiatives that provide guidance for companies at all stages of maturity in terms of sustainability. Chapter 3.3 provides an overview of sustainability initiatives that offer a range of solutions for different aspects of sustainability including traceability, risk mitigation, and getting certified. Furthermore, Chapter 4 offers concrete next steps for companies at all stages of maturity.

Required knowledge to implement: Palm oil supply chains are inherently complex. At plantation and mill level, fresh fruit bunches often undergo several transactions between growers and intermediary traders before reaching the mill. During refining, PO/PKO/PKE and their derivatives go through multiple processing stages involving many actors. These complexities make it difficult to identify, prevent, and/or mitigate embedded sustainability challenges throughout the supply chain.

To address sustainability successfully companies need significant in-house knowledge within their procurement, sustainability, and marketing departments – or the resources to outsource the necessary expertise. For many companies this poses too large a barrier.

However, many initiatives have emerged to lower the knowledge barrier, enhance trust, and strengthen collaboration and learning. Compared to ten years ago, companies have created and shared a wealth of knowledge. Expectations are therefore high for what the next ten years will bring.

Collaboration across the supply chain: Due to the high number of actors involved in palm oil production, supply chain collaboration is an essential ingredient to long-term sustainability.





Often, collaboration across so many actors is difficult. Historically only large, vertically integrated palm oil companies have been able to structurally align efforts between different stages of the supply chain. For the millions of smallholders, local governments, millers, refiners, and end-users, this collaboration has been more difficult. Collaborative efforts are further restrained by a lack of trust and willingness among supply chain actors to take the needed actions for sustainability. There are significant barriers to sharing data to trace products to mill or plantation level, implementing No-Deforestation or NDPE commitments, or getting all supply chain actors together in one room.

However, recent years have seen a dramatic increase in the number of (pre-competitive) collaboration along the supply chain and throughout the sector as a whole. Although these initiatives serve different purposes (see Chapter 3.3), they all have one thing in common: they build trust in the sector

Direct financial costs: There is a price-tag to sustainability. Sustainability solutions require upfront investments such as additional overhead (hiring new employees that bring the required knowledge), certification fees, membership fees, or the cost of implementing new traceability solutions into supply chains. These costs are in addition to the indirect costs such as obtaining 'required knowledge to implement.'

On the flipside, growing evidence shows that in the long run, the financial costs of inaction on issues like deforestation or excessive water use exceed the costs of action. For example, the Climate Disclosure Project (CDP) observes that in 2020, companies reported maximum financial impacts of water risks at USD 310 billion (cost of inaction). This is five times higher than the costs of addressing them, which was estimated at USD 55 billion (cost of action).²² In other words, companies that do not mitigate sustainability risks now will face higher costs in the future from risks such as climate change related droughts or excessive rainfall.

"Working with existing producers to increase certification presents a feasible and scalable path to ensuring supply of sustainable palm oil and vegetable oils can meet growing demand"

2.2 Benefits: What companies receive

The (financial) advantages of supporting SPO are driven by four elements:

Consumer branding: Consumers are increasingly placing value on 'sustainability' indicators. SPO helps companies differentiate their product from conventional palm oil companies. For consumers, trademarks like the RSPO logo or rankings such as the WWF Palm Oil Buyers Scorecard, World Benchmarking Alliance, and the DUH Feed Radar play an important role in distinguishing the frontrunners from the less mature companies.²³

Access to investors: The investment world increasingly integrates sustainable investments into portfolios, connected to terms such as 'ESG', 'SDG,' or 'Green bonds'. Where most investors are subject to regulation to 'avoid harm', so-called 'impact investors' go further and focus on 'doing good' with their investments. Other organizations are playing into this by offering new tools and guidance on how to mitigate deforestation-related or other risks to investment portfolios.²⁴

For companies supporting SPO, this means access to wider funding than those trading conventional palm oil. Sustainable sourcing is aligned with safer investments as well. For example, higher levels of traceability allow companies to exercise more control over their supply chains. Adverse events such as deforestation, peat fires, or supply disruptions can be more easily identified, and quickly prevented, mitigated, or addressed. This reduces supply chain and financial risks and enhances the investment worthiness of companies that make sustainability investments.



^{23.} Palm Oil Buyers Scorecard 2021, WWF, 2021; Food and Agriculture Benchmark, World Benchmarking Alliance, 2022; First aid for tropical forests: Deforestation-free palm oil and soy feed in Germany's stables, Deutsche Umwelthilfe, 2022

^{24.} How to achieve deforestation-free pensions, Deforestation Free Finance, 2022

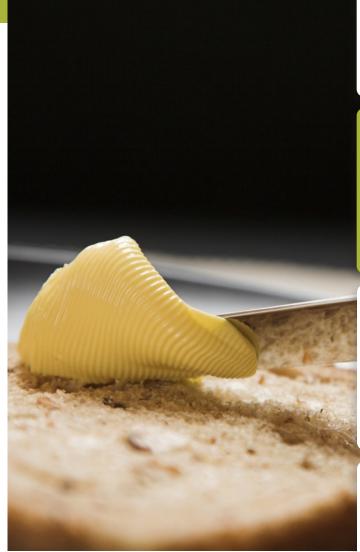
Market access: Access to national or regional markets is a key requirement for companies to thrive. It is therefore often a key consideration for companies (not) to support SPO

Globally, companies that source conventional palm oil still have access to most large markets. China, India, Malaysia, and other major consuming regions do not have strict sustainability standards. In the EU-27 (the third-largest consumer), palm oil is subject to ever more stringent sustainability regulations. The upcoming EU Due Diligence legislation on Deforestation and the EU Sustainable Corporate Governance Initiative are only two examples (see Case study: Proposed EU regulation for mandatory due diligence for deforestation). Investing in SPO helps companies stay ahead of these trends and keep operational licenses. Companies that are engaged in certification or NDPE commitments will have a head start in the face of these policy developments.

Access to buyers: For manufacturers, traders, and other business-to-business companies (not selling direct to consumers), consumer and regulatory pressure will principally be felt through increasingly stringent procurement requirements.

Nevertheless, this is not true for all supply chains. Globally, demand for CSPO is still lower than supply. Comparing global CSPO production with estimated global CSPO consumption shows global CSPO consumption constitutes 58% of total global CSPO production.²⁵ For companies (oil palm growers, refiners, palm oil end users etc.) that have invested in certification, this means they cannot sell 100% of their certified produce at a premium. and are therefore unable to cover the expenses that went into membership, compliance efforts, and purchasing CSPO. Yet 'certification' does not tell the whole story. Commitments towards sustainability via concepts such as NDPE and Zero Deforestation are growing.

It is worth noting that at the root of the costs and benefits barriers above are structural issues firmly embedded in the palm oil supply chains. A general lack of transparency and traceability, the limited collaboration between consuming and producing governments, growers, and companies, and the way the market is structured all inhibit sustainable uptake. The five action areas that follow help companies move past some these barriers, and they indirectly begin to address some of these structural challenges.



Case study

Proposed EU regulation for mandatory due diligence for deforestation

The regulation is officially called the 'Regulation of the European Parliament and of the Council on the making available on the Union market as well as export from the Union of certain commodities and products associated with deforestation and forest degradation' (source) and aims to minimize the EU's contribution to global deforestation.

What is it? The Regulation prohibits the placing or making available on the Union market, or exporting from the Union market, the relevant commodities and products* if they are a) not legal and b) if there is a non-negligible risk that they can be linked to deforestation or forest degradation. The prohibition is complemented by an obligation for companies to submit due diligence statements when placing relevant commodities and products on the market, which assure the products is compliant with both requirements.

Who is it for? The proposals targets both the companies that are the first to put the commodity or good on the EU market (operators) as well as the subsequent companies in the chain who handle the commodity or good commercially (traders). For smaller traders (SMEs) more limited obligations apply.

What does the due diligence obligation require? It should ensure that the risk of non-compliant relevant commodities or products being placed or exported from the EU market is negligible. To do so, operators and non-SME traders have to gather significant information including the geolocation coordinates of the plots of land where the commodities are being produced and adequate and verifiable

information that the relevant commodities and products are deforestation-free. On the basis of that information they have to identify and assess the risk of possible non-compliance of relevant commodities and products with the requirements of the regulation, and where necessary, they have to adequately mitigate such risks to a negligible level.

What about producing countries? The Commission will assess the risk that countries or regions therein produce relevant commodities and products that are not deforestation-free. The benchmarking system will assign each country or region one of three possible levels of risk: low, standard, and high risk. At the entry into force of the Regulation, all countries will be assigned a standard level of risk. The obligations for operators and Member States' competent authorities are differentiated according to the level of risk of the country of production or regions therein, with simplified due diligence duties for operators sourcing from low risk countries or regions, and enhanced scrutiny for competent authorities operating checks on relevant commodities and products produced in high risk countries or regions therein.

Challenges for the palm oil sector: The challenges for companies to comply lie in the combination of the short implementation deadline (12 months after coming into force), high fines for non-compliance (at least 4% of the operators or trader's annual turnover in the Member State or Member States concerned), and the requirements for geolocation and traceability, especially in relation to the inclusion of smallholders. To meet the requirements of the

current proposal, millions of smallholder farmers in the countryside of Papua New Guinea, Sarawak, and other rural areas of Indonesia, Malaysia, Africa, and Latin America need to be reached, informed, equipped, and trained. The majority of these smallholders supply mills through middlemen, meaning that most European companies currently do not have direct contact with them. To support smallholders in this transition, work must be undertaken in collaboration with local authorities, NGOs, and local supply chain actors. Another challenge is that the definition in the regulation for what constitutes "forest" differs from definitions used in other deforestation-focused initiatives (such as FAO or RSPO). European companies also bring up the duplication of efforts and costs caused by giving the traders the same due diligence responsibility as the operators as a cause for concern. Finally, the benchmarking system for producer countries has been criticized as it could lead to companies cutting good suppliers in challenging (high risk) areas since the client would not want palm oil from a region that has been classified as such.

When will it come into force? At the time of writing (September 2022) the European Council agreed to its General Approach on the regulation. The European Parliement has adopted its position on the proposal on 13 September 2022. The trialogue negotiations with European Commission will start after the Council has adopted its position too. Once these negotiations (which can still alter the text) have ended, the proposal will enter into force. On the basis of the current proposal the due diligence requirements will enter into force 12 months thereafter.

^{*}The commodities covered by the regulation are cattle, cocoa, coffee, oil palm, soy, and wood. The exact goods covered are set out in Annex I to Council Regulation (EEC) No 2658/87









At different stages in their sustainability journey, companies can take different actions to better source and sell products using SPO.²⁶ Taking action in these areas contributes to building awareness and educating consumers on the importance of SPO in a holistic and balanced manner. Moreover, it reinforces the importance of promoting the sustainable market transformation of the palm oil sector, rather than fleeing from the problem by switching to alternative ingredients. The five key action areas are:

- Improving palm oil traceability
- Committing to and implementing No
 Deforestation, No Peat & No Exploitation (NDPE)
- 3 Joining a palm oil initiative for sustainable sourcing
- 4 Getting certified along the supply chain
- 5 Joining a landscape approach to address sustainability at scale

Chapter 4 helps companies define how mature they are in their sustainability journey, and which actions suit them best. Figure 3.1 on the right shows that if applied in the right way, all five action-areas hold value for companies at different sustainability maturity levels. Whereas a company that is 'just starting' may focus on learning from others and piloting, more mature companies may leverage their position to promote SPO and share their expertise with others.





State of play

Support SPO?



^{26.} Note that these action areas provide direction for companies seeking to enhance sustainability, but are no means exhaustive. There are a number of actions complementary to those suggested in this report.



3.1 Improving palm oil traceability

Traceability is the ability to follow a product or its components through several stages of the supply chain.²⁷ Although palm oil has relatively high levels of traceability compared to other commodities (see Annex 5.1), traceability to plantation (TTP) is still challenging. The supply chains are complex and involve many stakeholders at production and processing level. Moreover, the fluid nature of palm oil adds to the complexity of securing traceability of oil palm derivatives. Whereas solid resources such as timber can be physically 'fingerprinted' and isolated from a stack of timber logs, this is not possible for a liter of fluid palm oil contained in a barrel.

Still, improving and extending traceability along the supply chain offers end-users of palm oil several benefits. Knowing the provenance of its raw materials makes a company's sustainability claim more credible.²⁸ Furthermore, traceability allows companies to exercise more control over their supply chains and reduce supply chain risks. Adverse events such as deforestation, peat fires, or supply disruptions are more easily identified and can be guickly prevented, mitigated, or addressed.²⁹ See Chapter 2 for other benefits of traceability as part of supporting SPO.

^{27.} Traceability Accountability Framework, Accountability Framework, 2020

^{28.} RSPO certification offers four distinct chain of custody systems ensuring that palm oil bought as SPO has indeed been produced by certified plantations. These systems have varying degrees of traceability. See Annex: Chain of custody systems for an overview of these four systems.

^{29.} Sustainable palm oil, Unilever, 2022

Tools to improve palm oil traceability, map supply chains and identify risks

As the section above states, improving traceability, mapping supply chains, and identifying risks are three key ingredients to addressing (visible) sustainability issues such as deforestation or fires. Figure 3.2 presents an overview of the different tools available to companies to make improvements.³⁰ Some tools, such as risk detection systems, are primarily useful for those (vertically integrated) companies close enough to the production base to mitigate these risks. Others, such as traceability tools, are useful for manufacturers or retailers interested in making sustainability claims to consumers.

As for mapping supply chains, there is a trend of moving from mapping software such as the Universal Mill List (a database of palm oil mill locations across the world) and GeoRSPO (an RSPO-led tool to map concessions), towards satellite imagery.³¹ A new market, driven by satellite companies such as Satelligence or Starling is rapidly emerging.

FIGURE 3.2

Overview of tools to help companies map their supply chains, detect risks, and trace their palm oil back to the origin (see Annex for more details).

Growers*	Local traders*	Millers	Processors & Refiners	Manufacturers	Retailers & Food service
		• Mapping lists	& software (e.g. WRI Glo	obal Oil Palm Mills)	
		• Satel	lite systems (e.g. Satellig	gence)	
		• • Drone	technology (e.g. Insight	t Robotics)	
		•	Radar Alerts (e.g. RADD))	
		Cer	rtification traceability sy	stems (e.g. PalmTrace)	
		•	Cell phone geolocation	(e.g. Orbital Insight)	
		•	External traceability so		
		•	Blockchain technology	y (e.g. Provenance)	

Mapping supply chains
 Detecting risks
 Tracing a product



not the main financers/initiators of the traceability,

supply chain, and risk management systems, they are always involved in implementation of those systems.

^{30.} Table for Section 3.1 in the Annex contains an overview of the selected tools

^{31. &}lt;u>Universal Mill List,</u> World Resources Institute, 2019; GeoRSPO – RSPO Mapbuilder App. RSPO, 2022

These mapping tools are often used in combination with systems focusing on detecting risks, such as deforestation or fires. Satellites, drones, cell phone geolocation, and/or software development kit (SDK) applications aid companies in detecting latent risks (e.g. regions that are prone to deforestation via satellites or maps) and active risks (e.g. active fires through aerial reconnaissance). Note that the nature of these longdistance mapping tools does not equip them to detect social sustainability risks such as forced labor, genderbased violence, or unfair payments. Risk detection tools are also unable to verify the sustainability of an individual product. To maximize effectiveness, companies should therefore complement these tools with traceability tools and accountability systems.

While certifications such as RSPO manage their own traceability systems (e.g. RSPO's PalmTrace - a traceability system registering oil palm products from mill to refineries), technological improvements and an increased demand for traceability across sectors has resulted in a boom of external, for-profit traceability providers such as Trase.

3.2 Committing to No **Deforestation, No Peat & No Exploitation**

Since 2013, manufacturers, refiners, traders, and mills have increasingly made No Deforestation, No Peat, and No Exploitation (NDPE) commitments. Although NDPE is not a term that is owned or protected by a certain entity, NDPE commitments typically includes three elements:

- · 'No deforestation' is typically achieved through protecting High Conservation Value (HCV) and High Carbon Stock (HCS) areas.32
- 'No Peat' refers to avoiding planting on peat.
- · 'No Exploitation' entails protecting human rights, workers' rights, and the rights of local communities and indigenous peoples.33

Companies in the agricultural sector use NDPE commitments as an industry benchmark to structure the key sustainability priorities for the palm oil sector, and demand compliance on from their upstream traders and mills. And with relative success: companies sourcing through supply chains covered by NDPE policies, show continued limited amounts of deforestation.³⁴

Furthermore, companies whose supply chains are not yet fully covered by RSPO sourcing can leverage NDPE commitments to still exercise influence over those parts of the supply chain that are not certified.



Cooperation on NDPE commitments and interventions requires that supply chain actors align methodologies and/or standards in assessing NDPE criteria, and agree on shared definitions (e.g. defining what is considered a 'forest' area).35 The NDPE Implementation Reporting Framework (IRF) was created to address this (See Case study on the next page). The IRF also benefits companies wishing to take steps in tandem with certification by scoring companies on elements that are complementary to many certification standards. This includes an absence of grievances (in case of malpractices), or the promotion of active engagement between supply chain actors.

See Chapter 2 for other benefits of traceability as part of supporting SPO. For an overview on the current state of NDPE commitments and implementation refer to the Annex: Current state of NDPE.

^{32.} High Conservation Value Network, 2022; High Carbon Stock Approach, 2022

^{33.} Palm Oil Sustainability: NDPE, Efeca, 2020

^{34.} The Chain: Deforestation Driven by Oil Palm Falls to a Four-Year Low, Chain Reaction Research, 2022

^{35.} Palm Oil Sustainability: NDPE, Efeca, 2020

Case study

NDPE Implementation Reporting Framework

The NDPE Implementation Reporting Framework (IRF) is a self-reporting tool to ensure consistency in reporting on NDPE commitments. Created in 2018, the IRF has been designed and monitored by a consortium of 29 palm oil companies and is technically executed by Proforest.

Benefits for companies: The IRF allows retailers, manufacturers, or refiners to build and receive reports in a consistent, time-efficient way. Furthermore, the consistent methodology, backed by a large part of the sector, allows for higher credibility of reporting results. Finally, a standardized, comparable reporting structure enables companies to have a fruitful conversation on how to increase performance, for example through the Palm Oil Collaboration Group.

How it works: Refiners at the local level fill out the reporting template, providing information on key NDPE indicators for each of their mills (E.g. Is the mill certified? Is the palm oil traceable to plantation level?). The information is aggregated and passed on to the (EU-based) refiner or manufacturer. At this level, manufacturers fill out their own template, indicating the same information of their refiners. All the way downstream, retailers have the possibility to do the same. Although the IRF is a self-reporting tool, companies have the possibility to verify their data through a third-party certification body. Currently, Proforest and the consortium are engaging other certification bodies to expand verification.

Current state: Currently, a few large refiners and manufacturers make use of the IRF, but the number is expanding rapidly.

How to make use of the IRF: Go to the https://www.ndpe-irf.net/ website for more information

Source: Information was obtained from the IRF website and interviews.



3.3 Joining a palm oil initiative for sustainable sourcing

Palm oil challenges are not solved alone. Recent years have therefore seen an increase in the number of collaborative sustainability initiatives. Some have opened their membership to different stakeholders (e.g. RSPO including private and non-private actors), while others restrict participation to specific parts of the global supply chain (e.g. the Consumer Goods Forum, focusing on manufacturers and retailers) or specific countries/regions.

For end-users of palm oil, collaborative sustainability initiatives offer several benefits. First, they offer a platform to share and create knowledge, covering varying topics including: field-level service delivery, strengthening supply-chain relations, and sector-level regulatory changes. Second, by taking part in a sustainability initiative, a company's sustainability commitment (e.g. NDPE) carries more credibility. Finally, crossorganizational collaboration allows companies to access and share resources such as money, and expertise.³⁶

Examples of sustainability initiatives

At a national level, there are various initiatives working to bring together private sector actors to share lessons, discuss opportunities for collaboration, and coordinate action in a pre-competitive space with the aim of deepening global impact and realizing systemic change. These national initiatives for sustainable palm oil typically include a range of actors, from first importers to endusers. Retailers are especially important drivers of sectoral transformation towards SPO, and their involvement in national initiatives should be promoted.³⁷

The European national initiatives are linked to the Amsterdam Palm Oil Declaration 2015, which convened European private sector organizations (Denmark, France, Germany, Italy, the Netherlands, Norway, and the UK) to commit to ensuring fully SPO supply chains in Europe by 2020.³⁸ Gradually, many national initiatives are promoting continuous improvement of certification standards and are moving towards additional criteria.

At a sector level, there is an ever-growing wealth of multi-stakeholder initiatives companies can consider joining. Figure 3.3 shows an overview of these initiatives (for a more comprehensive overview, see Table for Section 3.3 in the Annex.



Companies seek multi-stakeholder collaboration to fulfill different needs. Obtaining and sharing knowledge remains one of the most common reasons to join these initiatives, especially due to the relative simplicity and lowcost of joining. Other initiatives expand their functional base by fostering cross-organizational collaboration on specific plantation-, supply-chain- or sector-level issues. One example is the Palm Oil Transparency Coalition, which focuses on assessment of company NDPE policies. Organizations such as RSPO include the opportunity to make a public commitment. Finally, companies wishing to engage in advocacy for SPO (in their particular segment) can find representation through the Retailers Palm Oil Group (representing retailer needs in RSPO and beyond), the European Sustainable Palm Oil Advocacy Group (representing food sector federations), or RSPO (representing all stakeholders).

^{36.} An example of pooling resources with the end of promoting sustainability is the RSPO Smallholder Support Fund, which is funded by 10% of the revenue generated from the trade of CSPO. The RSPO Smallholder Support fund makes it possible for oil palm smallholders around the world to achieve RSPO certification without incurring costs.

^{37. &}lt;u>Guidelines for the set-up for national endeavors for certified</u> <u>sustainable palm oil,</u> RSPO, n.d.

^{38.} Palm oil, Amsterdam Declarations Partnership, 2018

FIGURE 3.3

Selection of multi-stakeholder initiatives engaged with European palm oil stakeholders (see Annex for more details on this initiative)

COMPANY NEEDS

VISION

"I want to learn about the benefits of a sustainable palm oil sector, and the challenges to overcome before this vision is realized."

SHARING KNOWLEDGE & EXPERIENCES

"I want to read about sustainable palm oil journeys of other actors and want to share the expertise I built up myself with peers."

COLLABORATE & IMPLEMENT

"I need guidance in implementing solutions to sustainability challenges, possibly by collaborating."

PUBLIC COMMITMENT

"I want to show my buyers, investors and consumers I take my sustainability responsibility seriously."

ADVOCATE

"I want to join others in advocating for a more sustainable sector."

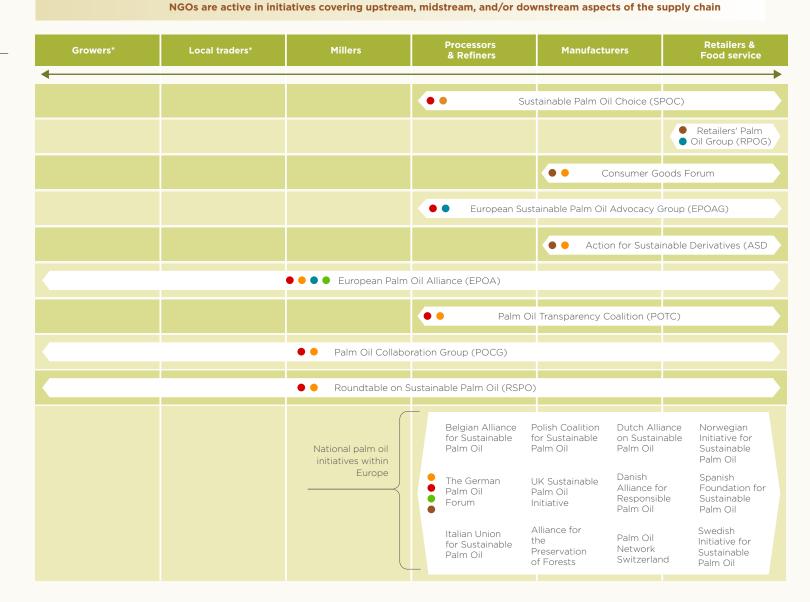
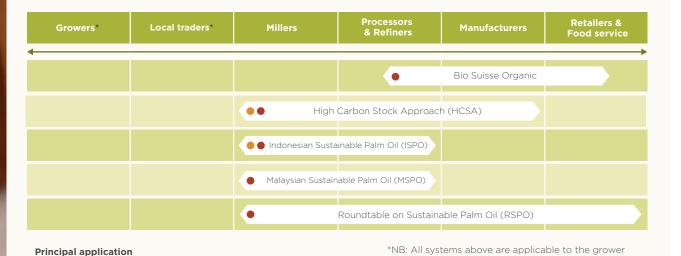


FIGURE 3.4

Biofuel

Standards (certification systems and other) mapped according to the principal initiator in the supply chain*, and principal application in palm oil products (see Table 5 on the next page for more detailed information)



and local trader level, the actors primarily engaged

with first mile traceability and mitigating risks at

estate level.

Sustainable Palm Oil: Europe's Business

Food, feed, home & personal care

3.4 Getting certified along the supply chain

Sustainability certification of palm oil products provides customers or buyers with an independent assurance that the product meets certain sustainability requirements. In exchange for meeting certain fixed sustainability requirements, a grower or company receives financial benefits (through premiums or investments) or other benefits (through enhanced market access or positive branding).

Figure 3.4 shows the schemes that currently provide a standard for, certify, and/or assure sustainable production and trade of palm oil. Some certification schemes, such as RSPO, ISPO, and MSPO, focus solely on palm oil. These schemes show the largest uptake in the palm oil sector, either because of their longstanding role as an authority in the area (RSPO), or because uptake is mandatory in the country of production (ISPO and MSPO). See Annex: Case study - National sustainable palm oil certification schemes.

When opting for a suitable certification scheme, companies should consider different factors, such as the reputation of the standard in the eyes of their stakeholders, the scope of the standard, the verification process and overall governance of the scheme. In terms of credibility, RSPO is widely considered to be the strongest standard. For instance, the Forest Peoples Programme finds that RSPO has the strongest set of requirements from the principal oil palm sustainability standards across the world.³⁹ Additionally, RSPO was one of only 12 quality and sustainability labels in the food industry that received the "Top Quality Label" from the independent Dutch organization Milieucentraal.⁴⁰

A comparison of Leading Palm Oil Certification Standards, Forest Peoples Programme, 2019

^{40.} What are top standards?, Milieucentraal, 2022

FIGURE 3.5 Total RSPO Trademark License issued in Europe and non-Europe in 2020 and 2021⁴¹ 600 544 488 500 Eurpoe 400 .⊆ Licenses issued 300 224 200 100

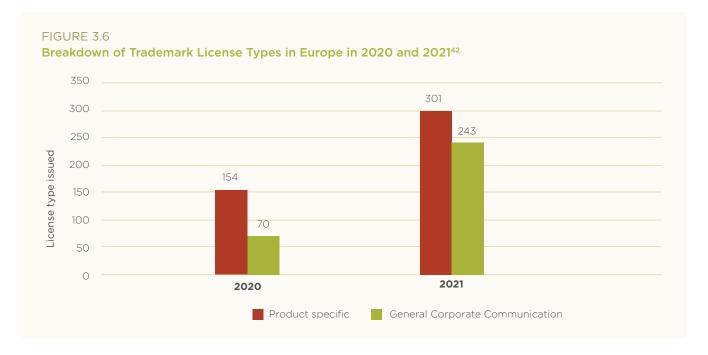
2020

Europe

2021

Non-Europe

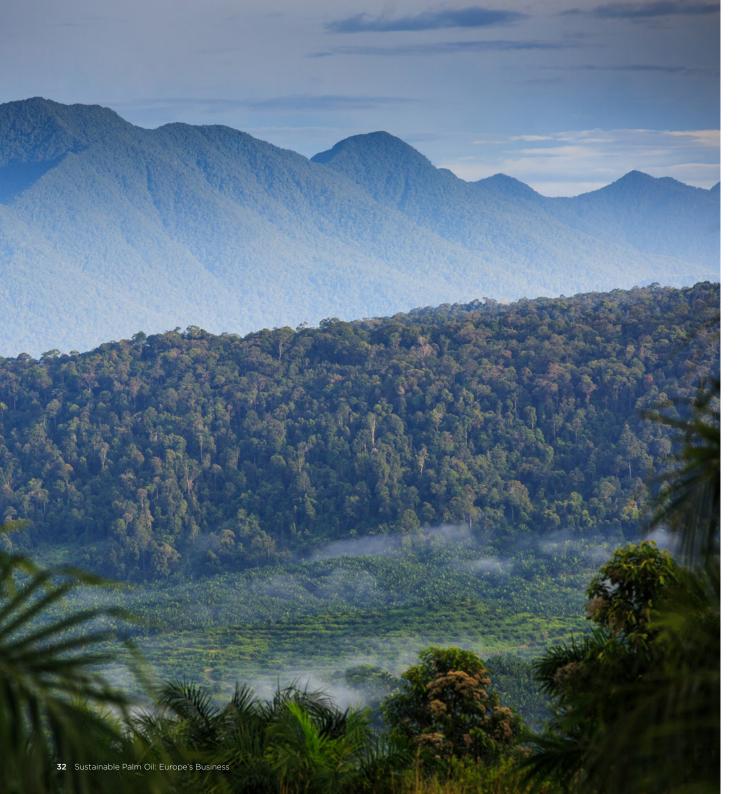
 \bigcirc



Palm oil supply chain actors may have reservations about investing in sustainability certification. For example, Segregated and Identity Preserved certification require significant investment by multiple supply chain actors, and not all supply chain members have the logistic capacity and willingness to collaborate to implement such certification systems. Certification has also been subject to increased scrutiny in recent years. The mix of high (onpackage) visibility and perception of greenwashing has triggered criticism of certification's credibility.

However, the benefits of getting certified are manifold. Most importantly, certification offers the opportunity to show one's commitment to sustainability - and thereby differentiate oneself from competitors. The data in Figures 3.5 and 3.6 on the acquisition of RSPO Trademark Licenses demonstrates that companies increasingly value sustainability branding. Globally, the total number of RSPO Trademark licenses issued increased 2.5 times, going from 424 in 2020 to 1,032 in 2021. More specifically, the number of Product Specific trademarks licensed used on products - has doubled between 2020 and 2021. In the same period, the number of trademarks licensed for General Corporate communication (off-product) tripled.





3.5 Joining a landscape approach to address sustainability at scale

A relatively new, innovative step to increase support for SPO is the 'landscape approach'. The key innovation of a landscape approach is that sustainability issues are addressed at a geographical rather than commodity level. This means going from 'sustainable products' to 'sustainable geographies.' This geography can be a jurisdiction, or an area bounded by natural borders. For example, the state of Sabah in Malaysia, has committed to sustainable palm production at the state level, using a Jurisdictional Approach to resolve sustainability issues throughout the state (see Annex: Case study Sabah, Malaysia).

Addressing sustainability issues through individual supply chains has not always proven effective due to the following reasons:

· Not all stakeholders are involved.

Working with a limited number of stakeholders (e.g. farmers, cooperatives, and agribusiness) through only a sourcing approach does not involve all stakeholders that are responsible for conserving the landscape (e.g. local governments). Addressing these issues requires a multi-stakeholder approach.

Disconnects between up- and downstream.

With certification, there is often no direct link between downstream buyers and the landscape from which the commodity is sourced. Addressing systemic social and environmental issues requires a long-term approach with a direct connection between buyer and landscape.

^{41.} Latest available data, RSPO Secretariat, 2022

^{42.} Latest available data, RSPO Secretariat, 2022

· Environmental and social issues are multicommodity problems. Issues such as deforestation and poverty occur across different commodities that are produced in the same landscape. Tea plantations may be situated alongside log factories, and cocoa fields are neighbored by cattle farms. In areas where multiple economic activities are taking place. certifying only one of these products will therefore not solve the problem. A multi-commodity approach is therefore required.

Most landscape approaches are designed to address the issues above due to their distinct characteristics:

• Multi-stakeholder platform: A landscape approach often includes a central hub where local stakeholders such as farmers, millers, refiners, and governments meet and create joint strategies.

"The key innovation of a landscape approach is that sustainability issues are addressed at a geographical rather than commodity level."

• Multi-commodity: Because landscape approaches adopt a multi-commodity approach and involve local authorities, they have the potential to result in more impact than commodity-specific certification. As such, landscape approaches are excellent ways to meet a company's sustainability commitments because they tackle sustainability in a holistic manner at scale.

- Inclusion of producers: Farmers who are the true custodians of the land and primarily responsible for sustainable production get a seat at the table and can contribute to the action agenda for building the supporting infrastructure for sustainable production.
- Cross-supply chain: Downstream companies such as retailers, manufacturers and Europe-based refiners can make impact on-the-ground by funding the efforts and sourcing palm oil from a landscape.
- Tracking progress: Tracking progress on environmental, social, or economic outcomes at plantation- and mill-level is often still challenging. Sourcing palm oil through a landscape initiative allows for more accurate monitoring of sustainability progress, conducted by a central body that is funded by collective resources.

Key examples of initiatives piloting landscape approaches are the RSPO Jurisdictional Approach, IDH's SourceUp, and Rainforest Alliance's LandScale.





e are done talking It's time for Action! CONTRIBUTI SUSTAINAL

KEY TAKE-AWAYS

- Depending on the sustainability maturity of a palm oil end-user, companies can take concrete steps within each of the five action areas identified in Chapter 3.
- Taking these next steps improves sustainability within the palm oil supply chain of an enduser and leads to a multitude of material & immaterial business benefits.
- Undertaking these steps also contributes to the sustainable market transformation of the palm oil sector *globally* by building (public) awareness on the business case for SPO.

Now that you have read the report, you may wonder what the next step is for your company and where to start. The table below helps you position your company and determine steps that suit its situation.43

43. The actions stated above endorse the actions outlined in the section 'What should companies do?' in the WWF Palm Oil Buyers Scorecard Report (p78-79).



what's next?

Making impact:









STEP 1 Imagine your company's long-term vision

Every change starts with a vision. For any company, it is pivotal to be clear about where it is headed in the next few years. A strong long-term vision considers external (regulatory, natural and market) developments, supply chain risks, sustainability objectives, and commercial targets.

STEP 2 Compare your company's current situation to its vision

The next step is to clarify to what extent your company is on track to achieve its long-term vision. This includes an assessment of the quality, feasibility, and consistency of its sustainability strategy, levels of traceability in the supply chain, and an estimation of the resources needed to take the necessary steps to achieve your vision.

STEP 3 Determine the right steps based on outcomes and cost

Based on your company's vision and current situation, you can situate your company in roughly one of three maturity levels of sustainability. Your company may be 'just starting,' 'well on your way,' or 'mature' in its sustainability journey. Each maturity level brings its own recommended actions. In addition, your company can always contact the commissioning organizations of this report:

Contact the EPOA team info@palmoilalliance.eu

Contact the RSPO team info.eu@rspo.org

Contact the IDH team office@idhtrade.org

LEVEL OF MATURITY IN SUSTAINABILITY:

Just starting

Your company has not dedicated much time and attention yet to trading, manufacturing, or selling SPO. In-house knowledge about the topic is limited.

RECOMMENDED ACTIONS FOR END-USERS

USEFUL NEXT STEP

RECOMMENDED ACTIONS FOR END-USERS **USEFUL NEXT STEP**



oil traceability

Start mapping your company's supply chain and engage with your suppliers

- · Check out supply chain mapping tools in the Annex to get started
- · Request traceability information from your suppliers (processors and traders)



Start buying or expanding purchased volumes of certified palm oil

Check out organizations such as RSPO that offer certification

Find key information on the application of CSPO, CSPKO and CSPKE in your sector by using the corresponding RSPO factsheets:

- Retailer sector RSPO factsheet
- Home & personal care RSPO factsheet
- Livestock sector RSPO factsheet
- Out-of-home sector RSPO fact-



Committing to NDPE

Create a sustainable sourcing policy which contains your sustainability principles, such as the No Deforestation, No Peat, No Exploitation (NDPE) commitments

Check out the NDPE IRF website to review the elements of an NDPE commitment



Joining a landscape approach

of a landscape approach

Check out the relevant initiatives that are piloting a landscape approach in palm oil or other commodities:

- RSPO Jurisdictional approach
- IDH SourceUp
- Rainforest Alliance LandScale



Joining a palm oil initiative for sustainable sourcing

Get acquainted with the best practices of other companies by joining one or more sustainability initiatives

Check out the table of sustainability initiatives (in your sector or country) in the Annex and contact the organization that meets your interests

Learn about the benefits

LEVEL OF MATURITY IN SUSTAINABILITY:

Well on your way

Your company has spent some years trading, manufacturing, or selling SPO, and you're ready to further develop your efforts. In-house knowledge of the topic is medium.

RECOMMENDED ACTIONS FOR END-USERS

USEFUL NEXT STEP

RECOMMENDED ACTIONS FOR END-USERS

USEFUL NEXT STEP



Improving palm oil traceability

Improve your company's traceability and supply chain risk assessment frameworks

Check out the table of traceability, risk management, and supply chain management tools in t_



Getting certified

- · Switch from creditsbased certified palm oil to physical certified palm oil (Mass Balance, Segregated, or Identity-Preserved)
- Enhance communication of your company's sustainable sourcing efforts with consumers by using the RSPO trademark on your products
- Check out certifying organizations such as RSPO and buy certified palm oil.
- Learn more about the RSPO trademark and apply here:



Committing to NDPE

Set up an NDPE monitoring process through the NDPE Implementation Reporting Framework

Go to the NDPE IRF website -



Joining a landscape approach

pilot using a landscape approach.

Check out the relevant initiatives that are piloting a landscape approach in palm oil or other commodities:

- RSPO Jurisdictional approach
- IDH SourceUp
- Rainforest Alliance LandScale



Joining a palm oil initiative for sustainable sourcing

Share your company's knowledge and help build solutions in an existing initiative

Contact the relevant contact in the initiative your company is already a part of, or check out Table for Section 3.3 in the Annex.

Consider setting up a

LEVEL OF MATURITY IN SUSTAINABILITY:

Mature

Your company is a frontrunner in trading, manufacturing, or selling products that contain SPO, and is ready for the next step. In-house knowledge of the topic is advanced.

RECOMMENDED ACTIONS FOR END-USERS

USEFUL NEXT STEP

RECOMMENDED ACTIONS FOR END-USERS

USEFUL NEXT STEP



Improving palm oil traceability

Share your company's best practices on traceability, supply chain mapping, and risk management at sector-level (via initiatives) and at business-to-business level

- Check out Table for Section 3.3 to select the initiative relevant to your interests and geographical proximity
- End-users could play a key role in influencing processors and traders which are not having full traceability yet.



joining a palm oil initiative for sourcing

I Join a national palm oil initiative to help the national perception of SPO to rise

II Represent your stakeholder group to find actionable solutions for concrete challenges in palm oil, by joining an internal working group of RSPO. The current eight working groups cover the following topics: biodiversity, human rights, jurisdictional (landscape) approach, no deforestation, outreach to promote the uptake of CSPO, peatland, shared responsibility, and supply chain traceability

III Shape policy agendas in consuming and producing countries, to increase the enabling environment for SPO

I Check out Table for Section 3.3 to select the initiative relevant to the interests of, and geographical proximity to your company. Go to the following page to have an overview of the different national palm oil initiatives

II Go to the RSPO Working Groups pages and have a look at the different working groups

III Check out Table for Section 3.3 in the Annex on (national) initiatives to shape national or European policy agendas, or leverage existing associations you are part of



Committing to NDPE

Set up an NDPE monitoring process through the NDPE Implementation Reporting Framework

Go to the NDPE IRF website



Getting certified Share your company's experience with RSPO certification in RSPO Working Groups or via other channels

· Go to the RSPO Working Groups pages and have a look at the different working



Joining a landscape approach

Take additional steps in sourcing additional palm oil by setting up or joining a landscape approach.

- Contact the RSPO Jurisdictional Working Group
- Contact the IDH SourceUp

5. Annex









5.1 Current state of traceability

Figure 5.1: Average refiner traceability to mill & traceability to plantation performance

Out of a sample of five major PO/PKO refiners that publish data on traceability, on average 100% of PO/ PKO that is imported into Europe is traceable to mill-level (TTM-Europe). 75.6% of PO/PKO imported into Europe is traceable back to plantations (TTP-Europe). For palm oil traded globally, both TTM (96.9%) and TTP (64.3%) are lower.

Figure 5.2: Average manufacturer TTM & TTP performance

Out of a sample of seven manufacturers that publish data on traceability, an average of 95% of their palm oil supply is traceable at least to mill-level. On average, traceability to plantation level is much lower (32%), driven by three manufacturers which did not report on TTP numbers (and are therefore considered to be 0%). These numbers reflect a trend of front-runner manufacturers stepping up their traceability performance and sharing this publicly.

5.2 Current state of NDPE

Figure 5.3: Key NDPE figures for consumer goods manufacturers using palm oil:

Figure 5.3 shows that out of the eighty manufacturers responding to the WWF Palm Oil Buyers Scorecard, 70% have commitments in place for deforestation and/or conversion-free palm oil. 86% have made commitments to respect human rights & labor conditions. Beyond their own operations, 61% of the responding manufacturers require their palm oil suppliers to have deforestation/and or conversion free commitments.



^{45.} Based on latest public data on manufacturer websites, July 2022

FIGURE 5.1 Traceability to mill & plantation performance of 5 major PO/PKO refiners⁴⁴

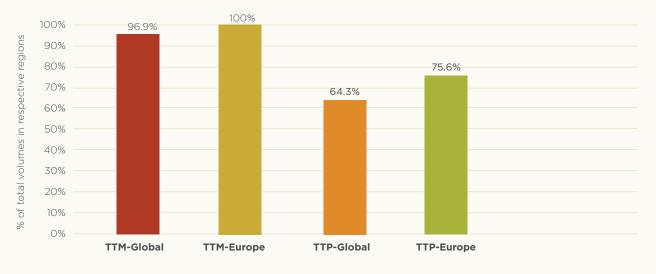


FIGURE 5.2 Palm oil traceability progress of 7 major European consumer goods manufacturers, selected based on availability of traceability data and relatively large volume of palm oil used⁴⁵

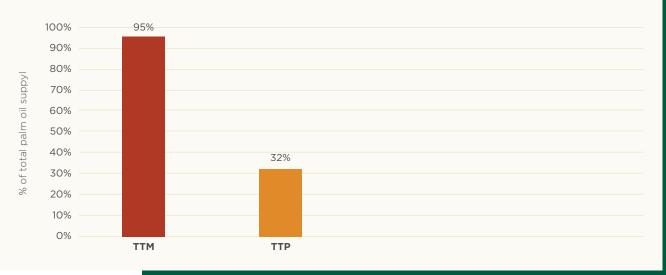


FIGURE 5.3 Key NDPE figures for consumer goods manufacturers using palm oil⁴⁶

Requires deforestation- and/or conversion- free commitment from supplier

Commitment to respect human rights

Commitment to deforestation- and/or conversion- free palm oil

Commitments to sourcing 100% CSPO

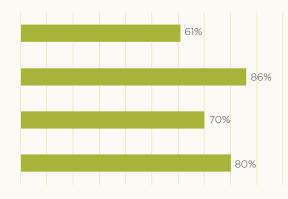


FIGURE 5.4 Key NDPE figures for consumer goods retailers using palm oil⁴⁷

Requires deforestation- and/or conversion- free commitment from supplier

Commitment to respect human rights

Commitment to deforestation- and/or conversion- free palm oil

Commitments to sourcing 100% CSPO

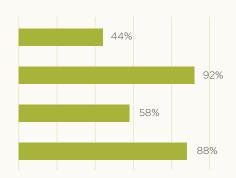


Figure 5.4: Key NDPE figures for retailers using palm oil:

Figure 5.4 shows that most retailer respondents (48 in total) to the WWF Palm Oil Scorecard survey have NDPE commitments in place. There is a marked difference between manufacturers and retailers when it comes to the number of deforestation and/or conversion-free requirements for suppliers in place. Only 44% of retailer respondents have such requirements in place, compared to 61% of manufacturers.



^{46.} Palm Oil Buyers Scorecard 2021, WWF, 2021

^{47.} Palm Oil Buyers Scorecard 2021, WWF, 2021

Case study

Sabah, Malaysia

Palm oil is a major export commodity for the state of Sabah in Malaysia (see Figure 5.5). Sabah is a large contributor to annual global trade of palm oil, supplying 10% of annual global trade (~70 million MT). Palm oil is complex for Sabah, linked to both environmental and social issues, and central to people's livelihoods (especially smallholders). In 2015, Sabah announced its commitment to certify 100% of its palm oil output to the standards of RSPO by 2025 as a pilot for the jurisdictional approach. This enabled large plantation and refinery companies (Wilmar International, Sime Darby Plantation, AAK), consumer goods manufacturers (Unilever, Reckitt), and retailers (Walmart) to coordinate their efforts at jurisdictional level and allowed them to align their initiatives in support of this commitment. These companies worked with (subnational) government agencies and civil society organizations (including WWF, Hutan, Forever Sabah) to carry out their jurisdictional approach.

As of May 31st 2020, 35.96% of Sabah's oil palm growing area met the MSPO standard, and 26% met the RSPO certified standard.48

Location of Sabah. Malaysia⁴⁹



FIGURE 5.6 Key characteristics of Sabah, Malaysia



4.44 million

(HA)

Total forested area



1.54 million Total oil palm planted area in Sabah (HA)

339 Annual deforestation in Sabah (2002-2020) (HA)



21.600 Annual deforestation in Sabah (2020) (HA)

3.86 million

Population

440,000 RSPO Certified area





32,566 - 34,000 Number of independent smallholders in Sabah



4.36 MT / ~2.9% global **CSPO** production

> Potential palm oil volume production (2021)

Sabah

^{48.} Malaysian Sustainable Palm Oil (MSPO) Certification Progress for Independent Smallholders in Malaysia, Yap et al., 2021; Common ground: can palm oil be sustainable?, WWF, 2020

^{49.} https://rspo.org/certification/supply-chains



BENEFITS FOR MANUFACTURERS, REFINERS AND **RETAILERS INVOLVED**

- Tackling traceability to plantation*: By engaging in a landscape approach, first mile traceability from mill to plantation (often the most complex feat) is no longer necessary. All plantations in the state are deemed verified to be sustainable.
- Tackling sustainability challenges together: The multi-stakeholder nature of Sabah's landscape approach makes it possible to address challenges that individual organizations could not resolve alone. Issues of land legality and large-scale deforestation are particularly challenging for single companies to address. In Sabah, a Jurisdiction Certification Steering Committee (JCSC) comprised of government, private sector, and civil society organizations (CSOs) ensures systemic challenges are addressed. This committee can leverage each of these stakeholders unique strengths: governments' legislative power, CSOs onthe-ground knowledge, and companies ability to implement and verify practical solutions.

Since its inception in 2015, the Sabah case has raised useful lessons for actors intending to take a landscape approach elsewhere:

- Sub-national government ownership is key. A strong commitment from the Sabah state government on the jurisdictional process, which signaled ownership of the goal of getting the state RSPO-certified by 2025, was one of the key drivers for many companies to engage and invest resources in Sabah.
- Roles and responsibilities of stakeholders need to be clear. As jurisdictional approaches are multistakeholder by nature and involve support from local and international levels, roles and responsibilities for the different stakeholders need to be clear, particularly as some stakeholders are not as involved at the site level. This helps manage expectations and assists companies further down the supply chain to identify the type of support they can provide.
- · Strong private sector support can leverage more support. Sabah's ability to attract support from companies with strong sustainable commitments and key players in the palm oil sector such as Sime Darby, Sawit Kinabalu, Wilmar International, Unilever, and Beiersdorf has resulted in more support from other growers and companies across the supply chain. Private sector support has come through various models including various partnerships, technical assistance, financial contribution, or building the narrative around the importance of the jurisdictional approach for a major palm oil producing state like Sabah.
- · Jurisdictional initiatives have the potential to address leakage: Certifying Sabah based on RSPO standards would mean the state's entire palm oil output could be segregated, increasing the volume of RSPO certified palm oil traded and removing the need for costly supply chain controls currently conducted by individual companies with mixed success.

KEY LESSONS LEARNED

^{*} Please note that EU legislation will likely require traceability to plot. See case study EU regulation for mandatory due diligence for deforestation page 21.

Case study

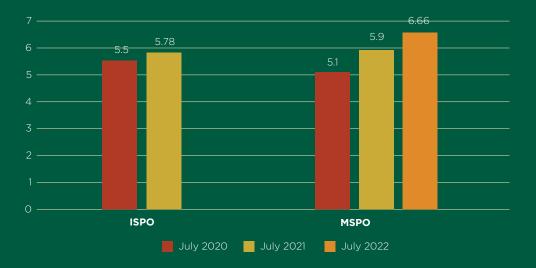
National sustainable palm oil certification schemes

The dominant palm oil certification schemes operating on a national level are situated in Indonesia and Malaysia, the biggest palm oil exporting countries in the world. Voluntary international and (mandatory) national certification schemes are often perceived to be complementary – where the latter raises the minimum floor, the former raises the aspirational bar of CSPO production.

- Indonesian Sustainable Palm Oil (ISPO) The ISPO standard (2011) is mandatory for palm oil producers in Indonesia. The ISPO is managed by the ISPO Foundation, a national non-profit organization aiming to improve the sustainability and competitiveness of the Indonesian palm oil industry and contribute to the Indonesian government's objectives to reduce greenhouse gas emissions and draw attention to environmental issues. As can be observed in Figure 5.7, ISPO certified 5.78 million hectares of Indonesian palm oil plantations in 2021. This is equivalent to 44.4% of the total palm oil plantation area in Indonesia 2021, which constituted 13.2 million hectares. ISPO aims to achieve certification of all Indonesian palm oil plantations by 2025.
- Malaysian Sustainable Palm Oil (MSPO) The MSPO Certification Scheme (2013) is a
 mandatory, industry-driven, national certification scheme in Malaysia through which oil
 palm plantations, independent and organized smallholdings, and palm oil processing
 facilities are certified against the MSPO Standards. As can be observed in Figure 5.7,
 MSPO currently certifies 6.66 million hectares of Malaysian palm oil plantations. As of
 March 2022, 97% of Malaysia's oil palm plantations and smallholders as well as 453 out of
 the total 464 licensed palm oil mills in the country have received the MSPO certification.
- Aceite de Palma Sostenible Colombia (APSColombia) APSColombia (in development) is a national strategy and voluntary verification mechanism for all Colombian palm oil suppliers. Driven by Fedepalma (the national federation for palm oil producers), Cenipalma, and the independent APSColombia Corporation with the support of Solidaridad, the mechanism aims to promote uptake of sustainable production practices by 8,000 smallholders. This is driven by the fact that of the total 1.6 million MT palm oil produced in Colombia in 2020, only 28% was certified. The share of RSPO certified smallholders was even smaller, only 6% in 2020. Based on ten economic, environmental, and social principles, oil palm growers and millers can improve on, track, and deliver CSPO products.

FIGURE 5.7

Total area certified under ISPO and MSPO national certification standards
(Note: data for ISPO July '22 not available)



^{50.} Annual Progress Report: UK Roundtable on Sourcing Sustainable Palm Oil. Efeca, 2021

^{51.} Oil World Annual 2021, Oil World. 2021

Overview of tools to map supply chains, detect risks, and trace a product

System	Examples	Usage	Actor directly responsible for financing and implementation*	Specific to palm oil	Can be used independently (e.g. without certification)	
Mapping supply	Mapping supply chains					
Mapping lists & software	Palm Industry Platform GeoRSPO interactive mapping platform WRI Global Oil Palm Mills WRI, Rainforest Alliance, Proforest, Daemeter Universal Mill List	Mapping supply chains (such as mills and oil palm concessions) & identifying risks	Manufacturers, processors & refiners, millers	Yes	Yes	
Satellite systems	Satelligence, Starling	Mapping plantations, detecting risks	Manufacturers, processors & refiners, millers	No	Yes	
Detecting risks						
Drone technology	Insight Robotics	Mapping plantations, detecting risks	Manufacturers, processors & refiners, millers	No	Yes	
Radar Alerts	Radar Alerts for Detecting Deforestation (RADD)	Detecting risks such as deforestation	Manufacturers, processors & refiners, millers	No	Yes	
Tracing a produc	t					
Certification traceability systems	RSPO PalmTrace	Tracing individual certified palm oil products	Retailers & Food service, manufacturers, processors & refiners, millers	Yes	No, part of the RSPO certification program	
Cell phone geolocation	Orbital Insight	Tracing (truck) movements between plantations, mills and refineries	Manufacturers, processors & refiners, millers	No	Yes, but often used in combination with (satellite-based) plantation mapping, and (drone-based) surveillance	
External traceability systems	<u>Trase</u>	Tracing individual palm oil products	Retailers & Food service, manufacturers, processors & refiners, millers	No	Yes	
Blockchain technology	Provenance: Blockchain	Tracing individual palm oil products	Retailers & Food service, manufacturers, processors & refiners, millers	No	Yes	

^{*}NB: All systems above are applicable to the grower and local trader level, the actors primarily engaged with first mile traceability and mitigating risks at estate level.

Overview of national sustainability initiatives

National initiative	Actor focus	Value for companies	Country	
Belgian Alliance for Sustainable Palm Oil (BASP)	Possible actors	Possible activities	Belgium	
Dutch Alliance on Sustainable Palm Oil (DASPO)	• PO/PKO users: food/	Convening PO/PKO users, sector organizations, and/or other	The Netherlands	
Spanish Foundation for Sustainable Palm Oil	feed/oleochemical manufacturers, food service providers, and first importers • Sector organizations • Industry coalitions • NGOs • National governments	industry actors in domestic markets to support sustainable palm oil	Spain	
Italian Union for Sustainable Palm Oil		Providing a space for open and safe dialogue at national level	Italy	
The German Palm Oil Forum (FONAP)		·	Tabilitating the evaluation of information O knowledge aboving	Germany
Palm Oil Network Switzerland		Providing technical support to move companies forward (e.g.	Switzerland	
UK Sustainable Palm Oil Initiative		access to tools that can support operations and expert-led	United Kingdom	
Norwegian Initiative for Sustainable Palm Oil		workshops)	Norway	
Danish Alliance for Responsible Palm Oil		National awareness campaigns on sustainable palm oil	Denmark	
Swedish Initiative for Sustainable Palm Oil		 Market monitoring of the national progress of sustainable palm oil 	Sweden	
Polish Coalition for Sustainable Palm Oil (PCSPO)		Engaging with relevant stakeholders like NGOs and national	Poland	
Alliance for the Preservation of Forests		governments on sustainable palm oil	France	
Initiative for Sustainable Palm Oil			Czech Republic & Slovakia	

Please note each national initiative is unique to its own market, members, and activities

Overview of sustainability initiatives

Multi-stakeholder initiatives	Actor focus	Main activities	Value for companies		
Sustainable Palm Oil Choice (SPOC)	All palm oil supply chain actors & stakeholders: palm oil	Creating science-backed communication material on the importance of SPO and its potential for positive impact on the ground	Learn how other companies meet their commitments towards 100% CSPO, stop deforestation, protect biodiversity or create fair socio-economic development through SPO		
		 Promoting certified palm oil uptake in EU by identifying and addressing missing volumes 	Share your progress with other companies and civil society organizations that support SPO		
Roundtable on Sustainable Palm Oil (RSPO)	Palm growers, palm oil processors and/or traders, consumer goods manufacturer, retailers, banks/ investors, NGOs	 Develop, implement & refine a credible global SPO standard through a multi-stakeholder process Certification of SPO 	 Obtain credible certification for using SPO Member can access SPO markets, which increases their potential palm oil supply, and thereby contribute to increasing CSPO demand Become entitled to use the RSPO Trademark which demonstrates your sustainability commitments to customers, thereby improving branding 		
Consumer Goods Forum	CEOs and senior management of: Retailers, manufacturers, service providers & other palm oil stakeholders	 Combatting deforestation & forced labor in key global commodities, including palm oil Convening (CEOs of) major global retailers in Consumer Good Forum's Forest Positive & Human rights coalitions (amongst others) 	 Benefit from implementation support through expert-led webinars & workshops Get access to toolkits and guidelines that help in operationalizing solutions for deforestation-free palm oil 		
European Palm Oil Alliance (EPOA)	Any company or industry organization operating in the palm oil supply chain, with an interest in creating a balanced and objective view on palm oil and contributing to market transformation	 Sharing knowledge & creating a positive image of palm oil in food Promoting certified palm oil uptake through national initiatives in Europe Convening platform for different stakeholders to work toward sustainable palm oil 	 Engage with dedicated international professionals in the field of palm oil, nutrition and sustainability Share your experiences, insights and ideas, and work towards common initiatives Fact-based communication on sustainable palm oil Advocacy activities for sustainable palm oil at European level 		
European Sustainable Palm Oil Advocacy Group (EPOAG)	Governments & food sector federations	 Supporting uptake of sustainable palm oil in Europe Sharing knowledge on sustainable palm oil 	 Obtain objective facts and figures on aspects of SPO in Europe Lend your voice to increase lobbying for the importance of SPO at European level 		
Action for Sustainable Derivatives (ASD)	Companies in the cosmetics, home and personal care, and oleochemicals industries	Collectively tackling supply chain issues around palm oil and palm kernel oil derivatives	Co-build and co-implement solutions that improve transparency, lead to collective supply chain monitoring and social and environmental issues on the ground		

TABLE FOR SECTION 3.3 CONTINUED

Overview of multi-stakeholder sustainability initiatives

Multi-stakeholder initiatives	Actor focus	Main activities	Value for companies
Palm Oil Transparency Coalition (POTC)	Buyers and users of palm oil (retailers, manufacturers, and food services), financial institutions (investors, banks) and other service providers with similar aims	 Engaging and reviewing the major international first importers of palm oil to assess their performance with respect to NDPE in their palm oil supply chains Promote transparency and encourage progress beyond certification 	 See whether your palm oil importer/supplier performs in the POTC Importer assessment Work together with members to find practical solutions that overcome challenges that your palm oil supplier may have in delivering SPO
Palm Oil Collaboration Group (POCG)	Companies from every stage of the palm oil supply: producers, refiners, traders, manufacturers, and retailers	 Accelerate effective implementation of No Deforestation, No Peat Expansion, No Exploitation (NDPE) commitments Identify key areas for collaboration Create legitimacy of solution direction 	 Learn from peers on issues and challenges and identify opportunities to collaboratively accelerate progress through development of practical solutions Connect with implementation partners & service providers Access a library with tools that can support in adopting human rights due diligence approaches in your operations and supply chain
Retailers' Palm Oil Group (RPOG)	All retail companies	 Engage with RSPO and other relevant standards and initiatives Find solutions to achieving SPO production and usage in all growing regions Share insights on technical and market developments on SPO and innovative alternatives 	 Get access to local and international stakeholders to find solutions to common problems faced by retailers Ensure your retailer needs are reflected in RSPO production and supply chain standards through an RPOG representative on the RSPO Board of Governors

Overview of certification schemes

Standard (a-z)	Foundation	Certification	Principal focus of standard	Uptake in palm oil sector*	Palm Oil only	Consumer label on packaging
Bio Suisse Organic	1981	Yes, requires companies to be RSPO certified	Food	Low	No	No
High Car- bon Stock Approach (HCSA)	2014	No	Covers all palm oil produced	Low	No	No
Indone- sian Sus- tainable Palm Oil (ISPO)	2011	Yes	Covers all palm oil produced	High	Yes	No
Malaysian Sustain- able Palm Oil (MSPO)	2013	Yes	Covers all palm oil produced	High	Yes	No
Round- table on Sustain- able Palm Oil (RSPO)	2004	Yes	Food, feed, home & personal care	High	Yes	Yes

^{*} Uptake in palm oil sector' is based on indicators such as MT of palm oil traded under this certification or hectares of plantations certified

Chain of custody systems

RSPO is a not-for-profit association that unites stakeholders from seven sectors of the palm oil industry. For end-users of palm oil, RSPO has four distinct chain of custody systems in accordance with its Supply Chain Certification Standard ensuring that palm oil bought as CSPO has indeed been produced by certified plantations..⁵²

Chain of custody system	Explanation
(Smallholder) Credits	The supply chain is not monitored for the presence of SPO. Manufacturers and retailers can buy Credits from RSPO- certified growers, crushers, and independent smallholders.
Mass balance	SPO from certified sources is mixed with ordinary palm oil throughout supply chain. Companies using Mass Balance certification model can claim that the palm oil used in their products supports the production of certified palm oil, but cannot claim that the specific palm oil contained in their product is certified and traceable to a single plantation.
Segregated	SPO from different certified sources is kept separate from ordinary palm oil throughout supply chain. This certification assures that assures that the palm oil comes only from RSPO certified sources while permitting mixing of certified palm oil from a variety of certified sources (e.g. not traceable to plantation).
Identity preserved	This assures that the certified oil palm products delivered to the end user are uniquely identifiable to a single mill and its supply base. This product is kept physically isolated from all other oil palm sources throughout the supply chain (including other segregated RSPO-CSPO sources). It is fully certified and traceable to the source.

^{52.} RSPO Principles & Criteria Certification, rspo.org, accessed July 2022; RSPO Supply Chains, rspo.org, accessed July 2022

