China's Green Finance System Supporting the Commodity Supply Chain in Addressing Forest Risks

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Glossary and List of Acronyms

In this report, the term forest risk in commodity supply chains refers to the risk of forest ecosystems being damaged due to excessive logging, land conversion, or other unsustainable land use practices during production and circulation.

Deforestation refers the process where human activities lead to a reduction or complete disappearance of forest coverage. These activities include, but are not limited to, logging for timber, agricultural expansion (such as planting oil palms, soybeans, and other cash crops), livestock development, mining, infrastructure construction, and urbanization.

Forest-risk-free refers to the principle emphasized by the European Union, which requires that products entering the EU market to be free from deforestation or forest degradation, to promote sustainable supply chains.

Forest risk products refer to certain commodities defined by the UK, such as palm oil, soy, and beef, whose production may directly or indirectly cause forest destruction. Therefore, these products should be subject to stricter regulations and certifications to mitigate their negative impact on forests.

EUDR	EU Deforestation Regulation
ESG	Environmental, Social and Corporate Governance
HCV	High Conservation Value Area
HCS	High Carbon Stock
NDP	No Deforestation, No Expansion on Peat and No Exploitation
FPIC	Free, prior and informed consent (rights of indigenous peoples)
TNFD	Taskforce on Nature-related Financial Disclosures
TCFD	Task Force on Climate-related Financial Disclosures
LEAP	(Scoping) Locate, Evaluate, Assess and Prepare
AFi	Accountability Framework Initiative
SBTi	Science Based Targets Initiative
FLAG	Forest, Land and Agriculture
SLL	Sustainable Linked Loan
SLB	Sustainable Linked Bond
KPI	Key Performance Indicator
SPT	Sustainable Performance Target

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Abstract

As one of the world's largest consumers of agricultural commodities, China holds a pivotal position in global agricultural supply chains. With the ongoing advancement of the 'Belt and Road' green development initiative and the expansion of China's green finance system, the financial sector has emerged as a critical mechanism for addressing forest-related risks and mitigating climate change impacts within commodity supply chains. The green financial system can serve as a powerful tool to promote sustainable trade practices and enhance environmental risk management across key commodity supply chains, including palm oil, soy, and beef.

Nevertheless, managing forest risks in commodity supply chains is fraught with challenges. These include complexities arising from cross-border trade, divergent regulatory frameworks between importing and exporting countries, issues related to traceability, and the absence of standardized and widely adopted corporate disclosure practices. In China, green finance policies specifically targeting deforestation risks in commodity supply chains remain underdeveloped. On a global scale, the introduction of the EU Deforestation Regulation (EUDR) has prompted international financial institutions (hereinafter referred to as FIs) and corporate actors within commodity supply chains to adopt proactive measures to fulfill their commitments to eliminating forest-related risks.

Building on this foundation, this report examines China's green finance system with the aim of identifying financing mechanisms to assist Chinese enterprises involved in agricultural and forestry commodity supply chains in reducing forest-related risks. It achieves this by:

- Reviewing existing regulatory requirements within China's green finance framework as they pertain to forest risks in commodity supply chains,
- Exploring policies and practices adopted by international financial institutions (FIs),
- Drawing insights from existing sustainable risk management frameworks, international initiatives, and global trends.

The report provides practical recommendations for Chinese FIs and agri-food companies to strengthen forest risk management in commodity supply chains and support the further development of China's green finance system in promoting zero forest-risk commodity trade.

Based on a study of international FI policies, sustainable risk management frameworks, and semi-structured interviews with key stakeholders in China and abroad, the report identifies current demands, challenges, and drivers for both FIs and companies in China. It outlines the following recommendations:

1. FIs and companies should identify specific goals and initiate targeted actions for forest risk management.
2. FIs are encouraged to innovate and diversify sustainable financial products.
3. Government and regulatory institutions should establish incentive mechanisms and develop standardized criteria.
4. Promote cross-sector collaboration and information sharing to improve transparency and accountability.

1 Requirements related to Forest Risks in Commodity Supply Chains within China's Green Finance Policy System

Since the release of the Guidelines for Establishing the Green Financial System in 2016, China's green finance policies have driven industries to transition toward climate mitigation, resilience, and environmentally friendly practices. These policies have encouraged Chinese financial institutions (FIs) and enterprises to strengthen environmental and social risk management in overseas investments under the Belt and Road Initiative (BRI), while improving ESG (Environmental, Social, and Governance) disclosures and performance in the Chinese market.

However, China has yet to introduce specific policies addressing forest risks in commodity supply chains. This chapter outlines relevant green finance initiatives and principles within China's policy framework, including green finance mechanisms supporting green production, ecological finance and green supply chains, green trade and ecological agriculture, policies related to construction and investment under the Belt and Road Initiative, transition finance and the development of the ecological agriculture industry, and information disclosure requirements for FIs.

1.1 Belt and Road Initiative: supporting green supply chain management and green trade

In 2017, the Ministry of Ecology and Environment, the Ministry of Foreign Affairs, the National Development and Reform Commission, and the Ministry of Commerce of China jointly issued the Guidance on Promoting Green Belt and Road. This document explicitly proposed "promoting the development of green trade and strengthening green supply chain management." It provides clear directions for developing green industries and green finance, targeting both corporations and financial institutions (FIs), to support the investment and development of a green Belt and Road Initiative (BRI). The guidance emphasizes several key points:

- Formulating policy measures, standards, and codes to boost green trade;
- Incorporating environmental protection requirements into Free Trade Agreements (FTAs) and supporting the negotiation and implementation of relevant environmental and trade agreements;
- Expanding the import and export of green products and services while reducing green trade barriers;
- Strengthening international cooperation and demonstration projects on green supply chains, encouraging upstream and downstream supply chain participants to adopt energy-efficient and environmentally friendly measures, and reducing environmental impacts through market-based mechanisms.

Additionally, the Green Investment Principles (GIP) for the Belt and Road, launched in 2018, underscore the importance of green supply chain management. As of January 2022, the GIP has garnered significant participation, with 41 signatory institutions and 13 supporting organizations from various countries, including major Chinese banks and international financial institutions.

1.2 Green finance in China: components related to sustainable agriculture and forest commodity product

Green bond policies supporting sustainable certification of agricultural commodity

The Green Bond Principles, released in June 2021 by the China Green Bond Standard Committee, identified "sustainable agriculture" and "sustainable livestock farming" as eligible categories for green bond financing. Additionally, the Green Bond Endorsed Projects Catalogue (2021 Edition) includes "bulk green agricultural products" under the "Green Organic Agriculture" category within the "Ecology and Environment" sector. The Catalogue defines bulk green agricultural products as commodities certified under internationally recognized sustainability standards. However, it does not provide further details on the scope or types of certifications that qualify.

The Green Bond Principles outline fundamental requirements for green bond issuers, including corporate entities, banking financial institutions, and other relevant organizations. These requirements focus on four core elements: the use of proceeds, project evaluation and selection, management of proceeds, and ongoing reporting throughout the life of the bond.

Green loans supporting development from "Green Industries" to "Green and Low-Carbon Transition Industries"

Green bonds in China are issued in alignment with the Green Finance Statistical System, released by the China Banking and Insurance Regulatory Commission (CBIRC) in 2020, and the Catalogue of Industries for Green and Low-carbon Transition (2024 Edition), introduced by the National Development and Reform Commission (NDRC) in 2024. The Catalogue encourages financial institutions (FIs) to provide financial support for both domestic and overseas projects—such as those along the Belt and Road Initiative (BRI)—that meet its criteria. Compared to the Green Industries Guidance Catalogue (2019 Edition), the updated Catalogue integrates low-carbon transition industries into the broader definition of green industries. Notably, under the fifth category of the Catalogue, titled "Ecological Protection, Restoration, and Utilization," it includes "green agricultural production" and "organic, green, and other certified agriculture" as subcategories.

This update strengthens the policy foundation for FIs to support low-carbon transitions in the agriculture sector. It also provides a basis for financial instruments, such as green credit, to advance sustainable and forest-risk-free practices within agricultural commodity supply chains.

Green Trade Financing

According to the China Green Trade Development Report (2017), "green trade" refers to the exchange of environmentally friendly products and services aimed at protecting, improving, and enhancing environmental quality and functions. "Green trade finance" refers to trade financing measures designed to encourage international trade in environmental products and guide industries toward green production. The concept of green trade finance was formally introduced at the regulatory level for the first time in the Green Finance Statistical System by the China Banking and Insurance Regulatory Commission (CBIRC) in July 2020.

In addition to traditional international trade financing instruments, current green trade financing tools include the Sustainable Shipment Letter of Credit (SSLC), launched by the International Finance Corporation (IFC) and the Banking Environment Initiative (BEI), as well as green forfaiting, green packaged loans, green import and export financing, and green international factoring[1].

Chinese banks and enterprises have also undertaken related initiatives. For example, China Construction Bank (CCB) introduced its Guidelines for Green Trade Investment and Financing, while Petroineos Trading Limited, a trading joint venture controlled by PetroChina International (London) Co., completed Europe's first green sustainable trade finance transaction with Standard Chartered Bank London. The financing was designated for sourcing ISCC-certified (International Sustainability and Carbon Certification) renewable fuels and associated raw materials[2].

1.3 Transition Finance offers opportunity for the green transition of agricultural supply chain

To address the climate transition financing challenges faced by industries that do not yet meet the eligibility criteria for green finance, the concept of transition finance offers new opportunities for sectors such as agriculture and forestry. These sectors are highly sensitive to climate policies and have significant transition impacts.

Currently, transition finance standards are still under development, led by the People's Bank of China (PBoC). Key questions remain under exploration, such as how to promote the measurement and disclosure standards for carbon emissions related to forest risks and land-use changes in agricultural supply chains through transition finance. In addition, several local governments have introduced regional transition finance standards. For example, the Chongqing Transition Finance Support Project Catalogue includes "low-carbon agricultural practices" as eligible transition projects[3].

1 IIGF. IIGF Annual Conference | Preview of Achievements: Green Trade Finance. [Accessed: December 10, 2024]. Available at: https://iigf.cufe.edu.cn/info/1012/7620.htm

2 CNPC News Center. CNPC and Standard Chartered Bank Complete First Green Trade Finance Deal in Europe [Accessed 2024-12-10] https://news.cnpc.com.cn/system/2023/03/30/030097307.shtml

3 Shao, D., Zhang, J., He, X., Li, S., & Xie, W. (2024). Financial support for the climate transition of China's agri-food system: Towards a future of net-zero emissions, climate resilience, and social equity.

1.4 Agricultural and ecological sector policies calling for innovative financing support

Innovation in financial support mechanisms has gained increasing attention in China's agricultural and ecological policies. While these policies have traditionally focused on supporting domestic industrial development, the rapid expansion and diversification of Chinese agricultural and forestry enterprises' overseas operations and investments highlight the need for cross-border policy guidance and incentives. Such international frameworks could draw upon successful domestic policy experiences.

In the agricultural sector, the 14th Five-Year National Agricultural Green Development Plan (2021) established a comprehensive goal of accelerating agriculture›s green transformation. The plan specifically emphasizes innovation in green finance policies and calls for enriching the green financial product system. Additionally, the Guidelines on Encouraging and Supporting Social Capital Participation in Ecological Protection and Restoration (2021) identifies farmland ecosystem protection, restoration, and eco-friendly agricultural and forestry industry development as key focus areas, positioning financial support as one of its core enabling policies.

In the area of ecological finance, the General Office of the State Council of China issued the Opinions on Establishing and Improving the Ecological Product Value-Realization Mechanism in 2021. This policy emphasizes the application of ecological product value accounting in areas such as ecological compensation and financing for operational development. It focuses on establishing market mechanisms and policy support instruments to measure and differentiate the ecological value of products, while underscoring the critical role of green finance. The policy encourages enterprises and individuals to actively participate in green credit operations related to ecological value in accordance with laws and regulations, and to explore innovative financing models to support regional green industry development.

This policy sets the stage for exploring new instruments such as ecological finance and ecological banks, further advancing the development of China's green financial system.

1.5 Information disclosure standards and guidelines for financial institutions

Environmental sustainability disclosure requirements serve as a critical tool for regulators to advance green finance development and as a key incentive mechanism to guide financial institutions in strengthening their environmental and sustainable financing practices. By enhancing the transparency and standardization of information disclosure, these requirements encourage FIs to improve their environmental risk management, thereby directing capital flows toward more sustainable projects and industries. This includes supporting commodity-related enterprises that have implemented robust sustainable supply chain management systems.

In July 2021, the People's Bank of China (PBoC) released the Guidelines for Financial Institutions' Environmental Information Disclosure. These guidelines provide principles, forms of disclosure, essential content, and requirements for FIs to follow in the environmental information disclosure process. The guidelines define environmental information as data related to the environmental impact caused by the business activities, investments, and financing activities of FIs, recorded and stored in a specific format.

In April 2024, under the guidance of the China Securities Regulatory Commission (CSRC), the Shanghai Stock Exchange, Shenzhen Stock Exchange, and Beijing Stock Exchange simultaneously issued the Guidelines on Self-Regulation of Listed Companies – Sustainability Report. These guidelines align with the International Sustainability Standards Board (ISSB) sustainability disclosure standards and formally integrate sustainability disclosure requirements into the regulatory framework for listed companies. The guidelines provide a clearer roadmap for listed companies and FIs to advance their environmental and social responsibilities. At the same time, they offer practical guidance for small and medium-sized enterprises (SMEs) and FIs seeking to enhance their sustainability disclosure practices.

1.6 Summary

Currently, the development of green finance and transition finance in China is not only providing effective financing support and incentives for the innovation and transformation of green industries and products but is also gradually extending support to Chinese corporations engaged in overseas investment and trade in green industries. Although the agricultural and forestry commodity trade supply chain has yet to become a primary focus of green finance, the emergence of green financial products and services—including green trade financing, supply chain finance, green insurance, green funds, and information disclosure guidance—is creating new opportunities. In this dynamic landscape, sustainable and forest-risk-free agricultural commodities, as well as sustainable commodity trade in China, represent emerging financing opportunities.

Seizing these opportunities will require proactive efforts from Chinese FIs, alongside further development of policies, market mechanisms, standards, and tools within the green financial system. Drawing on the existing policies and practices of international FIs in sustainable commodity supply chain management can provide valuable insights to guide Chinese FIs in establishing more targeted and practical policy frameworks. These frameworks can support the green transition of agricultural commodity supply chains, particularly in commodity trade that eliminates forest risks.

2 International Financial Institution's Policies and Practices for Addressing Forest Risks in Commodity Supply Chains

This chapter outlines the forest-risk-free practices of international financial institutions (FIs), focusing on their policy initiatives and case studies in investment and financing. It also highlights key international frameworks and the lessons they offer for advancing forest risk management policies and practices. These insights aim to guide Chinese FIs in developing strategies and action plans, enabling them to take more proactive steps in global sustainable finance.

2.1 Management Practices of International FIs

Financial institutions (FIs) are increasingly adopting policies to eliminate deforestation and forest degradation in commodity supply chains, driven in part by the influence of international laws, regulations, and voluntary initiatives. The European Union Deforestation Regulation (EUDR), officially released in December 2022, prohibits companies from selling or exporting products linked to deforestation or forest degradation in the EU market. This regulation covers key commodities such as beef, palm oil, soy, and their derivatives. It not only directly impacts companies but also increases compliance risks for financial institutions' investment portfolios.

Additionally, in response to growing climate change concerns and ESG (Environmental, Social, and Governance) pressures from capital markets and the international community, standards and frameworks addressing environmental issues such as deforestation, biodiversity conservation, and natural capital have been developed and refined by NGOs, civil society organizations (CSOs), and commercial certification institutions. In alignment with these trends, FIs have begun implementing policy actions, enhancing risk management practices, and improving information disclosure to mitigate potential forest risks in their investment portfolios.

2.1.1 Commitments and Policies

A common practice among international FIs is to articulate zero-deforestation commitments through position statements and targeted policies under their sustainability strategies, biodiversity initiatives, and related topics. For example, in its position statement under the "Nature" theme, released in October 2024, Standard Chartered Bank stated, "We will not provide financial services directly toward projects or activities that: […] convert or degrade High Conservation Value (HCV) areas[4], High Carbon Stock (HCS) forests[5], or peatlands[6]." Additionally, in its Agribusiness Position Statement, the bank specified zero-deforestation requirements for palm oil, soy, and forestry products.

4 High Conservation Value (HCV) areas: Natural habitats with outstanding significance or critical cultural importance. https://by.fsc.org/by-en/for-forests/high-conservation-values

5 High Carbon Stock (HCS) forests: Forests where trees and vegetation contain high levels of carbon. https://highcarbonstock.org/the-high-carbon-stock-approach/

6 Peatlands cover approximately 3% of the Earth's land area but store one-third of the world's soil carbon. They also play a crucial role in maintaining freshwater quality, sustaining fishery resources, and serving as vital ecological habitats.

Other FIs, such as BNP Paribas and Barclays, have adopted similar approaches. Meanwhile, some FIs, including Rabobank, HSBC, and Société Générale, manage deforestation risks directly through established policies.

The primary objective of forest-risk-free commitments and policies is to guide relevant departments within FIs in screening and monitoring existing and potential clients to ensure that their operations and supply chains do not involve forest-related risks. The core elements of these commitments focus on halting the development and conversion of HCVs, HCSs, and peatlands, as well as adhering to sound human rights practices. For specific industries, commodities, and types of supply chain companies, the requirements associated with forest-risk commitments may vary slightly among different banks based on their individual contexts.

Forest-risk-free Policies and Commitments: Coverage of Products and Geographic Scope

Due to the varying deforestation risks associated with different commodities, FIs involved in multiple commodities typically specify their forest-risk-free commitments separately for each industry or commodity.

The table below highlights six FIs with relatively higher levels of transparency and policy strength, detailing their forest-risk-free policies and the range of commodities they cover:

FIs	Titles of the forest risk related policies	Covered sector/commodities
Standard Chartered	Agribusiness Position Statement	Forestry, palm oil, and soy
Barclays	Forestry & Agricultural Commodities Statement	Soy, beef, palm oil, and timber
HSBC	Agricultural Commodities Policy Forestry Policy	Palm oil, soy, cattle ranching, and rubberwood Timber product
Societe Generale	Industrial agriculture and forestry sector policy	Palm oil, beef, and soy
Rabobank	Deforestation and Land Conversion Policy	Palm oil, soy, timber(also addresses sugarcane, cocoa, coffee, tea, and cotton)
BNP Paribas	Sector Policy - Palm Oil Sector Policy - Agriculture	Palm oil Soy and beef(as a separate sector from other agricultural products)

Table 1: Forest-risk-free Policies and Coverage of Commodities by FIs

For palm oil, all six FIs listed above require their clients to commit to No Deforestation, No Expansion on Peat, and No Exploitation (referred to as NDPE). Furthermore, according to Forest500 statistics, over 20 other FIs—including ANZ, Citibank, UBS, and ING—also mandate that clients within their investment portfolios adopt NDPE commitments.

International Initiative: "No Deforestation, No Expansion on Peat, and No Exploitation" (NDPE) Commitment

The NDPE commitment serves as a practical action guide for companies to fulfill the goals of the New York Declaration on Forests, proposed at the 2014 UN Climate Summit.

NDPE is a voluntary sustainability commitment targeting key players in the palm oil value chain, including large downstream manufacturers, retailers, and financial institutions (FIs) investing in the palm oil industry. These entities are expected to require and monitor their suppliers or clients to comply with the commitment. The NDPE goals are set to be achieved by the end of 2025.

The NDPE commitments aim to protect High Carbon Stock (HCS) forests and High Conservation Value (HCV) areas, halt land and peatland development, and prevent the exploitation of indigenous peoples, workers, local communities, and smallholder producers.

Although the declaration is non-binding, companies can systematically disclose their progress through the NDPE Implementation Reporting Framework, enabling stakeholders to monitor compliance. FIs committing to NDPE are expected to assist and oversee their clients' progress in implementing NDPE commitments.

**The New York Declaration on Forests is a voluntary, non-binding international declaration aimed at halting deforestation by 2030. Endorsed and adopted at the UN Climate Summit by multiple stakeholders—including companies, governments, and civil society—the declaration pledges to address environmental and social issues in palm oil production.*

For beef and soy, certain financial institutions (FIs) focus their commitments on designated high-risk areas, such as the Amazon and Cerrado regions in South America. The table below outlines the forest-risk-free commitments made by four FIs for beef and soy sourced from the Amazon and Cerrado regions.

<table>
<tr><th>Financial Institution</th><th>Beef</th><th>Soy</th></tr>
<tr><td>Standard Chartered</td><td>None</td><td>• Exclude clients who：
- "Grow, process or trade soy from the Brazilian Amazon in contravention of the Amazon Soybean Moratorium implemented in 2006."
- "Grow soy in the Brazilian Cerrado."
For clients who source, process or trade soy from the Brazilian Cerrado and / or Brazilian Amazon， the bank requires them to demonstrate:
- "a sustainable sourcing policy with the explicit aim of protecting High Carbon Stock ("HCS") and High Conservation Value ("HCV") land."
- "A commitment to no deforestation and protection of native vegetation."
- Active participation in sustainability forums such as the Roundtable on Responsible Soy (RTRS), etc."[7]</td></tr>
<tr><td>BNP Paribas</td><td colspan="2">• "will not finance customers producing or buying beef or soybeans from land cleared or converted after 2008 in the Amazon."
• "will encourage its clients not to produce or buy beef or soybeans from cleared or converted land in the Cerrado after 1 January 2020, in line with global standards."
• "For all its customers, BNP Paribas will require full traceability of beef and soy (direct and indirect) channels by 2025."[8]</td></tr>
<tr><td>Societe Generale</td><td colspan="2">• "For large corporate clients active in South American soy and beef sectors, the Group will only provide financial products and services to clients who committed to deforestation-free activities (own operations and supply chain) by the end of 2025."
• "will not provide new financial products or services to any company involved in beef or soybeans production or trading from land cleared or converted after 2008 in the Amazon."[9]</td></tr>
<tr><td>Barclays</td><td colspan="2">• "Prohibit the production or primary processing of soy on/from areas in the Amazon cleared or converted after 2008"
• (For soy) Require clients to "commit to achieving a Deforestation-Free South American soy supply chain (direct and indirect) by December 2025 in Areas at High-Risk of Deforestation and Conversion, which include the Amazon, Cerrado and Chaco Biomes."[10]</td></tr>
</table>

Table 2: Specific Regional Requirements in Forest-risk-free commitments for Soy and Beef by Four FI

7 Standard Chartered. Agribusiness Position statement. [Accessed 2024-01-02] https://www.sc.com/en/about/sustainability/position-statements/agribusiness/

8 BNP Paribas. BNP Paribas defines a restrictive policy to fight deforestation in the Amazon and the Cerrado regions. [Accessed 2024-01-02] https://group.bnpparibas/en/press-release/bnp-paribas-defines-restrictive-policy-fight-deforestation-amazon-cerrado-regions

9 Societe Generale, 2024. Industrial agriculture and forestry sector policy https://www.societegenerale.com/sites/default/files/documents/CSR/industrial-agriculture-and-forestry-sector-policy.pdf

10 Barclays, 2023. Forestry & Agricultural Commodities Statement. https://home.barclays/content/dam/home-barclays/documents/citizenship/our-reporting-and-policy-positions/policy-positions/Forestry-and-Agricultural-Commodities-Statement.July23.pdf

Supply Chain Scope of Forest-risk-free Commitments

The forest-risk-free policies of different financial institutions (FIs) vary slightly in terms of classification and coverage, depending on their clients' positions and roles in the commodity supply chain—whether they are direct owners of plantations, fields, and ranches, or midstream and downstream companies involved in direct or indirect sourcing. For instance, Standard Chartered Bank, in its Agribusiness Policy, establishes different levels of constraints—"exclude," "provide only," "expect," and "encourage"—for clients based on their roles in the supply chain, such as producers, processors, and traders involved in direct and indirect procurement. The following chart illustrates the constraints and specific requirements for different roles in the palm oil supply chain as outlined by Standard Chartered Bank.

Level of constraints	Applicable to	Requirements
Exclude	All*	• Develop new plantations by converting or degrading HCV, HCS, primary forests, swamps, peat, or legally protected areas; • Use fire in plantation operations; • Violate human rights.
Only Provide to	Producers	• RSPO member and RSPO-certified; • Have a timebound plan to become fully certified; • Publicly commit to No Deforestation, No Peat and No Exploitation (NDPE), verified by credible assessors when developing new plantations.
	Refiners and traders with direct linkages to units of production	• Have RSPO membership and RSPO Supply Chain Certification of owned facilities and/or obtain a RSPO Traders License.
Expect	Refiners and traders with no direct linkages to units of production	• Implement a sustainable sourcing policy which includes a goal to source palm oil produced with no deforestation, burning, exploitation or planting on peat
Encourage	All*	• Use the High Carbon Stock Approach Toolkit and ProForest Good Practice Guidelines for integrating HCS-HCV assessments and FPIC into the Environmental and Social Impact Assessment (ESIA) process.

* This includes palm oil plantations and mills, scheme smallholders, independent smallholders, and palm oil refiners and related traders.

Table 3: Standard Chartered Bank's Differentiated Requirements for Different Palm Oil Supply Chain Roles in its Agribusiness Position Statement

Traceability Requirements for Forest-risk-free Policy in the Supply Chain

As shown in Table 3 with the example of Standard Chartered Bank, other financial institutions (FIs) also include traceability requirements for midstream and downstream companies in the supply chain, such as traders, retailers, and processors, to identify and mitigate deforestation risks associated with their supply chains.

BNP Paribas requires its clients involved in directly or indirectly sourcing beef or soy to establish a strategy to achieve zero deforestation in their production and supply chains by 2025 at the latest.[11]

Rabobank mandates that its clients active in the palm oil value chain become members of the Roundtable on Sustainable Palm Oil (RSPO) and develop a time-bound plan to achieve RSPO certification or verification for their production or sourcing. Additionally, Rabobank encourages its clients in the soy supply chain to purchase soybeans verified by the Round Table on Responsible Soy (RTRS) and urges midstream and downstream clients to increase their sustainable sourcing of soy.[12]

HSBC requires its clients who are refiners or traders to improve traceability and provide sustainability certifications, ensuring that their palm oil sourcing excludes controversial origins.[13]

In comparison, some policies have more limited traceability requirements for supply chains. For example, Barclays' zero-deforestation policy for palm oil only requires clients involved in upstream plantation, production, and primary processing—and located in high deforestation-risk countries—to obtain zero-deforestation certification.[14]

2.1.2 Identification and Management of Forest Risks in Commodity Financing by FIs

Investing in and financing companies within commodity supply chains that pose forest risks can impact financial institutions' (FIs) financial performance, including revenue, asset valuation, and costs, as well as affect client creditworthiness, credit ratings, or the market value of loans or bonds for investment companies. By identifying potential forest risks within their portfolios, FIs can strengthen their ability to meet forest-risk-free commitments while aligning their financing activities with green standards.

In current practices, the forest risk management of commodities by international FIs is reflected in two dimensions:

1. Macro Dimension: In response to natural capital, biodiversity risks, and climate risks, FIs utilize frameworks such as the Taskforce on Nature-related Financial Disclosures (TNFD) to incorporate forest risks and identify and disclose short-term, medium-term, and long-term risks.
2. Investment Decision Level: FIs integrate forest-risk-free requirements into project selection mechanisms and due diligence processes.

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11 BNP Paribas.BNP Paribas defines a restrictive policy to fight deforestation in the Amazon and the Cerrado regions.[Accessed 2024-01-02] https://group.bnpparibas/en/press-release/bnp-paribas-defines-restrictive-policy-fight-deforestation-amazon-cerrado-regions

12 Rabobank, 2024. Global Standard on Sustainable Development. https://media.rabobank.com/m/3197e93d12fa9d9/original/Sustainability-Policy-Framework.pdf

13 HSBC, 2017. Agricultural Commodities Policy. https://www.hsbc.com/who-we-are/esg-and-responsible-business/managing-risk/sustainability-risk

14 Barclays，2023. Forestry & Agricultural Commodities Statement. https://home.barclays/content/dam/home-barclays/documents/citizenship/our-reporting-and-policy-positions/policy-positions/Forestry-and-Agricultural-Commodities-Statement.July23.pdf

Application of External Frameworks for Risk Identification

In identifying sustainability risks, as well as climate-related risks and opportunities, FIs commonly apply frameworks such as the materiality analysis from the Global Reporting Initiative (GRI) and the Task Force on Climate-related Financial Disclosures (TCFD) framework. However, in the context of forest risks—particularly those linked to commodity investments—FIs have yet to fully integrate these considerations into their sustainability risk assessment processes. Additionally, they have often overlooked the potential opportunities that effective management of these risks could unlock.

Nevertheless, in the past two years, some enterprises and FIs have begun adopting the Taskforce on Nature-related Financial Disclosures (TNFD) framework to identify, disclose, and quantify risks related to biodiversity, forest sustainability, and ecosystem protection.

International Initiative: Financial Risk Analysis of Forests as a Natural Resource—Taskforce on Nature-related Financial Disclosures (TNFD)

In December 2022, during the Convention on Biological Diversity's COP15, 196 countries adopted the Kunming-Montreal Global Biodiversity Framework, committing to achieving a nature-positive world by 2030 and fulfilling the vision of living in harmony with nature by 2050. This commitment presents both responsibilities and opportunities for financial institutions (FIs). Directing financial flows toward biodiversity, forest sustainability, and ecosystem protection is a critical foundation for ensuring sustainable returns on investments in agriculture.

In this context, in October 2021, 75 global member organizations—including FIs, companies, government regulators, think tanks, and market alliances—initiated and established the Taskforce on Nature-related Financial Disclosures (TNFD) to effectively identify, manage, and quantify financial risks and opportunities related to the natural environment.

In September 2023, the TNFD released the final version of its Recommendations, which include a comprehensive framework for managing and disclosing nature-related risks. This framework introduces the LEAP methodology, guiding organizations through a systematic process of: Locate, Evaluate, Assess, and Prepare. By following this approach, organizations can effectively manage and assess their nature-based risks and opportunities to inform decision-making.

In June 2024, the Additional Sector Guidance – Food and Agriculture was published. This guidance recommends that businesses and FIs within the value chains of key agricultural commodities—such as cattle, cocoa, coffee, oil palm, and soybeans—assess and disclose high deforestation and land-use change risks associated with these commodities under the TNFD framework, along with relevant indicators.

According to the TNFD website, a total of 131 financial institutions (FIs) have committed to adopting the TNFD framework. Among them, 11 FIs—including ING Group, Schroders, Mitsui Sumitomo Financial Group, and the Norinchukin Bank—have already disclosed information ahead of schedule. Additionally, 12 agricultural and food companies have committed to adopting TNFD, with agricultural company Bunge (disclosure metrics shown in Table 4) and food retailer Seven & I having already made disclosures. In 2023, China's Mengniu Group also released a report based on the TNFD framework.

The following chart illustrates ING Group's evaluation of the dependency relationship between different industries in its investment portfolio and natural resources using the TNFD methodology. As shown in the chart, ING Group's portfolio has a high level of dependency on trade in soft commodities, with a moderate impact on nature.

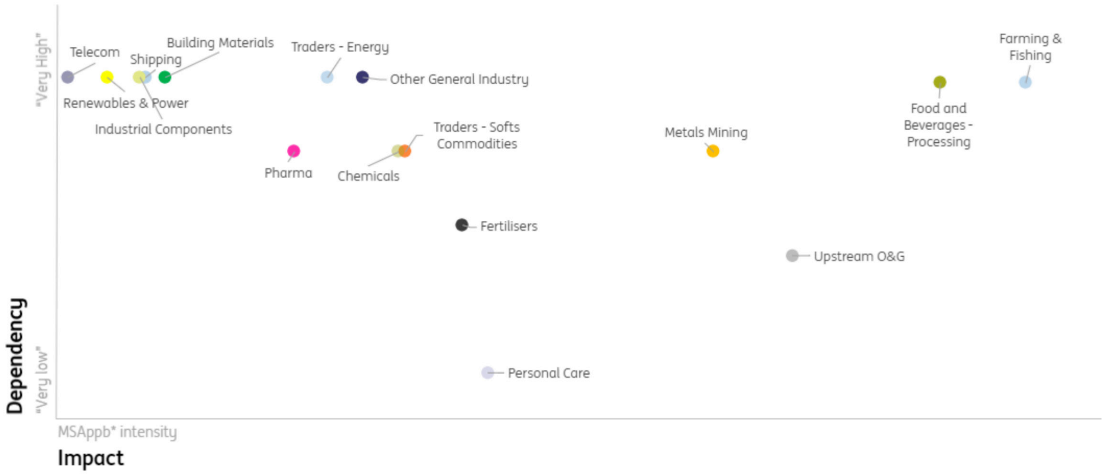

Figure 1: ING Group's Dependency-Impact Hotspot Analysis Based on TNFD Methodology

Indicator	2023 data
Total spatial footprint(km^2)	26% Inside, 74% Outside Biodiversity-sensitive Regions.
Extent of land/freshwater/ocean ecosystem use change (km^2)	Total volume of water withdrawn 2023 - 86,840,746 m^3 27 million hectares monitored through satellite and radar.

Table 4: Display of Selected TNFD Disclosure Metrics for Agricultural Company Bunge[15]

▶ Identifying, Screening, and Managing Clients

In forest risk management policies, FIs typically establish exclusion lists and eligibility criteria for clients whose operations and supply chains pose high forest risks.

FIs usually begin by screening clients against exclusion lists and conducting preliminary reviews based on eligibility criteria. They then proceed to assess and perform due diligence on clients in high forest-risk commodity sectors or consider terminating partnerships where necessary.

15 Bunge Group. 2024 Global Sustainability Report. https://delivery.bunge.com/-/media/Files/pdf/2024-Bunge-Global-Sustainability-Report.ashx

For example, ING Group screens clients based on the following conditions[16]:

- High-risk commodities: Palm oil, soy, cattle, coffee, and cocoa.
- High-risk regions: Regions with high deforestation and conversion rates.
- Involvement in primary production, trading, or first-time processing of high-risk commodities.

After screening, ING conducts assessments based on the following forest-risk-related criteria:

- Public commitment: Clients must have a public commitment to no-deforestation and no-ecosystem conversion.
- Time-bound commitment: Clients must have a time-bound commitment, with a target year of 2025 or sooner.
- Traceability commitment: Clients must commit to achieving full traceability across the entire upstream value chain.

If all the above conditions are met, no further assessment or management is required. If any criteria are not met, ING initiates further communication. In addition to ING, FIs such as Barclays and HSBC also implement similar methods, setting both exclusion lists and eligibility criteria in their forest risk management policies.

For commodity forest risks, FIs can establish independent risk identification and management mechanisms by referencing the latest international frameworks and standards, as well as utilizing analytical tools and databases for targeted risks. For example, asset management group Schroders has developed assessment methodologies and a zero-deforestation scorecard to evaluate clients' deforestation risks. These include:

- A four-step strategy of "Identify – Communicate – Supervise – Gradually Improve";
- Assessment of deforestation risk exposure across different industries;
- Initial evaluation of companies' zero-deforestation commitments and actions using data from platforms such as CDP, Forest500, MSCI, Refinitiv, and Encore;
- Scoring clients using a scorecard (see Table 5 for scorecard dimensions and contents).

Dimensions	Assessment criteria
Strategy and ambition	• Strength of deforestation commitments and policies
Governance and risk management	• Forest-related risk assessments • Board level responsibility and executive incentivization
Traceability and supply chain management	• Supply chain mapping and traceability Monitoring and enforcement • Capacity building
Certification and compliance	• No-deforestation certification and targets
Partnerships and reporting	• Disclosure in line with emerging best practice • Industry initiatives

Table 5: Five Assessment Dimensions of Schroders' Zero-Deforestation Scorecard[17]

16 ING. Our Stance: Deforestation. https://www.ing.com/Sustainability/Our-Stance/Deforestation.htm

17 Schroders, 2021. Assessing Our Impact on Nature – Deforestation https://mybrand.schroders.com/m/156bdba901af246f/original/603383_SC_IDD_Deforestation-Thought-Leadership.pdf

International Initiatives: The Pathway to Eliminate Forest Risks in Supply Chain – The Accountability Framework

In 2019, the Accountability Framework Initiative (AFi), established by several NGOs, released the Accountability Framework. This framework, grounded in the United Nations Sustainable Development Goals and the UN Guiding Principles on Business and Human Rights, provides operational guidelines for companies, financial institutions (FIs), and investors in commodity-related sectors to manage deforestation, ecosystem conversion, and human rights risks. Its goal is to drive the transformation of sustainable and ethical agricultural and forestry supply chains.

Currently, hundreds of companies in the agriculture and forestry value chains have adopted the Accountability Framework. Notably, companies in the food and retail sectors—such as Nestlé and Sainsbury's—are featured on the Accountability Initiative's website. Additionally, various corporate alliances and industry associations have adopted and promoted the Accountability Framework, with over a thousand companies involved.

Furthermore, the principles of the AFi are reflected in the questionnaire by the Carbon Disclosure Project (CDP) and the ESG disclosure standards of the Global Reporting Initiative (GRI). Agricultural and forestry companies, FIs, and other stakeholders can manage, monitor, and disclose supply chain risks based on this framework by completing the CDP questionnaire and following (or referring to) the GRI standards.

Currently, Schroders has selected a limited number of key listed companies for assessment and plans to gradually expand the coverage of forest-risk-free assessments in the future.

The implementation of financial institutions' (FIs) forest risk policies relies on the effectiveness of their project screening processes, as well as the capabilities of business personnel—such as client relationship managers—in addressing forest risks. Additionally, it depends on their existing ESG policies and assessment mechanisms.

Furthermore, FIs can strengthen their forest-risk-free policies by aligning with international frameworks and standards, such as the Accountability Framework Initiative (AFi). Setting greenhouse gas emission reduction targets linked to land-use change, using frameworks like the Science Based Targets Initiative (SBTi), also offers a practical approach to promoting best practices.

International Initiatives: Aligning Forest Risk Control and Climate Targets—Science-Based Targets Initiative (SBTi)

In 2022, the widely adopted climate target initiative, the Science-Based Targets initiative (SBTi), released the Forest, Land, and Agriculture (FLAG) Science-Based Target-Setting Guidance, requiring relevant industries to integrate deforestation and land conversion into their carbon accounting and emission reduction targets. Additionally, it mandates the establishment of a no-deforestation commitment with a target date no later than 2025, in alignment with the Accountability Framework initiative (AFi).

By the end of 2023, according to SBTi, ten major food companies had incorporated land-conversion-related emissions into their Science-Based Target Reports and climate disclosures, including ABF Sugar, a UK-based agri-food company.

In 2024, SBTi issued updated guidance for financial institutions (FIs), stipulating that they should establish emission reduction targets for specific industries and financial products within their investment portfolios. However, this update has yet to introduce mandatory requirements for the FLAG sector. As of December 2024, 286 FIs had publicly committed to SBTi (with some later removed), including 28 institutions from China, encompassing Hong Kong, Macau, and Taiwan.

For the forestry and agriculture sectors, achieving forest-risk-free commodity supply chains is intrinsically linked to aligning supply chain climate targets with the 1.5°C temperature goal of the Paris Agreement. At present, FIs have access to established standards, calculation methodologies, and corporate best practices for integrating forest-risk-related carbon emissions within the boundaries of their investment portfolio climate targets. Looking ahead, the effective management of commodity-related climate risks through SBTi will depend on the continued exploration, practical implementation, and iterative refinement of strategies by FIs.

▶ Supply Chain Management Due Diligence of FI's Clients

Conducting due diligence on both existing and prospective clients is crucial for assessing and monitoring their environmental footprint. Additionally, evaluating their supply chain traceability efforts is essential to ensuring alignment with the financial institution's (FI) forest-risk-free requirements.

For instance, Barclays, in its Forestry & Agricultural Commodities Statement, outlines a framework for utilizing annual due diligence to monitor clients' progress in meeting forest-risk-free commitments. The following summarizes the key aspects of this approach[18]:

- If a client is found to be non-compliant with mandatory deforestation-free requirements, Barclays mandates the development and implementation of a time-bound action plan to achieve compliance.

18 Barclays，2023. Forestry & Agricultural Commodities Statement. https://home.barclays/content/dam/home-barclays/documents/citizenship/our-reporting-and-policy-positions/policy-positions/Forestry-and-Agricultural-Commodities-Statement.July23.pdf

Clients who are unable or unwilling to do so will be subject to measures for terminating the business relationship, taking into account existing contractual obligations.

- For clients that do not meet non-mandatory deforestation-free expectations, Barclays engages with them through the annual due diligence process, encouraging corrective action. Clients who remain non-compliant over time or refuse to take action will undergo a relationship review, and Barclays may consider reducing support.

Similarly, HSBC's Agricultural Commodities Policy requires customers involved in soy, cattle products, and rubber to undergo desk-based due diligence to identify and mitigate deforestation risks within their business activities. If inconsistencies with HSBC's policy are detected, further assessments will be conducted in accordance with the latest standards.[19]

2.1.3 Information Disclosure on FIs' Forest-Risk-Free Commitment Progress

Regular, quantitative, and transparent information disclosure enables multiple stakeholders to monitor financial institutions' (FIs) forest-risk-free commitments, facilitating responsible investment and financing decisions while ensuring effective implementation and management. Although FIs currently disclose significant information regarding their forest-risk-free risk management policies and portfolio measures, publicly available details on specific practices remain limited.

As signatories of the Principles for Responsible Investment (PRI) and the Principles for Responsible Banking (PRB), investment institutions and banks are required to report on deforestation risk management in their investment and financing activities in accordance with PRI and PRB requirements.

Both PRI and PRB incorporate forest-risk management considerations. PRI outlines sustainable forestry investment disclosure requirements in Investment Policy: Process & Practice – A Guide for Asset Owners, while PRB addresses forest-related commitments in its Guidance on Biodiversity Target-Setting. FIs can refer to these guidelines when disclosing progress on their forest-risk-free commitments.

2.1.4 Sustainable Commodity Certification

The performance of corporate forest-risk-free practices in commodity supply chains commonly reflected in the quantifiable indicator of the proportion of sustainably certified commodities sourcing. In existing international sustainable finance practices, such as the identification of Sustainable Performance Targets (SPTs) for Sustainable Linked Loans (SLLs), the acquisition of certification system certificates (e.g., RSPO-certified palm oil) is also involved. Therefore, managing forest risks by requiring, encouraging, and supporting clients to obtain certificates with forest-risk-free requirements is a common practice among international FIs.

19 HSBC, 2017. Agricultural Commodities Policy. https://www.hsbc.com/who-we-are/esg-and-responsible-business/managing-risk/sustainability-risk

The Roundtable on Sustainable Palm Oil (RSPO) and the Round Table on Responsible Soy (RTRS) certifications are widely adopted by FIs as part of their sustainability criteria. Banks such as HSBC[20], Societe Generale[21], Barclays[22], and Rabobank[23] have incorporated these certifications into their forest-risk-free policies, requiring clients to obtain them.

For palm oil, RSPO certification is extensively adopted, with FIs not only requiring clients to become RSPO members but also mandating certification for specific product batches and supply chains. Similarly, in the forestry sector, certifications such as the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC) are widely utilized to ensure responsible and sustainable sourcing of timber, pulp, paper, and rubber.

However, traceability certification for forest-risk-free beef and beef products remains challenging due to the complexities of the supply chain. Unlike palm oil and soy, traceability systems for beef are still under development and have yet to be widely implemented.

The development of sustainable certification and standards for commodities is driven not only by non-governmental organizations (NGOs) but also by industry associations, governments, and commercial entities, each applying these frameworks in different ways depending on their objectives and scope. The following table provides an overview of a broader range of sustainable certifications and standards for agricultural commodities:

Category of Commodities	Certification/Standards	Initiated by
Palm oil	Roundtable on Sustainable Palm Oil (RSPO)	(Jointly initiated by) NGOs
	Palm Oil Innovation Group (POIG)	(Jointly initiated by) multiple stakeholders
	Sustainable Agriculture Network (SAN)	SAN, an international network of NGOs
	Roundtable on Sustainable Biomaterials (RSB)	(Jointly initiated by) NGOs
	Malaysian Sustainable Palm Oil (MSPO)	Malaysian Sustainable Palm Oil (MSPO) Certification Committee (government-owned NGO)
	Indonesia Sustainable Palm Oil(ISPO)	Ministry of Agriculture of the Republic of Indonesia
	International Sustainability and Carbon Certification (ISCC)	(Jointly initiated by) multiple stakeholders
	Rainforest Alliance (RA)	Rainforest Alliance, environmental civil society

20 HSBC, 2017. Agricultural Commodities Policy. https://www.hsbc.com/who-we-are/esg-and-responsible-business/managing-risk/sustainability-risk

21 Societe Generale, 2024. Industrial agriculture and forestry sector policy https://www.societegenerale.com/sites/default/files/documents/CSR/industrial-agriculture-and-forestry-sector-policy.pdf

22 Barclays，2023. Forestry & Agricultural Commodities Statement. https://home.barclays/content/dam/home-barclays/documents/citizenship/our-reporting-and-policy-positions/policy-positions/Forestry-and-Agricultural-Commodities-Statement.July23.pdf

23 Rabobank, 2024. Global Standard on Sustainable Development. https://media.rabobank.com/m/3197e93d12fa9d9/original/Sustainability-Policy-Framework.pdf

Soy	Round Table on Responsible Soy Association (RTRS)	(Jointly initiated by) multiple stakeholders
	ProTerra	ProTerra Foundation (NGO)
	FEFAC Soy Sourcing Guidelines	European Feed Manufacturers' Federation (industry association)
	International Sustainability and Carbon Certification (ISCC)	(Jointly initiated by) multiple stakeholders
Cattle	Global Roundtable for Sustainable Beef (GRSB)	(Jointly initiated by) corporates
	RA-SA(Rainforest Alliance Sustainable Agriculture)	Rainforest Alliance, environmental civil society
	Roundtable on Sustainable Biomaterials (RSB)	(Jointly initiated by) NGOs
Timber product	Forest Stewardship Council (FSC)	(Jointly initiated by) multiple stakeholders
	Programme for the Endorsement of Forest Certification (PEFC)	The Board of PEFC (NGO)
	SFI Urban and Community Forestry Standard	Standards Council of Canada （standardization organization）
	Roundtable on Sustainable Biomaterials (RSB)	(Jointly initiated by) NGOs
	Sustainable Biomass Program (SBP)	(Jointly initiated by) corporates
	VLO (Verification of Legal Origin) of Rainforest Alliance	Rainforest Alliance, environmental civil society
	VLO (Verification of Legal Compliance) of Rainforest Alliance	Rainforest Alliance, environmental civil society
Other	GLOBALG.A.P., for crops, poultry and livestock, fisheries, etc.)	Industry associate
	UTZ, for coffee, tea, cocoa, hazelnuts	NGO
	Farm Service Agency (FSA) certificate, for sustainable farming and ranching	Industry associate

Table 6 Sustainable Certifications/standards of Commodities

In 2024, the Climate Bonds Initiative (CBI) introduced the Deforestation and Conversion-Free (DCF) Sourcing Criteria and the Agricultural Production Criteria. The DCF Sourcing Criteria establish guidelines and certification standards for post-production companies to implement zero-deforestation procurement practices, enabling them to gain recognition in capital markets. Meanwhile, the Agricultural Production Criteria provide certification standards for sustainable production enterprises, projects, and assets, explicitly mandating zero deforestation as a prerequisite.

2.2 FIs' Investment and Financing Practices: Supporting Beef and Palm Oil Supply Chains in Addressing Forest Risks

2.2.1 SLLs and SLBs Supporting the Green Transition of Commodity Trade

Sustainability-Linked Bonds (SLBs) and Sustainability-Linked Loans (SLLs) are widely utilized sustainable finance instruments designed to facilitate the transition of high-emission industries and promote the green trade of commodities. By linking concessional financing terms to borrowers' or issuers' key performance indicators (KPIs) and sustainability performance targets (SPTs), these instruments create financial incentives for enhanced environmental, social, and governance (ESG) performance.

The standards governing SLBs and SLLs are based on the Sustainability-Linked Bond Principles (SLBP) issued by the International Capital Market Association (ICMA) and the Sustainability-Linked Loan Principles (SLLP) published by the Loan Market Association (LMA) and other organizations. The core components of these standards include the selection of KPIs, calibration of SPTs, loan characteristics, reporting, and verification, all of which ensure transparency and accountability in achieving sustainability objectives.

The table below outlines the latest potential KPIs for SLBs, as well as forest-risk-free targets announced by ICMA, categorized by industry, sub-industry, sustainable development themes, and benchmarked international frameworks:

Sector	Subsector	Sustainable development theme	Potential KPIs	Global Benchmarks for calibration of targets
Consumer Goods	Apparel, Accessories & Footwear; Appliance Manufacturing; Building Products & Furnishings; E-Commerce; Household & Personal Products; Multiline and Specialty Retailers & Distributors; Toys & Sporting Goods	Biodiversity (incl. soil/ land use)	Percentage of deforestation free certified commodities	EUDR CDP Forest Questionnaire
Food & Beverages	Food - Wholesale	Raw material sourcing and recycling (circular economy)	Share of products sourced in accordance with NDPE (No Deforestation, No Peat, No Exploitation) practices (%)	/
Food & Beverages	Food & Beverages	Biodiversity (incl. soil/ land use)	Percentage of deforestation-free certified commodities	EUDR CDP Forest Questionnaire

Food & Beverages	Food & Beverages	Biodiversity (incl. soil/ land use)	Amount or proportion of product demonstrated deforestation-free, third party certified (t or % of exposed products)	Convention on Biological Diversity IPBES SASB OECD Post-2020 Biodiversity Framework
Industrials & Manufacturing	Materials / Container & Packaging	Biodiversity (incl. soil/ land use)	Percentage of deforestation-free certified commodities	EUDR CDP Forest Questionnaire

Table 7. Potential deforestation-free KPIs of SLBs

COFCO International's Sustainability-Linked Loan Practices for Brazilian Soy

Since 2019, COFCO International has secured a total of USD 4.6 billion through three sustainability-linked loan (SLL) facilities, each tied to the company's performance in enhancing the traceability of its Brazilian soy supply chain and advancing other sustainable sourcing objectives. These initiatives demonstrate COFCO International's commitment to improving sustainable supply chain management.

In 2019, COFCO International obtained a USD 2.3 billion senior unsecured sustainability-linked loan facility, which at the time represented the largest sustainability-linked loan issued to a commodity trader[24]. The facility was arranged in collaboration with 21 international banks, with Rabobank serving as the sustainability coordinator. The loan's margin adjustments were linked to sustainability performance, with Rabobank providing guidance on improving sustainability disclosures and assisting in the design of incentive structures based on annual performance targets.

The SPTs for this SLL included:

- Year-on-year improvements in environmental, social, and corporate governance (ESG) performance, as assessed by Sustainalytics;
- Increased traceability of agricultural commodities, with a particular focus on directly sourced soy in Brazil, verified annually by an independent inspector;
- Reinvestment of all margin savings into sustainability initiatives, including traceability, environmental protection, and broader sustainable development efforts.

According to COFCO International's official disclosures, this loan facility enabled the company to:

- Achieve its external ESG performance rating target;

24 COFCO international, 2019. COFCO international successfully completes USD 2.3 billion sustainability-linked facilities. [Accessed 2025-01-02]. https://www.cofcointernational.com/newsroom/cofco-international-successfully-completes-usd-23-billion-sustainability-linked-facilities/

- Attain 100% traceability for directly sourced soy in 25 priority municipalities within Brazil's Cerrado region, with a plan to expand full traceability to all directly sourced soy in Brazil within three years;
- Enhance socio-environmental risk assessments of supplying farms, with a focus on high-risk areas, and extend these screening methodologies to Matopiba, a more vulnerable subregion of the Cerrado, to assess suppliers.

In 2021 and 2022, COFCO International secured two additional sustainability-linked loans, USD 700 million and USD 1.6 billion, respectively, in partnership with seven[25] and nineteen[26] banks, continuing its sustainable supply chain efforts and maintaining the SPTs established in 2019[27].

▶ Wilmar Partners with ING to Sign Sustainable Performance-Linked Loan Agreement

In November 2017, Wilmar International Limited (Wilmar) partnered with ING to convert a portion of its existing USD 150 million bilateral committed Revolving Credit Facility into a sustainability performance-linked loan. This initiative marked the first collaboration between a company and a financial institution in the palm oil industry to integrate sustainability performance with financial terms[28].

The loan's favorable conditions are directly tied to Wilmar's ESG performance. If the company meets its commitments to improving ESG performance, the interest rate on a portion of the loan will be reduced in the following year. The assessment of ESG performance improvements is based on ratings provided by Sustainalytics, a leading ESG rating platform.

▶ JBS Establishes "100% Traceable Beef Supply Chain" Goal in Sustainability-linked Bond Framework

In October 2021, JBS announced its sustainability-linked bond framework. As a leading global food company, JBS specializes in the production and sale of protein-based foods, including beef, chicken, pork, lamb, as well as alternative proteins and plant-based products. The company operates across Australia, New Zealand, Brazil, Mexico, Puerto Rico, Canada, the United States, the United Kingdom, and Europe.

Through this framework, JBS reaffirms its commitment to its global sustainability strategy and the development of a zero-deforestation supply chain in Brazil. The company emphasizes strict adherence to its "zero tolerance

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25 Agricultural Bank of China(ABC), ANZ Bank, Banco Bilbao Vizcaya Argentaria(BBVA), Bank of China, China Construction Bank(CCB), China Development Bank(CDB), and Industrial and Commercial Bank of China(ICBC).

26 ABC, Crédit Agricole, SMBC, CCB, BNP Paribas, DBS Bank(Singapore), ICBC, Bank of America, Westpac Banking Corporation, Bank of Communications, OCBC Bank, ANZ Bank, Deutsche Bank, HSBC, Standard Chartered Bank, and ING Group.

27 COFCO International, 2022. COFCO International Secures New Sustainability Linked Loan. [Accessed 2025-01-02] https://www.cofcointernational.com/newsroom/cofco-international-secures-new-sustainability-linked-loan/

28 Wilmar, 2017. Wilmar and ING collaborate on sustainable loan in Asia. [Accessed 2025-01-02]. https://www.wilmar-international.com/sustainability/wp-content/uploads/2017/11/Joint-Press-Release-Wilmar-and-ING-collaborate-on-sustainable-loan-in-Asia.pdf

for illegal deforestation" policy and compliance with environmental and social standards outlined in its responsible procurement policies.

The framework establishes Key Performance Indicators (KPIs), Sustainability Performance Targets (SPTs), and long-term goals to enhance the traceability and transparency of JBS's beef supply chain in Brazil:

- KPI: Collect and publicly disclose the annual total number of cattle purchased from suppliers registered on the JBS Transparent Livestock Platform.
- SPT: By the end of 2025, ensure that the total number of cattle purchased from direct suppliers registered on the platform equals the total number of cattle slaughtered by the group in Brazil in 2024, thereby achieving full traceability for all cattle sources.
- Long-Term Goal: Advance the traceability of the beef supply chain in Brazil, aligning with the standards outlined in JBS's Responsible Procurement Policy to establish a zero-deforestation beef supply chain.

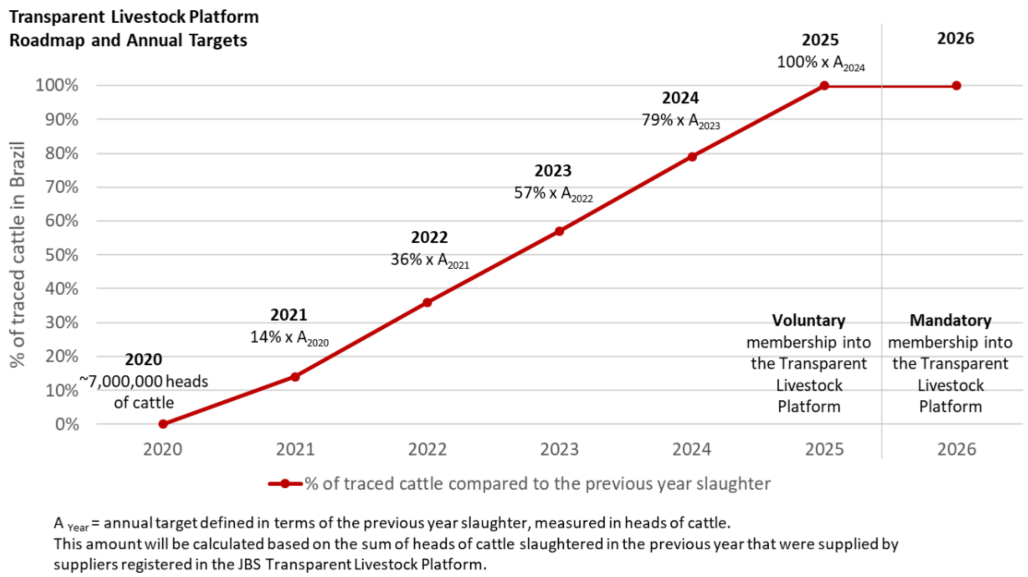

Figure 2: Transparent Livestock Platform Roadmap and Annual Targets

▶ Musim Mas Partners with Rabobank and HSBC to Launch Sustainability-Linked Revolving Credit Facility

In August 2024, Indonesian company Musim Mas announced its inaugural Sustainability-Linked Revolving Credit Facility (RCF), marking a significant milestone in its commitment to sustainable business practices. As a fully integrated palm oil company, Musim Mas operates across the supply chain, from upstream plantations to midstream processing, downstream refining, and logistics.

The EUR 150 million uncommitted RCF will be converted into a Sustainability-Linked Loan (SLL) through a partnership between Musim Mas' marketing arm, Inter-Continental Oils & Fats Pte. Ltd., its Spain and Italy biofuel entities, Rabobank (acting as the sustainability coordinator), and HSBC (as a participating lender)[29].

The loan is linked to three Key Performance Indicators (KPIs):

- RSPO certification of independent smallholders
- Training of independent smallholders
- Maintaining a deforestation-free palm oil supply chain

Annual progress on these KPIs will be externally verified by reputable assessors to ensure transparency and accountability.

In 2021, Musim Mas entered into a Green Trade Financing Facility agreement with a Singapore-based bank. This financing was structured under the Monetary Authority of Singapore (MAS) Green Finance Industry Taskforce's Green and Sustainable Trade Finance and Working Capital Framework, with RSPO certification as a key performance indicator (KPI).

Additionally, Musim Mas had previously introduced an NDPE (No Deforestation, No Peat, No Exploitation) roadmap using 2019 as a baseline. In 2022, the company updated this roadmap with a 2025 target, extending its NDPE commitments to cover its entire supply base.

2.2.2 AGRI3 Blended Finance Supporting Sustainable Agriculture

In October 2017, Rabobank partnered with the United Nations Environment Programme (UNEP) to establish the AGRI3 Fund, aiming to support sustainable, deforestation-free agricultural development while enhancing rural livelihoods. As a blended finance fund, AGRI3 provides de-risking mechanisms, such as first-loss guarantees, to facilitate commercial banks in financing high-risk projects related to sustainable agriculture, forest conservation, and rural development.

At the inception of the partnership, Rabobank and UNEP set an ambitious goal of mobilizing USD 1 billion in private and public capital to drive sustainable, deforestation-free agricultural production. This initiative led to the formal establishment of the AGRI3 Fund.

In January 2020, the Dutch Government and Rabobank each committed USD 40 million, bringing the fund's initial capital base to USD 80 million[30].

29 Musim Mas,2024. Musim Mas Signs its first Sustainability-Linked Loan with Rabobank and HSBC Bank. [Accessed 2025-01-02]. https://www.musimmas.com/resources/news-releases/musim-mas-signs-its-first-sustainability-linked-loan-with-rabobank-and-hsbc-bank/

30 UNEP. AGRI3 Fund launched with Dutch Government and Rabobank as anchor investors. [Accessed 2025-01-02]. https://www.unep.org/resources/case-study/agri3-fund-launched-dutch-government-and-rabobank-anchor-investors

2.2.3 Farmers for Forest Fund Supports Independent Palm Oil Smallholders in Protecting High Carbon Stock Forests

The Farmers for Forest Fund (4F), launched by the Indonesian palm oil farmers' association (SPKS), aims to support smallholder farmers in protecting forests while marketing their sustainably produced palm oil globally.

Ensuring sustainable and forest-risk-free palm oil production comes with increased production costs. According to SPKS estimates:

- Mapping, data collection, and traceability for smallholders require at least 200,000 Indonesian Rupiah (~$13) per hectare.
- Training smallholders in sound agricultural practices costs up to 500,000 Rupiah (~$33) per farmer.
- Educating smallholders on sustainability requirements for certification schemes such as the Indonesian Sustainable Palm Oil (ISPO) and the Roundtable on Sustainable Palm Oil (RSPO) costs 5 million Rupiah (~$330) per village.
- Obtaining ISPO and RSPO certification requires an investment of 3.5 million Rupiah (~$230) per hectare.

Smallholders also face significant risks, including fluctuating market prices, limited capital, high production costs, and low income, particularly during drought periods.

4F is Indonesia's first farmer-led foundation dedicated to raising and managing funds for sustainable certification measures, ensuring direct financial support for smallholders. Funding sources may include private sector investors, government donors, and consumer goods companies engaged in the palm oil supply chain.

To facilitate market access for sustainably produced palm oil, 4F applies the High Carbon Stock (HCS) and High Conservation Value (HCV) methodologies, which are tested and promoted through pilot programs[31].

2.3 Summary

This chapter examines the policies and practices of international financial institutions (FIs) in addressing forest risks within commodity supply chains. These actions stem not only from the need for environmental risk management in FI portfolios but also from the evolving global policy landscape. With the continuous refinement of industry initiatives and market standards, the international financial system is moving toward a more binding regulatory framework, encouraging FIs to integrate forest risk management into their operations.

For Chinese financial institutions (FIs) and companies, these international practices provide valuable references for developing forest risk management approaches. However, due to the distinct characteristics of Chinese FIs and enterprises—as well as differences in policy and market landscapes—directly adopting international models may present limitations.

31 MONGABAY. New farmers foundation supports deforestation-free products in Indonesia.[Accessed 2024-12-10].https://news.mongabay.com/2023/08/new-farmers-foundation-supports-deforestation-free-products-in-indonesia/

For instance, this study focuses primarily on investment and financing incentives provided by Chinese FIs to Chinese enterprises that operate downstream in international agricultural and forestry commodity supply chains—engaging in import, procurement, and sales. In contrast, international FI policies and practices for forest risk reduction primarily target producers at the upstream end of supply chains, requiring them to mitigate deforestation and other environmental impacts. There are fewer binding requirements for downstream enterprises, and most existing measures rely on voluntary commitments rather than strict supply chain management obligations.

Therefore, while drawing from international experience, Chinese FIs must tailor their strategies to their unique challenges, motivations, and external incentives, as well as assess the support required to develop effective forest risk management action plans.

Among international investment and financing practices, sustainability-linked loans (SLLs) represent a relatively feasible approach for Chinese FIs and enterprises at this stage. Other models—such as sustainability-linked bonds (SLBs), the AGRI3 blended finance model, and the Farmers for Forest Fund—offer less directly replicable frameworks. However, these initiatives provide valuable insights for developing blended finance models that leverage public funding and official aid to attract private sector investment and bridge funding gaps in sustainable agriculture and forestry supply chains.

3 The Motivation, Demand, and Challenges for FIs and Enterprises in Supporting Commodity Supply Chains to Address Forest Risks

From a global perspective, the primary financial institutions (FIs) involved in commodity supply chains include banks—both commercial banks and multilateral development banks (MDBs)—as well as asset management companies. These institutions play a crucial role by providing financing to companies along the supply chain and mitigating risks through credit assessments, risk monitoring, and other financial mechanisms.

Other types of FIs, such as securities firms and insurance companies, play supporting roles in the supply chain. For example, securities firms assist enterprises, banks, and asset management companies in managing market fluctuations and mitigating risks through market analysis and financial instruments. Meanwhile, insurance companies provide risk assessments and consulting services, helping supply chain participants identify and evaluate potential risks.

This chapter synthesizes insights from Chinese policies and international experiences to outline the motivations, drivers, demands, and challenges faced by FIs and enterprises in mitigating forest risks within commodity supply chains.

3.1 Motivation

▶ Increasing Compliance Risks Related to Supply Chain Forest Issues

Stricter global regulations on forest protection, such as the EU Deforestation Regulation (EUDR), are compelling financial institutions (FIs) and enterprises to enhance forest risk management. This includes strengthening compliance frameworks and adopting sustainable investment strategies to mitigate exposure to high-risk activities.

▶ Growth of ESG and Responsible Investment

The rising importance of Environmental, Social, and Governance (ESG) factors is reshaping industry practices. Governments, regulators, and stock exchanges are enforcing stricter ESG requirements, prompting large enterprises to prioritize sustainability. This shift also presents opportunities for small and medium-sized enterprises (SMEs) to attract ESG-conscious investors through strong sustainability commitments.

▶ Climate Change Mitigation and Adaptation Imperatives

Land-use change and deforestation account for over 70% of carbon emissions in the food industry. Addressing Scope 3 emissions—particularly from deforestation—is crucial for achieving global climate targets under the Paris Agreement and China's "3060" decarbonization goals. Without proactive management, FIs and enterprises face risks from climate-related disasters, regulatory changes, shifting market preferences, and rising decarbonization costs.

▶ Stakeholder Expectations: Civil Society, Media, and Public Perception

Proactively addressing civil society concerns and public scrutiny on forest risks helps reduce financing risks associated with deforestation-linked projects. By committing to deforestation-free financing, FIs can enhance their reputation, meet consumer expectations for sustainability, and strengthen their market position.

3.2 Demand

▶ Building Awareness and Enhancing Expertise

Financial institutions (FIs) need to strengthen internal expertise in forest-risk-free investment to better identify sustainable financing opportunities. Currently, knowledge gaps exist across institutions and stakeholders in the investment and financing landscape. To bridge these gaps, FIs should:

- Stay updated on regulatory changes and international best practices.
- Participate in cross-institutional information-sharing networks.
- Develop professional teams capable of providing high-quality advisory services for decision-making.
- mplement comprehensive training programs for staff.

Investment managers should have in-depth knowledge of forest-risk-free financing to identify suitable projects, while risk management teams need specialists to assess forest-related risks and opportunities effectively.

▶ Establishing Clear Industry Standards and Environmental Benefit Metrics

Financing deforestation-free agricultural products depends on well-defined green finance standards to verify their sustainability and quantify environmental benefits. Currently, China's green finance framework provides limited guidance on forest risk management in commodity supply chains. While green bonds support certified sustainable agricultural products, and transition finance is gaining attention for climate resilience in agriculture, the sector lacks a unified set of standards and guidelines.

Additionally, China's environmental performance assessments do not yet include quantifiable forest risk metrics, such as the percentage of sustainably sourced commodities. Developing clear, standardized benchmarks for forest-risk-free financing will be critical for enhancing transparency and driving investment in sustainable supply chains.

▶ Building Awareness and Enhancing Expertise

Financial institutions (FIs) should enhance their internal expertise in forest-risk-free investment and financing to better identify sustainable forestry opportunities. Currently, knowledge gaps exist between institutions and stakeholders across the investment landscape. To bridge these gaps, FIs should:

- Stay updated on regulatory developments and international best practices.
- Engage in cross-institutional information-sharing networks.
- Build professional teams to provide high-quality advisory services and staff training.

The effectiveness of these efforts depends on strategic leadership decisions regarding forest-related risks in commodity investments. Investment managers must develop in-depth expertise to identify suitable projects, while risk management teams require specialists to assess forest-related risks and opportunities effectively.

▶ Clear Industry Standards and Environmental Benefit Metrics

Financing for agricultural products that mitigate forest risks depends on green finance standards to certify their sustainability and quantify environmental benefits. Currently, China's green finance system only partially addresses forest risk management in commodity supply chains. While green bonds support sustainably certified agricultural products and transition finance is gaining traction in agricultural climate adaptation, the sector remains underdeveloped, lacking clear, unified standards and guidelines. Moreover, environmental performance assessments and disclosures in China's green finance framework have yet to incorporate quantifiable forest-risk metrics, such as the percentage of sustainable sourcing.

3.3 Challenges

▶ Lack of Clear Industry Standards and Performance Metrics

As mentioned in the previous section, the absence of clear and applicable quantitative indicators and industry standards poses significant challenges. This gap affects agricultural enterprises seeking to implement forest-risk-free supply chain management, financial institutions (FIs) looking to invest in sustainable practices, and the flow of information between them.

▶ Traceability Issues in Commodity Supply Chains

The complexity, length, and fragmentation of commodity supply chains—particularly those involving dispersed smallholders—make traceability a persistent challenge. In consuming countries, weak systematic oversight and accountability hinder transparency, as many enterprises engage only in post-shipment trading, limiting their ability to track sourcing origins.

Despite rising consumer demand for supply chain transparency, it has yet to translate into strong mandatory policies or significant market pressure. Meanwhile, producing countries face technological and financial constraints that impede traceability efforts. For instance, industries like Indonesian palm oil and Brazilian beef, which heavily rely on smallholders, struggle with monitoring due to decentralized operations and inconsistent data collection.

Currently, traceability efforts depend on certification systems, satellite monitoring, and supplier information platforms. However, effective enforcement requires coordination among local governments, regulatory agencies, processors, farms, and smallholders, creating a complex communication chain. This results in delays, technological barriers, and funding gaps, making 100% traceability difficult to achieve.

Given these challenges, the agri-food industry's structural complexities further complicate forest risk management. To address this, financial institutions (FIs) should expand their workforce and strengthen capacity-building initiatives, equipping employees with specialized expertise in forest risk assessment and mitigation.

▶ Underdeveloped Information Disclosure Systems

Corporate disclosure of forest risks remains in its early stages. While some leading Chinese enterprises have begun incorporating forest-related information into their ESG reports, industry-wide transparency remains limited, with significant gaps in disclosure. Many companies lack systematic reporting mechanisms, and their disclosures often lack depth, breadth, and consistency, particularly regarding key supply chain forest risk indicators.

This insufficient transparency not only hinders external stakeholders' ability to assess corporate forest risk management but also presents challenges for financial institutions (FIs) in conducting risk assessments and making informed investment decisions. As a result, weak disclosure practices further complicate effective forest risk management across commodity supply chains.

▶ Insufficient Leadership Engagement in Forest Risk Management

The prioritization of forest risk management in commodity supply chains on institutional agendas largely depends on the awareness and commitment of decision-makers. Currently, many Chinese financial institutions (FIs) take a cautious approach, with forest risk management practices often limited to overseas departments or foreign branches, rather than being fully integrated into corporate-level sustainable development strategies and policies.

To drive more proactive institutional action, it is essential to enhance decision-makers' understanding of forest-related risks through three key approaches:

- Scientifically rigorous risk identification to provide clear, data-driven insights.
- Effective stakeholder communication to align priorities and expectations.
- Targeted capacity building to equip institutions with the necessary expertise.

These elements serve as critical drivers in motivating financial institutions to take decisive action in managing forest risks.

▶ High Financing Costs and Lack of Private Sector Investment

High financing costs pose a significant barrier to forest risk management in commodity supply chains, with funding currently dominated by governments and development financial institutions. Private sector participation remains limited, restricting both the scale and efficiency of available financing.

At present, financial products in this sector are primarily loans and bonds, offering limited flexibility. To address these challenges, it is crucial to expand financing channels and develop innovative financial products. This can be achieved through policy incentives and public-private partnerships, which would help attract private sector investment and reduce financing costs. Such measures would diversify funding sources and foster more cost-effective financing solutions for sustainable commodity supply chains.

3.4 Summary

With tightening legal and regulatory requirements on forest risks in supply chains, alongside ESG developments, international initiatives, and climate targets, managing forest risks has become a critical environmental concern for governments, financial institutions (FIs), enterprises, and civil organizations worldwide.

However, Chinese FIs and enterprises face multiple challenges in addressing these risks, including insufficient awareness, unclear standards, traceability difficulties, and inadequate information disclosure. Additionally, limited private sector funding further exacerbates the issue, highlighting the need for policy and market mechanisms to mitigate high financing costs.

To address these challenges, the following chapter offers targeted recommendations for FIs, enterprises, and regulatory bodies, integrating international best practices with China's market realities. These recommendations aim to help Chinese FIs more effectively identify, assess, and manage forest risks in investment and financing decisions, while also encouraging enterprises to enhance supply chain management practices. Furthermore, policy and financial systems can play a pivotal role in reducing cost barriers through incentives and support mechanisms, fostering the development of sustainable supply chain models in China.

4 Recommendations for China's Financial Sector, Enterprises, and Relevant Regulatory Bodies

4.1 The FIs and Companies should Identify specific goals and initiate targeted actions for forest risk management

In the absence of comprehensive mandatory targets or requirements, enterprises and financial institutions (FIs) should proactively leverage existing tools and frameworks for forest risk assessment and identification. By doing so, they can establish clear, specific targets tailored to their operations, ensuring more effective risk management and alignment with sustainability objectives.

4.1.1 Set Feasible and Ambitious Goals for Reducing Forest Risk in Supply Chains

When setting forest risk reduction goals for supply chains, banks and enterprises must balance ambition with practicality. Goals should go beyond easily achievable actions to avoid greenwashing risks, yet remain concrete and implementable rather than vague commitments. While existing standards vary, organizations should adopt industry best practices within their capabilities, tailoring commitments to align with their operational realities and ensuring meaningful progress in forest risk management.

4.1.2 Utilize Risk Identification Tools and Analytical Frameworks to Aid Decision-Making

Existing frameworks such as TNFD and AFi can help enterprises and financial institutions conduct in-depth forest risk analyses to understand the potential impacts on their organizations.Based on the existing frameworks, standards and tools introduced in Chapter Two - including NDPE, the AFi, and TNFD –FIs can take the following actions to begin addressing forest risks in commodity supply chains:

- **Develop commitments to manage forest risks:** in line with internationally widely applied standards like NDPE to clarify supply chain risk management in both environmental and social dimensions. Referring to TNFD's guidelines to establish the boundaries and select relevant disclosure indicators for deforestation and land-use change within the supply chain.

- **Identify enterprises and projects in existing investment portfolios that require further development or improvement:** Based on the types of commodities and the degree of forest risk involved, categorize different products and businesses within the investment portfolio and require clients to classify their direct and indirect suppliers.

- **Establish a time-bound action plan for reducing forest-risks in the existing investment portfolio:** Applying TNFD's LEAP methodology, manage and assess the FI's risks and opportunities based on their natural assets. According to the principles of feasibility and inclusiveness addressed by AFi, the following elements should be taken into comprehensive consideration:

- The regulatory transition
- The geographic locations of the clients and their supply chains
- The number of smallholders involved (e.g., the palm oil and beef industries typically involve many independent smallholders). These factors help to balance practical challenges with commitment goals when establishing timelines or deadlines.

▶ **Incorporate consideration and analysis of forest risks in commodity supply chains in investment decisions:** Evaluate the supply chain management capabilities and performance of enterprises based on potential lenders' commodity supply chain policies, annual audits, and level of engagement with non-compliant suppliers. Based on the above criteria, to select enterprises with more sustainable commodity supply chain management for investment. Reference the TNFD framework's LEAP methodology and conduct a double materiality analysis of reliance and impact regarding different roles of industries or enterprises in the commodity supply chain. For instance, agricultural product processing may exhibit high reliance and low impact on the natural environment, while agricultural production shows high reliance and high impact. Manage and assess risks and opportunities based on the natural environment and make decisions accordingly.

▶ **Gradually enhance supply chain management for enterprises with forest risks in investment portfolios:** Based on supply chain compliance management principles in the AFi, FIs should assist and supervise enterprises in clarifying forest protection goals according to initiatives like NDPE. FIs should require their lenders to develop roadmaps, establish remediation or restoration measures, and establish supply chain policies. Meanwhile, FIs should actively support capacity building for smallholders and small-sized suppliers to ensure joint participation across the supply chain; and continuously monitor and disclose compliance in supply chains through mechanisms like requiring enterprises to respond to CDP questionnaires and referencing to frameworks such as the TNFD.

▶ **Disclose forest risks in the FI's investment portfolio for compliance oversight:** Disclose the FI's analysis of its forest risks in annual reports or ESG reports, or in CDP questionnaires, to align with disclosure guidelines adopted in the ISSB General Requirements for Disclosure of Sustainability-related Financial Information and the EU Corporate Sustainability Reporting Directive (CSRD).

By utilizing external frameworks or tailored analytical methods, institutions should be able to answer the following questions: What role do they play in the supply chain? If no action is taken, how long might potential risks take to materialize? What are the best practices for sustainability in supply chain management?

After completing the analysis, specific goals should be established based on these findings, and immediate action should be taken.

4.1.3. Phased, Layered, and Gradual Implementation Path for Achieving the Goals

After setting their goals, enterprises and FIs can progressively advance their implementation through the following pathways:

Strategic Planning and Governance System

- Use the results of forest risk assessments as a reference for decision-making to formulate a forest-risk-free strategy, integrating it into existing sustainable development strategies.
- Establish a monitoring system, overseen by a dedicated decision-making committee or related mechanisms (such as an ESG/Sustainable Development Committee).
- Form a dedicated working group for coordination and designate relevant contact persons in departments such as procurement, supplier management, marketing, investor relations, government relations, etc.

Target and Performance System

- Develop clear targets and quantifiable key performance indicators (KPIs).
- Ensure that the relevant indicators reflect the responsibilities and performance of management, procurement staff, and investment business personnel.

Planning the action roadmap

- Implementing the PDCA Cycle: Planning, Doing, Checking, and Acting

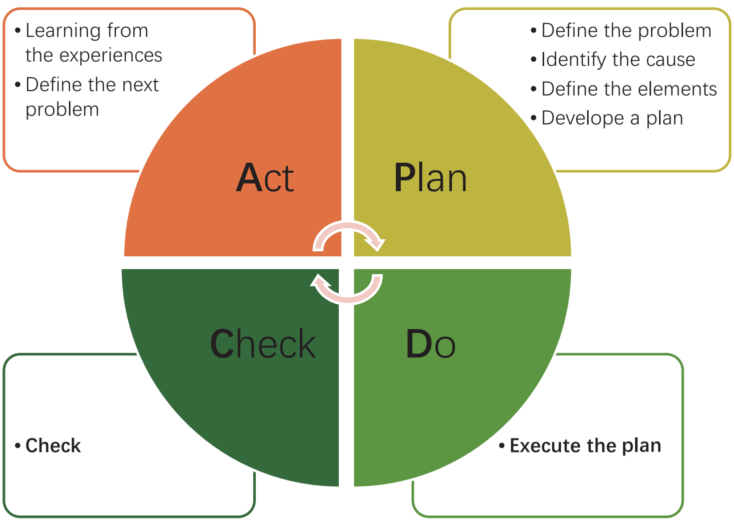

Figure 3 PDCA Cycle

Plan	• Forest-risk-free commitments • Targets and KPIs
Do	• Break down to KPIs for different departments and execute
Check	• Establish performance criteria based on the targets • Analyze the performance data
Act	• Review if the criteria are met • Review feasibility • Alignment with the current international best practices and norms

Table 8 Forest-risk-free action roadmap

Supply Chain Management Measures

- Establish supply chain traceability system;
- Establish supplier compliance policies;
- Implement tiered management for different supply chain players: direct suppliers, indirect suppliers, and raw material providers;
- Conduct supplier due diligence check to strengthen the management;
- Incorporate training on forest-risk-related topics into the existing employee training and capacity-building systems, including evaluation and attendance mechanisms, and integrate these into ESG performance indicators, particularly for procurement staff.

Supply Chain Engagement and Communication

- Conduct supplier surveys and organize training and capacity-building program to enhance cooperation and communication within the supply chain, especially for suppliers with insufficient capacity.
- FIs can implement a phased approach - a systematic progression that establishes priorities and tiers for implementation:
  - Categorize business and product within investment portfolios based on commodity types, source location, and the position of borrowing entities in the supply chain.
  - Develop clear timelines and milestones for each tier to ensure the feasibility of achieving the goals and the monitorability of progress.

Information Disclosure

- Enterprises and FIs should align with relevant sustainable development disclosure frameworks(such as GRI), to:
  - Disclose organizational-level information
  - Develop specialized supply chain disclosure indicators
  - Enhance transparency through tiered data collection

4.2 Encourage More Innovation and Exploration in Financial Products within the Financial System

- **Expand the Use of Sustainability-Linked Financial Tools:** Promote the adoption of sustainability-linked loans (SLLs) and sustainability-linked bonds (SLBs) by establishing performance targets aligned with objectives such as supply chain traceability and forest risk management. These mechanisms can incentivize large enterprises to enhance their sustainability practices, thereby fostering improvements across their supply chains and mitigating forest-related risks.

- **Diversify Financial Instruments and Funding Mechanisms:** Actively develop and expand financial instruments and channels, including private equity (PE), venture capital (VC), insurance products, and carbon market solutions. Innovative financing tools can mobilize additional capital for forest-risk-free initiatives and attract a broader range of institutional investors, particularly asset managers, thereby enhancing market depth and liquidity.

- **Leverage Blended Finance Solutions:** Utilize blended finance structures that integrate public capital and development aid to stimulate private sector investment. Such approaches can address market inefficiencies and accelerate sustainable development efforts.

- **Strengthen Supply Chain Finance:** Encourage large enterprises to facilitate financial flows and enhance risk management for small and micro enterprises within their supply chains, thereby advancing the sustainable transformation of the entire supply chain.

4.3 The government and regulatory institutions should establish incentive mechanisms and develop series of standardized criteria

- **Promote Incentive Mechanisms:** Policy tools can be utilized to reduce tariffs on green products, lower export credit insurance guarantee fees, and provide interest subsidies on relevant loans. These measures can help alleviate financial pressures on businesses, thereby encouraging forest risk management. In terms of policy design, it is advisable to promote regional pilot initiatives to explore practical implementation pathways. Additionally, the introduction of a comprehensive policy framework for managing forest risks in commodity trading can help establish clear objectives and directions. Over time, this approach can drive improvements in regulatory mechanisms and facilitate the harmonization of industry standards, with clearly defined implementation timelines.

- **Development of a Standardized System:** While advancing the establishment of relevant mechanisms, financial institutions and enterprises should be encouraged to voluntarily disclose environmental performance data related to forest risk management in commodity supply chains, thereby setting industry benchmarks. Once a robust indicator system is established, transitioning to mandatory disclosure requirements would be feasible. For instance, following the approach of FLAG companies under the SBTi framework, land-use change data could be incorporated as supplementary information in greenhouse gas emissions reports.

4.4 Promote cross-sector collaboration and information sharing to improve transparency and accountability

Banks, asset managers, commodity supply chain enterprises, industry associations, and corporate alliances should actively foster cross-sector collaboration. This entails engaging with think tanks, research institutions, NGOs, CSOs, and industry associations in exporting countries to conduct research and establish standards, risk management tools, and criteria—such as commodity catalogs, industry benchmarks, and blacklists/whitelists—to mitigate forest risks. Additionally, developing a data-sharing platform that integrates forest risk detection data, industry insights, geographic risk assessment tools, and policy identification mechanisms will enhance resource and information exchange. This, in turn, will support financial institutions and enterprises in establishing more robust decision-making frameworks and actionable guidelines.

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