



SEEING THE FOREST FOR THE TREES

A PRACTICAL GUIDE FOR FINANCIAL INSTITUTIONS TO TAKE
ACTION AGAINST DEFORESTATION AND CONVERSION RISKS

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EXECUTIVE SUMMARY

The planet's ecosystems underpin our economic system, with estimates of over half of the world's GDP being moderately or highly dependent on nature and its services, and they are critical to our efforts to deliver on the target of limiting global warming to 1.5°C.¹ However, despite their clear importance, they are being destroyed at a rapidly accelerating rate: almost 50% of the world's habitable landⁱ has now been lost, with

half of this destruction taking place in the last 100 years.² Given the financial sector's integral role in underpinning the global economic system, financial institutions are highly exposed to the risks of ecosystem loss through their financing of and investments in companies. These risks can be summarized into three types:

PHYSICAL RISK

arises from the impacts of deforestation and ecosystem conversion leading to material destruction and resulting in direct economic and financial losses for businesses that depend on those natural assets and the ecosystem services they provide, and in turn the financial institutions that support or invest in them.

TRANSITION RISK

results from policy measures, litigation, changing consumer preferences, and technological developments that occur to combat the rate of deforestation and ecosystem conversion and its resulting impacts. Financial institution clients and investeesⁱⁱ not prepared for these changes are exposed to potential financial losses and valuation impacts.

SYSTEMIC RISK

refers to the larger-scale risk of the breakdown of an entire system. It is characterized by the combined effect of modest tipping points leading to large failures with cascading interactions of physical and transition risks.

There are five key steps for financial institutions to address these risks to their portfolios, which are summarized as follows:



UNDERSTAND MATERIAL RISKS

Before being able to take action effectively, a financial institution must develop a clear understanding of its risk profile. This involves first understanding which regions and sectors carry the highest risk, and then mapping current clients and investees against this set of regions and sectors to identify which have probable exposure to deforestation and conversion risks.

Given that financial institutions typically invest in and/or finance a large number of companies, for effective due diligence, monitoring and engagement, it is essential to then sort this list of clients and investees with probable risk into different levels of priority. This prioritization should consider two factors:

- 1. Degree of exposure, reflecting the scale of financing or investment and extent of connection between the client or investee and high-risk regions / sectors.**
- 2. Strength of mitigation response/client risk controls, reflecting the presence of a commitment/policy targeting deforestation and ecosystem conversion risks, and evidence that the client or investee is taking acting towards mitigating them.**

ⁱ Defined as all land that is not deserts, glaciers, rocky terrain and other barren land.

ⁱⁱ In this context, 'client' refers to any company (i.e. an organizational entity involved in the production, provision, trade or sale of goods and services) that procures any of the services of the financial institution, including but not limited to financing, trade solutions (e.g. facilitation of trade flows and transactions) and insurance solutions. 'Investee' refers to a company in which an investment has been made (e.g. through the purchase of equity).

DEVELOP AN EFFECTIVE DEFORESTATION AND CONVERSION FREE POLICY



Once a financial institution understands its risk exposure, the next step is to develop a policy that effectively targets these risks, satisfying three conditions:

1. Sufficient policy breadth, including important landscapes beyond forests with a high risk of both illegal and legal deforestation and conversion, the guarantee and reinforcement of internationally recognized human rights, and the inclusion of the full spectrum of the financial institution's business areas as well as the full range of its clients and investees.
2. A credible, effective target, with a clearly defined objective, a specified timeline and the inclusion of intermediate targets to effectively track progress towards the objective.
3. Guidance for clients and investees, setting clear expectations on 'what good looks like' in terms of developing their own policy/target and disclosing progress, in addition to supporting them to effectively implement the terms of this policy.

CONDUCT DUE DILIGENCE AND MONITOR PROGRESS



Incorporate deforestation, conversion and associated human rights factors into ongoing risk management and other decision-making processes, assessing both existing and potential clients on their deforestation and conversion risk profile and mitigation efforts.

Specific factors to consider include the presence and strength of policies at the client/investee level to mitigate deforestation, conversion and associated human rights risks; demonstration of supply chain traceability; and instances of deforestation, conversion or associated human rights violations occurring in a client or investee's operations.



ENGAGE CLIENTS AND INVESTEES

Active, early engagement is essential to support clients and investees in their journey to align their activities with the terms of the financial institution's deforestation and conversion free policy. It also sends a clear signal of intent that the financial institution is serious about implementing its policy, driving more voluntary adherence. An effective engagement strategy consists of two components:

1. **Identification of priority clients to engage:** When selecting clients and investees for priority engagement, consider their contribution to total risk in the portfolio, as identified in Step 1, in addition to those clients and investees deemed to have made insufficient progress towards the management of their risks and/or impact (e.g. lack of timely development of a policy, no reporting or evidence of deforestation, conversion and associated human rights abuses in their operations/supply chain).
2. **Use of best-practice engagement methods:** Develop an engagement process that incorporates best practices and, where possible, embed this into existing engagement opportunities and compliance processes as a complementary step. These best practices include:
 - a. **Early interaction with clients and investees that have been identified as a priority for engagement to flag potential barriers and opportunities where support should be provided.**
 - b. **Leveraging shareholder rights to raise resolutions focused on eliminating deforestation and conversion issues and exercising proxy voting rights to support such resolutions (in the case of asset managers/asset owners).**
 - c. **Encouraging the use of guidance that supports the identification and elimination of deforestation and conversion risks in supply chains. This includes guidance from the Accountability Framework, Science Based Targets Network (SBTN) and Science Based Targets Initiative Forest, Land and Agriculture Project (SBTi FLAG).**



REPORT TRANSPARENTLY

Frequent, transparent reporting both ensures recognition for the progress being made and generates pressure on other financial institutions to eliminate deforestation and conversion from their portfolios, reducing risks across the finance sector more broadly. Financial institutions should proactively report information on:

1. **Evidence of implementation of initiatives to reduce exposure. This should include insights into risk assessment processes, engagement efforts and specific instances of divestment.**
2. **Financial exposure to deforestation and conversion risks. Insights should be provided on how this exposure is changing over time and how it relates to the targets outlined in the financial institution's deforestation and conversion free policy. This year, the Taskforce on Nature-related Financial Disclosures (TNFD) will release a framework for organizations to report on and manage exposure to nature risks and opportunities. Financial institutions should track and support the progress of the TNFD to ensure they are well positioned to action this guidance once released.**

NATURE-POSITIVE FINANCE OPPORTUNITIES

Beyond simply eliminating risks, financial institutions are also well placed to direct capital *towards* nature-positive activities that protect and restore these key landscapes. The rapid growth in interest in sustainable finance investments in recent years presents an attractive commercial opportunity to profit from these instruments while delivering a positive environmental impact. Furthermore, the target 19 of the Kunming-Montreal Global Biodiversity Framework, emerging from the recent COP 15, refers to the increase of financial resources in order to mobilize 200 billion USD per year by 2030, for the implementation of national biodiversity strategies and action plans. This and the necessary alignment of the financial flows for the implementation of the Framework, represent relevant opportunities for green financial products.³

GREEN BONDS:



Fixed income instruments aimed at raising funds for projects that deliver environmental benefits. Market interest in such instruments is growing at pace with the annual issuance of green bonds topping \$500 billion in 2021.⁴



INNOVATIVE INSURANCE PRODUCTS:

Insurance offerings facilitating risk management to promote environmental sustainability. A growing application of this product is to the management of risk to enable sustainable agriculture practices and resilient land management.

SUSTAINABLE FUND INVESTMENTS:



Portfolios of equities and/or bonds for which environmental factors are core to the investment process. These funds are most effective when they have a specialized focus on a specific sector or outcome (e.g. sustainable food and regenerative agricultural practices) rather than broad mandates.



SUSTAINABILITY-LINKED LOANS:

Loan instruments that tie their conditions to the performance of the borrower against a set of predetermined sustainability objectives, applying higher risk premiums or lower interest rates based on performance against these objectives.



INTRODUCTION: CASE FOR ACTION FOR FINANCIAL INSTITUTIONS

Forests and other natural ecosystems provide services that are of fundamental importance to human well-being, from regulating our climate to maintaining biodiversity and supporting human health and livelihoods.⁵

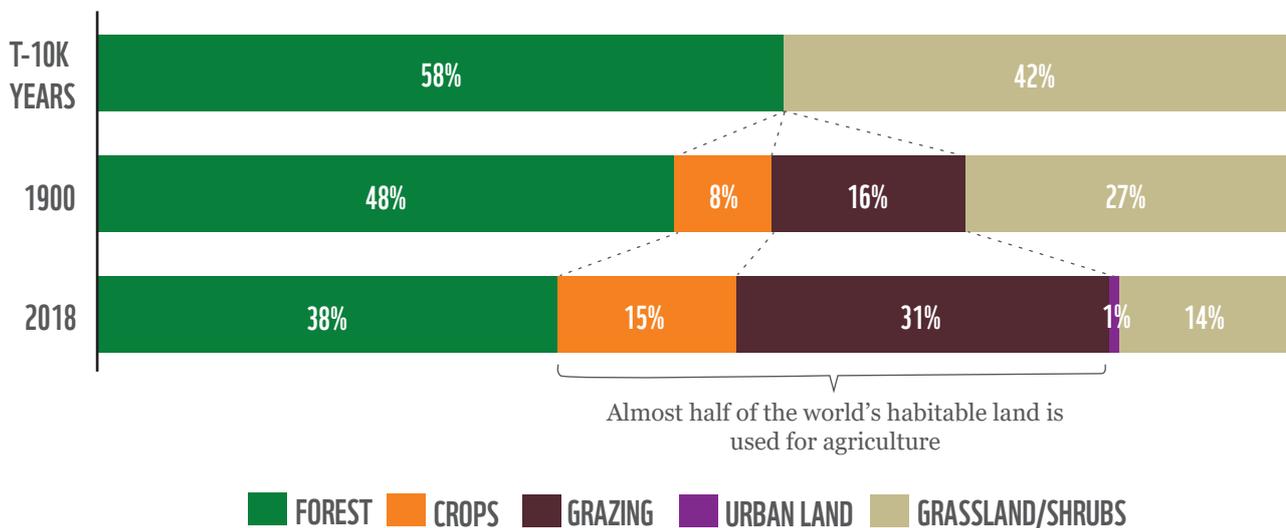
Considering this value in terms of mainstream economic indicators, it is estimated that over half of the world's GDP is moderately or highly dependent on nature.¹ Furthermore, conserving ecosystems is critical to our efforts to deliver on the target of limiting global warming to 1.5°C. Transforming the land sector and deploying measures in agriculture, forestry, wetlands and bioenergy could feasibly and sustainably contribute about 30% of the global mitigation needed in 2050 to deliver on the 1.5°C target.⁶

We must therefore seek to balance efforts to meet human needs with the need to preserve these ecosystems from degradation and destruction, living off the 'interest' they provide rather than the 'capital' itself.

As a key economic pillar, the financial services industry plays an integral role in all economic sectors. This not only puts it in a unique position to drive significant change, but it also means it is inherently exposed to the impacts of deforestation, ecosystem conversion and associated human rights risks.ⁱⁱⁱ However, current progress towards integrating these risks into decision-making is slow. In 2021, 81% of key financial institutions did not have deforestation commitments or policies across the commodities they are exposed to.⁷

As a result of inaction, forest degradation and ecosystem conversion is occurring at an alarming rate. In 2021, around 33% of the world's original stock of forests and ~68% of its grasslands and shrubs have been lost. Moreover, this rate of conversion is accelerating: over the last 100 years the world has lost as much of its forests and other wild ecosystems as it did in the previous 9,000 years.²

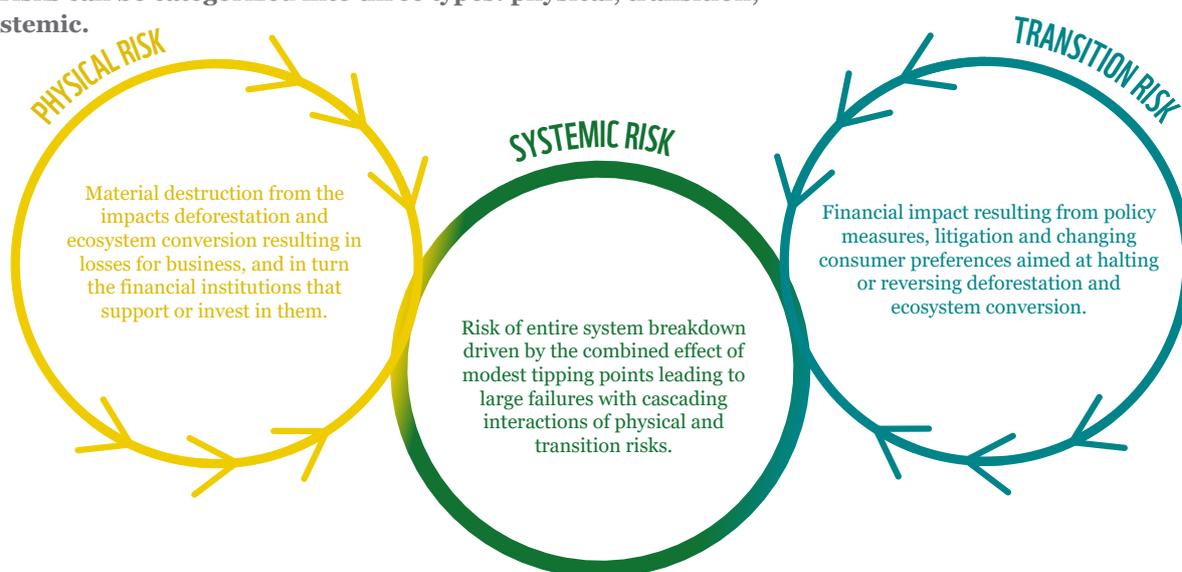
GLOBAL HABITABLE LAND USE OVER TIME, %



Source: Our World in Data, 2021

iii Ecosystem conversion is closely associated with land grabbing, conflict, violence and other adverse human rights impacts, particularly against indigenous peoples.

The rate of conversion of natural ecosystems and its resulting human rights implications poses substantial risks to the finance sector. These risks can be categorized into three types: physical, transition, and systemic.



Physical risks arise from the impacts of deforestation and ecosystem conversion leading to material destruction and resulting in direct economic and financial losses for businesses, and in turn for the financial institutions that

support or invest in them. These physical risks can be acute (event-driven) or chronic (cumulative over time), with chronic impacts depleting the resilience of an entire system and leading to a permanent loss of productivity.

CASE STUDY | PHYSICAL RISKS (ACUTE)

Impacts of 2004 South Asian tsunami

In Southeast Asia, a 28% reduction in mangrove forest cover between 1980-2002, converted to make way for commercial shrimp farming and tourist developments, contributed to a loss of natural protection against natural disasters.⁸

The economic impacts of this conversion were laid bare during the 2004 South Asian tsunami, which caused an estimated US\$10 billion of damage, impacting industries and raising loan default rates, directly affecting the financial institutions supporting these industries.⁹ The effects of the tsunami were disproportionately high in those areas where mangroves had been removed.

CASE STUDY | PHYSICAL RISKS (CHRONIC)

Deforestation reduces rainfall and agricultural revenues in the Brazilian Amazon

A report published in *Nature* evaluating the impact of forest loss on rainfall in the southern Brazilian Amazon found that forest loss beyond 25-30% across a large area (112km²) would result in a precipitous reduction in rainfall, impacting the agricultural productivity of the region.¹⁰

Under a weak governance scenario, it is estimated that the southern Brazilian Amazon may lose 56% of its forests by 2050. The study evaluated the commercial impact of this scenario on the agricultural industry, comparing the cost of foregone revenues from converting less forest to crop and pastureland to the impact of productivity losses, calculating a net present value impact of US\$181 billion resulting from this conversion.

This impact on profitability would have direct implications for the financial institutions supporting or investing in these companies, transmitting through depressed stock prices and increased delinquency rates. Moreover, there would likely be broader indirect impacts through dropping productivity, decreasing the competitiveness of the agricultural sector in the region.

The second risk, **transition risk**, arises from policy measures, litigation, changing consumer preferences, and technological developments that occur to combat the rate of deforestation and conversion and its resulting impacts. The UN Principles for Responsible Investment (PRI) contends that an 'Inevitable Policy Response' consisting of decisive and abrupt changes in policy will occur as the adverse effects of nature loss and climate change become increasingly apparent.¹¹ Businesses and industries not prepared will be exposed to (material) regulatory risks with important consequences for client and investee financial performance and valuation.

There are clear signals that governments are already taking significant steps to address the risks resulting from deforestation and conversion. One example is the European Deforestation Regulation (EUDR) recently agreed upon by the European Parliament and the Council requiring all importers of key forest risk commodities (including cattle, cocoa, coffee, palm-oil, soy, wood, rubber, charcoal and printed paper), as well as derivatives and products made from these commodities, to trace their supply chains to demonstrate that the commodity has been legally produced and was not grown on land that had been deforested after December 2020.¹² Furthermore, the Brazilian Central Bank has stated it will require all banks operating in the country to include climate change-related risks, such as droughts, floods and forest fires in their stress tests from July 2022,¹³ with the results having implications for the cost of loans to high-risk sectors. The Brazilian Central Bank also conducted a climate-risk assessment at the country level¹⁴. This is particularly significant for the agricultural and forestry sectors given

that the largest source of emissions is deforestation and land conversion,¹⁵ in contrast to other parts of the world where fossil fuels play a more significant role.

Finally, the implementation of the Kunming-Montreal Global Biodiversity Framework, not only points out the requirement to align public and private financial flows for its implementation, but, in its target 15, calls the ratified countries to "take legal, administrative or policy measures to encourage and enable business, companies and financial institutions: a) regularly monitor, assess and transparently disclose their risks, dependencies and impacts on biodiversity"³.

With developments in regulation and increased attention on the impacts of deforestation and conversion, transition risks are increasingly becoming realized through litigation. This is especially pertinent for this topic, as while the historic lack of transparency underpinning supply chains across the agricultural sector has left significant room for transgression, satellite and traceability technologies are rapidly improving and enabling the enforcement of these standards, policies and regulations.¹⁶ Moreover, human rights abuses in particular carry a significant litigation risk: the risks related to unsustainable supply chains are notably material given that two-thirds of the 740 million people living in poverty and 70% of the 250 million working children work in agriculture, a leading driver of deforestation and ecosystem conversion. This has a number of key financial consequences, the most common being significant fines, suspensions and stranded assets, with a knock-on effect on the financial institutions financing or investing in these organizations.

CASE STUDY | TRANSITION RISKS

Indonesian President prohibits conversion of land owned by soft commodity companies

In 2019, the Indonesian President Joko Widodo issued a permanent moratorium on new forest clearance for activities such as palm plantation and logging, covering an area of 66 million hectares.¹⁷

This presidential instruction mandates that ministers, governors and other officials cannot issue new permits within the moratorium area, impacting the performance of companies operating in this region.

CASE STUDY | TRANSITION RISKS

US bans palm oil imports from Sime Darby and FGV over human rights violations

In Q4 2020, the US Customs and Border Protection issued Withhold Release Orders on two Malaysian palm oil companies due to human rights violations.¹⁸ Allegations against the two companies include passport retention, unpaid overtime, issues with salary payments and other unethical employment practices.

Both companies have had to contend with a series of financial, business access and reputational impacts; for instance, key palm oil buyers have cut or reduced their exposure to these companies. Moreover, this follows on from the Roundtable on Sustainable Palm Oil (RSPO) in 2018 suspending one of FGV's plantations due to human rights issues. Its stock price subsequently fell by two-thirds over the course of the year.

While the risks discussed so far are typically local in nature and felt at the scale of a specific company or sector, the third

risk, **systemic risk**, has impacts at a greater scale, leading to the breakdown of an entire system rather than the failure of

individual parts. It is characterized by the combined effect of modest tipping points leading to large failures with cascading interactions of physical and transition risks. This can have significant consequences for entire sectors and regions that depend on the value these ecosystems provide.

Furthermore, due to the interconnectedness of systems, these effects can transmit more broadly through indirect channels; for example, droughts driven by deforestation in the Amazon could result in energy shortages that affect industrial enterprises or result in intensified food insecurity with impacts on human health and social outcomes.

CASE STUDY | SYSTEMIC RISK

Tipping point of the Amazon rainforest

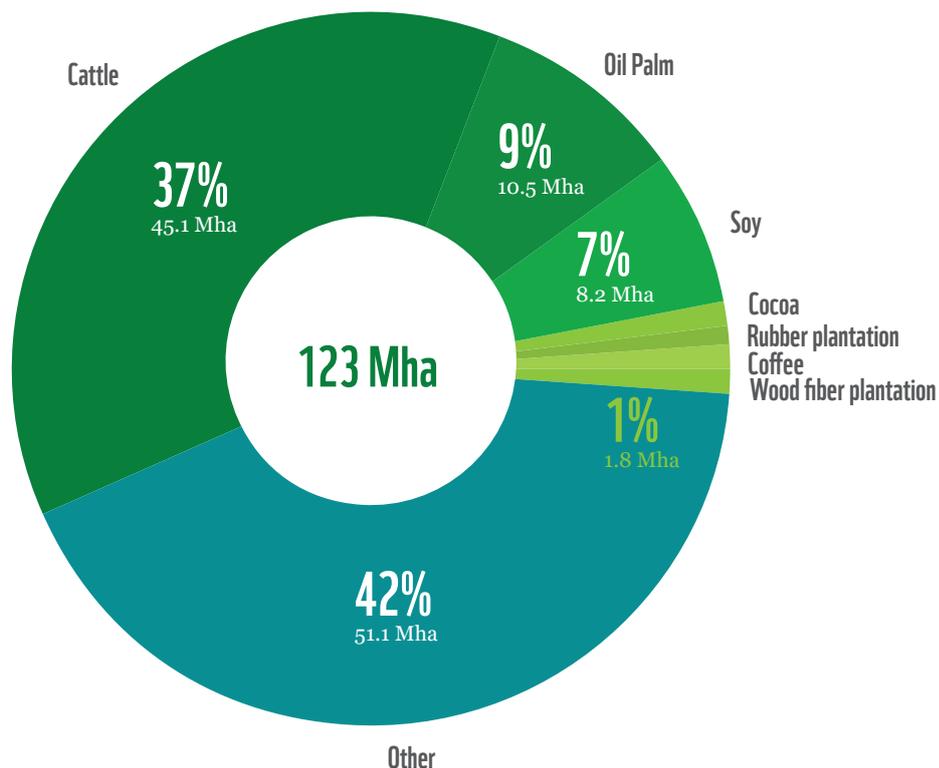
Over the past century, average temperatures in the Amazon rainforest have risen by 1-1.5°C, increasing the frequency of droughts, and large parts of it have been cut down and burnt, with a shrinking of the forest of 15% compared to the 1970s.¹⁹ Moisture is key to this system, with the forest playing a major part in its own survival by generating rainfall through the recycling of water from trees. If deforestation or drought clears too many trees, a negative feedback loop will commence with less vegetation leading to a reduction in rainfall and so on. Eventually this negative cycle is expected to transform the Amazon into an ecosystem more similar to a savannah (although with much less biodiversity).

This would not only result in stranded assets across the sectors depending on the Amazon, but it would also cause billions of tonnes of carbon dioxide to be released as trees are lost, increasing the systemic global impacts of climate change.

The largest driver of deforestation and conversion is agricultural production – that is, the conversion of ecosystems to make space for food and fuel crops and the clearing of land for livestock. Between 2001 and 2015, agricultural commodities contributed to 39% of global tree-cover loss, with three commodities accountable for over half of this impact – cattle, 37%; palm oil, 9%; and soy, 7%.²⁰ Moreover, the impact of these commodities is significantly greater when we consider their role in the conversion of other ecosystems beyond forests, particularly grasslands and savannahs, which represent 80% of the world’s agricultural

and livestock area.²¹ However, this rate of deforestation and ecosystem conversion is not necessary to feed our population. Our current agricultural system prioritizes short-term returns over long-term public goods such as soil quality, and has resulted in a quarter of all land globally now being classified as degraded (although a large proportion of this could be rehabilitated).²² Due to their outsized role in driving deforestation and conversion, this report will focus primarily on risks associated with soft commodities; however, the principles outlined are still relevant in the targeting of other drivers of deforestation.

AGRICULTURE-DRIVEN DEFORESTATION PER COMMODITY

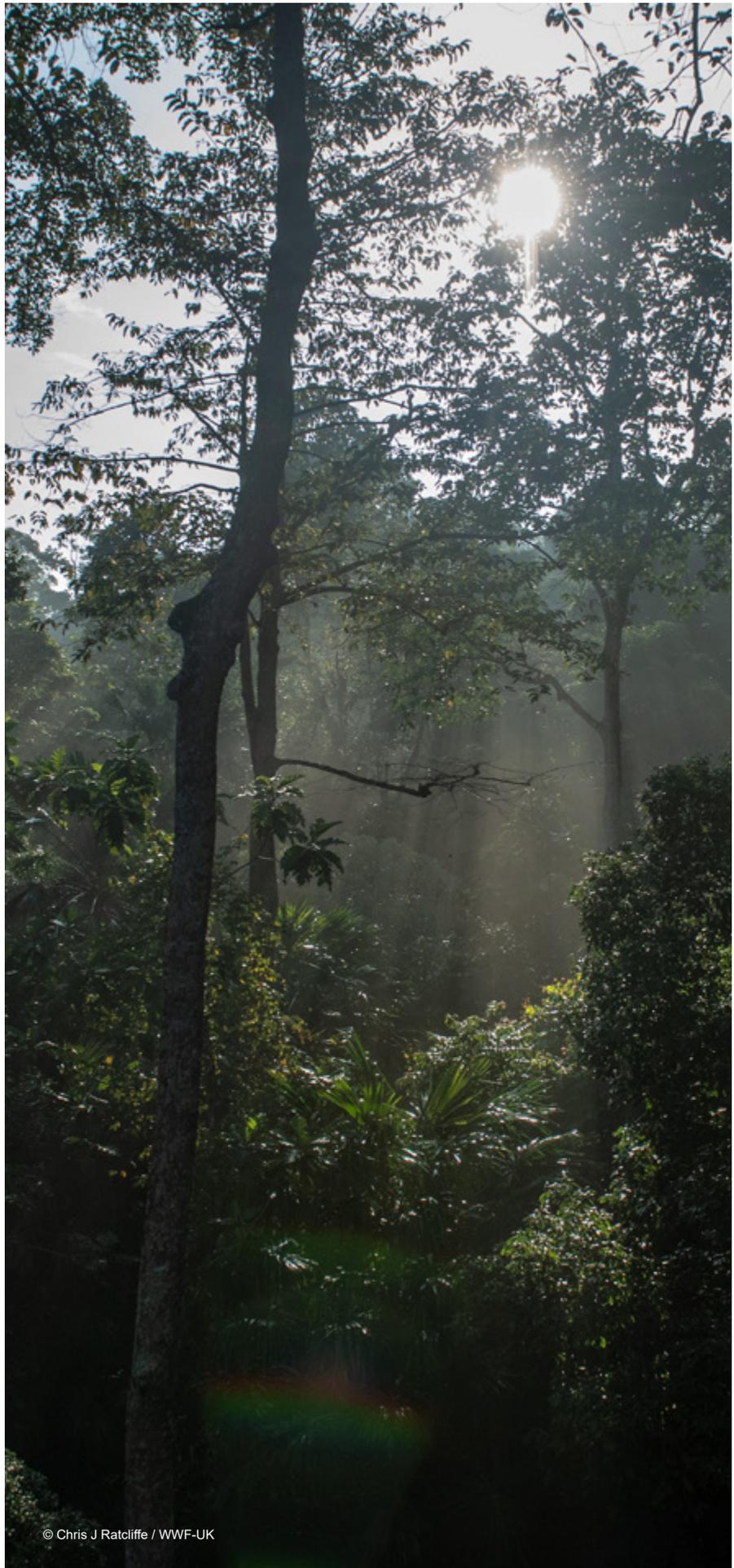


Source: 2001-2015, Goldman et al.

Furthermore, while the majority of focus on this topic is currently on tropical forests, other ecosystems – savannahs, grasslands and wetlands, among others – are being destroyed at an alarming rate. These ecosystems are crucial for biological diversity, carbon sequestration and food/freshwater security. For example, it is estimated that wetlands alone store twice as much carbon as all the world's forests, despite making up only 3% of the world's land area.²³ Moreover, for centuries the fertile soils of natural grasslands have led to their unchecked conversion for use in growing crops and creating pastureland, with these ecosystems currently representing up to 80% of the world's agriculturally productive land.²⁴ However, almost none of the commitments from corporations and financial institutions cover the full range of these ecosystems. This guidance therefore stresses the importance of including these wider ecosystems in the process of eliminating deforestation and ecosystem conversion risks from a financial institution's portfolio and references specific tools and frameworks that apply to ecosystems beyond forests.

Moreover, there is a growing momentum for financial institutions to make bold commitments both directly targeting the elimination of deforestation and conversion risks as well as targeting net zero emissions, for which action against deforestation and conversion exposure is critical.^{25,26} This guidance aims to support these financial institutions to achieve these commitments.

This report provides recommendations for how private financial institutions can eliminate deforestation, habitat conversion and associated human rights risks from their portfolios and outlines the specific nature-positive finance opportunities that fit most seamlessly into the landscape of current private financial institution offerings. These recommendations are closely aligned with those of the Accountability Framework, as well as the detailed step-by-step guidance outlined in the Global Canopy Deforestation-Free Finance Roadmap.^{27,28}

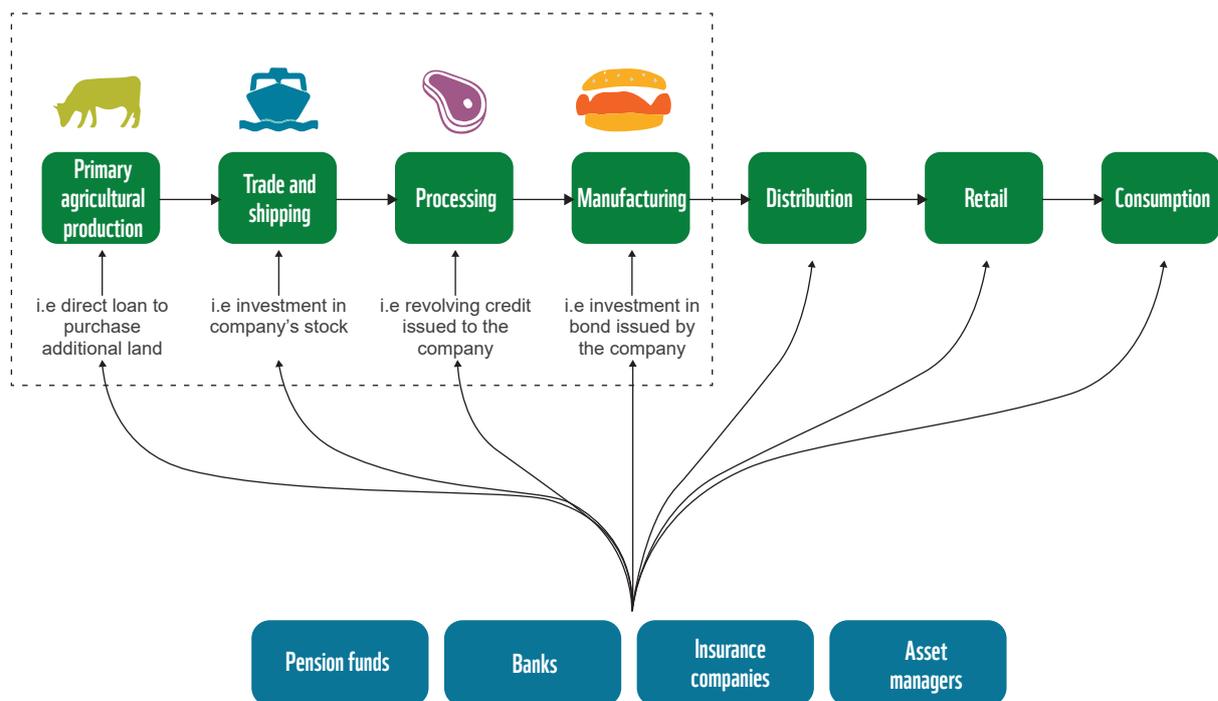


SWISS FINANCIAL INSTITUTIONS' EXPOSURE TO DEFORESTATION AND LAND CONVERSION

INTRODUCTION^{iv}

Swiss financial institutions such as banks, asset managers, pension funds and insurance companies are known to finance, invest in, own and/or insure companies which are directly involved in the production, trading, processing and manufacturing of soft commodities (e.g. soy, timber, palm oil and cattle). These commodities are responsible for driving deforestation and land conversion (see figure below).

According to a dataset of Forests & Finance, which estimates financing connected to forest-risk companies, Switzerland ranks 13th out of 69 countries in terms of total funding from Swiss financial institutions to such companies (2013-2022). With regard to financing for beef and palm oil, Swiss financial institutions even rank 7th and 10th^{29,v}.



Channels between financial institutions and companies driving deforestation

Switzerland has made international commitments to directly or indirectly halt deforestation and land conversion and align financial flows with related goals:

- **The Paris Agreement of 2015** is aimed at keeping the global temperature rise to well below 2 degrees Celsius and pursuing efforts to limit the temperature increase even further to 1.5 degrees Celsius. To achieve these goals, deforestation and land conversion must be halted. Article 2c of the Agreement also calls for financial flows to be made consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.

- **The Kunming-Montreal Global Biodiversity Framework of 2022** aims, among other things, to maintain, enhance and restore all ecosystems by 2050. The Framework also includes the target of aligning public and private financial flows with the global biodiversity goals (Target 14).^{3,vi}

Eliminating deforestation and land conversion from portfolios, financing and underwriting is a precondition for achieving these goals. The Swiss government and economy now face the challenge of honouring these commitments.

^{iv} This Chapter has been written in February 2023 before the takeover of Credit Suisse by UBS

^v Forests & Finance dataset (2021). [Accessed in April 2022] <https://forestsandfinance.org>

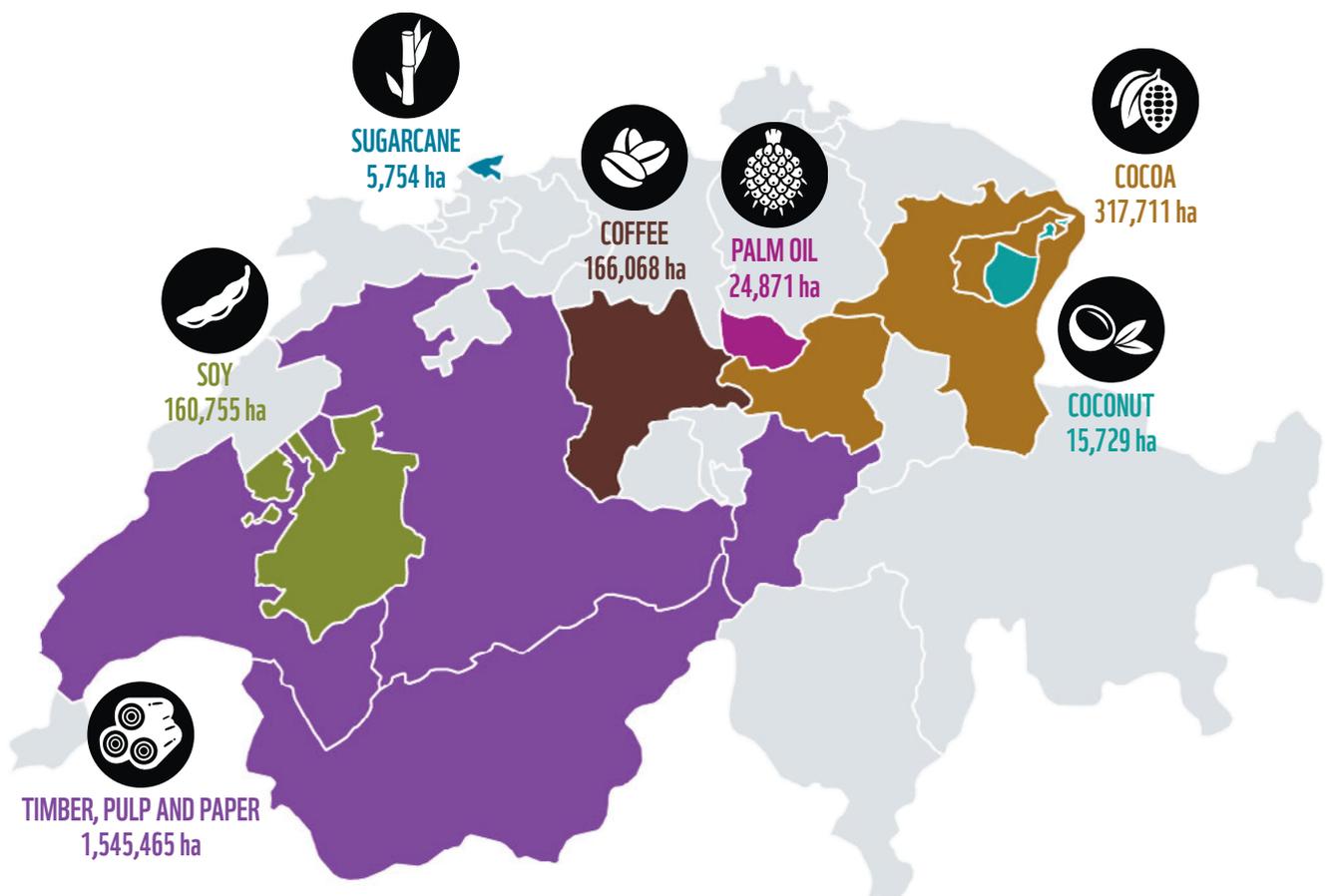
^{vi} Target 14: "Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments and, as appropriate, national accounting, within and across all levels of government and across all sectors, in particular those with significant impacts on biodiversity, progressively aligning all relevant public and private activities, fiscal and financial flows with the goals and targets of this framework."³

IMPORTED DEFORESTATION AND LAND CONVERSION AS PART OF THE SWISS ECONOMY AND FINANCIAL CENTRE

The report 'Imported Deforestation' (WWF, 2020)³⁰ shows that the Swiss economy needs the equivalent of 22,000 km² (more than half the size of Switzerland) of overseas land each year to produce the imported palm oil, soy, timber, pulp and paper, cacao, coffee, sugar cane and coconut that it consumes (see figure below). To fully comprehend the burden put on land and forests by Swiss consumption, we would need to add the land necessary to produce imported animal products such as meat, chicken, eggs and leather. While some importers already make efforts to source these resources responsibly, including 'deforestation-free' (e.g. through the Soy Network)³¹, there is still a need to reduce pressure on land abroad through lower consumption and more sustainable sourcing.

Swiss banks are part of the deforestation-risk value chain, as they finance activities linked to the production, trading, processing and distribution of imported commodities. The value chain includes many activities, such as trading or importing the commodities, processing them (e.g. into chocolate or roasted coffee), feeding soy to chickens, using timber in construction, or serving a steak in a restaurant. All the companies pursuing these activities might borrow from banks to make their investments. Similarly, **Swiss insurance companies** make these activities possible with their insurance coverage. Furthermore, Switzerland is also home to global banks and (re-)insurance companies covering economic activities that put pressure on forests and land worldwide.

Area of overseas land required each year to supply Switzerland's imports of forest and agricultural commodities (annual average 2015-19)



Source: 'Imported Deforestation', p.5 (WWF, 2020)³⁰

Switzerland is a trade hub, not only for fossil fuels and gold, but also for agricultural commodities. A study commissioned by the Federal Council (2018)³² estimated that Swiss companies trade 53% of the coffee, 35% of the cacao and 56% of the palm oil traded globally. Furthermore, agricultural commodity traders not only trade in these goods but also finance and insure part of the production and are involved in the processing. Increasingly, they also own plantations themselves to have more control over the value chain. It is estimated that Swiss banks play a relatively minor role in commodity trade financing. Between 2014 and 2020, only 3.2% of financing and underwriting to the major Swiss commodity traders came from Swiss banks, according to a Profundo study commissioned by Public Eye. However, Credit Suisse still provided USD 4.7 billion, and UBS provided USD 3 billion in credit and underwriting to the trading firms.³³ Apart from the global banks, Zürcher Kantonalbank (ZKB), Banque Cantonale de Genève and Banque Cantonale de Vaudoise are also known to be active in commodity trade finance, but to a smaller degree.

Pension funds, the AHV (Swiss public pension system), insurance companies (as asset owners), the Swiss National Bank and many individuals invest their savings and capital globally. Through these investments, Swiss asset owners and residents are not only indirectly involved in the deforestation that is caused by Swiss consumption or by Swiss companies such as traders – they also own parts of nearly every publicly listed company worldwide. Through this ownership, Swiss residents are likely to be involved in most deforestation value chains globally. A study by Greenpeace estimates that around 5% of the assets of Swiss pension funds are invested in companies that are significant contributors to tropical deforestation.³⁴ As co-owners of these deforestation-risk companies, the pension funds, the Swiss National Bank and the insurance companies (and asset managers on their behalf) are co-responsible for the management and the strategies of those companies. They therefore need to demand deforestation and land conversion-free business practices.

EXAMPLES OF DEFORESTATION RISKS LINKED TO CATTLE PRODUCTION

The following paragraph provides an example, of how Swiss banks are linked to deforestation driven by cattle production. The example is based on data from Trase. Trase is an initiative by Global Canopy^{vii} and the Stockholm Environment Institute that maps relevant supply chains to create more transparency over commodity trading and financing practices which drive deforestation. Trase used the datasets of the initiative to analyse deforestation risk from cattle production in Brazil and Paraguay, two major cattle-producing nations and deforestation hotspots.^{viii}

They found that, of the numerous exporting companies responsible for cattle production and processing that were included in the Trase dataset, at least three were identified as receiving finance from Swiss banks. These three companies, JBS S.A., Minerva S.A. and Marfrig Global Foods, had an estimated deforestation-risk footprint of 605,278 hectares in Brazil and Paraguay between 2014 and 2019. This represents 39% of all deforestation risk identified by Trase in the beef supply chains of Brazil and Paraguay.

BOX 1: UBS BB - JOINT VENTURE IN BRAZIL

In 2020, UBS and Banco do Brazil formed a joint venture for investment banking, 'UBS BB'. Banco do Brazil is the second largest bank in Brazil (and South America) and is state-controlled.

Since the start of the joint venture, UBS has been repeatedly criticised for raising money through CRAs (agribusiness receivables certificates) for companies that are involved in deforestation and do not respect the rights of indigenous communities.^{35, 36} The same sources also accused UBS of softening its soy policy to allow business practices that would not have been admissible under the previous UBS soy standard. The launch of the joint venture in 2020 is remarkable, as during the term of the Bolsonaro government (2019–2022), deforestation and land conversion in Brazil accelerated and important violations of the rights of indigenous peoples occurred.^{37, 38} With the new government in place, led by Lula da Silva since the beginning of 2023, there is hope that both the state-controlled Banco do Brazil and UBS BB will turn towards more sustainable practices. However, any financial institution should stay clear of deforestation on its own accord, regardless of the political ideology of the local government.

Presented with these criticisms in March 2023, UBS representatives pointed to their Sustainability and Climate Risk Policy Framework³⁹ and their standards around soy businesses, asserting that these also apply to UBS BB. However, they did not share any specific information or details of measures taken in response to the above-mentioned accusations.

vii Global Canopy is a data-driven non-profit organisation that specialises in improving transparency and accountability with regard to deforestation supply chains and financing.

EXAMPLES OF DEFORESTATION RISKS LINKED TO COCOA PRODUCTION

Through the same 3Keel study commissioned by WWF, several links between Swiss Banks and the cocoa supply chain were also identified based on Trase datasets. For example, Olam International, Barry Callebaut and Cargill are all forest-risk companies that receive financial resources from Swiss banks. Trase has linked these three companies to a combined deforestation-risk footprint of 6,815 hectares in Cote d'Ivoire in 2019 alone. This represents 38% of all deforestation risk identified by Trase in the cocoa supply chain of Cote d'Ivoire over that period. The cumulative deforestation-risk footprint of these companies is a conservative estimate, as the data of other major producing countries, such as Ghana and other countries in West Africa, are not included in the Trase datasets.

EXAMPLES OF DEFORESTATION RISKS LINKED TO SOY PRODUCTION

Additional links have been identified between Swiss Banks and 12 companies associated with deforestation for soybean production.^{viii} According to Trase, these companies had a combined deforestation-risk footprint of 751,603 hectares in Argentina, Brazil and Paraguay between 2004 and 2019. This represents 53% of all deforestation risk identified by Trase in the soybean supply chain over that time. Some significant soybean-producing countries are not yet covered by the Trase data. The cumulative deforestation-risk footprint of these companies is therefore a conservative estimate.

BOX 2: FINANCING OF PALM OIL BUYERS AND TRADERS - AN IN-DEPTH CASE STUDY

Table 01: Financial flows to palm oil buyers and traders in USD million

LOANS		UNDERWRITING		INVESTMENTS	
USA	429'062	USA	314'930	USA	2'010'631
UK	152'033	UK	89'812	Canada	174'059
France	92'457	France	55'751	UK	165'216
Japan	74'260	Japan	45'504	Switzerland	98'645
Germany	49'584	Germany	43'894	Japan	82'147
Netherlands	43'817	Switzerland	33'665	Germany	70'010
Switzerland	37'519	Canada	23'635	France	58'386

Source: WWF (2023): Financial Flows: Who is financing the palm oil buyers?

The present box provides an overview of the most relevant financial flows between Swiss financial institutions and palm oil buyers and traders. It is based on a Profundo study commissioned by WWF Singapore (2023) "Financial Flows: Who is financing the palm oil buyers?"⁴⁰ which analyses the financial flows in the form of underwriting, loans and investment from financial institutions to companies assessed in the WWF Palm Oil Buyer Scorecard (POBS).⁴¹ The latest (2021) edition of the WWF POBS assesses the progress and performance of 227 major retailers, traders, manufacturers and hospitality companies on key actions they can and should be taking to show their commitment and support for a sustainable palm oil industry.

Swiss financial flows ranked 4th in terms of investment into those companies, 6th in terms of bond and equity underwriting and 7th in terms of loans (see Table 01). Given that financial services is a key sector of the Swiss economy, it is not surprising that these positions are disproportionate to the size of the Swiss economy, which ranks 20th in terms of GDP.⁴² The highest rank for investments also aligns with the fact that the Swiss financial centre is best known for specialising in wealth and asset management.

viii Bunge, Cargill Global Funding PLC, Archer-Daniels-Midland Company, Mitsui & Co., Ltd., Louis Dreyfus Company, Marfrig Global Foods S.A., Terra Santa Agro S.A., Kimberly-Clark Corporation, JBS Investments, Marubeni Brasil S.A., Olam International Limited, Adecoagro Brasil Participações S.A.

BOX 2 CONTINUED..**Table 02: Largest Swiss financier of palm oil buyers and traders^{ix}**

LOANS			UNDERWRITING			INVESTMENT		
Company	Mio. USD	Ø POBS	Company	Mio. USD	Ø POBS	Company	Mio. USD	Ø POBS
Credit Suisse	24,399	11.8	Credit Suisse	19,341	13.1	UBS	41,868	14.6
UBS	8,870	15.2	UBS	8,971	16.0	Credit Suisse	14,867	15.7
ZKB	847	15.4	ZKB	1,390	19.9	SNB	12,581	14.8
SUVA ^x	91	N/A	BKB	380	22.4	Pictet	8,505	15.5
BLKB	63	16.5	Raiffeisen	82	22.4	ZKB	6,365	15.6

Source: WWF (2023): Financial Flows: Who is financing the palm oil buyers?

Table 02 provides an overview of the top five financial institutions per financial flow type in terms of the size of the flow. Credit Suisse provides the most loans and underwriting to the companies analysed in the POBS, while UBS, with its large wealth management business, has the largest investment amounts. It is also worth noting that the local players have significantly less exposure than global banks, especially regarding loans and underwriting. As mentioned above, the POBS Score assesses companies on their commitments and actions to source sustainable palm oil. The score ranges from 0 to 24. The average score among the 227 companies assessed in 2021 was 13.2, with a maximum of 22.4 and a minimum of 0. The POBS Score shown in Table 02 is the weighted average POBS Score.^{xi} Regarding loans, the relatively lower POBS Score for Credit Suisse is mainly driven by a few loans to companies that perform poorly in terms of deforestation policies and actions. Interestingly, there is not much overlap between the companies that the financial institutions lend to – except for Nestle. The relatively high POBS Score of local financial institutions for underwriting can be attributed to underwriting for Coop, which has the highest POBS Score (22.4) of all the companies analysed. In the area of investment, the POBS Scores are much less dispersed. This is not surprising, since all financial institutions invest along similar indices and philosophies and therefore end up with similar portfolios. In fact, the following five companies are among the top 10 palm oil investees for all banks displayed: Johnson & Johnson; Procter & Gamble; McDonald's Corporation; PepsiCo Inc.; Walmart Inc. A further four investees^{xii} are among the top 10 palm oil investees for four out of the five banks displayed. Another remarkable fact is that the Swiss National Bank (SNB) is the third largest investor in palm oil buyers and traders.

For an in-depth explanation of the methodology of this assessment and an overview of global financial flows to palm oil buyers and traders, please see the WWF report “Financial Flows: Who is financing the palm oil buyers?”.

ix The table adds up the top ten positions per financial institution for each kind of financial flow. For non-global actors regarding loans and underwriting, only between one and three positions are available, as they do not have 10.

x According to SUVA, the mentioned credit line had already been repaid and is no longer active.

xi The POBS Score is weighted by the number of relationships between the FI and a particular POBS client.

xii Nestlé; Walmart Inc.; Target; Colgate-Palmolive Company; The Estée Lauder Companies Inc.

FINANCIAL INSTITUTIONS WITH LIMITED DEFORESTATION POLICIES

Given that there are many links and financial flows from Swiss financial institutions to companies active in the supply chain of deforestation-risks commodities, it is crucial that financial institutions have established policies to avoid financing of deforestation and land conversion. The following paragraph will present a high-level overview of those policies.

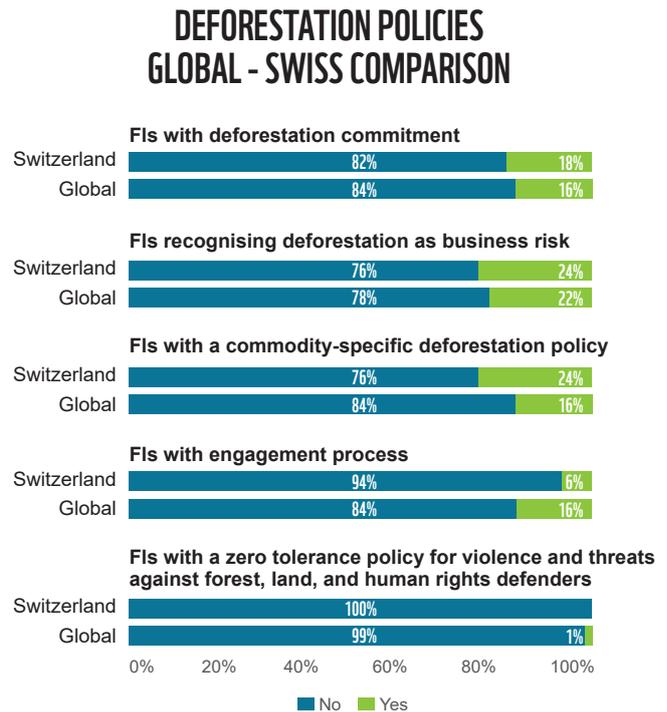
In 2022, Global Canopy published the Deforestation Action Tracker,^{43,xiii} which analyses whether financial institutions that made climate pledges and/or were part of the Finance Sector Deforestation Action⁴⁴ initiative, introduced policies to reduce deforestation because it is a major contributor to climate change, a fact that is also recognised by the Race to Zero.

With regard to the Swiss financial institutions covered, we specifically look at those that have a known link to deforestation. These tend to be the larger financial institutions.^{xiv} From the analysed institutions, 24% recognise deforestation as a business risk, but only 12% had made a public commitment to zero net deforestation as of summer 2022. Thus, even though financial institutions commit to net zero emissions, which implies the necessity to halt and reverse deforestation, they do not necessarily commit to halting deforestation specifically. Looking at commodity-specific policies, as this guide encourages (see Step 2), 24% of the institutions have differentiated policies and only a mere 6% also have targeted engagements about deforestation and forest-risk commodities with their investees. With regard to social issues, the findings are even bleaker. Out of the Swiss financial institutions assessed, none required investees to have a zero-tolerance approach to violence and threats against forest, land and human rights defenders.

It is worth noting that UBS and Credit Suisse have the most advanced deforestation policies. Yet the Forest500 analysis⁴⁵ – also by Global Canopy – still grades these policies as incomplete, with scores of 36% (CS) and 30% (UBS) respectively.

CONCLUDING REMARKS ABOUT THE SWISS SITUATION

This chapter shows that Swiss financial institutions are involved in financing, owning and underwriting deforestation-risk companies because these companies are either involved in the Swiss consumption of deforestation-risk commodities or the global supply chain of those commodities. Even though aligning financial flows with the global climate and biodiversity goals that Switzerland has committed to (Paris Agreement, Kunming-Montreal Global Biodiversity Framework) requires deforestation to be halted



Data based on dataset from Deforestation Action Tracker⁴³

Furthermore, it is important to mention that some of the largest Swiss financial institutions are not covered by this analysis, as they did not make significant climate commitments within official initiatives or were not part of the Finance Sector Deforestation Action initiative as of summer 2022. Large financial institutions that are not covered include Julius Bär, Raiffeisen, Banque cantonale de Valais, Luzerner Kantonalbank, Helvetia, Baloise, Compenswiss and most pension funds. While many of these financial institutions have no climate target at all, others have set one for themselves but they have not made any official pledge that would give rise to disclosure requirements and accountability.

and reversed, almost no Swiss financial institutions can say that they have successfully eliminated deforestation from their business activities. At the same time, the Swiss legislator has not yet passed any legislation to prevent Swiss companies or financial institutions from enabling deforestation. We therefore urge Swiss financial institutions to fulfil their responsibilities, commit to stopping deforestation by 2025, and start addressing the topic based on the following report and similar resources.

xiii The analysis was based only on publicly available information. Any information publicly available on the financial institutions' websites during the review period, which ran from 1 August to 30 September 2022, was considered within the baseline review.

xiv For the global comparison, as for the Swiss Financial Institutions, the analysis only included those financial institutions with a known exposure to deforestation risk. Swiss financial institutions included: BLKB, BEKB, LGT Capital Partners, Lombard Odier Investment Managers, Mirabaud Asset Management, Pictet Group, J Safran Sarasin, Swiss Life Asset Managers, Swiss Re, UBS, UBS AM, Unigestion, UBP AM, zCapital, Swisscanto, Zurich Insurance



STEP 1: UNDERSTANDING MATERIAL RISKS

Before being able to take mitigation action, a financial institution must develop a clear understanding of its portfolio's risk profile, identifying connections to high-risk sectors and the specific clients and projects where exposure is material. This information can then be used to form the basis of a robust deforestation and conversion free policy and an effective engagement strategy.

The Taskforce on Nature-related Financial Disclosures (TNFD) is in the process of developing a framework to help financial institutions understand and disclose where material risks exist in their portfolios and how nature affects their financial performance in the short and long term (to be launched this year). In the interim, a process consistent with the following framework can be used to conduct this risk evaluation.

The framework we propose below supports the identification of specific sectors, commodities and regions where a material risk exists, and enables the categorization of clients and investees as either 'low', 'medium' or 'high' risk. This segmentation of clients will be used as a prioritization tool in the later steps focused on monitoring and engagement.

UNDERSTAND WHICH REGIONS / SECTORS CARRY THE HIGHEST RISK

Certain industry sectors and the presence of client or investee operations in specific ecosystem conversion hotspots carry a disproportionate amount of risk.

This first step involves building a list of and broader understanding of these sectors and regions that carry significant risk, providing a basis for evaluating the risk profile of clients and investees.

The analysis of sectors should consider both those with a direct link to deforestation and ecosystem conversion (e.g. agricultural commodity producers) as well as those sectors further along the

value chain that are connected to this activity (e.g. through the sourcing of commodities).

Similarly, the analysis of regions should also consider sourcing regions and not simply the regions or locations where the financial institution or its clients and investees are located.

The Global Canopy Deforestation Free Finance Roadmap (Phase 1, Step B) lists specific high-risk sectors and high-risk forest commodities by region.²⁶ The additional resources referenced provide further context and granularity on these sectors and regions.

HELPFUL TOOLS/RESOURCES

ENCORE: interactive tool highlighting how businesses across each sector depend on and impact natural capital, and how this translates to business risk.⁴⁶

Ceres Investor Guide to Deforestation and Climate Change: includes details on high-risk industry/commodity and region/commodity pairs.⁴⁷

Global Forest Watch: online geospatial platform providing insight into how forest cover/integrity is changing over time.⁴⁸

LandMark: maps and holds information on land collectively held and used by indigenous peoples and local communities. Includes details on changes in land cover over time, potential pressures on their lands and their contributions to protecting the environment.⁴⁹

Environmental Justice Atlas: documents, catalogues and geographically maps social conflict around environmental issues.⁵⁰

MapBiomas: provides land cover data for all Brazilian biomes from 1985 to present.⁵¹

MapHubs: technology company enabling the analysis and tracking of ecosystem conversion (including deforestation).⁵²

Verite Commodities Atlas: provides overview of specific commodity/region pairs that are most associated with forced labour and/or child labour.⁵³

WWF Plowprint Mapping: presents a cumulative footprint of cropland conversion in the North American Great Plains. Data updated annually.⁵⁴

WWF Deforestation Fronts report: Provides a comprehensive analysis of key deforestation drivers across specific regions with a significant concentration of deforestation hotspots and where remaining forest areas are under a large threat.⁵⁵

WWF Biodiversity Risk Filter: Serves as a screening and prioritization tool for biodiversity risk exposure of a company's production and operational sites. By combining 56 datasets the WWF Biodiversity Risk Filter allows a company or financial institution to plot its sites and identify sectorial, geographical and site-specific biodiversity risk hotspots.⁵⁶

IDENTIFY CLIENTS / INVESTEES WITH PROBABLE RISK

Map current clients and investees against the list of high-risk regions and sectors identified in Step 1 to understand which have probable exposure to all deforestation and conversion (both legal and illegal) and human rights risks.

The resources referenced include lists of companies considered most influential in supply chains with a high deforestation and conversion risk. These lists can be compared against current clients and investees to identify probable risk

HELPFUL TOOLS/RESOURCES

Forest 500: annual report lists 350 companies with most influence in forest-risk supply chains, along with their policy strength, actions and progress.⁷

WWF Palm Oil and Soy scorecards: list the most influential buyers and traders in the palm oil and soy industries and evaluate their commitments and actions to transition towards deforestation and conversion free sourcing.^{57,58}

Trase: maps the supply chains of companies involved in the trade of commodities, linking them to specific municipalities.⁵⁹

ZSL SPOTT: lists and scores producers and traders of key deforestation and conversion risk commodities on their disclosures, policies and practices.⁶⁰

World Benchmarking Alliance 'Food and Agriculture Benchmark': assesses and ranks 350 of the world's most influential

food and agriculture companies on their contribution to the UN Sustainable Development Goals.⁶¹

WWF Biodiversity Risk Filter: Serves as a screening and prioritization tool for biodiversity risk exposure of a company's production and operational sites. By combining 56 datasets the WWF Biodiversity Risk Filter allows a company or financial institution to plot its sites and identify sectorial, geographical, and site-specific biodiversity risk hotspots.⁶²

Forest IQ: provides data about corporate performance on deforestation, conversion of natural ecosystems and associated human rights abuses.⁶³

MSCI Deforestation Screening Metrics: indicates companies exposed to deforestation-related risks, including those that may directly or indirectly contribute to deforestation.⁶⁴

ASSIGN PRIORITY LEVEL TO EACH CLIENT / INVESTEE WITH PROBABLE RISK

Sort list of clients and investees with probable risk into different levels of priority based on two dimensions:

Degree of exposure, composed of:

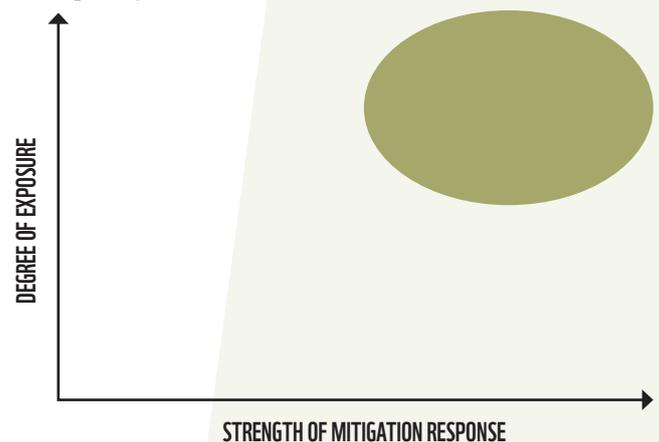
1. Extent of connection between client/investee and high risk-regions/sectors. Proxies include:
 - a. % of annual revenue dependent on high-risk sectors.
 - b. Locations of operations.
 - c. Locations of raw material sourcing.
2. Scale of financing or investment to consider % of portfolio impacted and degree of potential influence.

Strength of mitigation response/client risk controls, indicated by:

1. Presence of commitment/policy with specifics in line with the financial institution's deforestation and conversion free policy.
2. Evidence client/investee takes action against its risks, e.g. through:
 - a. % of deforestation free production or sourcing, evidenced by tracing of products back to the point of production.
 - b. Integration of deforestation, conversion and human rights factors into internal decision-making frameworks.

- c. Inclusion of deforestation risks into internal trigger mechanisms to identify and address risks (e.g. monitoring systems, supplier engagement, grievance mechanisms).

A helpful visualization to support this analysis is the plotting of each client or investee on the matrix below. The distribution and clustering of the specific financial institution's client base can then be evaluated, setting boundaries for what would classify as 'high', 'medium' or 'low' priority. Note, all clients where a probable risk is not identified (i.e. those not considered in Step 2) should be classified as 'low' priority.



HELPFUL TOOLS/RESOURCES

Tools and resources noted under previous steps where specific company exposure details are provided should be used here. Additional resources include:

Roundtable on Sustainable Palm Oil (RSPO): reports volume of palm oil and derivatives produced, processed and secured by RSPO member companies.⁶⁵

CDP Forests: holds a comprehensive collection of self-reported company data and provides an 'A list' outlining which companies

have displayed corporate leadership on environmental performance and transparency.⁶⁶

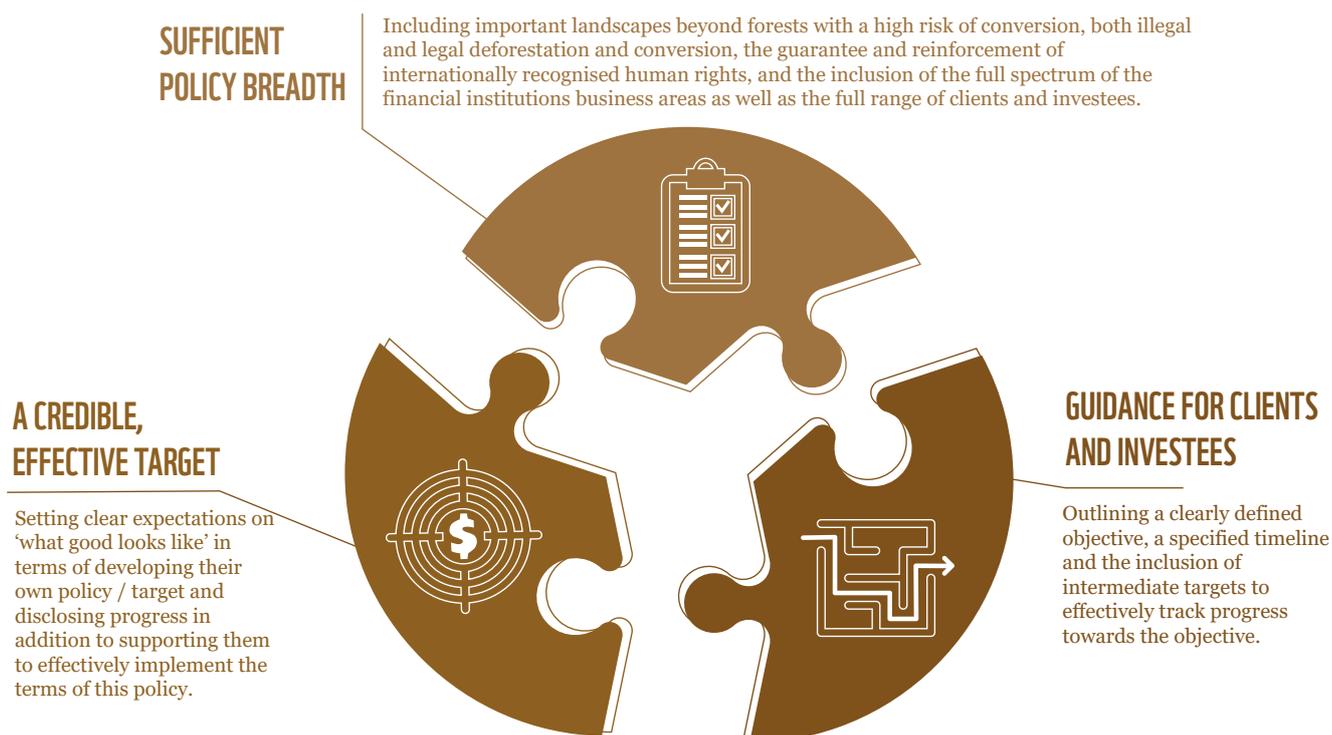
For the clients and investees where public data is not available but a probable risk has been identified, a questionnaire can be sent asking them to provide this information directly.

Furthermore, as part of a pragmatic risk assessment, it can be helpful to consider the absence of disclosure as a signal for concern in itself.



STEP 2: WHAT AN EFFECTIVE FINANCIAL INSTITUTION DEFORESTATION AND CONVERSION FREE POLICY LOOKS LIKE

Once a financial institution has a clear understanding of its risk exposure, the next step is to develop a deforestation and conversion free policy. This sets clear expectations for clients and investees and provides a basis for engagement on these risks.



RECOMMENDED POLICY COMPONENTS - BREADTH OF DEFORESTATION AND CONVERSION FREE FINANCE POLICY

To set a strong foundation for effective risk mitigation, a deforestation and conversion free finance policy must cover all financing, investments, insurance and underlying financial products, and encompass all material risks identified in the previous step. This includes ensuring the policy explicitly references:

Important landscapes beyond forests with a high risk of conversion.^{xv,67} This includes, but is not limited to, grasslands, savannahs and wetlands (including peatlands). These ecosystems cover significantly more of the Earth’s surface than forests and are essential for sustaining a liveable climate and maintaining biodiversity and human health; however, they typically have a high risk of conversion given the lack of recognition and understanding of the importance of the benefits they provide. The IUCN Red List of Ecosystems presents assessments of the risk of biodiversity loss across thousands of ecosystems worldwide.⁶⁸

Both illegal and legal deforestation and conversion. Legality does not ensure the sustainability of natural resources since it often allows large-scale deforestation and

conversion to take place. Therefore, additional information (beyond illegality) is crucial to building a comprehensive understanding of risk. For example, across Brazil, Argentina and Paraguay alone it is estimated that close to 110 million hectares of forest can still be legally converted to other land uses. Legislation to protect other natural ecosystems such as wetlands and grasslands is also often minimal. As a result, while legal conversion does not carry the same legislation risk, it does not remove the physical or systemic risks surrounding these activities.

The guarantee and reinforcement of internationally recognized human rights. Including free, prior and informed consent (FPIC);^{xvi} land rights; access rights; workers’ rights; fair governance; and gender equality.

The full spectrum of offerings and full range of clients and investees. To comprehensively account for all risks, every relationship should be considered in scope of this policy, regardless of the specific financial product or service offered, or the position of the client or investee in the supply chain.

xv Reference to the WWF Report “Beyond Forests” for a deeper explanation of the topic.

xvi The collective human right of indigenous peoples and local communities to withhold or provide their consent to any activity that may affect their rights, resources, land, territories, food security and livelihoods.

RECOMMENDED POLICY COMPONENTS – A CREDIBLE, EFFECTIVE TARGET

A financial institution having a credible, effective target serves as an important benchmark of success. Its presence can also lead to the identification of additional opportunities and help garner senior management attention and funding. This target should include three components:

- 1. A clearly defined objective**, specifying an ambition of no conversion of any natural ecosystem and zero tolerance for threats and attacks against environmental and human rights defenders, with definitions aligning to recognized standards, e.g. those produced by the Accountability Framework.²⁴
- 2. A specific cut-off date.** A cut-off date is the reference date after which ecosystem conversion renders production or sourcing by clients or investees in violation of the commitment. In line with guidance from the Accountability Framework, commitments

should follow sector-wide cut-off dates^{xvii} – and where one does not exist, it should not be later than 2020.⁶⁹

- 3. An ambitious target date.** A target date is the date by which the organization intends to fully achieve its commitment. We recommend a target date of 2025, in line with the Accountability Framework's principles for high ambition, guidance from the Science Based Targets initiative, and the recent commitment from more than 30 financial institutions during COP26.⁷⁰
- 4. Inclusion of intermediate, time-bound targets to effectively track progress towards the objective.** These targets can be operational in nature, benchmarking specific organizational milestones (e.g. date by which the first risk assessment is to be completed, date by which first full disclosure is to be released).

RECOMMENDED POLICY COMPONENTS – GUIDANCE FOR CLIENTS AND INVESTEES

Companies are at very different stages in eliminating deforestation, conversion and associated human rights risks from their operations. As a result, providing clear expectations and specific guidance on 'what good looks like' is important to support them to effectively implement the terms of the policy. There are four key areas to set expectations in:

- 1. Require clients and investees to set a comprehensive and time-bound target and policy to eliminate deforestation and conversion from their operations in line with the ambition of the overarching financial institution policy.** Policies should apply to all of their operations and supply chains and include all activities, commodities and countries of operation, specifically encompassing both direct and indirect suppliers and human rights violations. See the Accountability Framework Supply Chain Policy guidance for further details, including recommended cut-off and target dates and a sample company policy.⁷¹
- 2. Provide guidance on what constitutes sufficient disclosure.** To receive recognition for their progress and enable effective monitoring, it is important for clients and investees to regularly and transparently report on their progress towards meeting their targets. In September 2023 the Taskforce on Nature-related Financial Disclosures is expected to share specific guidance that can be used as a framework to guide these disclosures, an important feature of which will be the requirement to provide asset location information and evidence of supply chain traceability. In the interim, clients and investees should ensure they align their reporting and disclosures to the best practices outlined in the Accountability Framework, which provides guidance on the reporting of commitments, actions and progress.⁷² CDP's forests questionnaire

provides a clearly aligned platform for reporting against the expectations of the Framework, and the new GRI Agriculture, Aquaculture, and Fishing Sector Standard includes a comprehensive set of indicators for aligned reporting.^{73,74} Furthermore, the Forest 500 company assessment methodology is aligned to the Accountability Framework and provides additional granularity, through its scaled scoring methodology, on what constitutes effective disclosure as well as what would be considered insufficient disclosure.⁷⁵

- 3. Reference resources that clients and investees can use to support the elimination of these risks from their supply chains.** This includes the operational guidance from the Accountability Framework in addition to those resources that provide specific guidance depending on where the company sits in the supply chain.⁷⁶ For example, the WWF Deforestation and Conversion Free Supply Chain Asks outline specific asks for companies at different stages of the supply chain, while the WWF Deforestation and Conversion Free Implementation Toolkit provides a process to support companies at different points along the supply chain to implement their commitments, specifically targeting beef, soy and leather in the Amazon, Cerrado and Chaco biomes.^{77,78}
- 4. Outline the implications of a client or investee not making acceptable progress towards the requirements outlined in the policy.** These implications should typically start with active engagement from the financial institution to develop a plan to meet objectives, alongside frequent touch points to monitor progress (e.g. every three to six months). To provide guidance on what constitutes 'acceptable progress' the interim targets outlined by the Science Based Targets Network (SBTN) can be referred to.⁷⁹

xvii Sector-wide cut-off dates are those that apply to a dominant or comprehensive portion of a particular commodity in a particular geography. They can arise through a number of means, including but not limited to (i) government policy, or (ii) voluntary action from a number of companies that form a significant share of the market.



STEP 3: DUE DILIGENCE AND MONITORING OF PROGRESS

Due diligence and risk management is a key part of a financial institution's day-to-day operations, be this through the credit risk screening of potential corporate lending clients; the regular monitoring of factors influencing the performance of holdings in a portfolio; or the frequent analysis of risk to re-price insurance policies over time. We recommend that financial institutions incorporate deforestation, conversion and associated human rights factors into this ongoing process, benchmarking current and potential clients and investees against the aims of the overall deforestation and conversion free policy.

While all clients identified in Step 1 as having probable risk should be monitored on their progress, to effectively manage exposure the first focus should be on the monitoring of clients categorized as 'high risk', followed by 'medium risk'.

SPECIFIC FACTORS THAT CAN BE USED TO EVALUATE PERFORMANCE AND PROGRESS INCLUDE:

Presence and strength of client or investee on no deforestation and no conversion policies. There should be consideration of the alignment of target dates with those of the financial institution, and whether the policy encompasses a sufficient scope and breadth of activities, commodities and regions.

Progress towards ensuring internationally recognized human rights. Companies should have clear human rights policies in line with guidance from the Accountability Framework and demonstrate actions taken to ensure, throughout their supply chain, free, prior and informed consent (FPIC); land rights; access rights; workers' rights; fair governance; and gender equality.⁸⁰

Demonstration of supply chain traceability. The ability of clients to trace commodity volumes to their origin provides insights into the extent to which they can determine the deforestation and conversion free status of commodities they produce or source. A high proportion of volumes sourced from high-risk regions without further traceability, or a high proportion of commodities sourced from an unknown origin, both indicate a high risk of deforestation and conversion in the supply chain. As companies are at different stages of tracing their supply chains, this data may not be immediately available. In the interim, supply chain mappings and risk assessments can be used to pragmatically evaluate risk.

Evidence of deforestation, conversion or associated human rights violations occurring in a client or investee's operations. This can be either through direct

reporting, geospatial mapping of operations, or the presence of open cases of deforestation, conversion or human rights abuses in their supply chain or financing activities.

Confirmation of excluded activities in specific locations. This includes the conversion of legally protected areas and UNESCO World Heritage sites, or high carbon stock (HCS) and high conservation value (HCV) areas.

To enable effective monitoring, the disclosure expectations outlined in the deforestation and conversion free policy should be aligned to these factors. However, given that reporting of this information is currently scarce, in instances in which the information is not publicly available financial institutions should explicitly request these details, conducting direct monitoring when companies cannot or will not provide them. The external data sources in Annex 1 can be used to fill any gaps and validate information received.

If the financial institution determines there is insufficient information to assess the relevant risks, the recommended path of action depends on the current relationship with the company. In respect of existing clients or investees, engage the company as outlined in the following step, putting in place a time-bound plan to ensure the client or investee can present evidence of compliance with the terms of the financial institution's policy within a specified period. In respect of potential clients or investees, set a requirement to prove compliance as a criterion for financing or investment, detailing a specific timeline and consequences in the event that this requirement is not met.

ROLE OF CERTIFICATIONS IN MONITORING PROGRESS

The majority of company commitments (65-75%) seeking to address commodity-driven deforestation and conversion rely heavily on certification schemes. When effectively implemented, certification provides vital support to value chain actors moving towards more sustainable practices.¹⁸ However, it is important to understand that the specific requirements, degree of monitoring and enforcement of certifications vary, affecting the relative robustness and credibility of different schemes. Global Canopy assesses the landscape of global certification schemes annually, outlining those they determine to be 'credible' in their Forest 500 Company Assessment Methodology.⁷⁵

As a result, WWF takes the position that certification is a stepping stone that needs to be complemented with other

interventions. It is only one tool, and it will not deliver responsible and sustainable commodity supply chains if it is used in isolation. When considering the progress and risk profile of a specific company, the presence of certifications is a positive indicator; however, it is critical for a company to take actions that go beyond the unit of certification, such as adopting jurisdictional and landscape approaches; connecting smallholders to ethical supply chains through capacity-building and financial investments and supporting the development of principles and guidelines to inform national and local frameworks. As a result, the additional information specified above forming the due diligence and monitoring process should be collected as incremental data points to evaluate risk, over and above the important insights provided by certifications.

CASE STUDY | CERTIFICATIONS IN FINANCIAL INSTITUTION POLICIES

Roundtable on Sustainable Palm Oil (RSPO) and its inclusion in HSBC's agricultural commodity policy

RSPO is a not-for-profit multistakeholder platform that unites stakeholders in the palm oil industry to develop and implement global standards for sustainable palm oil. The certification system built around the RSPO principles and criteria, when properly applied, can help to minimize the negative impact of palm oil cultivation on the environment and communities in palm oil producing regions.

However, as with other certification schemes, there are weaknesses in the RSPO standard and its implementation that still need to be addressed. Estimates indicate that only 19% of global palm oil production is currently RSPO certified. Of this, only 50% to 65% is sold as certified.⁷⁹ Unsustainable palm oil thus continues to be the norm, sold as uncertified material through conventional supply chains and the RSPO Mass Balance and Book and Claim supply chain models.

As a result, while requiring clients and investees to be certified through RSPO can be an effective and pragmatic method to manage deforestation and conversion risk, it cannot be used as an instrument in isolation. WWF and others submitted a resolution at the last RSPO General Assembly in 2021, asking the organization to 'Enhance the robustness of the RSPO Mass Balance model to accelerate uptake of Certified Sustainable Palm Oil.'⁸¹

HSBC has one of the most stringent approaches to driving sustainable palm oil in its portfolio^{xviii}. In its palm oil agricultural commodity policy, HSBC explicitly requires that customers obtain RSPO certification as a prerequisite for financing.⁸²



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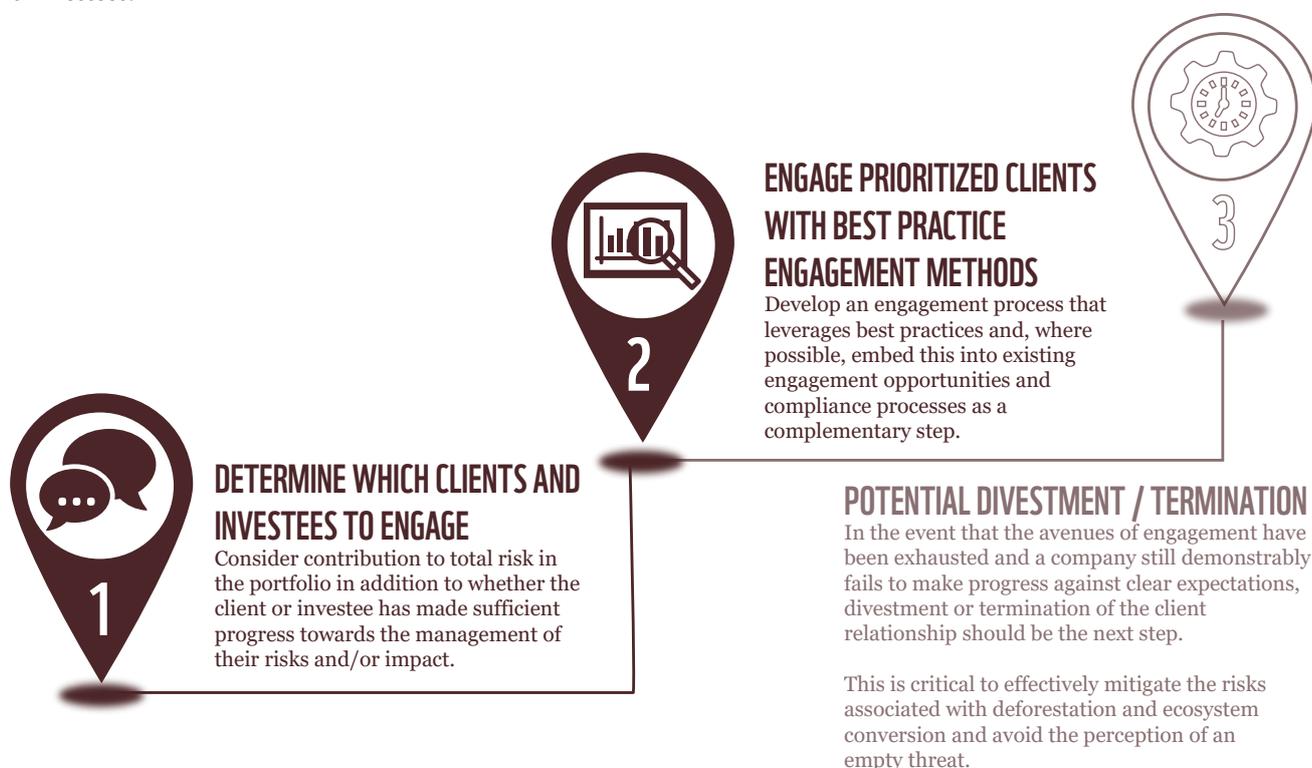
STEP 4: BEST PRACTICE ENGAGEMENT OF CLIENTS AND INVESTEES

Active, early engagement must be a core component of any strategy to manage deforestation, conversion and associated human rights risks in a financial portfolio. Beyond simply supporting clients and investees in their journey to align their activities with their commitments, engagement sends a clear signal that the financial institution is serious about implementing its policy, driving greater adherence and a subsequent positive feedback loop.



An effective engagement strategy consists of two components: first a framework to determine which clients to engage, and second an engagement process that incorporates best practices and guidance on how to achieve compliance. This step provides guidance on each of these components.

As a key enabler of effective engagement, it is important to ensure that relevant employee segments, including portfolio managers, client advisors and risk officers, are sufficiently trained to be able to include these topics in discussions with clients and investees.



STEP 1: DETERMINE WHICH CLIENTS TO ENGAGE

Given that financial institutions typically invest in a large number of companies across their portfolio and/or offer a significantly large array of products and services, the number of relationships in scope for potential engagement can quickly become too large to be practical. As a result, a prioritization framework is crucial to ensure effective use of time and resources. Two metrics should be considered when defining this prioritization:

- 1. Those best placed to mitigate risk.** Prioritize clients identified as 'high risk' or 'medium risk' in the risk analysis process outlined in Step 1. This enables the targeting of the most material areas of risk in a portfolio.
- 2. Those deemed to have made insufficient progress towards management of their risks and impact.** Evaluate the information gathered in the annual monitoring process (outlined in Step 3) and identify those that have not made acceptable progress towards driving zero deforestation and conversion in their portfolios. Potential benchmarks include:
 - a. Lack of transparent disclosure of evidence of compliance or progress towards goals. Transparency is a key first step towards eliminating risks, and therefore as part of a pragmatic assessment it can be helpful to consider the absence of disclosure as a signal for concern in itself
 - b. Absence of a time-bound commitment or plan compliant with the details of the financial institution's policy
 - c. Specific occurrences of activities which are not compliant with the financial institution's policy. These can be identified by:
 - i. Instances of non-compliance identified in grievance mechanisms, media news, crowdsourcing platforms, NGO or community reports (e.g. Eyes on the Forest, Greenpeace, Chain Reaction Research, Global Witness, RepRisk or other similar services)
 - ii. Satellite-based early warning systems tracking land use change near client or investee operations (e.g. Global Forest Watch, MapHubs)
 - iii. Unacceptable progress towards a time-bound commitment or plan. This should be established on a case-by-case basis from evidence collected during monitoring and engagement efforts. The company's intermediate targets set out in their commitment can often be a helpful benchmark to use.

STEP 2: ENGAGE PRIORITIZED CLIENTS WITH BEST-PRACTICE ENGAGEMENT METHODS

The following initiatives can be used in engagements with clients and investees. Furthermore, these measures can be embedded into existing engagement opportunities and compliance processes as complementary steps.



APPLICABLE TO ALL FINANCIAL INSTITUTIONS

Meet with the client or investee management team to discuss progress and potential barriers. In this meeting it is important to outline why they have been identified as a priority for engagement and why they are considered high-risk. Communicate expectations, referring

to a public policy document, and identify any issues they are facing in assessing and acting on their deforestation, conversion and associated human rights risks, sharing guidance and supporting efforts to help address these gaps.

EXAMPLE QUESTIONS TO ASK DURING ENGAGEMENTS INCLUDE:

- Has the company completed a risk assessment of its deforestation and conversion impacts and dependencies? Does the company understand which risks are financially material?
- Is the company's policy sufficiently strong?
 - Is the company's commitment quantifiable with a time-bound target aligned with the target of your organization?
 - Does the policy apply beyond deforestation to the conversion of all ecosystems?
 - Does the policy specifically reference both legal and illegal conversion?
 - Does the policy include all operations and supply chains, as well as both direct and indirect suppliers?
- Does the company have a strategy to meet its targets, including time-bound interim goals?
 - Does this strategy include an action plan for suppliers or regions with a high deforestation, conversion and associated human rights risk?
- Is the company disclosing progress, at regular intervals (e.g. annually), towards its no deforestation and conversion commitments?
- What are the key internal or external barriers to action against the company's deforestation, conversion and associated human rights risks?

Engage clients in a dialogue to strengthen their risk mitigation capacity. Insurance companies in particular, despite often only being considered for their role in carrying risk, have a depth of expertise in assessing and reducing risk. This puts them in a position to provide risk management advice to clients to prevent or reduce deforestation and conversion risks.

Encourage the use of guidance from the Accountability Framework, Science Based Targets Network (SBTN) and Science Based Targets Initiative Forest, Land and Agriculture Project (SBTi FLAG).^{27,83,84} The Accountability Framework provides step-by-step operational guidance for achieving ethical

supply chains. The SBTN has also released interim guidance enabling companies to understand where and how to analyse risks and focus efforts. Full methodologies to support the setting of targets across all Earth systems is planned for release later in March of this year. Furthermore, guidance has been released by SBTi to enable companies within the food, agriculture and forest sectors to set science-based emission reduction targets that include land-related emissions and removals.

Increase interaction with clients and investees identified as non-compliant. Evaluate progress every six months until they return to a trajectory conducive with meeting their commitments.



APPLICABLE TO ASSET MANAGERS/ASSET OWNERS

Exercise proxy voting rights to support resolutions focused on eliminating deforestation and conversion from activities. Asset managers should incorporate deforestation and conversion considerations into their publicly disclosed proxy voting guidelines to ensure they are leveraging this opportunity to manage deforestation and conversion risks. The proxy-voting guideline should include

key requirements which, in case of not being fulfilled, trigger a vote against the re-election of management members.

Propose and bring shareholder resolutions targeting deforestation and conversion issues to the General Assembly. Actively drive portfolio companies to raise the profile of these issues and address key gaps.

DIVESTMENT OR THE TERMINATION OF CLIENT RELATIONSHIPS SHOULD ONLY BE CONSIDERED FOLLOWING SIGNIFICANT EFFORTS TO ENGAGE

Due to the nature of global financial markets, divestment or the removal of a client by one financial institution can be a blunt instrument that results in a less responsible financial institution stepping in to fill the gap. This can lead to unsustainable companies continuing to receive financing without any form of safeguards or engagement over their environmental and social impacts.

However, while engagement generally holds the most potential to improve the sustainability of a sector, when the avenues of engagement have been exhausted and a company has demonstrably failed to progress against clear expectations, divestment or termination of the client relationship should be the next step. This is critical to ensure

the effective mitigation of the financial risks associated with deforestation and ecosystem conversion and the potential subsequent financial losses.

It is important to be clear on the specific conditions which would result in this course of action, to avoid the perception of an empty threat and the risk of ‘engagement washing’, where companies have some form of dialogue to appear sustainable while not achieving real progress. Moreover, in the event that divestment or removal of a client is required, the names of each company and the process leading to such divestments should be publicly disclosed, to the extent to which client confidentiality requirements permit.





STEP 5: REPORTING TRANSPARENTLY

Frequent and transparent reporting is an important lever to pressure other financial institutions to proactively drive the elimination of deforestation and conversion from their portfolios, reducing risks for the broader finance sector. It also ensures recognition for the progress being made and sends a signal of intent to clients and investees.



Given the nuances and complexity of measuring impacts on nature, it is important for disclosures and reporting to be consistent across financial institutions, with unified definitions and standardized metrics. This ensures clarity over progress being made and comparability between actors. The Taskforce on Nature-related Financial Disclosures (TNFD) was established to develop a consistent and comprehensive framework for organizations to report on and manage exposure to evolving nature risks and opportunities. This guidance is planned for launch in September 2023, with initial recommendations already available. It is important for financial institutions to track and support the progress of the TNFD to ensure they are well positioned to action this guidance once released.

In the interim, until this guidance has been developed, financial institutions should proactively publicly report information and metrics including:

Policy and commitment to eliminate deforestation, conversion and associated human rights risks from your portfolio. The target date and plan to achieve this objective should be outlined.

Evidence of implementation of the deforestation and conversion free policy. Actions that have been taken in the preceding year should be disclosed, including data on:

- The percentage of portfolio evaluated under the risk assessment framework (as a share of total financing/assets under management/revenue).
- The percentage of clients and investees in each risk category engaged to support their journey towards their

no deforestation and conversion commitments, and the high-level impacts of engagement (both in absolute terms and as a share of total financing/assets under management/revenue).

- Details on the specific instances where a divestment was required or where a relationship was terminated as a result of insufficient progress towards eliminating deforestation and conversion risks, including the names and process leading to such divestments, to the extent to which client confidentiality requirements permit.

Overview of financial exposure. Insights into how the financial institution's risk profile is changing over time and evidence of progress towards its targets should be provided. Several data points can be reported at regular intervals (e.g. annually), including:

- Value to the financial institution of its financing or investment exposure across specific regions or commodities where a high risk of deforestation, conversion or associated human rights issues have been identified.
- Sum of financing and volume of clients determined to be in high, medium and low risk categories, including how this exposure is evolving over time. Include details on the risk mitigation hierarchy and thresholds used to determine these risk ratings, following the framework outlined in Step 1.
- Proportion of clients and investees determined to have a robust commitment and to be on track to deliver against this target.



NATURE POSITIVE FINANCE OPPORTUNITIES TO PROTECT AND RESTORE KEY LANDSCAPES

Beyond directing capital *away* from activities that drive deforestation and ecosystem conversion, financial institutions are also well placed to direct capital *towards* nature-positive activities that protect and restore these key landscapes, including through nature-based solutions.^{xix}

Sustainable finance investments have experienced significant growth in recent years, with the Global Sustainable Investment Alliance (GSIA) estimating that 36% of all professionally managed assets in 2020 were directed towards investments considering ESG factors, representing a growth of 55% over the previous four years.⁸⁵ A recent survey of 2,000 capital market issuers and institutional investors by HSBC implies this trend is likely to continue, with 94% of issuers expecting to move away from environmentally- and socially-challenged business models within five years.⁸⁶ Furthermore, given the increased focus on the interconnectedness of nature and climate risk, nature-focused investments are likely to gain considerable traction.

The Kunming-Montreal Global Biodiversity Framework serves as a limelight for biodiversity conservation and restoration. Under target 15 the framework stresses the importance of transparent disclosure of biodiversity

These opportunities can be captured by financial institutions developing versions of common financial instruments and offerings that embed a sustainability lens into their terms, also known as ‘green financial products’. Specific examples include:

GREEN BONDS

Fixed-income instruments designed specifically to raise funds for new and existing projects that deliver environmental benefits. Market interest in such instruments is growing at pace with the annual issuance of green bonds topping \$500 billion in 2021. While a number of green bonds have been developed to fund energy-related projects, there is a clear need for instruments that fund projects supporting the protection and restoration of ecosystems.

SUSTAINABLE FUND INVESTMENTS

Portfolios of equities and/or bonds for which environmental factors are core to the investment process. These portfolios are rapidly gaining in popularity, bolstered by their returns becoming increasingly competitive against conventional funds. To drive the most positive impact these funds should have a specialized focus, e.g. a focus on sustainable food and regenerative agricultural practices. A number of sustainable investment funds observed today that take a broad lens, while relatively better than ‘standard’ funds, are still far from sustainable.

CASE STUDY | SUSTAINABLE FUND INVESTMENTS

ERSTE WWF Stock Environment investment fund

Since 2006, Erste asset management and WWF have cooperated to manage the ERSTE WWF Stock Environment fund, a fund investing primarily in companies that offer and promote environmentally sound technologies, products and services.

Based on a set of guidelines and exclusion criteria, an environmental advisory board initiated by WWF screens all proposed investments to determine if they meet the fund mandate.

The fund has experienced significant growth in assets under management, rising from US\$36 million at the beginning of the relationship with WWF to US\$890 million at the end of FY2021.⁸⁹

risks, which highlights the relevance of initiatives like the TNFD and the EUDR. Furthermore, target 19 of the Framework indicates the necessity of increasing the financial resources up to 200 USD billion annually by 2030 for the implementation of national biodiversity strategies and action plans. While most of these resources are allocated through grants, or payments for ecosystem services, financial products can in some instances contribute as an effective mechanism to halt and reverse biodiversity loss.

The WEF has estimated that transitioning the three socioeconomic systems (food, land and ocean use) onto a nature-positive trajectory could generate US\$10 trillion in business value by 2030 with a total annual investment of US\$2.7 trillion.⁸⁷ Furthermore, the UN Environment Programme estimates investment in nature-based solutions needs to triple in real terms by 2030 and quadruple by 2050 if the world is to meet its climate change, biodiversity and land degradation targets.⁸⁸ This provides an attractive opportunity for financial institutions to have a positive environmental impact while still engaging capital in a commercially viable way.

xix Refers to a suite of actions or policies that harness the power of nature to address some of our most pressing societal challenges, such as threats to water security, the rising risk of disasters, or climate change.



INNOVATIVE INSURANCE PRODUCTS

Given their roles as risk carriers and managers, insurance companies are in a unique position to provide insurance offerings that help to promote environmental sustainability. For example, insurance can be effective in landscapes where changing weather patterns are resulting in more erratic crop yields, limiting the predictability of farmers' cash flows and, in turn, their ability to implement sustainable agricultural practices and resilient land management.

CASE STUDY | INNOVATIVE INSURANCE PRODUCTS

Protecting agricultural yields with innovative insurance products

There are an estimated 500 million smallholder families globally. These producers are responsible for 29% of global crop output and play a key role in the production of the high-conversion-risk commodities discussed in this report.⁹⁰ As a result, the adoption of sustainable farming practices by this group is critical to disentangle environmental degradation from commodity agriculture. One key blocker to investment in more sustainable and productive technologies is the volatility of yields due to weather-related disasters. Why invest in expensive assets given the daunting possibility of losing everything in a storm?

Innovative insurance products are being developed to help drive increased resilience in agriculture. For example, to mitigate the risks of drought, one of the largest threats to farmers, SwissRe and Vandersat (the Dutch-based provider of soil moisture data) partnered to develop a technology-driven tool to measure real-time moisture levels around the world. An insurance solution was then developed to pay out if soil moisture is determined to reach a predetermined level.

This solution has been rolled out to thousands of farmers across the world, including in Latin America and Asia, providing more stability in crop yields. Moreover, the insurance itself acts as useful evidence of collateral when trying to secure a loan, reducing the barriers to sustainable investments.⁹¹



SUSTAINABILITY-LINKED LOANS

Financial institutions can tie nature objectives into the terms of loans to clients, applying higher risk premiums or lower interest rates based on environmental performance. As awareness of the need to internalize these risks increases, we expect loans to consider these factors in their terms by default.

CASE STUDY | SUSTAINABILITY-LINKED LOANS

COFCO US\$2.1 billion sustainability-linked loan

In 2019 COFCO, China's largest food and agriculture company, agreed on a US\$2.1 billion sustainability-linked loan with a consortium of 20 banks. This loan was targeted at financing its efforts to create an integrated agricultural supply chain.⁹²

The interest rate of the loan was linked to the company's sustainability performance with targets including:

- Year-on-year improvement of environmental, social and corporate governance (ESG) performance, independently assessed by research provider Sustainalytics.
- Increasing traceability of agricultural commodities, with a focus on directly sourced soy in Brazil, assessed annually by an independent inspector.



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FURTHER RESOURCES: DEFORESTATION AND CONVERSION FREE FINANCE

In addition to those referenced throughout this report, there are several resources that provide guidance covering a broader set of financial institutions in addition to further granularity on each of the topics covered. These include:

Banking Environment Initiative (BEI) CISL Guidance ‘Banking beyond deforestation’: Provides an action plan for growing the supply of soft commodities that are deforestation-free or forest-restorative.⁹³

Ceres Investor Guidance on Deforestation and Climate Change: Framework for investors to understand and engage on deforestation-driven risks across portfolios. Provides an overview of assessing deforestation risks, key expectations that investors should be looking for in corporate climate and deforestation commitments, and concrete steps to address deforestation risk.⁹⁴

WWF SUSREG tracker for Central Banks: Framework reflecting best practices in the regulatory landscape, providing a roadmap for central banks, financial supervisors and policymakers to enhance the financial sector’s stability and resilience to environmental and social risks (including those focused on biodiversity).⁹⁵

PBAF Standard: Provides guidance on assessing biodiversity impacts and dependencies. Note, while a single metric and/or metrics based on modelled data are not sufficient for financial decision-making, the approaches outlined can be useful to better understand risks.⁹⁶

WWF Biodiversity Risk Filter: Serves as a screening and prioritization tool for biodiversity-risk exposure of a company’s sites. By combining 56 datasets the WWF Risk Filter allows a company or financial institution to plot its sites and identify sectorial- and geographical-hotspots and, if analyzed on a portfolio level, prioritize companies with high biodiversity risks.⁶²

ANNEX 1 | EXTERNAL DATA SOURCES TO MONITOR CLIENT/ INVESTEE PROGRESS

- **Trase:** Platform drawing on publicly available production, trade and customs data to map the supply chains of countries and companies involved in the trade of commodities, down to the specific municipality, supporting the assessment of deforestation risk associated with these commodities.³⁹
- **Forest 500:** Ranks the most influential companies in forest-risk supply chains, evaluating the strength of their policies and actions and progress, updated yearly.⁷
- **ZSL SPOTT:** Lists and scores producers and traders of key deforestation and conversion risk commodities on their disclosures, policies and practices.⁶⁰
- **Global Canopy Aligned Accountability Project:** Database connecting several datasets (including SPOTT, Trase and Forest 500) to support financial institutions in portfolio screening and monitoring of companies.⁹⁷
- **CDP Forests:** Provides a standardized, Afi aligned framework for companies to measure their forest-related risks and opportunities and transparently report on progress. Holds a comprehensive collection of self-reported company data and provides an 'A list' outlining which companies have displayed corporate leadership on environmental performance and transparency.⁶⁶
- **World Benchmarking Alliance 'Food and Agriculture Benchmark':** Assesses and ranks 350 of the world's most influential food and agriculture companies on their contribution to the UN Sustainable Development Goals.⁶¹
- **WWF Palm Oil and Soy scorecards:** Evaluate the progress of the most influential buyers and traders in the palm oil and soy industries on their commitments and actions to transition towards deforestation and conversion free sourcing.^{57,58}
- **Global Forest Watch:** Online geospatial mapping tool providing near-real-time information on how forests are changing around the world (including changes in forest cover/forest integrity). Alongside information on the locations of client and investee operations, this can be used to evaluate the extent of deforestation.⁴⁸
- **Environmental Justice Atlas:** Documents, catalogues and geographically maps instances of social conflict around environmental issues.⁵⁰
- **MapBiomias:** Annual geospatial mapping of land use and land cover across Latin America and Indonesia, providing insights on changes in each territory over time.³²
- **WWF Plowprint Mapping:** Focused on the North American Great Plains and presents a cumulative footprint of cropland conversion, and the ecosystem that remains. The underlying data is updated annually and can be used alongside information on the locations of client and investee operations to evaluate potential instances of conversion.⁵⁴
- **Eyes on the Forest:** Coalition of environmental NGOs that investigate and report on organizations connected to forest loss in Indonesia (Riau, Sumatra and Kalimantan). Report covers both specific companies carrying out deforestation as well as those buying products made from commodities grown on these lands.
- **Agrotools:** Brazilian service provider supporting financial institutions to connect landscape-level information to finance activity. Tool supports screening based on geographical coordinates of land being financed.
- **Earth Defenders Tool Finder:** Collection of resources and training materials to support communities to defend critical ecosystems and territories. Includes the documentation of human rights and environmental abuses.
- **Greenpeace/Chain Reaction Research/Global Witness:** Raise awareness of and highlight key activities relating to deforestation, conversion and human rights abuses, publishing such cases on their websites.
- **Deforestation Action Tracker 'Raising the Bar':** Monitors financial institutions with significant commitments including those in Race to Zero and Glasgow Financial Alliance for Net Zero (GFANZ), to track their action on deforestation and associated human rights abuses.⁴³

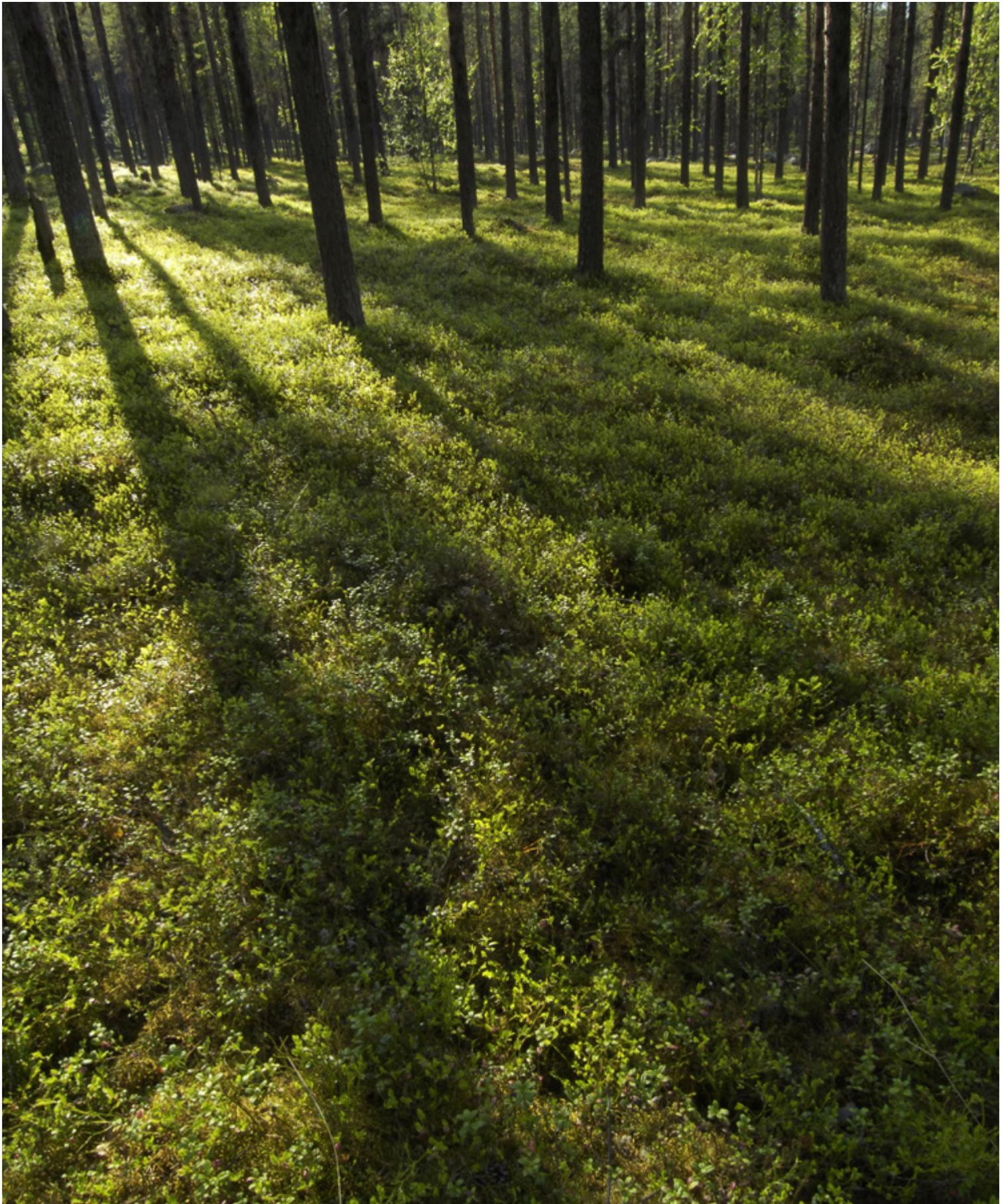


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