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White Paper

The Roadmap to Financing Deforestation-Free Commodities

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Abbreviations

AFI	Accountability Framework Initiative
BEI	Banking Environment Initiative
CFA	Collaboration for Forests and Agriculture
ESG	environmental, social and governance
FI	financial institution
FSC	Forest Stewardship Council
G20	Group of Twenty
GFW	Global Forest Watch
GHG	Greenhouse gases
MYR	Malaysian ringgit
NDC	nationally determined contribution
NDPE	No Deforestation, No Peat, No Exploitation
NGO	non-governmental organization
PRI	Principles for Responsible Investment
REDD+	reducing emissions from deforestation and forest degradation
RSPO	Roundtable on Sustainable Palm Oil
RTRS	Roundtable on Responsible Soy
SCRIPT	Soft Commodity Risk Platform
SDG	Sustainable Development Goal
SPOTT	Sustainable Palm Oil Transparency Toolkit
TCFD	Task Force on Climate-related Financial Disclosures
TFA 2020	Tropical Forest Alliance 2020
UNEP	United Nations Environment Programme

Executive summary

The Paris Agreement on climate change, which entered into force in November 2016, saw 195 countries agree to keep the rise in global temperature to below 2°C to avert dangerous climate change. Crucial in the fight against climate change, tropical forests could provide up to one-third of the greenhouse gas (GHG) savings needed.

Despite their globally acknowledged importance, forests have lost more than 120 million hectares since 1990. Commercial agriculture is responsible for nearly 70% of tropical deforestation, and most agriculture-driven deforestation results from the production of four soft (grown, not mined) commodities (“forest risk commodities”): palm oil, soy, cattle products (beef and leather) and timber products (including paper).

Financial institutions are exposed to the risks associated with deforestation through their investments in and lending to companies involved with soft commodities. However, while a number of financial institutions have made progress in integrating the environmental and social impacts of soft commodities into their risk management frameworks, a larger number are not taking action, with only 30% having public policies on these commodities, according to Global Canopy’s Forest 500 annual report for 2017¹.

This White Paper looks at why financial institutions globally are not taking sufficient action or are finding it more difficult to do so than envisaged, and recommends ways forward for the various groups concerned. The recommendations are targeted first at financial institutions and second at other stakeholders in the soft commodity value chain, namely those who can provide the enabling environment for financial institutions to act. The paper contains sections on the four biggest areas of challenge to financial institutions in this space. They are:

The business case for financial institutions

Financial institutions around the globe need to see a clear business case to integrate deforestation risks into their risk management and business strategy. One way to achieve this is by demonstrating to financial institutions the link between deforestation risks and financial risks.

This White Paper shows that the Paris Agreement and the related nationally determined contributions (NDCs) indicate a changing regulatory and market landscape in which the financial risks of deforestation to companies, and therefore to financial institutions, will become more material. Policy and regulatory measures relevant to deforestation and soft commodities will be implemented by countries to help meet their NDCs. As Indonesia’s regulation on peatlands² demonstrates, regulations can affect companies’ financial performance and valuation, as they may prohibit the conversion of land owned by soft commodity companies. Creating such “stranded assets” would also directly affect

financial institutions involved with the concerned companies. More stringent regulations may also enhance transparency (making it easier for financial institutions to run certain checks) or make certain activities by companies as well as financial institutions illegal.

Increasing regulations and shareholder pressure on financial institutions themselves are also driving greater transparency and a need to understand and communicate material risks to stakeholders. To assist it in this process, the finance sector requires guidance, data and tools on deforestation.

Although aimed at communicating material climate risks rather than specifically deforestation risk, the disclosure framework of the Task Force on Climate-related Financial Disclosures (TCFD) is an example of improving transparency and the flow of information to financial institutions. How the TCFD framework provides lessons on improving disclosure is also explored (Box: The TCFD), given the clear link between deforestation and climate.

The key recommendations for this section include:

- Financial institutions should undertake scenario analyses to understand their exposure to forest risk commodities from a physical, regulatory, legal and reputational perspective, and to inform their respective institution’s strategy and portfolio in the medium to long term.
- Other stakeholders, such as non-governmental organizations (NGOs) and environmental, social and governance (ESG) data providers, should support financial institutions on this. They should provide data on, for example, potential land banks, which financial institutions can feed into their analysis of stranded assets.
- Given the rising interest of institutional investors in impact investing, financial institutions should also explore opportunities linked to new financial products, such as sustainable landscape bonds, green bonds or impact funds that target sustainable landscape outcomes.

Robust policies and good practices

Although some financial institutions have had forest risk policies for over a decade, many still struggle to understand and recognize good soft commodity policies and how to implement them internally.

The key recommendations for this section include:

- Financial institutions should develop robust policies and procedures that ensure funding is diverted from entities whose operations fail to protect globally important forests. These should be applied across all relevant financial services and products.
- Financial institutions should also define and disclose clear procedures for managing non-compliance and the consequences of non-compliance for clients. Where

appropriate, institutions should explore partnering with clients to improve their standards and practices.

- Financial institutions need to ensure that investment and lending teams share ownership of ESG issues and approach them in the same way they would wider risks.
- To embed policies and procedures, and integrate ESG teams with investment and lending teams, financial institutions must continually provide training on ESG issues for key personnel, raise awareness on the materiality of these risks (including deforestation risk) and incorporate ESG performance into loan documentation and executive remuneration.

Monitoring

Most financial institutions with deforestation policies have relied on certification schemes for monitoring purposes, such as the Roundtable on Sustainable Palm Oil (RSPO) and the Forest Stewardship Council (FSC). Certification has provided the standardization crucial for mainstreaming sustainable practices in the sector, creating the required market scale and comparability for banks and asset managers. However, use of certification schemes among companies remains relatively low, which is problematic for financial institutions that rely on widespread coverage to have a large and diverse range of clients. In addition, a number of NGOs and leading operating companies are increasingly critical of existing schemes, with some companies moving to develop their own tailored approaches.

The key recommendations for this section include:

- Financial institutions should support the uptake of certification by requiring its inclusion as part of client onboarding, annual credit or investment reviews and, where feasible, loan covenants or other documentation. Offering favourable financial terms might also be possible.
- Financial institutions should support jurisdictional approaches to encourage widespread use of certification, especially among smallholders.
- Financial institutions should use certification schemes to set minimum standards for client companies. They might then consider moving beyond certification for certain clients, for example by requesting traceability or monitoring deforestation risk using proprietary as well as open-source tools.

Given the recent momentum behind the TCFD, how its disclosure framework for climate-related financial risks can aid monitoring of deforestation risk is explored (Box: The TCFD).

A diverse market response

Soft commodity supply chains are inherently complex, with a wide range of entities involved at different stages of the chain, from farmgate to supermarket. No one entity has enough influence to change the entire value chain. Some companies seek to make their supply chain deforestation free, while others do not consider it a priority. This could lead to parallel markets in deforestation-free/sustainable soft commodities and non-deforestation-free commodities.

Both markets would be served by different companies and financial institutions, with the former markets served by entities with good practices and policies, and the latter ones served by those with lax practices or no policies. In this scenario, with the leaders disengaged from the laggards, deforestation could continue.

The key recommendations for this section include:

- Financial institutions and other relevant stakeholders need to collaborate and leverage their influence with governments and regulators to encourage robust regulation, particularly in emerging markets.
- Financial institutions need to carefully consider when to completely disengage from a company, striking a balance between enforcing policies and supporting companies, to avoid that companies turn to financial institutions with lax or no policies.
- Financial institutions should engage in peer-to-peer learning on the business case, on good practices to develop and implement policies and processes, and on understanding the value of standards and certification.
- Forums, such as the Tropical Forest Alliance 2020 and the Banking Environment Initiative (BEI), can facilitate multistakeholder dialogue, learning and collaboration to further the no-deforestation agenda.

Financial institutions have a compelling need to strengthen the business case concerning forest risk commodities, and to use it to drive robust policies and support client companies' efforts on supply chain sustainability and traceability. All entities involved with soft commodity supply chains have a role in providing the enabling environment for these actions. This includes NGOs helping financial institutions to understand good practice and to access relevant service providers, thus improving access to financing decision-relevant information, and regulators introducing robust regulations, such as in emerging markets.

Governments could reinforce these efforts as part of their commitment to Sustainable Development Goal (SDG) 15, as well as their commitments under the Paris Agreement to reduce GHG emissions.

Introduction

The Paris Agreement on climate change, which entered into force in November 2016, saw 195 countries agree to keep the rise in global temperature to below 2°C, and as close as possible to 1.5°C, to avert dangerous climate change. Tropical forests are crucial in the fight against climate change. Deforestation is currently responsible for 15% of greenhouse gas (GHG) emissions,³ but forests could provide up to one-third of the climate solution needed.⁴ Forests are also critical for global biodiversity, maintaining water cycles and the livelihoods of the roughly one billion people who depend on them.

Despite their globally acknowledged importance, forests have lost more than 120 million hectares since 1990 – an area almost the size of South Africa.⁵ Commercial agriculture is responsible for nearly 70% of tropical deforestation,⁶ and most agriculture-driven deforestation is due to land clearance to produce four soft (grown, not mined) commodities (“forest risk commodities”): palm oil, soy, cattle products (beef and leather) and timber products (including paper). Global demand for these products continues to drive deforestation of tropical forests, resulting in greater loss of global tree cover.⁷

Research by CDP Worldwide found that, in 2017, up to \$941 billion of turnover in publicly listed companies depended on these forest risk commodities. Companies are beginning to understand the risks associated with them;

87% of companies disclosed to CDP that they identified “at least one risk related to forest-risk commodities that has the potential to cause a substantive change in operations, revenues or costs”.⁸ In addition, 32% disclosed that they had already been affected by the production or consumption of soft commodities. As these risks increase, so will the financial impact on companies, affecting revenues, costs, profits, asset values and impairments.⁹ As consumers become more aware of social and environmental risks, reputational risks will also continue to rise, and customers may well change buying patterns or select companies they see as being more sustainable.

The number of companies with commitments to tackle deforestation in soft commodity supply chains continues to grow,¹⁰ and many of them look to a 2020 deadline.¹¹ However, an annual review by Global Canopy of the commitments from the largest 250 companies in these supply chains found that uptake of voluntary commitments is not rapid enough to protect tropical forests. In fact, 30% of these companies have no sourcing policy for any of the commodities they are exposed to in their supply chains, particularly for soy and cattle, with more corporate commitments currently covering palm oil and timber.¹² Moreover, policies alone do not help prevent deforestation, and a deeper look reveals that 40% of companies assessed failed to report their implementation efforts against their policies.

Figure 1: Potential material effects of deforestation risks on financial institutions



Source: Adapted from WWF. *Banking on the Amazon: How the Finance Sector Can Do More to Avoid Tropical Deforestation*, 2016, p. 12, [https://www.wwf.org.uk/sites/default/files/2016-11/Banking%20on%20the%20Amazon%20\(English\)%20-%20WWF%20Nov%202016.pdf](https://www.wwf.org.uk/sites/default/files/2016-11/Banking%20on%20the%20Amazon%20(English)%20-%20WWF%20Nov%202016.pdf)

Financial institutions are exposed to the risks associated with deforestation through their investments in and lending to companies involved in the production, trade, manufacturing or sales of soft commodities (see Figure 1 for an overview of potential material effects of deforestation risks on financial institutions). As governments transition to a low-carbon economy, and as public pressure grows more broadly on environmental and social risks, changing regulations targeting unsustainable production may increase financial risks of companies and impair the equity holdings of investors and the quality of loans in bank portfolios.

To date, the finance sector has engaged on deforestation issues through a number of initiatives set up to help its institutions work with their portfolio companies to tackle deforestation. These include:

- Banking Environment Initiative (BEI): comprised of 11 leading banks, the initiative looks to collectively direct capital towards environmentally and socially sustainable economic development. As such, the BEI's soft commodities compact aligns with many of the banks' clients' goals to reach zero net deforestation by 2020.
- Collaboration of the Investor Initiative for Sustainable Forests of the Ceres Investor Network with the Principles for Responsible Investment (PRI): this partnership was set up to support institutional investors in engaging companies on deforestation and related social issues.
- PRI's Investor Working Group on Sustainable Palm Oil: this group of investment organizations supports the development of a sustainable palm oil industry.
- The Tropical Forest Alliance 2020 (TFA 2020): this finance-sector initiative aims to further the goal of zero net deforestation and include more financial institutions in the discussions on tackling commodity-driven deforestation.

Guidance also exists for financial institutions on what they should expect of companies¹³ and how they can begin to assess risk and dependencies in their portfolios.¹⁴ Signatories to CDP's forests programme have steadily increased since its launch and now stand at 650 financial institutions representing \$87 trillion in assets,¹⁵ reflecting the growing awareness of their exposure to deforestation risks.

Despite this increase in awareness, many financial institutions are not taking action. The Forest 500 project annually assesses 150 financial institutions against their policies to tackle deforestation risks linked to the four soft commodities in their portfolios.¹⁶ Those institutions assessed have proportionally fewer public deforestation policies than non-financial companies. Moreover, nearly 70% (104) had no public policies for any of the commodities.

Of the 46 financial institutions with at least one commodity policy, the strength, coverage and implementation of policies varied: 29 publicly reported non-compliance processes, and only 18 of those had thorough screening and monitoring. The remaining 17 had no statement to explain the consequence of non-compliance for their client companies.

This White Paper identifies the main challenges for financial institutions as they attempt to understand and tackle the deforestation risks they face. It goes on to recommend next steps for financial institutions to overcome those challenges, as well as for other stakeholders who can better enable, or put pressure on, financial institutions to act.

Methodology

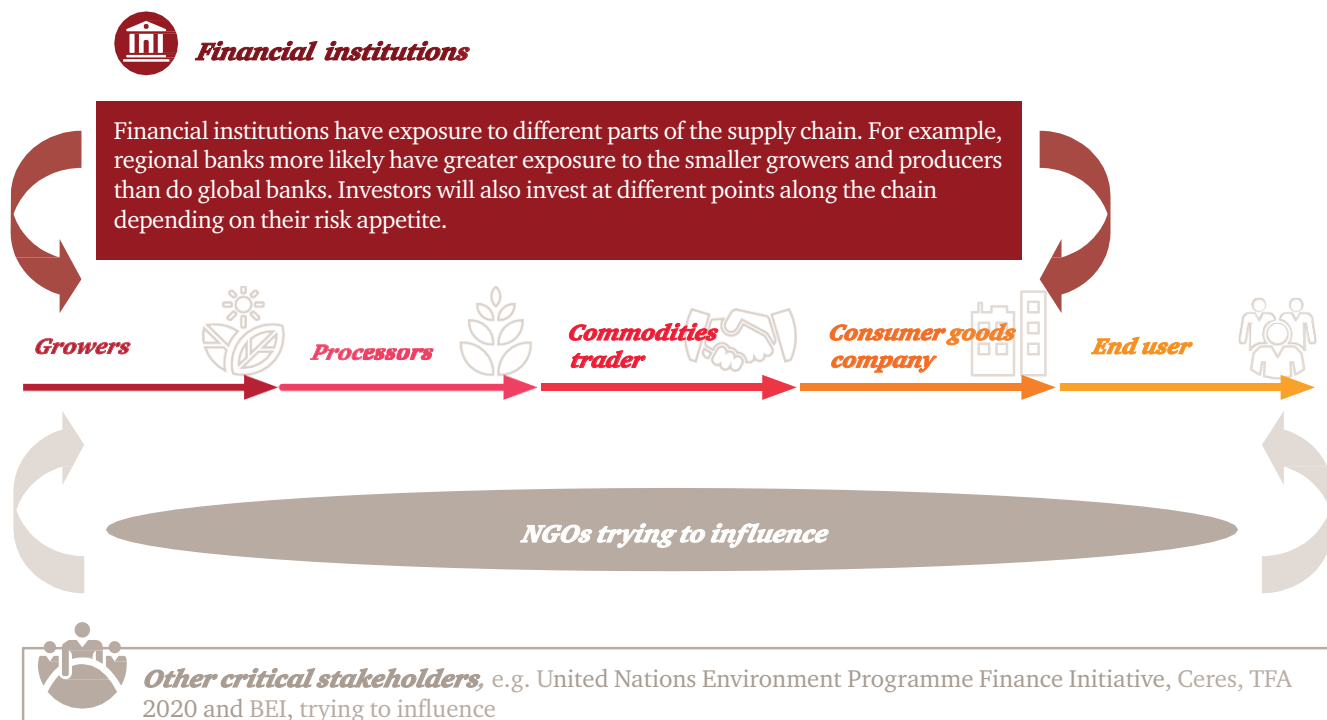
The Forest 500 – the group of jurisdictions, companies and financial institutions assembled based on publicly available data – forms the basis of this White Paper and its underlying evidence. Included in the group are the previously mentioned 150 financial institutions who are the biggest investors and lenders to forest risk commodity companies.

In-depth interviews were conducted with 15 financial institutions, global and regional banks, and asset managers as part of an Expert Working Group. The interviews focused on understanding current policies and challenges that financial institutions face in implementing soft commodity policies. Two workshops were hosted with the institutions and other stakeholders. The workshops sought to devise recommendations applicable to most of the participating institutions.

The White Paper is divided into four sections on the biggest challenges to financial institutions in this space:

- **The business case for financial institutions:** A look at the materiality of the commercial effect that financing forest risk commodities can have on financial institutions.
- **Robust policies and good practices:** An exploration of how financial institutions can implement good-practice soft commodity policies and activity in their day-to-day operations, and how institutions manage policy non-compliance.
- **Monitoring:** A discussion on the challenges of using certification for monitoring, how its use could evolve, and the wider data required for monitoring.
- **A diverse market response:** A look at how various entities in the soft commodity value chain take different approaches to forest risk commodities, and how they can be encouraged to work better together to ensure mainstreaming of sustainable practices.

Figure 2: Value chain mapping



Source: PwC

Setting the scene – soft commodity value chains

Soft commodity value chains are complex, with many entities both directly and indirectly involved. A direct chain exists from upstream producers to downstream end-users (see Figure 2). Tracing every entity in a supply chain is extremely difficult, often with thousands of smallholders at the producer level and many family-owned conglomerates with unclear ownership structures. In addition to the entities in the direct supply chain, other entities, particularly financial institutions, play a vital role in the wider value chain. Depending on the point in the supply chain, these could be trade finance and corporate lending banks, both in the producer and buyer countries, or commodity traders or insurers; and, at the corporate level, equity or debt investors, providers of longer-term corporate loans and treasury and risk management services, or corporate finance advisers. In addition, given their link to deforestation, soft commodity supply chains are closely observed by other entities, including NGOs and international institutions.

The entities in the value chain each have a certain amount of leverage to influence others in the chain and advance the zero deforestation agenda. Some stakeholders, however, could better use their potential leverage and act more to prevent deforestation in the soft commodity supply chain – for example, if they are buyers, by asking producers to only produce sustainable soy; or, if they are financial institutions, by having strict policies on soft commodities. Those entities striving for positive change could collaborate more to exert higher pressure on the supply chain.

The purpose of this White Paper is to identify where financial institutions, often in collaboration with wider stakeholders, can have a greater positive impact. The recommendations have been designed to address the challenges identified by the Tropical Forest Alliance 2020 (TFA 2020) Expert Working Group that are preventing progress on reducing deforestation. As such, the paper's recommendations should act as guidance to ensure financial institutions are better able to expedite improved sustainability performance at the corporate and project finance level. While most of the recommendations are targeted at financial institutions, some are intended for wider stakeholders, such as NGOs or governments and regulators. As a result, the paper recognizes the importance of a multistakeholder approach to implementing the recommendations.

1. The business case for financial institutions

Challenge 1: Demonstrating the commercial effect on financial institutions of financing forest risk commodities

The need to look beyond reputational risk

Most financial institutions involved in soft commodity supply chains appreciate that lending to or investing in companies engaged in unsustainable and destructive deforestation practices will likely negatively affect their reputation. As with other environmental, social and governance (ESG) risks, the financing of deforestation by financial institutions leads to their being criticized by stakeholders, including NGOs, clients and the wider media, and draws negative publicity. Such was the case recently for banks found to be financing unsustainable palm oil.

While the link between ESG issues and reputational risk is generally known, very few financial institutions consider deforestation as a material risk to their financial performance. In the Forest 500 assessment, 65 of 150 financial institutions scored zero, meaning these institutions showed no awareness of the material risks of deforestation and lacked policies to address them.

This is largely because entities across soft commodity value chains have not recognized such risks as material. Consumer goods companies are starting to act on deforestation in their supply chains, but these are mostly European or North American companies responding to reputational risks. Most governments in soft commodity producer countries must balance deforestation challenges against wider development and economic growth. Consequently, entities in the supply chains to date consider regulatory risk as low. Many palm oil companies, for example, make good financial returns for their owners and investors, regardless of whether they are associated with deforestation. Yet, companies' bottom lines are starting to be affected (see Case study: Corporate liquidity risk), demonstrating that deforestation can be a real financial risk for both companies and financial institutions. As the case study shows, the effect on the share price meant real financial losses for equity investors. A number of financial institutions are recognizing this and factoring ESG risks into their financial risk analysis (too often, however, this is still not the case).

Case study: Corporate liquidity risk – IOI share price fell after suspension from the Roundtable on Sustainable Palm Oil for illegal deforestation¹⁷

IOI Corporation, a large Malaysian palm oil producer, has a market capitalization of \$7 billion and a 230,000-hectare land bank. Chain Reaction Research published an analysis in the first quarter of 2016 stating that IOI was overvalued and might be suspended from the Roundtable on Sustainable Palm Oil (RSPO), owing to illegal deforestation of 11,750 hectares in Indonesia. This was contrary to RSPO's principles and criteria, and RSPO subsequently suspended IOI in April 2016.

As a result, IOI's share price dropped from about MYR5 (Malaysian ringgits) to MYR4.12. Simultaneously, 26 corporations, including some of the world's largest consumer goods companies, stopped buying from IOI. The corporation threatened to sue the RSPO, while Moody's stated they would review IOI for downgrading. Consequently, IOI had a net loss of \$14.8 million in the second quarter of 2016.

In August 2016, the RSPO reinstated IOI after it implemented an action plan to prevent further deforestation in its operations. IOI's shares then rallied 5% to MYR4.45 on the news. Finally, IOI sold Lodders Croklaan, its high-value palm oil products division, to Bunge for \$946 million.

The Paris Agreement as a game changer

The Paris Agreement on climate change and signatory countries' nationally determined contributions (NDCs), as well as the implementation of the Sustainable Development Goals (SDGs), are resetting the deforestation landscape for financial institutions in terms of risks and opportunities. In fact, 80% of countries make explicit reference to land use and/or forestry in their NDCs, while 58% reference specific policies and measures for forestry.¹⁸ Large forested nations, such as Indonesia, Brazil and Malaysia, have made strong commitments on deforestation, as well as on their overall emissions reductions. Brazil is looking to reduce its emissions by 37% by 2025; 46% of that will be contributed by land-use change and forests.¹⁹ Indonesia is planning to lower its emissions by 29% by 2030 against a business-as-usual baseline scenario (with 17% coming from the forestry sector), with a conditional reduction target of up to 41% subject to international assistance and financial support.²⁰

If these and other countries are to follow through on their commitments, they need to create new and stronger regulations on deforestation and land-use change. Such regulations could include restricting new licences and new plantings, such as Indonesia's moratorium on peat lands,²¹ and outlawing conversion of carbon-rich forests and conservation targets. For example, the Brazilian Forest Code requires that landowners maintain up to 80% of their

property in the Amazon as native vegetation,²² and Brazil's Central Bank has a mandatory requirement for producers to present a "license, certificate, or equivalent evidence of environmental compliance" to qualify for public loans. Other recent government commitments include the Amsterdam Declaration, pledging a 100% sustainable palm oil supply chain in Europe by 2020,²⁴ and emerging ESG-related regulations, such as the French Duty of Care law, which includes a requirement for companies to prove vigilance over environmental risks in their supply chains.²⁵

If these types of regulations are applied widely by the countries signatory to the Paris Agreement, the risks to business as usual increase greatly. Palm oil companies may not be able to use land they had earmarked for new plantations due to its falling under a new restricted category. Traders might have to prove that their soft commodities come from deforestation-free areas. Such scenarios could lead to a decrease in the value of supply chain companies and an inability to service their debts.

Regulation and stranded assets

Emerging regulation might mean that financial institutions' client companies hold "stranded forest assets". The concept of stranded assets, defined as "assets that have suffered from unanticipated or premature write-downs, devaluations or conversion to liabilities",²⁶ has been used to describe how environmental and climate change-related risks are altering asset values in various sectors of the economy. While the concept until recently has been mainly applied to fossil fuels, it is highly relevant to forest risk commodities: as productive assets linked to deforestation lose access to end markets, their economic value declines and they become "stranded". The stranding of assets linked to deforestation may occur as a result of physical climate risks, such as land degradation and resource scarcity, which may cause disruptions and financial loss to a company's supply chain. In addition, anticipated changes in regulation on the production of forest risk commodities in response to climate change risks may also lead to unsustainable forest products and to their linked assets becoming stranded.

Stranded assets could affect entities, including financial institutions, along the forest risk commodity value chain. The TFA 2020 has estimated that if investors continue to invest in expanding production of deforestation commodities over the next 5-10 years, this could result in tens of billions of dollars of assets at risk of stranding. In fact, "if all historically illegal production areas were deemed at risk of stranding, then hundreds of billions of dollars of existing productive assets might be at risk".²⁷

Market demand and stranded assets

Companies involved in harmful deforestation also face market risk as structural changes in consumer consciousness and consumption patterns shift demand away from unsustainable products. As such, the commitments made by major companies under the New York Declaration on Forests²⁸ to remove deforestation from their supply chains will have significant implications for commodity producers in the coming years. For example,

research suggests that 29% of Indonesia's palm oil concessions cannot be developed without violating buyers' No Deforestation, No Peat, No Exploitation (NDPE) policies, meaning 95 Indonesian palm oil companies each have at least 1,000 hectares of stranded land on their books.²⁹

Recommendations for financial institutions

- Conduct a scenario analysis to understand the potential effect of macroeconomic changes over the next 5-10 years on the institution's portfolio and strategy. This analysis should include:
 - How the Paris Agreement and the corresponding country NDCs, adoption of SDGs, and increasing public and investor pressure concerning environmental and social risks will influence changes in regulation, international and regional banking market centres and forest nations. The analysis could also extend to physical and reputational risk drivers. Particular attention should be paid to understanding where future stranded assets from forests might lie.
 - How current deforestation affects countries' ecosystems in the long term. A study conducted in the Amazon, for example, found that agricultural productivity, including soy and cattle, may be compromised in the long term as rainfall patterns shift dramatically.³⁰ With rising awareness, the possibility of new regulations coming in to prevent this is highly likely.
- Explore opportunities linked to deforestation-free commodities. While action on deforestation is often focused on risks, financial institutions have opportunities in the space. Financing deforestation-free supply chains represents a sizeable investment opportunity for such institutions, particularly with the growth in impact investment. Financial products that should be explored include:
 - Sustainable landscape bonds or green bonds linked to zero deforestation.
 - Sovereign green bonds or sustainable commodity bonds issued by governments and underwritten by financial institutions.
 - Specific loan facilities, such as ING's sustainability performance-linked loan with Singapore-based agribusiness Wilmar (see Case study: ING and Wilmar).
 - Investment products that aim for a zero or positive net effect on forests, or are aligned with SDGs that include a goal on deforestation.
 - Incentives on traditional products to encourage uptake of certification.

Recommendation for stakeholders

- Conduct a study on forested land banks to gather evidence on the potential effects of stranded assets from forests. This study would highlight the location of large land banks in danger of being stranded because of ever-tightening regulation, the companies owning them and the potential financial impact.

Case study: ING and Wilmar partner on first Asian sustainability performance-linked loan opportunity³¹

In 2017, it was agreed that Singapore-based agribusiness Wilmar would convert a portion of its existing bilateral, committed revolving credit facility with ING into a sustainability performance-linked loan. Sustainalytics will measure Wilmar's progress in meeting its commitments to improve aspects of its environmental, social and governance performance. If the performance milestones are met, the interest rate for part of the loan will be reduced for the following year. Sustainalytics, a leading provider of environmental, social and corporate governance research and ratings, will track the company's performance of different environmental, social and governance (ESG) indicators.

Challenge 2: Assessing and quantifying risks at the asset level and at scale across financial products

Financial institutions generally do not assess and quantify deforestation risk at the asset/project level. Moreover, they lack the processes for quantifying the percentage of their loan book or investment portfolios related to soft commodities. Confirming this trend, the United Nations Environment Programme (UNEP) found that none of the financial institutions reviewed have a process in place to quantify the overall percentage of their loan book, investment portfolios or even individual assets related to soft commodities and the risks associated with it.³² The reasons for this include:

- Forest risks are seen as immaterial for certain financial transactions. Project-level finance requires detailed checks of the project (e.g. clearance and planting of a palm oil concession). Due diligence can then be targeted at any deforestation risks within the project, as financial institutions understand these to be material to the specific transaction. However, very few forest risk commodity projects are funded through conventional project finance. When it comes to other financial instruments, such as general purpose corporate loans, deforestation is often not considered a proportional, material risk unless the loan is specifically for a forestry or soft commodity company. Hence, risks related to deforestation may not be checked for, leaving financial institutions open to significant risks if a company's subsidiaries are involved in these activities.
- When financial institutions lend to a group's holding companies, they may not know to which of the company's subsidiaries the money might flow – and whether that subsidiary might be involved in any deforestation-related activity. This could be particularly true if the holding company itself is not involved in the soft commodity supply chain.

Recommendations for financial institutions

- Establish a central, independent platform that collates company-oriented incidents and case studies showcasing the materiality of deforestation risk (see "Recommendation for stakeholders" below), which would help financial institutions in the following ways:
 - Financial institutions could run due diligence checks on current and future clients and understand specific risks of deforestation associated with a client and its suppliers and subsidiaries.
 - ESG departments could use the platform to present a comprehensive picture and thus make the case of deforestation risk to other parts of the institution.
 - Financial institutions should use the platform to identify "no go" companies across their portfolio.
- Have visibility of risks across the whole portfolio, which would allow financial institutions to target engagement on these issues in underperforming companies exposed to the greatest amount of risk.

Recommendation for stakeholders

- Establish an authoritative central platform, hosted by trusted third-party institutions, that collates company-oriented incidents and case studies showcasing the materiality of deforestation risk. This platform should be hosted by an independent, reputable source and include information on corporate ownership structures. Precedents for this kind of information platform include Thomson Reuters' World Check, which provides companies with a comprehensive risk analysis including negative media or links with political campaigns.³³ Some financial institutions are already using this tool successfully to investigate potential human trafficking in their portfolios.

2. Robust policies and good practices

Developing and implementing robust soft commodity policies across the value chain are critical to achieving zero deforestation. The financial sector is potentially well placed in the value chain to implement policies that affect the landscape in soft commodity investment and lending. Progress in terms of policy and process implementation, however, varies widely among financial institutions.

Challenge 1: Understanding what constitutes a good policy

Public policies regarding deforestation are an important signal from financial institutions to the wider market that they have strong governance on deforestation-related risks. Only eight of the 150 financial institutions assessed as part of the Forest 500 in 2017 had a sustainability policy for all four forest risk commodities, and nearly 70% of those assessed lacked a policy for any of them. Palm oil and timber were the most covered, with 30% having a policy for at least one, compared with about 10% for cattle or soy.

Financial institutions disclose a range of policies and approaches. Some commodity policies are included under higher-level ESG, forestry or agribusiness policies, and others are stand-alone policies related to a particular commodity. Even the terms used to describe policies vary, with some called “position statements” rather than policies. Others had no public policy document for any specific commodity or sector but explained that they consider deforestation risks on a case-by-case basis. This range of approaches may be expected when looking at a variety of financial institutions that serve different segments of markets, regions and financial products, and that finance different commodities. However, key elements forming a robust policy can and should be applied by all financial institutions.

The robustness varied within existing policies. Less than half of the commodity policies included a requirement to protect priority forest areas, such as high conservation value areas and primary or intact forests. The rest only encouraged protection or lacked any criteria on these landscapes. In terms of policy scope, half of the commodity policies assessed did not apply to all of the institution’s financial products, and one-third applied only to some parts of the supply chain. In the latter case, they focused on upstream companies.

Recommendations for financial institutions

- Develop a policy or policies that cover all soft commodities.
- Ensure in the development of robust soft commodity policies that they are based on internationally recognized standards, such as the World Bank/IFC Performance Standards and/or those of equivalent regional development banks, and include minimum requirements for companies to:
 - Protect globally important forests and other important areas of biodiversity.
 - Comply with applicable laws and regulations
 - Protect the rights of communities, workers and, where applicable, indigenous peoples.
 - Contain time-bound commitments; these can either be set by the financial institution or be part of the companies’ own time-bound targets, but should be in line with those typically required under certification schemes.
 - Include these policy requirements in financing documents where possible, ensure they contain conditions precedent and covenants requiring compliance, are measured at least annually and have terms to deal with a breach of covenant and other conditions.
- Include appropriate stakeholder consultation in policy development with clients, investors, staff, NGOs and other financial institutions as appropriate. The policy should apply to all financial services and products, and to all clients of the financial institution regardless of size or position in a supply chain. Financial institutions should make the policy, or a summary of it, publicly available and report levels of compliance with the policy at least annually.

Recommendation for stakeholders

- NGOs and financial institutions: collaborate to devise a set of good practice standards for policy development. They should gain and provide insight on how to vary approaches depending on:
 - Position of clients in the supply chain
 - Types of financial products
 - Geographies

Guidance on soft commodity policies: The Soft Commodity Risk Platform tool

The Soft Commodity Risk Platform (SCRIPT) provides direction on what a strong policy should include.³⁴ The SCRIPT policy benchmarking tool³⁵ allows a financial institution to assess its own policies and compare these to both best practice and its peers, and to identify key areas for improvement.

The tool provides policy guidance on a range of areas, including monitoring and reporting, compliance with law and regulations, awareness and understanding, and the protection of globally important forests. The recommendations include practical suggestions, such as becoming a signatory to the New York Declaration on Forests and suggesting engagement questions. They also include overarching recommendations, including establishing a policy that seeks to reduce the deforestation footprint of the institution's financing portfolio and asking companies to disclose subsidiaries.

Challenge 2: Recognizing and addressing barriers to internal implementation

After establishing a policy, the next challenge is implementing it across portfolios and financial products. A number of barriers can inhibit the implementation of internal policy, including the isolation of ESG departments from lending and financing decision-makers, insufficient training of relationship managers and a lack of executive-level endorsement. A UNEP study on bank and investor risk policies on soft commodities found that, of the 30 financial institutions reviewed, only 10% met the criteria for internal policy implementation, considering factors such as governance, training and policy updates.³⁶

Lack of integration between ESG teams and relationship managers

Most financial institutions interviewed reported a lack of integration between the ESG or risk teams responsible for ESG or forestry policies and the teams directly responsible for lending and investment decisions. This separation links back to the challenge that few financial institutions consider deforestation to be a material financial risk. A lack of integration results in misaligned incentives by teams navigating between ESG performance and short-term financial performance, rather than a truly integrated assessment process. An asset manager explained that, for their institution, a clear distinction exists between the risk team responsible for ESG issues and the portfolio managers responsible for securing bankable investments. As a result, they found that the teams' incentive structures and performance targets were often opposed rather than linked to each other, causing conflicts of interest during the investment process. Regardless of how financial institutions organize the risk and ESG process, investment and lending teams need to share ownership of ESG issues and approach them in the same way they would wider risks.

The relationship managers or investment analysts are usually responsible for completing an ESG assessment during the initial lending or investment screening process. A client will be subjected to more in-depth scrutiny only if the relationship managers escalate the case as a cause for concern; such escalation usually comes from a sustainability team and, in some cases, is further accelerated to a review and approvals body, such as a reputational risk committee.

Employee awareness and training

Some financial institutions reported progress in raising employees' awareness of ESG issues including deforestation. Nevertheless, a widely reported challenge remains in ensuring that relevant employees, particularly relationship and investment managers, know when to flag an issue. Training on ESG policies is available for relationship or investment managers in some organizations, but should be more widely adopted. Expert Working Group members suggested the training itself needs to be clearer on, for example, the materiality and subsequent risk ratings applied to clients associated with forest risk commodities, and this links back to how robust the financial institutions' policy is on this.

Training financial services staff in some of the more technical aspects of forests and land use also presents challenges. Training therefore must be sufficiently clear and linked to the core activities of a financial institution rather than dwell on the more academic and scientific aspects. Financial institutions should also develop decision-support processes that enable clients and transactions to be screened against the key environmental and social criteria in the policy and, as with other risks, an ESG score should be given to each client. This score can then be used to escalate higher-risk transactions and monitor the portfolio over time. Given the complexity of some of the environmental and social issues involved, the environmental and social risk review is often best undertaken by specially-trained credit analysts rather than the relationship and investment managers themselves.

Internal governance

Internal policy implementation can be inhibited by structural challenges within the institution. These include:

- Standardizing implementation across international offices
- Accessing board-level approval through a long chain of command
- Obtaining buy-in from C-level executives

Financial institutions highlighted the significance of the "tone from the top" in the uptake and attitude towards embedding policies linked to deforestation. In the instance of one bank known for responsible lending and investment, the chief executive officer was a key advocate of sustainability, which facilitated internal implementation. Other financial institutions recognized the barrier of having to convince internal teams and leadership of the materiality of deforestation risk.

Recommendations for financial institutions

- Incorporate ESG risks, performance and key performance indicators into bonus structures and remuneration of C-level executives, business unit leaders in key functions involved in forest risk sectors, relationship and investment managers, and other appropriate support functions, such as risk personnel.
- Promote long-term investment horizons and mainstream valuation of public goods and natural capital, where applicable, based on future potential impacts on private capital.
- Educate and train relationship managers, investment managers, risk managers and other supporting functions (e.g. audit, compliance, legal) on ESG issues and how to screen for them. Consider training credit analysts at a more technical level to ensure robust and consistent assessment and integration into wider risk management processes. Ensure relationship managers and investment managers are comfortable with and capable of talking to clients about issues such as forest risk commodities.

Recommendation for stakeholders

- For shareholders of banks: push for specific board-nominated oversight on ESG issues, including deforestation where appropriate. This could be done by appointing a subcommittee of the board, such as a risk or sustainability committee, or by placing the responsibility with the chief risk officer or chief investment officer.

Challenge 3: Dealing with non-compliance and incentivizing leaders

A vital part of implementing policy is dealing with non-compliance. The financial institutions interviewed discussed the difficulty of choosing the most appropriate approach for addressing policy non-compliance with client companies. Some financial institutions, for example, are reluctant to draw clear deadlines for compliance and divestment. In fact, only 62 of the 98 commodity policies identified in the Forest 500 analysis set a deadline for compliance.³⁷ Financial institutions can be reluctant to communicate publicly the cut-off date for clients to meet their policy because, among other reasons, they fear institutions without policies will take advantage of this opportunity to poach clients. A number of financial institutions, however, express the benefits of a cut-off date for incentivizing action among client companies and for accelerating progress.

Financial institutions are also reluctant to communicate these procedures publicly or to clients. Of the 46 financial institutions in the Forest 500 with at least one commodity policy, only 29 declared publicly how they dealt with non-compliance.

Drawing on different approaches for leaders and laggards

Financial institutions often juggle the need to be firm on minimum standards for client companies that are borderline on compliance with the chance to offer support to close gaps. In addition, institutions want to reward or incentivize clients who are leaders to continue to improve practices.

Recommendations for financial institutions

- Define and disclose clear procedures for managing non-compliance and the consequences of non-compliance for clients:
 - Financial institutions should develop non-compliant client procedures. These should cover actions to be taken and key decisions and decision-makers across the organization, as well as the associated timelines. They should also consider the risks of lending to or investing in any company involved in illegal forestry as part of a wider anti-money laundering policy and process.
 - Financial institutions should publicly disclose their non-compliant supplier procedures to enhance policy credibility and enforceability.
 - Financial institutions should establish clear compliance deadlines for client companies and measure their progress against them. The lead-up to the deadline should have time-bound targets.
 - Banks should consider including appropriate covenants and events of default in lending agreements; investors should engage and then divest for non-compliance. Banks can work with other stakeholders and peers to establish a standard set of covenants to be included uniformly in lending agreements.
- Partner with client companies to improve their standards and practices. Partnerships can be selectively offered to companies with performance gaps who are willing to move towards compliance. For leaders, institutions can explore offering differential prices/interest rates linked to client companies' sustainability performance. Financial institutions should also vary their approach to compliance depending on the position of clients in the supply chain. Upstream and downstream companies should have different requirements due to the change in inherent levels of risk associated with project finance at a plantation level, as opposed to trade finance, for example.

Case study: Rabobank partnering with clients

Rabobank, which provides financial services to producers, processors, traders, manufacturers and retailers, is active throughout the palm oil supply chain. It partners with clients in meeting their sustainability ambitions and gives priority to sustainability leaders. For example, Rabobank prioritizes the use of RSPO NEXT,³⁸ a voluntary add-on to RSPO's Principles and Criteria for sustainably grown palm oil, in financing.

Rabobank's palm oil vision supports transitions towards sustainable production by providing:³⁹

- Access to finance solutions for smallholders in the clients' supply base
- Access to capital at attractive conditions through impact loans, development funds, green loans and green bonds
- Sustainable shipment letters of credit
- Prioritized project finance for sustainable innovations, such as wastewater digesters and other renewable energy generation

3. Monitoring

Robust policies, including non-compliance procedures, are an important building block for addressing deforestation risks. For these to be effective, however, financial institutions need systems to monitor client compliance (or lack thereof). Many financial institutions rely on external providers for their monitoring, be it certification schemes or ESG data providers. Reliance on external providers can make monitoring challenging.

Challenge 1: Relying on certification to verify compliance

Certification has provided the standardization that is crucial to mainstreaming sustainable practices in the soft commodities sector, creating the market scale and comparability required for banks and asset managers. A number of financial institutions rely on certification schemes to verify client compliance. For the financing of palm oil, for example, a number of institutions require clients to be members of the RSPO as a pre-screening prerequisite. For much of the last decade, outsourcing the assessment of compliance to certification schemes has provided financial institutions with a relatively easy mechanism to guarantee supplier performance that is not resource- or time-intensive. Financial institutions are in a similar predicament to retailers; the latter also have a broad portfolio or product list linked to a vast range of soft commodities, and champion the simplified assurance that certification provides to stakeholders at the end of highly complex, protracted supply chains.

Certification has also made oversight straightforward for employees who are not experts in forestry yet are responsible for implementing policies. Relying on certification, however, is clearly not enough to assure institutions that their portfolios are deforestation free. This is due to three main issues:

- 1) *A lack of uptake of certification schemes across soft commodity producers means financial institutions are restricted in their financing choices.*
 - The RSPO has the widest uptake of soft commodity certification schemes, with approximately 18% of global palm oil currently certified.⁴⁰
 - Only 1-2% of global soy production is certified responsible under the Roundtable on Responsible Soy.⁴¹
 - 9.1% of the world's forested areas comply with the Forest Stewardship Council (FSC) and/or the Programme for the Endorsement of Forest Certification.⁴²

A number of factors have been cited for the lack of uptake of certification schemes within the global market, including a lack of demand for certified products as well as the high costs of certification. For some schemes, cut-off dates for ending forest conversion, sometimes several decades in the past, also prohibit companies that ceased conversion after

those dates from ever being certified. Expert Working Group members noted that ever increasing demands for higher standards from a number of certification schemes mean that uptake has slowed, particularly with the lack of premiums reaching producers. This slowing of uptake means the potential pool of clients for banks is restricted and not forecast to increase.

2) *Civil society is growing critical of certification schemes.*

Much of the credibility of certification schemes comes from multistakeholder endorsement, and particularly the endorsement of trusted civil society organizations and NGOs. In recent years, a number of high-profile civil society organizations have criticized certification schemes for their weak standards,⁴⁴ lack of enforcement of sanctions⁴⁵ and substandard assessments.⁴⁶ Most recently, Greenpeace International has selectively withdrawn support from the FSC, citing inconsistent application of FSC principles worldwide and a lack of transparency in the disclosure of sourcing areas.⁴⁷ The RSPO is already characterized by a disparity between the number of NGOs making up its members (less than 2% of its 3,080 members worldwide)⁴⁸ compared to the number of companies; some perceive this as a weakness in the standard.

In the last decade, financial institutions have repeatedly found that using membership of certification schemes as a minimum threshold for deploying finance to clients in the soft commodities industries is an inadequate safeguard against reputational damage. A number of large banks, including HSBC, BNP Paribas and Standard Chartered, as well as a range of Norwegian investors, have been criticized by international NGOs for their exposure to companies, often RSPO members, accused of deforestation.⁴⁹ Being a member of a certification scheme in itself clearly does not guarantee legality and sustainability; members also have to implement the principles and criteria of the scheme, including chain of custody certification, and be subject to an annual audit of compliance. These certificates and audits should be conditions required by financial institutions for providing finance and should serve as covenants in financing documents where possible.

3) *Supply chain companies are increasingly going beyond certification.*

Under growing pressure from NGOs to go beyond certification, many supply chain companies have established their own No Deforestation policies. These tailored approaches ask for additional elements not required under the RSPO and other certification schemes, notably the protection of peatlands and high carbon stock forest.⁵⁰ Implementing these policies across conventional (uncertified) supply chains has characteristically begun with “traceability” exercises, where companies map their supply chains back to their source to monitor performance and prioritize areas

for supplier engagement.⁵¹ Supply chain companies are also evolving their approach to include landscape/jurisdictional approaches⁵² in some key sourcing areas. Jurisdictional approaches have their origins in reducing emissions from deforestation and forest degradation (REDD+) and landscape approaches; they seek to align governments, businesses, NGOs and other stakeholders on shared goals of conservation, supply chain sustainability and green economic development. They require strong involvement at the political level where land-use decisions are made, and go beyond certification at a concession level to ensure regions or “jurisdictions” are sustainable.

Case study: Olam launches digitally enabled traceability tool for customers⁵³

Global agribusiness company Olam recently launched AtSource, a digital dashboard for Olam customers to review the traceability and sustainability of its suppliers. At its most basic level, it lists suppliers that comply with the Olam Supplier Code and allows users to understand their environmental impact through its Eco-Calculator, which displays climate change, water and land-use risks for each country. Based on clients’ sustainability priorities, the system helps them find weaknesses in the supply chain or farming operations.

Recommendations for financial institutions

- Set minimum standards for client companies by using the standards set by certification schemes and drawing on other multistakeholder guidance:
 - Financial institutions should work with NGOs, commodity producers and consumer goods companies and/or with broader initiatives, such as the Accountability Framework Initiative (AFI)⁵⁴ and the Collaboration for Forests and Agriculture (CFA).⁵⁵ They should agree on minimum standards for companies, drawing on certification schemes and guidance notes, such as those developed by the NGOs forming the AFI.
 - Further work will be needed to establish consensus on consistent standards that can be used across particular commodities and regions so that clients can be held to a uniform base standard, appropriate to the context in which they operate.
- Banks engaged in corporate and trade finance with mid- and upstream companies: encourage client companies to establish traceability targets for their supply chains and to monitor and regularly report the performance of their own and their suppliers’ no-deforestation performance. For banks financing downstream companies, e.g. small retailers, certification is a practical and likely sufficient assurance mechanism for implementing policy, given the associated lower level of direct risk. Where banks are financing producer clients directly via project finance, banks should engage in more in-depth company- and site-level due diligence and include appropriate covenants and other conditions in financing documents.

- Investors: actively engage with all investee companies in the supply chain, and require them to use certification schemes or other no-deforestation policies as well as to make such policies public, disclosing progress in implementation at least annually.
- Support initiatives aimed at evolving the use of certification in jurisdictional approaches. These initiatives are being tested in jurisdictions around the world, some of which include the aim to certify the jurisdiction as sustainable via one or more certification schemes (e.g. Sabah, Malaysia has a 10-year plan to achieve full jurisdictional RSPO certification).⁵⁶ To be successful, jurisdictional approaches require financial support and should be a key focus for impact investors, green bonds and other sources of green finance.
- Support the uptake of certification by requiring it as part of client on-boarding, annual credit or investment reviews and, where feasible, loan covenants or other documentation. It might also be possible to offer favourable financial terms, particularly if a correlation between environmental, social and credit risks can be demonstrated and better still accepted by financial regulators. Finally, financial institutions could require companies they lend to or invest in to put in place credible, time-bound certification schemes or to implement other no-deforestation policies, and to provide annual reports on progress (and have these independently verified where appropriate). This will enable financial institutions to support downstream companies in promoting certification.

Recommendations for stakeholders

- NGOs: document what leading companies are doing beyond certification (for example, implementing NDPE commitments, landscape/jurisdictional approaches) to help financial institutions understand good practice.
- Financial institutions: devise an information source that could collate the real-time findings of a network of trusted NGOs that identify and monitor companies linked to deforestation on a consistent basis.

Case study: Supporting the jurisdictional approach

Funds such as & Green⁵⁷ and the Amazon Fund⁵⁸ are already taking advantage of supporting jurisdictional approaches. With strict investment criteria, the &Green Fund only invests in regions that meet its jurisdictional eligibility criteria, where local authorities are committed to reducing deforestation and are actively taking steps to work with the private sector, communities and civil society to protect forest and peatlands. They provide purpose-built capital for the sustainable intensification of agricultural production systems and business models that reduce deforestation, use strong financial and environmental instruments and covenants, and leverage private-sector investment.

Challenge 2: Having limited access to ESG data and relying on external data providers when monitoring clients

To assess the compliance status of client companies, financial institutions require robust evidence of their performance. Many institutions have limited access to data on client company ESG performance and thus rely on external data providers. A number of financial institutions interviewed noted inconsistencies in the quality and depth of the underlying evidence provided by data providers, which form the basis of internal decision-making. Whether a red flag is raised to investors depends on data providers assigning appropriate weighting to ESG issues (including deforestation); however, providers often do not provide transparency in the way they assign these weightings. ESG data providers can supply up to 80 ESG indicators that go into a company assessment, of which only a small number relate to deforestation issues. As a result, even where company deforestation exposure is high, ESG data may not be sufficient for lenders and investors to assess and manage this risk. Data providers may also not provide the necessary type and depth of information for financial institutions to make informed decisions about next steps. A number of financial institutions interviewed stated they do not have confidence in ESG reviews from external data providers and would prefer not to make decisions based solely on them.

Recommendations for financial institutions

- Engage with data providers and credit rating agencies, and encourage the inclusion of natural capital and deforestation risk into ESG risk assessments.
- Financial institutions engaged in project finance: use existing proprietary and open-source tools to monitor deforestation risk among client companies (see “Open-source monitoring tools and platforms” below).

Recommendations for stakeholders

- Configure open-source tools so that financial institutions can buy a licence to download them, rather than having to upload portfolio data, thus protecting proprietary information and increasing uptake.
- Potentially adopt the recommendations for disclosure of the Task Force on Climate-related Financial Disclosures (TCFD) to help financial institutions adequately assess and price deforestation risks (see Box: The TCFD).
- Service providers: create tools for financial institutions engaged in trade finance and corporate finance further downstream that add additional decision-relevant information to current open-source platforms. Information systems that include deforestation monitoring at the asset level should be combined with data on corporate governance and ownership information; this would allow for detection and attribution that could be useful for decision-making in financial institutions.

Open-source monitoring tools and platforms

Open-source and proprietary geospatial data monitoring platforms using advanced sensors and satellite imagery are emerging in the market. They allow for near-real-time deforestation monitoring and are useful for financial institutions engaged in project finance that require detail about a site’s environmental conditions.

Global Canopy’s SCRIPT portfolio risk tool brings together multiple initiatives, such as Forest 500, CDP disclosures, the Zoological Society of London’s Sustainable Palm Oil Transparency Toolkit (SPOTT) and the RSPO Annual Communications of Progress data, to give companies an overall score for risk of association with deforestation.

<https://www.script.finance/tool/register>

The Zoological Society of London’s SPOTT platform assesses soft commodity producers and traders on the public disclosure of their policies, operations and commitments to ESG best practice.

<https://www.spott.org/>

World Resource Institute’s Global Forest Watch (GFW) initiative is an open-source online platform that monitors global forests using satellite technology in near real time. GFW partners include Google; USAID; the University of Maryland, USA; Esri, a builder of mapping and spatial analytics software; and many other academic, non-profit, public and private organizations.

<https://www.globalforestwatch.org/>

Open Foris, a set of free and open-source software tools, includes Collect Earth, which enables data collection through Google Earth in conjunction with Bing Maps and Google Earth Engine. It allows users to analyse high- and very high-resolution satellite imagery.

<http://www.openforis.org/tools/collect-earth.html>

Starling, a collaboration between Airbus, The Forest Trust and SarVision, combines satellite and radar technology to enable large coverage and high-resolution capabilities for monitoring deforestation.

<http://www.starling-verification.com/>

Box: The TCFD – The role of good disclosure in managing risk

“The right information allows sceptics and evangelists alike to back their convictions with their capital.” – Mark Carney, Chair, G20 Financial Stability Board; Governor, Bank of England

Good disclosure of material strategic, business and financial effects – both risks and opportunities – is critical in enabling lenders, investors and insurers to correctly price risk and allocate capital efficiently. But when it comes to environmental and social issues, many are externalities, are contingent or are longer-term issues. As a result, risk is mispriced, and capital is misallocated.

The link between deforestation and climate change is well understood. Despite this, no market mechanism exists to correctly price the effects of deforestation in the production of goods that cause it, such as soft commodities. However, learnings from a Group of Twenty (G20)-initiated effort to improve corporate disclosure on climate change – the Financial Stability Board (FSB) Task Force on Climate-related Financial Disclosures (TCFD) – could be useful to help financial markets measure and respond to risks.

The TCFD seeks to address the problem of companies not adequately or consistently disclosing the financial implications of climate change to the financial services market. In June 2017, the TCFD put forward a set of voluntary recommendations for companies, including financial institutions, with listed debt or equity to improve their climate-related financial disclosures. With better corporate disclosure, financial institutions can use this information to inform their asset allocation and risk-pricing decisions, and in turn disclose climate-related impacts to the market, regulators and other beneficiaries. Over 250 companies have already signed up to support the TCFD recommendations, including over 180 financial institutions responsible for \$87 trillion of financial assets, or just over 40% of global financial assets.⁵⁹ Although voluntary at this stage, the TCFD recommendations are being strongly promoted by influential investors, and governments in some countries are considering what regulation might be needed to implement them.

For many soft commodity producers, climate change could present a material financial risk. This is due to their links to significant carbon emissions, primarily through land-use change (e.g. deforestation, soil tillage, conservation) and their vulnerability to physical risks (e.g. effects of extreme weather events on yields, changes in water availability). Both of these could lead, through regulatory or environmental change, to financial impacts, such as reduced revenues, increased costs and stranded assets.

Given the clear link between deforestation and climate change, the TCFD provides specific recommendations covering the forest, land and agricultural sectors. While the effects of climate change will directly impact the retail, food and agricultural sectors (e.g. soft commodity companies), these impacts may indirectly affect those providing finance. The materiality of these aggregate indirect impacts for financial institutions will depend on the type of institutions, where they have exposure (i.e. the client's position in the value chain and associated financial product) and the extent to which their portfolios are diversified against climate risks. Any financial impairments are likely to be felt first by equity holders through changes in share prices, and less so by lenders unless any impairment is significant. The effects are likely to be most material for mid- and upstream companies (e.g. soft commodity traders and integrated producers) rather than for downstream consumer goods companies and food retailers, which may be more able pass on cost increases to consumers and would therefore be less affected financially. Finally, portfolio diversification is likely to make these risks more manageable for a financial institution than for the producer or buyer in the supply chain, provided the financial institution can identify the risk – hence, the need for good disclosure.

The TCFD's recommended metrics for the agricultural sector include one specific to land-use change: “GHG Emissions/Land Use, Land use change (Scope 1): Changes of carbon stocks as a result of land use and land use changes (e.g., from the conversion of native habitats into farmlands)”.⁶⁰ Financiers could take this disclosure into account when assessing companies' track record and their potential investment risk.

Equally, consistent disclosure across commodity producers on the impact of a two-degree scenario on their supply and demand curves for certain commodities, based on changes in land availability, would allow financial institutions to compare companies and make informed investment decisions. However, disclosure against the TCFD recommendations alone will not provide sufficient assurance to financial institutions that their portfolios are deforestation free:

- The TCFD recommendations are climate focused. Other important aspects of the deforestation challenge include biodiversity, conservation value and community land rights. The recommendations are also tailored to reporting at the consolidated corporate level rather than at the operating company or specific asset or transaction level.
- Risk from deforestation in commodity supply chains comes primarily from undeveloped forest assets on companies' books. Therefore, metrics for GHG emissions resulting from historical land clearance are useful but limited in indicating the risk of future deforestation. They also fail to account for the risks resulting from climate policy changes on land use, which may reduce available concessions or even require reforestation. The latter, however, could be disclosed as part of the TCFD regulatory risk assessment, as and when implemented in a jurisdiction.

- Deforestation for soft commodity production originates from fragmented sources across complex multi-nodal supply chains; for example, deforestation is commonly attributed to both smallholders and medium-sized third-party suppliers to the larger producers and traders. Metrics for reporting on potential changes in GHG emissions via land-use change would therefore need to go beyond company-owned concessions and to quantify and aggregate risks across multiple actors.

The TCFD's recommendations therefore only tackle part of the deforestation issue – namely, climate change. Disclosure on the financial implications of a wider set of environmental and social impacts will be needed if financial institutions are to adequately assess and price the risks of deforestation. Establishing a consistent, comparable and efficient disclosure framework for deforestation risks more wholly would be beneficial. The SDGs, the reporting framework developed by the United Nations Global Compact, and the Global Reporting Initiative could be helpful to build on in this respect.

4. A diverse market response

Individual financial institutions can act on deforestation, implement and execute policies, and find innovative ways to measure compliance. This will only address part of the problem, however, as soft commodity supply chains are inherently complex with a wide range of entities involved at different stages, from farmgate to supermarket. In addition, financial institutions finance different entities within the chain. Impact can be made at scale only when every entity exerts its influence on the deforestation challenge to its full potential.

Challenge 1: Dealing with an inconsistent approach across financial institutions in the supply chain

Such an approach could result in banks from each tier financing different parts of the market with diverging practices and standards. The Forest 500 shows that financial institutions are at very different levels of ambition when it comes to soft commodities. Of the global banks assessed by the Forest 500, 50% have at least one soft commodity policy, while 33% of the regional banks included have such a policy. European banks have the most holistic policies, with one in five having committed to either zero net or reduced deforestation across the commodities. Members of the Expert Working Group pointed out that while some banks set increasingly tight standards, others do not have policies and often take up the clients that the other banks decline to finance.

Taking a closer look, however, shows that some banks in developing economies are also integrating forest risk (and wider environmental and social risk) policies into their businesses. A number of Indonesian banks have statements on sustainable lending,⁶¹ and Banco do Brasil and Bancolombia are signatories to the Equator Principles and the United Nations Global Compact. In addition, as the Forest 500 shows, a number of North American banks are lagging behind the leading European banks, with none having committed to either zero net or reduced deforestation.

Overall, the challenge remains that with thousands of commercial banks in the world, only a handful actively engage on deforestation. While some financial institutions are set to make the supply chain deforestation free, others do not see this as a priority. A situation could develop where parallel markets for “deforestation-free” and “no questions asked” emerge for soft commodity production. This has already occurred among supply chain firms themselves, with some responsible downstream companies (including Danone⁶² and Ferrero⁶³) opting to purchase their low palm

oil volumes from only RSPO-certified, segregated sources. This material comes from a small niche of suppliers who can provide the product at a premium, and delinks the buyers’ supply chains from the wider challenges facing the industry.

It is important to understand why some financial institutions are more reluctant than others to implement stringent policies, or sometimes any policies at all. Interviews with Expert Working Group participants shed light on some of the reasons:

- Some smaller banks might be reluctant to implement policies that could lose them business, particularly where no shareholders, NGOs or other stakeholders pressure them to do so. For these banks, losing business becomes material more quickly than for other banks given the relative size of their portfolios. They might also be relatively more exposed to family-owned conglomerates and small and medium-sized companies which themselves do not face the same investor pressures on environmental and social issues.
- Data availability is much more limited for small and medium-sized enterprises, which smaller or regional banks are mostly financing, than for multinational companies, making it harder for these banks to conduct certain checks.
- A number of financial institutions from developing countries highlighted that regional banks are more mindful of nuances on certain sustainability issues than global banks might be. Smallholders that practise slash-and-burn agriculture, for example, might not have another way to maintain their livelihoods, so withholding finance has economic and social effects. Similarly, the soft commodity industries, particularly palm oil and soy, have an important role in the economies of a number of countries where economic development is prioritized over environmental and social issues.
- Some countries lack incentives and regulation to encourage banks and investors to improve their policies.
- Many banks and investors may be interested in moving forward on soft commodities but might not have the capacity or skills for implementation. In these cases, development banks have a crucial role in funding capacity building.

The effect of these limitations could be simplified as:

- Companies involved in deforestation seek out financial institutions that do not scrutinize their operations in the same way that leading financial institutions do.
- Financial institutions that are leaders on zero deforestation may lose clients and end up competing for a small pool of companies that have subscribed to deforestation-free supply chains.

These effects, taken together, could mean deforestation increases as the scrutiny of leading financial institutions is focused on a small select number of players, while the institutions' bargaining power with companies involved in deforestation is greatly reduced due to divestment. This links back to the need for financial institutions to engage with client companies to improve their standards and practices before divesting, as recommended in the section "Robust policies and good practices". Similarly, supply chain companies should work with producers or companies downstream before withdrawing.

Recommendations for financial institutions

- Facilitate peer-to-peer learning between different banks and investors involved at all points in the supply chain, bringing them together to encourage dialogue and shared understanding. The BEI, for example, could facilitate this.
- Work with regulators to help them implement stringent ESG regulations.
- Carefully consider at what point to completely disengage from a company, striking a balance between enforcing policies and supporting companies to avoid that companies turn to financial institutions with lax or no policies.
- Work with banks and investors with strong policies on their lending practices with other financial institutions where capacity building might be needed, specifically collaborating to agree on a common approach to ESG standards and policies in their practices.
- Ensure the banks and investors with policies engage with downstream companies throughout their supply chains.

Case study: Norges Bank Investment Management's company dialogues

In its annual report on responsible investment,⁶⁴ Norge Bank Investment Management lays out how the fund routinely raises ESG issues at meetings with companies in which it invests. In addition, in 2017, the investor initiated two dialogues on deforestation: one with commodity traders and meatpacking companies on improving standards in their supply chain beyond the Brazilian Amazon, and the other with Indonesian and Malaysian banks on their policies governing palm oil financing.

Recommendations for stakeholders

- Shareholders: engage with banks – those that do not currently have forest risk policies or are not implementing them – to encourage ESG integration and disclosure.
- Financial regulators around the globe: implement strong regulations regarding ESG integration, recognizing it as a financial risk and requiring financial institutions to disclose progress in policy implementation. In Brazil, for example, the Central Bank has introduced regulation that all banks have to follow,⁶⁵ and in Indonesia, the banking regulator Otoritas Jasa Keuangan has issued regulation for a Roadmap for Sustainable Finance, requiring all banks to have a sustainable finance action plan. Similar regulatory or voluntary initiatives are found in other countries, such as China, Nigeria and Ghana.
- Country governments and local NGOs: influence regulators to establish strong regulations and help countries fulfil their NDC ambitions.

Case study: Singapore's Transboundary Haze Pollution Act⁶⁶

In 2014, Singapore passed the Transboundary Haze Pollution Act, which allows entities causing haze pollution in Singapore to be taken to court, regardless whether they are based in Singapore. As the origin of the haze is ordinarily peat being burned in Indonesia, the Act directly targets companies involved in the burning of peatland, which is often used to clear land for palm oil plantations.

Challenge 2: Influencing the deforestation agenda when entities lack leverage over supply chains and banks have limited leverage over companies

No one entity has leverage over the entirety of soft commodity supply chains, and many banks have limited leverage over companies directly associated with deforestation. Soft commodity supply chains are very complex, with different entities asserting influence at different points in the chain (see Figure 2). Some work with large consumer goods companies, while others work more closely with producers, traders and refiners. Other financial institutions, such as asset managers, may be involved with family-run conglomerates trading in soft commodities. Across this network of financial institutions, each may have differing policies on forest risk, and many will have none. The risk, therefore, is that the fewest standards will prevail, particularly in a competitive financial market.

Financial institutions are not the only entities in this space. Consumer goods companies, traders, producers, and national and international NGOs all play a part in the chain. While all of them can influence some of the chain's other entities, none of them can influence all. This creates a challenge for those that try to positively influence the agenda on deforestation. As demonstrated in the past, however, buyers typically have the greatest influence over their supply chains, and not the entities financing them. Investors also have influence, although this is harder in partially listed groups and absent in family-controlled or privately held companies.

As an example, large consumer goods companies significantly influence their supply chains and use this influence when pledging that their supply chains will be deforestation free. These companies point out, however, that they do not control significant parts of the supply chains (Unilever, for example, only sources 3% of the world's palm oil). This again points to the need for such companies to collaborate on no-deforestation requirements of their suppliers.

Recommendation for financial institutions

- Leading financial institutions: work together to implement strong policies that apply across their client portfolios.

Recommendations for stakeholders

- NGOs from different countries: work together to raise consumer awareness. For example, a German NGO could team up with an Indonesian NGO to highlight how the different entities in the supply chain are linked to deforestation, and to raise awareness with the public in both the producer and the consumer countries. Equally, BankTrack, an international tracking and campaigning organization that also supports civil society organizations, could work with Transformasi untuk Keadilan, an NGO in Indonesia, to transfer knowledge, skills and tactics. Regional NGOs could choose topics that affect their countries' constituents more immediately than the felling of trees, such as the Indonesian haze affecting large parts of Southeast Asia nearly every year.
- Consumer goods companies: require their banks to be leaders in this field and to adopt and implement policies consistent with their own; lenders are, after all, suppliers to these companies and should be subject to the same supplier codes.
- As this is a systemic problem that needs systems change, use a forum, such as the TFA 2020, to bring all these entities together – banks and investors, national and international NGOs, consumer goods companies and interested traders and producers. These entities should work together to bring about ambitious change throughout the supply chain.

Conclusion

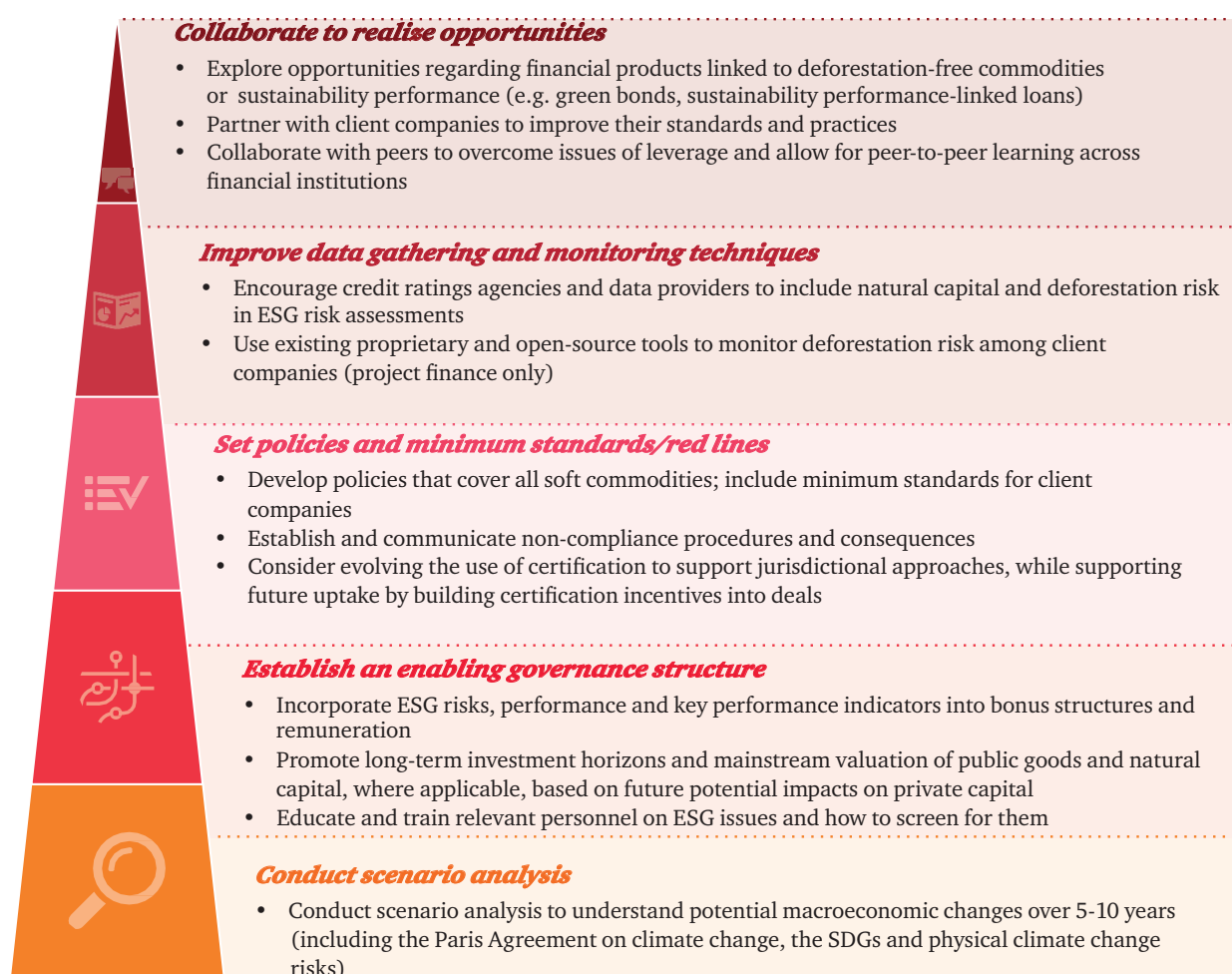
A compelling need exists for financial institutions to strengthen the business case on forest risk commodities, to use it to drive robust policies and to support client companies' supply chain traceability efforts. Moreover, there is a demand for all entities involved with soft commodity supply chains to provide the enabling environment for these actions. This includes NGOs helping financial institutions to understand good practice, service providers improving access to financing decision-relevant information, and regulators introducing stronger regulations.

A robust, collaborative effort could lead to a rapid decrease in deforestation – both legal and illegal – as non-compliant companies and projects would quickly find it impossible to raise finance or find customers. Equally, financial institutions lending to non-compliant companies would find themselves excluded by other finance and corporate entities.

To make such a collaborative effort possible, financial institutions need to have access to information systems that connect and aggregate currently fragmented information sources about deforestation performance from multiple nodes of the supply chain. This information should be made available for decisions taken by financial institutions, companies and other stakeholders. Governments and regulators could reinforce these efforts as part of their commitment to SDG 15, as well as their commitments under the Paris Agreement to reduce GHG emissions. Finally, the TFA 2020 Financial Institutions Expert Working Group, established to inform this White Paper, could be extended and expanded to provide an ongoing platform for institutions to continue working together in this respect.

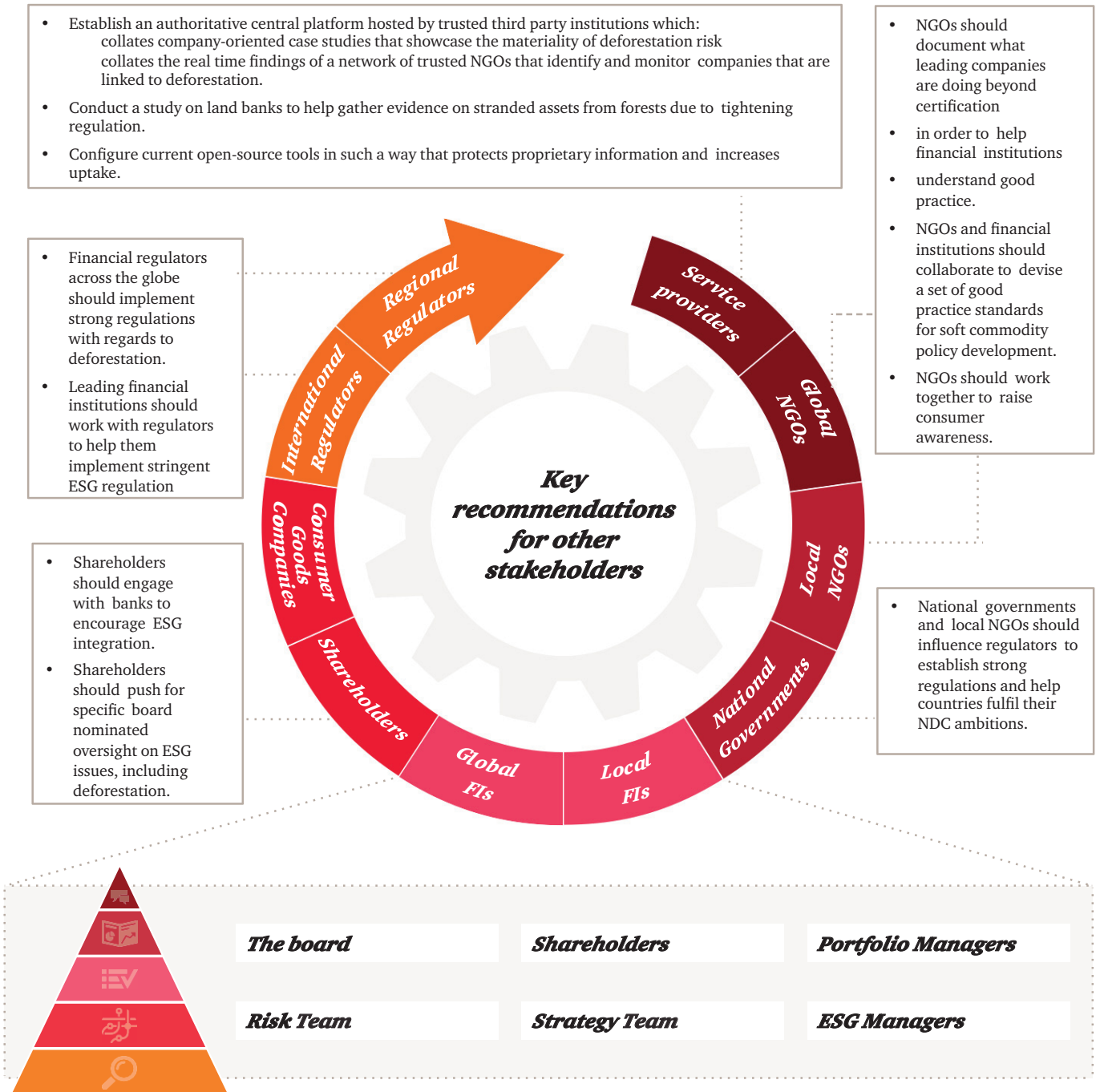
The key recommendations that financial institutions should implement internally, as well as the recommendations for other stakeholders in the soft commodity value chain with influence on the supply chain, are summarized in Figures 3 and 4, respectively.

Figure 3: Key recommendations for financial institutions



Source: PwC

Figure 4: Key recommendations for other stakeholders



Note: FI = financial institution
Source: PwC

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Endnotes

1. Rogerson, S. Achieving 2020: how can the private sector meet global goals of eliminating commodity-driven deforestation? Forest 500 Annual Report 2017, Global Canopy, 2017, https://forest500.org/sites/default/files/related-documents/f500-annual-web_1.pdf.
2. “Indonesia president approves two-year extension of forest moratorium”, Reuters, 24 May 2017, <https://www.reuters.com/article/us-indonesia-environment-forests/indonesia-president-approves-two-year-extension-of-forest-moratorium-idUSKBN18K0CV>.
3. Van der Werf, G.R., et al. “CO2 emissions from forest loss”, *Nature Geoscience*, 2, 1 November 2009, pp. 737-738, <https://www.nature.com/articles/ngeo671>.
4. United Nations Climate Change. Forests as Key Climate Solution [External Statement], 30 November 2015, <https://unfccc.int/news/forests-as-key-climate-solution>.
5. “Global Forest Resources Assessments”, Food and Agriculture Organization of the United Nations, <http://www.fao.org/forest-resources-assessment/en/>.
6. Lawson, S. Consumer Goods and Deforestation: An Analysis of the Extent and Nature of Illegality in Forest Conversion for Agriculture and Timber Plantations, Forest Trends Report Series, Forest Trade and Finance, September 2014, <https://www.forest-trends.org/publications/consumer-goods-and-deforestation/>.
7. Weisse, M. and L. Goldman. “Global Tree Cover Loss Rose 51% in 2016”, Global Forest Watch, 18 October 2017, <http://blog.globalforestwatch.org/data/global-tree-cover-loss-rose-51-percent-in-2016.html>.
8. CDP. From risk to revenue: The investment opportunity in addressing corporate deforestation, November 2017, <https://b8f65cb373b1b7b15feb-c70d8ead6ced550b4d987d7c03fcdd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/002/860/original/CDP-2017-forests-report.pdf>.
9. Ibid.
10. Rogerson, S., op. cit.
11. The Consumer Goods Forum, on behalf of its 400 members, committed to achieve zero net deforestation by 2020. Similarly, signatories to the New York Declaration on Forests committed to eliminate deforestation from the production of agricultural commodities by 2020. See Bregman, T.P., K. McCoy, R. Servent and C. MacFarquhar. Turning collective commitment into action: Assessing progress by Consumer Goods Forum members towards achieving deforestation-free supply chains, Global Canopy Programme and CDP, UK, 2016, <https://forest500.org/analysis/insights/progress-cgf-members-zero-deforestation-commitment>; Climate Summit 2014. Forests: Action Statements and Action Plans, 23 September 2014, <https://www.un.org/climatechange/summit/wp-content/uploads/sites/2/2014/07/New-York-Declaration-on-Forest-%E2%80%93Action-Statement-and-Action-Plan.pdf>.
12. Rogerson, S., op. cit.
13. Global Canopy and CDP. Financial Institution Guidance: Soft Commodity Company Strategy, 14 December 2017, <https://globalcanopy.org/publications/financial-institution-guidance-soft-commodity-company-strategy>.
14. UNEP Finance Initiative. Natural Capital Coalition: Natural Capital Protocol framework, 2016, <http://www.unepfi.org/publications/ecosystems-publications/ncafa-publications/natural-capital-protocol-finance-sector-supplement/>.
15. CDP. From risk to revenue: The investment opportunity in addressing corporate deforestation, November 2017, <https://www.cdp.net/en/research/global-reports/global-forests-report-2017>.
16. Global Canopy. Forest 500 project, 2018, <https://forest500.org/>.
17. “The Chain: IOI Corporation Commits To Improving its Supply Chain Risk Management”, Chain Reaction Research, 22 May 2017, <https://chainreactionresearch.com/2278-2/>.
18. Deutsche Gesellschaft für Internationale Zusammenarbeit. Sectoral implementation of nationally determined contributions (NDCs), May 2017, <https://www.transparency-partnership.net/sites/default/files/u2618/giz2017-en-ndcs-sectoral-implementation-forestry.pdf>.
19. Speranza, J., V. Romeiro and F. Feder. “Will Brazil Meet Its Climate Targets?”, World Resources Institute, 7 July 2017, <http://www.wri.org/blog/2017/07/will-brazil-meet-its-climate-targets>.
20. Republic of Indonesia. First Nationally Determined Contribution – Republic of Indonesia, November 2016, http://www4.unfccc.int/ndcregistry/PublishedDocuments/Indonesia%20First/First%20NDC%20Indonesia_submitted%20to%20UNFCCC%20Set_November%20%202016.pdf.

21. “Indonesia president approves two-year extension of forest moratorium”, Reuters, 24 May 2017, <https://www.reuters.com/article/us-indonesia-environment-forests/indonesia-president-approves-two-year-extension-of-forest-moratorium-idUSKBN18K0CV>.
22. The Nature Conservancy. “Brazilian Amazon: The Forest Code”, <https://www.nature.org/ourinitiatives/regions/latinamerica/brazil/placesweprotect/brazils-forest-code.xml>.
23. Azevedo, A. A., et al. “Limits of Brazil’s Forest Code as a means to end illegal deforestation”, Proceedings of the National Academy of Sciences of the United States of America (PNAS), vol. 114, no. 29, 18 July 2017, <http://www.pnas.org/content/pnas/114/29/7653.full.pdf>.
24. “The Amsterdam Declaration in Support of a Fully Sustainable Palm Oil Supply Chain by 2020”, The Netherlands Ministry of Foreign Affairs, 7 December 2015, <https://www.euandgvc.nl/documents/publications/2015/december/7/declarations-palm-oil>.
25. Moyo, J. “France adopts new corporate ‘duty of care’ law”, Ethical Trading Initiative, 1 March 2017, <https://www.ethicaltrade.org/blog/france-adopts-new-corporate-duty-care-law>.
26. Littan, S. “Stranded assets: Balancing the books in light of climate change”, Thomson Reuters, 26 July 2017, <https://blogs.thomsonreuters.com/answeron/stranded-assets-accounting-climate-change/>.
27. Tropical Forest Alliance 2020. The Role of the Financial Sector in Deforestation-free Supply Chains, 2017, https://www.tfa2020.org/wp-content/uploads/2017/01/TFA2020_Framing_Paper_130117.pdf.
28. Climate Summit 2014, op. cit.
29. “Indonesian Palm Oil’s Stranded Assets: 10 Million Football Fields of Undevelopable Land”, Chain Reaction Research, February 2017, <https://chainreactionresearch.com/reports/indonesian-palm-oils-stranded-assets/>.
30. Lawrence, D. and K. Vandecar. “Effects of tropical deforestation on climate and agriculture”, Nature Climate Change, vol. 5, February 2015, <https://www.nature.com/articles/nclimate2430>.
31. “Wilmar and ING collaborate on sustainable loan”, ING, <https://www.ingwb.com/insights/news/2018/wilmar-and-ing-collaborate-on-sustainable-loan>.
32. United Nations Environment Programme (UNEP). Bank and Investor Risk Policies on Soft Commodities: A framework to evaluate deforestation and forest degradation risk in the agricultural value chain – Summary, 2015, <https://globalcanopy.org/sites/default/files/documents/resources/SOFT%20COMMODITIES%20SUMMARY%20AW%20WEB.pdf>.
33. “World-Check Risk Intelligence”, Thomson Reuters, 2018, http://risksolutions.thomsonreuters.com/world-check-global?utm_source=RiskPortal&utm_medium=PPC&utm_campaign=00010YR_RiskPPCLandingPages_Digital&utm_term=world%20check&elqCampaignId=998&gclid=CjwKCAjwu7LOBRBZEiwAQtfbGGb6a8GyZSoGB1u74wz0WGyqB_BNU_GfexgoCXSAhiYHZK9j3_XCXRoC7oEQAvD_BwE&ef_id=VTJ7bQAABNc8kF89:20170928172021:s.
34. See SCRIPT, “Guidance & Resources”, <https://www.script.finance/guidance-resources/>.
35. “An Interactive Platform for Analysing Your Soft Commodity Risk Exposure: How SCRIPT Works”, SCRIPT, <https://www.script.finance/>.
36. UNEP, op. cit.
37. This number includes both instances when financial institutions set compliance deadlines and instances when financial institutions required companies to make their own time-bound plans to comply with policy.
38. “RSPO NEXT”, RSPO, <https://rspo.org/certification/rspo-next>.
39. Rabobank. Make sustainable palm oil the norm. Our vision on a commodity supply chain, <https://www.rabobank.com/en/images/vision-on-commodity-palm-oil-digitaal-def-eng.pdf>.
40. Michail, N. “Amnesty report fallout: Another blow for RSPO?”, FoodNavigator.com, 30 November 2016, <https://www.foodnavigator.com/Article/2016/11/30/Amnesty-report-fallout-Another-blow-for-RSPO>.
41. Byrne, J. “Demand needed downstream for certified responsible soy: RTRS”, FeedNavigator.com, 7 December 2017, <https://www.feednavigator.com/Article/2017/12/07/Demand-needed-downstream-for-certified-responsible-soy-RTRS>.
42. Potts, J., et al. The State of Sustainability Initiatives Review 2014: Standards and the Green Economy, Chapter 10: Forestry Market, 2014, https://www.iisd.org/pdf/2014/ssi_2014_chapter_10.pdf.
43. Cameron, B. A Step Toward Supply Chain Sustainability: The Round Table on Responsible Soy in Brazil, 2005-2017, Innovations for Successful Societies, Princeton University, August 2017, https://successfulsocieties.princeton.edu/sites/successfulsocieties/files/BC_Certification_Brazil_Soy_Revised%209_15_2017.pdf.

44. Greenpeace International. Certifying Destruction: Why consumer companies need to go beyond the RSPO to stop forest destruction, September 2013, <https://www.greenpeace.org/archive-international/Global/international/publications/forests/2013/Indonesia/RSPO-Certifying-Destruction.pdf>.
45. Chow, E. "Palm oil's green body comes under fire from activists", 7 November 2016, <https://uk.reuters.com/article/us-palmoil-sustainable/palm-oils-green-body-comes-under-fire-from-activists-idUKKBN13213S>.
46. "RSPO slammed for delays tightening up certification procedures", Forest Peoples Programme, 10 April 2017, <https://www.forestpeoples.org/en/responsible-finance-palm-oil-rspo/news-article/2017/rspo-slammed-delays-tightening-certification>.
47. Greenpeace International. Greenpeace International to not renew FSC membership [Press release], 26 March 2018, <https://www.greenpeace.org/international/press-release/15589/greenpeace-international-to-not-renew-fsc-membership/>.
48. Chow, E., op. cit.
49. Aidenvironment. Nordic investments in banks financing Indonesian palm oil, May 2017, <http://d5i6is0eze552.cloudfront.net/documents/Publikasjoner/Andre-rapporter/Nordic-investments-in-banks-financing-Indonesian-palm-oil-ID-39688.pdf?mtime=20170529161746>; Greenpeace International. Dirty Bankers: How HSBC is financing forest destruction for palm oil, January 2017, https://www.greenpeace.org/archive-international/Global/international/publications/forests/2017/Greenpeace_DirtyBankers_final.pdf.
50. Riley, T. "Companies' 'zero deforestation' pledges: everything you need to know", The Guardian, 29 September 2017, <https://www.theguardian.com/sustainable-business/2017/sep/29/companies-zero-deforestation-pledges-agriculture-palm-oil-environment>.
51. "Traceability", Wilmar, 2018, <http://www.wilmar-international.com/sustainability/progress/traceability/>.
52. Wang, M. "A closer look at jurisdictional approaches", TFA 2020, TFA 2020 News, 7 March 2017, <https://www.tfa2020.org/en/closer-look-jurisdictional-approaches/>.
53. Koh, H. "Olam introduces new tool for more transparent supply chains", Eco-Business.com, 19 April 2018, <http://www.eco-business.com/news/olam-introduces-new-tool-for-more-transparent-supply-chains/>.
54. The AFI is a collaboration of environmental and social NGOs that work to develop common definitions, norms and good practices regarding companies' sustainability commitments. For more information, see The Accountability Framework (<https://accountability-framework.org/>).
55. The CFA was launched in 2016 by the National Wildlife Federation, The Nature Conservancy, WWF and the Gordon and Betty Moore Foundation. The collaboration aims to define standards and outline incentives for producing zero deforestation beef and soy in Latin America. For more information, see WWF, "Collaboration for Forests and Agriculture (CFA)", https://www.wwf.org.br/natureza_brasileira/reducao_de_impactos2/agricultura/agr_acoes_resultados/copy_of_colaboracao_para_florestas_e_agricultura_cfa__27062017_1949/.
56. TFA 2020. Supporting jurisdictional leadership in net zero deforestation through sustainable value chains: Opportunities for TFA 2020, April 2017, <https://www.tfa2020.org/wp-content/uploads/2017/04/TFA2020-Supporting-jurisdictional-leadership-in-net-zero-deforestation-Report.pdf>.
57. "&Green: investing in inclusive agriculture, protecting forests", &Green Fund, <http://www.andgreen.fund>.
58. "Amazon Fund", Amazon Fund, 2018, <http://www.amazonfund.gov.br>.
59. Cuff, M. "Climate risk disclosure could become mandatory, government hints", BusinessGreen, 22 February 2018, <https://www.businessgreen.com/bg/analysis/3027196/climate-risk-disclosure-mandatory-could-become-mandatory-for-firms-government-officials-hint>.
60. Task Force on Climate-related Financial Disclosures (TCFD). Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures, June 2017, p. 65, <https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-TCFD-Annex-062817.pdf>.
61. "WWF: ASEAN regional banks and investors behind on Environmental, Social and Governance standards", WWF, 13 May 2015, http://wwf.panda.org/wwf_news/?246790.
62. "Palm Oil Policy: Innovating for Deforestation-Free Palm Oil", Danone, November 2015, http://danone-danonecom-prod.s3.amazonaws.com/user_upload/danonetemplates_elementinv/Palm_Oil_Forest_Policy_031215_Final_Version_01.pdf.
63. "Only Sustainable Traceable Certified Palm Oil for Ferrero", Ferrero, 3 February 2015, <https://www.ferrero.com/group-news/ONLY-SUSTAINABLE-TRACEABLE-CERTIFIED-PALM-OIL-FOR-FERRERO>.
64. Norges Bank Investment Management. Responsible Investment: Government Pension Fund Global, 2017, <https://www.nbim.no/contentassets/67c692a171fa450ca6e3e1e3a7793311/responsible-investment-2017---government-pension-fund-global.pdf>.

65. Azevedo, et al., op. cit.
66. Republic of Singapore Government Gazette, Acts Supplement. Transboundary Haze Pollution Act 2014 (No. 24 of 2014), <https://sso.agc.gov.sg/Act/THPA2014>.



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