Palm oil: Economic and environmental impacts

Economical and versatile, palm oil has become the world's most widely used vegetable oil. Although palm oil can be produced sustainably, rising consumption increases the risk of tropical rainforests being cut down to make way for plantations. Deforestation threatens biodiversity and causes greenhouse gas emissions. In view of this, the EU has revised its biofuels policy to phase out palm oil-based biodiesel by 2030.

Palm oil: A vital commodity

Oil palm trees are native to West Africa, but were introduced to tropical regions of south-east Asia and Latin America in the late 19th century. Oil extracted from the fruit was traditionally used in Africa for cooking, but has now found a wider range of uses: as a substitute for animal fats such as butter in baked products, soaps and cosmetics, or as a feedstock for biodiesel. Around half of packaged products in supermarkets contain palm oil. Although not particularly healthy (it contains higher levels of saturated fats than most other vegetable oils), palm oil has many advantages. Compared to soybean, it requires only one-tenth as much land, one-seventh as much fertiliser, one-fourteenth as much pesticide and one-sixth of the energy to produce the same quantity of oil, and is therefore very cheap. In addition, palm oil is highly resistant to oxidation, making it suitable for frying and giving it a long shelf life. As a result, consumption of palm oil has doubled over the past 15 years to nearly 8 kg per inhabitant of the globe, and shows no signs of slowing down. Until the 1960s, oil palms were mainly grown in Africa, but since then production has shifted to south-east Asia: according to FAO statistics, Indonesia (42 % of global output) and Malaysia (36 %) are the leading producers, followed by Thailand (5.6 %), Nigeria (2.9 %), Colombia (2.2 %) and Ecuador (1 %).

The economic and social impact of palm oil

Palm oil is the main agricultural export of Indonesia and Malaysia, generating 8.8 % and 3.4 % respectively of their exports in 2019. It is claimed that the sector provides direct employment for nearly 1 million in Malaysia and 4 million in Indonesia, often in remote rural areas where alternative employment is scarce. However, not all have benefited; in Indonesia, indigenous communities often lack legal documents certifying their ownership of land, and there are many legal conflicts between oil palm companies granted government concessions in forested areas, and the people who have used the land for centuries. In some cases, this has led to local people losing access to land and resources. As a result of such problems, one survey found that many villages in Indonesian Borneo were strongly opposed to palm oil companies. There are also serious concerns about abusive labour conditions on some plantations.

The environmental impact of palm oil

Deforestation is the main reason why palm oil is controversial. Booming production means that more land is needed for new plantations. This does not necessarily result in forest-clearing, as oil palms can be planted on degraded land or land previously used for other crops. However, scientific studies cited by the European Commission in 2019 suggest that 45 % of the land area covered by new plantations is on formerly forested land, a much higher share than for other oilseed crops such as soybean (8 %), and that between 2008 and 2011 palm oil caused 4 300 km^2 of deforestation worldwide. A second study from 2019 points to oil palm plantations as the single biggest cause of deforestation in Indonesia, accounting for nearly a quarter of permanent forest-clearing in the country between 2001 and 2016.

Deforestation is a major concern for several reasons. Compared to rainforests, oil palm plantations support only one quarter as many animal species. By eating into the habitats of the orang-utan and Sumatran tiger (both critically endangered species) as well as numerous smaller animals, they threaten biodiversity. At the same time, oil palms have less than 20 % as much above-ground biomass as rainforest trees, and a correspondingly lower capacity to absorb carbon dioxide from the atmosphere.

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Greenhouse gas emissions go up when oil palms are planted on carbon-rich peaty soil – which is the case for around one-fifth of new plantations. Draining such soils, which is necessary for the oil palms to grow, exposes the peat to oxygen, causing it to decompose and release huge quantities of carbon dioxide into the atmosphere over many years. Peat drainage in south-east Asia is estimated to cause the equivalent of 2 % of global fossil fuel CO_2 emissions. Fires on dried-out peat, which are very hard to put out, release thick clouds of choking smoke in the atmosphere. In Indonesia, around one-fifth of such fires are directly linked to palm oil.

Some of Indonesia's worst fires to date were in 2015. For several weeks, Indonesia became the world's biggest greenhouse gas emitter, as fires destroyed an area almost the size of Belgium. Choking haze spread as far as Singapore, costing the Indonesian economy at least US$16 billion and causing up to 100 000 premature deaths.

Efforts by producers to make palm oil more sustainable

As the world's largest producer of palm oil and one of the countries worst affected by deforestation, Indonesia has taken several steps to make palm oil more sustainable. Since 2011, Jakarta has stopped issuing new concessions for clearing forests in primary (i.e. old-growth) forests and on peatland; moreover, since the peak fire year of 2015, concession-holders are required to protect and rehabilitate peatland areas. Despite this, the country lost over 10 000 km^2 of forests a year between 2017 and 2019, partly due to oil palm cultivation. The good news is that this is still less than half the record deforestation rate of 24 000 km^2 in 2016. Deforestation has also slowed down in neighbouring Malaysia, the other main producer, which has a long-standing commitment to keep at least half of its land area under natural forest cover.

Several certification schemes for sustainable palm oil exist, of which the most widely used is that of the international Roundtable on Sustainable Palm Oil (RSPO). To be RSPO-certified, palm oil must not come from land that has been cleared by fire or by destroying primary forest. Moreover, since November 2018, the scheme excludes new plantations on peat soil. Opinions on the RSPO are divided: the World Wildlife Fund sees the scheme as an 'essential tool' in the drive to ensure that palm oil does not cause deforestation; on the other hand, Greenpeace claims that RSPO standards are not strict enough and that in any case not all participants in the scheme meet their commitments. Besides, less than one-fifth (19 %) of global palm oil production is certified by the RSPO as sustainable.

The EU and palm oil

Several European countries (including France, Germany, Italy and Norway), as well as numerous multinational companies, have already committed to only buying sustainably produced palm oil. In 2016, 69 % of EU palm oil imports were RSPO-certified. At present, there is no EU-level requirement for sustainability, but this could change soon; as part of its 'Green Deal', the EU is planning an impact assessment of regulatory and non-regulatory options to promote deforestation-free imports of commodities such as palm oil.

In a bid to curb greenhouse gas emissions from fossil fuels, in 2009 the EU's Renewable Energy Directive set a target of 10 % of transport fuels in Member States to come from renewable sources by 2020. To help meet this goal, nearly two-thirds of the EU palm oil imports are used as biodiesel feedstock. However, studies show that when forests are cleared for plantations, palm oil-based biodiesel actually causes more greenhouse gas emissions than fossil fuels. In response to such concerns, the EU amended its Renewable Energy Directive in 2018. As a result, though biofuels from crops such as palm oil that carry a high risk of deforestation will not be banned, they will no longer count towards the 10 % target from 2030 on.

Apart from these sustainability concerns, the EU also complains that subsidies and tax breaks give Indonesian producers of palm oil-based biodiesel an unfair advantage over their European competitors. To compensate for this, in 2019 the EU imposed countervailing duties on Indonesian biodiesel.

Indonesia and Malaysia have responded sharply to what they see as unfair EU restrictions. In December 2019, Indonesia filed a dispute with the World Trade Organization, arguing that the amended Renewable Energy Directive is discriminatory, and Malaysia plans to do likewise. Palm oil-related tensions stand in the way of an EU-Malaysia trade deal, perhaps also of closer EU relations with south-east Asia as a whole.

The **European Parliament** has expressed concerns about palm oil as a cause of deforestation, for example in its resolutions of April 2017 on palm oil and deforestation, and of September 2020 on the EU's role in protecting the world's forests. The latter calls for a binding 'legal framework based on due diligence, in order to ensure sustainable and deforestation-free supply chains for products … on the EU market'.