SPOTT

OIL PALM AND TROPICAL PEAT:

COMPANY COMMITMENTS AND REPORTING IN 2021

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AUTHORS: Imogen Fanning, Eleanor Spencer and Claire Salisbury, Zoological Society of London (ZSL)
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ABOUT SPOTT

Developed by the Zoological Society of London (ZSL), SPOTT is a free online platform supporting sustainable commodity production and trade. By tracking transparency, SPOTT incentivises the implementation of corporate best practice.

SPOTT assesses commodity producers, processors and traders on their public disclosure regarding their organisation, policies and practices related to environmental, social and governance (ESG) issues. SPOTT scores tropical forestry, palm oil companies and natural rubber annually against over 100 sector-specific indicators to benchmark their progress over time. Investors, buyers and other key influencers can use SPOTT assessments to inform stakeholder engagement, manage ESG risk, and increase transparency across multiple industries. SPOTT assesses commodity producers, processors, traders and manufacturers.

For more information, visit SPOTT.org

ABOUT ZSL

ZSL (Zoological Society of London) is an international conservation charity working to create a world where wildlife thrives. From investigating the health threats facing animals to helping people and wildlife live alongside each other, ZSL is committed to bringing wildlife back from the brink of extinction. Our work is realised through our ground-breaking science, our field conservation around the world and engaging millions of people through our two zoos, ZSL London Zoo and ZSL Whipsnade Zoo.

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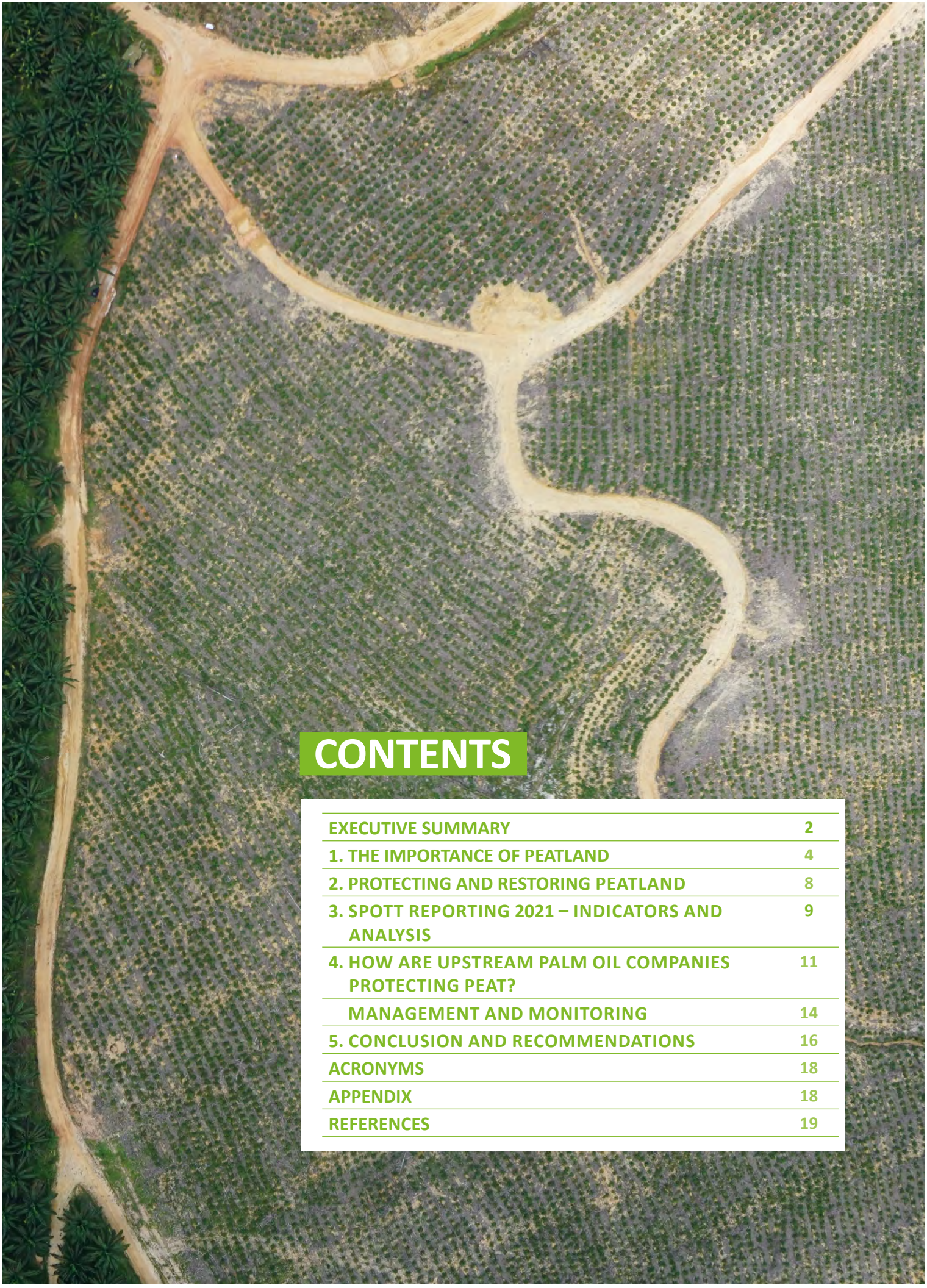


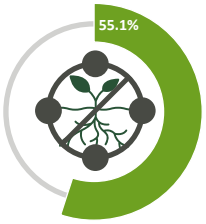
CONTENTS

EXECUTIVE SUMMARY

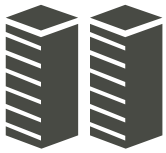
- Tropical peatland areas are rich ecosystems crucial for biodiversity, and which deliver a range of vital regulating, provisioning, and supporting ecosystem services.
- The destruction and degradation of tropical peatland in Southeast Asia, Africa and Central and South America for oil palm cultivation has serious negative impacts on people and nature, as well as posing a business risk for companies in the supply chain and their financiers.
- This report provides an overview of ZSL's 2021 SPOTT assessments of sustainability reporting by palm oil producers, processors and traders.

Key findings in 2021:

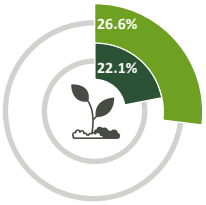
68.4% of companies assessed had a clear commitment to no planting on peat of any depth. This is the fundamental minimum requirement that ZSL recommends financiers and buyers should expect of their suppliers, but ensuring that this requirement is cascaded along supply chains is also vital.



55.1% of companies assessed held their suppliers to the same commitment.



Two companies assessed on SPOTT were found to have **weak or unclear commitments** that failed to specify no planting on peat of any depth or did not clearly apply to all operations.



Just **26.6% of companies reported how much of their landbank is on peat areas**, and **22.1% provided evidence that this has not increased over time**.

- ZSL recommends a range of actions to protect peatland in oil palm landscapes. It is the responsibility of all actors involved – from producers through to their downstream buyers, investors and lenders – to ensure clear and robust policies on peatland are in place as a first step, but then crucially, to ensure these are followed up with the implementation of concrete and effective actions on the ground.
- Downstream buyers should incorporate sourcing policy requirements into contracts and clearly communicate their sourcing policies to their upstream suppliers. They should continuously engage with suppliers to monitor implementation.
- Financial institutions should develop policies that require companies to commit to implementing strict No Deforestation, No Peat, No Exploitation (NDPE) commitments across their whole value chains, or be Roundtable on Sustainable Palm Oil (RSPO)-certified, as well as incorporate traceability and supplier verification processes into their due diligence frameworks.

BOX 1

DEFINING PEAT

The Global Peatlands Initiative describes peat as "decayed plant material that accumulates under water-logged conditions over long time periods. Natural areas covered by peat are called peatland. Terms commonly used for specific peatland types are peat swamp forests, fens, bogs or mires. Peat is found around the world – in permafrost regions towards the poles and at high altitudes, in coastal areas, beneath tropical rainforest and in boreal forests".[1]

The IUCN explains that "Peatlands are a type of wetland which are critical for preventing and mitigating the effects of climate change, preserving biodiversity, minimising flood risk, and ensuring safe drinking water".[2]

"Peatland and wetlands are critical for preventing and mitigating the effects of climate change and preserving biodiversity"

1. THE IMPORTANCE OF PEATLAND

Peatland is found around the world, with tropical peatland underlying parts of the major rainforests of Southeast Asia, the Congo Basin, and the Amazon, as well as areas of Central America and the Caribbean.

Globally these soils, running several metres deep, contain an enormous amount of carbon. A current estimate is that despite covering less than 3% of the Earth's surface, peatlands contain 550 gigatonnes of carbon – nearly 30% of global soil carbon and more than twice as much as the carbon stored in the world's forests,[3] even though forests extend across an area more than ten times as large.[4] Moreover, their often remote nature means that estimations of tropical peat cover and the volumes of carbon stored in peatland are increasing over time, as global soil and wetland mapping is improved.[5,6]

Whilst much of the focus of peat research is on Asia, studies suggest that South America could be the continent with the most tropical peatland. Research by the Center for International Forestry Research (CIFOR) and others in 2017 found that Brazil is the country with the largest amount of tropical peatland, followed by Indonesia.[6] However, as the identification of the world's largest tropical peatland beneath the forests of the Congo Basin was only made in 2017, it is possible that current estimates on Africa's tropical peatland area will continue to grow as more is mapped.[6] This discovery led to a revised estimate of 36% of global peatland cover falling within the Congo Basin alone.[7]

In addition to storing carbon, intact peatland provides an indispensable 'Nature-based Solution' for adapting to and mitigating the effects of climate change, including extreme weather events such as drought and flooding. During periods of excess rainfall, peat absorbs water, which is slowly released during drier periods thereby providing water regulatory services and preventing flooding.[8]

Peatlands are also crucial for biodiversity. Tropical peatland has the greatest floral diversity of any peatland ecosystem, with many plant species endemic to their peatland locations due to the particular chemical and hydrological conditions of peat forest. A study conducted across Southeast Asia peatland ecosystems found 11% of plant species were endemic, with the majority – 63% – being tree species.[9] Peatland habitats around the world are also home to Endangered and Critically Endangered wildlife including clouded leopards, orangutans, tapirs, sun bears, and Storm's storks.[10,11]

Tropical peatland maintains important provisioning ecosystem services such as providing drinking water, wild plants for food and medicines, fuel, and habitat for fish in rivers and coastal areas on peatland. In much of Borneo, for example, fish is a main source of dietary protein and a major source of livelihood. The durable and water-resistant wood of the mangrove tree *(Rhizophora mangle)* found in Borneo's tropical peatland areas is used for construction, whilst the *Diospyros siamang* tree can be boiled and used as a dye for clothes, and plants such as agarwood *(Aquilaria malaccensis)* can be used for medicinal purposes.[12]

PALM OIL AND PEAT DEGRADATION

A major threat to peatland is drainage for agriculture, including oil palm, and forestry, including industrial pulp plantations. Although tropical peat is not ideally suited for oil palm cultivation – due to its high water content and acidic pH – as demand for land has increased over the last few decades, and areas with optimal soil types have become increasingly scarce, pressure to convert these areas has continued to grow.[13] It is predicted that the majority of smallholder oil palm expansion will happen on peat soils by 2030, as cultivators look for more marginal landscapes to convert in response to a growing demand for palm oil and other commodities.[14]

Clearing peatland often involves digging canals to drain the peat and then burning the land to remove vegetation. When peatland is drained the earth dries out, leading to the release – as carbon dioxide – of carbon that was stored in the soil. The subsequent burning of these drained soils and vegetation releases more carbon dioxide into the atmosphere.[11] Once this land is degraded, it is nearly five times as likely to experience fires compared to protected areas of forest. Drained tropical peatland is currently thought to release 2,000 million tonnes of carbon dioxide annually, equal to 8% of global emissions from fossil fuels.[15,16]

In addition to releasing carbon, degradation of peatland can lead to land subsidence. Not only does this directly threaten agricultural yields and infrastructure assets, but increases flood and fire risks within the landscape. In extreme cases such flooding can mean areas of land are no longer fit for oil palm cultivation and must be abandoned altogether, leading to stranded assets which pose financial risks to companies and their financers.[17] Low-lying regions such as Central Kalimantan, Indonesia (a major oil palm cultivation region) are at high risk from flooding and saltwater intrusion, especially where draining of peatland and subsidence occurs. Saltwater intrusion also negatively affects the fertility and productivity of soil.

The degradation and loss of peatland leads to declines in biodiversity, and puts threatened species at risk, with 45% of mammals and 33% of bird species in tropical peat swamp forests having an IUCN Red List status of 'threatened' (i.e. Vulnerable, Endangered or Critically Endangered) or higher. This loss can also have significant negative consequences for local communities and others who rely on the habitat and forests that peatland ecosystems support for their livelihoods, food, and homes. At present, government protection is often limited – for example, it is estimated that just 8% of the peatland in the world's largest tropical peatland area in the central Congo Basin currently falls within nationally protected areas.[18]

"Degradation and loss of peatland leads to declines in biodiversity, and puts threatened species at risk, with 45% of mammals and 33% of bird species in tropical peat swamp forests listed as threatened."

PEAT FIRES

The greatest cause of peat fires in tropical forest landscapes is human activity. Healthy peat should not burn due to its high water content, and fires are very rare in nondegraded peatland ecosystems. But when peatland has been drained, fires can burn for many weeks by burning down into the thick layers of peat and spreading across large areas,[19] making them especially difficult to detect and extinguish.[20]

These types of fires are unfortunately becoming increasingly frequent. Such events are exacerbated by El Niño systems which bring drier-than-usual conditions. In September 2015, for example, the Indonesian islands of Sumatra and Borneo experienced forest fires in degraded peatland areas which devastated 2.6 million hectares of land. These fires started from intentional burning, but grew out of control due to a combination of factors including drought, El Niño conditions, and the degradation of peatland that would otherwise have acted as a fire break due to its high water content. Around 33% of the total burned area was peatland.[21] It took a month for the fires to subside and the greenhouse gas (GHG) emissions were equivalent to those of Germany over a whole year.[22] The haze from these fires affected neighbouring Malaysia and Singapore, and reached as far as Thailand. This toxic smog led to an estimated 500,000 cases of respiratory tract infections and an estimated 100,000 premature deaths.[23,24] River acidity in the affected region also increased following the 2015 fires, and fish captures decreased, which had livelihood and food security implications for fish-dependent local communities.

Events such as these are increasing due to the climate crisis, with drought risk escalating in many regions, which helps fires to spread.[8] Indonesia experienced more serious wildfires in 2019, again exacerbated by El Niño conditions. It is estimated that these fires burned 3.11 million hectares of land, nearly 1 million of which was peatland.[25]

BOX 2

PEATLAND AND CLIMATE POLICY

CARBON STORAGE

The Global Peatlands Initiative (GPI) states that peatlands are the world's largest terrestrial organic carbon stock, and are thus vital in combatting and mitigating the effects of the climate crisis. According to their research, conservation and restoration efforts focused on peatland could reduce GHG emissions by 800 million tonnes per year. Despite this, peatland are undervalued, resulting in their mismanagement and disproportionate impact on the climate crisis.[26]

"Investment in peatland is a triple win for people, the climate, and biodiversity," said Professor Joanne Burgess, co-author of the research, at the time of its publication during the Glasgow Climate Conference (COP26) in November 2021. "Peatland need to be central to global investments in Nature-based Solutions, as part of a global strategy that ends the underpricing and underfunding of these crucial ecosystems."[i]

COUNTRIES AND CORPORATIONS: REACHING NET-ZERO WITH NATURE-BASED SOLUTIONS

Peatland has been drawing increasing attention on the international policy stage, with a 'Peatland Pavilion' at COP26 – coordinated by the United Nations Environment Program (UNEP) – hosting almost 50 events. These both highlighted the benefits of peatland as a nature-based solution to the climate crisis, and promoted the inclusion of peatland in countries' Nationally Determined Contributions (NDCs). Indonesia, Democratic Republic of Congo, and Peru – home to a significant proportion of the world's tropical peatland – including it in their NDCs for the first time.

The 2021 Glasgow Climate Pact saw 90% of world GDP and around 90% of global emissions committed to net zero.[27] Over 90% of the world's forests were covered by the commitments made through the Glasgow Leaders' Declaration on Forests and Land Use[ii] to halt and reverse forest loss and land degradation, and this was accompanied by a pledge of USD 1.5 billion for the conservation of Congo Basin forests and peatland. The UN's Race to Zero Campaign[iii] represents over 5,000 businesses, alongside other key actors; over 2,200 companies representing USD 38 trillion have science-based emission reduction targets[iv]; and the Glasgow Financial Alliance for Net Zero, launched ahead of COP26, has over 450 member firms representing more than USD 130 trillion in assets under management and advice.[v]

For these commitments to be achieved, peatland conservation and restoration must form a core component of both national and corporate net-zero strategies. All countries are required to return with revised NDCs – to accelerate action to achieve the Paris Agreement target of 1.5 °C – ahead of the COP27 Climate Conference in November 2022, and therefore have the opportunity to evaluate the importance of peatland in achieving national emissions targets. Companies and financial institutions also have a crucial role to play in safeguarding peatland through their purchasing and financing decisions.

i. See https://www.unep.org/news-and-stories/press-release/conserve-and-restore-peatlands-slash-global-emissions-new-report
ii. See https://ukcop26.org/glasgow-leaders-declaration-on-forests-and-land-use/
iii. See https://unfccc.int/climate-action/race-to-zero-campaign
iv. See https://sciencebasedtargets.org/news/companies-committed-to-cut-emissions-in-line-with-climate-science-now-represent-38-trillion-of-global-economy
v. See https://www.gfanzero.com/about/

"Peatland conservation and restoration must form a core component of both national and corporate net-zero strategies."

THREATS TO PEAT ARE THREATS TO BUSINESS

In addition to the environmental and social risks posed by developing oil palm plantations on peatland, there are also serious business risks to companies and their financers. These take many forms, including financial, operational, reputational, and regulatory risks.

Soil subsidence is a common result of peat drainage, and provides a clear example of both operational and financial risk to a plantation company and anyone connected with it. Subsidence increases the risk of flooding and saltwater intrusion, which in turn reduces the quality of oil palm yields and can spoil the crop altogether due to root exposure to saline water, or submergence, as well as putting associated infrastructure at risk.[28] In extreme cases, flooded plantations have to be abandoned completely, becoming a stranded asset for the company and its financiers.

Fire, both as a cause and a result of peatland degradation, also poses a major physical operational risk, with the potential to damage or destroy large areas of oil palm plantations and associated infrastructure, or land not yet planted. Fires have also been proven to be a wider financial risk of potentially enormous scale. The World Bank estimated that the financial damage as a result of the above-mentioned 2015 fires was $16.1 BN USD in Indonesia alone, due to loss of agricultural productivity and disruption to trade.[20] This figure includes the impacts on agriculture, trade, tourism and transportation, as well as the short-term effect of noxious haze exposure on human health and school closure.

As demand for No Deforestation, No Peat, No Exploitation (NDPE)-compliant palm oil increases, converting peatland into oil palm concessions is becoming increasingly economically unviable, and producers risk being excluded from important markets. According to a 2019 study, an estimated 28.4% of the total concession area for oil palm in Indonesia could be considered 'stranded', as its development would cause exclusions from NDPE supply chains and potential deforestation-related liabilities.[29]

The destruction of peatland for palm oil production also poses reputational risk for companies. Research in 2019 by AMO Strategic Advisors found that approximately 35% of market capitalisation in the 15 leading market equity indices was linked to corporate reputation.[30] The growth of ethical consumerism means that companies which do not adhere to consumer demands may lose access to certain markets. High-profile campaigns focussing on palm oil's environmental impacts have influenced both companies and their stakeholders' reputations. In recent years, Greenpeace's 'Dying for a Cookie' campaign,[31] Rainforest Action Network's 'Snack Food 20' campaign,[32] and Iceland's 2018 Christmas advert have raised the profile of environmentally damaging palm oil cultivation practices in the public psyche. Open resources such as WWF's Palm Oil Buyers' Scorecard,[33] which publicly scores and ranks companies on the sustainability of their palm oil supply chains, have also exposed stakeholders to reputational risk.

Government scrutiny of unsustainable palm oil practices through fines and penalties also contributes to the business case for peat protection. In 2021, Rengat District Court in Riau, Indonesia, sentenced Samsung C&T's palm oil subsidiary, PT Ganarea Hendana to a 15.3M USD fine. The company was found to be in violation of Law 32 of 2009 on Protection and Environmental Management, due to fires which occurred in September 2019. The fires burned for 21 days as the company did not have appropriate equipment or personnel to extinguish them. The court reported that 580 hectares of land was damaged, including peatland ecosystems, and estimated the cost to restore the areas to be 14.7M USD.[34]

2. PROTECTING AND RESTORING PEATLAND

NO NEW DEVELOPMENT ON PEAT

Many in the palm oil value chain are responding to the threats to peatland discussed above by adjusting their policies and practices. The high awareness of this issue in sustainability efforts is reflected in the explicit incorporation of peat protection in the 'No Deforestation, Peat or Exploitation' (NDPE) commitments which have been increasingly adopted in recent years, which should ideally specify no development on peat of any depth.

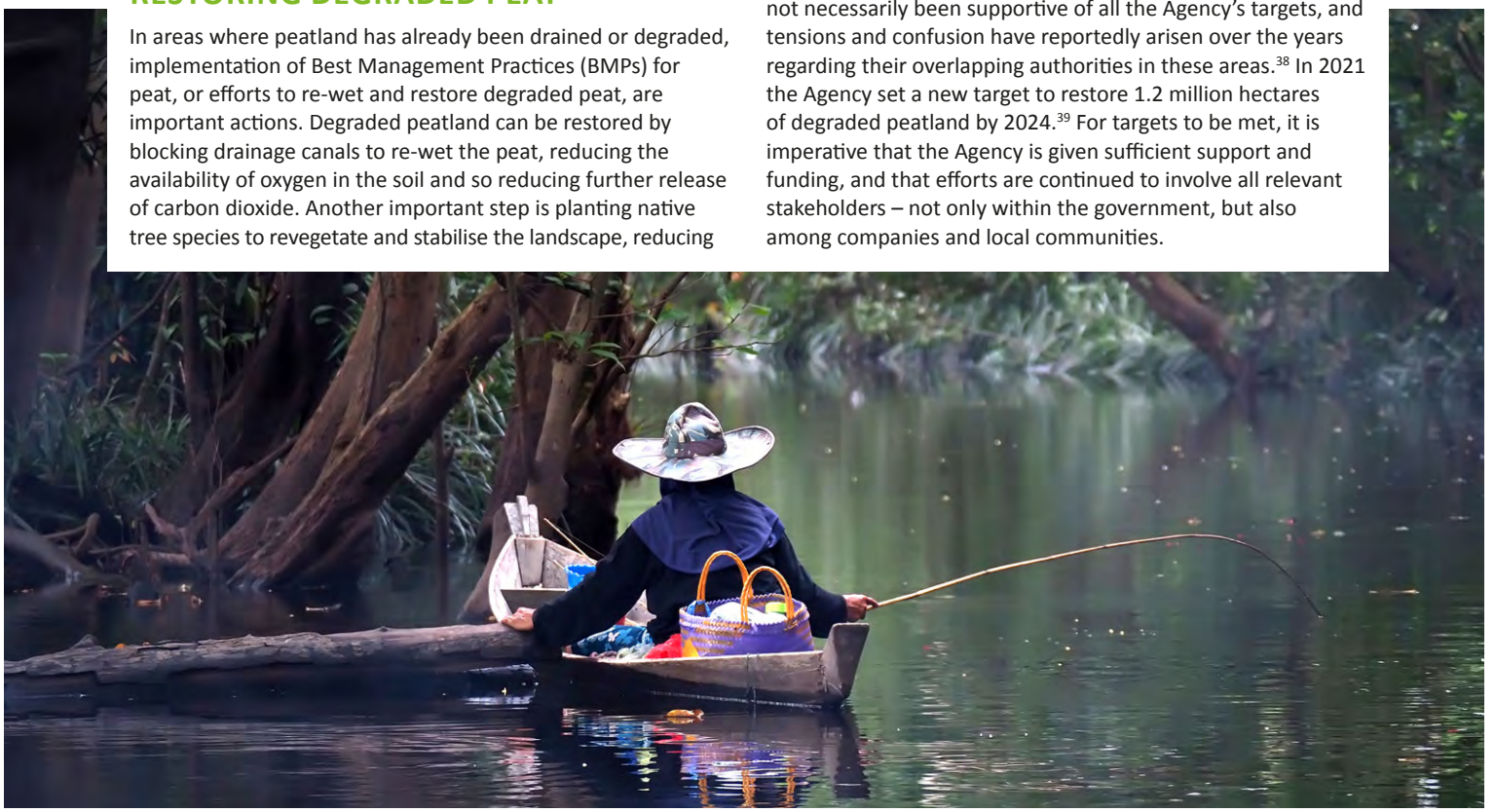
Indonesia is a key focus country for protecting peatland, with huge areas of peat distributed mainly across Sumatra, Kalimantan and Papua. There are two key legislative instruments from the Indonesian government which go some way towards protecting peatland – the peatland regulation and the forest and peat moratorium. The peatland regulation is a legally binding piece of legislation introduced in 2016, which prohibits exploitation on peatland in Protected Forest Areas and Conservation Forest Areas. However, it still allows for exploitation outside of these areas, and for planting of peatland for agriculture (such as oil palm cultivation) according to set rules on depth and drainage. The forest and peat moratorium was first introduced in 2011 and made permanent in 2019. This bans certain agricultural activities on forest and peatland within particular areas, including primary forests, but is not legally binding. Although deforestation rates in Indonesia have slowed in recent years, these measures have received substantial criticism for their narrow scope, various loopholes and often weak enforcement.[35]

RESTORING DEGRADED PEAT

In areas where peatland has already been drained or degraded, implementation of Best Management Practices (BMPs) for peat, or efforts to re-wet and restore degraded peat, are important actions. Degraded peatland can be restored by blocking drainage canals to re-wet the peat, reducing the availability of oxygen in the soil and so reducing further release of carbon dioxide. Another important step is planting native tree species to revegetate and stabilise the landscape, reducing the effects of subsidence and holding more water in the peat.[36] Both the direct and the opportunity costs of these restoration efforts can be a deterrent, but a long-term view must be taken. A 2021 study found that the benefits of restoring peatland will outweigh the financial costs and recommended restoration as a "cost-effective strategy for reducing the impacts of peatland fires to the environment, climate and human health".[37]

In addition to a commitment to no new development on peat, palm oil stakeholders must commit to and implement BMPs for peatland conservation. Examples include: nutrient recycling; no planting on marginal or fragile soils; using terracing or ground cover to reduce erosion; managing water levels for peat; organising training courses or workshops on BMPs for soils and peat.

Following the 2015 fires and haze, the Indonesian government set up Indonesia's Peatland Restoration Agency. The Agency aimed to restore 2.6 million hectares of degraded tropical peatland by 2020 – an important target not only for restoring habitat and combating hanze, but as a key element of the country's Nationally Determined Contributions to the 2015 Paris Agreement. However, the Agency only achieved 45% of this original target by 2020. According to researchers at the National University of Singapore, one reason the Agency failed to reach its target was due to its lack of authority over private plantations and forest areas, with 1.7 million hectares of the target areas of degraded peatland situated within forestry and oil palm concessions. These areas fall under the jurisdiction of the Ministry of Environment and Forestry, but the Ministry has not necessarily been supportive of all the Agency's targets, and tensions and confusion have reportedly arisen over the years regarding their overlapping authorities in these areas.[38] In 2021 the Agency set a new target to restore 1.2 million hectares of degraded peatland by 2024.[39] For targets to be met, it is imperative that the Agency is given sufficient support and funding, and that efforts are continued to involve all relevant stakeholders – not only within the government, but also among companies and local communities.



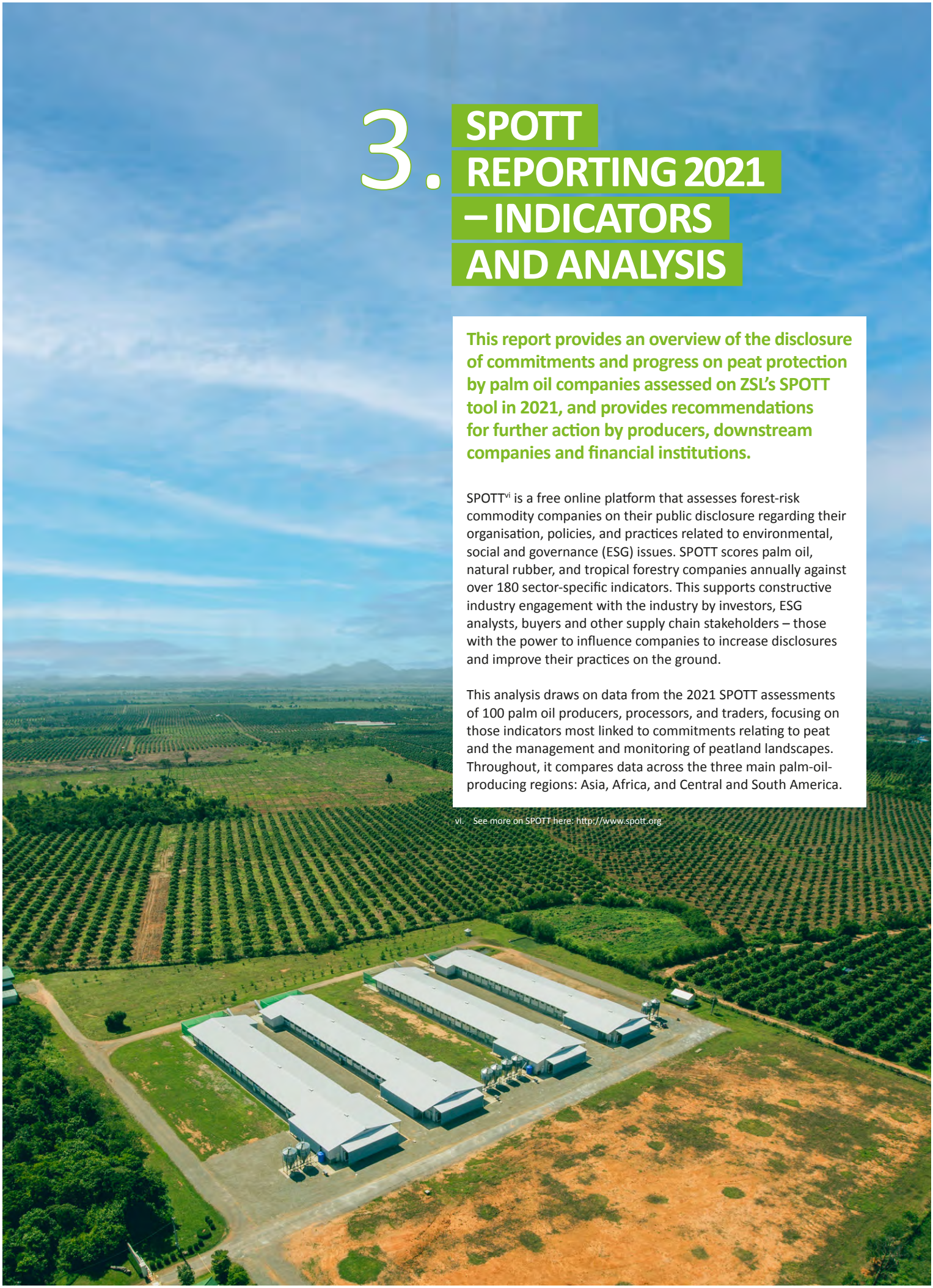
3. SPOTT REPORTING 2021 – INDICATORS AND ANALYSIS

This report provides an overview of the disclosure of commitments and progress on peat protection by palm oil companies assessed on ZSL's SPOTT tool in 2021, and provides recommendations for further action by producers, downstream companies and financial institutions.

SPOTT[vi] is a free online platform that assesses forest-risk commodity companies on their public disclosure regarding their organisation, policies, and practices related to environmental, social and governance (ESG) issues. SPOTT scores palm oil, natural rubber, and tropical forestry companies annually against over 180 sector-specific indicators. This supports constructive industry engagement with the industry by investors, ESG analysts, buyers and other supply chain stakeholders – those with the power to influence companies to increase disclosures and improve their practices on the ground.

This analysis draws on data from the 2021 SPOTT assessments of 100 palm oil producers, processors, and traders, focusing on those indicators most linked to commitments relating to peat and the management and monitoring of peatland landscapes. Throughout, it compares data across the three main palm-oil-producing regions: Asia, Africa, and Central and South America.

vi. See more on SPOTT here: http://www.spott.org



The following SPOTT palm oil indicators from the 2021 framework have been used for this analysis:

TABLE 1

TABLE OF PEAT-RELATED INDICATORS

ID	INDICATOR TITLE	DISCLOSURE TYPE
64	Implementing a landscape or jurisdictional level approach	Practice
86	Commitment to no planting on peat of any depth	Policy
87	Commitment to no planting on peat of any depth applies to all suppliers	Policy
88	Landbank or planted area on peat (ha)	Organisation
89	Implementation of commitment to no planting on peat of any depth	Practice
90	Commitment to best management practices for soils and peat	Policy
91	Commitment to best management practices for soils and peat applies to all suppliers	Policy
92	Evidence of best management practices for soils and peat	Practice

BOX 3

SPOTT INDICATOR FRAMEWORK

ZSL recognises that companies are at different stages of their sustainability journey. To allow SPOTT users to better understand where companies currently are and how they are progressing, indicators are separated into three categories:

- **Organisation:** The transparency and content of company disclosure regarding its operations, assets and management structure.
- **Policy:** The transparency and content of company disclosure regarding the policies, commitments and processes it has to guide its operations and practices on the ground.
- **Practice:** The transparency and content of company disclosure regarding activities it undertakes, in order to actively progress towards its targets and implement its policies and commitments on the ground.

Additionally, for certain Practice indicators the SPOTT Framework further differentiates between information reported only by the company, and that which has been confirmed by an external party:

- **Self-reported:** Information that has been reported by the company, without external verification
- **Externally verified:** Information reported by the company has been verified by a second or third-party, or has been audited by a certification body.

BOX 4

RSPO CERTIFICATION AND PEAT

The Roundtable on Sustainable Palm Oil (RSPO) is the largest global certification scheme for sustainable palm oil, with over 5,000 members and certifying 19% of the world's palm oil. The RSPO Principles and Criteria (P&C) 2018, against which producers are audited, cover multiple elements relevant to peat protection and management. The RSPO requires:

- No new planting on peat after November 2018.[40]
- All existing planting on peatland, unplanted and set-aside peatland to be managed and protected, in accordance with the RSPO Manual on BMPs Volume 1 & 2.[41,42] These documents provide guidance on water and nutrient management, monitoring, and rehabilitation of peat swamp forests in degraded sites.
- **Peat inventory:** identification of peat within managed areas.
- **Drainability assessment:** "to predict the potential lifespan of a plantation planted on peat by estimating Drainage Limit Time – i.e. the time when the drainage base of the plantation is reached."[43]
- **Additionally, all Grower and Processor and Trader members are required to submit to the RSPO an inventory of peat areas under their management, and to report on the status of planting and conservation measures on this peat.**[vii]

vii. Read more on the RSPO peat inventory requirements here: https://rspo.org/news-and-events/announcements/second-submission-of-rspo-peat-inventory

4 HOW ARE UPSTREAM PALM OIL COMPANIES PROTECTING PEAT?

SPOTT-assessed palm oil companies report collectively to control over 9 million hectares of land. The actual figure will be higher due to just 67/77 companies publicly reporting their total land area managed or controlled for oil palm.

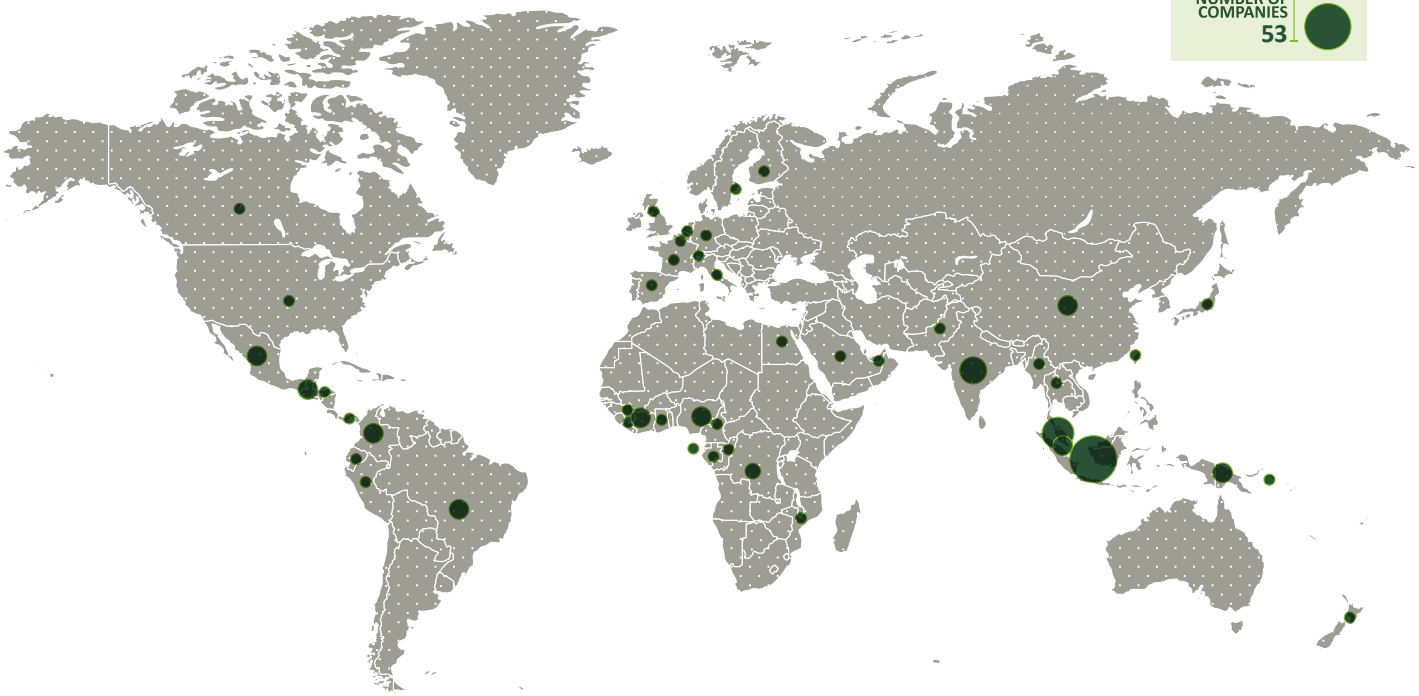
These assessments predominantly cover companies with operations in Southeast Asia, with the highest proportion of SPOTT-assessed companies by country being located in Indonesia (Figure 1).

This distribution reflects the region's dominance in palm oil production. The list of companies operating in the three significant global regions (Africa, Asia, and Central and South America) is reported in Appendix 1. There are 76 SPOTT-assessed companies with operations in Asia, 15 with operations in Central and South America, and 10 with operations in Africa. Three companies have operations across multiple regions so have been included in the results for each region in which they operate.

FIGURE 1

PROPORTIONAL SYMBOL MAP OF SPOTT-ASSESSED COMPANIES' OPERATING LOCATIONS

The size of the circle indicates the number of companies operating in that country, with the larger the circle indicating more companies



When we compared companies operating in the three major global palm oil-producing regions on how they scored across the eight peat-related indicators, companies operating in Africa were found to score the lowest, with an average of 30.7%. Those operating in Asia score an average of 42.9%, and the highest scoring region was Central and South America with an average score of 47.9% on corporate disclosure of commitments or reporting on peat conservation measures (Figure 2).

When broken down by indicator, companies with operations in Africa scored lowest for seven out of eight indicators, companies with operations in Asia scored highest on three of the eight indicators, whilst companies with operations in Central and South America scored highest on five out of eight (Figure 3).

In all three regions, the average score achieved by companies was higher for policy indicators than practice indicators (Table 2). Companies operating in Africa had the greatest percentage disparity between policy and practice indicators, with companies scoring 18.4 percentage points lower on practice indicators than on policy indicators. This means that whilst some of these companies have robust commitments, many are still not reporting evidence of whether these policies are being put into practice. Those operating in Asia had the second largest disparity with scores for practice indicators being 14.1 percentage points lower than for policy indicators. Companies operating in Central and South America showed the least disparity, with companies scoring just 8.8 percentage points lower on practice indicators compared to policy indicators.

FIGURE 2

PEAT INDICATORS SCORES BY REGION

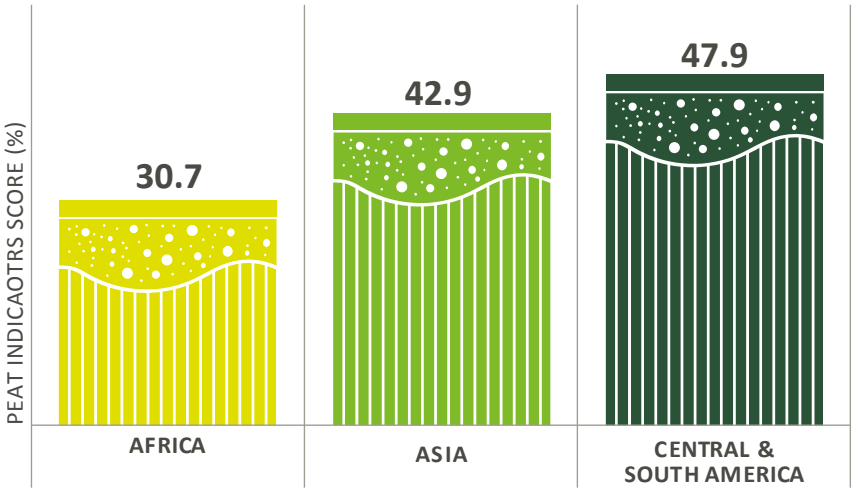


FIGURE 3

PEAT INDICATORS SCORES BY REGIONAL COMPANY OPERATIONS LOCATIONS (%)

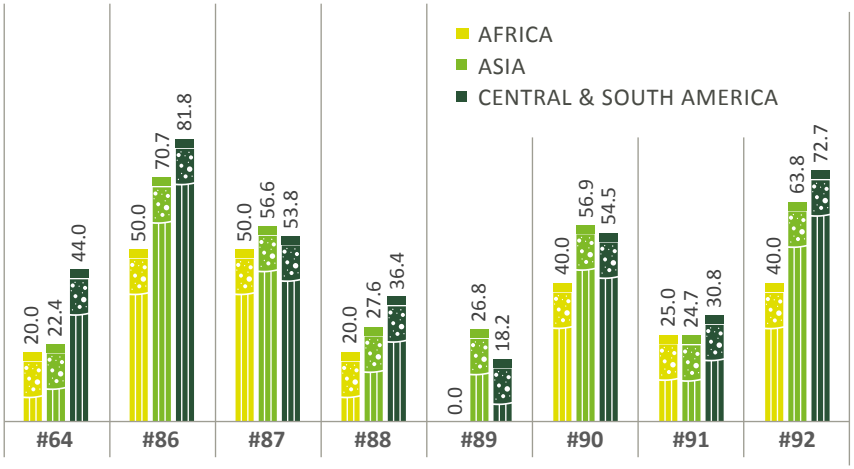


TABLE 2

COMPANIES SCORING COMPREHENSIVE POINTS FOR PEAT RELATED POLICY AND PRACTICE REPORTING ACROSS THE THREE MAJOR REGIONS

ASIA		AFRICA		CENTRAL & SOUTH AMERICA	
POLICY	PRACTICE	POLICY	PRACTICE	POLICY	PRACTICE
135/268	69/190	15/36	7/30	27/52	16/37
50.4%	36.3%	41.7%	23.3%	52.0%	43.2%

COMMITMENT TO NO PLANTING ON PEAT

In 2021, 54/79 (68.4%) of companies assessed had a clear commitment to no planting on peat of any depth. This is the fundamental minimum requirement that ZSL recommends financiers and buyers should expect of their suppliers. Companies operating in Central and South America scored the highest by region, with 9/11 (81.8%) reporting a commitment to no planting on peat regardless of depth. Of the companies operating in Asia, 41/58 (70.7%) reported a commitment, whilst 5/10 (50%) of those operating in Africa reported a commitment.

Ensuring that this requirement is cascaded along supply chains is vital also. A lower percentage – 54/98 (55.1%) – of companies assessed held their suppliers to the same commitment. This level of commitment is more evenly spread across regions with 4/8 (50%) of companies operating in Africa, 7/13 (53.8%) in Central and South America, and 40/72 (56.6%) in Asia, reporting a comprehensive commitment.

IDENTIFYING PEAT AREAS

In order to protect peat areas, companies must first identify the soil types within their concessions. This is a crucial first step in understanding what management and monitoring approaches are needed and where they should be applied, as well as preventing encroachment or conversion of this important ecosystem. Few companies – 21/79 (26.6%) – reported the size of their landbank on peat. The 21 companies that provided this information report a combined total of 161,360.11 hectares of landbank on peat, between 0.09% and 0.18% of global tropical peatland.[44] This is equivalent to more than double the size of Jakarta or nearly seven times the size of Kuala Lumpur. However, the actual figure is likely to be significantly higher as the majority – 58/79 (73.4%) – do not report their landbank on peat. Whilst Indonesia's peatland stores 55% of the world's tropical peatland carbon,[31] identification of landbank on peat is lower than average for SPOTT-assessed companies operating there, with just 6/31 (19.4%) companies providing comprehensive landbank data. Regionally, companies operating in Central and South American countries score highest, with 4/11 (36.4%) reporting their landbank size, compared with 16/58 (27.6%) in Asia, and 2/10 (20%) in Africa.

MANAGEMENT AND MONITORING

IMPLEMENTATION OF COMMITMENT TO NO PLANTING ON PEAT OF ANY DEPTH

To ensure implementation of a company's commitment to no planting on peat of any depth, it is important for companies to report their landbank on peat over time. Landbank on peat should not increase unless it is a result of an acquisition/merger or due to the availability of new data. Just 17/77 (22.1%) companies assessed on SPOTT provided such evidence. Companies operating in Asia scored the highest of the three main regions, with 15/56 (26.8%) companies reporting their landbank on peat over time, compared to just 2/11 (18.2%) companies operating in Central and South America, and 0/9 (0%) in Africa.

IMPLEMENTATION OF A LANDSCAPE OR JURISDICTIONAL LEVEL APPROACH

The geography and hydrology of peat domes (see Box 5) make landscape management approaches especially important in peatland settings. This is because if drainage were to occur at any location within a peat dome, it would affect the health of the entire dome and lead to degradation of a much wider ecosystem. Therefore, in order for peat to be managed effectively, it must be managed as an entire system.[47] Of the companies assessed on SPOTT, 22/100 (22%) report evidence of implementing a landscape or jurisdictional level approach. Regionally, 6/15 (40%) companies operating in Central and South America, 17/76 (22.4%) in Asia, and 2/10 (20%) in Africa report examples of how landscape or jurisdictional level approaches are implemented. Two companies specifically mention peat management in the context of implementing a landscape approach.

BOX 5

PEAT DOMES

Peat 'domes' are raised areas of peat which form above the water table, and so are kept wet only through rainwater. These domes act as a kind of reservoir, and can be many metres deep.

COMMITMENT TO BEST MANAGEMENT PRACTICES FOR SOILS AND PEAT

If palm oil cultivation overlaps with tropical peatland areas, it is imperative that soils and peat are managed to minimise negative environmental impacts, particularly in relation to GHG emissions, subsidence, soil fertility, soil erosion and degradation. Companies certified under the RSPO 2018 P&C are expected to adhere to the RSPO Manual on BMPs for Existing Oil Palm Cultivation on Peat. Of the companies assessed, 42/79 (53.2%) committed to BMPs for soils and peat. A further seven companies committed to BMPs for soils only, and five committed to BMPs for peat only. By region, Asia had the most companies making these commitments, with 33/58 (56.9%), compared to 6/11 (54.2%) in Central and South America, and 4/10 (40.0%) in Africa. The proportion of companies that report a commitment to BMPs for soils and peat that applies to all suppliers is almost half of that for companies’ own operations, with just 25/98 (25.5%) reporting this commitment.

EVIDENCE OF BEST MANAGEMENT PRACTICES FOR SOILS AND PEAT

The implementation of BMPs for soils and peat is key to protecting landscapes by preventing degradation and subsidence, supporting biodiversity, and supporting water management to prevent flooding and protect against drought. This will also maintain and improve crop yields by optimising growing conditions. Of all palm oil producers assessed on SPOTT, 48/79 (60.8%) reported comprehensive evidence of BMPs for soils and peat. By region, companies operating in Central and South America scored the highest with 8/11 (72.7%) companies reporting examples of BMPs, companies operating in Asia had the second highest, with 37/58 (63.8%) companies reporting on this, and those operating in Africa had the lowest proportion with only 4/10 (40%) companies reporting on this.

5. CONCLUSION AND RECOMMENDATIONS

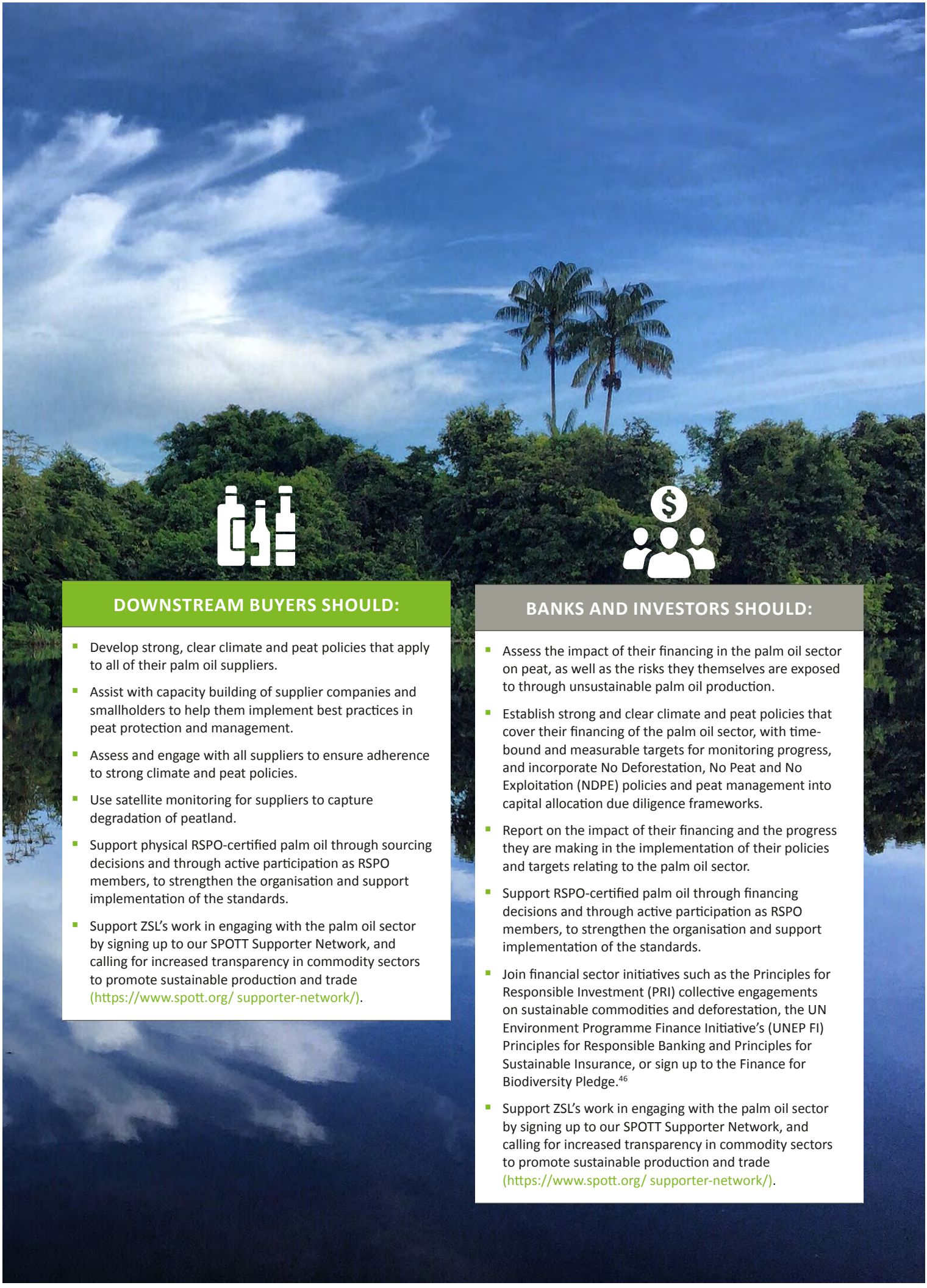
Given the critical environmental and social impacts associated with peat destruction, it is crucial that palm oil companies work to minimise the risks to peat on and around their plantations or those of their suppliers.

Although the majority of upstream palm oil companies assessed on SPOTT commit to no planting on peat, most fall short in reporting on implementation, with just 26.6% reporting how much of their landbank is on peat areas, and 22.1% providing evidence that this has not increased over time. Interestingly, in terms of reporting in relation to BMPs for soils and peat, examples of implementation (60.8%) were more frequent than a commitment to BMPs for soils and peat (52.2%). For seven of the eight indicators in the analysis, companies operating in African countries scored the lowest. This is concerning given the extensive tropical peatland in Africa, with research explored in this report suggesting that much of Africa's tropical peatland is yet to be recorded.

We recommend the following actions be implemented by palm oil producers, supply chain companies and financiers:

PALM OIL PRODUCERS SHOULD:

- Make clear commitments to no planting on peat of any depth.
- Ensure commitments apply, and are communicated to, suppliers, including smallholders.
- Investigate whether existing maps have been produced by their own organisation or other supply chain stakeholders and to what degree of accuracy, and if so, these should be supplemented with soil analysis. If no previous maps exist, then the company should draw up peat maps or support suppliers with mapping.
- Refer to the RSPO Manual on BMPs for Existing Oil Palm Cultivation on Peat for guidance if they have existing landbank on peat.
- Report on the size of any peatland landbank annually.
- Collaborate with external expert stakeholders where relevant, to inform their management and monitoring practices. This is particularly useful for monitoring deforestation of peatland.
- Engage with local communities on the protection of peatland, and include communities in management and monitoring plans.
- Incorporate use of remote-sensing technology where possible, to support monitoring of all operations for deforestation and fires in peatland areas.
- Go beyond conservation of peatland, and restore and rehabilitate degraded peat areas.



DOWNSTREAM BUYERS SHOULD:

- Develop strong, clear climate and peat policies that apply to all of their palm oil suppliers.
- Assist with capacity building of supplier companies and smallholders to help them implement best practices in peat protection and management.
- Assess and engage with all suppliers to ensure adherence to strong climate and peat policies.
- Use satellite monitoring for suppliers to capture degradation of peatland.
- Support physical RSPO-certified palm oil through sourcing decisions and through active participation as RSPO members, to strengthen the organisation and support implementation of the standards.
- Support ZSL's work in engaging with the palm oil sector by signing up to our SPOTT Supporter Network, and calling for increased transparency in commodity sectors to promote sustainable production and trade (https://www.spott.org/ supporter-network/).

BANKS AND INVESTORS SHOULD:

- Assess the impact of their financing in the palm oil sector on peat, as well as the risks they themselves are exposed to through unsustainable palm oil production.
- Establish strong and clear climate and peat policies that cover their financing of the palm oil sector, with time-bound and measurable targets for monitoring progress, and incorporate No Deforestation, No Peat and No Exploitation (NDPE) policies and peat management into capital allocation due diligence frameworks.
- Report on the impact of their financing and the progress they are making in the implementation of their policies and targets relating to the palm oil sector.
- Support RSPO-certified palm oil through financing decisions and through active participation as RSPO members, to strengthen the organisation and support implementation of the standards.
- Join financial sector initiatives such as the Principles for Responsible Investment (PRI) collective engagements on sustainable commodities and deforestation, the UN Environment Programme Finance Initiative's (UNEP FI) Principles for Responsible Banking and Principles for Sustainable Insurance, or sign up to the Finance for Biodiversity Pledge.[46]
- Support ZSL's work in engaging with the palm oil sector by signing up to our SPOTT Supporter Network, and calling for increased transparency in commodity sectors to promote sustainable production and trade (https://www.spott.org/ supporter-network/).

ACRONYMS

BMPs	Best Management Practices
COP	Conference of the Parties
ESG	Environmental, Social, Governance
GHG	Greenhouse Gas
NDCs	Nationally Determined Contributions
NDPE	No Deforestation, No Peat, No Exploitation
RSPO	Roundtable for Sustainable Palm Oil
P&C	Principles and Criteria
PRI	Principles for Responsible Investment
SPOTT	Sustainable Policy Transparency Toolkit
ZSL	Zoological Society of London

APPENDIX

TABLE OF SPOTT-ASSESSED PALM OIL COMPANIES BY COUNTRIES OF OPERATIONS.

ASIA		
3F Industries	Hap Seng Plantations Holdings Bhd	TSH Resources Bhd
AAK AB	IFFCO	Tunas Baru Lampung Tbk PT
Allana Group	IJM Plantations Bhd	United Plantations Bhd
Anglo-Eastern Plantations plc	Indofood Agri Resources Ltd	Viterra
Apical Group	Wings Corp	Wilmar International Ltd
Asian Agri Group	IOI Corporation Bhd	
Astra Agro Lestari Tbk PT	Kencana Agri Ltd	**CENTRAL AND SOUTH AMERICA**
Austindo Nusantara Jaya Tbk PT	Kharisma Pemasaran Bersama Nusantara PT (PT. KPBN)	AAK AB
Bakrie Sumatera Plantations Tbk PT		AgroAmerica
Best Group	Korindo Group	Agropalma Group
BLD Plantation Bhd (Bintulu Lumber Development (BLD) Plantation)	KPN Plantation (previously GAMA Plantation)	Archer Daniels Midland Company (ADM)
	KS Oils Ltd	Belem Bioenergia Brasil (BBB)
Boustead Plantations Bhd	Kuala Lumpur Kepong Bhd	Brasil Bio Fuels (BBF)
Bumitama Agri Ltd	Kulim (Malaysia) Bhd	Bunge Ltd
Bunge Ltd	Louis Dreyfus Company	C.I. Biocosta S.A.
Cargill Inc	M.P. Evans Group plc	Daabon Group
Carotino Group	Makin Group	Danec S.A.
COFCO Corp	Mewah Group	Grupo Hame
Commodities House Investments Ltd (HSA Group)	Musim Mas Group PT	Grupo Jaremar
	Nisshin OilliO	Louis Dreyfus Company
Darmex Agro Group PT	Patum Vegetable Oil Company Ltd	NaturAceites S.A.
Dharma Satya Nusantara Tbk	Permata Hijau Group	Palmaceite S.A.
Eagle High Plantations Tbk PT	POSCO International	Palmas Group
Emami Agrotech Ltd	Priya Gold Oils	
FELCRA Bhd	QL Resources Bhd	**AFRICA**
FGV Holdings Bhd	R.E.A. Holdings plc	Atama Plantation Sarl
FGV IFFCO	Rimbunan Hijau Group	Feronia Inc
First Resources Ltd	Royal Industries Indonesia PT	Golden Veroleum (Liberia) Inc (GVL)
Fuji Oil Group	Ruchi Soya Industries Ltd	Groupe Blattner Elwyn
Genting Plantations Bhd	Sampoerna Agro Tbk PT	Olam International Ltd
Glenealy Plantations Sdn Bhd	Sarawak Oil Palms Bhd	Peak Palm Oil plc
Godrej Industries	Sawit Sumbermas Sarana Tbk PT	SIFCA Group
Gokul Agro Resources Ltd	Sazean Holdings	SIPEF
Golden Agri Resources Ltd	Sime Darby Plantation Sdn Bhd	Socfin Group S.A.
Golden Plantation Tbk PT	Tianjin Julong Group	Wilmar International Ltd
Goodhope Asia Holdings Ltd	Tradewinds Plantation Bhd	
Gozco Plantations Tbk PT	Triputra Agro Persada Group PT	

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