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# Our Responsibility for the Raw Material Palm(kernel)oil

Sustainability is one of Lidl's core strategic goals for a brighter future. Wherever our actions impact people and the environment, we are there to take responsibility. This is how we reaffirm our commitment to quality each and every day, thereby ensuring the best possible future for the company.

It is against this backdrop that we have developed our CSR strategy, which gives us clear guidance in fulfilling our responsibility to act responsibly. Our shared, comprehensive understanding of sustainable conduct addresses six strategic focus areas: conserving resources, protecting the climate, respecting biodiversity, acting fairly, promoting health, and engaging in dialog. In this way, we describe how we understand and implement Lidl's responsibility for the environment, people, and our customers.

#### Our Responsibility for the Raw Material Palm(kernel)oil

Palm (kernel) oil is a popular ingredient thanks to its positive properties. It is used to varying degrees in our own-brand products, including in baked goods and confectionery, cosmetics, and cleaning agents. However, palm (kernel) oil also carries many risks, both in cultivation and processing. As it is often not possible or sensible to completely replace palm (kernel) oil in our Lidl products, we are firmly committed to using this raw material with care. By taking a targeted approach in the palm (kernel) oil value chain, Lidl can make a positive contribution to the four strategic focus areas of protecting the climate, conserving resources, respecting biodiversity, and acting fairly.

#### Our International CSR Strategy at Lidl



# **Background**



# The Background of the Raw Material Palm(kernel)oil

Today, oil palms are the most commonly grown oil plants worldwide on account of their high yield and variety of uses. Palm oil is obtained from the fruit pulp of the oil palm, while palm kernel oil is extracted from the seeds of the fruit. According to a study by the International Institute of Sustainable Development (IISD), 72 percent of the palm (kernel) oil produced worldwide is used in food production, 18 percent is found in cosmetic products, washing detergents, and candles or used as lubricants in industry. The remaining 10 percent is used as bioenergy.

#### Palm (Kernel) Oil Has a Variety of Uses

40 kg

oil is obtained from one oil palm each year. Thanks to its natural properties, palm (kernel) oil is an extremely versatile and efficient raw material to use in food and near-food products. A single oil palm produces around 40 kg of oil every year — the highest yield of any oil plant.<sup>3</sup>

#### Area of Land Required to Produce One Ton of Oil



 $<sup>^{\</sup>mbox{\tiny 1}}$  We use the term "palm (kernel) oil" in the following to cover both products.

<sup>&</sup>lt;sup>2</sup> IISD: Global Market Report. Palm Oil, 2019.

<sup>&</sup>lt;sup>3</sup> WWF: On the oil trail, 2016.

In an average supermarket, around 50 percent of products contain palm (kernel) oil. The following figure shows the various uses of palm (kernel) oil products:

#### Palm oil:



 Palm oil is obtained from the yellow/orangecolored pulp.



The raw palm oil is extracted by **pressing the fruits** and is then **processed in refineries**ready for further use.



 Palm oil is used in margarine, convenience products, baked goods, and confectionery. It is also used to make candles, cosmetic products, and cleaning agents.

#### Palm kernel oil:



 White/yellow palm kernel oil is extracted from the fatty seed (kernel) of the palm oil fruit.



The seeds are removed from the pressed palm fruits and then dried. The oil can then be extracted from the seeds in an oil mill by grinding and pressing the seeds while applying heat.



Palm kernel oil is mainly used in chemicals, cosmetics, and cleaning products

#### Palm (kernel) oil fractions:



Both palm oil and palm kernel oil can be separated into solid and liquid components, which are known as palm (kernel) oil fractions.



 Palm (kernel) oil fractions are mainly used in cooking and frying oils, margarine, and confectionery.

#### Palm (kernel) oil derivatives:



Palm (kernel) oil fractions can be processed further to produce palm (kernel) oil derivatives — oleochemicals.



Palm (kernel) oil derivatives are mainly used in cosmetics and cleaning products.

#### Rapid Growth of Global Palm (Kernel) Oil Production

Due to the variety of ways in which palm (kernel) oil can be used, demand for the raw material has also grown. The annual production volume of palm (kernel) oil has more than tripled worldwide between 2002 and 2021, and is currently around 76 million tons.<sup>4</sup> Just 20 percent of this comes from sustainable production.<sup>5</sup> More than 80 percent of the palm (kernel) oil produced globally comes from Indonesia and Malaysia. Other important producing countries include Thailand, Colombia, and Nigeria. Between 2001 and 2015, 10.5 million hectares of forest were destroyed worldwide to create space to grow oil palms.<sup>6</sup> As a result, 1.5 percent of arable land globally is now dedicated to the cultivation of oil palms. That is the equivalent of around 23 million soccer fields.

#### **Environmental Risks of Palm (Kernel) Oil Production**

The large-scale production of palm (kernel) oil is contributing to a loss of biodiversity and climate change. This is caused not only by the scale of the land used for cultivation, but also by the methods used to obtain this land, because palm (kernel) oil plantations are often created by slashing and burning virgin forests and other valuable ecosystems. In Indonesia, plantations are also established on peat soil — an exceptionally valuable  $CO_2$  store. The consequences of these methods

<sup>&</sup>lt;sup>4</sup> USDA: Palm Oil Explorer, 2021.

<sup>&</sup>lt;sup>5</sup> Forum for Sustainable Palm Oil: What is palm oil, n.d.

<sup>&</sup>lt;sup>6</sup> World Economic Forum: Forests, Food Systems and Livelihoods, 2021.

include a loss of habitat for various plants and animal species, including many that are on the Red List. Burning areas of virgin forest causes CO<sub>2</sub> and soot to be released into the atmosphere — posing a risk to the population and to air quality. Deforestation is therefore also contributing to climate change, see Purchasing Policy for Supply Chains Free From Deforestation and Land Conversion - Lidl (abettertomorrow-lidl.ie). Areas of land obtained for the production of palm (kernel) oil are often cultivated as a monoculture. This type of land is much more afflicted by pests, and so pesticides and fertilisers are used. These substances harm the soil and contaminate groundwater — including in neighbouring ecosystems.

#### The Social Challenges Involved in Producing Palm (Kernel) Oil

If land is intended to be converted into plantations for palm (kernel) oil, this can cause land conflicts with and even the theft of land from palm oil smallholders and indigenous peoples. As these people are often not able to adequately protect themselves legally, this can endanger indigenous communities and drive them into poverty because their livelihoods often depend on the land and they are not able to compete with large plantations. This is further evidenced by the fact that only five percent of the land cultivated by smallholders is certified, as they

often do not have the time and resources required to obtain the relevant certification.<sup>10</sup>

The maintenance of palm oil plantations also poses a risk to workers' health. The necessary occupational health and safety is often lacking, for example when handling pesticides or performing the physically arduous task of harvesting the palm oil fruits.

Seasonal workers and migrant workers are mostly recruited by organised recruitment agents to work on the palm oil plantations.<sup>11</sup> Often, work standards are not adhered to, migrant workers are employed without valid employment contracts, statutory minimum wages are not paid, and personal difficulties are exploited. Structural causes such as poverty and a lack of insurance in the event of illness play a large role here and are exacerbated by the palm (kernel) oil production. Parents who are ill and unable to work often send their children to the plantation in order to safeguard their family income. The children must then perform the challenging work in their parents' place. This is one reason why child labour is a frequent occurrence on the plantations.

<sup>&</sup>lt;sup>7</sup> IUCN: Palm oil and biodiversity, 2018.

<sup>8</sup> Greenpeace: Palm oil, n.d.

<sup>&</sup>lt;sup>9</sup> Fairtrade: Fair palm oil, n.d.

<sup>&</sup>lt;sup>10</sup> Fairtrade: Fair palm oil, n.d.

<sup>&</sup>lt;sup>11</sup> Earthworm: Insights into recruitment costs [...] in the palm oil industry in peninsular Malaysia, 2019.

The hard work jeopardises children's health and education.<sup>12</sup>

Further information on human rights in relation to products in the Lidl assortment can be found in our > Purchasing Policy for Human Rights in the Supply Chain - Lidl (abettertomorrow-lidl.ie)



<sup>&</sup>lt;sup>12</sup> Amnesty International: The great palm oil scandal, 2016.

# Our **Commitment**



# Our Commitment to More Sustainable Palm(kernel)oil

At Lidl, we are committed to the more responsible and sustainable production of palm (kernel) oil on multiple levels within our raw materials strategy. Further information about the Lidl raw materials strategy can be found in our > Position Paper on the Sustainable Sourcing of Raw Materials - Lidl (abettertomorrow-lidl.ie).

We have two goals: We want to improve the working and living conditions of workers in the producing countries and work toward more environmentally friendly cultivation.

To achieve our goals, we have partnered with external stakeholders to develop a holistic strategy based on the following four pillars.

#### By the end of 2022 and thereafter, we will procure our palm (kernel) oil raw material in a more sustainable way.

We are investigating the risks inherent in our supply chains, buying only certified palm (kernel) oil, and working on alternatives and changes to improve the situation for palm (kernel) oil farmers.

#### Understanding impacts

We are identifying risks in our supply chains and are creating transparency.

#### Establishing standards

We are ensuring that our entire palm (kernel) oil supply is certified.

#### **Promoting alternatives**

We are promoting the use of more sustainable alternatives in our assortment and reducing the procurement of critical raw materials.

#### 4 Driving change

We are participating in multistakeholder initiatives and international projects.

# Prioritising Palm(kernel)oil as a Critical Raw Material and Understanding the Impacts

We have carried out a comprehensive risk assessment of our assortment and identified the raw materials that are critical for us together with our stakeholders and external experts, to ensure that we act in a way that is both targeted and effective.

#### **Our Critical Raw Materials at a Glance**



#### Risks in the Palm (Kernel) Oil Supply Chains, Especially in Producing Regions

Lidl's supply chains involve suppliers that produce worldwide. Our analyses show that palm (kernel) oil is one of our



In line with the **first pillar** of our raw materials strategy, we are determining the ecological and social risks associated with our supply chains.

critical raw materials with social and environmental risks throughout the entire supply chain — particularly at the source in the producing countries. Our risk assessment defines the starting point for the development of further measures and gives us guidance on where we need to take action to ensure our products containing palm (kernel) oil are more sustainable.

Further information on our comprehensive risk assessment can be found in our <u>> Position Paper on the Sustainable Sourcing of Raw Materials - Lidl (abettertomorrow-lidl.ie)</u>.

We have identified the following risks in relation to the supply chain for palm (kernel) oil in the countries concerned:

#### Social risks

Child labour	Côte d'Ivoire, Nigeria,
Forced labour	Indonesia, Malaysia, Thailand
Employee rights	Indonesia, Colombia, Malaysia
Discrimination	Guatemala, Indonesia, Papua New Guinea

#### **Environmental risks**

Biodiversity	Ecuador, Indonesia, Papua New Guinea
Climate vulnerability:	Indonesia, Malaysia, Thailand
Land use and deforestation	Indonesia, Malaysia, Thailand
Water risks	Indonesia, Nigeria, Thailand
Air pollution	Indonesia, Malaysia



# **Improving Transparency through Supplier Mapping**

Lidl is working hard to continuously improve transparency in its palm (kernel) oil supply chains. We perform an annual supplier review, known as supplier mapping, to monitor whether our suppliers are adhering to our defined requirements concerning palm (kernel) oil and document progress. As part of this process, we record the precise quantities, certification status, and countries of origin as far as possible. This gives us an overview of which palm (kernel) oil potentially originates from atrisk areas, enabling us to address our suppliers directly.

This monitoring process is performed annually with the support of external service providers and helps Lidl to monitor its raw materials goal of offering 100 percent RSPO-certified palm (kernel) oil by the end of 2022. If we identify any deficiencies during our annual monitoring, Purchasing will discuss these issues with the supplier concerned and define a detailed action plan to ensure the goal is met.

The work of standard-setting seal organisations like the Round Table on Sustainable Palm Oil (RSPO) and the underlying traceability systems also provide robust transparency in relation to the supply chain.

The identified palm (kernel) oil quantities from our supplier mapping are aggregated by type and RSPO supply chain model in an overall report for Lidl Ireland and Lidl Northern Ireland. As a longstanding member of the RSPO, we send this overall report (under the name "Annual Communications of Progress (ACOP)") to the RSPO each year in order to document our progress.



In line with the **first pillar** of our raw materials strategy, we are determining the ecological and social risks associated with our supply chains.

# Making More Sustainable Palm(kernel)oil the Standard with RSPO

As a longstanding member of the Roundtable on Sustainable Palm Oil (RSPO), Lidl supports more sustainable production methods for palm (kernel) oil and is committed to minimising the negative environmental consequences of the production of this raw material.

#### **Minimum Standard with RSPO Certification**

The Roundtable on Sustainable Palm Oil (RSPO) is currently the most important certification for palm (kernel) oil. The aim of the global initiative, which was launched in 2004 by the WWF, is to establish more sustainable palm (kernel) oil as the global industry standard. The criteria that must be met to obtain the certification are both ecological and social in nature. For example, forests must not have been cleared in order to produce palm (kernel) oil, farmers and workers in the producing regions must have more rights and security, and small farms must also have the opportunity to participate. In addition, areas worth protecting, such as rainforests, must not be used for the production of palm (kernel) oil. As a result, the carbon footprint of RSPO-certified palm (kernel) oil (3.41 kg  $CO_2/kg$  RBD palm (kernel) oil) is 35 percent smaller than that of conventional palm (kernel) oil (5.34 kg  $CO_2/kg$  RBD palm oil).

The aim of these RSPO requirements is to reduce the risk of deforestation in the production of palm (kernel) oil. RSPO also offers group certification, which gives small businesses and farmers the chance to keep up

with larger producers. The RSPO initiative also addresses the issue of child and forced labour: It requires plantations to comply with the applicable laws, exclude child and forced labour, involve smallholders, and fulfil other social conditions. To obtain the RSPO seal, local communities must also be allowed to organise themselves autonomously and legal contracts must be in place, as must proof of consent to the use of the land.

#### Lidl Demands: The RSPO Standard Must Be Developed Further

The RSPO is currently the only initiative that has developed measures for more sustainable palm (kernel) oil production on a large scale. NGOs criticise a lack of transparency and some organisations consider the certification to be inadequate. Lidl views the RSPO criteria as a step in the right direction, but is clear that they are only a minimum standard and must be refined and developed further. That is what we are working toward as an ordinary member of the initiative. We are also proactively seeking to engage in dialog and network with other



We are obtaining certification for our critical raw material palm (kernel) oil in line with the **second pillar** of our raw materials strategy.

companies, nongovernmental organisations, and European initiatives in order to jointly drive improvements in this area.

In particular, we are committed to strengthening the existing complaint mechanisms within the framework of the RSPO certification. This includes improving the RSPO's own complaint mechanism and establishing effective complaint mechanisms at plantation level.

Lidl Ireland and Lidl Northern Ireland are extremely pleased to see that, in addition to the RSPO, other standard-setting organisations such as the Rainforest Alliance, International Sustainability and Carbon Certification Plus (ISCC Plus), and the Forum for Sustainable Palm Oil (FONAP) are also committed to establishing more sustainable palm (kernel) oil production and the supply of this raw material from certified production sources.

#### Trading Models for RSPO-Certified Palm (Kernel) Oil

There are up to four trading models in the supply chain when purchasing certified raw materials such as palm (kernel) oil. These have different requirements in terms of the traceability of the raw material to the producers as well as the physical quantity of the certified raw materials actually contained in the end product.

#### Certified raw material not found or only partially found in the end product:

Book & Claim: No traceability

**Mass Balance:** No traceability, but partially found in the end product

#### Certified raw material physically contained in end product:

**Segregated:** Traceability to certified producers. Certified palm oils from different oil mills may be mixed at source.

**Identity Preserved:** Traceability to individual certified producers. The oil mills are kept strictly separate at source.

In Purchasing, we can do our bit to ensure the fair and more environmentally compatible production of palm (kernel) oil by adding products from certified sustainable production to our assortment, for example. This includes the RSPO (Roundtable on Sustainable Palm Oil) seal. That's why Lidl Ireland and Lidl Northern Ireland have been working with the suppliers of own-brand products to ensure greater sustainability in relation to palm (kernel) oil for many years now. Because with our own brands, we are able use the close relationship we have with our suppliers to directly influence this issue, which means we can actively drive improvements.

In the food own-brand assortment, Lidl Ireland and Lidl Northern Ireland have been exclusively using palm (kernel) oil that is largely traded in accordance with the Segregation (SG) trading model, and at least in accordance with the > Mass Balance (MB) trading model, since 2017. In the near-food assortment, we have been using palm (kernel) oil traded in accordance with the MB model since 2017, and are also switching to SG for these products by the end of 2022.

This means that from 2023, only SG-traded palm (kernel) oil will be used in our food and near-food assortments. This excludes palm (kernel) oil derivatives and fractions, which can continue to be procured under the MB model. We will also be making this switch in the non-food assortment by 2023. This brings us one step closer to our aim of ensuring that certified palm (kernel) oil is not just partially (MB) but fully, physically (SG) found in the end product.



In line with the **third pillar** of our raw
materials strategy, we are
promoting the use of
alternatives in our
assortment and reducing
the procurement of
critical raw materials.

# Our aim: We will procure palm (kernel) oil in a more sustainable way by the end of 2023.

 By the end of 2017, the palm (kernel) oil in food and near-food items will be certified in accordance with the RSPO "Segregated" standard at a minimum.

- By the end of 2022, palm (kernel) oil fractions and derivatives in food and near-food items will be certified in accordance with the RSPO "Mass Balance" standard at a minimum.
- By the end of 2023, the palm (kernel) oil in non-food items will be certified in accordance with the RSPO "Segregated" standard at a minimum.
- By the end of 2023, palm (kernel) oil fractions and derivatives in non-food items will be certified in accordance with the RSPO "Mass Balance" standard at a minimum.

# **Promoting Alternatives in the Assortment**

#### Responsible Use of Palm (Kernel) Oil in Lidl Own Brands

Palm (kernel) oil is found in many oils, fats, and baked goods, as well as cosmetics, detergents, and cleaning agents. In the Lidl assortment, around 80 percent of palm (kernel) oil is used in edible items and 20 percent in non-edible items.

It is important to consider the use of palm (kernel) oil from different perspectives: The oil palm has the highest yield compared to other plant oils. If produced in a sustainable way, this can reduce the environmental impact, which supports use of the oil. However, from a nutritional perspective, it may make sense to use alternative, healthy plant oils — if the technical processing required to produce the end product is similar or identical.



# **Supporting Indonesian Palm Oil Smallholders with FONAP**

Lidl has been a member of the Forum for Sustainable Palm Oil (FONAP) since 2021. FONAP is an alliance of companies from the product chain, NGOs, and associations that are seeking to establish greater transparency, traceability, and better certification systems and eliminate deforestation in palm oil supply chains. Members of FONAP also focus in particular on protecting human rights and many other social aspects.

As a member of FONAP, Lidl is therefore working with the Indonesian Palm Oil Forum (FORTASBI) on a project to support smallholders in Indonesia – on Sumatra, in the province of Jambi. There are both social and ecological aspects to the project.

#### **Targeted Local Support with FONAP**

The FONAP project supports social forestry, among other things. One of the ways that it does this is by creating alternative sources of income for the smallholders through the supplementary cultivation of native crops. These plants are grown by local groups of women, giving them the chance to earn their own income.

The project also supports more environmentally friendly cultivation. To improve water quality in the local Pengabuan River, green buffer strips will be created along the riverbanks. A regenerative agricultural concept is being implemented with the aim of supporting soil health in oil palm cultivation: On demonstration plots, participating smallholders

learn to create organic fertiliser and topsoil from cow dung and empty fruit bunches.

The project region on the island of Sumatra borders Bukit Tiga Puluh National Park, which is one of the last refuges for endangered species like the

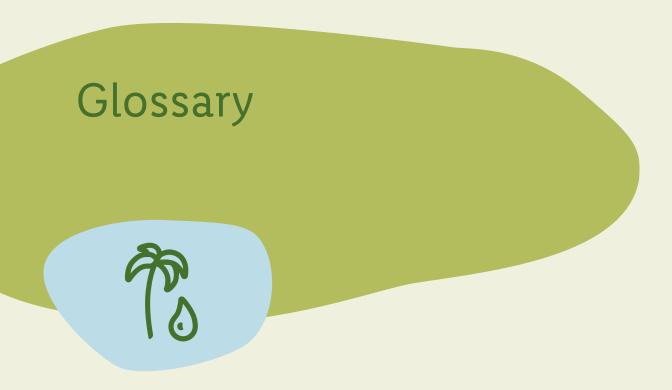


In line with the **fourth pillar** of our raw
materials strategy, we are
committed to industry
initiatives and
international projects.

Sumatran orangutan, Sumatran tiger, and Sumatran elephant. A further aim of the work in this area is to maintain the buffer zone around the park and minimise the disturbances caused by non-sustainable oil plant production, for example.

This is how we, as a member of FONAP, are taking responsibility in our global supply chains and are working cooperatively to champion better social, economic, and environmental conditions in producing countries.

Thanks to our work with FONAP and on this project, we can make a tangible difference to the lives of smallholders in the region.



### **Glossary**

#### **Book & Claim** Book & Claim is a certificate trading system for sustainable palm (kernel) oil. Producers sell certificates for palm (kernel) oil that has been produced in a sustainable manner. This palm (kernel) oil is then mixed with conventional palm (kernel) oil for subsequent processing. If companies at the end of the value chain use conventionally produced palm (kernel) oil, they can buy certificates corresponding to the quantity of non-certified palm (kernel) oil that they have used. This ensures that an equivalent quantity of certified palm (kernel) oil has been produced for the quantity of conventional palm (kernel) oil used in the end product. The end product does not have to contain certified palm (kernel) oil.13 CO<sub>2</sub> A natural component of air and one of the most important greenhouse gases, with a crucial function for our climate: CO<sub>2</sub> absorbs some of the heat emitted into space and radiates it back to Earth. This natural greenhouse effect is what creates our temperate climate. CO<sub>2</sub> is released into the atmosphere through the combustion of fossil fuels and sources of energy, for example during power generation and logistics processes.14 **Ecosystem** A relational structure (biocenosis) of living things (microorganisms, plants, fungi, animals, humans) with a habitat (biotope) of a certain scale (e.g., ocean, forest, coral reef). 15 **Identity Preserved** The Identity Preserved model involves the physical separation of certified and conventional palm (kernel) oil. It differs from segregation because the certified palm (kernel) oil comes from just one (large) plantation. This means that certified products are not mixed with palm (kernel) oil from other plantations at any stage. There is therefore strict separation by oil mills at source. 16

Trading model	Categorisation of certified raw materials, such as palm (kernel) oil. Trading models have different requirements in terms of the traceability of the raw material to the plantations as well as the physical quantity of the certified raw material actually contained in the end product. A differentiation is made between "Book & Claim," "Mass Balance," "Segregated," and "Identity Preserved." 17
Mass Balance	In the Mass Balance model, certified palm (kernel) oil is mixed with conventional palm (kernel) oil, e.g., in the field, oil mills, refineries, or cargo ships, and offered on the market in this way. With this model, only the same quantity of certified palm (kernel) oil that was purchased at the start of the value chain can be sold on at each subsequent stage of the value chain. This is crucial, as certified palm (kernel) oil is mixed with conventional palm (kernel) oil. It must be ensured right through to the end product that the purchased quantity of certified palm (kernel) oil is only sold once, and that the quantity of certified palm (kernel) oil therefore remains consistent throughout the entire value chain. <sup>18</sup>

<sup>&</sup>lt;sup>13</sup> Forum for Sustainable Palm Oil: Trading models, n.d.

<sup>&</sup>lt;sup>14</sup> Encyclopedia Britannica: Carbon Dioxide, 2021.

<sup>&</sup>lt;sup>15</sup> National Geographic: Ecosystem, 2022.

<sup>&</sup>lt;sup>16</sup> Forum for Sustainable Palm Oil: Trading models, n.d.

<sup>&</sup>lt;sup>17</sup> Forum for Sustainable Palm Oil: Trading models, n.d.

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Methane	A greenhouse gas that is 20 to 30 times more harmful to the
	environment than the equivalent volume of carbon dioxide ( $CO_2$ ).
	Methane gas is present in the atmosphere at lower levels —
	compared to CO <sub>2</sub> . The biggest generators of this gas are domestic
	waste dumps, rice fields, and cow digestion. Methane gas is also bound in permafrost soil in Siberia and Sweden, as well as in the
	seabed. Global warming can cause large quantities of the gas to be
	released, massively accelerating the greenhouse gas effect. <sup>19</sup>
Near Food	Cosmetics, detergents, cleaning agents, pet food, paper, films,
	hygiene products, tobacco, household goods (batteries, coal, candles,
	lighters, lubricants, carrier bags)
Non Food	Textiles, hard goods
Ecosystem	A relational structure (biocenosis) of living things (microorganisms, plants, fungi, animals, humans) with a habitat (biotope) of a certain scale (e.g., ocean, forest, coral reef). <sup>20</sup>
Palm oil	Palm oil is obtained from the yellow/orange-coloured pulp of the oil
	palm fruit. The raw palm oil is extracted by pressing the fruits and is
	then processed in refineries ready for further use. Palm oil is used in margarine, convenience products, baked goods, and confectionery.
	It is also used to make candles, cosmetic products, and cleaning agents. <sup>21</sup>

Palm kernel oil	White/yellow palm kernel oil is extracted from the fatty seed (kernel) of the palm oil fruit. The seeds are removed from the pressed palm fruits and then dried. The oil can then be extracted from the seeds in an oil mill by grinding and pressing the seeds while applying heat. Palm kernel oil is mainly used in chemicals, cosmetics, and cleaning products. <sup>22</sup>
Palm (kernel) oil derivatives	Products manufactured through complex chemical processes during further processing following fractionation. They are predominantly used in cosmetics, detergents, and cleaning agents as surfactants or emulsifiers. <sup>23</sup>
Palm (kernel) oil fractions	Parts of refined palm (kernel) oil that are separated from one another through cooling, crystallisation, and filtration. Solid fractions are referred to as stearins and liquid fractions as oleins. They are used in the food, cosmetics, and detergent industries. <sup>24</sup>
Segregated	Segregation refers to the physical separation of the supply chain for certified and conventional palm (kernel) oil. Recipients of certified palm (kernel) oil can be sure that the palm (kernel) oil product supplied comes from a more sustainable production source and is not mixed with conventional palm (kernel) oil at any point in the value chain. Certified palm oils from different oil mills may be mixed at source. <sup>25</sup>

<sup>&</sup>lt;sup>19</sup> Stanford University: Methane and climate change, 2021.

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#### Greenhouse gases

Gaseous elements of the atmosphere, including carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and hydrofluorocarbons. A certain level of these gases in the atmosphere provides the natural greenhouse effect — and therefore favourable living conditions on Earth. However, if the concentration is too high—as a result of anthropogenic greenhouse gas emissions—then this causes the Earth to heat up.<sup>26</sup>

<sup>&</sup>lt;sup>26</sup> Encyclopedia Britannica: Greenhouse Gas, 2022.

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#### **Further Information about CSR**

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