



Final Report – Project P140

Prepared for Partnerships for Forests

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Executive summary

In 2021, and into 2022, supply chains have continued to be under immense pressure from geopolitical developments and the fallout of the Covid-19 pandemic, with volatile markets impacting businesses across the supply chain. In tandem, the urgency of the climate crisis and importance of rapid progression in developing sustainable supply chains of agricultural commodities is of ever-increasing intensity. Facing this combination of pressures and priorities, stakeholders in the UK and beyond have continued to make progress in sourcing sustainable palm oil.

Since the inception of the UK Roundtable on Sourcing Sustainable Palm Oil in 2012 (herein referred to as the UK Roundtable), a decade of reporting has shown the progress made by the UK. Since 2010, the proportion of UK imports of palm and palm kernel oil that can be reported as certified sustainable has increased from 16% to 72% in 2021, with the vast majority of remaining imports likely to be sourced through a form of assurance, such as an NDPE (No Deforestation, no Peatland, no Exploitation) policy. Whilst this percentage has remained roughly consistent since 2015, during this time progress has been made in transitioning to Segregated supply chains, with around 80% of imports (that this report has full visibility of) certified to an RSPO Segregated supply chain model.

Gaps in the UK market do remain, with different sectors facing a variety of challenges. Whilst the Out of Home (foodservice) sector has taken significant strides in using sustainable palm oil, this is not necessarily reflected in communication and claims, with visibility of sustainable palm oil use often lost in the downstream supply chain. The animal feed sector, meanwhile, remains a key user of palm kernel expeller – with traceable supply chains of this by product currently under-developed, it remains to be seen whether significant progress will be required in this area if expeller comes within the remit of pending UK and EU due diligence regulations. These demand-side measures present issues for other sectors too, most notably those linked to the oleochemical industry, such as the home and personal care sector. Characterised by complex supply chains of palm fractions and derivatives, achieving traceability to origin (and providing the assurance associated with this) remains a considerable challenge for this sector.

Moving forward, given these remaining pressures, the UK Roundtable (with Efeca as its Secretariat) will focus efforts in two key areas – domestic action and technical support, and international collaboration and partnership.¹ Addressing the first, the remaining gaps in the UK market highlight the support that is required to address them, for example the provision of information and resources through Efeca's Sustainable Commodities Resource Hub,² and the sharing of learnings and ideas through working groups to tackle issues such as the need to balance the narrative around sustainable palm oil in UK communication. Secondly, international

¹ The UK Roundtable is the industry-led element of the UK Sustainable Palm Oil Initiative (UKSPOI), through which Efeca provides technical assistance and carries out outreach and engagement. The UKSPOI forms part of the wider UK Sustainable Commodities Initiative – a cross-commodity initiative that Efeca operates as Secretariat for.

² <https://www.efeca-resource-hub.com/>

efforts will focus on developing partnerships with producer countries and other consumer initiatives. Particularly as a small user of around 0.5% of the global palm oil volume, the UK's greatest impact will not be had through a solely top-down approach of sourcing sustainable palm oil, but rather through aligning efforts globally across supply chains to also help raise the base standard of production.

1 Introduction: a decade of action

Sourcing sustainable palm oil is a small but integral piece of a broader puzzle that industry, government and society as a whole is working to resolve: the question of how we can halt human-induced deforestation and climate change whilst meeting the needs of an ever-growing population.

Deforestation and land use change, driven largely by the expansion of commercial agriculture, in particular by soy, palm oil, timber, pulp and paper,³ accounts for around 13% of the world's greenhouse gas emissions.⁴ If properly protected and restored, forests and other ecosystems could provide more than one-third of the total CO₂ reductions required to keep global warming below 2 °C.⁵

As our global population continues to grow, and emerging economies develop, demand for vegetable oils for an enormous range of uses rises too; palm oil, as the most efficient vegetable oil, has a huge role to play in meeting this demand – but only when produced and consumed responsibly and sustainably, in a way that benefits people and prevents further deforestation or land conversion. The same case applies not only to other vegetable oils too, but also to other forest risk commodities – and, in fact, to all natural resources at our disposal. Severing the link between agricultural commodities, social issues, deforestation and climate change is the challenge that sustainable sourcing of palm oil looks to help address.

2022 marks 10 years since the inception of the UK Roundtable on Sourcing Sustainable Palm Oil, which brings together users of palm oil from across UK industry to work collectively to develop sustainable supply chains. Over the course of this decade, as the urgency surrounding climate change and the need for a sustainable society has grown, global attention and high-level action has increased in ambition and intensity. 2021's Glasgow-based COP26 was the platform for a range of landmark industry and government commitments aiming to address these issues – the impact of resultant action remains to be seen.

In parallel, recent years have seen a series of immense challenges emerge and develop in the UK and beyond. A global pandemic and geopolitical crisis have shocked supply chains at producer and consumer levels, whilst changing regulatory frameworks have added an element of uncertainty.

In this context, this report looks at where the UK market currently stands in its progress in sourcing sustainable palm oil, reflecting on a decade of UK Roundtable action and reporting⁶ (using the most recent data from 2021). It aims to evaluate where the gaps remain in the UK and how they can be addressed, and emphasises how, as an insignificant market player, the UK's greatest opportunity for positive impact lies in engaging in collaborative global action.

³ [State of the World's Forests 2020 \(fao.org\)](https://www.fao.org/state-of-the-worlds-forests-2020)

⁴ <https://climatefocus.com/wp-content/uploads/2022/06/2019NYDFReport.pdf>

⁵ <https://www.pnas.org/doi/10.1073/pnas.1710465114>

⁶ From 2012 to 2015, reporting was carried out by Efeca under the UK Government-funded Central Point of Expertise for Timber (CPET).

2 The context: global market update

In a world full of acronyms, VUCA seems the most apt to describe the world today. Volatility, Uncertainty, Conflict and Ambiguity are rife, and impacts can be seen across society, throughout international trade supply chains and within the palm oil market specifically too.

In 2021 – the year that the data on the UK palm oil market presented in this report is specific to – supply chains were reeling from ongoing impacts of the Covid-19 pandemic and Brexit. The price of palm oil shot up dramatically through the course of the year, rising by 36% between January and November 2021, and beyond then rising further to a peak in April 2022 – a total increase of 92% since the beginning of 2021.⁷ Other supply chain costs increased in tandem; the price of a 40-foot shipping container was 182% higher in September 2021 compared to the 5-year average, a phenomenon that had impacts across global trade.⁸

The aftershocks of these impacts are still being felt in 2022, and have been compounded by dramatic geopolitical developments. A ban on exports of some palm oil in Indonesia in April 2022, aiming to combat rising domestic prices, meant short-term impacts were felt in some markets importing from the world’s biggest producer. But in addition to this, and most significantly, the Russian invasion of Ukraine in February 2022 has had major impacts on global supply chains. Both countries are major players in key commodity markets including, most relevantly to this report, sunflower oil. With exports of sunflower oil from Ukraine, the commodity’s largest exporter, being severely limited by the conflicts, knock-on impacts have been observed in the palm oil market.

With some businesses suddenly unable to use sunflower oil, they have moved to alternatives – in some cases, this has meant stronger demand for palm oil. Media coverage of this impact has carried largely negative connotations centred around the destructive impacts that can be linked to conventional oil palm production. At times this has failed to recognise the wide availability of certified sustainable palm oil in the UK (as discussed later in this report), and the importance of supporting it if sustainable production practices are ever to become the norm. With sustained price rises in the palm oil and wider vegetable oil markets observed since the start of the Russia-Ukraine conflict, it remains to be seen how 2022 data on the UK market will reflect these developments.

With the most recently available data from 2021, we are able to look at the broad patterns of production and usage in the global palm oil market to investigate whether impacts presented by Covid and Brexit can be observed.

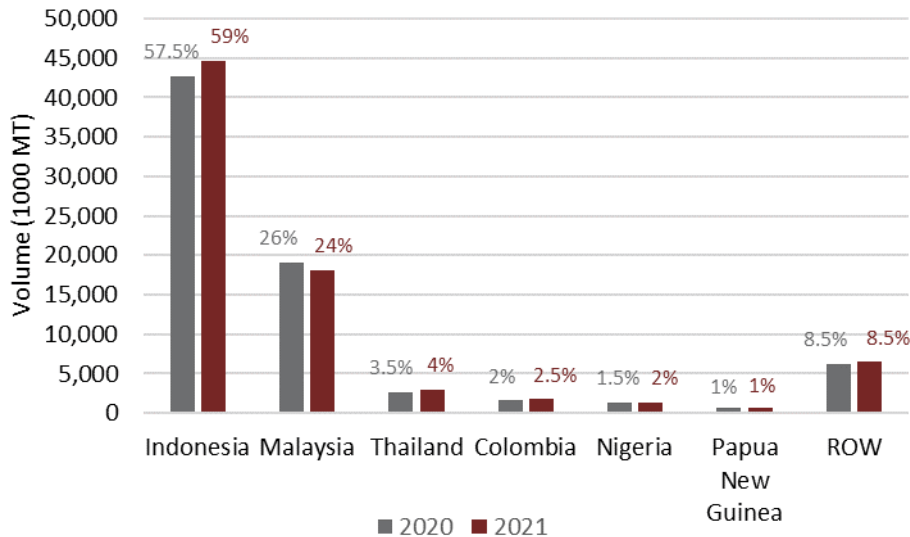
For example, figure 1 compares production volumes of major producers in 2020 and 2021, with total global production of palm oil increasing by 2% from 74.2 million MT in 2020 to 75.9 million MT in 2021. Despite this, Malaysia’s production volume dropped by over 1 million MT in 2021 compared to 2020, seeing its share of the global production volume drop by 2 percentage

⁷ <https://tradingeconomics.com/commodity/palm-oil>

⁸ <https://www.drewry.co.uk/supply-chain-advisors/supply-chain-expertise/world-container-index-assessed-by-drewry>

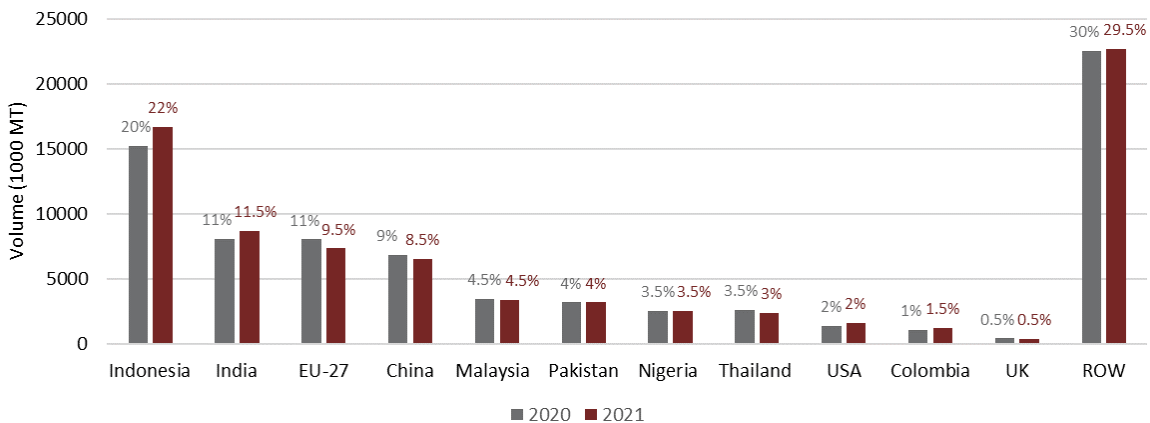
points. This was more than offset by Indonesia’s production increasing by almost 2 million MT, with their share increasing by 1.5 percentage points. This change in Malaysia’s production volume reflects the serious issues experienced by the country on labour shortages throughout the pandemic, with the industry’s reliance on migrant labour in Malaysia exposed to Covid restrictions.

Figure 1 Palm oil production, 2020-2021



Similarly to production, global use of palm oil continued increasing in 2021 too, with Indonesia’s status as the biggest user becoming ever more apparent (see figure 2). The EU's share of the global usage volume decreased from 11% to 9.5%– a significant drop not observed in any of the other major users, which could reflect the EU’s Renewable Energy Directive policy to phase out the use of palm oil in biofuels, a major application of palm oil in Europe. With nearly 30% of global palm oil volumes attributed to small users that collectively make up the ROW (rest of the world) bar in figure 2, this data emphasises the truly global nature of palm oil, and how important this ubiquitous commodity is in so many countries.

Figure 2 Palm oil use (2021)



3 Progress in the UK market

Summary – key findings from section 3

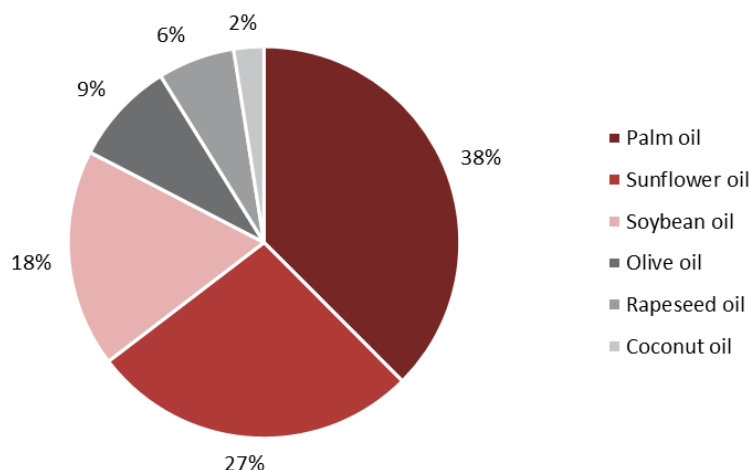
Imports of palm oil into the UK decreased in 2021 compared to 2020, possibly reflecting reduced use in the foodservice industry during the Covid-19 pandemic. The proportion of imports that can be reported as certified sustainable remains static, with the 2021 figure standing at 72%.

Increasing proportions of RSPO Segregated palm and palm kernel oil are being brought into the UK by first importers, which is significant due to the traceability and origin assurance benefits this provides. **However, gaps remain in the UK market** where commitment to and progress in sustainable sourcing is less visible.

Mass Balance palm oil is still crucial for non-food derivatives and complex supply chains – but a lack of complete traceability and assurance of legality could create problems in the face of an incoming due diligence regulation.

Palm oil is one of a number of different vegetable oils imported into and used in the UK. Figure 3 provides an indication of the range of vegetable oils that comprise the UK market, and emphasises the importance of palm oil within this collective, with palm oil accounting for 38% of UK imports of 6 major vegetable oils in 2021.⁹ This graph also visualises the significance of sunflower oil in the UK, which made up 27% of imports of these vegetable oils in 2021. The impact of the Russia-Ukraine conflict on the availability of sunflower oil has already been discussed above, and we can see from this data that a large chunk of the UK’s vegetable oil imports will have been impacted by this. Some companies are using alternative oils as a result (although depending on the application a switch to an alternative oil is not always easy), so we may see a different picture when equivalent data for 2022 is analysed.

Figure 3 UK vegetable oil imports (2021)



⁹ Note that this data is for imports, not usage, and therefore does not include domestic production – which is significant for rapeseed oil, for example.

The 38% segment of the UK's imports of these 6 major oils – representing palm oil – is the focus of this report. In 2021, UK palm oil imports decreased by around 30,000 MT compared to 2020, with palm kernel oil imports remaining consistent. According to Oil World data, in 2021 the UK imported 404,300 MT of palm oil and 28,900 MT of palm kernel oil. This is compared to 2020 import figures of 436,000 MT and 29,000 MT respectively. This is likely to be a reflection of the impacts of the Covid-19 pandemic, which saw heavily reduced use in the foodservice industry due to its limited operation.

Another driver that could be behind reduced imports of palm oil is legislation announced by the UK government in 2020 restricting promotions on high fat, sugar and salt (HFSS) products. Although these provisions will now be delayed to 2023, many businesses began planning for this new policy during 2021, reducing use of fat, salt and sugar. The growing use of palm oil, particularly in the west, is often linked to the increase in the number of processed foods consumed – the very types of foods that would be impacted by an HFSS policy. As part of efforts to reduce use of fat in light of these restrictions, we could see businesses reducing their use of palm oil. However, there is no clear indication yet about how this could have impacted volumes of palm oil used in the UK, but it could have had some effect in 2021.¹⁰

3.1 UK progress in sourcing sustainable palm oil

This analysis covers UK imports of palm and palm kernel oil. It does not include palm oil embedded in finished products, nor palm kernel expeller, and therefore does not cover all palm products imported into the UK.

To assess the UK's progress in sourcing sustainable palm oil at a headline level, we can compare Oil World data on total imports of palm and palm kernel oil with information on the volumes of certified sustainable palm oil (CSPO) being imported into the UK (provided for use in this report by first importers). Doing so, we observe a continuation of the recent static trend of CSPO imports, with 313,000 MT of CSPO (72% of total imports) reported by first importers in 2021 for this report's analysis (see figure 5).

It is important to note that the figure of 72% CSPO is calculated with data that only Efeca has visibility of (the volumes entering the UK via first importers that have provided data for use in this report).¹¹ It should not be assumed that the remaining import volume is not CSPO – rather, the status of this 'gap' in imports (as certified, covered by an NDPE policy or otherwise) cannot be confirmed. This is further broken down in figure 6.

¹⁰ [Promotions of unhealthy foods restricted from April 2022 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/promotions-of-unhealthy-foods-restricted-from-april-2022)

¹¹ For more information on the methodology behind this report, please see Annex 1.

Figure 5 UK imports of RSPO CSPO as a proportion of total, 2010-2021

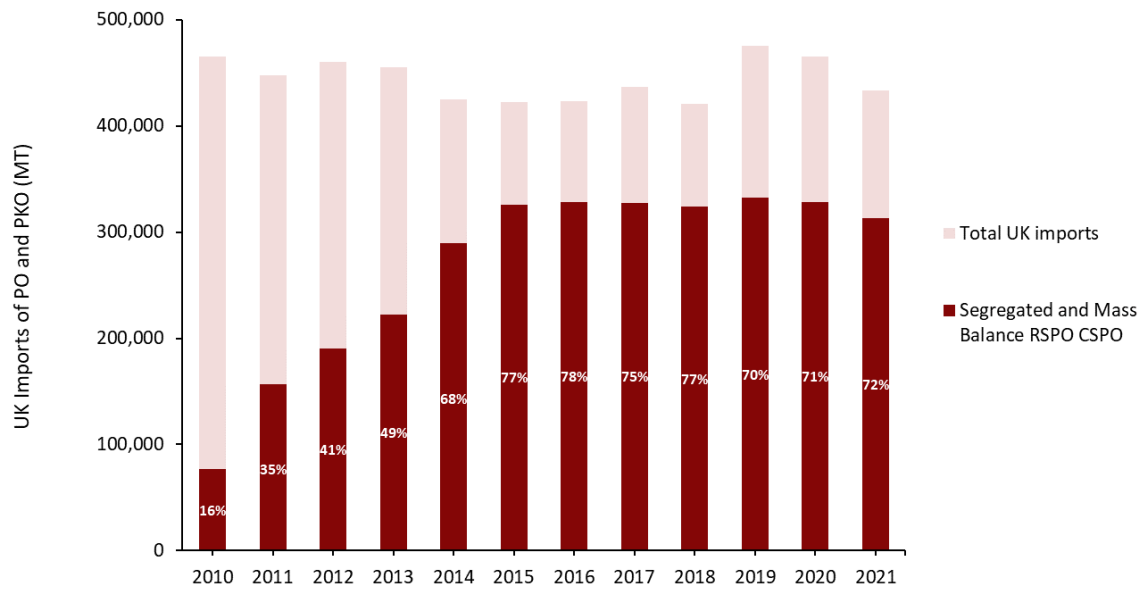
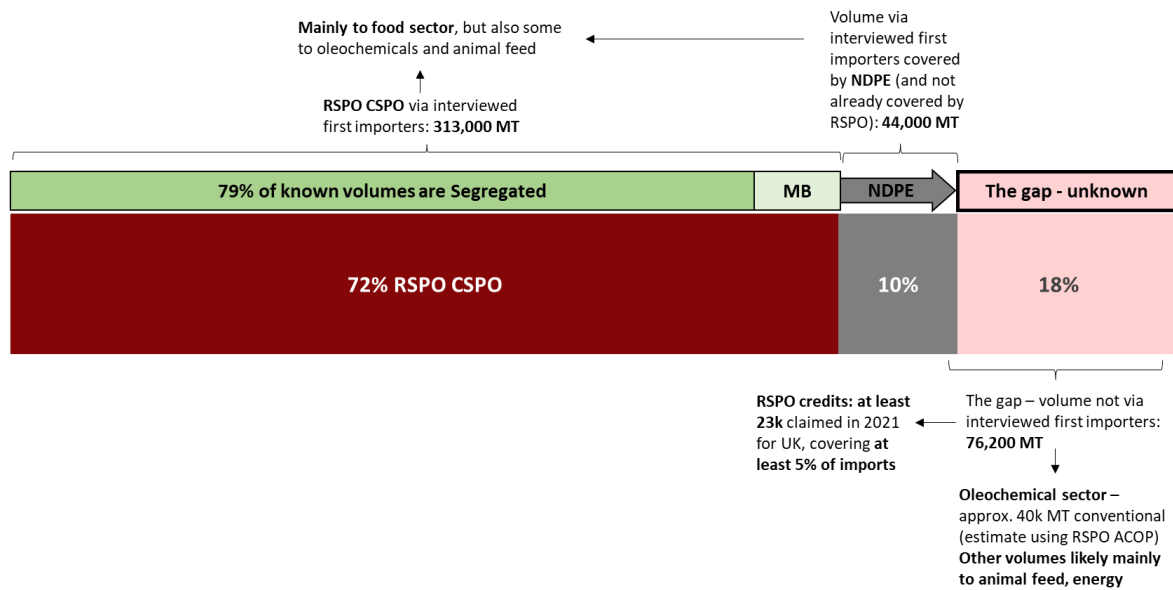


Figure 6 Breakdown of UK 2021 palm and palm kernel oil imports



Further analysis of alternative data sources can provide some insight into which sectors of industry the ‘gap’ of volumes entering the UK not via the refiners nor importers that have provided data for use in this report. RSPO Annual Communication of Progress (ACOP) data, submitted publicly every year by RSPO ordinary members,¹² suggests that some volumes are brought in as palm fatty acid distillate (PFAD – see section 3.1.2.2.), fractions and other derivatives for the oleochemicals and animal feed markets. Although RSPO ACOP does not

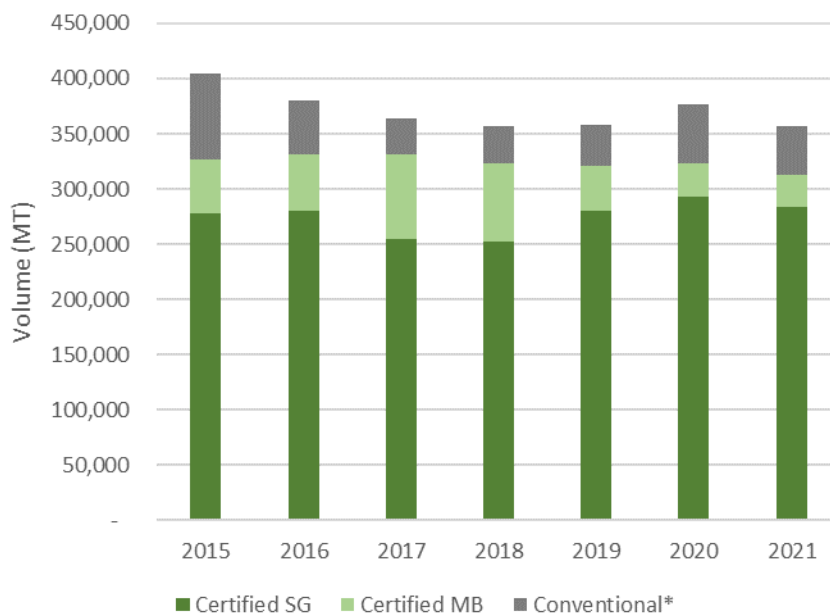
¹² RSPO ordinary members are members who use over 500 tonnes of palm oil a year.

identify volumes being imported into the UK, the usage data it provides suggests non-certified volumes entering the UK for use by RSPO members in these markets could be in the region of 40,000 MT. This could account for nearly half of the current ‘gap’ of imports of unknown certification or NDPE status. Additionally, data provided by the RSPO shows that at least 23,000 credits were claimed for the UK in 2021, covering the equivalent of 5% of total UK imports of palm and palm kernel oil. Note that the food sector is not considered to be a key contributor to the ‘gap’ of unknown volumes because it is mainly supplied by the importers that provided data on CSPO imports for this report.

The proportion of imports that this report has the strongest visibility of – that which first importers have provided data on – offers some interesting insight into the progress that the UK palm oil market has made. This data is highlighted in figure 6 for 2021, whilst figure 7 below displays how it has changed.

There has been a clear increase in the proportion of palm and palm kernel oil sourced by these first importers that is RSPO certified to a Segregated level (69% in 2015 to 79% in 2021). Concurrently, intake of Mass Balance volumes has decreased steadily over this period, although this supply chain model remains important for some sectors (see section 3.1.2.1.). Note that the small proportion of these volumes that is uncertified is sourced under NDPE policies.

Figure 7 UK imports via first importers, 2015-2021 (data provided directly by first importers)



**Covered by an NDPE policy*

The prevalence of Segregated material in the UK market is important as it means that the vast majority of imports entering the UK via refiners can be traced back to a relatively small group of certified oil palm mills; on average, Segregated palm oil can be traced back to 196 mills. Each of

these mills goes through an RSPO Principles and Criteria audit that publicly records information on location, expected volumes and details adhering to environmental and social criteria.¹³

This is a fraction of the 516 mills that are RSPO certified as of September 2022, let alone the 2,500 mills operating in total globally. So, in addition to the assurance that Segregation provides about the sustainability of the material, it also provides traceability advantages – something that is becoming increasingly important particularly in light of incoming due diligence regulations (see section 3.3.2.).

Case study: KTC reaches milestone of 100% RSPO Segregated palm oil

KTC Edibles Ltd, a UK Roundtable member and Britain's largest independent distributor of edible oils, is now offering only 100% Segregated CSPO to its customers. This marks the successful achievement of its 2019 pledge to make the switch to 100% Segregated CSPO by the end of 2022, after signing up to the RSPO Shared Responsibility Initiative.

Since 2019, KTC has been phasing out the remainder of its non-certified and Mass Balance palm products, replacing them with Segregated options. To drive this transition, the company has been engaging with and educating customers on the benefits of sustainable alternatives, developing new products and proactively encouraging customers to make the switch.

But, despite what figure 7 is showing us, some companies are reportedly struggling to access Segregated material or pay the associated premium. Faced by pressures of rising costs of business and living, and the knock-on impacts of war and pandemic, the greater influx of Segregated volumes into the market that we have observed is not necessarily being reflected in downstream use, and gaps remain in the UK market.

3.2 Addressing the gaps

With data showing that the vast majority of palm and palm kernel oil imported into the UK is either certified or sourced under an NDPE policy, this begs the question – what issues remain, and if sustainable palm oil is so widely sourced in the UK, why do we need to address them?

Whilst only relatively small gaps remain, they represent similar challenges experienced around the world. By addressing issues such as a lack of shared responsibility and communication within some sectors, and the challenges of complex supply chains, the UK can be better placed to share learnings with major consumer markets where large-scale change is most needed and has the greatest potential for impact.

3.2.1 Strengthening shared responsibility – the Out of Home sector

The Out of Home (OoH) sector can be defined simply as any food that is purchased or eaten away from home – it encompasses the foodservice, convenience and hospitality markets.

With the exception of some major brands, the visibility of the OoH sector's use of sustainable palm oil is less clear than for other sectors. For this reason, it is considered to be one of the

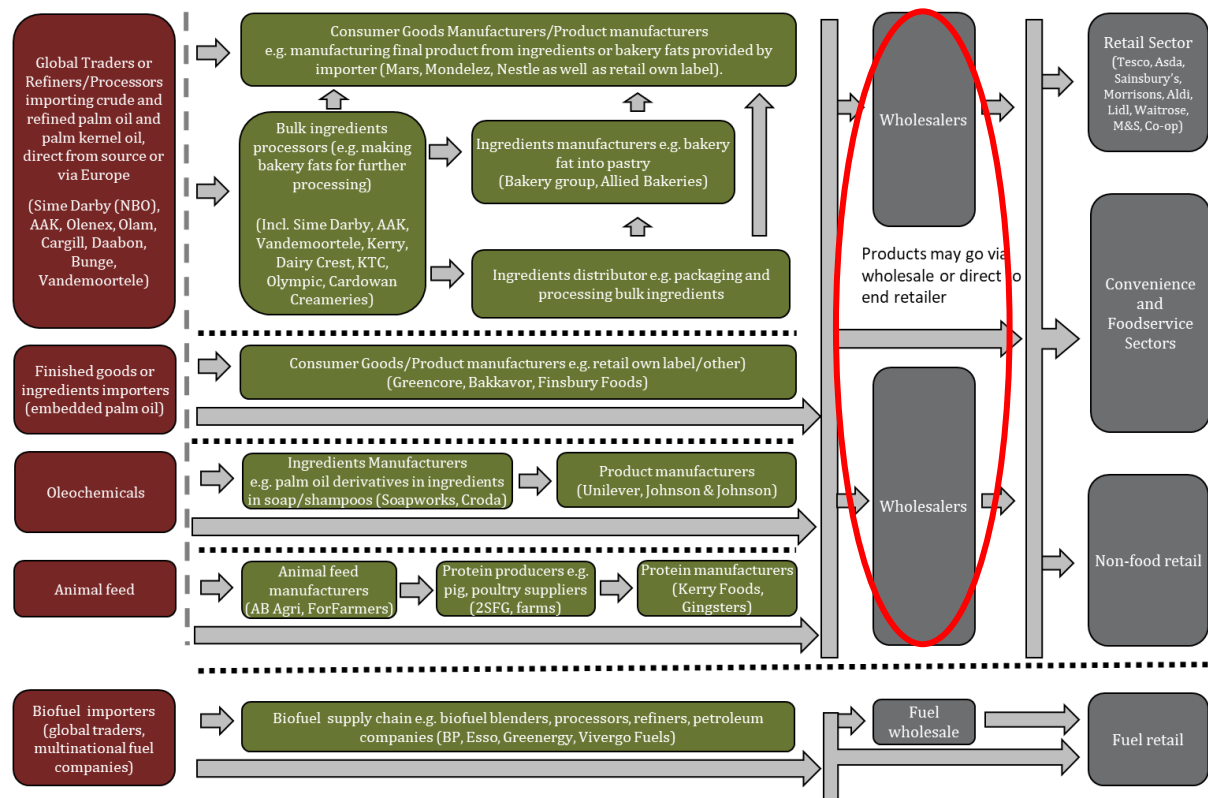
¹³ Similar information is also available from Mass Balance mills – see section 3.1.2.1.

remaining 'gaps' in the drive towards developing sustainable, resilient supply chains of palm oil for the UK.

Whilst the OoH sector is a key source of demand for palm oil, it experiences little consumer pressure around its procurement activities compared to sectors with more visibility around the composition of a product, like retail. Industry engagement by Efeca has suggested that this lack of consumer demand (from both businesses and end users) and knowledge available to end users of ingredients used in prepared foods (for example in restaurants) are key barriers preventing the sector from developing its uptake of sustainable palm oil.

When exploring how these barriers can be overcome, we can consider which actors in the supply chain have the most significant role and potential for influence. In the UK OoH sector supply chain – and the country’s broader palm oil supply chains – it is clear that wholesalers play a major role in connecting manufacturers and distributors to consumers. Their significance is illustrated in figure 8 below, which represents the UK palm oil supply chain.

Figure 8 The UK palm oil supply chain



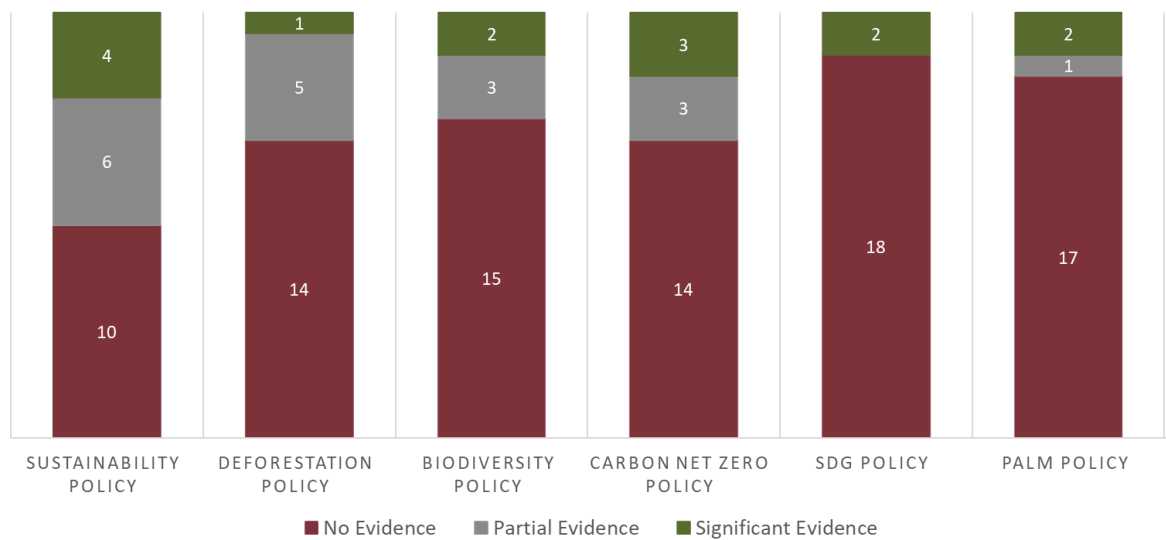
The majority of the UK wholesale market is dominated by a small number of large companies, with a large number of smaller companies also operating independently or within buying groups or consortia.

The central position of wholesalers in the UK supply chain means that they play an influential role in the supply of sustainably sourced palm oil to the downstream market, and the passing on of sustainability claims or credentials. A top-line desk-based review of publicly available information, carried out by Efeca in 2022, provides an indication of the level of current progress made and action taking place within the sector.

An assessment of policies and commitments of 20 leading wholesalers in the UK (see figure 10) shows that half of this group of leading wholesalers demonstrate at least partial evidence of a sustainability policy, with 30% showing evidence of a deforestation policy. Three companies (15% of the group) have a palm oil policy and are RSPO members, meaning that only a small proportion of the group are able to pass on certified sustainable palm oil claims down the supply chain.

In consequence, visibility of sustainable palm products supplied by some wholesalers is obscured, and is therefore not readily available to businesses and subsequently consumers.

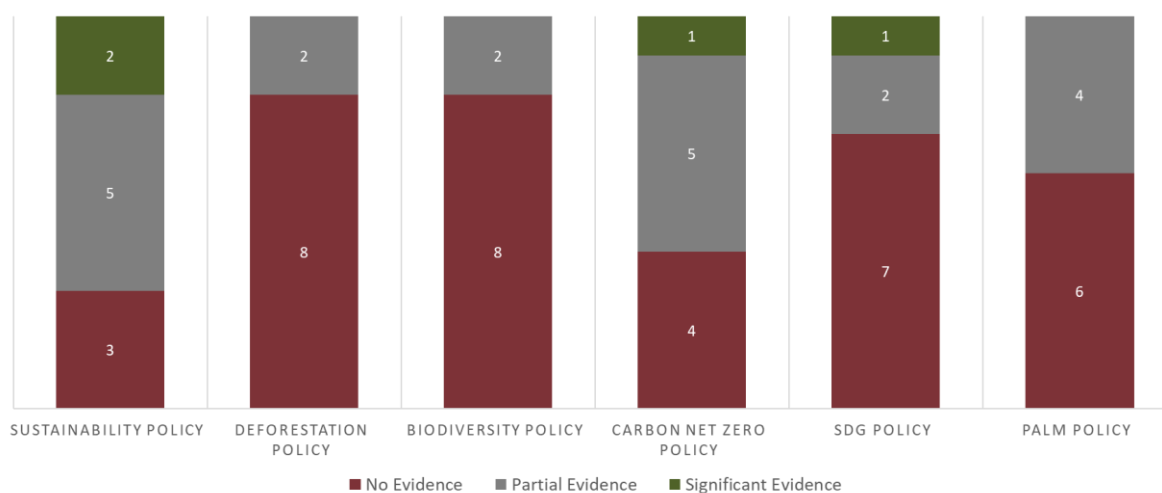
Figure 10 Wholesale sector policy review



So, what lies behind these observations? Efeca industry engagement suggests that a lack of awareness and pressure to develop sustainable sourcing of commodities like palm oil exists within the sector, with sustainability efforts focused elsewhere, such as in reducing plastic waste or cutting greenhouse gas emissions. In addition, observations could reflect the role that wholesalers see themselves as playing – some may base procurement activity on the demands of customer policies or Government Buying Standards, rather than implementing their own policies.

Likewise, a review of 10 leading pub groups (see figure 11) shows a similar pattern, with many showing partial or no evidence of a sustainability policy at all, and no significant evidence of a sustainable palm oil policy from any. Only one company in this group was an RSPO member.

Figure 11 Pub group policy review



Case study: the fish and chip shop market

An exception to the pattern set out by the wholesale and pub group reviews displayed above is the fish and chip shop market, which shows greater visibility over its use of sustainable palm oil – in fact, certified sustainable palm oil is very much the norm in shops where palm is used widely as a frying oil.

These outlets often buy from wholesalers who specialise in supplying this market, and can buy, dependent on size, considerable volumes of palm oil. A small shop alone can use 2.5 to 5 tonnes per annum, with a medium shop using 5 to 9.4, and a large or busy outlet using a considerable 9.4 to 12.5.¹⁴

Collectively, this market is a significant user (approximately 20,000 tonnes) of palm oil and strong proponent of sustainable sourcing – perhaps the fish and chip market can lead the wider OoH sector to drive greater visibility around the use of sustainable palm oil and better demonstrate the positive actions companies are taking.

3.2.2 Mass Balance, derivatives and by-products

Away from the food sector, non-food industries face unique circumstances and challenges to sourcing palm oil in a way that is traceable and assured of sustainability. The animal feed sector, and in particular the oleochemicals sector, are characterised by complex supply chains of palm derivatives (or by-products) that are currently working to address a limited capacity for traceability or segregation of material.

3.2.2.1 The Mass Balance conundrum

The Mass Balance supply chain model allows for mixing of certified and non-certified volumes of palm oil. It plays a key role in the development of sustainable supply chains by allowing for

¹⁴ Source: National Edibles Oil Distributors’ Association, 2018.

positive engagement with conventional producers, inclusion of smallholders (who can face unique barriers in achieving certification), and transition towards certified supply chains for markets that are less engaged.

Mass Balance can be applied at different stages of the supply chain, and is first applied at the mill level – a mill is certified as Mass Balance if it is taking in fresh fruit bunches (FFB) from certified and non-certified (conventional) sources. At this level, criterion 2.3 of the RSPO Principles and Criteria ensures that particular standards are met for the FFB from conventional sources: all FFB supplies from outside the unit of certification must be from legal sources, and the mill is required to record information on the geo-location of FFB origin, as well as proof of ownership status. This means that, for Mass Balance applied at the mill level, proof of legality can be provided for the conventional element – something that, for demand-side markets like the UK that are facing incoming due diligence regulations focused on legality, is important.

However, Mass Balance can also be applied further down the supply chain at the refiner level, where certified and conventional volumes may be mixed and sold as Mass Balance certified. Refiners may also apply a ‘1-tonne for 1-tonne’ Mass Balance, whereby a tonne of Segregated material is sold as conventional, to enable a Mass Balance claim to be applied to a separate tonne of conventional material. This is often applied to complex fractions or derivatives.

At the refiner level, where Mass Balance is applied, we therefore do not have the same information about the origin of conventional volumes as is available at an RSPO Mass Balance mill. The legality status of that element is unknown, and this is a major issue particularly for sectors that rely heavily on Mass Balance supply chains to source CSPO – most notably, the oleochemicals sector.¹⁵

3.2.2.2 *Oleochemicals – the home & personal care sector and beyond*

Previous Annual Progress Reports have highlighted oleochemicals as a sector facing difficult and unique challenges in sourcing sustainable palm oil – but why does this continue to be such a challenge within this sector?

Oleochemicals are chemicals derived from plant and animal fats which go through multiple process stages to achieve the key application requirements. They are comparable to petrochemicals derived from petroleum. Herein lies the first hurdle for oleochemical supply chains; not all oleochemicals are derived from a single plant type, and there is evidence that businesses struggle to identify if chemicals are plant- or petrochemical-derived. This means that simply understanding the origin of oleochemicals can be a barrier that needs to be addressed before even considering how to ensure that palm-derived products are sustainably sourced.

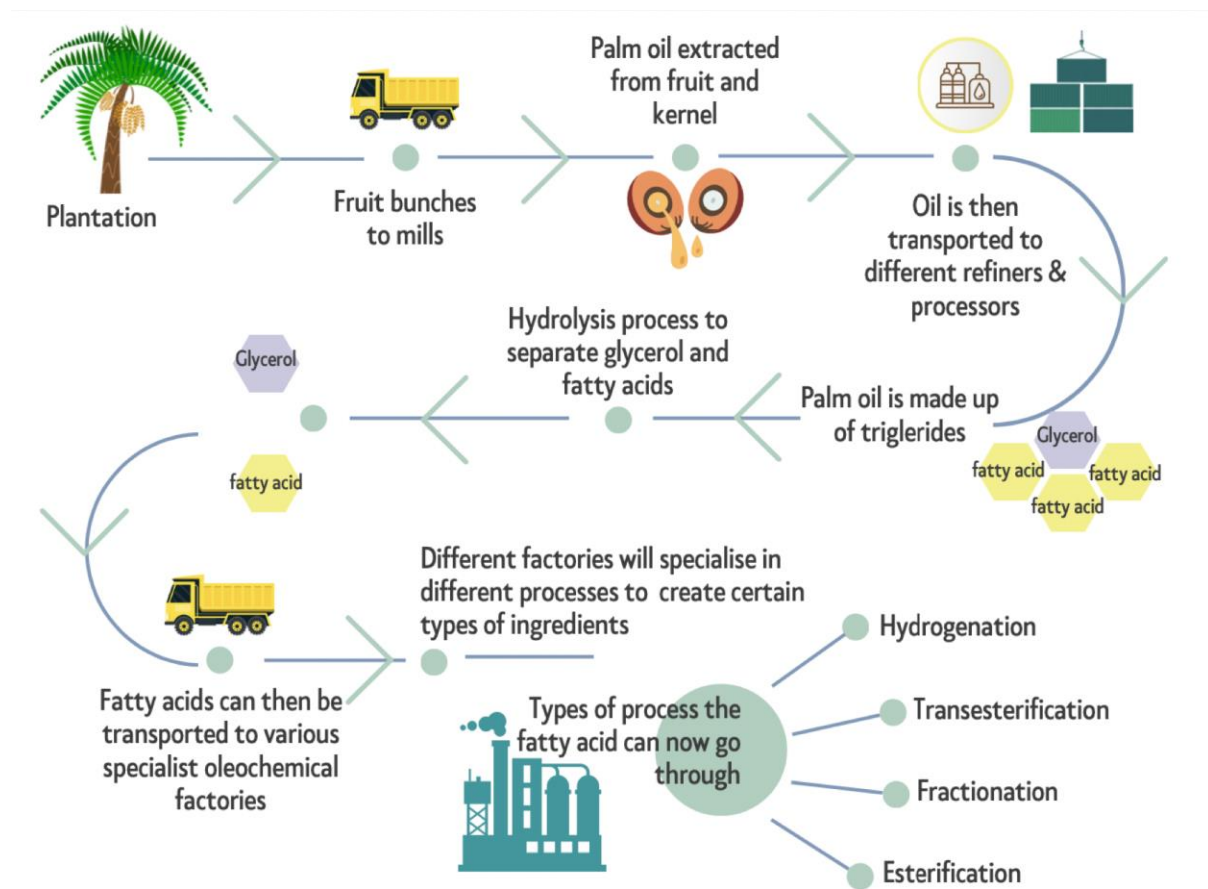
Oleochemicals which may be palm (or palm kernel) based are used in a vast range of industries and products, from agrochemicals and animal feed to cosmetics and pharmaceuticals, and even rubber and textiles. Each sector is working at a different level of sustainability requirement in their procurement activity, meaning that the wider oleochemical sector is facing a range of

¹⁵ At the time of writing, the RSPO is undertaking a review of the Mass Balance model to explore how its robustness can be enhanced at different levels of the supply chain.

different policy requirements, rather than a single consistent one that could be more effective for driving positive change in sustainable sourcing.

The final answer to the sustainable sourcing question in this sector lies in the complexity of the supply chain, a visual representation of which is offered in figure 13. Palm-based oleochemicals go through multiple process stages to achieve the end product application requirements, which makes traceability to mill difficult and presently virtually impossible to achieve a Segregated certified supply chain, given the difficulty in maintaining segregation of sometimes multiple chemicals through a number of processes.

Figure 13 Supply chain diagram of palm-based oleochemicals¹⁶



Looking at this complexity from the perspective of an individual product highlights this challenge further. A shampoo product picked from a supermarket shelf may contain a number of ingredients that could be palm based; examples include Sodium Laureth Sulphate, Sodium Lauryl Sulphate and Cocamidopropyl Betaine. The multi-stepped process to produce each of these chemicals from a palm feedstock might be carried out at different sites, possibly in different countries, before arriving at the final manufacturing site where the shampoo is produced. So, a single product like a shampoo might be linked to a number of complex palm

¹⁶ Source: Murdoch Associates, AAK & MPOB

supply chains influenced by a variety of procurers operating under different market conditions in different countries.

Oleochemicals produced or imported into the UK are, where possible, RSPO Mass Balance certified, but progress to Segregated or Identity Preserved supply chains is currently severely limited by these complexities already highlighted. Not only does this limit the sector's ability source CSPO – it also carries implications for companies that will be obliged to comply with incoming due diligence regulations in the UK (and EU). The conventional element of Mass Balance CSPO may not provide the legality assurance that will be required by the UK's due diligence law if information about its origin is limited.

Whilst the RSPO is exploring how the Mass Balance model can be strengthened, leading companies in the oleochemicals sector (and beyond) are working individually and collectively across other areas beyond certification to provide visibility and assurance of what they are procuring and where they are sourcing it from. Many leading businesses operate under NDPE policies and work in collaboration within initiatives such as Action for Sustainable Derivatives (ASD). With traceability currently limited in the oleochemicals sector due to the complexities explained already, many companies using palm-based derivatives are currently only able to trace their products back to a large number of possible mills linked to their supply chains. Groups like ASD are working to strengthen levels of traceability back to mills, recognising the increasing urgency of this need due to incoming regulations requiring evidence of origin.

Working in tandem, Mass Balance certification, traceability and NDPE policies remain the best and most credible options to answer new due diligence requirements and to ensure sustainable palm-based oleochemical supply chains.

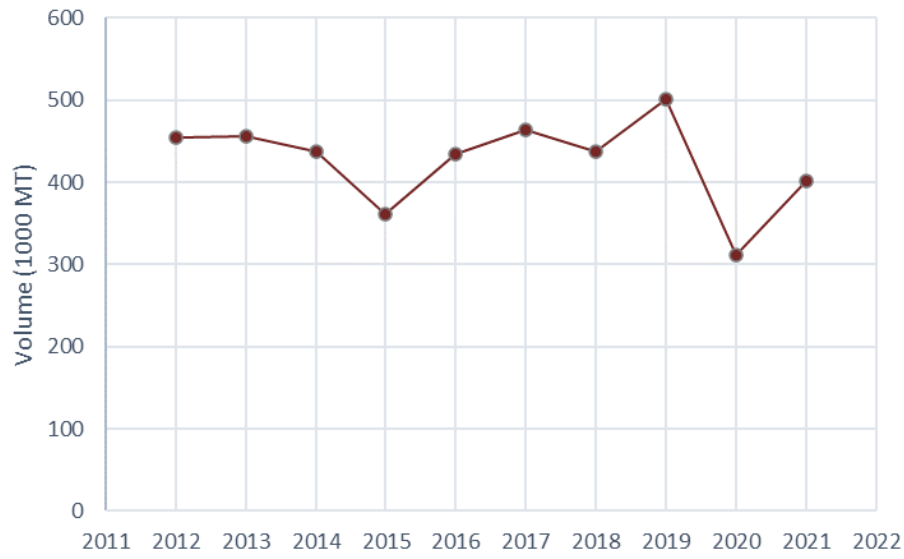
3.2.2.3 *Animal feed*

Another sector that uses palm derivatives is that of animal feed – palm fatty acid distillate (PFAD), a by-product of the palm oil refining process, can play an important role in the nutrition of dairy cow feed (according to industry sources, an estimated 25,000 MT to 35,000 MT is used in the UK each year). PFAD is being supplied in the UK as RSPO Segregated or Mass Balance, or is covered by NDPE policies.

The key issue surrounding the use of palm oil in animal feed remains that of palm kernel expeller (PKE) – a by-product of the oil palm fruit used as one of the main components for feed meal formulation for the ruminant industry. Large volumes of PKE are imported into the UK each year – this figure stood at 400,000 MT in 2021, a little below the average since 2015 after considerable fluctuation between 2019 and 2020.

Currently, physically certified supply chain models for PKE are only at an early stage of development, possibly reflecting the fact that many industry stakeholders view PKE as a by-product – however, this view is changing amongst some. PKE credits are available for purchase from the RSPO to cover use of PKE, with at least 4,000 claimed to cover UK use in 2021 according to RSPO data. It remains to be seen for sure whether PKE will come under the remit of due diligence regulations, in which case a strengthening in traceability and knowledge of origin may be required.

Figure 12 UK palm kernel expeller imports, 2012-2021



4 Global impact through collective action

Thus far, this report has focused on how the UK is doing and where the remaining gaps in the national market lie. 10 years ago, this was certainly a bigger priority – the first Annual Progress Report published in 2012 reported that 41% of the UK’s imports were certified sustainable, with this figure standing at only 16% in 2010. But over the last decade of reporting, we have seen a distinct evolution in the UK market as the UK Roundtable and its members have worked to develop sustainable supply chains of palm oil to the UK. The beginning of the decade saw steady increases in the proportion of CSPO entering the UK, but since 2015, this figure has remained static at between 70% and 80%.

This report has already explored the nature of this remaining gap and the challenges in addressing it. But ensuring companies are sourcing palm oil sustainably in the UK is only a part of the action the UK can take to ensure positive change at a wider scale. As a user of only 0.5% of the world’s palm oil volumes, the impact of UK demand alone is limited – but the potential of the UK’s role as an influencer and collaborative partner to consumer and producer markets is unbounded.

There is absolutely still an important role to be played in supporting UK business to source palm oil sustainably, with initiatives such as Efeca’s Sustainable Commodities Resource Hub aimed at simplifying this journey for any user of palm oil (or other commodities).¹⁷ But in terms of generating wide-scale change, there are other areas that also require significant focus.

4.1 Communication as a tool for change

Communication and the unbalanced narrative surrounding palm oil remains a significant issue in the UK, and in other consumer countries. A 2019 study showed that 77% of British consumers are aware of palm oil, with 41% of those perceiving it as ‘environmentally unfriendly’. Meanwhile, in the same study, recognition of the RSPO label was as low as that of a fictitious ecolabel.¹⁸ This is a reflection of the perceptions of a public presented with an unbalanced narrative in the media, which often does not inform of the importance of supporting sustainable palm oil to people or the environment, and with prominent ‘palm oil-free’ labelling on products.

Perhaps, in the UK, the greatest impact can be had not just by supporting businesses to source palm oil sustainably, but also through education and raising awareness. It is essential that people have balanced, unbiased information to inform their purchasing decisions – innovation in tools that are available to support consumers can aid this process, with an example being the PalmOil Scan app launched by Chester Zoo with partners around the world.¹⁹ Greater levels of

¹⁷ <https://www.efeca-resource-hub.com/>

¹⁸ Rosemary Ostfeld et al 2019 Environ. Res. Lett. **14** 014001

¹⁹ <https://www.chesterzoo.org/what-you-can-do/our-campaigns/sustainable-palm-oil/palmoil-scan-app/>

public awareness can resonate in the information provided by the media, and could even inspire action beyond our borders.

The UK is not alone in its need to educate consumers about the importance of sustainable palm oil – major consumers like Indonesia, China, India and the EU are working on this issue too at different levels, so it is important that we explore what we can learn from other countries in terms of their approaches, and how we can amplify efforts around what is absolutely a global issue. Changing consumer behaviour at a global level, in particular in domestic markets of producer countries and other regional markets, could be key to creating a level of demand that sees sustainable palm oil become the norm.

4.2 Collaboration beyond our borders

The worldwide nature of the palm oil market is evident when we look at where it is used and the vast array of applications it is used for. Attempting to address the UK market in silo is therefore not the most effective approach – we need to look beyond our borders at the impact we can have globally, through the influence of industry and in collaborative partnership with others.

The UK Roundtable is engaged in these efforts through Efeca’s extensive global outreach and engagement programme, including through a global national initiative network that facilitates dialogue and discussion between initiatives representing Europe, India, China and Singapore. A key theme that has emerged from these dialogues is the need for multi-national companies to act consistently in different markets, with examples including companies not applying the same sustainability principles in India that they do in Europe. This demonstrates the value of national initiative collaboration to share information and raise awareness of where efforts need to be aligned.

This important theme of collaboration also applies to consumer-producer relationships. Working together and engaging in productive dialogue to meet shared aims is an approach that can deliver constructive, positive impacts at scale. Recognising the need for such dialogue, the UK Roundtable and its members joined a meeting with the Indonesian Ambassador to the UK in 2021, which highlighted alignment at both ends of the supply chain in the ambition for sustainable production and consumption of palm oil. Discussions centred around the need for reliable information about the progress being made on the ground in Indonesia to provide market access for producers and reassurance for consumers. Dialogue such as this is demonstrating the value of collective action – particularly in light of incoming demand-side regulatory measures.

4.2.1 Demand-side measures and national standards

Recent years have seen a global push from demand-side markets to develop regulatory approaches aimed at ensuring the legality or sustainability (or both) of imported commodities. Due diligence regulations are being developed in the UK, US and EU, with the former two focusing on ensuring legality of origin, and the latter taking a step further by including legality and deforestation-free requirements.

In 2022, the UK government carried out its secondary consultation on the due diligence regulation, publishing a response to the consultation in June 2022.²⁰ At the time of writing, the timeline for implementation of the regulation, which will require certain large companies to undertake due diligence to ensure commodities (including palm oil) they use have been legally sourced, remains unclear. Greater clarity on the steps that companies will need to take to do so will be provided upon the publishing of a guidance document at a later date.

The EU's due diligence regulation, meanwhile, will require companies to ensure that products sold in the EU do not come from deforested or degraded land. The regulation was approved by vote in the European Parliament in September 2022, taking a step closer to implementation stage.²¹ The extensive traceability this regulation will require, in addition to the proof of legality that will be needed under the UK and US regulations too, presents challenges that are unique for some sectors of the palm oil industry that, as discussed already, are reliant on Mass Balance supply chain models or are based around incredibly complex supply chains. Geospatial technology such as satellite mapping and other innovations offer possible means for achieving the level of traceability that supply chains may require under these regulations.

Implemented on their own, measures such as due diligence regulations can be criticised as only cleaning supply chains in those consumer markets, rather than having a meaningful impact at the production base. The effectiveness of these measures could be strengthened by implementing them as part of a package of measures enacted in partnership with producer countries. A key example is the role that national standards can play in 'raising the base' of production.

With around 80% of the world's production not certified to a voluntary standard with a chain of custody model (such as the RSPO or ISCC), national standards such as Malaysia Sustainable Palm Oil (MSPO) and Indonesia Sustainable Palm Oil (ISPO) could provide a degree of assurance of the production base they cover. MSPO in particular covers almost all of Malaysia's production base, with the total MSPO-certified area in Malaysia increasing considerably between July 2020 and July 2021 from 5.9 million ha to 6.66 million ha, representing 97% of its production area.²² ISPO is further behind in terms of this proportion but perhaps not in terms of numbers of producers and total area covered.

Currently, the lack of a chain of custody model beyond export prevents claims being passed down the supply chain for these standards, however due to their crucial coverage of the production base they could present an opportunity for producer-consumer partnership around development of the assurance they can provide. This could prove particularly important for, for

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1080235/due-diligence-uk-supply-chains-summary-of-responses.pdf

²¹ [Climate change: new rules for companies to help limit global deforestation | News | European Parliament \(europa.eu\)](https://www.europa.eu/press-room/en/dae-102222-01)

²² https://www.idhsustainabletrade.com/uploaded/2022/09/Palm_Oil_Report_21_09_22_FINAL.pdf

example, RSPO Mass Balance volumes – the conventional element of which currently carries little assurance, but could have been produced under a national standard.

4.2.2 The legacy of Glasgow

COP26, which took place in Glasgow in 2021, put the theme of collaborative global engagement into the public eye, placing the spotlight on climate change, deforestation and commodity supply chains. It was seen as a crucial moment for indicating the capability of countries to work together to make meaningful progress on these issues, and a number of major commitments did come out of it.

To date, 145 leaders (including the UK), accounting for more than 90% of the world’s forests, have signed the Glasgow Leaders’ Declaration on Forests and Land Use.²³ Signatories are committed to work together to halt and reverse forest loss and land degradation by 2030. In addition, 12 of the largest companies managing over half of global trade in key forest-risk commodities such as palm oil, beef and soya announced that by COP27 they will lay out a shared roadmap for enhanced supply chain action consistent with a 1.5-degree Celsius pathway.²⁴ Further, in the finance sector, the UK became the first G20 country to make it mandatory for Britain’s largest businesses to disclose their climate-related risks and opportunities, in line with Taskforce on Climate-related Financial Disclosures (TCFD) recommendations.²⁵

For the sustainable palm oil industry, it is perhaps too early to evaluate how effectively these commitments have been turned into action, and COP27 (taking place in November 2022) will provide a good point for reflection on progress. But the reality is that action needs to be urgent, fast and on a large scale, with the next decade an absolutely vital period if we are to limit the negative impacts of climate change.

²³ <https://ukcop26.org/glasgow-leaders-declaration-on-forests-and-land-use/>

²⁴ <https://ukcop26.org/agricultural-commodity-companies-corporate-statement-of-purpose/>

²⁵ <https://www.gov.uk/government/news/uk-to-enshrine-mandatory-climate-disclosures-for-largest-companies-in-law>

5 Conclusion

A decade on from the first Annual Progress Report on the UK sustainable palm oil market, considerable progress has been made, both in terms of the UK's sourcing of sustainable palm oil and in efforts to form meaningful global partnerships to amplify impact.

Since that first report indicated that only 16% of UK imports of palm and palm kernel oil were RSPO certified in 2010, a decade of action by the UK Roundtable and its members has catalysed an evolution in the UK market, with the CSPO proportion standing at between 70% and 80% since 2015. The UK market is now at a stage where the vast majority of imports of palm oil and palm kernel oil, carry a form of sustainability assurance, be it through a certified supply chain or under an NDPE policy; nearly 80% of the intake volumes reported for use in this APR by UK first importers were RSPO Segregated. A few gaps do remain, however.

Although progress has been made in the Out of Home sector in terms of the use of sustainable palm oil, much of this is not visible in communication, with claims not passed down supply chains – a lack of pressure from consumers (compared to, for example, the retail sector) and the risk of a backlash from the palm-free lobby could be behind this. Meanwhile, gaps remain in the animal feed sector too, with certified supply chains of the voluminous PKE entering the UK not readily available.

In addition, the complexity of oleochemical supply chains in the home and personal care sector in particular means that traceability and segregation remains a significant challenge for palm derivatives and fractions, with Mass Balance a key supply chain model of certified material for this sector. For incoming due diligence regulations in the UK that will require evidence of legal origin, this could have major implications for such a supply chain model where information about the conventional element of the volume may be lacking. This highlights the fact that top-down demand-side approaches cannot act alone to ensure sustainable production of commodities like palm oil – they must work in tandem with collaborative actions in partnership with producer countries, as part of a wider package of measures.

This reality is reflected in the UK Roundtable's areas of focus moving forward, with international collaboration and partnership central to our actions. This includes engagement with producer countries in constructive dialogue, and learning from the actions of other national initiatives in consumer markets. Domestic action and technical support will aim to address the remaining gaps in the UK market that have been highlighted in this report. The Roundtable will continue to act as an invaluable public-private interface that connects industry with government and facilitates a constructive dialogue, with this role of increasing importance to ensuring smooth implementation of new regulations. Furthermore, remaining gaps in the UK market highlight the continued need for support, for example the provision of information and resources through Efeca's Sustainable Commodities Resource Hub, and the sharing of learnings and ideas through working groups to tackle issues such as balancing the narrative around sustainable palm oil in UK.

Despite the disruption and volatility that has characterised the start of this decade, the ambition and commitment to action in the UK and beyond continues to strengthen. If this ambition can be matched by sustained action at scale, at a producer and consumer level, we will see the positive collective change needed on the ground to transition to a fully sustainable oil palm industry.

Annex 1 Methodology (2016 to present)

This annex describes in detail how the UK's imports of certified sustainable palm and palm kernel oil as a percentage of total UK consumption was calculated. This analysis builds on the methodology used to obtain estimates of UK sustainable palm oil consumption in the Defra research report (2011) 'Mapping and Understanding the UK Palm Oil Supply Chain (EV0459)', undertaken by Proforest, and the methodology of previous Annual Consumption Reports (ACRs) prepared by UK Central Point of Expertise on Timber and Palm Oil (CPET) from 2012 – 2015.

The initial 2011 Defra report estimated 643,400 MT of palm oil was imported in 2009 (including palm oil (PO), palm kernel oil (PKO), direct fractions, olein and stearin and palm fatty acid distillate). These 2009 import figures were developed using trade data. Imports of finished products, oleochemicals and palm kernel meal/expeller (PKE) were excluded from the 2009 estimate. The 2012 – 2015 ACRs used the same methodology.

Consequently, to ensure that the 2009 estimate can be used as a baseline, and a comparison can be made with the 2012 – 2015 figures, this study also excluded imports of finished products, oleochemicals and PKE from the main UK import figures.

Estimating UK consumption of sustainable palm oil and palm kernel oil

The highly complex nature of PO and PKO supply chains means that it is not currently possible to develop a reliable indicator of total palm oil use in the UK, including PO and PKO found in finished goods.

However, volumes of PO and PKO imported into the UK were used in the Defra research report (2011) and the subsequent Annual Consumption Reports (2012-2015) as a reliable indicator of consumption in the UK market and consequently have also been used for this Annual Progress Report (APR).

Previously, CPET included UK PO purchases supported by RSPO certification including Identity Preserved, Segregated and Mass Balance CSPO products as well as GreenPalm's Book and Claim system in the calculations for the ACRs from 2012-2015 (based on the 2011 Defra research report). As agreed in 2016 by the UK Roundtable on Sourcing Sustainable Palm Oil, the APR now reports RSPO credit usage separately from the headline figure.

Imports of sustainable PO and PKO

Total volumes of UK imports of PO and PKO have been gathered from two data sources, FEDIOL and Oil World, for the period between and including 2009 – 2019. Both FEDIOL and Oil World use trade data from Eurostat, taking into account the same tariff lines for palm oil and palm kernel oil. Eurostat relies upon submissions of trade data from individual countries.

FEDIOL uses Eurostat data, without any further revision, although it collects the Eurostat data later in the year once it has been refined. Oil World on the other hand uses trade intelligence to refine their estimates of PO and PKO data including imports into the UK, and includes PFAD in their total palm oil imports.

It was previously agreed by the UK Roundtable on Sourcing Sustainable Palm Oil that the APR would report one headline figure based on the FEDIOL baseline data. This was decided because stakeholders wanted to align with Eurostat data as much as possible, in order to mirror what other European countries are measuring. For the 2021 APR onwards, the Oil World Annual has been used as the source for this information. This is because Eurostat data moving forward may no longer contain UK figures, due to Brexit. 2020 data from both sources was aligned, and therefore data will be sourced from Oil World moving forward.

The volume of palm oil supported by RSPO supply chain models was estimated by collating the submissions of data generously provided by UK refiners and other first importers. This was used to estimate the proportion of PO and PKO imports accounted for by Mass Balance, Segregated and Identity Preserved CSPO.

Imports of Palm Kernel Expeller

Total volumes of UK imports of PKE have been gathered from Oil World.

Stakeholder consultation

In contrast to some previous APRs, industry stakeholders were not sent a survey to gather their views of the draft analysis of 2021 data. Instead, the main findings were presented during a meeting of the UK Roundtable in October 2022, giving an opportunity to sense-check data analysis with stakeholders directly engaged in the supply chain.

Assumptions and Limitations

Due to the complex nature of palm oil supply chains and the availability of data it has been inevitable that a number of assumptions have been made at each stage of the analysis. Where possible these have been in line with the previous research and/or informed by stakeholder engagement. This section explains what assumptions have been made during the analysis.

Calculating the total UK consumption of palm and palm kernel oil:

- Total UK consumption has been defined as the total imports in volume for a given year (metric tonnes – MT). UK imports are based solely upon Eurostat data provided by Oil World.
- Derivatives/fractions and finished goods have not been included in the import figures. This means that the import figures are likely to be an underestimate of the true volume of palm oil consumed.

Calculating the volumes of sustainable palm and palm kernel oil:

- This analysis defines CSPO differently from some previous reports, which included RSPO supply chain models Mass Balance, Segregated and Identity Preserved CSPO as well as RSPO credit certificates. This report does not include RSPO credit certificates in the headline figures, instead focusing on physically certified volumes.
- The 2011 Defra research report identified a range of companies that imported palm oil into the UK. As the major importers of palm oil into the UK (as substantiated by stakeholder engagement) this analysis refined the original approach taken in 2011 and

focused solely on the first importer data as the most robust means to capture the upstream supply of sustainable palm oil in the UK.

- All first importers that submitted data for use in the report provided intake data, rather than sales data. This is because a company may sell palm oil as conventional even though it was imported as CSPO (due to demand issues). For this reason, intake data is likely to be more accurate in terms of describing the CSPO status of the palm oil entering the UK supply chain.
- It should be noted that the estimate of imports of Segregated, Mass Balance and Identity Preserved CSPO is likely to be an underestimate as it does not include data from all companies importing palm oil into the UK.
- In addition, this study also includes information about palm oil consumption for biofuels under sustainability standards such as the International Sustainability & Carbon Certification (ISCC), as reported under the Renewable Transport Fuel Obligation (RTFO) (see Annex 2).

Annex 2 Biofuels

Sustainable consumption of palm oil within the biofuels sector is controlled by the Renewable Fuels Transport Obligation (RFTO) and the Renewables Obligation (RO). The RFTO statistics are in their 14th year of reporting with the most recent report covering 2021. Information on volumes of biofuel produced using palm oil was obtained from the RFTO statistics for 2021 and used to produce Table 1 below. Note that the total biofuel volume reported by RFTO for 2021 was 2,501 million litres, compared to a total of 2,536 million litres in 2020.

Note that no volumes of biodiesel for palm feedstocks were reported for 2021, in contrast to the 29 million litres reported for 2020 (from feedstocks of palm, palm oil mill effluent and empty palm fruit bunches). However, at the time of writing this data remained provisional, so could be subject to change (final data due to be published in November 2022). This is also the case for volumes of diesel (origin Bio) and off road biodiesel.

Table 1 RFTO 2020 data on UK imports of palm oil-based biofuels (Source: Department for Transport)

Fuel type	Feedstock	Country of origin	Volume (million litres)	Total volume of fuel type (million litres)	% of total fuel type	% of total UK biofuel
Biopropane	Palm	Indonesia	33	63	63.5%	1.6%
		Malaysia	7			
	Palm fatty acid distillate	Indonesia	1		1.6%	<0.1%

The RFTO statistics also report on the volumes of biofuel certified by voluntary sustainability schemes. In 2021, all of the volumes recorded in table 3 were certified by the International Sustainability & Carbon Certification (ISCC).

Annex 3 FEDIOL and Oil World reporting comparison

Previous APRs have reported FEDIOL and Oil World showing a large difference in palm oil and palm kernel import volumes into the UK. For example, in 2019, FEDIOL data reported total imports of 475,000 MT,²⁶ whilst Oil World recorded total imports of 533,800 MT.²⁷ This displayed a difference of 58,800 MT, most of which is composed of palm oil imports as opposed to palm kernel oil. The 2019 APR revealed that this difference could be almost completely attributed to Oil World including palm fatty acid distillate (PFAD) imports, whereas FEDIOL did not.

Since 2020, the data reported by both sources has been consistent, with Oil World still including PFAD in their figures. Oil World has been officially used as the UK import volume data source since the 2021 APR.

²⁶ PO – 450,000 MT and PKO – 25,000 MT

²⁷ PO – 500,600 MT and PKO – 33,200 MT