EXECUTIVE SUMMARY

Monitor and Responding to Emerging Issues

The Palm Oil Toolkit supports companies in the responsible sourcing of palm oil, highlighting a wide range of tools and initiatives which aim to decouple palm oil production and trading from deforestation, development on peat and human rights violations. This document summarises the key points on how to monitor and respond to emerging issues in the palm oil sector.

Briefing Notes 01 to 04 focused on the development of systems and procedures to implement responsible sourcing commitments, understand risks, engage both within and beyond supply chains and to monitor progress and performance. Each of them reflects the efforts undertaken to date in the palm sector. While progress has been made in addressing key social and environmental risks, some issues remain, and have been exacerbated by external factors and a lack of risk mitigation. This briefing note highlights these emerging issues and the mitigating actions implemented by industry players and supporters to address them. Trends in international regulations will also be introduced.

01 Emerging issues in the palm oil sector

Climate change

Under current trajectories, the world is heading for >2°C warming by the end of the century. This prediction is far greater than the target to keep warming below 1.5 °C above pre-industrial levels (the threshold to prevent catastrophic climate change impacts). Urgent action is needed from the entire industry to effectively tackle multiple challenges that threaten the entire palm oil supply chain.

Contribution of oil palm cultivation to environmental degradation and climate change

Food systems are responsible for over 80% of global biodiversity loss and more than a third of global greenhouse gas emissions. To date, carbon emissions from agriculture remain the primary source of global warming. The clearing of peat and native forests for palm oil cultivation account for 1.5% of GHG emissions globally, for Malaysia and Indonesia alone. Across Southeast Asia, land clearance and Palm Oil Mill Effluent (POME) are the biggest sources of GHG emissions contributing to climate change.

Impact of climate change on palm cultivation

Oil palm is grown in tropical countries where communities and ecosystems are most vulnerable to the impacts of climate change. Climate change will have multiple negative long-term impacts on oil palm cultivation. Research shows 3/4 of suitable land available for palm oil production will be lost by 2100 due to drought. Rising temperatures have made water stress events more prevalent, a significant limiting factor in the growth and productivity of the oil palm tree, a rain-fed crop. Sea level rise caused by thermal expansion, melting of glaciers, ice sheets, and land water storage changes is another concerning threat to the oil palm industry. CDP's No Wood for the Trees report found that 90% of the palm oil production regions in Southeast Asia are concentrated along low-lying areas, threatened by coastal flooding and rising sea levels.

Water stress

Agriculture accounts for roughly 70% of global freshwater use

Water availability

Conversion of natural ecosystems, such as from rainforests to oil palm plantations, causes significant changes in the hydrological cycle including periodic water scarcity. Clearing of mangroves for conversion to oil palm also impacts on water availability and quality. Mangroves are key to protecting coasts from storm surges, seawater storms, waves and tsunamis. Southeast Asia is a global hotspot for mangrove loss. Research is making the link between oil palm expansion and mangrove loss increasingly clear: Expansion of oil palm, together with rice and rubber, accounts for most mangrove conversion in Myanmar; and large-scale oil palm production is replacing vast areas of former mangrove forests in Malaysia and Indonesia.

Pollution and water quality

Research has found that oil palm cultivation significantly reduces water quality and threatens freshwater systems, impacting millions of livelihoods and destroying aquatic life. The sources of water pollution from oil palm cultivation are usually sediment loads from increased surface run-off and soil erosion from converted land, and agricultural run-off from applied chemical inputs such as fertilisers and pesticides. Extensive fertiliser, pesticide and chemical usage on plantation estates also impacts water quality in nearby areas. The two largest palm oil producing countries produce approximately 84 mill. (Indonesia) and 50 mill. (Malaysia) tonnes of POME wastewater annually.

Impacts on human rights and livelihoods

Palm oil production is an important livelihood source for many communities, but it also creates serious and intertwined environmental and social problems which need to be understood and addressed

Environmental issues that lead to negative impacts on the livelihoods of communities

The annual use of fire to clear forests (especially on peatlands) for palm oil development, in particular in Kalimantan and Sumatra in Indonesia, is one of the principal sources of polluting haze in Southeast Asia. In addition, most of the global supply of palm oil (approximately 84% in 2018) is produced in developing countries such as Indonesia and Malaysia, where 40% of the oil palm supply base are independent smallholders. These smallholders are vulnerable and at high risk of negative impacts, as they lack the resources fundamental to climate change resilience, such as finance, technology and knowledge.

Climate-induced migration and modern slavery

Regions of South Asia and Southeast Asia are particularly vulnerable to the impacts of climate change that lead to displacement and forced migration, which could result in an increase in human rights risks such as forced labour and human trafficking. For example, Bangladesh, China, India and the Philippines accounted for 58% of the global disaster displacement in 2020. The World Bank estimates that more than 143 mill. people spread out over sub-Saharan Africa, South Asia and Latin America will be forcefully displaced by 2050 due to climate change.

Political instability

In recent years, Latin America has become the world's second largest palm oil producing region, contributing up to 5.7% of global palm oil. Across countries such as Colombia, Ecuador, Honduras, Guatemala, Brazil and Costa Rica, lack of opportunities, limited access to education and political corruption have persisted for generations, exacerbating issues of violence and displacement.

Pollution and water quality

Research has found that oil palm cultivation significantly reduces water quality and threatens freshwater systems, impacting millions of livelihoods and destroying aquatic life. The sources of water pollution from oil palm cultivation are usually sediment loads from increased surface run-off and soil erosion from converted land, and agricultural run-off from applied chemical inputs such as fertilisers and pesticides. Extensive fertiliser, pesticide and chemical usage on plantation estates also impacts water quality in nearby areas. The two largest palm oil producing countries produce approximately 84 mill. (Indonesia) and 50 mill. (Malaysia) tonnes of POME wastewater annually.

02 Proactive actions needed for positive impacts

Total economic losses from natural disaster events in 2021 reached US$ 280 billion globally. In Asia, one of the costliest events were the floods in China, costing a total of US$ 20 billion. To reduce our vulnerability to future impacts of climate change, there is urgent need to invest in disaster risk management and reduction. Until recently, much of the attention has been on reactive measures, such as humanitarian aid relief, to deal with rapid onset catastrophes like storms and landslides. Climate change, on the other hand, can cause slow-onset disasters like drought. Hence, the **industry must come together and shift from reactive to proactive risk reduction measures**.

Here we present examples of mitigative and adaptive measures that can be taken individually and collectively to reduce negative impacts from climate change, and to ensure oil palm is not grown at the expense of the people and planet.

2.1. Public sector actions and initiatives

Measure	Type	Description
United States CBP sanctions on Malaysian palm oil companies	Public sector actions and initiatives	The United States Customs and Border Protection (CBP) is a law enforcement organisation that implements border management and control to facilitate lawful international travel and trade. In 2020, the United States (CBP) imposed bans on two Malaysian palm oil companies – FGV Holdings Berhad and Sime Darby Plantation Berhad. Both companies were issued a Withhold Release Order (WRO) on their palm oil and products due to allegations of forced labour. Even though exports to the US are insignificant to both companies (approximately 3% of Malaysia's total exports of palm oil in 2020) the CBP ban still causes both companies severe reputational risks.
European Union Deforestation Due Diligence	International legislation	In 2021, the European Commission developed draft EU deforestation Due Diligence legislation to regulate deforestation-free products entering the EU market. The legislation currently covers six commodities: palm, soy, wood, cattle, cocoa, coffee, rubber and some derivates. Companies that are providing the specified commodities or products to the EU market will be covered by the legislation and be obligated to ensure these products are deforestation-free and legally produced on land that has not been subject to deforestation after December 31, 2020.

Global Methane Pledge	Global targets	The Global Methane Pledge is an initiative by the United States, European Union and partners to reduce global methane emissions. The agriculture industry is currently the largest contributor of anthropogenic methane emissions globally. Palm oil mill effluents (POME) are the second largest methane emission source in Malaysia. This highlights the need to foster greater collaboration within the palm oil supply chain to effectively reduce methane emissions.
Commitments and progress made during Conference of the Parties (COPs)	Global targets	During COP27 (November 2022), 14 trader and processor companies signed the **Agriculture Sector Roadmap to 1.5°C**, a sectoral-wide commitment for companies to reduce their land use change emissions. The roadmap has 3 objectives: 1) accelerate supply chain action to reduce emissions from land use change, 2) drive transformation of commodity producing landscapes, and 3) support forest positive sector transformation. Specifically for the palm oil sector, signatory companies will focus on smallholder inclusion, forest protection in priority landscapes, and providing support on the uptake of mandatory regulatory frameworks in Indonesia and Malaysia. Companies that have signed this Roadmap include: Bunge, Wilmar, GAR and LDC.
China's stronger climate commitments and policies	National policies	China launched its first national - and the world's largest - emissions-trading scheme (ETS) in 2021. This scheme allows companies to adopt more efficient equipment and facilities, and trade on saved emissions to cover the excess. At its core, the ETS would punish polluters to compensate for environmental damage, thus incentivising them to slash their emissions. The ETS is an integral tool to support China's carbon emission mitigation targets.

2.2. Nature-Based Solutions (NBS)

The International Union for Conservation of Nature (IUCN) defines Nature-based solutions (NBS) as: "Actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits".

Nature-Based Solutions are an important part of the global effort to meet the goals of the Paris Climate Agreement and are an integral part of decarbonisation, minimising climate change risks, and building climate-resilient societies. They prioritise human-nature harmony together with ecological growth, and constitute a comprehensive, people-centred solution to climate change. The Climate Action Summit's Nature based solution (NBS) Action Area, co-led by China and New Zealand, have urged the incorporation of nature-based solutions in the post-2020 global biodiversity framework, as well as consideration of natural systems' ability to aid mitigation and adaptation.

NBs Example: Reducing GHG Emissions from Peatlands

Image Source: Wikipedia

43% of Siak's landscape is dominated by oil palm, pulp and paper plantations, with only 19% remaining forested land. 60% of the total oil palm area within the Siak district is inhabited by oil palm farmers. The peatlands here are facing historical rates of peat subsidence and fire events that directly threaten livelihoods, cause health risks and release a significant amount of Indonesia's yearly GHG emissions. In 2016, the Siak government together with Winrock International and Elang worked directly with farmers' groups to implement ways for oil palm smallholders to maximise production, reduce emissions and improve water table management, rewetting peat, and enact other best management practices.

2.3. GHG Scope 3 Emissions

- **Scope 1 emissions** are direct carbon emissions from sources that you own or control. This includes manufacturing and process emissions, onsite fuel combustion and emissions from company vehicles.
- **Scope 2 emissions** are indirect emissions from the use of energy that your organisation buys such as electricity, heating and cooling, and steam.
- **Scope 3 emissions** are all the indirect GHG emissions that are not captured under the Scope 1 and 2 reporting and are in fact the largest portion of an agricultural companies' footprint, potentially accounting for about 90% of a company's total carbon impact. These are significant emissions that have been historically underreported.

CDP (formerly the Carbon Disclosure Project) has identified four ways companies can mitigate their Scope 3 emissions and engage their supply chains.

1. **Leveraging buying power to drive transparency and better management of GHG emissions**.
2. **Set clear expectations and strategically engage with vendors to drive action**: Companies should go beyond data collection and set clear expectations for suppliers on emissions reduction.
3. **Cascade science-based targets (SBTs) through the supply chain**: companies that have adopted SBTs have typically reduced their emissions by 6.4% per year.
4. **Join forces to accelerate action and build momentum**: In 2021, 26 CDP Supply Chain members (including L'Oréal) with a total of US$500 billion in annual procurement joined CDP's Science Based Targets Campaign to encourage their suppliers to set 1.5 °C aligned SBTs.

2.4. Regenerative agriculture

Regenerative Agriculture is a transformational approach that focuses on restoring and rebuilding soil fertility, increasing biodiversity, enhancing water quality, support greater carbon capture and has the potential to uplift the livelihoods of producers.

Regenerative Agriculture also provides a range of benefits:

CLIMATE
- Climate-smart agriculture (resilience / mitigation)
- Carbon sequestration

BIODIVERSITY
- Overall ecosystem health
- Natural regeneration / agroforestry

WATER
- Decreases nutrient run-off and erosion, protects buffer zones
- Zero-till or conservation till practices / crop-cover: Increase water retention / filtration in soil
- Crop cover / fertiliser reduction: reduces water pollution

LIVELIHOODS AND HEALTH
- Optimise renewable resources, reduces agrochemicals
- Diversified income revenues

SOIL
- Zero-till or conservation till practices: reduces soil erosion & increases soil microbial life / nutrient cycling
- Crop-rotation / crop cover: diversifies soil organic matter / biomass -> avoids pests and disease
- Compost: food waste, crop residue and animal waste

2.5. Use of technology and digital services

Worker voice technologies encompass communication channels designed to give workers a direct channel to provide information about their working conditions. These tools are increasingly being used by companies as a part of responsible supply chain management. To learn more about worker voice technologies, please refer to Proforest's **InfoNote**.

2.6. Sustainability Due Diligence

'Sustainability due diligence' is an overarching framework that converges environmental and human rights due diligence and allows companies to more clearly understand the linkages and synergies between these two areas. It is hoped that this synergistic approach will allow companies to identify the interlinkages between environmental and human rights risks, develop more refined prioritisation criteria and methodologies, and inform and explain their prioritisation decisions. As described in **Briefing Note 02B**, the UN Guiding Principles on Business and Human Rights (UNGPs) provide guidance to companies on how they can demonstrate their respect of human rights in their operations and supply chains by undertaking human rights due diligence (HRDD) as part of a Responsible Business Conduct approach.

Learn more and help us improve

For more information, see the full briefing note, available at **www.palmoiltoolkit.net**

Please also share with us information that will improve this Briefing Note (via **palmoiltoolkit@proforest.net**).

The Palm Oil Toolkit has been developed by Proforest as part of the Good Growth Partnership's Responsible Demand Project, thanks to financial support from the Global Environment Facility (GEF) through World Wildlife Fund (WWF). We also acknowledge co-funding from Forest Governance, Markets and Climate (FGMC) Programme.