



Financial Sector Confronts Deforestation as a Key ESG Risk

Investors and Lenders Demand Stricter Standards for Forest-Risk Corporates

Loss of natural forests as a result of clearing for agricultural and forestry use is growing across the world. This has a number of environmental effects and contributes to increased carbon emissions, biodiversity loss, and climate change.

Fitch Ratings expects environmental, social, and governance (ESG) factors to have increasing influence on the financing activities of corporates and financial institutions with links to forest-risk sectors in the coming years, as deforestation comes under growing scrutiny.

Growing Awareness of Deforestation Risks

Governments and the private sector have become more aware of the economic costs of the environmental issues stemming from forest loss, such as increased greenhouse gas emissions and biodiversity loss. Investors and banks are paying increasing attention to deforestation risks as climate change and other ESG issues rise higher on their agendas.

Food, Consumer Entities Scrutinised Most

Some of the most widely consumed agricultural commodities are linked to forest loss – beef and leather, palm oil, soy, rubber, and timber and wood products. Government responses to address the issue have been varied, with different approaches applied in producer countries and consumer countries.

Investors Engage Forest-Risk Value Chain

Some groups of institutional investors, often in partnership with non-government organisations (NGOs), have actively engaged with companies on excessive or illegal deforestation. These actions have raised some public awareness and built engagement with commodity producers and governments, although investors are increasingly using the threat of divestment to speed up progress.

Bank ESG Policies Increasingly Applied

International banks have introduced comprehensive sector policies focused on forest-risk commodities. For large corporates, this has effectively set a standard for them to access financing such as bond underwriting and share issuance.

Regional banks in Asia and South America that primarily offer standard lending services have not applied similar levels of ESG standards, and so corporates that operate more locally face less financing-related pressure to adopt sustainable production practices.

Related Research

ESG Credit Quarterly: 2Q20 (July 2020)

Credit Profiles of Asian Palm-Oil Producers Resilient Against Non-Certification (February 2020)

ESG Bites into Banks' Lending to Corporates (January 2020)

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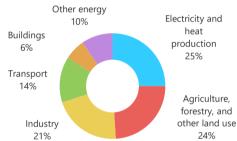


Greenhouse Gas Emissions and Biodiversity Loss Draw Regulator and Investor Attention

Deforestation occurs when landuse demand for economic activities – primarily agriculture and forestry products – leads to the long-term or permanent removal of trees. As awareness of the wide-reaching consequences of unchecked deforestation has grown outside of the scientific community, governments and private-sector institutions are increasingly dedicating resources towards preventing the most destructive activities. Companies involved in the production of forest-risk commodities increasingly have to answer to regulators, consumers, and financiers about the sustainability of their operating practices.

According to the UN Intergovernmental Panel on Climate Change (IPCC), 24% of global greenhouse gas emissions come from agriculture, forestry, and other land uses. Half of these emissions are generated through agricultural production and half from deforestation and land clearing. Deforestation contributes to emissions in two key ways: 1) stored carbon within trees is released as carbon dioxide through decomposition or burning; and 2) fire clearing – whether natural or manmade – releases nitrous oxide and methane.

Direct Greenhouse Gas Emissions from Human Activities Other energy



Source: Fitch Ratings, IPCC, 2019: Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems [P.R. Shukla, J. Skea, E. Calvo Buendia, V. Masson-Delmotte, H.-O. Pörtner, D. C. Roberts, P. Zhai, R. Slade, S. Connors, R. van Diemen, M. Ferrat, E. Haughey, S. Luz, S. Neogi, M. Pathak, J. Petzold, J. Portugal Pereira, P. Vyas, E. Huntley, K. Kissick, M. Belkacemi, J. Malley, (eds.)]. In press

Although 31% of the world's land is covered by forests, they are concentrated in specific regions. Four countries make up half of the global total of forest land area. Boreal forests, such as those in Russia and North America, are primarily converted for forestry products. As well as logging, rising temperatures increase the risk of emissions from these forests, which store carbon in soils and peat that is normally frozen (permafrost). Natural deforestation in these regions is also occurring as a result of these higher temperatures. The highest ever temperature in the Arctic (38°C) was recorded in Siberia in June 2020, which is contributing to the wildfires affecting the region's forests this summer.

Temperate forests are also increasingly at risk from highly destructive wildfires, such as the ones in eastern Australia between December 2019 and February 2020 and in California in 2017 and 2018.

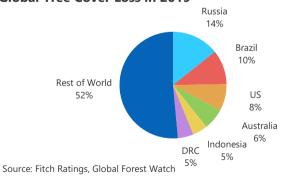
Global Distribution of Forests

	(m hectares)	% World total	Forest type
Russia	815	20	Boreal
Brazil	497	12	Tropical
Canada	347	9	Boreal; Temperate
USA	310	8	Boreal; Temperate; Subtropical
China	220	5	Temperate; Subtropical
Australia	134	3	Tropical; Subtropical; Temperate
Democratic Republic of Congo	126	3	Tropical
Indonesia	92	2	Tropical
Peru	72	2	Tropical
India	72	2	Tropical
Rest of world	1,375	34	n.a.

Source: Fitch Ratings, UN Food and Agriculture Organization 2020

Tropical forests make up 45% of the world's forest area, although they have a larger role in global forest loss and land conversion. Tropical deforestation alone accounts for 6.4% of annual greenhouse gas emissions – the same amount as direct emissions from buildings worldwide. Tropical rainforests hold more carbon dioxide compared to temperate forests and serve as sinks, absorbing large amounts of carbon dioxide from the atmosphere. The removal of these forests generates emissions, and the long-term loss of their carbon-absorbing qualities further contributes to climate change. Economic activities that promote land clearing therefore have a larger impact on the environment when conducted in tropical forests than those in temperate or subtropical regions.

Global Tree Cover Loss in 2019



Forests are central to the increasing interest in natural capital, which aims to more accurately value assets such as land, water, and plant and animal biodiversity when considering activities that lead to changes those assets' characteristics or integrity. The newly announced Task Force on Nature-Related Financial Disclosures (TNFD), set to formally launch in 2021, will establish a framework for quantifying the financial impact of natural capital losses, and to promote a flow of funds into activities that minimise or reverse them. The TNFD, whose informal working group includes BNP



Paribas S.A., DBS Bank Ltd., Cooperatieve Rabobank U.A., and the International Finance Corporation, will focus specifically on biodiversity and ecosystem loss.

Glossary

Biodiversity: The variability among living organisms, including within species

Deforestation: Loss of natural forest, due either to conversion to non-forest use (e.g. agriculture), or to severe degradation (e.g. logging)

Ecosystem services: Benefits to humans, both material and non-material, derived from ecosystems, such as raw materials, food, water, waste decomposition, recreation, culture

Forest-risk commodity: A good or raw material whose extraction or production contributes to deforestation

Natural capital: The stock of renewable and non-renewable natural resources that yield a flow of benefits to people

NDPE: No deforestation, no peatland development, and no exploitation of communities or workers

Sources: UNEP 2020, Ceres 2020

It is difficult to quantify the value of biodiversity loss to the economy; we cannot know if an undiscovered plant or animal species could have been the source of a new medical treatment or sustainable energy source. The UN Environment Programme (UNEP) estimates that the annual loss due to decline in ecosystems is at least USD479 billion annually, and that more than half of global GDP is dependent on ecosystem services. ¹

Biodiversity loss within forests can increase physical risks to the environment and human communities – for example, natural forests with a wider range of tree and plant types tend to be more resilient to wildfires. Researchers have studied links between deforestation and the spread of infectious diseases, including malaria, Lyme disease, and Zika virus, as animal and insect species' habitats become disrupted and interactions with humans increase.

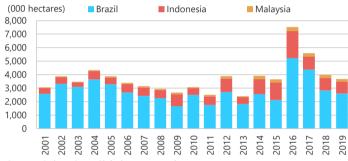
Food and Timber Demand Drives Excessive Land Clearing

The leading cause of forest loss is commodity production – primarily beef, palm oil, soy, and timber or pulp. Forest land conversion for commercial agricultural use normally results in deforestation (i.e. permanent loss), while logging for timber and wood products can cause temporary loss with the possibility of future regrowth. However, illegal logging, which is common in tropical regions and Siberia, tends to have a more permanent impact on forests, as does agriculture.

Brazil is the top exporter of both beef and soybean products, and it contains 60% of the Amazon, the world's largest forest. Production growth in these sectors is the primary cause of area loss in the Amazon. Beef and soybean demand are linked; two-thirds of global soybean consumption is as soybean meal for animal feed. Worldwide soybean production has grown by 285% since 1990, while beef consumption has increased by 47% over the same period.

Brazil has lost an average of 2.85 million hectares of tree cover in natural forests a year since 2010, and the current government has been supportive of further clearing to support economic development. The Brazilian president Jair Bolsonaro has asked the environment agency Brazilian Institute of Environment and Renewable Natural Resources (Ibama) to reduce fines and slow down enforcement of prevention of excessive fire clearing. Government data from July 2020 shows a 28% year-on-year increase in forest fires

Tree Cover Loss in Natural Forests



Source: Fitch Ratings, Global Forest Watch

Palm oil is the most commonly used vegetable oil in the world and grows exclusively in tropical regions. The oil palm plant is highly productive, with much higher yields per hectare than other vegetable oil crops, such as rapeseed or sunflower. The World Wide Fund for Nature estimates that nearly 50% of all packaged products – food, toiletries, and cosmetics – contain palm oil. It is also the main forest-risk commodity in south-east Asia and the primary cause of area loss in the Borneo rainforest, which spans Indonesia, Malaysia, and Brunei.

Deforestation in Borneo has been rapid; 30% of the forest's land area was lost between 1975 and 2015, and the World Wildlife Foundation estimates that another 22 million hectares, or around half of what still remains, could be lost by 2030.² Fire is also the main clearing method in this region, causing seasonal haze and air pollution that regularly stretches into the urban centres of Singapore and Kuala Lumpur in the August to October period.

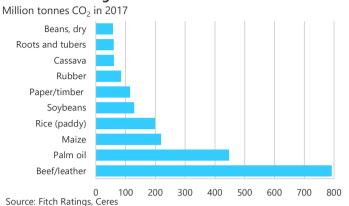
Beef and palm oil account for 57% of the annual total of greenhouse gases associated with deforestation. Other crops commonly grown in South America and south-east Asia – such as maize, rice, soybeans, and rubber – are also significant contributors.

 $^{^1}$ UN Environment Programme, UNEP Finance Initiative and Global Canopy 2020. "Beyond 'Business as Usual': Biodiversity targets and finance." UNEP-WCMC, Cambridge, UK, 42 pp

² World Wildlife Fund, 2015. "Living Forests Report," Chapter 5.



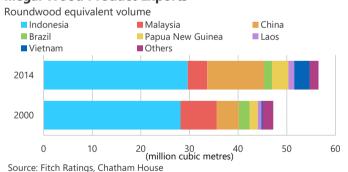
Greenhouse Gas Emissions from Deforestation and Peatland Drainage



Logging for timber and wood pulp for paper products is another contributor to deforestation, particularly in temperate and boreal regions. One-fifth of the world's forests are in Russia, and its wood products exports grew by 34% from 2009–2018, largely due to increased demand from China, which is a major manufacturer of wood-based consumer products.

An important difference between wood products and other forestrisk commodities is that sustainable logging is possible, where the integrity of natural forests is maintained to allow for future regrowth. In practice, and particularly in regions where illegal logging is common, forest clearing for wood products is nonetheless a cause of long-term or permanent deforestation.

Illegal Wood Product Exports



The Forest Stewardship Council (FSC) oversees the most well-regarded sustainable forestry certification, requiring producers to commit to conservation of biodiversity and forest regeneration efforts, among other principles. Only around 11% of global wood production is FSC-certified, however, and 60% of this comes from North America or Europe (excluding Russia) where regulations around logging are better enforced.

Between 2000 and 2014, exports of illegally forested wood products from selected high-risk countries rose 20%, with large increases from China, Papua New Guinea, and Vietnam. Less than 1% of FSC-certified forests are in these countries.

Regulations addressing deforestation can be inconsistently enforced in commodity-producing countries. For instance, in 2019 the Malaysian government agreed to review its forestry laws; forest

management is the responsibility of states, but the laws addressing deforestation are the federal government's responsibility. As logging permits are issued at the state level, this misalignment of authority has impeded enforcement. There are economic incentives to allow commercial plantations to replace uninhabited forest lands, presenting a conflict between environmental preservation and development. Another issue is that several of the larger forest ecosystems, such as Borneo and the Amazon, span national borders, making policy coordination more challenging.

Governments of major timber-consuming economies have enacted regulations to address the demand-side component of deforestation-linked supply chains. A 1900 American law called the Lacey Act that prohibits the illegal trade of wildlife products was amended in 2008 to include timber, pulp, and paper.

The largest judgement under the amended law was in 2016 when flooring retailer Lumber Liquidators Holdings, Inc. was convicted and fined USD13.15 million for illegally importing products harvested from a Siberian tiger habitat in Russia. The fine was the equivalent of around 12% of Lumber Liquidator's previous year EBITDA. The Russian government subsequently charged the local supplier Beryozoviy with 15 counts of illegal logging.

Enforcement actions have been less punitive in other regions. The 2013 EU Timber Regulation prohibits companies operating in the EU from using or trading illegally harvested timber products. Enforcement is delegated to member state authorities, and there are country-to-country differences in sanctions and penalties. Actions have mainly been guidance for importers on which countries or suppliers to avoid due to strong evidence of illegal products coming from those sources, rather than judgements.

Australia's Illegal Logging Prohibition Act passed in 2012 but only ended its "soft-start" phase in 2018, and the government's first infringement notice was issued in 2019 – a fine of AUD12,600. Japan's Clean Wood Act, passed in 2017, establishes a voluntary registry for companies, who upon joining will be required to prove that there is no illegally sourced wood in their supply chains. There are no criminal penalties or fines for companies who do not register or for those who do and fail to meet the annual audit requirements.

In August 2020 the UK government announced plans for a law that would restrict large companies operating in the UK from purchasing goods produced on illegally deforested land. The proposal would require companies to submit annual due diligence statements about their supply chain. The type of enforcement and the products that would fall under the legislation have yet to be finalised, but the framework is similar to reporting requirements under the Modern Slavery Act.

In the absence of regulation addressing the production or import of agricultural commodities, producers and purchasers rely largely on third-party certification. The leading international standards for sustainable forest-risk commodities – FSC, Roundtable on Sustainable Palm Oil (RSPO), Round Table on Responsible Soy Association (RTRS) – are voluntary. However, large buyers in North America and Europe, such as retailers and food manufacturers, are demanding certification for purchased goods with potential links to deforestation.

Producers' incentive to participate in certification can be due to their ability to charge a premium for having it, rather than because



they anticipate such standards becoming a legal requirement. In Brazil, large beef processors participate in several local or national voluntary standards, but these companies normally lack visibility into their supply chain beyond their direct suppliers – known as feedlots. Processing companies rarely know the cattle's origin before the feedlots, so certification only indicates that one step of the chain is deforestation-free.

We do not see government regulation or sanctions as being financially material for most corporates involved with forest-risk commodities at this time, given the low levels of enforcement. While the USA has the ability to levy very large fines under the Lacey Act, there have only been a few judgements related to timber products since its amendment in 2008. The minimal credit impact from regulation so far is evident from the fact that no ESG relevance scores (ESG.RS) of '4' or '5' reference deforestation in the Waste & Hazardous Material; Ecological Impact (EHZ) category.

A greater financial risk for these corporates is likely to be growing awareness among financial institutions about the environmental costs of deforestation, which is leading to a change in policies around investing and lending strategies.

Investors Engage Across Forest-Risk Commodity Value Chain

Following previous successes in the fossil fuels sector, NGOs and intergovernmental agencies have encouraged institutional investors to divest from companies involved in the production or consumption of forest-risk commodities.

In 2014, the New York State Common Retirement Fund and ESG investor Green Century Capital Management, Inc began to pressure food manufacturer Conagra Brands, Inc. (BBB-/Stable) over its palm oil supply chain. The following year, Conagra adopted a new policy requiring its suppliers not only to be RSPO-certified but also to meet higher NDPE standards.

Norway's sovereign wealth fund Government Pension Fund Global (GPFG) has excluded or divested from, or both, more than 30 palm oil companies, including Singaporean traders Wilmar International Limited and Olam International Limited. GPFG, along with pension funds Kommunal Landspensjonskasse Gjensidig Forsikringsselskap (KLP) and Stichting Pensioenfonds ABP began to divest from South Korean conglomerate POSCO in 2015; its Indonesian subsidiary is suspected of having cleared more than 20,000 hectares of natural forests for palm oil production. In March 2020 POSCO announced changes to its production standards and will be the first Korean company to have an NDPE policy.

Engagement activities have led to some changes in industry practices and additional transparency. Unilever PLC committed to disclosing their palm oil supply chain in 2018 and suspended orders from a number of suppliers following allegations of unsustainable practices from NGOs.

There have been a number of recent actions focused on the Brazilian Amazon. In September 2019, a group of institutional investors with more than USD17 trillion in assets under management issued an open letter asking companies producing commodities in the Amazon to publicly adopt a no-deforestation policy. The group, organised by the Principles for Responsible

Investment and the non-profit Ceres, is made up of investors from North America, Europe, and Asia and includes the largest pension fund in the United States – the California Public Employees' Retirement Scheme (CalPERS). Another open letter followed in December 2019, signed by a mix of food retail companies and pension funds, calling for a commitment of no soybean-related deforestation from the Brazilian government.

In response to evidence of increased fire clearing in the Amazon in 2020 year-to-date, a group of 10 investors, eight of whom signed one or both of the 2019 letters, met with the Brazilian government in July and secured an agreement from the vice president to halt fires for 120 days. One of these investors, Nordea Asset Management, has further announced that it is divesting from JBS S.A. (BB+/Stable), the world's leading meat processor, having already suspended investing in Brazilian sovereign bonds last year.

In response, JBS's competitor Marfrig Global Foods S.A. (BB-/Stable) announced that it will invest BRL500 million (USD94 million) in building a deforestation-free supply chain with 100% traceability in the Amazon. The largest investors in companies linked to deforestation in the Amazon and Asia include sovereign wealth funds, banks, insurance companies, and asset managers. BlackRock Capital Investment Corporation and Capital Group were highlighted in several NGO and news reports in 2019 as having provided significant capital to beef, palm oil, rubber, and timber companies operating in at-risk regions.

The possibility of further divestments from investors facing internal or external pressure could tighten financing availability for some corporates, although the significant equity and debt holdings by government-linked investors based in commodity-producing countries may be less likely to shift as a result of deforestation-related activism in the short term.

These engagement activities have not led to widespread divestment. They are intended to cause forest-risk corporates to change their operating practices and improve their ESG standards. There are very few investors who have a blanket restriction on investing in palm oil, beef, or forestry securities; more common are exclusion lists on a per-company basis, or the exclusion of some sectors from a specific sustainability or ESG fund while their securities remain in other non-thematic portfolios.

We do not expect to see companies involved in activities that can cause harm to forests struggling to raise financing as a result of these actions, although the level of engagement that has been achieved with some key corporates and governments suggests that ESG-related investor activism is likely to continue. In wider financing – loans, bonds, and share issuance – banks are more important for commodity producers' access to capital.

Banks' ESG Policies Are Increasingly Applied to Forest-Risk Sectors

The Natural Capital Declaration, signed in 2012 at the UN Earth Summit, was the first comprehensive accord addressing the role that financial institutions can play in the preservation of natural capital assets. Over time a growing number of international banks have begun to incorporate these principles into their ESG policies, making changes in the level of due diligence required before extending new or additional financing to companies in forest-risk



sectors. There have been a number of examples where ESG policies have influenced credit ratings, as Fitch discussed in the report *ESG Bites into Banks' Lending to Corporates*, published in January 2020.

Anti-Deforestation Commitments of Select Global Banks

		Soft Commodities		
Bank	Country	Compact	NYDF	RSPO FITF
Barclays plc	UK	✓	✓	
BNP Paribas S.A.	France	✓		✓
Deutsche Bank AG	Germany	✓	✓	
J.P. Morgan	USA	✓		
Lloyds Banking Group plc	UK	✓	✓	
NatWest Group plc	UK	✓		
Cooperatieve Rabobank U.A.	Netherlands	✓		✓
Banco Santander, S.A.	Spain	✓		
Société Générale S.A.	France	✓		
Standard Chartered PLC	UK	✓		✓
UBS Group AG	Switzerland	✓		✓
Westpac Banking Corporation	Australia	√	✓	

Source: Fitch Ratings

Two voluntary schemes for engaging international banks on reducing the financing of deforestation were launched in 2014. The Soft Commodities Compact was established by two industry groups – the Banking Environment Initiative and the Consumer Goods Forum. Banks who adopt the Compact agree to introduce policies that promote zero net deforestation for corporate and investment banking clients in four supply chains: beef, palm oil, paper/pulp/timber, and soy.

The New York Declaration on Forests (NYDF) is a multilateral commitment endorsed by governments, companies, and NGOs with two ambitious targets – halve natural forest loss by 2020 and end it by 2030 (the 2020 goal will not be achieved). The NYDF estimates that since 2010 there has been only USD3 billion in forest-related green finance flows compared to USD1.32 trillion in "grey" – capital with no sustainability objective – finance to the same sectors.³ Another programme with broad participation is the RSPO Financial Institutions Task Force, which asks banks to align with specific sustainable palm oil standards.

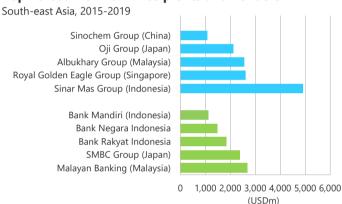
European banks have been the most proactive, both in joining voluntary programmes and in establishing comprehensive policies on forest-risk financing on their own. Netherlands' ING is the only

major bank with negative screening in this sector – no new palm oil producers or traders have been accepted as clients from September 2018, and there is enhanced due diligence for additional financing to existing clients.

ESG policies at global banks are more likely to influence financing for large corporates such as commodities traders, consumer goods manufacturers, and retailers, as they cover all aspects of financing including lending, book running, and underwriting. In practice, the companies with the most direct links to deforestation are agricultural producers operating in at-risk regions, where local financial institutions are a large funding source.

An analysis of forest-risk related financial flows in south-east Asia from 2015–2019 shows that the four of the five top lending banks are local banks, and three of the five top recipients are local companies. The top bond-issuing banks over the same period were ICBC (USD786 million) and Malayan Banking (USD713 million).

Top Forest-Risk Loan Recipients and Lenders



Note: Blue bars denote loan recipients, green bars denote lenders Source: Forests & Finance, Fitch Ratings

Financing for the leading Brazilian beef companies (JBS, Marfrig, Minerva Foods) is similarly concentrated among local banks. Several international banks stopped bond underwriting for these companies after 2014, including Bank of America, Credit Suisse, and Deutsche Bank. One exception is HSBC, which was their top bond underwriter from 2014–2018.

This indicates that Europe- and North America-based international banks, whether or not they have signed onto any commitments, are incorporating these principles into their activities on some level. A review of ESG policies at these major banks shows that nearly all include the key deforestation issues: NDPE, uncontrolled fires, high-conservation-value forests, and product certification. How these principles are applied, however, is subject to interpretation.

For instance, Marfrig issued a USD500 million 10-year transition bond in 2019, with the proceeds to be used for purchasing cattle from Amazonian farms that meet a higher sustainability threshold. Among the international coordinating banks were Soft Commodities Compact members BNP Paribas, Santander, and Rabobank, along with HSBC, ING, and Nomura.

York Declaration on Forests Five-Year Assessment Report. Climate Focus (coordinator and editor). Accessible at forestdeclaration.org

³ NYDF Assessment Partners (2019). Protecting and Restoring
Forests: A Story of Large Commitments yet Limited Progress. New
Focus (coordinator and



The issue was oversubscribed, and a 6.625% coupon is Marfrig's cheapest bond issue to date. The transaction has been criticised by some investors and NGOs as "green washing," as the use of proceeds neither prevents deforestation nor limits the environmental impact of cattle farming. Marfrig is the most committed of its peers to reducing deforestation with its recent announcement to fully trace its supply chain – perhaps in part because its experience with sustainable financing has been successful.

In Asia, the trend towards stricter ESG standards in this area is less widespread. The only two Asia-Pacific banks signed onto the three anti-deforestation commitments mentioned above are Australian: Australia and New Zealand Banking Group Limited (ANZ Bank) and Westpac Banking Corporation. Japanese megabanks are still involved in financing both Japanese conglomerates and local companies operating in south-east Asia producing pulp and paper products and palm oil, although this may change; Mizuho Financial Group, Inc. (A-/Negative) introduced much stricter ESG sector policies addressing forest-risk commodities earlier this year.

In the article *Credit Profiles of Asian Palm-Oil Producers Resilient Against Non-*Certification, published February 2020, Fitch said that Fitch-rated Asian palm oil producers that were not Roundtable on Sustainable Palm Oil (RSPO)-certified have funding access to domestic and regional banks that are not RSPO members. These smaller regional banks are likely to continue lending to the sector in light of its importance to the local economy and trade, limiting any credit impact on companies from the increasing global focus on ESG factors.

In China there may be increased attention paid to this area following the release of the People's Bank of China's updated draft of its Green Bond Catalogue in June 2020. It includes "Green Organic Agriculture" which is defined in part as "products that have obtained the relevant international sustainability certificates, including but not limited to RSPO, Round Table on Responsible Soy (RTRS), Forest Stewardship Council (FSC), etc." Should this draft version be approved, we expect to see Chinese commercial banks include these standards as part of their ESG due diligence process in alignment with the central bank's definition of "green" agriculture.

Bunge's Sustainability-Linked Loan Performance Targets

	Sustainability performance target	Measurement	
1	Global greenhouse gas emissions (Scope 1 & 2) intensity	Tonnes CO ₂ equivalent per tonne of production	
2	Soy traceabilty to direct sourcing farm in environmentally significant regions	%	
3	Zero deforestation certified soybean	Thousand tonnes	
4	Palm oil traceability to plantation	%	
5	Palm oil volume sourced from suppliers with NDPE commitment	%	
Source: Fitch Ratings, US Securities and Exchange Commission			

With the growing popularity of new products that incorporate antideforestation targets into financing facilities, banks have a growing role in directing corporate behaviour. Sustainability-linked loans where the lender receives a discount on the interest rate for achieving certain ESG goals are have become popular with agricultural companies.

Olam, Wilmar, and Louis Dreyfus have such facilities, although the targets are not focused on forestry. Bunge Limited's (BBB-/Stable) USDS1.75 billion sustainability-linked revolving credit facility in December 2019 is the one that most directly addresses deforestation in its KPIs. The interest rate can move between +3.0 and -2.5 basis points depending on achievement of or failure to meet sustainability targets, several of which are directly linked to reducing deforestation.

Another notable facility is a USD2.1 billion sustainability-linked loan to COFCO International, the Geneva-based agribusiness division of China's COFCO Corporation, in June 2019. Interest rates are linked to several indicators including traceability of Brazilian soy. In July 2020 the company announced that it will achieve full traceability for all directly sourced soy from Brazil by 2023, partially through the proceeds from the sustainability-linked loan.

A banking industry consensus in Europe and North America on minimum standards for financing companies operating in forest-risk sectors is emerging. These include: an internationally recognised product certification, a commitment to NDPE practices, and a plan to increase product traceability to origin. In the countries that are directly affected by wide-scale deforestation – the largest being Brazil, Indonesia, and Malaysia– local banks are not yet committed to a similar level of ESG due diligence.

In Brazil, the largest beef and soy processing companies are large global companies that require international sources of financing. This may indicate that companies operating in Brazil are more exposed to higher ESG standards from banks and investors. Southeast Asian palm oil producers rely significantly on local or regional bank funding, so the drive towards more supply chain transparency has less of an impact. Governments of the main palm oil-producing countries have not yet had to directly answer to international investors' concerns.

We expect to see more corporates announcing plans to reduce deforestation in their supply chains –commodity producers and also purchasers such as food manufacturers and retailers – in anticipation of increased regulatory requirements, such as the UK's proposed legislation. Investors are showing enthusiasm for green and sustainable financial products, and issuers have obliged with the issuance of instruments with anti-deforestation goals.

Large-scale infrastructure projects, such as roads, bridges, and dams, have been associated with increased deforestation in developing countries, and this could become the next area of focus. The Brazilian government plans to partially fund its new USD2.9 billion Ferrogrão railway infrastructure project, which crosses the Amazon rainforest, through issuing green bonds. Attention on forests is likely to stay high in the short-term, with the formal establishment of the TNFD and the UN Climate Change Conference (COP26) both scheduled for 2021.



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