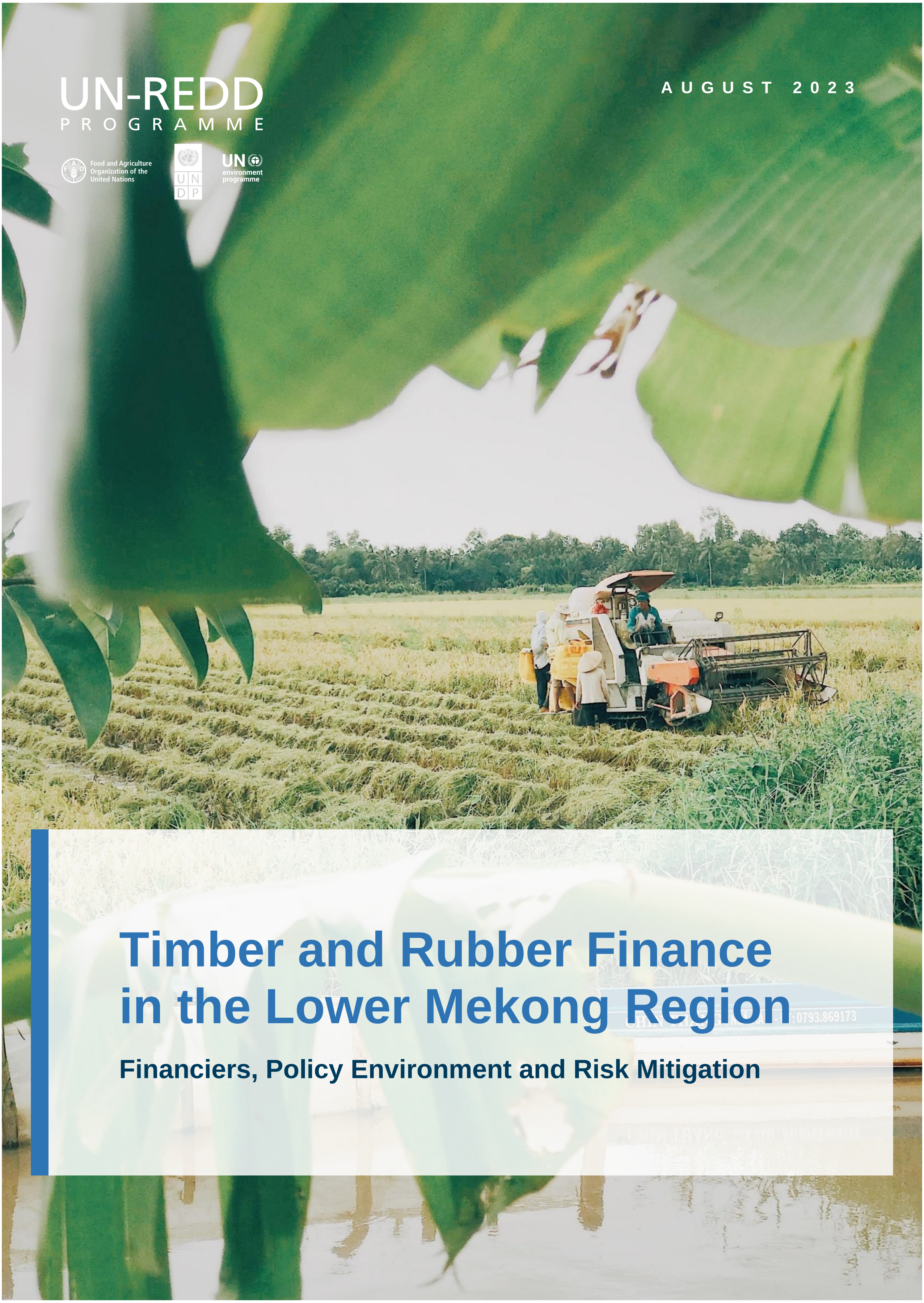

UN-REDD PROGRAMME

Food and Agriculture Organization of the United Nations
UNDP
UN environment programme

AUGUST 2023

Timber and Rubber Finance in the Lower Mekong Region

Financiers, Policy Environment and Risk Mitigation

About the report

This report was prepared for the UN-REDD project ‘Sustainable Forest Trade in the Lower Mekong region. This project aims to leverage the financial sector to mitigate timber and rubberwood exploitation-driven deforestation in the Mekong region. This report contributes to this work by providing information on the main financiers of timber and rubberwood in the region, the policy environment in which they operate, and the policy measures taken by both the companies and their financiers to mitigate deforestation in the region.

This work was commissioned and funded by the UN-REDD Programme.

Authorship

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Acknowledgements

The authors would like to thank Léa Pham Van, Chithira Rajeevan, Arthur Rempel, Mara Werkman and Luis Scungio for their contributions to this report, and George Scott and Alexis Corblin for their support during the research.

About UN-REDD

The UN-REDD Programme is the United Nations Collaborative initiative on Reducing Emissions from Deforestation and forest Degradation (REDD) in developing countries. The Programme assists developing countries in preparing and implementing national REDD+ strategies and builds on the convening power and expertise of the Food and Agriculture Organization of the United Nations (FAO), the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP).

Since its inception in 2008, UN-REDD, the UN interagency flagship programme on forests and climate, has, with the support of Norway and other donors, contributed to slowing deforestation, promoted as a guiding principle the informed and meaningful involvement of all stakeholders, including indigenous peoples, local communities, and women, established firm social and environmental safeguards, and contributed to the sustainable development of its 65 partner countries.

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Executive Summary

Much of the deforestation and biodiversity loss, pervasive across the Lower-Mekong Region has been caused by unsustainable and often illegal logging, and the conversion of forests for plantations and infrastructure.

Without financing, large-scale forest exploitation projects would not be commercially feasible. Forest-based projects require capital not only to buy equipment and machinery, but also to pay the costs of harvesting the timber, processing it, and transporting the finished products to the markets. Banks also serve as important players in the trade of products produced by forest-based industries. They provide (among other things) credit for trade, letters of credit to guarantee payment of trade, facilities for discounted trade credit, loans, and other short-term financing instruments. Without bank underwriting services, forest-based industries could not work their way into the equity and bond markets that allow them access to long-term financing.

Banks and fund managers involved in financing high-risk forest-based industries face legal risks resulting from banking regulations and anti-money laundering laws. Banking regulations require that banks know their customers, manage risk and avoid financing projects harmful to the environment. Failure to adhere to these regulations can result in banks losing their licences and facing administrative sanctions and even criminal charges. Failure to fully understand this risk has led to a fragmentation in the financial services market, with many larger international banks placing exclusions on all deforestation-risk-related activities including those that are sustainable. While many smaller local banks lack the capacity to discern and assess deforestation-related risks and have continued to finance destructive forest-related activities.

To understand this better, the United Nations Environment Programme (UNEP) commissioned this research paper to assess the deforestation risk represented by the key plantation sectors of timber, pulp and paper, and rubber, and the effectiveness of regional financial sector policies in mitigating that risk and provide recommendations for collaborating with the financial sector and regulators to protect natural capital while promoting economic development.

To achieve this, this report analysed the financing activities of the largest companies in each of the timber, pulp and paper, and rubber sectors:

- Firstly, to identify leading banks and investment funds that have exposure to the leading companies in each sector in the Mekong region through capital markets activities or direct financing;
- Secondly, to assess the extent to which the leading companies themselves are sufficiently mitigating their exposure to environmental and social risk through an analysis of their environmental, social and governance policies.
- Finally, to assess the robustness of the ESG risk management policies of the banks that are active in the three sectors in the region. The objective is to identify points of intervention, where banks may be unknowingly exposed to risks associated with deforestation.

Twenty-nine companies across the three sectors were selected using data from official publications, company websites, market studies, and NGO and media reports. Financial data pertaining to corporate loans, credits, and underwriting facilities provided to these companies from 2016 to September 2022 was collected and analysed from multiple sources.

A consistent methodology was used to calculate estimated financing contributions based on publicly available data on deal specifics. In cases where the individual bank commitments in syndicated deals were unknown, the research estimated commitment by analysing the proportion of total fees received by each financial institution to the known total deal value. If deal fee data was incomplete, the book ratio was employed. A formula was developed to decrease the commitment assigned to book-runners as the book ratio increases.

To understand the impact of upstream operations, such as potential deforestation and human rights issues for companies operating across more than one of the assessed value chains, segment adjusters were developed for the three forest-risk supply chains assessed. When deal specifics were insufficient, the adjusters were not applied, and the financing was treated for general corporate purposes.

To consider companies operating in multiple countries necessitated the development of geographic adjusters. These were used to attribute financial flows to the relevant Lower Mekong Region countries. Various financial indicators such as geographic distribution of capital expenditures, assets, liabilities, revenues, and profit/loss informed the development of these adjusters.

The research also assessed the Environmental, Social, and Governance (ESG) policies of 29 companies in the Lower-Mekong and China. The policies were evaluated against 32 environmental, social, and governance factors, using a methodology developed by Profundo. Points were awarded based on each met criterion or achieved sustainability certification.

In addition to thirty companies, thirty-eight banks from the Lower Mekong and China were assessed for their deforestation-risk policies. A methodology developed by the Forests & Finance Coalition was used, which required companies and their suppliers to commit to zero-deforestation and no-conversion of natural forests and ecosystems.

Finally, the regulatory landscape of the financial sector in the Lower Mekong countries and China was evaluated using two key resources: the WWF's SUSREG framework and an extensive literature review. The SUSREG framework, developed by WWF with an aim to fortify the stability and resilience of the financial sector against environmental and social risks, was specifically utilized for the assessments conducted in China, Thailand, and Vietnam. For the countries of Cambodia, Lao PDR, and Myanmar, the research offered concise overviews of their respective financial sector regulatory environments.

Key Findings

$11.4 billion	in forest-risk loans and services to companies that represent a deforestation risk in the Lower Mekong Region (LMR), 86% of which went to the pulp and paper industry were provided by financial institutions, between 2016 and 2022.
Over **50%**	of credit provided to companies in industries that represent a deforestation risk came from Chinese financial institutions, followed by Thai (25%) and Vietnamese (10%) institutions.
$1.3 billion	Forest-risk investments as of September 2022, primarily from financial institutions in China, Thailand, and the US, were held by Institutional investors
20/29 rubber, timber, and pulp and paper companies	assessed for their Environmental, Social, and Governance (ESG) policies, had insufficient measures to manage their ESG impacts.

1/38 **Banks**	in the LMR and China evaluated for their ESG policies (only TMB Tanachart Bank from Thailand), had a near-sufficient score. Eight banks scored zero points, indicating no comprehensive ESG policy.
China's financial sector	was found to have the most robust ESG regulations, while Cambodia, Lao PDR, and Myanmar had lower maturity levels regarding ESG considerations.
The study recommends	reaching out to companies with better ESG policy scores and offering training to banks on developing and implementing appropriate ESG policies.
Central banks	should incentivize green and social loans, while China is advised to develop a more robust approach to its Green project catalogue and ESG regulations.

Financial Flows

This research found that in the period January 2016 to September 2022, financial institutions provided US$ 11.4 billion in credit or loans and underwriting services to the selected companies active in companies in industries that represent a deforestation risk in the LMR. Companies engaged in the pulp and paper industry accounted for 86% (US$ 9.8 billion), and companies engaged in rubber accounted for 12% of rubber (US$ 1.4 billion). The pulp and paper sector attracts higher levels of financing as it is a more capital-intensive industry than rubber and timber, and the companies in the selection include several vertically integrated companies. Additionally, the actual levels of financing to rubber and timber are higher than could be identified by this research; companies operating in these sectors attracted more bilateral financing not captured by the financial databases used for this research and did not disclose these financiers in their annual reports and other disclosures referred to by this study.

More than half of the identified credit was provided by Chinese financial institutions (US$ 6.6 billion). Financial institutions from Thailand provided roughly a quarter of the forest-risk credit (US$ 2.9 billion). A similar trend was found in the destination of credit flows. Approximately 60% of the forest-risk credit provided to the selected companies flowed to China (US$ 6.8 billion), just under 30% (US$ 3.3 billion) flowed to companies active in Thailand, and roughly 10% (US$ 922 million) to companies registered in Vietnam.

Credit flows to Chinese operations mainly flowed through Chinese companies from Chinese financial institutions. A similar trend is observed for financial flows in Thailand. Credit flows to operations in Cambodia, Lao PDR and Vietnam often also flow through foreign-domiciled companies. In China and Thailand, fewer foreign companies were active in the focus forest-risk sectors. In Lao PDR, Cambodia, and Vietnam in particular, more foreign companies were active in pulp and paper, and rubber. Thai and Chinese companies were often active in other LMR countries.

This research further found that in September 2022, institutional investors held US$ 1.3 billion in forest-risk investments in bonds and shares issued by the selected companies. 88% of these investments (US$ 1.2 billion) were attributable to pulp and paper and 10% (US$ 132 million) to rubber. More than 55% of these investments were made by financial institutions from China. They were followed by their peers from Thailand and the United States.

Similar to the trend observed in the credit flows analysis, Chinese investors predominantly invested in companies domiciled in China, with those investments then mainly attributable to activities in China. A proportion of the investments in companies domiciled in China are also attributable to activities in Lao PDR, through Chinese stock listed Sun Paper's paper activities in Lao PDR. Investment attributable to operations in Thailand, mainly flowed through companies domiciled in Thailand, which also attracted significant investment from Thai investors. Thai stock-listed companies also received investments from US and Norwegian investors, among others. A small proportion of the investments in Thai-domiciled companies is attributable to Vietnam through Thai-listed company SCG Packaging, which has pulp and paper activities in Vietnam.

Company Policy Assessments

The environmental, social and governance (ESG) policies of a selection of 13 rubber companies and 16 timber companies active in the LMR were assessed based on their performance on 32 environmental, social, and governance criteria, derived from international standards and agreements.

The companies with the highest scores are the pulp and paper company Guangxi Stora Enso Forestry (active in China, owned by a company from Finland) which scored 7.5 out of 10 overall, and the Thai rubber company Sri Trang Agro-Industry. A total of 20 out of 29 companies have insufficient policies to address the environmental, social and governance impacts of their operations[i].

Nearly 50 percent of the pulp and paper, and timber companies analysed (seven out of 16) have reasonably adequate policies to address the environmental, social and governance impacts of their operations[ii]. This finding is strongly related to the fact that these seven companies have achieved Forest Stewardship Council (FSC) certification, which includes many of the criteria included in the assessment methodology in its list of certification criteria.

In contrast, to the pulp and paper, and timber companies analysed only two out of 13 rubber companies assessed have reasonably adequate policies to address the environmental, social and governance impacts of their operations[iii]. Unlike the pulp and paper, and timber sectors, the absence of a reliable certification system in the rubber sector plays an important role here.

The LMR country in which the companies operate does not play any role in explaining the differences in policy scores between the companies researched. However, the findings do suggest that companies owned by corporate groups from OECD countries typically display better ESG policies. This is probably linked to a higher level of public pressure on companies in OECD countries to live up to ESG criteria, in their domestic and overseas operations.

Bank Policy Assessments

As a next step, the ESG policies of 38 banks from the Lower Mekong Region and China were researched. This selection included banks for which financing relationships with the selected rubber

[i] Defined by a policy assessment score of below five out of ten

[ii] Defined by a policy assessment score of five out of ten, or higher

[iii] scores of five out of ten or higher

and timber companies were found, as well as some of the largest banks in the different countries in the LMR and national banks that have a specific focus on the agriculture sector.

As with the corporates, the ESG policies of these banks were assessed based on 35 key environmental, social and governance criteria, derived from international standards and agreements. This methodology delivers separate scores for each bank in separate scores on a scale from zero to 10 for each of the three areas (environmental, social and governance), as well as in a total score for the three areas together.

Only one bank, TMB Tanachart Bank from Thailand, scores almost sufficient with a score of five out of ten. Two other banks score inadequately: Vietnam Prosperity Bank from Vietnam with a score of 4.2 and Industrial Bank Company from China with a score of 3.9 All other 35 banks score poorly, lower than two points overall. Eight of the banks analysed scored zero points.

This means that none of the institutions researched comprehensively deal with the various environmental, social and governance issues, which are widespread in the pulp and paper, timber, and rubber sectors in the LMR and China. This is especially true of the 35 banks that have hardly any policy and for which there is the significant risk of providing finance to companies which violate crucial ESG criteria.

The analysis shows that differences between the average policy scores between banks by country of origin are no significant. Banks from Thailand score the highest relatively with an average score of 1.8 out of 10. This could be related to the Sustainable Banking and Responsible Lending Guidelines in Thailand, introduced in 2019. These are further analysed and discussed in chapter six.

Regulatory Environment Assessments

The financial sector regulatory environments of the five LMR countries (Vietnam, Thailand, Cambodia, Lao PDR, and Myanmar) and China were each assessed in terms of how they address ESG issues. Of the six countries, China was found to have the most robust regulation in terms of ESG, with ESG issues already embedded in many of the central bank’s activities and financial sector supervision. It also has adopted and regularly updates the Green Bond Endorsed Project Catalogue - a quasi-taxonomy that provides a comprehensive list of eligible green categories, which, however, lacks technical screening criteria.

Thailand and Vietnam show similar levels of ESG maturity. The analysis shows Thailand to be slightly more advanced. However, many of the Thai E&S policies and guidelines are voluntary, and their implementation remains at the discretion of the financial institutions, rather than being imposed by the regulator. At the same time, Thailand’s guidelines appear to be rather comprehensive, particularly when it comes to disclosures and transparency.

Although Vietnam’s central bank is engaged in organizing technical trainings on E&S risk management and E&S due diligence for banks and has issued sector-specific E&S checklists, overall, its regulatory environment seem to be slightly less advanced than Thailand’s.

Financial regulations and regulatory environments in Cambodia, Lao PDR, and Myanmar demonstrate lower levels of maturity in terms of ESG considerations. Their central banks and financial sector regulators are still to incorporate environmental and social aspects into their policies and guidelines for banks and financial institutions. Even though neither of the three countries has developed its green taxonomy, as ASEAN member states, Cambodia, Lao PDR, and Myanmar may benefit from the ASEAN taxonomy. At the same time, currently, according to the ASEAN Sustainable Finance State of the Market report, the development of the sustainable finance regulations and market environment in Cambodia, Lao PDR and Myanmar remains ‘very low’.

In all assessed jurisdictions, climate change seems to be the most widely represented E&S issue. In contrast, deforestation and land conversion, biodiversity loss, terrestrial, marine, and freshwater ecosystem conservation, as well as other environmental issues are poorly represented in local financial regulations. This equally applies to social issues, including human rights and gender-related issues, which were insufficiently addressed.

Recommendations

The analysis found that 20 of the 29 major pulp and paper, timber, and rubber companies active in the Lower Mekong Region and China had insufficient policies in place to mitigate the most negative ESG impacts of their operations. The absence of such policies increases the risks that the companies become involved in deforestation, human rights violations, and other unsustainable practices. It is vital that companies become aware of these risks, and take measures to address them.

In order to do so, an information programme could be set up for pulp and paper, timber and rubber companies in the region, informing them about international standards on environmental, social and governance issues and the advantages of adhering to such standards: managing legal and reputational risks, and securing continued access to product and finance markets. To elevate peer pressure and show best practices, it is recommended to start by reaching out to the companies that score better in our policy assessments. If these companies are on board and willing to share their experiences, practical advice can be provided to other companies. On top of providing information, the programme can then also provide trainings on the development and implementation of proper ESG policies.

When developing such an information programme it would be recommended to work together with sustainability certification schemes and frameworks, such as Accountability Framework, Global Platform for Sustainable Natural Rubber, PEFC, FSC, CCB, GAP and Rainforest Alliance, to learn from their experiences and to support the companies in the process of developing and implementing better ESG policies.

Our analysis of the ESG policies of 38 regional banks found, that none of these banks deals with the various ESG risks in the pulp and paper, timber and rubber sectors in a comprehensive way. This absence of policies increases the risks of financing companies that operate in a non-sustainable way. It is worth noting, that the majority of banks assessed report to have taken steps to integrate sustainability criteria in their governance structure. This indicates there is some initial awareness of the issues, which is a promising basis to work from.

It is recommended that trainings are offered to the selected banks. These trainings should focus on how they could develop and implement ESG policies that help to prevent them from getting involved in deforestation, human rights violations and other unsustainable practices. These trainings could be set up at the national level in the different LMR countries and China, if possible. These trainings should cover the sustainability challenges posed by the pulp and paper, timber and rubber sectors and how these challenges could translate into financial and compliance risks for the banks themselves. Further, the trainings should clarify what measures banks should take to address these risks and which (inter)national standards and certification schemes could be used to help implement these measures.

In developing the trainings, the organizers should look for collaboration with financial regulators in the LMR countries and with bank associations and other industry bodies. Endorsement from these institutions can be an effective signal to individual financial institutions. It would also be worthwhile to explore collaboration opportunities with civil society, including WWF, the Forests & Finance coalition[1] and Fair Finance Asia[2]. The latter is already organizing similar trainings for banks in the LMR.

All assessed countries will benefit from a more robust regulatory framework based on international standards and encompassing a broad range of sustainability aspects, including climate, ecosystems and biodiversity, as well as social issues. Many of the voluntary guidelines and recommendations will have to be transformed into regulations and made obligatory for banks and other financial institutions. Central banks of the LMR countries and China should provide incentives for banks and investors. These may include decreasing capital requirements for green, social, and sustainability loans, subsidizing interest rates on such loans, and including bonds that are compliant with relevant ICMA principles and national or regional taxonomies into their collateral frameworks. All LMR countries will benefit from designing and developing their own taxonomies, perhaps starting with a wider application of the existing ASEAN taxonomy as a low-hanging fruit. As for China, a more robust approach to its green project catalogue (often referred to as China's Green Taxonomy) is desired. Such an approach should include developing and adopting technical screening criteria for eligible sectors and project categories. More specifically, key recommendations for each country include:

China: More public and civil society engagement is desired while developing ESG regulations and supervisory expectations.

Cambodia: The Central Bank should include ESG considerations, including deforestation and forest degradation, in banking sector regulations, for example, by issuing relevant guidelines for FIs that will set out the framework for developing and implementing sustainable financial products.

Lao PDR: Environmental and social considerations should be included in the banking supervision, including in the prudential regulations at both micro and macro levels.

Thailand: The Bank of Thailand's efforts to develop a national taxonomy, as well as the Government of Thailand's plans to design and implement a carbon pricing mechanism, should be accelerated.

Vietnam: Development of the National Green Taxonomy (which is expected to cover 8 sectors, 83 green economic activities, and green investment projects with environmental screening criteria, thresholds, and indicators) should be finalized.

Myanmar: Like in Lao PDR, one of the key recommendations for Myanmar would be to include environmental and social aspects in the banking supervision, including in the prudential regulations at both micro- and macro levels.

Abbreviations

ASEAN	Association of Southeast Asian Nations
CBIRC	China Banking and Insurance Regulatory Commission
CFA	Conservation Forestland Area
E&S	Environmental and social
ELC	Economic Land Concessions
ESG	Environmental, social, and governance
EU	European Union
FIO	Forest Industry Organization
FLEGT	Forest Law Enforcement, Governance and Trade
GMS	Greater Mekong Subregion
ha	Hectare
ICAAP	Internal Capital Adequacy Assessment Process
ICMA	International Capital Market Association
LEP	Law on Environmental Protection (LEP)
LICADHO	Cambodian League for the Promotion and Defense of Human Rights
MAFF	Ministry of Agriculture, Forestry and Fisheries
MLF	Medium-term lending facility
MoE	Ministry of Environment
MTE	Myanmar Timber Enterprise
NBC	National Bank of Cambodia
NGFS	Network for Greening the Financial System
NGO	Non-Governmental Organization
PBOC	People's Bank of China
PFA	Production Forest Area
PPF	Public Protected Forests
PtFA	Protection Forest Area
RF	Reserved Forests
SBV	State Bank of Vietnam
SERC	Securities and Exchange Regulator of Cambodia
SME	Small and medium-sized enterprises
TCFD	Taskforce on Climate-related Financial Disclosures
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change

1.

Establishing the Financing Sources for the Selected Companies

This chapter presents/provides details on the origin and type of financing for the leading companies active in the forest risk industries of timber, pulp and paper, and rubber across the Lower Mekong region. Section 1.1. outlines the general findings. The remaining sections provide granular results for each LMR country. Each section is subsequently broken down into an analysis of the creditors and investors.

Key Messages

01	Between January 2016 and September 2022, the leading companies in the timber, rubber, and pulp and paper sectors active in the Lower Mekong Region received US$ 11.4 billion in financing and underwriting services. Of the three sectors assessed, the pulp and paper sector received the highest level of financing.
02	Most of the forest-risk credit in the Lower Mekong Region was provided by financial institutions from China, followed by Thailand, amounting to a total of US$ 2.9 billion.
03	The largest forest-risk creditor was Thailand's Siam Commercial Bank, which provided US$ 1.1 billion. The top 15 creditors were mostly regional and global commercial banks.
04	Institutional investors held US$ 1.3 billion in forest-risk investments in selected companies' bonds and shares in 2022. China, Thailand, and Lao PDR received the majority of these investments. Harvest Fund Management from China, was the single largest investor in forest-risk companies in the region. Other significant investors included entities from China, Norway, Thailand, and the United States.
05	Over 55% of forest-risk investments to companies in the region were made by financial institutions from China, followed by Thailand and the United States. The top three investors by capital were all Chinese financial institutions.

06 Chinese operations were primarily financed through Chinese companies, Sinar Mas Group, Thai companies, and Thai financial institutions. Financing in Lao PDR, Cambodia, and Vietnam came primarily through Chinese and Vietnamese companies.

07 China received US$ 6.8 billion in forest-risk loans and underwriting services for the selected companies. Most of this credit was provided by Chinese domestic financial institutions.

08 US$ 220 million in forest-risk loans and underwriting services were provided to the selected companies in Lao PDR. This financing came from a broad range of countries with China providing the most, followed by Vietnam and France.

09 Thailand received US$ 3.3 billion in forest-risk loans and underwriting services, mostly for pulp and paper activities. The largest provider was Siam Commercial Bank with US$ 875 million.

10 Vietnam received US$ 922 million in forest-risk loans and underwriting services, with the largest provider being Siam Commercial Bank, offering US$ 183 million. The largest investor in forest-risk companies in Vietnam was the Thai Social Security Office.

1.1 Findings

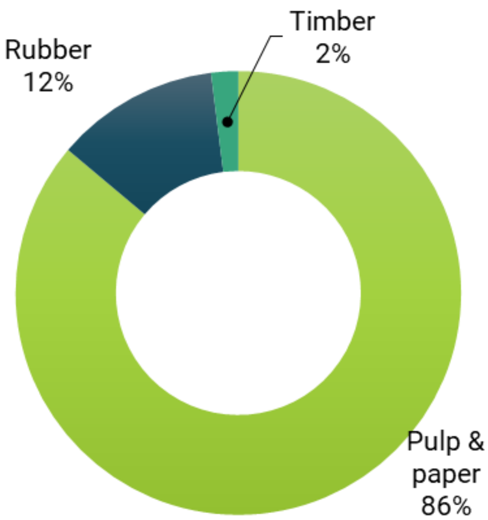
1.1.1 Creditors

Finance by sector

This research has found that from January 2016 – September 2022 US$ 11.4 billion in loans and underwriting services were provided to the leading companies in timber, rubber, and pulp and paper active in the LMR. 86% of this credit was provided to companies in pulp and paper (US$ 9.8 billion), 12% to companies in rubber (US$ 1.4 billion), and 2% to companies in the timber sector (US$ 224 million).

The higher level of financing attracted by the pulp and paper sector companies is due to the larger size of the selected pulp and paper companies and their degree of vertical integration. Moreover, pulp and paper are a comparatively capital-intensive industry. The seemingly lower levels of financing identified for companies active in the rubber sectors can be partially explained by the gaps in the financing data for the selected Vietnamese rubber companies HAGL and VRG. These are both relatively large companies with activities also in Cambodia and Lao PDR. The actual financing level of these large rubber companies is likely far higher than what could be identified in this analysis. Similarly, the selected timber companies were mostly upstream operators, thus requiring lower levels of financing. This was compounded by a lack of data and transparency that reduced the apparent levels of financing for the companies engaged in the timber supply chain.

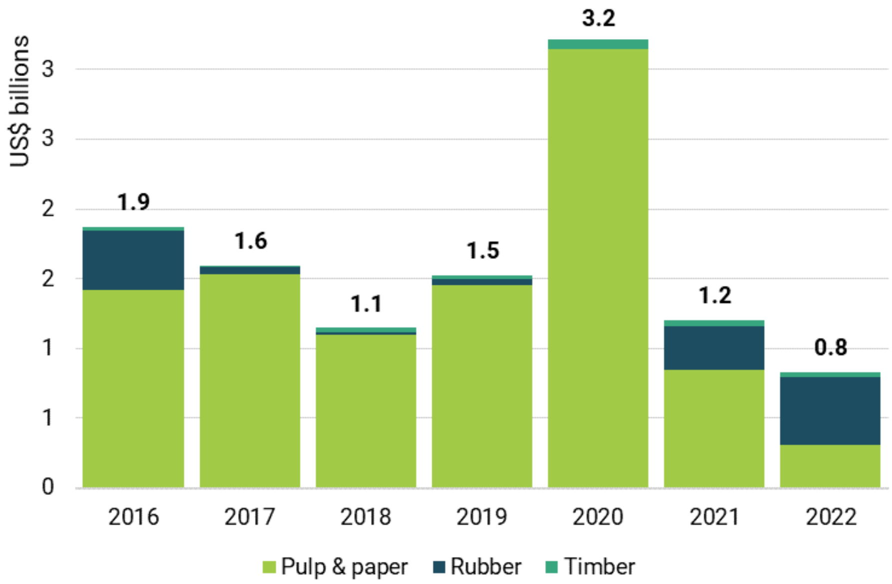
Figure 1 Loans and underwriting services per forest-risk sector (2016-2022 September)



Finance by year

Figure 2 shows the annual changes in forest-risk loans disbursed and underwriting services provided to the selected companies across the LMR countries. Annual forest risk credit flows can be seen to be relatively stable between US$ 1.1 to US$ 1.9 billion, with the exception of a peak in 2020 that was due to significant deals for pulp and paper from companies operating in Thailand and China which include a US$ 1.5 billion initial public offering (IPO) of Thai SCG Packaging.

Figure 2 Annual trends in forest-risk credit to selected companies in LMR (2016-2022 September, US$ mln)



The research found that 60% of the forest-risk credit provided to the selected companies flowed to activities in China (US$ 6.8 billion). 29% (US$ 3.3 billion) flowed to activities in Thailand, and 8% (US$ 922 million) to those in Vietnam. Additionally, this analysis found that the majority of identified credit provided to the selected forest-risk companies active in the LMR was provided by financial institutions from China. These financial institutions provided roughly US$ 6.6 billion, or 58% of all identified credit. Chinese financial institutions were followed by institutions from Thailand, which provided US$ 2.9 billion in forest-risk credit to the selected companies, or a quarter of identified credit.

Finance by country of origin

Financing for Chinese operations mainly flowed through Chinese companies or, the Indonesian/Chinese conglomerate Sinar Mas Group, as shown in Figure 3. A similar trend was observed for financial flows to Thailand, which predominantly flow through Thai-domiciled companies and come from Thai financial institutions. Credit flows to activities in Lao PDR flowed through companies domiciled in China and Vietnam, as well as domestic Laotian companies. Financing for activities in Cambodia came through companies domiciled in China and Vietnam. While credit flows to the focus forest-risk sectors in Vietnam flowed through companies domiciled in China and Thailand, as well as a number of domestic Vietnamese companies. In China and Thailand, the research found that there were fewer foreign companies active in the focus forest-risk sectors. Inversely in Lao PDR, Cambodia and Vietnam, there was a higher proportion of foreign companies active in pulp and paper, and rubber. Thai and Chinese companies were often active in other LMR countries.

Figure 3 Loans & underwriting per investor country – company group country – forest-risk production country (2016-2022 September, US$ mln)

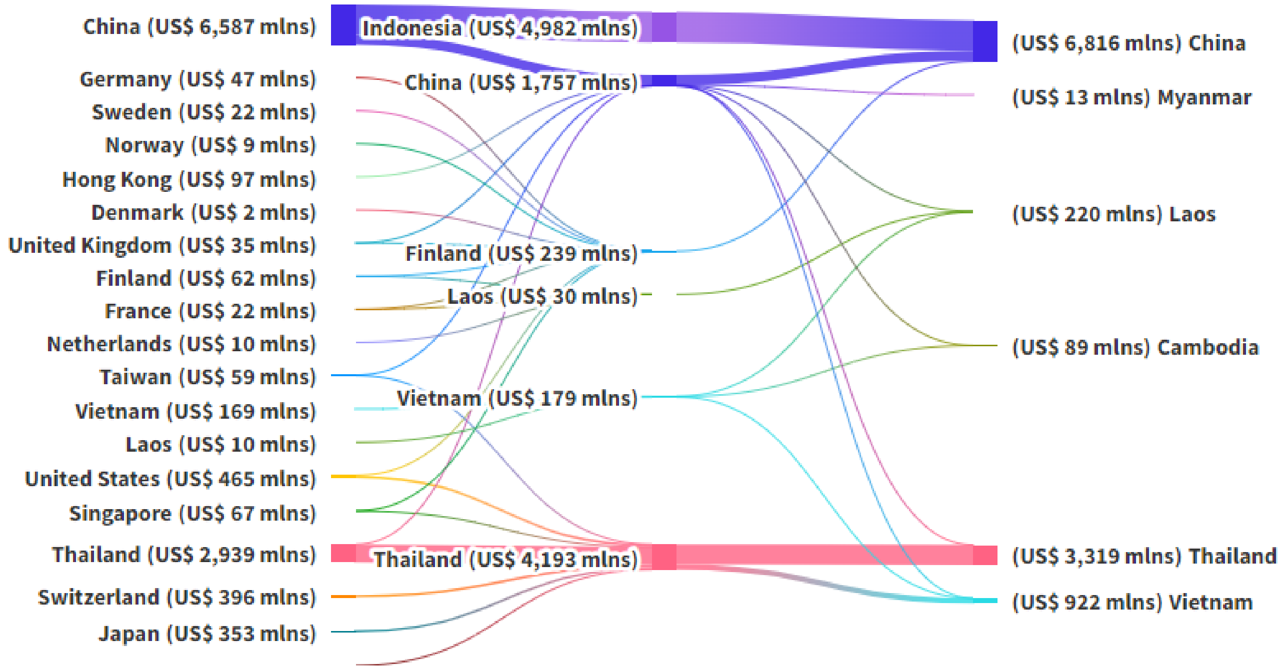
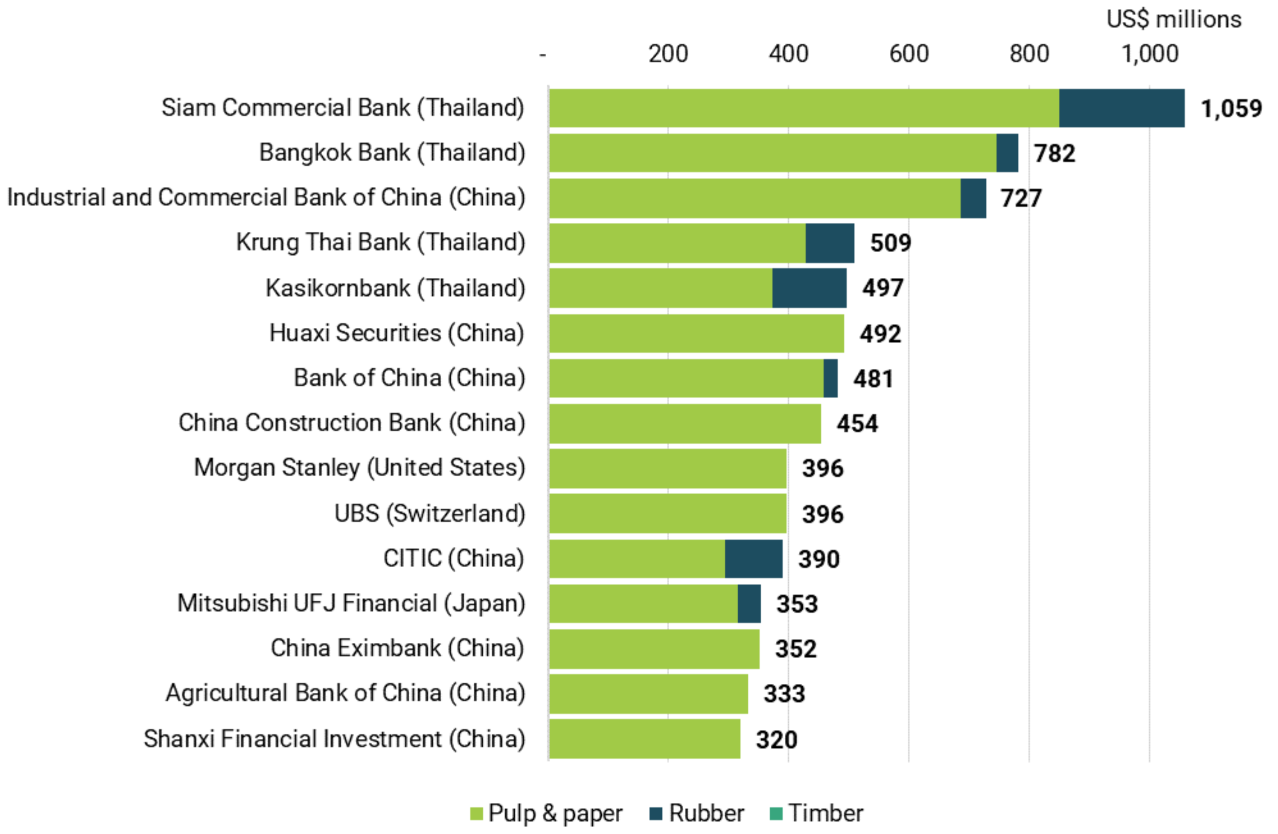


Figure 4 Top-15 creditors per sector (2016-2022 September, US$ mln)



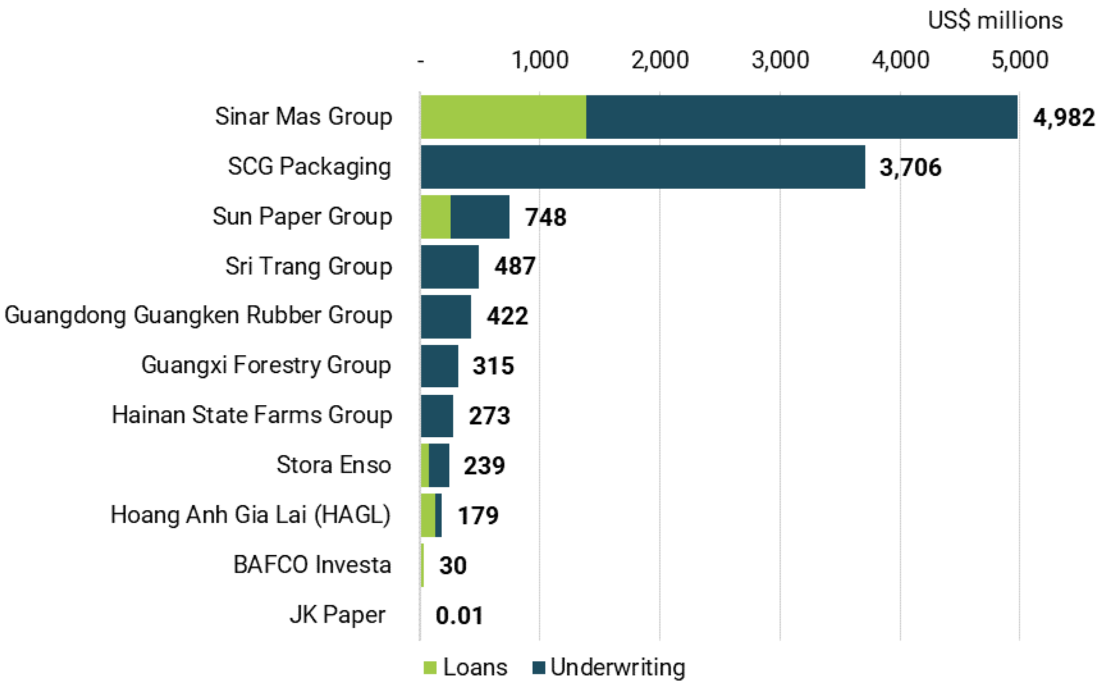
Finance by the disbursing institution

The top 15 creditors of the leading companies active in forest-risk sectors in the LMR include a range of regional and global commercial banks. The largest forest-risk creditor was Siam Commercial Bank from Thailand, which provided US$ 1.1 billion in forest-risk loans and underwriting services to the selected companies. It was followed by Bangkok Bank also from Thailand, which provided US$ 782 million, and Chinese ICBC which provided US$ 727 million.

Finance by the recipient company

Figure 5 shows which of the selected companies attracted the most credit. The largest among them was the Indonesia conglomerate Sinar Mas Group, with US$ 5.0 billion in forest-risk credit in the LMR. It was followed by SCG Packaging, a subsidiary of Thai conglomerate Siam Cement, which attracted US$ 3.7 billion in forest-risk loans and underwriting services. SGC Packaging was followed by Chinese pulp and paper company Sun Paper Group, which attracted US$ 748 million in forest-risk credit attributable to operations in the LMR. Pulp and paper attracted higher levels of financing because it is a more capital-intensive industry than rubber and timber. Additionally, the pulp and paper companies whose financing was identified include more vertically integrated companies than the selected rubber and timber companies.

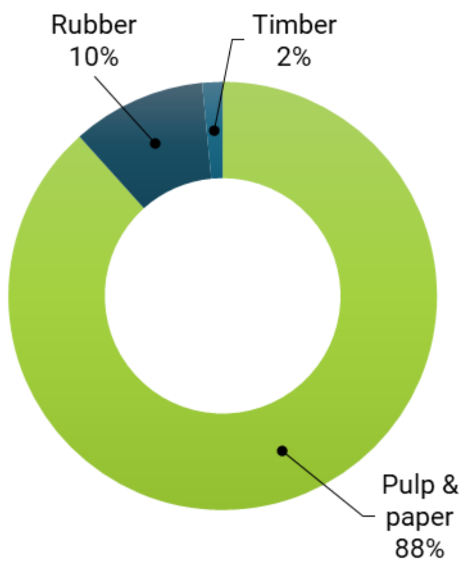
Figure 5 Loans & underwriting per group (2016-2022 September, US$ mln)



1.1.2 Investors

As of September 2022, institutional investors held US$ 1.3 billion in forest-risk investments in bonds and shares issued by the selected companies. 88% of these investments (US$ 1.2 billion) were attributable to pulp and paper, 10% (US$ 132 million) to rubber, and a further 2% (US$ 20 million) to timber, as shown in Figure 6. Of the 30 companies analysed, investments in bonds and shares were identified for 9. Four of these were pulp and paper companies, one of which also has timber activities. The remaining five companies were all rubber companies, with smaller market capitalizations than their peers in the capital-intensive pulp and paper industry.

Figure 6 Bond & shareholders per forest-risk sector (2022 September, US$ mln)



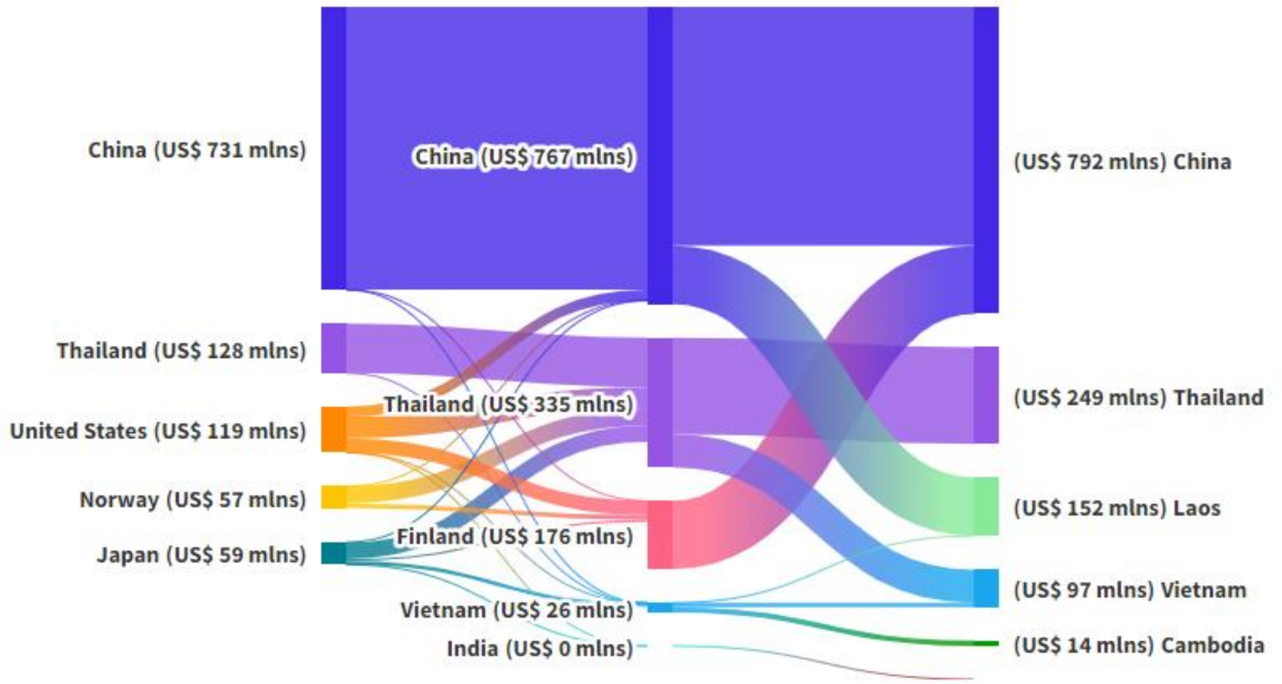
The majority of forest-risk investments were in bonds and shares were attributable to activities in China (US$ 792 million). Activities in Thailand attracted 19% of the identified investments, equal to US$ 250 million. Activities in Lao PDR attracted a further 12% of the identified forest-risk bond holdings and shareholdings in September 2022, equal to US$ 152 million.

More than 55% of the forest-risk investments in bonds and shares issued by the selected companies were made by financial institutions from China. These financial institutions held forest-risk bonds and shares worth US$ 731 million. Chinese financial institutions were followed by their peers from Thailand and the United States, which held forest-risk bonds and shares worth US$ 128 million and US$ 119 million, respectively.

Figure 7 shows that similar to the trend observed in the credit flows analysis, Chinese financial institutions predominantly invested in companies domiciled in China, with the majority of those investments attributable to activities in China. However, some of the investments in companies domiciled in China are also attributable to activities in Lao PDR, primarily through Chinese stock-listed Sun Paper which has pulp and paper activities in Lao PDR.

A similar trend is observed for investment attributable to Thailand, which is mainly due to flows from companies domiciled in Thailand, also attracting significant investment from Thai investors. However, Thai stock-listed companies also received investments from US and Norwegian investors, among others. Moreover, a proportion of the investments in Thai-domiciled companies is attributable to Vietnam. This is through Thai Thai-listed company SCG Packaging, which has pulp and paper activities in Vietnam.

Figure 7 Bond & shareholders per investor country – company group country – forest-risk production country (2022 September, US$ mln)



The top-15 forest-risk investors were from a variety of countries, including China, Norway, Thailand, and the United States (see Figure 8). However, the top-3 investors were all Chinese financial institutions. The largest among them was Harvest Fund Management, holding forest-risk bonds and shares worth US$ 278 million. It was followed by China Merchants Bank (US$ 122 million) and Zhongtai Securities (US$ 84 million).

Figure 9 shows that the majority of LMR-attributable forest-risk investments were attracted by Chinese stock-listed Sun Paper (US$ 703 million) and Thai-listed SCG Packaging (US$ 294 million). They were followed by Finnish-listed Stora Enso (US$ 4,176 million), with operations globally, of which its activities in the LMR only constitute a small proportion.

Figure 8 Top-15 investors per sector (2022 September, US$ mln)

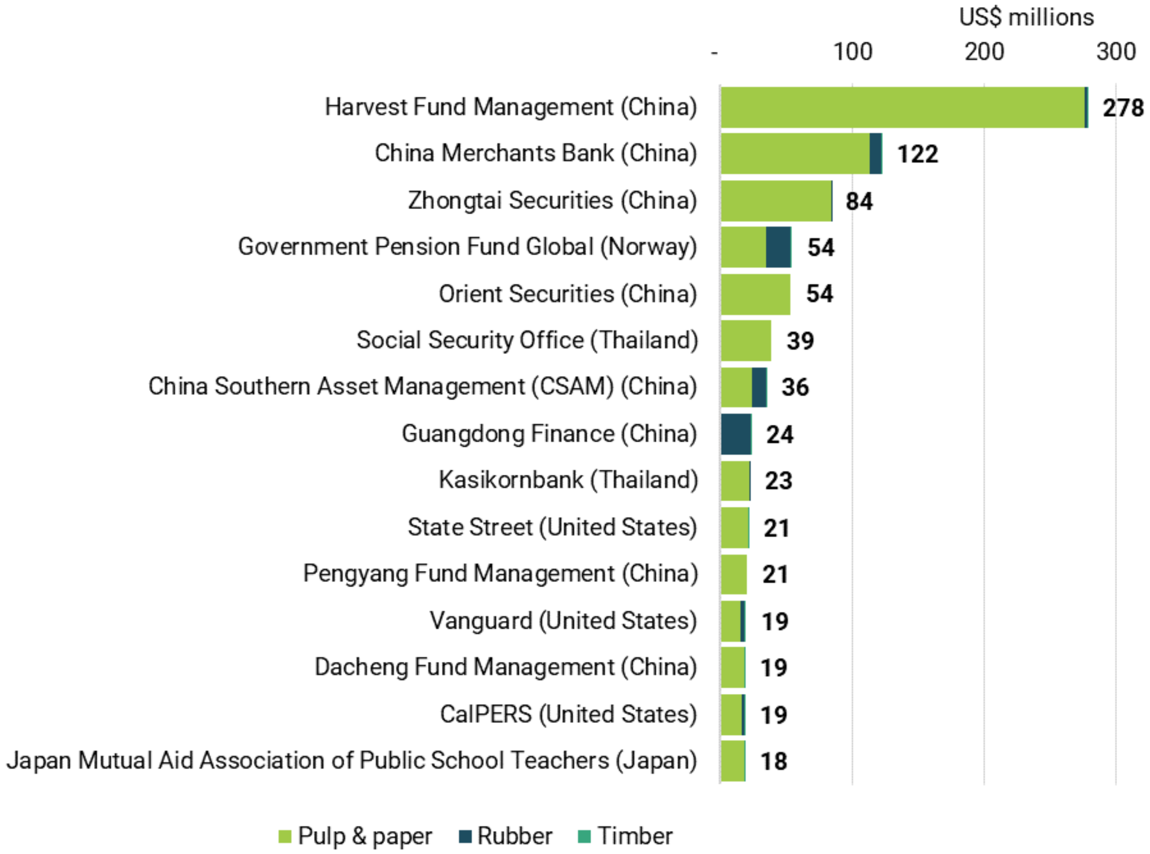
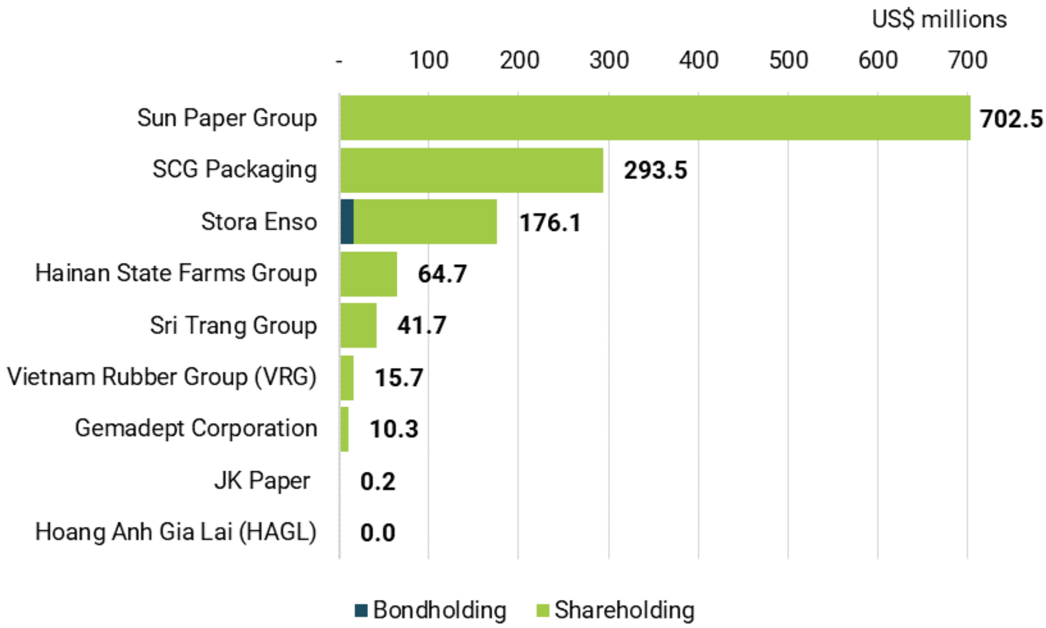


Figure 9 Bond- and shareholdings per group (2022 September, US$ mln)

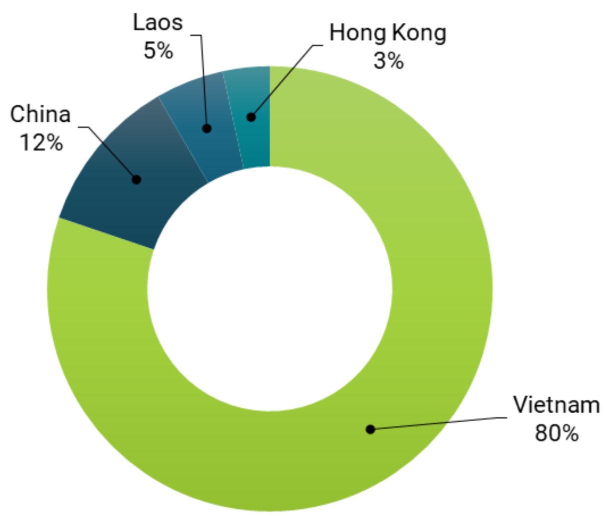


1.2 Cambodia

1.2.1 Creditors

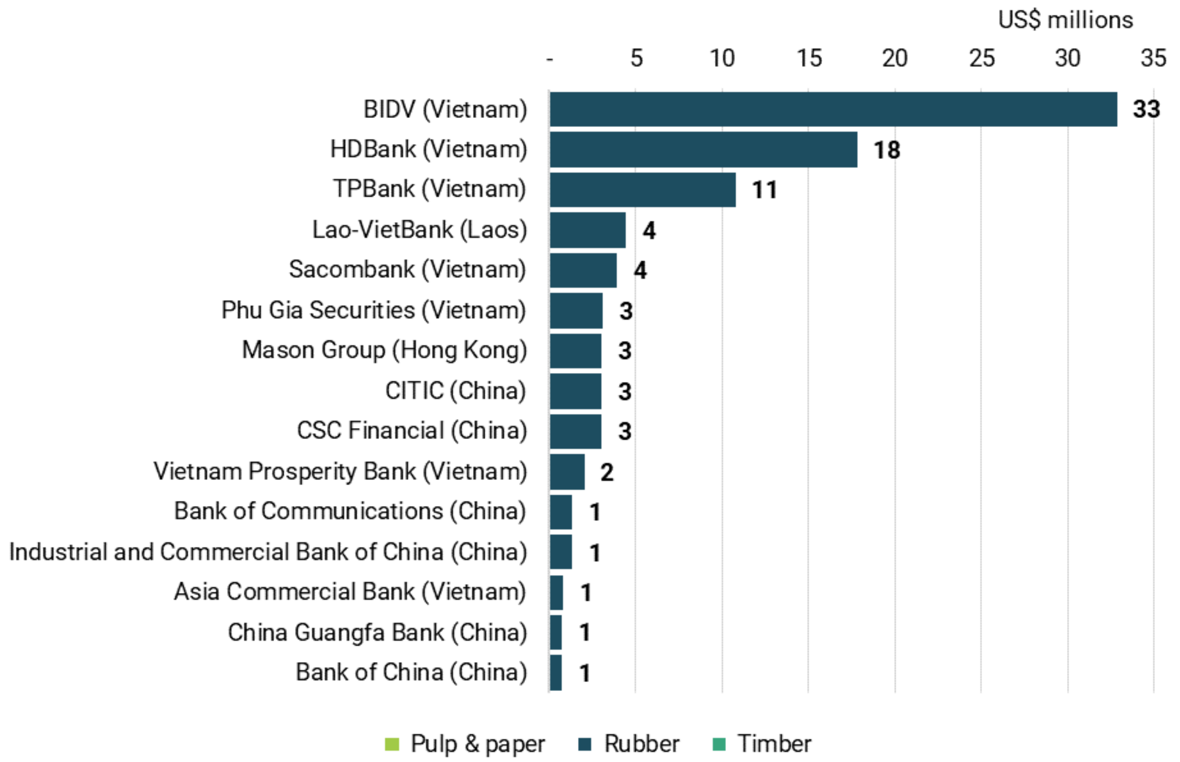
In the period 2016-2022 September, US$ 89 million in forest-risk loans and underwriting services were provided to the selected companies active in Cambodia, of which all were provided to activities in the rubber sector. All of the identified credit flowed through two companies: Vietnamese agro-commodity company HAGL (US$ 76 million), and Chinese rubber company Guangdong Guangken Rubber Group (US$ 13 million). The vast majority of identified credit provided to these two companies was provided by financial institutions from Vietnam, mainly due to their significant role in financing HAGL. These financial institutions provided US$ 71 million, or 80% of the identified credit (see Figure 10 for details). Vietnamese financial institutions were followed by Chinese financial institutions, which provided US$ 10 million (12%) in forest-risk credit primarily to Guangdong Guangken Rubber Group, and financial institutions from Lao PDR which provided US$ 4 million (5%) to HAGL.

Figure 10 Cambodia: Loans & underwriting per creditor country of origin (2016-2022 September, US$ mln)



The top 15 providers of forest-risk loans and underwriting services to the selected companies active in Cambodia include commercial banks from Vietnam, Lao PDR, and China, among others (see Figure 11). However, the top forest-risk creditors are all financial institutions from Vietnam. The largest among them is the Bank for Investment and Development of Vietnam (BIDV). BIDV provided US$ 33 million in forest-risk credit to the selected companies active in Cambodia. It was followed by HDBank and TPBank, which provided US$ 18 million and US$ 11 million, respectively.

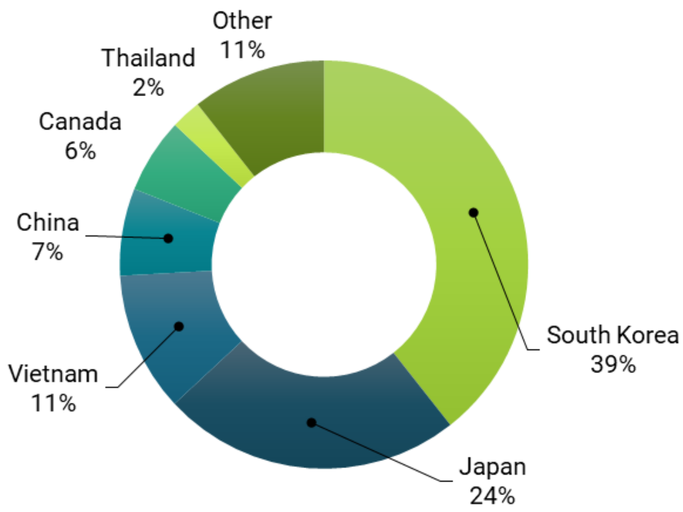
Figure 11 Cambodia: Top-15 creditors per sector (2016-2022 September, US$ mln)



1.2.2 Investors

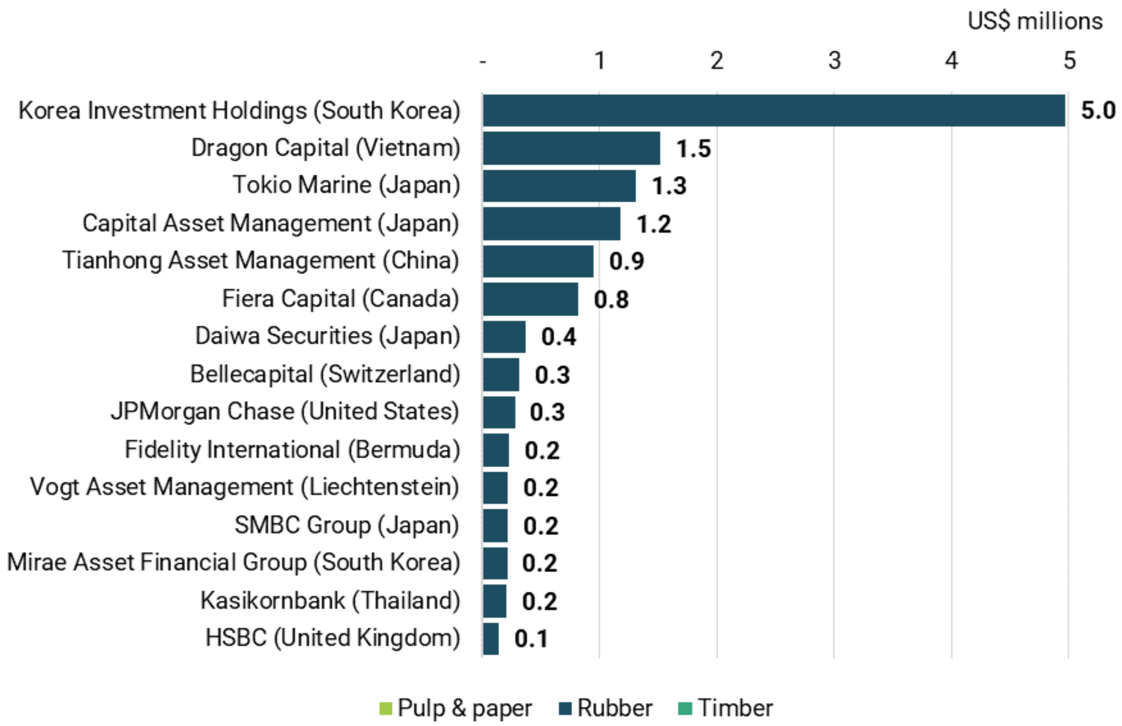
As of September 2022, institutional investors held US$ 14 million in forest-risk investments in bonds and shares issued by the selected companies active in Cambodia, of which 100% were attributable to rubber. All of these identified investments were in three Vietnamese rubber groups: HAGL, VRG and Gemadept Corporation. As a result, all rubber-attributable investments identified in Cambodia flowed through Vietnamese-domiciled companies.

Figure 12 Cambodia: Bond & shareholders per financial institution country (2022 September, US$ mln)



The top 15 investors in forest-risk bonds and shares issued by companies active in Lao PDR were from a diverse group of countries. The largest among them was Korea Investment Holdings from South Korea. This financial institution held US$ 5.0 million in forest-risk bonds and shares issued by companies active in Lao PDR. It was followed by Dragon Capital from Vietnam (US$ 1.5 million) and Japanese insurance company Tokio Marine (US$ 1.3 million).

Figure 13 Cambodia: Top 15 investors per sector (2022 September, US$ mln)

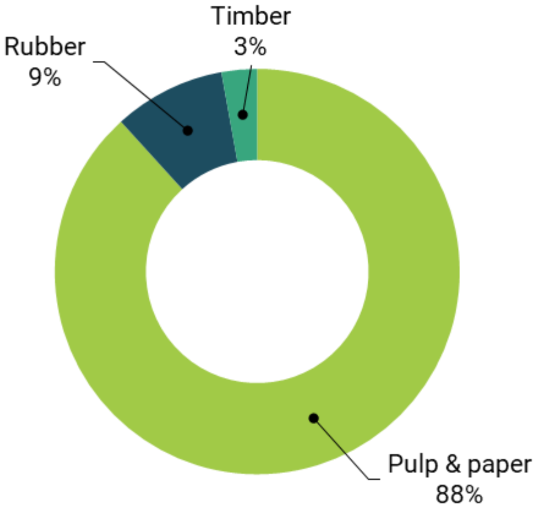


1.3 China

1.3.1 Creditors

In the period 2016-2022 September, US$ 6.8 billion in forest-risk loans and underwriting services were provided to the selected companies active in China. As Figure 14 shows, 88% of this financing (US$ US$ 6.0 billion) was attributable to pulp and paper activities, a further 9% (US$ 608 million) of this total was attributable to rubber, and 3% (US$ 193 million) to timber.

Figure 14 China: Loans & underwriting per sector (2016-2022 September, US$ mln)

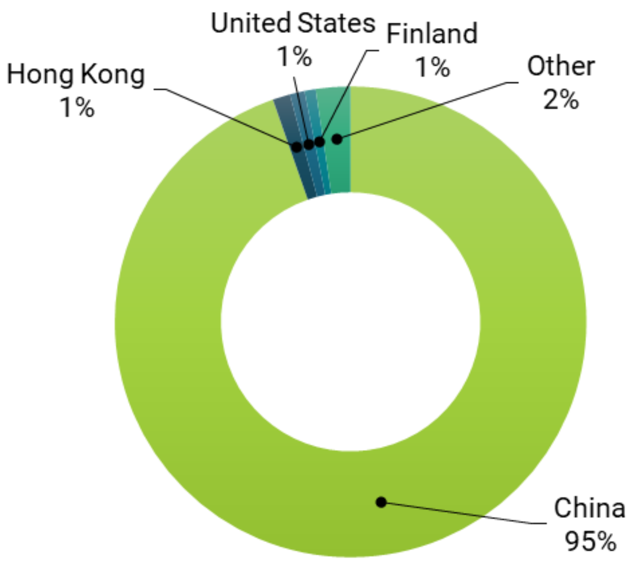


Almost all credit provided to the selected companies active in forest-risk sectors in China was provided by domestic Chinese financial institutions – US$ 6.5 billion, as shown in Figure 15 shows. The remaining credit was provided by financial institutions from a range of countries, including those from China, the United States and Finland, among others.

The majority of financing was attracted by the Indonesian/Chinese conglomerate Sinar Mas Group. Financing for the Chinese pulp and paper operation of this company was provided exclusively by Chinese financial institutions. Similarly, Guangxi Forestry Group and Hainan State Farms were also only financed by Chinese financial institutions. Credit flows to China through Finnish company Stora Enso originated mostly from Europe and the US. Financing to Sun Paper and Guangdong Guangken Rubber Group also included loans and underwriting from banks headquartered in Hong Kong, China, Taiwan, Thailand and the United Kingdom.

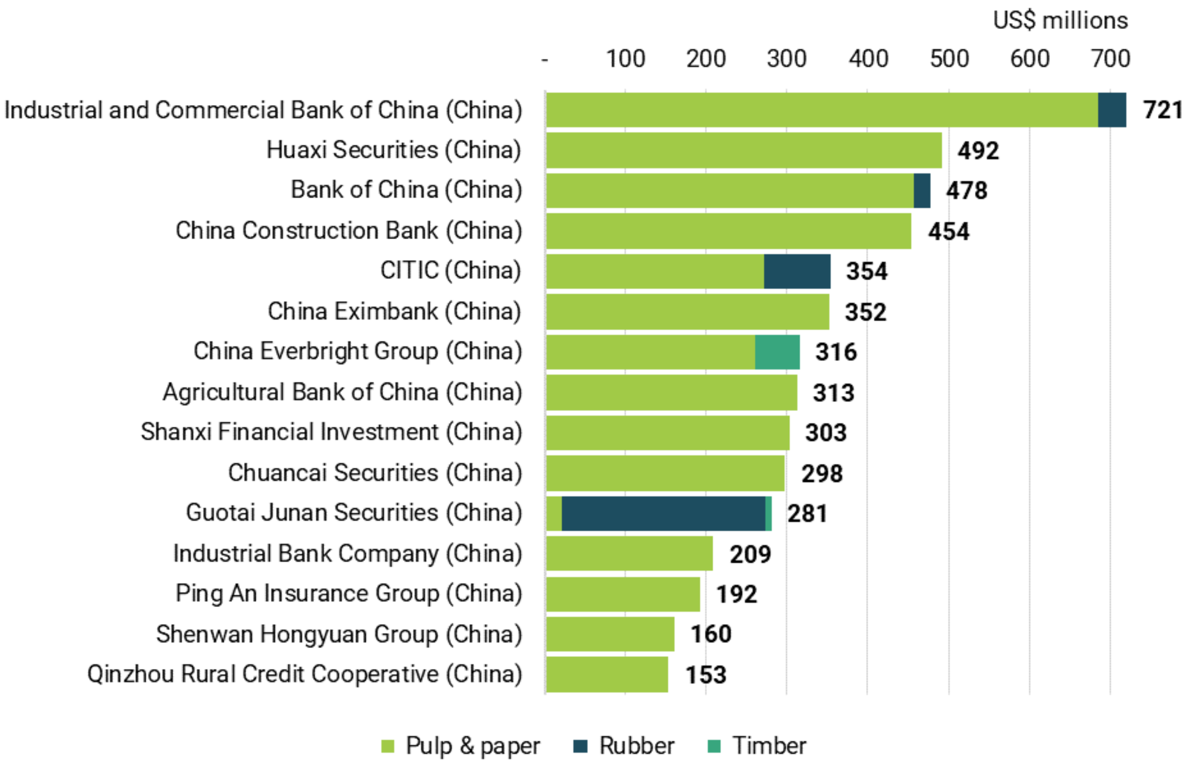
The dominance of Chinese bank financing of Chinese companies is explained by several factors. Firstly, the financial sector in China is well-developed. Secondly, the banking sector is not as open to foreign banks as is the case in other countries.

Figure 15 China: Loans & underwriting per creditor country of origin (2016-2022 September, US$ mln)



In line with the findings above, the top 15 providers of forest-risk loans and underwriting services to the selected companies active in China were all domestic Chinese financial institutions (see Figure 16). The largest among them was the Industrial and Commercial Bank of China (ICBC). ICBC provided US$ 721 million in forest-risk loans and underwriting services to the selected companies active in China in the period January 2016 to January 2022. ICBC was followed by Huaxi Securities (US$ 492 million) and Bank of China (US$ 478 million).

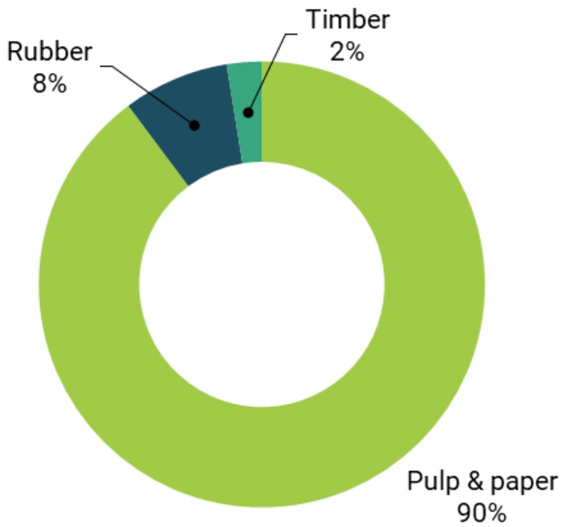
Figure 16 China: Top-15 creditors per sector (2016-2022 September, US$ mln)



1.3.2 Investors

As of September 2022, institutional investors held US$ 792 million in forest-risk investments in bonds and shares issued by the selected companies active in China. 90% of these investments (US$ 711 million) were attributable to pulp and paper, 8% (US$ 61 million) to rubber, and a further 2% (US$ 20 million) to timber, as shown in Figure 17 shows.

Figure 17 China: Bond & shareholders per sector (2022 September, US$ mln)



Approximately three-quarters of the identified forest-risk investment in bonds and shares issued by the selected companies active in China was held by domestic Chinese financial institutions (see Figure 18). In total, Chinese financial institutions held forest-risk bonds and shares worth US$ 586 million. They were followed by financial institutions from the United States which had holdings worth a total of US$ 59 million and Swedish financial institutions which held a combined total of US$ 37 million in bonds and equity.

Three of the selected companies active in China are listed on the stock exchange: Sun Paper, listed in China, Hainan State Farms, also listed in China, and Stora Enso, listed in Finland and Sweden. Chinese financial institutions held the highest value investments in domestic Chinese enterprises. However, both Chinese companies also had investments from outside the region. Investors in Stora Enso were more diverse, including European and North American financial institutions.

Figure 18 China: Bond & shareholders per financial institution country (2022 September, US$ mln)

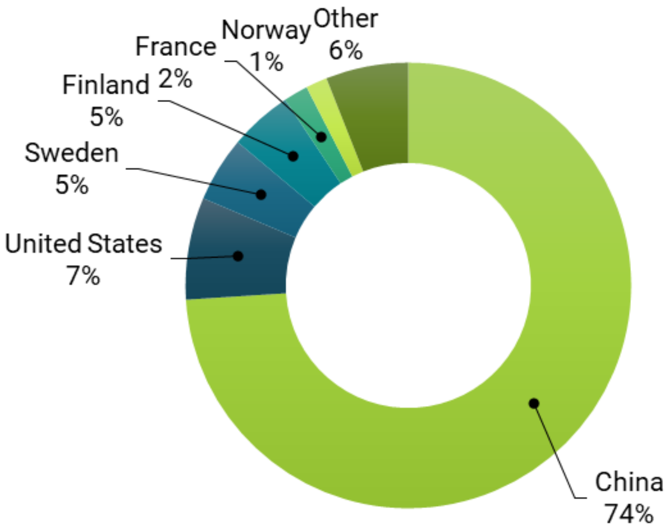
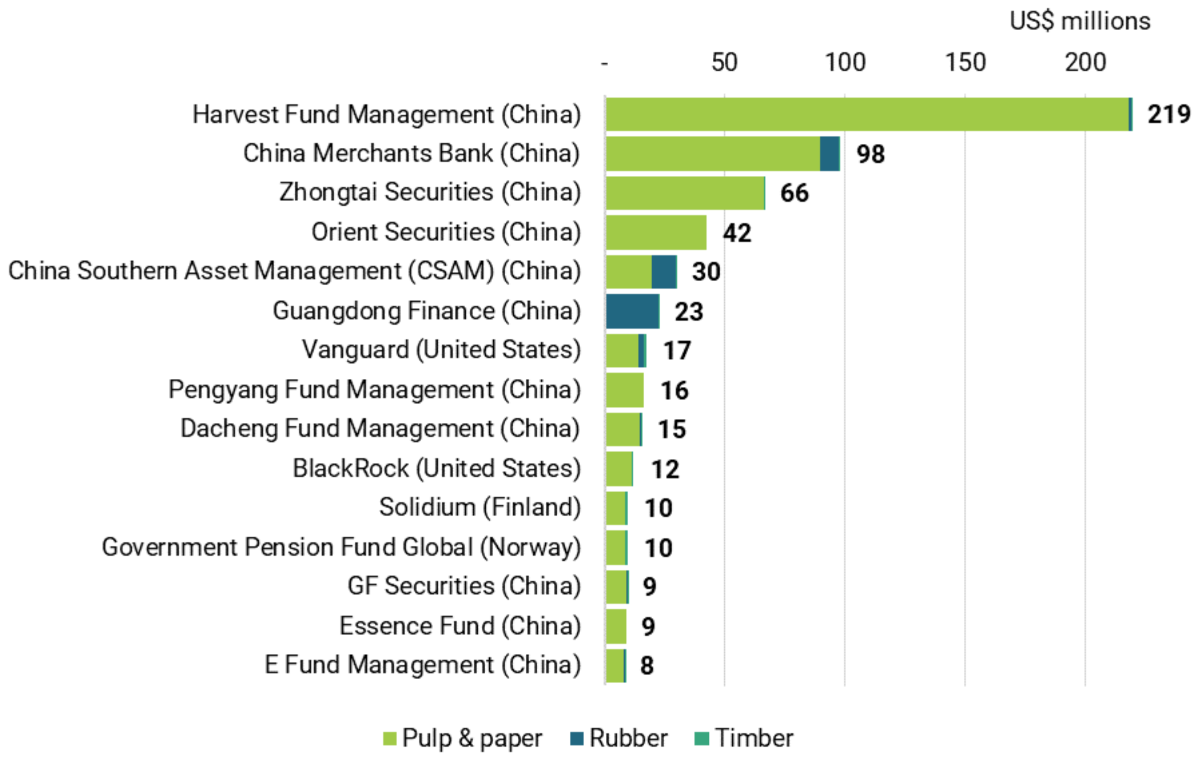


Figure 19 provides an overview of the top 15 investors by size of investment in the leading forest-risk companies active in China. It shows that the top-3 investors are Chinese financial institutions. Among them, Harvest Fund Management is the largest, holding US$ 219 million in forest-risk bonds and shares issued by the selected companies. Harvest Fund Management is followed by China Merchants Bank with US$ 98 million in forest-risk investments, and Zhongtai Securities with US$ 66 million.

Figure 19 China: Top-15 investors per sector (2022 September, US$ mln)

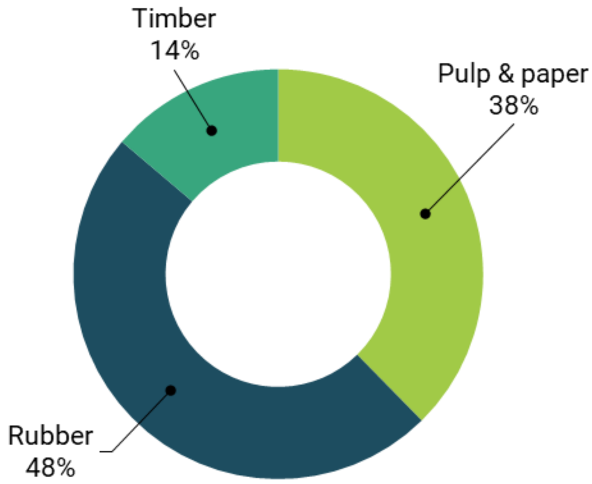


1.4 Lao PDR

1.4.1 Creditors

In the period 2016-2022 September, US$ 220 million in forest-risk loans and issuance underwriting services were provided to the selected companies active in Lao PDR. 48% of this financing (US$ 107 million) was attributable to rubber activities, a further 38% (US$ 83 million) of this total was attributable to pulp and paper, and 14% (US$ 30 million) to timber, as shown in Figure 20.

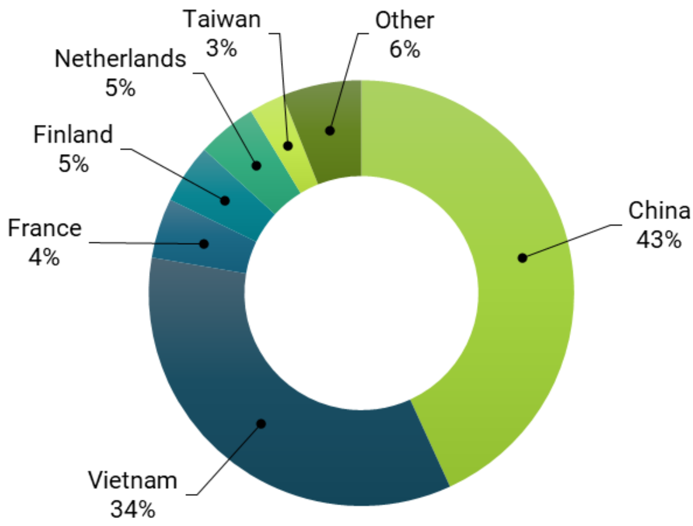
Figure 20 Lao PDR: Loans & underwriting per sector (2016-2022 September, US$ mln)



In terms of credit to forest-risk activities focused on in this report, Lao PDR saw the most diverse spread of financing for each sector. This is due to the important role of rubber in the portfolios of the selected companies, as well as the smaller role of pulp and paper, a more capital-intensive sector, as a proportion of the total business activities of the leading companies identified with activities in Lao PDR.

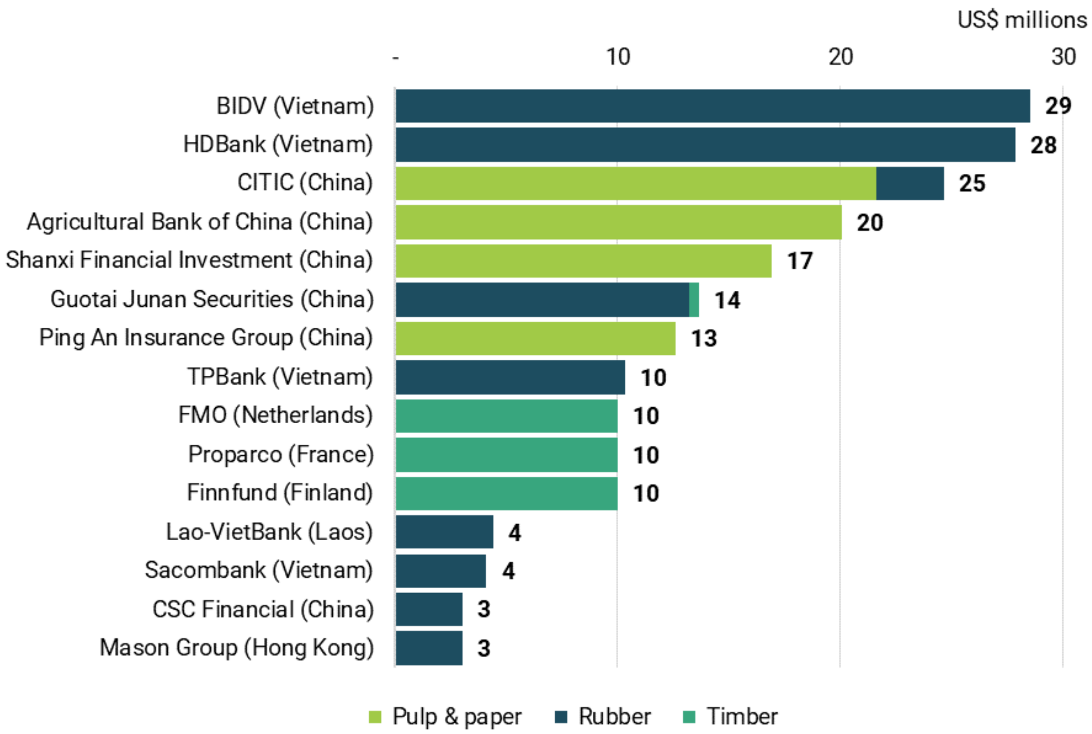
Loans and underwriting activities attributable to Lao PDR were identified for five companies: Sun Paper (China), HAGL (Vietnam), BAFCO Investa (Sweden), Hainan State Farms (China) and Guangdong Guangken Rubber Group (China). Financial institutions from a broad range of countries provided forest-risk credit to the selected companies with activities in Lao PDR (see Figure 21). Financial institutions from China provided the most credit. Providing a total of US$ 95 million for the period 2016-2022 September. Chinese financial institutions were followed by financial institutions from Vietnam that provided US$ 76 million, and French financial institutions, which provided a total of US$ 10 million to Lao PDR-related activities. Typically, Chinese-domiciled companies were primarily financed by Chinese companies. HAGL was financed by Vietnamese and Laotian financial institutions, and BAFCO Investa was financed by European financial institutions.

Figure 21 Lao PDR: Loans & underwriting per creditor country of origin (2016-2022 September, US$ mln)



In line with the findings above, the top 15 creditors of the selected forest-risk companies in Lao PDR are from a diverse range of countries. The top 3 creditors are from Vietnam and China. The largest among them was the Vietnamese bank, BIDV, with US$ 29 million in forest-risk loans and issuance underwriting services to the leading companies active in Lao PDR. BIDV was followed by its Vietnamese peer HDBank, which provided US$ 28 million in credit, and the Chinese banks, CITIC that provided US$ 25 million in forest-risk credit to the leading companies active in Lao PDR.

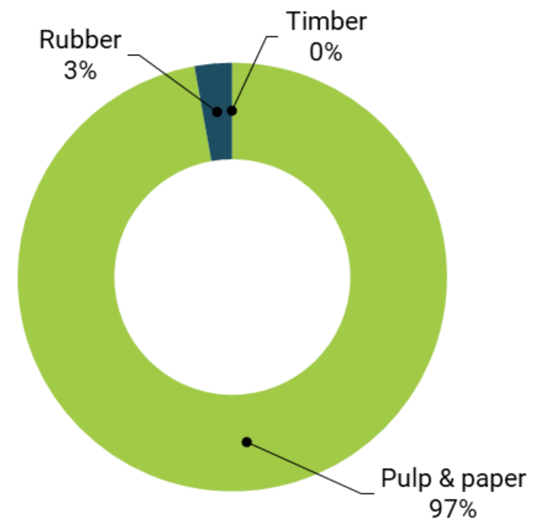
Figure 22 Lao PDR: Top-15 creditors per sector (2016-2022 September, US$ mln)



1.4.2 Investors

As of the most recent filings in September 2022, institutional investors held US$ 152 million in forest-risk investments in bonds and shares issued by the selected companies active in Lao PDR. Figure 23 shows that 97% of these investments (US$ 148 million) were attributable to pulp and paper, and a further 3% (US$ 4 million) to rubber.

Figure 23 Lao PDR: Bond & shareholders per sector (2022 September, US$ mln)



Two Chinese-domiciled companies, Sun Paper and Hainan State Farms Group, and two Vietnam-domiciled companies, HAGL and VRG, received investments attributable to Lao PDR. The largest investors in forest-risk bonds and shares issued by the selected companies active in Lao PDR were Chinese financial institutions. Together, Chinese institutions held 95% of the identified forest-risk investments in Lao PDR, equal to US$ 144 million. Chinese investors were followed by investors from the United States with positions worth US$ 5 million and Japan with US$ 1.2 million, (see Figure 24). Chinese financial institutions invested exclusively in the two Chinese companies, which were also invested by non-Chinese domiciled investors. VRG and HAGL saw minimal levels of investments, with most investments coming from within Asia.

Figure 24 Lao PDR: Bond & shareholders per financial institution country (2022 September, US$ mln)

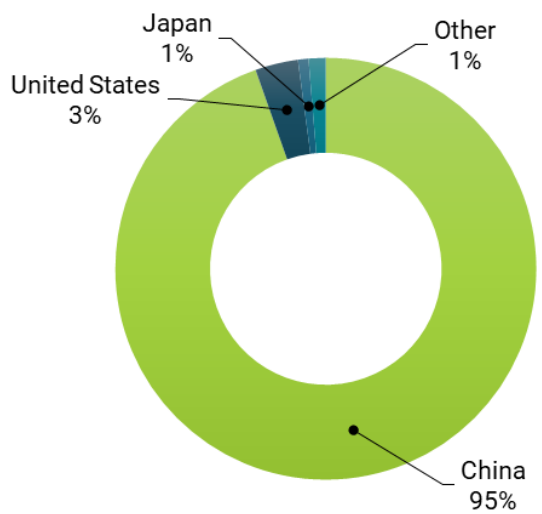
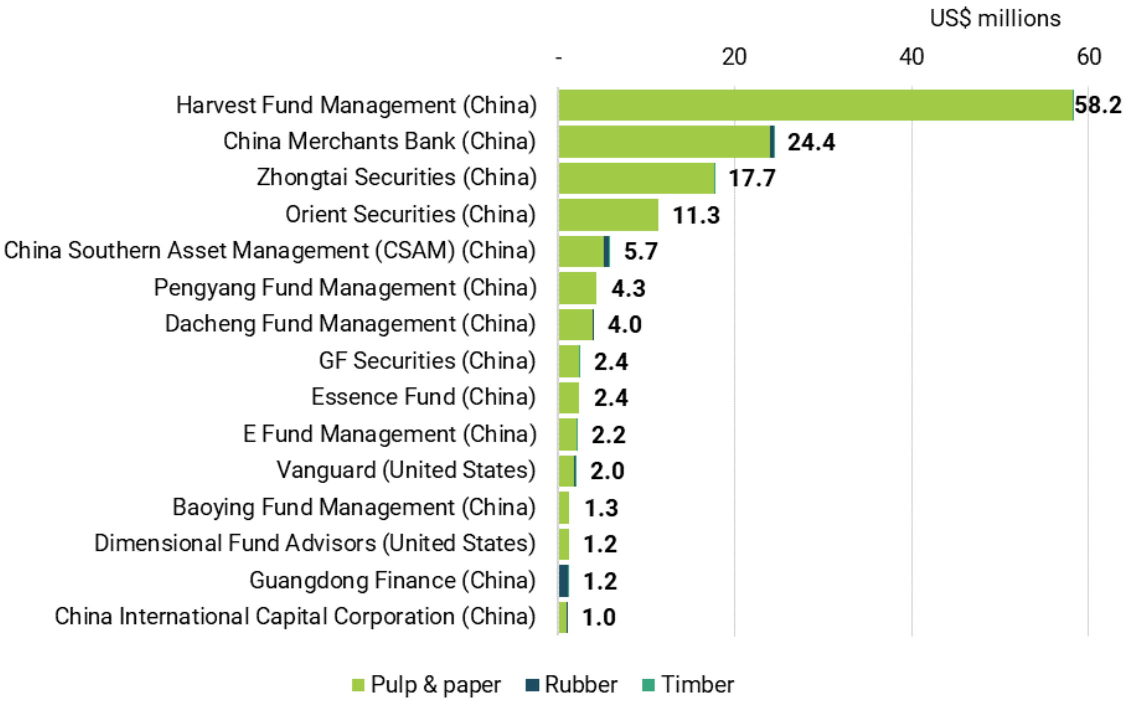


Figure 25 Lao PDR: Top-15 investors per sector (2022 September, US$ mln)



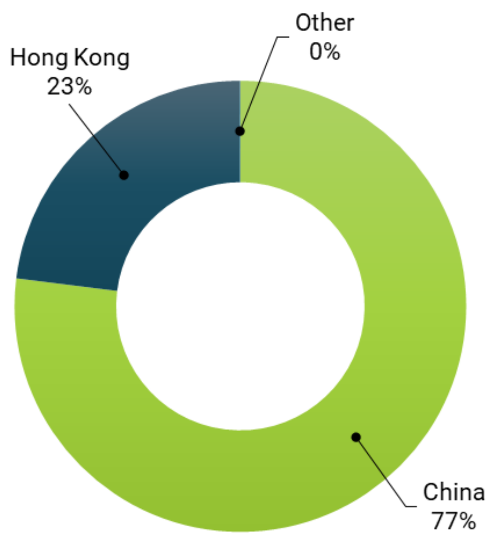
The top 15 investors in forest-risk activities in Lao PDR were found to be predominantly Chinese financial institutions. The largest among them was Harvest Fund Management, holding forest-risk bonds and shares worth US$ 58 million. It was followed by China Merchants Bank with US$ 24 million, and Zhongtai Securities with positions worth US$ 18 million.

1.5 Myanmar

1.5.1 Creditors

In the period 2016-2022 September, this research found that US$ 13.2 million in forest-risk loans and underwriting services were provided to the selected companies active in Myanmar. 99.02% was attributable to rubber activities, and the remainder to pulp and paper.

Figure 26 Myanmar: Loans & underwriting per creditor country of origin (2016-2022 September, US$ mln)

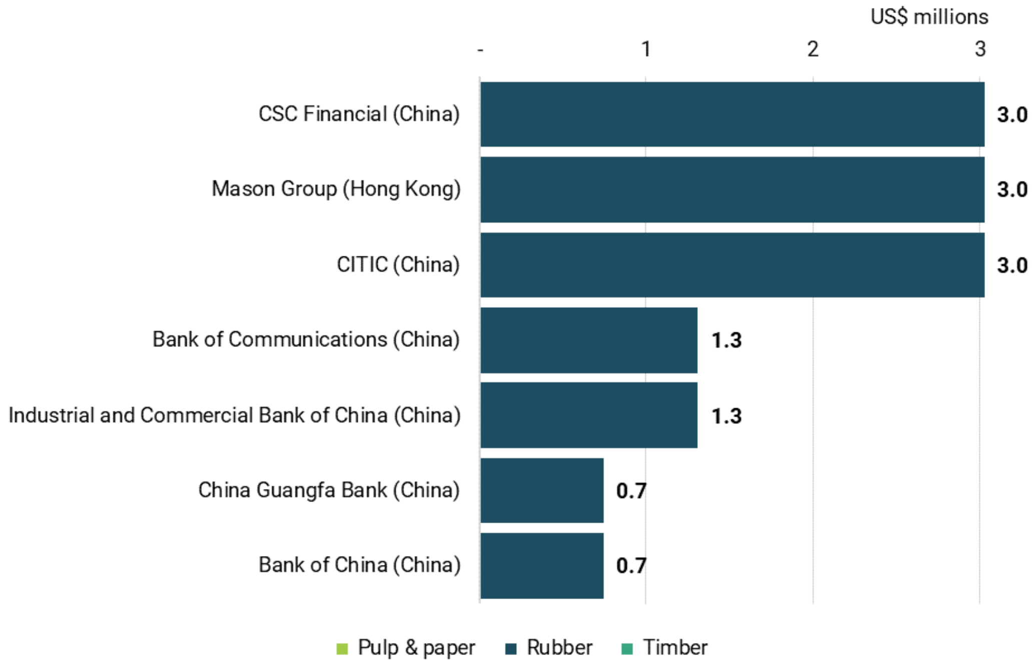


Credit flows attributable to activities in Myanmar were only identified for two companies: Guangdong Guangken Rubber Group (China) and JK Paper (India). Only a very small proportion of the business activities of JK Paper are attributable to Myanmar. Moreover, very little financing was identified for JK Paper. As a result, the overall figures of credit flows to Myanmar are dominated by credit flows to Guangdong Guangken Rubber Group.

More than three-quarters of the forest-risk credit provided to Guangdong Guangken Rubber Group, was provided by financial institutions from China (US$ 10 million). They were followed by financial institutions from Hong Kong, China (US$ 3 million) (see Figure 26).

Figure 27 shows the top forest-risk creditors of the selected companies in Myanmar. The largest among them is Chinese CSC Financial, which provided US$ 3 million in loans and underwriting in the period January 2016 to January 2022. It was followed by Mason Group from Hong Kong (US$ 3 million) and CITIC also from China (US$ 3 million).

Figure 27 Myanmar: Top creditors per sector (2016-2022 September, US$ mln)



1.5.2 Investors

As of September 2022, institutional investors held US$ 0.16 million in forest-risk investments in bonds and shares issued by the selected companies active in Myanmar. All these investments were attributable to pulp and paper, and all were attributable to JK Paper. Therefore, the figures below only relate to investments in JK Paper.

Two-thirds of the identified investments in forest-risk bonds and shares issued by JK Paper were made by financial institutions from India. These were followed by investors from the United States and Japan, as shown in Figure 28.

Figure 28 Myanmar: Bond & shareholders per financial institution country (2022 September, US$ mln)

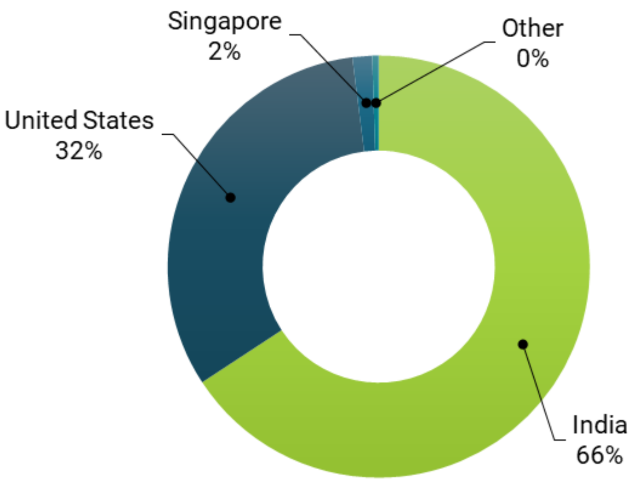
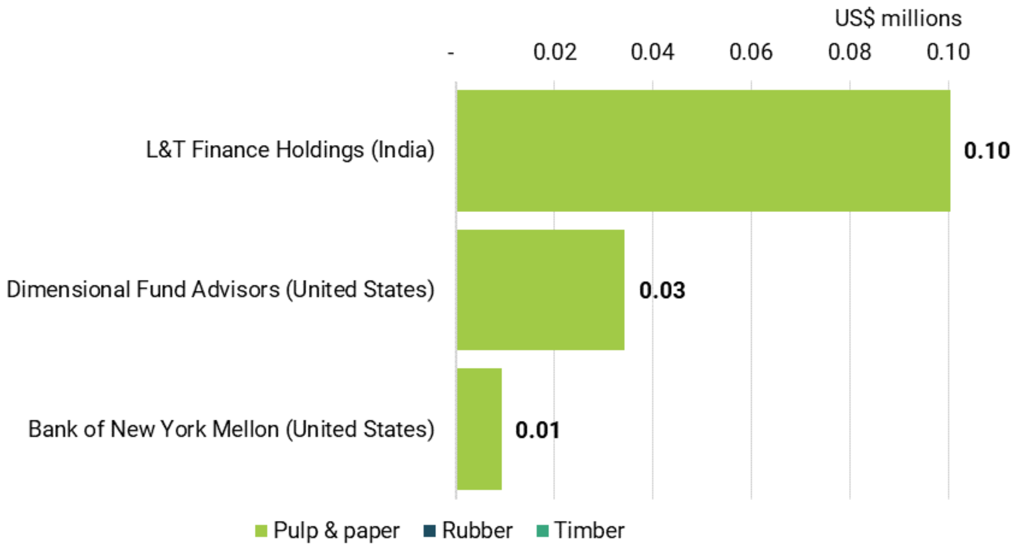


Figure 29 provides an overview of the largest investors in forest-risk bonds and shares issued by JK Paper. The largest among them was L&T Finance Holdings from India, with US$ 0.1 million in forest-risk bonds and shares. L&T Finance Holdings was followed by the US passive index investor Dimensional Fund Advisors with US$ 0.03 million, and Bank of New York Mellon with US$ 0.01 million.

Figure 29 Myanmar: Top investors per sector (2022 September, US$ mln)

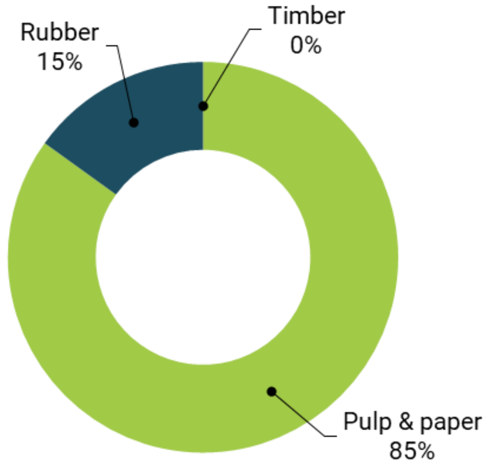


1.6 Thailand

1.6.1 Creditors

For the period 2016-2022 September, it was found that US$ 3.3 billion in forest-risk loans and underwriting services were provided to the selected companies active in Thailand. 84% of this financing, US$ 2.8 billion, was attributable to pulp and paper activities, and a further 16%, US$ 527 million, was attributable to rubber.

Figure 30 Thailand: Loans & underwriting per sector (2016-2022 September, US$ mln)



Credit flows attributable to forest-risk activities were identified for three of the selected companies: SCG Packaging (Thailand), Sri Trang Agro (Thailand) and Guangdong Guangken Rubber Group.

Figure 31 Thailand Loans & underwriting per creditor country of origin (2016-2022 September, US$ mln)

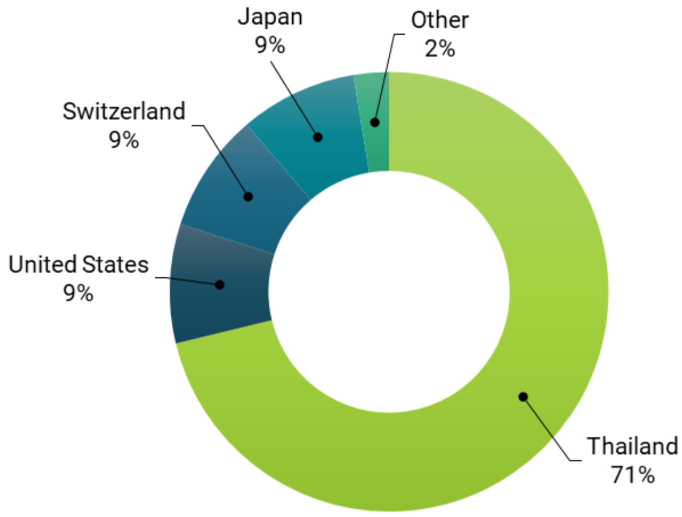
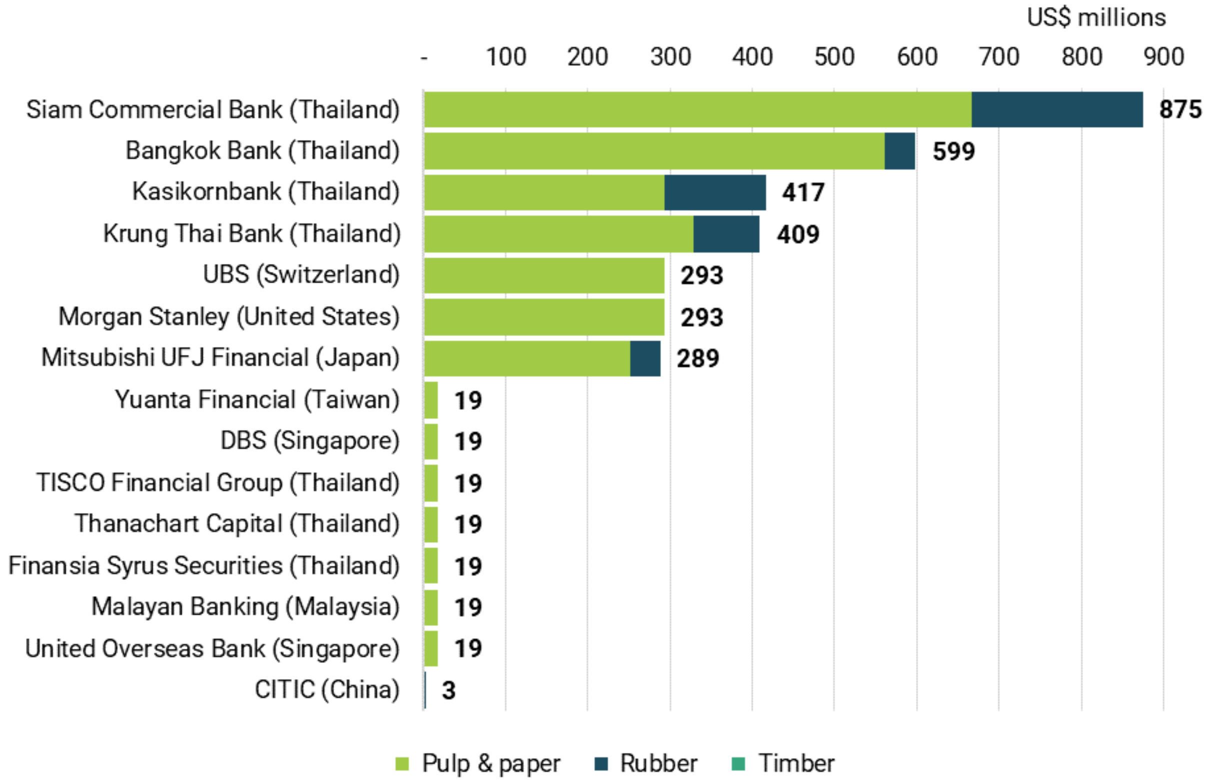


Figure 32 Thailand: Top-15 creditors per sector (2016-2022 September, US$ mln)



The majority of identified forest-risk credit provided by SCG Packaging and Sri Trang was provided by domestic Thai financial institutions (see Figure 31). From January 2016 to September 2022, these financial institutions provided US$ 2.4 billion in forest-risk loans and underwriting services, accounting for 71% of identified forest-risk credit to the selected companies. Financial institutions from Thailand were followed by financial institutions from the United States, which provided US$ 293 million in credit, Switzerland, US$ 293 million, and Japan, US$ 289 million, to the two Thai companies only. Guangdong Guangken Rubber Group was financed entirely by financial institutions from China.

As the findings above suggest, the majority of the top 15 providers of forest-risk loans and underwriting services to companies active in Thailand are domestic Thai financial institutions. The largest among them is Siam Commercial Bank, which provided US$ 875 million in forest-risk credit in the period January to September 2022. It was followed by Bangkok Bank with US$ 599 million and Kasikornbank Bank with US$ 417 million in credit.

1.6.2 Investors

As of the most recent filings in September 2022, institutional investors held US$ 249 million in forest-risk investments in bonds and shares issued by the selected companies active in Thailand. 83% of these investments, US$ 208 million, were attributable to pulp and paper, and a further 17% US$ 42 million, were provided to rubber companies with activities in the rubber sector, as shown in Figure 33.

Investments in forest-risk bonds and shares issued by companies active in Thailand were only identified for two companies: SCG Packaging, a Thai pulp and paper company, and Sri Trang Group, a Thai rubber company. This explains the proportions of investments in pulp and paper, and rubber, respectively. The figures below, therefore, reflect investments in these two companies exclusively.

Around a third of the forest-risk investments in the bonds and shares of Thailand-domiciled SCG Packaging and Sri Trang Group came from domestic Thai financial institutions, as shown in Figure 34. These financial institutions held forest-risk investments worth US$ 92 million. They were followed by investors from the United States, with investments worth US$ 41 million, and Norway with investments worth US$ 37 million.

Figure 33 Thailand: Bond & shareholders per sector (2022 September, US$ mln)

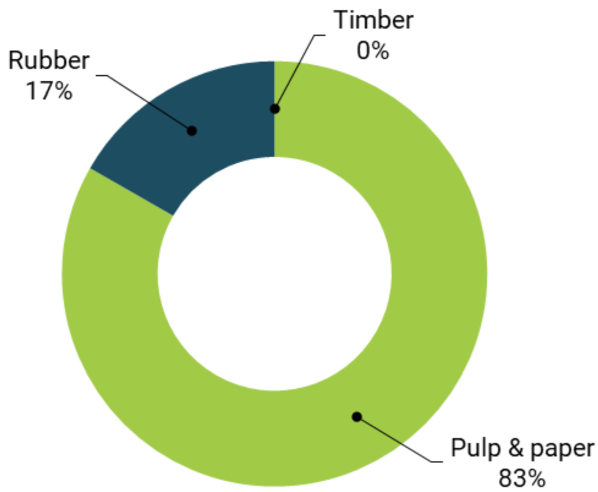
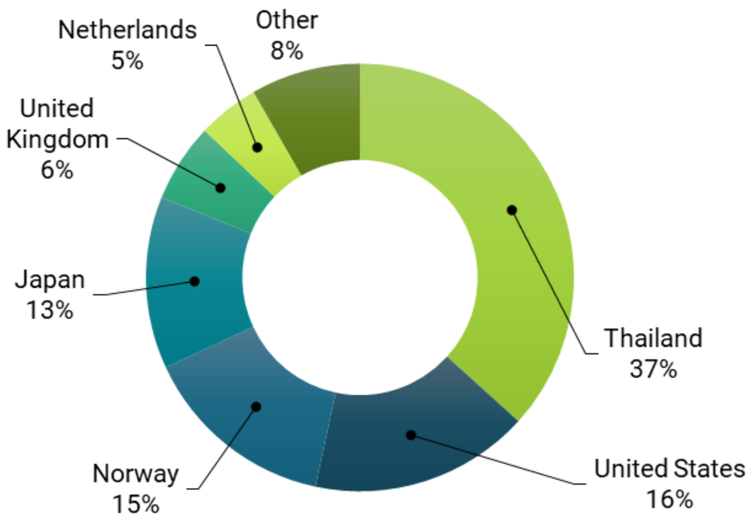
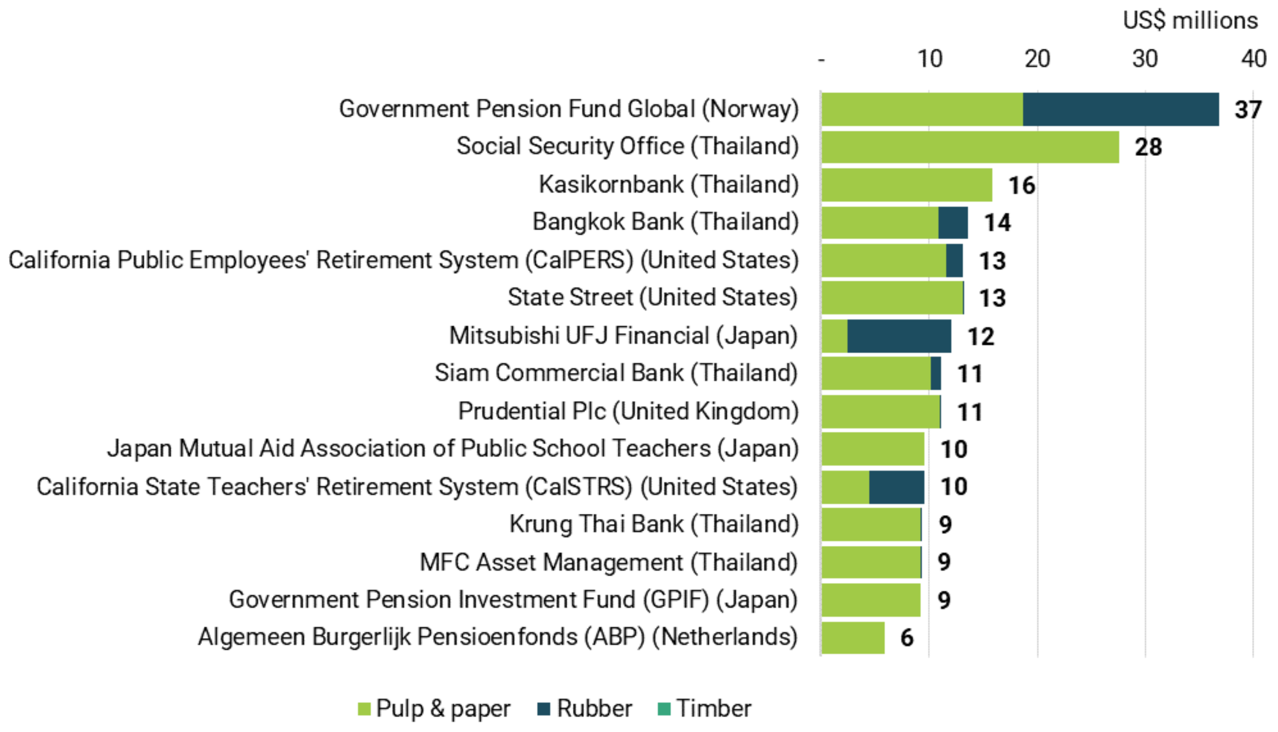


Figure 34 Thailand: Bond & shareholders per financial institution country (2022 September, US$ mln)



The largest investor in forest-risk bonds and shares issued by SCG Packaging and Sri Trang Group was the Norwegian Government Pension Fund Global (see Figure 35). The sovereign wealth fund held investments worth US$ 37 million. It was followed by the Thai Social Security Office (US$ 28 million) and Bangkok Bank (US$ 16 million).

Figure 35 Thailand: Top-15 investors per sector (2022 September, US$ mln)

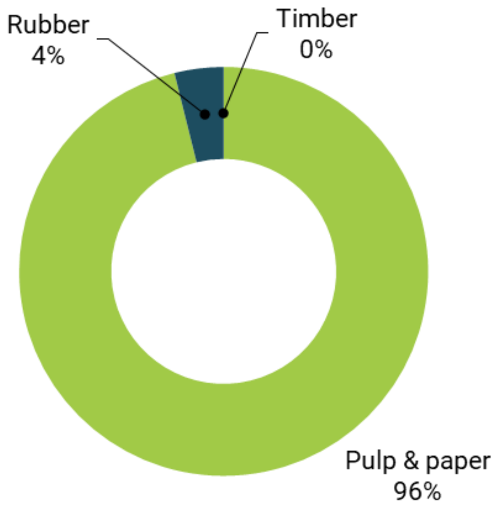


1.7 Vietnam

1.7.1 Creditors

In the period 2016-2022 September, this research found that US$ 922 million in forest-risk loans and underwriting services were provided to the selected companies active in Vietnam. As Figure 36 shows, 96% of this financing, US$ 887 million, was attributable to pulp and paper activities, and a further 4%, US$ 36 million, of this total was attributable to rubber.

Figure 36 Vietnam: Loans & underwriting per sector (2016-2022 September, US$ mln)

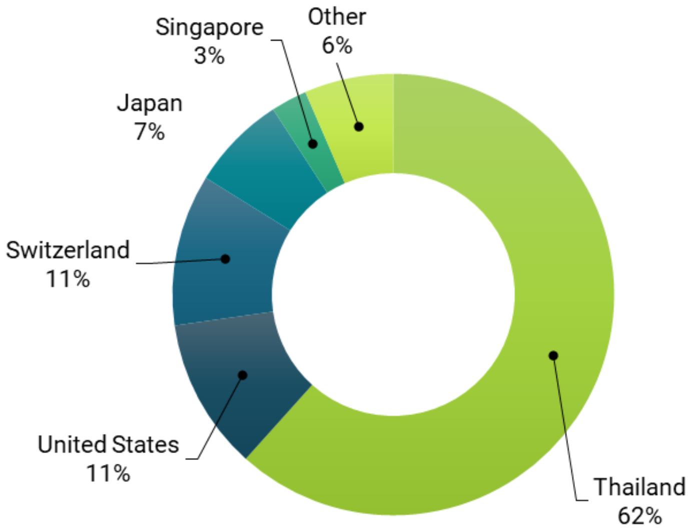


Loans and underwriting services attributable to activities in Vietnam were identified for three companies: SGC Packaging (Thailand), HAGL (Vietnam) and Guangdong Guangken Rubber Group (China). SGC Packaging attracted the most identified credit attributable to Vietnam, accounting for 96%, US$ 887 million. It was followed by HAGL, US$ 23 million, and Guangdong Guangken Rubber Group US$ 13.2 million.

Just over 60% of the identified forest-risk credit provided to the selected companies active in Vietnam was provided by financial institutions from Thailand, given the dominant place of SGC Packaging in the identified credit to Vietnam, as shown in Figure 37. For the period January 2016 to September 2022, Vietnamese financial institutions provided US$ 569 million in credit. In the same period, financial institutions from the United States provided US$ 102 million, and financial institutions from Switzerland provided US$ 102 million, providing credit exclusively to SGC Packaging. HAGL was financed by banks from Vietnam and Lao PDR. Guangdong Guangken Rubber Group was financed by banks from Hong Kong and mainland China.

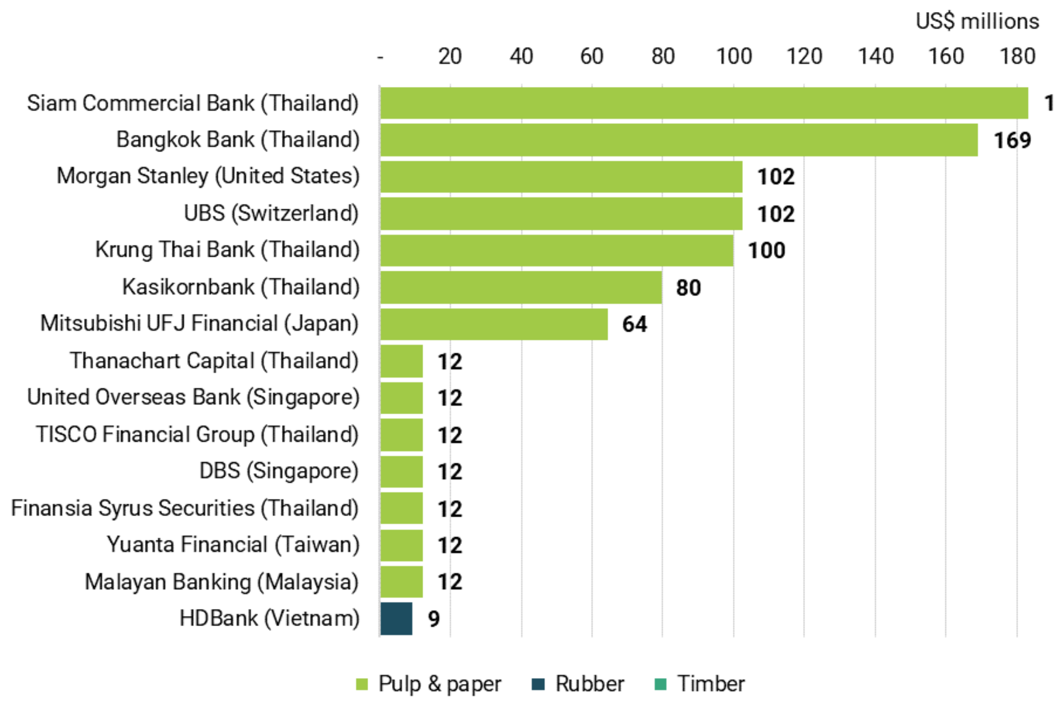
Vietnamese financial institutions likely played a larger role than has been represented in these findings, since the financial sector is quite well-developed. A lack of transparency and detail in the sources used by this research meant that, in some instances, bilateral financing between a company and one bank may need to be added to the overall dataset.

Figure 37 Vietnam: Loans & underwriting per creditor country of origin (2016-2022 September, US$ mln)



The top-15 providers of forest-risk loans and underwriting services to the selected companies active in Vietnam include financial institutions from a diverse range of countries. The largest among them is Thai banks, Siam Commercial Bank, which provided US$ 183 million in forest-risk loans and underwriting services in the period January 2016 to September 2022. It was followed by Bangkok Bank US$ 169 million and the US bank, Morgan Stanley with US$ 102 million in loans and underwriting services.

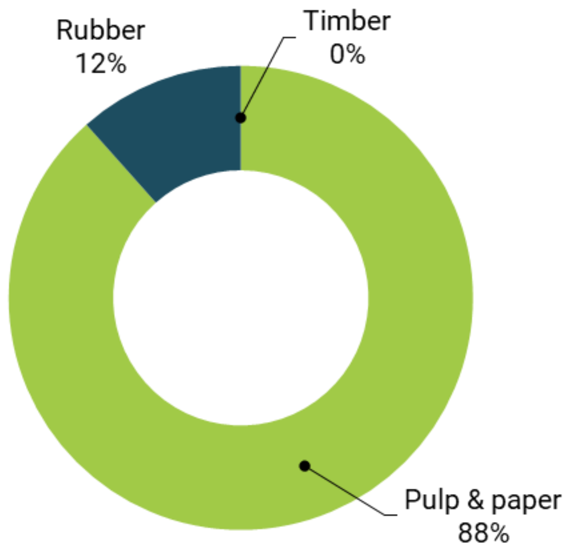
Figure 38 Vietnam: Top-15 creditors per sector (2016-2022 September, US$ mln)



1.7.2 Investors

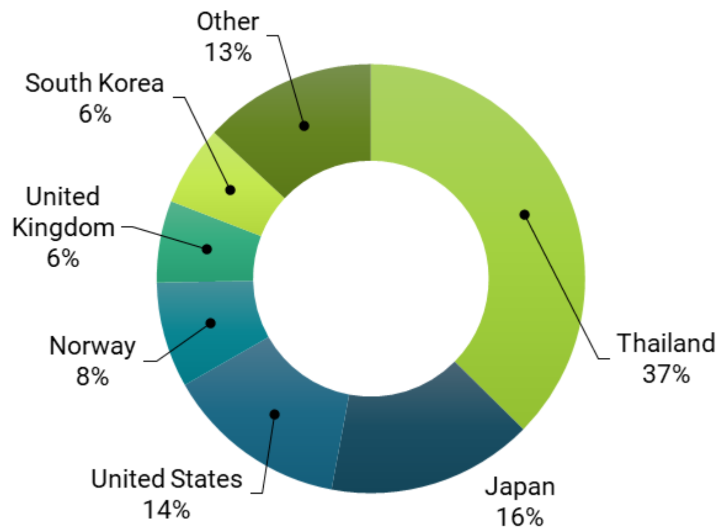
As of the most recent filings in September 2022, institutional investors held US$ 97 million in forest-risk investments in bonds and shares issued by the selected companies active in Vietnam. It was found that 88% of these investments, US$ 86 million, were attributable to pulp and paper, and only 12%, US$ 1 million, to rubber.

Figure 39 Vietnam: Bond & shareholders per sector (2022 September, US$ mln)



Forest-risk investments in bonds and shares attributable to Vietnam were identified for three companies: SCG Packaging, a Thai pulp and paper company, HAGL, a Vietnamese rubber company and VRG, another Vietnamese rubber company.

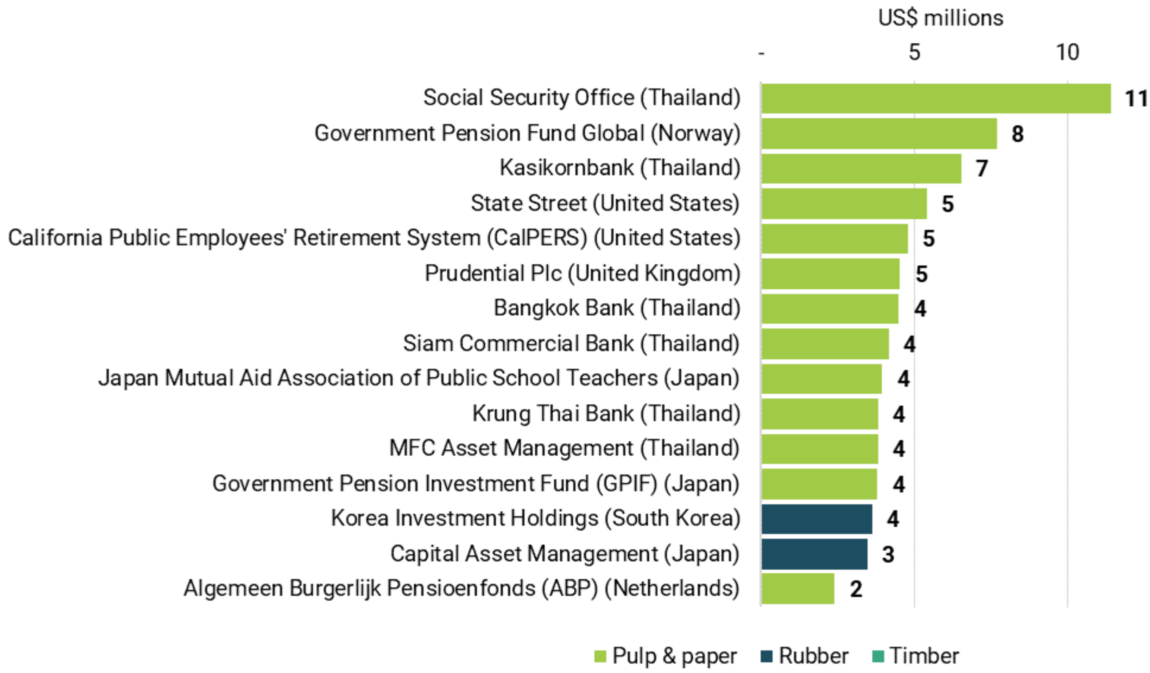
Figure 40 Vietnam: Bond & shareholders per financial institution country (2022 September, US$ mln)



This research found that selected companies engaged in the focus forest-risk sectors in Vietnam received investments from a wide range of countries, as shown in Figure 40. More than a third of the investments identified came from Thai financial institutions, which together held US$ 36 million in forest-risk bonds and shares issued by SCG Packaging Group. Thai financial institutions were followed by Japanese financial institutions which held US$ 15 million of investments in both SCG Packaging and VRG, and financial institutions from the US which held investments worth US$ 13 million in both SCG Packaging and HAGL.

The largest investor was the Thai Social Security Office, which held forest-risk bonds and shares issued by the selected companies active in Vietnam worth a total of US$ 11 million. The Thai Social Security Office was followed by the Norwegian Government Pension Fund Global with US$ 8 million in bonds and shares and the Thai bank, Kasikornbank Bank with US$ 7 million.

Figure 41 Vietnam: Top-15 investors per sector (2022 September, US$ mln)



2.

Assessing Company Policies

This chapter presents an assessment of the strength of the environmental, social and governance (ESG) policies for a selection of the 13 leading rubber companies and 16 leading pulp and paper, and timber companies active in the Lower Mekong Region and China. The chapter details the assessment approach and the general overall findings before discussing the policies of the selected rubber, pulp and paper, and timber companies.

Key Messages

01 The ESG policies of 29 leading companies in the rubber, pulp and paper, and timber sectors within the Lower Mekong Region were assessed, revealing 20 companies with insufficiently robust policies.

02 Around 50% of the pulp and paper, and timber companies had adequate ESG policies while only two out of 13 rubber companies were found to have suitable policies. This is likely a result of the absence of a reliable certification system in the rubber sector.

03 Key players in rubber production include Guangxi Stora Enso Forestry China Timber Finland, Sri Trang Agro-Industry Thailand Rubber, Mekong Timber Plantations Lao PDR Timber Australia, Viet Nam Forestry Corporation (VINAFOR) Vietnam Timber, and Lastica Thailand Rubber.

04 Sri Trang Agro-Industry and Vietnam Rubber Group were the only rubber companies that scored adequately on environmental criteria while most lacked commitments to not use fire for land clearing, protect wetlands and peatlands, or prevent degradation of high carbon stock areas.

05 On social criteria, rubber companies generally respect Indigenous peoples' rights to give or withhold Free, Prior and Informed Consent (FPIC), but none have committed to maintaining zero tolerance towards violence and the criminalization of land, environmental, and human rights defenders.

06 The assessment of the 16 leading pulp and paper, and timber companies shows a larger portion with adequate ESG policies. The companies, including Burapha Agro-Forestry Co., Siam Forestry, Grandis Timber, Habras-MZZ Plantation Myanmar Co., and Viet Nam Forestry Corporation, generally had environmental scores comparable to their overall scores.

07 On social criteria, pulp and paper, and timber companies scored better on average, with Guangxi Stora Enso Forestry scoring well. Several have achieved FSC certification and made commitments on worker safety and conflict resolution.

08 The governance issues of pulp and paper, and timber companies scored lower, with the notable exception of Guangxi Stora Enso Forestry.

09 Companies from OECD countries generally perform better in ESG policy analysis, but ESG scores for all companies active in the Lao PDR were still far from sufficient.

2.1 Approach and overall findings

In order to highlight areas of heightened potential forest risk exposure, the Environmental, Social and Governance (ESG) policies of the leading 29 companies active in forest risk sectors, in the Lower Mekong Region, 13 rubber companies and 16 timber and pulp and paper companies) active in the Lower Mekong Region and China were assessed. This assessment made use of a pre-established framework by using a modified version of the *Forests & Finance* policy assessment methodology.

Out of the 29 companies, 20 were found to have insufficiently robust policies relating to ESG, defined by a score of below five out of 10. The highest score was given to Guangxi Stora Enso Forestry, a pulp and paper company active in China and owned by a company from Finland, which scored 7.5 out of 10 overall. This was followed by the Thai rubber company, Sri Trang Agro-Industry, which received 6.7 out of 10. The full table of results for the 29 companies can be seen in Table 1.

Nearly 50% of the pulp and paper, and timber companies assessed were found to have adequate policies to address the environmental, social and governance impacts of their operations, defined by scores of five out of 10 or higher. This finding is strongly related to the fact that these seven of the companies assessed have achieved FSC certification. This certification system has included many of the criteria included in our assessment methodology in its list of certification criteria.

In contrast, only two out of 13 rubber companies were found to have adequate policies to address the environmental, social and governance impacts of their operations, a score of five out of 10 or over. The absence of a reliable certification system in the rubber sector plays an important role here.

The results suggest that the country of operations does not play any role in explaining the differences in policy scores between the companies researched. But, the findings do suggest that companies that there is a correlation between corporate groups from OECD countries have better ESG policies. This is probably linked to a higher level of public pressure on companies in OECD countries to live up to ESG criteria, in their domestic and overseas operations.

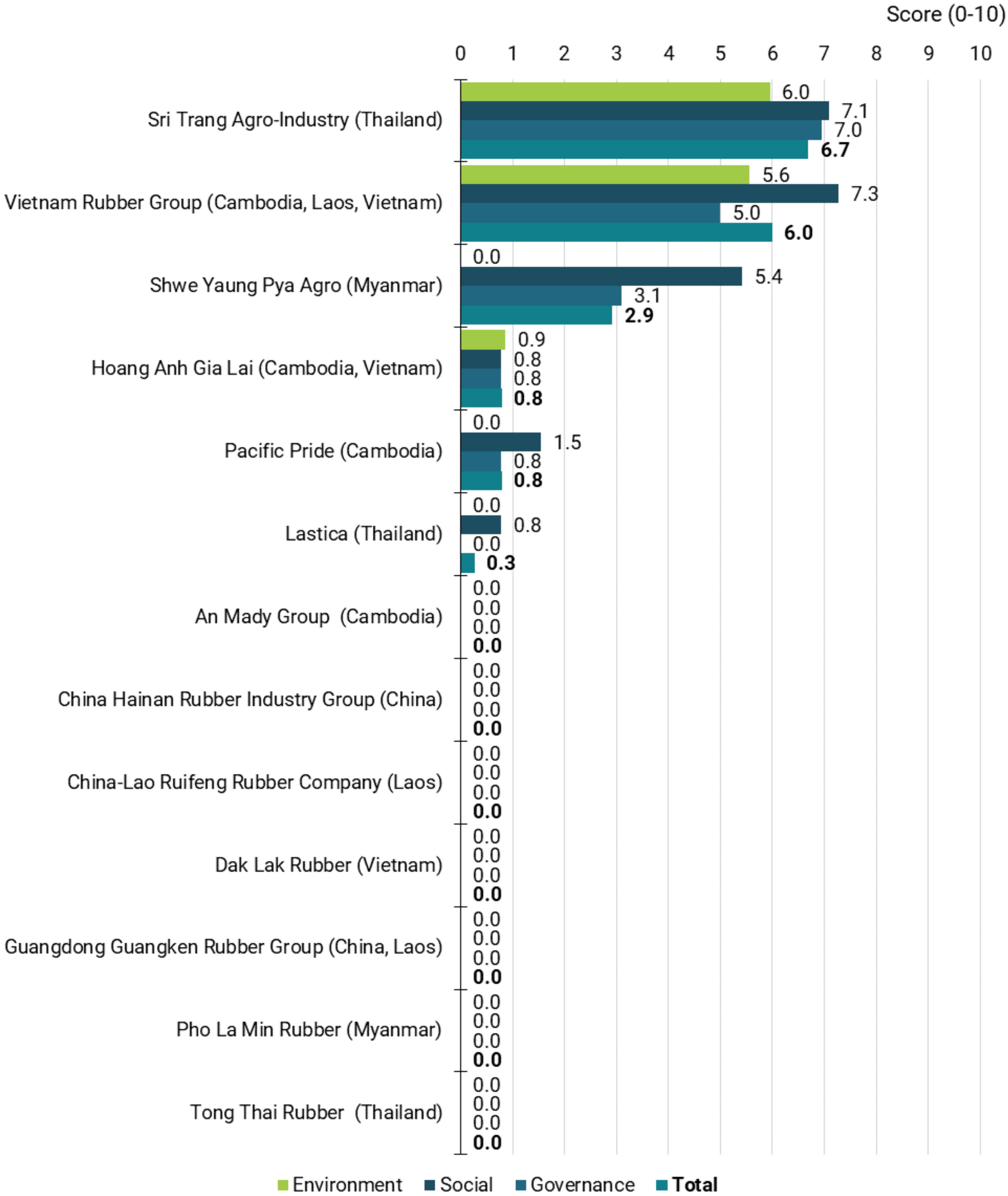
Table 1 Policy scores of selected pulp and paper, timber and rubber companies

Company	Active in	Commodity	Country of origin	Policy score
Guangxi Stora Enso Forestry	China	Timber	Finland	7.5
Sri Trang Agro-Industry	Thailand	Rubber	Thailand	6.7
Mekong Timber Plantations	Lao PDR	Timber	Australia	6.6
Vietnam Rubber Group (VRG)	Cambodia, Lao PDR, Vietnam	Rubber	Vietnam	6.0
Burapha Agro-Forestry Co.	Lao PDR	Timber	Sweden	5.9
Siam Forestry	Thailand	Timber	Thailand	5.6
Grandis Timber	Cambodia	Timber	Cambodia	5.3
Habras-MZZ Plantation Myanmar Co	Myanmar	Timber	India	5.3
Viet Nam Forestry Corporation (VINAFOR)	Vietnam	Timber	Vietnam	5.0
APP China	China	Timber	Indonesia	3.6
Shwe Yaung Pya Agro	Myanmar	Rubber	Myanmar	2.9
Global Agriculture Joint Venture Co.	Myanmar	Timber	Myanmar	0.8
Hoang Anh Gia Lai	Cambodia, Vietnam	Rubber	Vietnam	0.8
Pacific Pride	Cambodia	Rubber	Vietnam	0.8
Lastica	Thailand	Rubber	Thailand	0.3
An Mady Group	Cambodia	Rubber	Cambodia	0.0
Asia Teak Thailand	Thailand	Timber	United Kingdom	0.0
China Hainan Rubber Industry Group	China	Rubber	China	0.0
China-Lao Ruifeng Rubber Company	Lao PDR	Rubber	China	0.0
D&G Viet Nam Co.	Vietnam	Timber	Vietnam	0.0
Dak Lak Rubber (DAKRUCO)	Vietnam	Rubber	Vietnam	0.0
Guangdong Guangken Rubber Group	China, Lao PDR	Rubber	China	0.0
Guangxi Forestry Group	China	Timber	China	0.0
Nature Timber Trading (NTT)	Myanmar	Timber	Myanmar	0.0
Pho La Min Rubber	Myanmar	Rubber	Myanmar	0.0
Siv Guek Investment	Cambodia	Timber	China	0.0
Sun Paper Holding Lao PDR	Lao PDR	Timber	China	0.0
Think Biotech (Cambodia)	Cambodia	Timber	Taiwan	0.0
Tong Thai Rubber	Thailand	Rubber	Thailand	0.0

2.2 Rubber companies

The policy scores for the 13 leading rubber companies are shown in Figure 42, disaggregated by individual scores for Environmental, Social and Governance criteria and the total scores for all criteria. The results show that only a small number of the rubber companies assessed have any ESG policy in place, and of those, only two rubber companies score adequate or higher. These were Sri Trang Agro-Industry from Thailand with a total score of 6.7 and Vietnam Rubber Group from Vietnam, active in Vietnam, Cambodia and Lao PDR, with an overall score of 6.2. Of the remaining companies, Shwe Yaung Pya Agro from Myanmar scores reasonably on the social criteria (5.4), but overall, only a 2.9. The nine other rubber companies all score below 1 in total.

Figure 42 ESG policy scores of large rubber companies in the Larger Mekong Region



2.2.1 Environmental criteria

Rubber companies assessed scored lower than average on their environmental policies. Two companies scored adequately, Sri Trang Agro-Industry with a score of six out of 10, and Vietnam Rubber Group with a score of 5.6 out of 10. Shwe Yaung Pya Agro, which scores reasonably on the social criteria (5.4), scores a zero on the environmental criteria.

Table 2 provides a breakdown of the environmental assessment into individual criterion and shows the scores for the three rubber companies that have at least one environmental criterion in their policies. For simplicity, all companies that scored a zero in the assessment of their environmental policy have been removed from the table.

Table 2 Environmental policy scores of rubber companies

Environmental criteria		HAGL	Sri Trang Agro-Industry	Vietnam Rubber Group
1	The company and its suppliers commit to zero-deforestation and no-conversion of natural forests and ecosystems.	0	85	100
2	The company and its suppliers do not drain or degrade wetlands and peatlands.	0	0	85
3	The company and its suppliers do not convert or degrade High Carbon Stock (HCS) in tropical forest areas.	0	0	85
4	The company and its suppliers do not operate in, or have negative impacts on, protected areas.	85	85	0
5	The company and its suppliers do identify and protect High Conservation Value (HCV) areas under their management.	0	85	85
6	The company and its suppliers do not use fire for land clearing activities and fight fires.	0	0	0
7	The company and its suppliers do minimize their impacts on groundwater levels and water quality.	0	85	100
8	The company and its suppliers do not harvest, nor trade in, endangered species and does protect the habitats of endangered species.	0	85	0
9	The company and its suppliers do not use nor introduce genetically modified species or invasive alien species into the environment.	0	85	0
10	The company and its suppliers do minimize or eliminate the use of pesticides.	0	85	100

None of the three rubber companies shown in Table 2, and none of the other ten rubber companies assessed, commit to not using fire for land clearing (criteria 6). Sri Tang Agro-Industry also does not commit to protecting wetlands and peatlands (criteria 2), nor committed to non-conversion or degradation of high carbon stock areas (criteria 3). Vietnam Rubber Group is still missing the commitment to not operate in protected areas (criteria 4), to protect habitats of endangered species (criteria 8) and not to introduce genetically modified species (criteria 9).

2.2.2 Social criteria

Of those rubber companies that have any ESG policies, they typically score better on social criteria than on the other two categories. The Vietnam Rubber Group (7.3), Sri Trang Agro-Industry (7.1) and Shwe Yaung Pya Agro (5.4) score reasonably on the social criteria. Three other rubber companies score on one or two of the social criteria.

Table 3 provides a breakdown of the social assessment into individual criterion and shows the scores of the rubber companies on each criterion. For simplicity, only companies that have a score greater than zero are included in the table.

Table 3 Social policy scores of rubber companies

Social criteria		HAGL	Lastica	Pacific Pride	Shwe Yaung Pya Agro	Sri Trang Agro-Industry	Vietnam Rubber Group
11	The company and its suppliers do respect the right of Indigenous peoples to give or withhold Free, Prior and Informed Consent (FPIC) if they could be affected by planned operations.	0	0	0	85	85	100
12	The company and its suppliers do respect the right of all communities with customary land rights to give or withhold Free, Prior and Informed Consent (FPIC) if they could be affected by planned operations.	0	0	0	0	0	100
13	The company and its suppliers do establish human rights due diligence processes and monitoring systems.	0	0	0	85	85	100
14	The company and its suppliers do respect the broader social, economic and cultural rights of communities affected by their operations, including the right to health and the right to an adequate standard of living.	0	85	0	85	85	100
15	The company and its suppliers do commit to the resolution of complaints and conflicts through an open, transparent and consultative process.	0	0	0	85	85	100
16	The company and its suppliers do maintain zero tolerance towards violence and the criminalization of land, environmental, and human rights defenders.	0	0	0	0	0	0
17	The company and its suppliers do not engage in forced labour nor in child labour.	0	0	85	85	85	100
18	The company and its suppliers do uphold the rights to freedom of association, collective bargaining and freedom from discrimination.	0	0	0	85	85	0
19	The company and its suppliers do pay at least a living wage.	0	0	0	0	85	0
20	The company and its suppliers do protect the safety and health of workers.	85	0	85	85	85	100
21	The company and its suppliers do have a gender-sensitive zero tolerance policy towards all forms of gender-based discrimination and violence.	0	0	0	0	100	100

Criteria 14, 17 and 20 have received the most commitments from rubber companies: Five out 13 companies have committed to protecting the safety and health of their workers (criteria 20). However, only VRG has extended this commitment to its suppliers as well. Four out of 13 companies have committed to respecting the broader social, economic, and cultural rights of communities affected by their operations (criteria 14) and not to engage in forced labour or in child labour (criteria 17).

Of all the 11 social criteria, a commitment 'to maintain zero tolerance towards violence and the criminalization of land, environmental, and human rights defenders' (criteria 16) was not found in any of the rubber companies' policies. A commitment 'to respect the FPIC right of all communities with customary land rights' (criteria 12), is only supported by VRG, and a commitment 'to the payment of a living wage' (criteria 19), is only committed to by Sri Tang Agro-Industry has committed. Further engagement with the companies around their unwillingness to commit to these criteria could be beneficial.

2.2.3 Governance criteria

The rubber companies score highly on governance criteria. Of the companies assessed, Sri Trang Agro-Industry (7.0) and Vietnam Rubber Group (5.8) score reasonably well. Shwe Yaung Pya Agro (3.1) stays behind on governance criteria, while the ten other rubber companies score below 1.

Table 4 provides a breakdown of the governance assessment into individual criterion and shows the scores of the rubber companies on each criterion. For simplicity, only the five companies that have a score greater than zero are included in the table.

Table 4 Governance policy scores of rubber companies

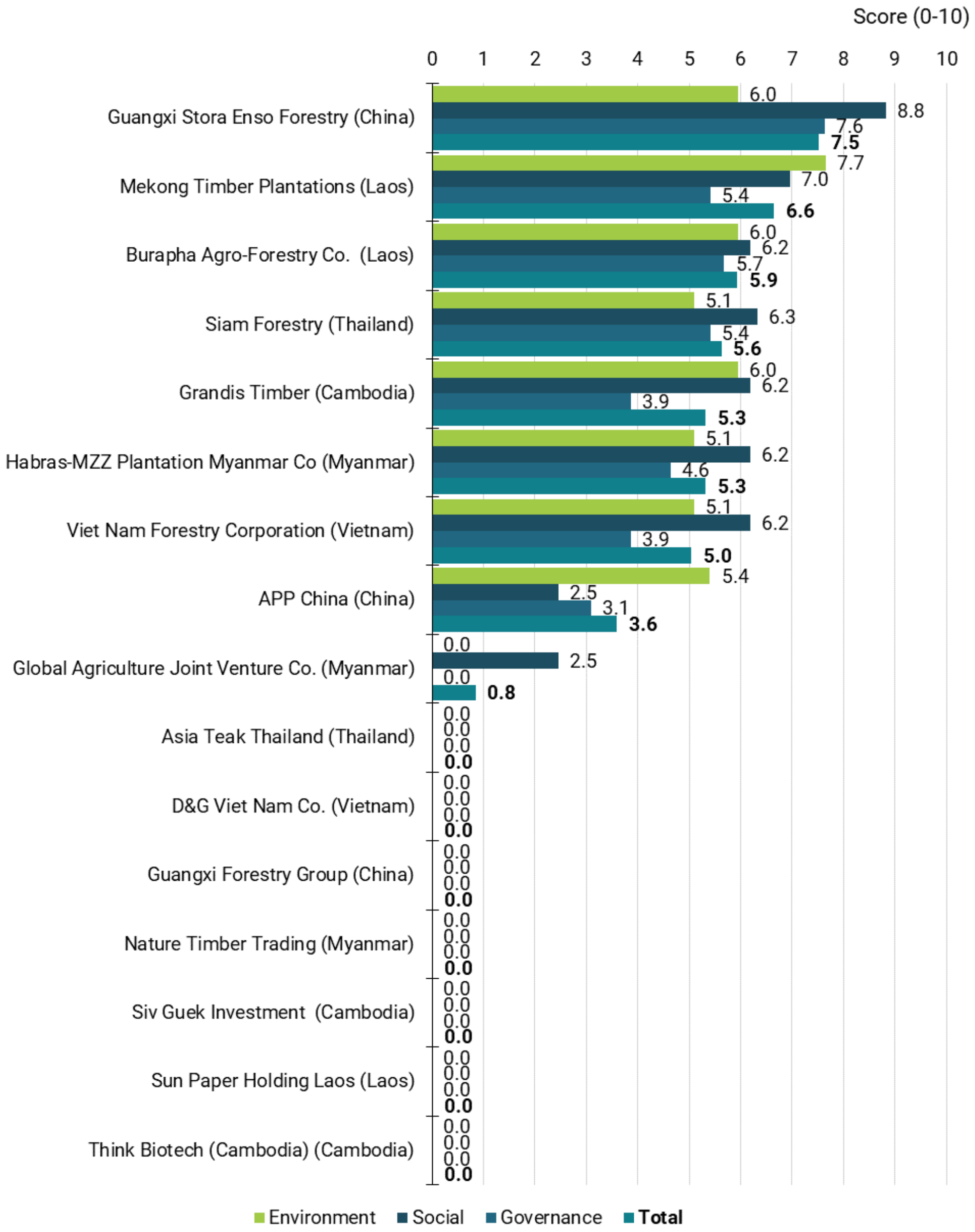
Governance criteria		HAGL	Pacific Pride	Shwe Yaung Pya Agro	Sri Trang Agro-Industry	Vietnam Rubber Group
22	The company has integrated sustainability objectives in its governance structure.	0	0	85	85	85
23	The company is transparent on the actions through which its forest-risk policies are implemented and enforced.	0	0	0	85	100
24	The company discloses its forest-related impacts, including its forest-related GHG emissions and its forest footprint.	0	0	0	85	0
25	The company commits to a transparent and effective external grievance mechanism.	0	0	0	0	0
26	The company and its suppliers do provide proof of legality of their operations and commodity supplies, in particular proof of compliance with all prevailing laws and regulations on land acquisition and land operation.	0	85	0	85	85
27	The company and its suppliers do ensure supply chain transparency and traceability.	0	0	0	85	0
28	The company and its suppliers do publish geo-referenced maps of all the concession areas and farms under their management.	0	0	0	85	100
29	If the company is starting new operations or expanding its operations, it does publish a social and environmental impact assessment.	85	0	85	85	100
30	The company and its suppliers do not get engaged in corruption, bribery and financial crimes.	0	0	85	85	85
31	The company and its suppliers do comply with the letter and the spirit of the tax laws and regulations in the countries in which they operate and does not set up corporate structures solely for tax avoidance purposes.	0	0	0	85	0
32	The company and its suppliers do publish their group structure and country-by-country data.	0	0	85	0	0

The governance criteria which received the most commitments from rubber companies, with commitments from four out of 13 companies, is the commitment ‘to publish a social and environmental impact assessment when starting new operations or expanding its operations’ criteria 29. Conversely, the commitment ‘to a transparent and effective external grievance mechanism, such as an OECD National Contact Point’ (criteria 25) was not found in any of the rubber companies’ policies. Additionally, four criteria are only supported by one of the 13 rubber companies: a commitment to disclose the company’s forest footprint (criteria 24), a commitment to ensure supply chain transparency (criteria 27), a commitment to comply with the letter and the spirit of the tax laws and regulations (criteria 31) and a commitment to disclose the company’s group structure and country-by-country data (criteria 32). As with the sections above, these would be appropriate points of engagement either, directly to the companies themselves or, via their financing institutions.

2.3 Pulp and paper, and timber companies

The overall assessment of the robustness of the environmental, social and governance policies for the 16 leading pulp and paper, and timber companies in the Lower Mekong region are shown in Figure 43. The table provides a total score for each company as well as a disaggregated score for the respective E, S, G categories. The results show that compared to the rubber companies shown in Figure 42, a larger portion of the pulp and paper, and timber companies (7 out of 16) has adequate policies. The best-scoring companies are Guangxi Stora Enso Forestry from China with a total score of 7.8, and Mekong Timber Plantations in Lao PDR with a score of 6.6.

Figure 43 ESG policy scores of large pulp and paper, and timber companies in the Larger Mekong Region



Five other companies have a total score between five and six: Burapha Agro-Forestry Co. from Lao PDR, Siam Forestry from Thailand, Grandis Timber from Cambodia, Habras-MZZ Plantation Myanmar Co. from Myanmar, and Viet Nam Forestry Corporation from Vietnam. The higher number of higher-scoring companies is a reflection of their participation in FSC certification. These companies are followed by APP China with a total score of 3.6 and eight timber companies which score less than 1 point in total, which indicates an inadequately robust policy.

2.3.1 Environmental criteria

The environmental scores for the leading pulp and paper, and timber companies were found to be generally comparable to their overall scores. The company with the best-performing environmental policy was Mekong Timber Plantations, which scored well, with a score of 7.7. Seven other pulp and paper, and timber companies score reasonably, between 5 and 6, as shown in Figure 43.

Table 5 provides a detailed breakdown of the environmental scores for each of the 16 pulp and paper, and timber companies based on the individual environmental criterion assessed. For simplicity, only the companies that have a score greater than zero are included in the table.

Table 5 Environmental policy scores of timber companies

Environmental criteria		APP China	Burapha Agro-Forestry	Grandis Timber	Guangxi Stora Enso Forestry	Habras-MZZ Plantation Myanmar	Mekong Timber Plantations	Siam Forestry	Viet Nam Forestry Corporation
1	The company and its suppliers commit to zero-deforestation and no-conversion of natural forests and ecosystems.	85	0	0	85	0	85	0	0
2	The company and its suppliers do not drain or degrade wetlands and peatlands.	0	0	85	0	0	85	0	0
3	The company and its suppliers do not convert or degrade High Carbon Stock (HCS) in tropical forest areas.	85	0	0	0	0	0	0	0
4	The company and its suppliers do not operate in, or have negative impacts on, protected areas.	100	85	85	85	85	85	85	85
5	The company and its suppliers do identify and protect High Conservation Value (HCV) areas under their management.	85	85	85	85	85	85	85	85
6	The company and its suppliers do not use fire for land clearing activities and fight fires.	0	85	0	0	0	85	0	0
7	The company and its suppliers do minimize their impacts on groundwater levels and water quality.	85	85	85	85	85	85	85	85
8	The company and its suppliers do not harvest, nor trade in, endangered species and does protect the habitats of endangered species.	100	85	85	85	85	85	85	85
9	The company and its suppliers do not use nor introduce genetically modified species or invasive alien species into the environment.	0	85	85	85	85	85	85	85
10	The company and its suppliers do minimize or eliminate the use of pesticides.	0	85	85	85	85	85	85	85

The leading company, Mekong Timber Plantations, has committed to 9 out of 10 environmental criteria, but it has not extended these commitments to its suppliers and therefore receives 85 points for each of these criteria. Three other pulp and paper, and timber companies (Burapha Agro-Forestry Co., Grandis Timber and Guangxi Stora Enso Forestry) have committed to 7 out of 10 environmental criteria, while four other companies committed to 6 criteria. The remaining 8 pulp and paper, and timber companies have not committed to any of the environmental criteria.

The analysis found that four of the environmental criterion were covered by all eight pulp and paper, and timber companies: 'the commitment not to operate in protected areas' (criteria 4), the commitment 'to protect HCV areas' (criteria 5), the commitment 'to minimize impacts on water' (criteria 7) and the commitment 'to protect the habitats of endangered species'. For seven of the eight companies, the commitments were made in the process of achieving FSC certification. APP China is the only one of the eight that is not FSC-certified and has made these commitments independently in its policies.

Criteria 1, 2, 3 and 6 are deemed by the Forest and Finance methodology to be covered less well by FSC certification. For this reason, only explicit commitments by the pulp and paper, and timber companies on these criteria received points. On criteria 3, the commitment not to convert degraded HCS areas, is only made by one pulp and paper company (APP China). Only two companies have committed to criteria 2 and 6, and only three companies to criteria 1.

2.3.2 Social criteria

On average, those pulp and paper, and timber companies that have social policies score comparatively better on social criteria, than on the other two categories. Guangxi Stora Enso Forestry scored very well on the social criteria, with a score of 8.8, while another six timber companies scored reasonably well, with scores between six and seven. Two other timber companies scored badly with a score of 2.5, and the remaining seven timber companies were found to have no policy on social criteria at all.

Table 6 provides a detailed breakdown of the environmental scores for each of the 16 pulp and paper, and timber companies based on the individual social criterion assessed. For simplicity, only the companies that have a score greater than zero are included in the table.

Table 6 Social policy scores of timber companies

Social criteria		APP China	Burapha Agro-Forestry Co.	Global Agriculture Joint Venture Co.	Grandis Timber	Guangxi Stora Enso Forestry	Habras-MZZ Plantation Myanmar	Mekong Timber Plantations	Siam Forestry	Viet Nam Forestry Corporation
11	The company and its suppliers do respect the right of Indigenous peoples to give or withhold Free, Prior and Informed Consent (FPIC) if they could be affected by planned operations.	0	85	0	85	100	85	85	85	85
12	The company and its suppliers do respect the right of all communities with customary land rights to give or withhold Free, Prior and Informed Consent (FPIC) if they could be affected by planned operations.	0	0	0	0	100	0	0	0	0
13	The company and its suppliers do establish human rights due diligence processes and monitoring systems.	100	0	0	0	100	0	85	0	0

	Social criteria	APP China	Burapha Agro-Forestry Co.	Global Agriculture Joint Venture Co.	Grandis Timber	Guangxi Stora Enso Forestry	Habras-MZZ Plantation Myanmar	Mekong Timber Plantations	Siam Forestry	Viet Nam Forestry Corporation
14	The company and its suppliers do respect the broader social, economic, and cultural rights of communities affected by their operations, including the right to health and the right to an adequate standard of living.	0	85	0	85	100	85	85	85	85
15	The company and its suppliers do commit to the resolution of complaints and conflicts through an open, transparent, and consultative process.	0	85	85	85	100	85	85	85	85
16	The company and its suppliers do maintain zero tolerance towards violence and the criminalization of land, environmental, and human rights defenders.	0	0	0	0	0	0	0	0	0
17	The company and its suppliers do not engage in forced labour nor in child labour.	0	85	0	85	100	85	85	85	85
18	The company and its suppliers do uphold the rights to freedom of association, collective bargaining and freedom from discrimination.	85	85	0	85	100	85	85	85	85
19	The company and its suppliers do pay at least a living wage.	0	85	0	85	85	85	85	85	85
20	The company and its suppliers do protect the safety and health of workers.	85	85	100	85	100	85	85	100	85
21	The company and its suppliers do have a gender-sensitive zero tolerance policy towards all forms of gender-based discrimination and violence.	0	85	85	85	85	85	85	85	85

For the seven pulp and paper, and timber companies that have achieved FSC certification, Burapha Agro-Forestry Co., Grandis Timber, Guangxi Stora Enso Forestry, Habras-MZZ Plantation Myanmar, Mekong Timber Plantations, Siam Forestry and Viet Nam Forestry Corporation, each was granted a score of 85 points for the eight (out of 11) social criterion that are mandatory to achieve FSC-certification (11, 14, 15 and 17-21). Additionally, Guangxi Stora Enso Forestry has also committed to criterion 12, a commitment 'to support free and prior informed consent rights for communities with customary land rights' and criterion 13, a commitment 'to establishing human rights due diligence processes and monitoring systems. Guangxi Stora Enso Forestry has also made clear that most of the criteria to which commits are also extended to its suppliers, and therefore it has been granted 100 points for most criteria. Mekong Timber Plantations is the only other FSC-certified company to have made a commitment on one of the criteria that is not already covered by FSC-certification, criteria 13, 'establishing human rights due diligence processes and monitoring systems.

Among the nine other pulp and paper, and timber companies that have not achieved FSC certification, only two, APP China and Global Agriculture Joint Venture Co., have committed to three social criteria. The remaining seven timber companies, not shown in Table 3. have not committed to any social criteria at all. APP China's commitment to criterion 13, 'establishing human rights due diligence processes and monitoring systems, and Global Agriculture Joint Venture Co.'s commitment to criterion 20, 'protecting the safety and health of workers, stand out as, as these commitments are extended to their suppliers as well.

The criteria that received the most commitments from pulp and paper, and timber companies is criteria 20 a commitment 'to protect the safety and health of their workers', which is supported by nine out of 16 pulp and paper, and timber companies. Eight companies each committed to criterion 15, 'the resolution of complaints and conflicts through an open, transparent, and consultative process', criterion 18, a commitment 'to uphold the rights to freedom of association, collective bargaining and freedom from discrimination' and criterion 2,1 'gender-sensitive zero-tolerance policy towards all forms of gender-based discrimination and violence'.

The commitment 'to maintain zero tolerance towards violence and the criminalization of land, environmental, and human rights defenders' criterion 16 is not found in any of the pulp and paper, and timber companies' policies. A commitment 'to respect the FPIC right of all communities with customary land rights' criterion 12, is only supported by one timber company, Guangxi Stora Enso Forestry.

2.3.3 Governance criteria

Pulp and paper, and timber were found to perform relatively worse on governance issues, than their average scores on all criteria. The exception being Guangxi Stora Enso Forestry, which scored high with a score of 7.6 on the governance criteria, in comparison to an overall score of 7.5. Three other pulp and paper, and timber companies, Burapha Agro-Forestry Co, Mekong Timber Plantations and Siam Forestry, scored adequality on the governance criteria, with scores between 5 and 6. Four other companies score poorly (between 3 and 4) and the remaining 8 companies have not committed to any governance criteria at all.

Table 7 provides a detailed breakdown of the environmental scores for each of the 16 pulp and paper, and timber companies based on the individual governance criterion assessed. For simplicity, only the companies that have a score greater than zero are included in the table.

Table 7 Governance policy scores of timber companies

Governance criteria		APP China	Burapha Agro-Forestry	Grandis Timber	Guangxi Stora Enso Forestry	Habras-MZZ Plantation Myanmar	Mekong Timber Plantations	Siam Forestry	Viet Nam Forestry Corporation
22	The company has integrated sustainability objectives in its governance structure.	85	85	0	100	0	85	85	0
23	The company is transparent about the actions through which its forest-risk policies are implemented and enforced.	85	0	0	100	0	85	85	0
24	The company discloses its forest-related impacts, including its forest-related GHG emissions and its forest footprint.	0	0	0	100	0	0	0	0
25	The company commits to a transparent and effective external grievance mechanism.	0	0	0	0	0	0	0	0
26	The company and its suppliers do provide proof of legality of their operations and commodity supplies, in particular proof of compliance with all prevailing laws and regulations on land acquisition and land operation.	85	85	85	85	85	85	85	85
27	The company and its suppliers do ensure supply chain transparency and traceability.	0	85	85	85	85	85	85	85
28	The company and its suppliers do publish geo-referenced maps of all the concession areas and farms under their management.	0	100	85	85	85	85	85	85

Governance criteria		APP China	Burapha Agro-Forestry	Grandis Timber	Guangxi Stora Enso Forestry	Habras-MZZ Plantation Myanmar	Mekong Timber Plantations	Siam Forestry	Viet Nam Forestry Corporation
29	If the company is starting new operations or expanding its operations, it does publish a social and environmental impact assessment.	0	85	85	85	85	85	85	85
30	The company and its suppliers do not get engaged in corruption, bribery and financial crimes.	85	85	85	100	85	85	85	85
31	The company and its suppliers do comply with the letter and the spirit of the tax laws and regulations in the countries in which they operate and does not set up corporate structures solely for tax avoidance purposes.	0	0	0	100	0	0	0	0
32	The company and its suppliers do publish their group structure and country-by-country data.	0	100	0	0	85	0	0	0

The seven pulp and paper, and timber companies that have achieved FSC certification, Burapha Agro-Forestry Co., Grandis Timber, Guangxi Stora Enso Forestry, Habras-MZZ Plantation Myanmar, Mekong Timber Plantations, Siam Forestry and Viet Nam Forestry Corporation, have each been granted a score of 85 points for the five governance criteria covered by the FSC-certification, criteria 26 through 30. Guangxi Stora Enso Forestry has committed to four additional governance criteria, and extended these commitments to its suppliers as well. Guangxi Stora Enso Forestry therefore committed to nine, out of 11, governance criteria, while three other pulp and paper, and timber companies, Burapha Agro-Forestry Co., Mekong Timber Plantations and Siam Forestry, committed to seven out of 11 governance criteria. Four further pulp and paper, and timber companies have committed to between four and six governance criteria, while the remaining eight pulp and paper, and timber companies which are not shown in Table 7 have not committed to any governance criteria at all.

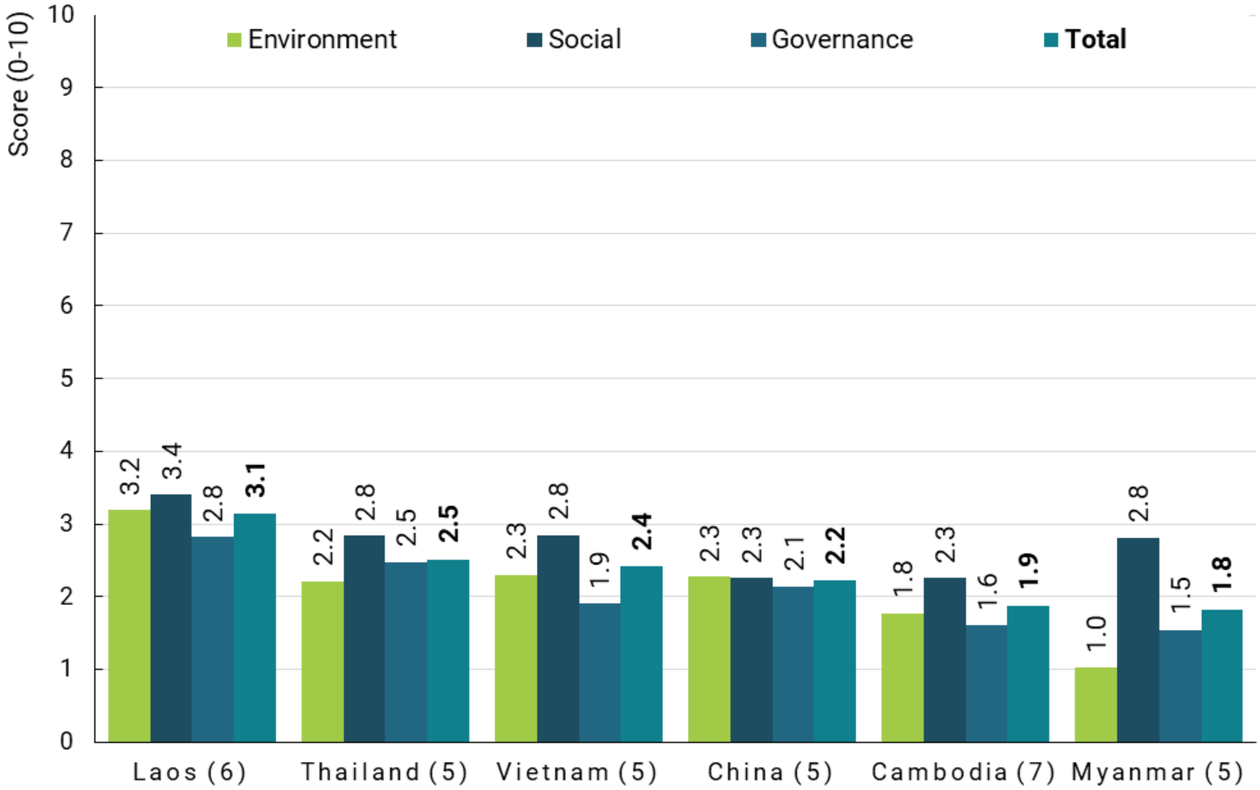
The two criteria that received most the commitments from pulp and paper, and timber companies, each receiving commitments from eight out of 13 companies, were criterion 26 ‘proof of legality of their operations and commodity supplies; and criterion 30, ‘no engagement in corruption, bribery and financial crimes’. Seven pulp and paper, and timber companies committed to three other criteria, mostly as part of their FSC certification process: criteria 27, ‘ensuring supply chain transparency and traceability’, criteria 28, ‘publishing geo-referenced maps of all the concession areas and farms under their management,’ and criteria 29, ‘publishing social and environmental impact assessments’.

Only one of the 11 governance criteria was not found in any of the pulp and paper, and timber companies’ policies: the commitment to a transparent and effective external grievance mechanism, such as an OECD National Contact Point, criterion 25. Two criteria are only supported by one of the 16 timber companies: a commitment ‘to disclose the company’s forest footprint criterion 24, and a commitment ‘to comply with the letter and the spirit of the tax laws and regulations’ criterion 31. Both criteria are only supported by Guangxi Stora Enso Forestry.

2.4 Average scores per country of operation

Figure 44 provides a summary of the average ESG policy scores by each country in the Lower Mekong Region and China. The figure shows the average scores for the rubber and timber companies active in each country. The number of companies per country is indicated in brackets.

Figure 44 Average ESG scores of rubber and timber companies per country of operation



Relatively, the six companies active in Lao PDR scored higher, with a total average score of 3.1 out of 10. However, their average is still far from sufficient on a scale from 1 to 10. The slightly higher than average scores of companies operating in Lao PDR may not be related to the company in which they operate, but rather to the countries of origin of the corporate groups owning the companies active in Lao PDR. None of the companies are domestically owned, with the corporate owners originating from Australia, China, Sweden, and Vietnam. Section 2.5 discusses the average scores per country of origin of the corporate groups.

2.5 Scores of corporate groups per country of origin

Figure 45 shows the relationship between the country of origin of the leading rubber and timber companies active in the Lower Mekong Region and China, and the average ESG scores of these companies.

Figure 45 Average scores per country of origin of the corporate groups

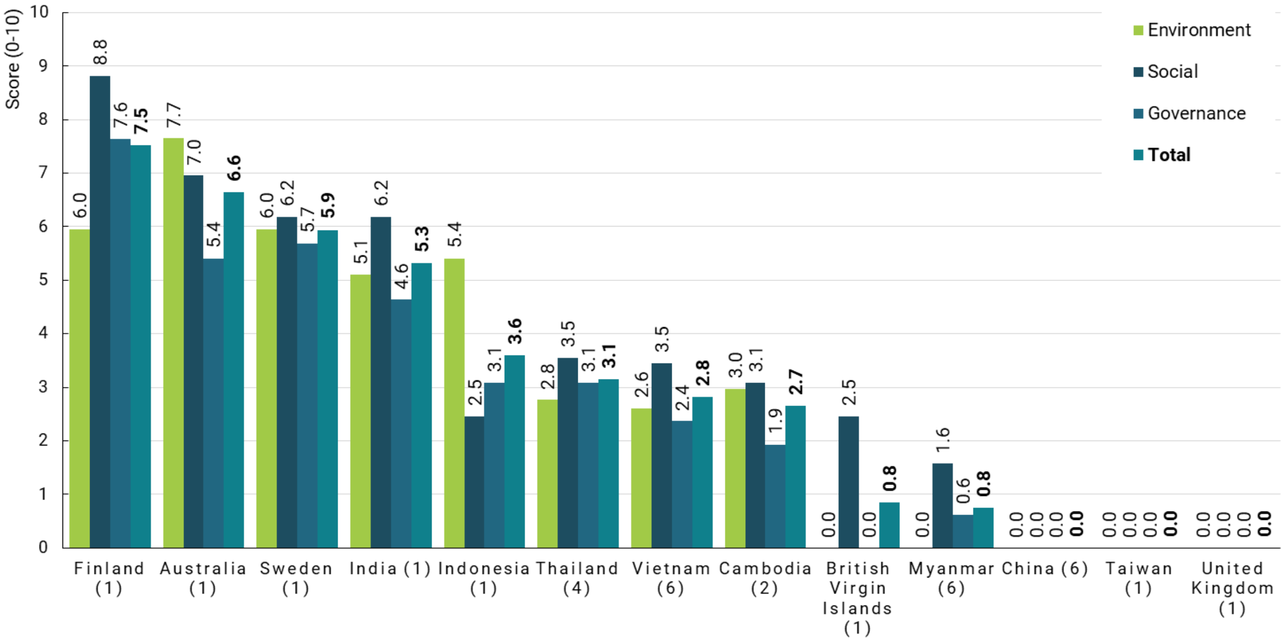


Figure 45 provides indicates that the rubber, pulp and paper, and timber companies owned by corporate groups from OECD countries, perform better in an analysis of their ESG policies. The companies originating from Finland, Australia and Sweden score relatively well with total scores of 7.8, 6.6 and 5.9 respectively. This finding is however contradicted by one company domiciled in the United Kingdom, which scored zero.

Companies from India, with an average score 5.4, and Indonesia, with an average score of 3.6, also score slightly better than the companies originating from within the Greater Mekong Region itself. Companies from Thailand on average scored 3.1, groups from Cambodia scored 2.7 and groups from Vietnam scored 2.1. Companies from Myanmar scored 0.6 and on average, companies from China scored 0, significantly behind in the development of proper ESG policies.

It is interesting to note that the companies active in Lao PDR, which scored relatively best in Figure 44, are all owned by foreign corporate groups. As a result, Lao PDR is not represented in Figure 45.

3.

Assessing Bank Policies

This chapter provides an assessment of the strength of environmental, social and governance (ESG) policies of 38 banks from the LMR and China. The chapter summarizes the analytical approach and the overall findings of the bank policy assessments before providing more detail on the individual environmental, social and, governance policies of the banks assessed.

Key Messages

01	An assessment was conducted on the Environmental, Social, and Governance (ESG) policies of 38 banks from the Lower Mekong Region (LMR), and China
02	Most banks performed poorly in the assessment, with an overall score of less than two. Eight banks even scored zero, indicating a lack of comprehensive ESG policies. From all of those assessed, only TMB Tanachart Bank from Thailand had adequate ESG policy coverage.
03	The average ESG policy score across all banks was inadequate, with an overall average of 1.95 out of 10. Thai banks scored slightly higher, potentially due to Thailand's Sustainable Banking and Responsible Lending Guidelines.
04	Of the assessed banks, 29 had no environmental policy at all and only three of the 29 banks scored from adequate to good on environmental criteria.
05	While most banks had policies on the trade in endangered species and their habitat protection, none had policies addressing the conversion of High Carbon stock areas or minimizing the impact on water.
06	TMB Tanachart Bank was the only bank that scored close to good on social criteria, with 29 banks having no social policy at all. Issues of gender-based discrimination, violence, and human rights due diligence were largely unaddressed.
07	All 38 banks scored on at least one of the 14 governance criteria, yet none were found to have a comprehensive governance policy. Seven governance criteria were not covered by any bank.
08	Some banks (22 out of 38) have made initial steps towards integrating sustainability criteria into their governance structures, yet much more needs to be done to tackle sustainability challenges in the rubber and timber sectors.

3.1 Approach and overall findings

The ESG policies of 38 banks from the LMR and China were assessed using the Forests & Finance methodology, consisting of 35 environmental, social and governance criteria derived from international standards and agreements. The banks were selected based on their financing relationships with the leading pulp and paper, timber, and rubber companies in the region. A number of banks from within the Lower Mekong Region were also included for comparison. The analysis focused on the largest banks in each Lower Mekong country, and on those banks that focus on the agriculture sector.

Table 8 provides an overview of the overall policy scores for the 38 banks assessed from the Lower Mekong region and China, on a scale from 0 to 10. The results show that from the region, only one bank, TMB Tanachart Bank from Thailand, was found to have adequate ESG policy coverage with a score of five out of 10. Two other banks score inadequately: Vietnam Prosperity Bank from Vietnam, with a score of 4.2, and Industrial Bank Company from China, with a score of 3.9. The remaining 35 banks assessed scored poorly, with an overall score of less than two. Eight of the banks had a score of zero.

This means that none of the banks assessed comprehensively address the various environmental, social and governance issues which are widespread in the pulp and paper, timber and rubber sectors in the LMR and China. This is especially true of the 35 banks that have very limited ESG policy coverage and as a result, run a significant risk that hardly any policy runs the risk that they finance companies which violate crucial ESG criteria.

Table 8 Overall ESG policy scores of 38 banks from the LMR and China

Rank	Bank	Total	Rank	Bank	Total
1	TMB Tanachart Bank (Thailand)	**5.0**	20	Agribank (Vietnam)	**0.2**
2	Vietnam Prosperity Bank (Vietnam)	**4.2**	21	Bank of China (China)	**0.2**
3	Industrial Bank Company (China)	**3.9**	22	Bank of Nanjing (China)	**0.2**
4	ABA Bank (Cambodia)	**1.9**	23	China Merchants Group (China)	**0.2**
5	Kasikornbank (Thailand)	**1.7**	24	VietinBank (Vietnam)	**0.2**
6	Krung Thai Bank (Thailand)	**1.5**	25	Bank of Ningbo (China)	**0.2**
7	KBZ Bank (Myanmar)	**1.2**	26	China Minsheng Banking (China)	**0.2**
8	Acleda Bank (Cambodia)	**1.0**	27	Shanghai Pudong Development Bank (China)	**0.2**
9	Bangkok Bank (Thailand)	**0.8**	28	Hua Xia Bank (China)	**0.2**
10	Aya Bank (Myanmar)	**0.7**	29	Agricultural Bank of China (China)	**0.0**
11	CSC Financial (China)	**0.5**	30	Agricultural Promotion Bank (Lao PDR)	**0.0**
12	China Development Bank (China)	**0.5**	31	Bank of Communications (China)	**0.0**
13	BIDV (Vietnam)	**0.5**	32	Canadia Bank (Cambodia)	**0.0**
14	China Everbright Group (China)	**0.5**	33	CITIC (China)	**0.0**
15	China Zheshang Bank (China)	**0.5**	34	HDBank (Vietnam)	**0.0**
16	China Construction Bank (China)	**0.5**	35	Lao-Viet Bank (Lao PDR)	**0.0**
17	Industrial and Commercial Bank of China (China)	**0.5**	36	Nayoby Bank (Lao PDR)	**0.0**
18	Shenwan Hongyuan Group (China)	**0.4**	37	TPBank (Vietnam)	**0.0**
19	Siam Commercial Bank (Thailand)	**0.2**	38	Vietcombank (Vietnam)	**0.0**

3.2 Environmental criteria

Of the 38 banks assessed, 29 were found to not have any environmental policy at all. An overview of the environmental scores of nine banks that had an existing environmental policy is provided in Figure 46. Three of the banks scored from adequate to good, TMB Tanachart Bank from Thailand had a score of 6.8 out of ten, Vietnam Prosperity Bank from Vietnam scored 6.1, and Industrial Bank Company from China scored 5.9. Three banks scored inadequately, with scores between 3 and 4 points, and three banks scored below 1 point.

Figure 46 Environment scores of the 9 banks with an environmental policy

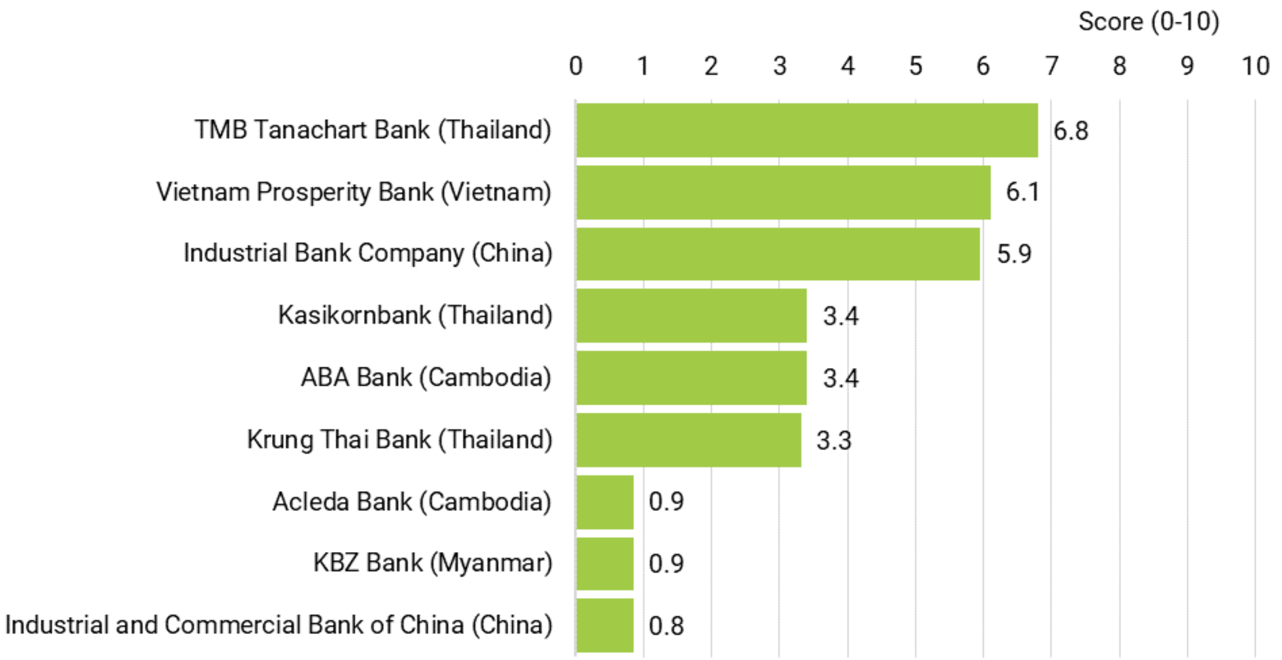


Table 9 provides an overview of the scores of the same nine banks per environmental criterion. The table only shows the 9 banks that scored on at least one environmental criterion and not the 29 banks that did not score on any of the environmental criteria.

Table 9 Environmental scores of selected banks per criterion

Criterion		ABA Bank	Acleda Bank	Industrial and Commercial Bank of China	Industrial Bank Company	Kasikornbank	KBZ Bank	Krung Thai Bank	TMB Tanachart Bank	Vietnam Prosperity Bank
1	Companies and their suppliers must commit to zero-deforestation and no-conversion of natural forests and ecosystems.	85	0	0	85	0	0	85	85	85
2	Companies and their suppliers must not drain or degrade wetlands and peatlands.	0	0	0	85	0	0	85	85	85
3	Companies and their suppliers must not convert or degrade High Carbon Stock (HCS) tropical forest areas.	0	0	0	0	0	0	0	0	0
4	Companies and their suppliers must not operate in, or have negative impacts on, protected areas.	0	0	0	85	85	0	85	85	85
5	Companies and their suppliers must identify and protect High Conservation Value (HCV) areas under their management.	85	0	0	85	85	0	0	85	85
6	Companies and their suppliers must not use fire for land clearing activities and fight fires.	0	0	0	0	0	0	0	85	0
7	Companies and their suppliers must minimize their impacts on groundwater levels and water quality.	0	0	0	0	0	0	0	0	0
8	Companies and their suppliers must not harvest, nor trade in, endangered species and must protect the habitats of endangered species.	85	85	0	85	85	85	85	85	100
9	Companies and their suppliers must not use nor introduce genetically modified species or invasive alien species into the environment.	0	0	0	85	0	0	0	85	85
10	Companies and their suppliers must minimize or eliminate the use of pesticides.	85	0	85	85	85	0	0	85	85

Table 9 shows that criterion eight, ‘trade in endangered species and protection of their habitats’ is covered by most banks, eight out of 38, in their policies. Criterion 10, ‘minimize pesticide use’ is covered by 6 banks. Notably, two criteria, criterion three, ‘no conversion of High Carbon stock areas’ and criterion 7, ‘minimize the impact on water; are not covered by any bank in its policies.

3.3 Social criteria

Of the 38 banks assessed, 29 have no policy on any of the social criteria. An overview of the social scores of the other nine banks is provided in Figure 47. The social scores of TMB Tanachart Bank from Thailand are close to good, with a score of 7.4, while Vietnam Prosperity Bank from Vietnam (4.6) and Industrial Bank Company from China (4.6) score inadequately. Three other banks clearly score inadequately, below 3 points, and three banks score below 1 point.

Figure 47 Social scores of the 9 banks with a social policy

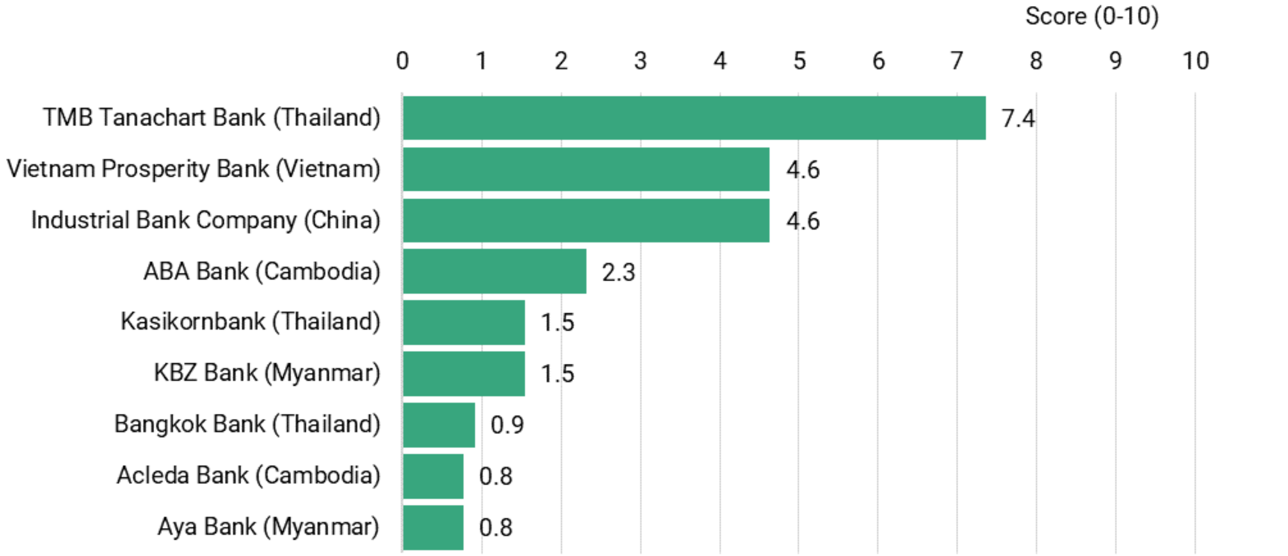


Table 10 provides an overview of the scores of the same nine banks, per social criterion. The table only shows the 9 banks which scored on at least one social criterion and not the 29 banks which did not score on any of the social criteria.

Table 10 Social scores of selected banks per criterion

Criterion		ABA Bank	Acleda Bank	Aya Bank	Bangkok Bank	Industrial Bank Company	Kasikornbank	KBZ Bank	TMB Tanachart Bank	Vietnam Prosperity Bank
11	Companies and their suppliers must respect the right of Indigenous peoples to give or withhold Free, Prior and Informed Consent (FPIC) if they could be affected by planned operations.	0	0	0	0	85	0	0	85	85
12	Companies and their suppliers must respect the right of all communities with customary land rights to give or withhold Free, Prior and Informed Consent (FPIC) if they could be affected by planned operations.	0	0	0	0	0	0	0	85	0
13	Companies and their suppliers must establish human rights due diligence processes and monitoring systems.	85	0	85	0	85	85	85	85	85
14	Companies and their suppliers must respect the broader social, economic and cultural rights of communities affected by their operations, including the right to health and the right to an adequate standard of living.	0	0	0	0	0	0	0	100	0
15	Companies and their suppliers must commit to the resolution of complaints and conflicts through an open, transparent and consultative process.	0	0	0	0	85	0	0	85	85
16	Companies and their suppliers must maintain zero tolerance towards violence and the criminalization of land, environmental, and human rights defenders.	0	0	0	0	0	0	0	0	0
17	Companies and their suppliers must not engage in forced labour or in child labour.	85	85	0	100	85	85	85	85	85
18	Companies and their suppliers must uphold the rights to freedom of association, collective bargaining and freedom from discrimination.	0	0	0	0	85	0	0	100	85
19	Companies and their suppliers must pay at least a living wage.	0	0	0	0	0	0	0	0	0
20	Companies and their suppliers must protect the safety and health of workers.	0	0	0	0	85	0	0	100	85
21	Companies and their suppliers must have a gender-sensitive zero-tolerance policy towards all forms of gender-based discrimination and violence.	85	0	0	0	0	0	0	85	0

Table 10 shows that criterion 17, 'no forced and child labour' is covered by most banks, eight out of 38, in their policies. Criterion 13, 'human rights due diligence,' is covered to some extent by seven banks, mostly because they receive 85 points for having a human rights policy. A clear demand from companies to perform human rights due diligence, which would earn them 100 points, is not covered in these policies, however.

Two criteria, namely criterion 16, 'protection of land, environmental, and human rights defenders', and criterion 19, 'paying a living wage,' are not covered by any bank in its policies.

3.4 Governance criteria

In contrast to the environmental and social criteria, most, 28 of the 38 banks score on at least one of the governance criteria. While this is encouraging, most of these banks score on only one or two of the 14 governance criteria, and no bank scores on more than four criteria. As a result, none of the 38 banks has an adequate governance policy as is shown in Figure 48. With a clearly inadequate score of only 2.4 points on a scale from 0 to 10, Vietnam Prosperity Bank from Vietnam scores relatively the best on the governance criteria. All other 37 banks score below two points.

Figure 48 Governance scores of selected banks

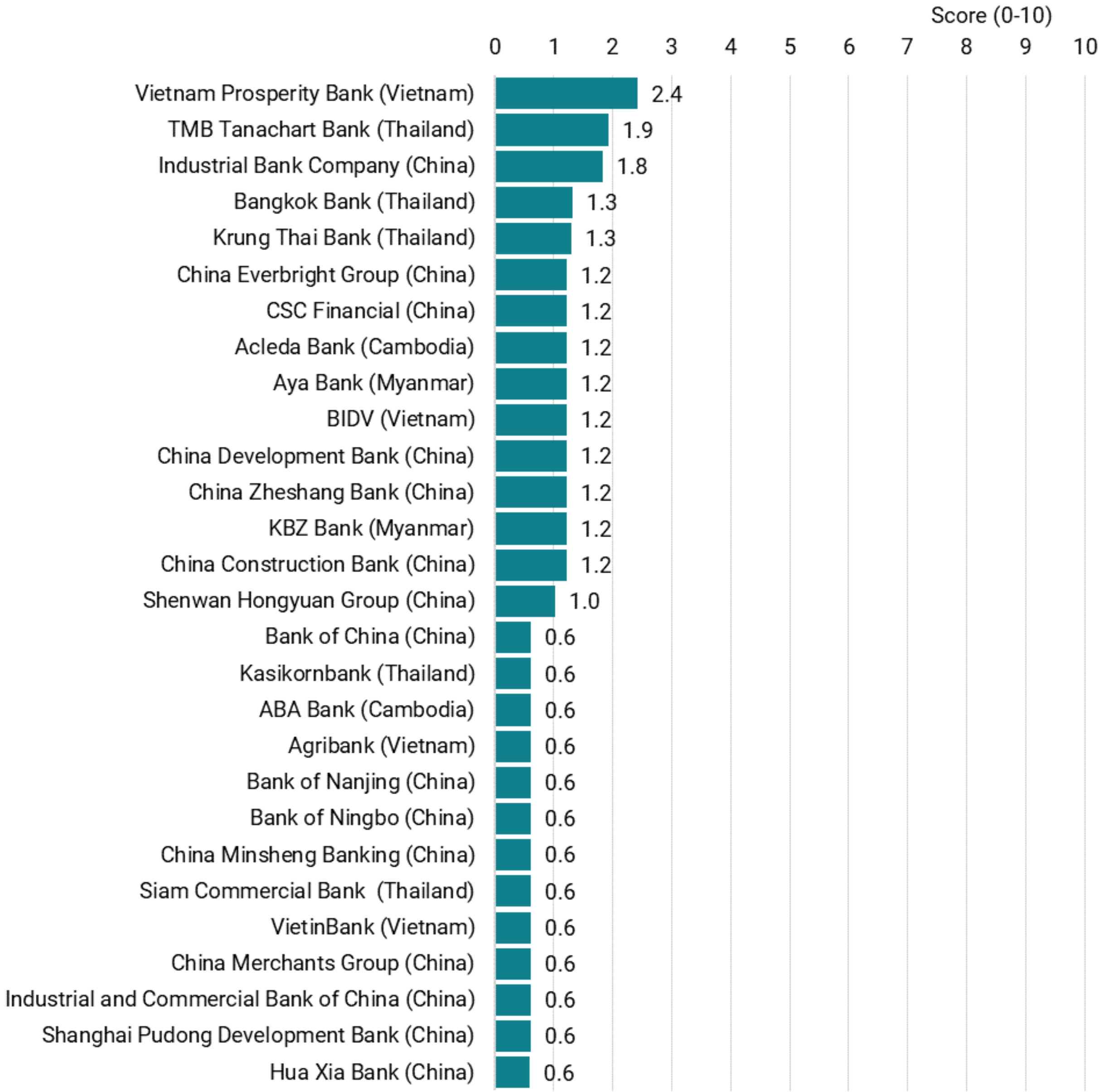


Table 11 provides an overview of the scores of 28 banks per governance criterion. The table shows all 28 banks that scored on at least one governance criterion and not the 10 banks that did not score on any of the governance criteria.

As is shown in Table 11, a total of 22 banks scored on criterion 22: ‘The financial institution has integrated sustainability objectives in its governance structure.’ These banks report on their sustainability objectives, clarifying at least one of the following three steps: it has formulated strategic sustainability objectives, and/or it has assigned responsibility for oversight of sustainability objectives and risks to a Board member and/or it has integrated clear sustainability targets and incentives in the remuneration structure of its employees. Two banks – Krung Thai Bank and TMB Tanachart Bank – both from Thailand, scored 100 points as they clarify all of these three steps.

This leads to the conclusion that the majority of banks assessed, 22 out of 38, have already made some steps to integrate sustainability criteria in their governance structure. However, the poor scores of almost all banks on the Environmental criteria (section 3.2), on the Social criteria (section 3.3) as well as on the other Governance criteria listed in Table 11, make clear that they need to take many more steps to concretize and operationalize their sustainability objectives into solid policies to deal with the sustainability challenges in the rubber and timber sectors.

Other governance criteria on which relatively many banks score points are criterion 25 (Transparency on investments and financings in forest-risk commodity sectors), which is covered by six banks, and criterion 32 (Requiring social and environmental impact assessments), covered by seven banks.

Table 11 Governance scores of the selected banks per criterion

Criterion		ABA Bank	Acleda Bank	Agribank	Aya Bank	Bangkok Bank	Bank of Nanjing	Bank of Ningbo	Bank of China	BIDV	China Construction Bank	China Development Bank	China Everbright Group	China Merchants Group	China Minsheng Banking	China Zheshang Bank	CSC Financial	Hua Xia Bank	ICBC	Industrial Bank Company	Kasikornbank	KBZ Bank	Krung Thai Bank	Shenwan Hongyuan Group	Shanghai Pudong Development	Siam Commercial Bank	TMB Tanachart Bank	VietinBank	Vietnam Prosperity Bank
22	The financial institution has integrated sustainability objectives in its governance structure.	0	85	0	85	85	0	0	85	85	85	85	85	85	85	85	85	0	85	85	85	85	100	85	0	85	100	85	85
23	The financial institution is transparent on the actions through which its forest-risk policies are implemented and enforced.	0	0	0	0	0	0	0	0	0	0	85	85	0	0	85	0	0	0	0	0	0	0	85	0	0	0	0	0
24	The financial institution applies its forest-risk policies to the entire corporate group	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	The financial institution is transparent on its investments and financings in forest-risk commodity sectors.	0	0	0	0	0	85	85	0	0	85	0	0	0	0	0	0	85	0	85	0	0	0	0	85	0	0	0	0
26	The financial institution discloses its forest-related impacts, including its forest-related financed GHG emissions and its forest footprint.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	The financial institution is transparent on its engagements with companies in forest-risk commodity sectors.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	The financial institution commits to a transparent and effective grievance mechanism regarding its financing of, or investments in, companies in forest-risk commodity sectors.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Criterion		ABA Bank	Acleda Bank	Agribank	Aya Bank	Bangkok Bank	Bank of Nanjing	Bank of Ningbo	Bank of China	BIDV	China Construction Bank	China Development Bank	China Everbright Group	China Merchants Group	China Minsheng Banking	China Zheshang Bank	CSC Financial	Hua Xia Bank	ICBC	Industrial Bank Company	Kasikornbank	KBZ Bank	Krung Thai Bank	Shenwan Hongyuan Group	Shanghai Pudong Development	Siam Commercial Bank	TMB Tanachart Bank	VietinBank	Vietnam Prosperity Bank
29	Companies and their suppliers must provide proof of legality of their operations and commodity supplies, in particular proof of compliance with all prevailing laws and regulations on land acquisition and land operation.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85	0	0
30	Companies and their suppliers must ensure supply chain transparency and traceability.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	Companies and their suppliers must publish geo-referenced maps of all the concession areas and farms under their management.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Companies starting new operations or expanding their operations must publish a social and environmental impact assessment.	85	0	85	0	100	0	0	0	85	0	0	0	0	0	0	85	0	0	85	0	0	0	0	0	0	0	0	85
33	Companies and their suppliers must not get engaged in corruption, bribery and financial crimes.	0	85	0	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85	85	0	0	0	0	0	85
34	Companies and their suppliers must comply with the letter and the spirit of the tax laws and regulations in the countries in which they operate and must not set up corporate structures solely for tax avoidance purposes.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85	0	85
35	Companies and their suppliers must publish their group structure and country-by-country data.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

No less than seven governance criteria are not covered by any bank at all:
24: The financial institution applies its forest-risk policies to the entire corporate group.
26: The financial institution discloses its forest-related impacts, including its forest-related financed GHG emissions and its forest footprint.
27: The financial institution is transparent on its engagements with companies in forest-risk commodity sectors.
28: The financial institution commits to a transparent and effective grievance mechanism regarding its financing of, or investments in, companies in forest-risk commodity sectors.
30: Companies and their suppliers must ensure supply chain transparency and traceability.
31: Companies and their suppliers must publish geo-referenced maps of all the concession areas and farms under their management.
35: Companies and their suppliers must publish their group structure and country-by-country data.

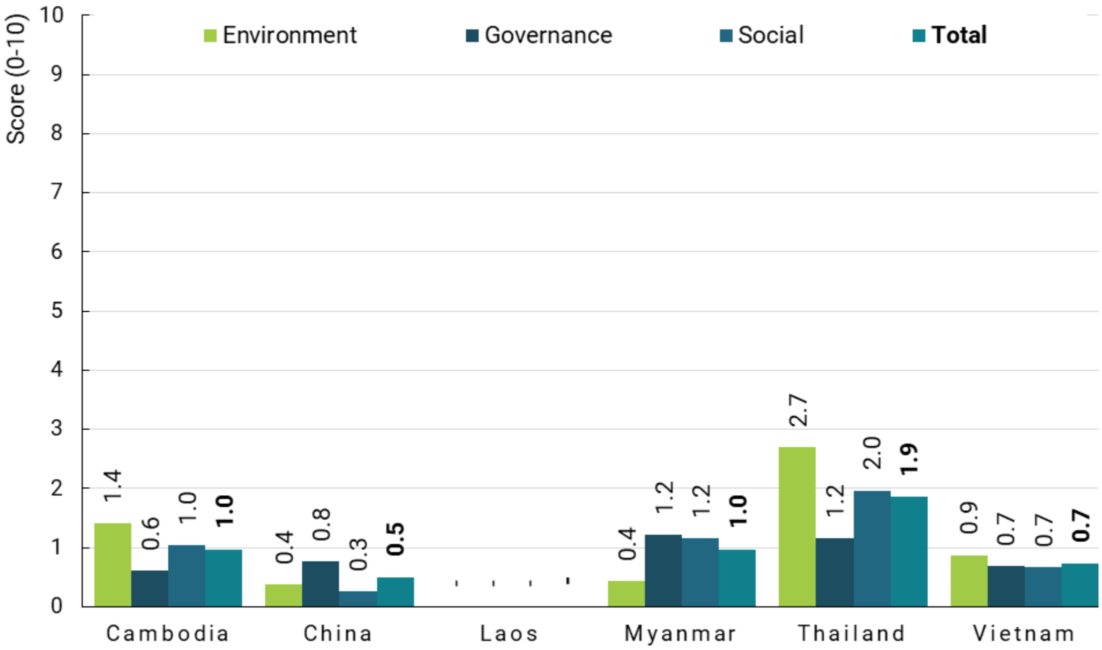
3.5 Average scores per bank country

The difference in average bank policy scores by country does not appear to be significant across the Lower Mekong region: The average score of banks by country was unequivocally low. Banks from Thailand score the highest, with an average score of 1.95 out of 10. Banks from Myanmar and Cambodia both had an average score of one out of 10. Banks from Vietnam had an average score of 0.7 out of 10 and banks from China scored 0.5 out of ten. The average score of banks from Lao PDR analysed was 0.

Figure 49 summarizes the average ESG policy scores per country in the LMR, showing the average scores for the banks originating from each country. As 35 out of the 38 banks assessed scored poorly (see Table 8) so, it is not surprising that the average policy score for the banks analysed in none of the countries was found to be sufficient.

The slightly higher score of Thai banks could be related to the Sustainable Banking and Responsible Lending Guidelines in Thailand, which require banks to '*determine how ESG risks arising from their lending activities materialize as financial risks and how these risks are factored into policies and processes*'. Baking regulations in the LMR countries and China are further analysed and discussed in chapter 4.

Figure 49 Average bank scores per country of origin



4.

Assessing Regulatory Environment

This chapter assesses how environmental and social considerations are covered by financial regulations across the Lower Mekong Region and neighbouring countries. SUSREG (Sustainable Financial Regulations and Central Bank Activities) Tracker developed by WWF has been used as the key data source for the analysis. For countries not currently covered by SUSREG, publicly available information has been collected and arranged in a similar framework. Based on the assessment, it appears that China, Thailand and Vietnam have more developed regulatory environments conducive to stimulating the financial sector in those countries to mitigate the environmental impacts of forest commodity exploitation. Some foundations for this are also present in Cambodia, but the financial sectors of Lao PDR and Myanmar lag far behind in terms of structurally mitigating ESG impacts driven by the financial sector.

Key Messages

01 Overall, there is a general trend toward incorporating ESG considerations into banking regulations in each of the economies assessed, but the degree of integration was found to vary significantly. While some central banks are developing green finance frameworks, green taxonomies, and other ESG-related initiatives, others lag behind in these aspects.

02 The environmental and social considerations in financial regulations are more developed in China, Thailand, and Vietnam, where the financial sector is encouraged to mitigate environmental impacts. However, Lao PDR and Myanmar lag behind in these aspects.

03 Macro-prudential supervision was found to be the least developed policy area in all the countries assessed.

04 While all four countries consider climate change in their financial regulations, it is often solely in terms of fossil fuel emissions. Thailand is better positioned to consider deforestation as part of its environmental, social, and governance (ESG) factors.

05 In Cambodia, green financing policies are yet to be established, and capacity building is needed for the National Bank of Cambodia (NBC) policymakers. However, the country's banking association has introduced the Cambodian Sustainable Finance Principles.

06 China is most advanced in integrating ESG into its banking and central bank policies. It has issued Green Credit Guidelines, encouraging banks to adjust their credit structure. Despite progress, its banking supervisor does not assess the implementation of regulations beyond lending, and the central bank is not a member of the Network for Greening the Financial System.

07 The People's Bank of China (PBOC) is taking some steps toward E&S integration, such as expanding the eligible collateral universe for the medium-term lending facility and granting first-among-equals status to SMEs' bonds, green bonds, and green loans. However, it slightly lacks an internal organization dedicated to implementing its E&S strategy.

08 In Thailand, banks are expected to integrate E&S considerations into their business strategy and risk management processes, but do not currently have to integrate these considerations into their Internal Capital Adeity Assessment Process (ICAAP) or liquidity risk management process. The Thai Bankers' Association has issued mandatory Sustainable Banking Guidelines - Responsible Lending for all banks based in Thailand.

09 Vietnamese banks are expected to integrate E&S considerations into their business strategy and decision-making process. They are also required to dedicate staff and resources to the implementation of their ESG strategy. However, they lack mandatory requirements to assess and mitigate their portfolio-level exposure to E&S risks, and lack sufficient transparency and disclosure regulations.

4.1 Findings

Of the three Mekong countries included in SUSREG, China seems to have the most robust regulations and policies regarding ESG integration into the central bank’s activities and financial sector supervision. However, it often still lacks requirements for banks to monitor and mitigate material environmental and social impacts at the portfolio level. It also often falls short of integration of social factors in the credit process, banks ‘strategies, and financial regulations, even though climate and some other environmental issues are mostly already integrated. China is also a notable example of a country where banks are expected to include ESG considerations in their senior management and board remuneration schemes.

Table 12 Overview of key SUSREG regulatory policy indicators

	Key indicators	Cambodia	China	Lao PDR	Myanmar	Thailand	Vietnam
Banking Supervision							
Micro-prudential supervision (supervisory expectations)							
1.1.0.	Principle-based regulations or supervisory expectations related to sustainable banking have been issued and are applicable to all supervised commercial banks.	🔴	🟢	🔴	🔴	🟡	🟢
Scope & implementation							
1.1.1.	The regulations or supervisory expectations cover a broad range of environmental and social (E&S) issues.	🔴	🟢	🔴	🔴	🟢	🟢
Strategy & governance							
1.2.1.	Banks are expected to integrate E&S considerations in their business strategy, consistent with the size and nature of their operations.	🔴	🟢	🔴	🔴	🟢	🟢
1.2.2.	Banks are expected to factor both short-term and longer-term E&S considerations in their business strategy.	🔴	🟢	🔴	🔴	🔴	🔴
1.2.8.	Banks are expected to conduct regular training on relevant E&S issues for their board, senior management, business lines and functions.	🔴	🟢	🔴	🔴	🟢	🟡
1.2.9.	Banks are expected to conduct stakeholder engagement on relevant E&S issues, incl. with civil society representatives.	🔴	🟡	🔴	🔴	🟡	🔴
Policies & processes							
1.3.1.	Banks are expected to develop and implement sector policies outlining minimum E&S requirements for their clients, particularly in sectors with high E&S risks and impacts.	🟡	🟢	🔴	🔴	🟢	🟡
1.3.2.	Banks are expected to refer to internationally recognized sustainability standards and certification schemes in their E&S sector policies.	🔴	🟡	🔴	🔴	🟡	🔴
1.3.3.	Banks are expected to engage with and support their clients on the adoption of best practices, based on internationally recognized sustainability standards and certification schemes.	🔴	🟡	🔴	🔴	🟡	🔴
1.3.4.	Specific guidelines or checklists covering the banks' activities in sectors with high E&S risks and impacts have been issued by the supervisor.	🔴	🟡	🔴	🔴	🟡	🟢
1.3.5.	Banks are expected to integrate E&S considerations in their decision-making and risk management processes.	🟡	🟢	🔴	🔴	🟢	🟢
1.3.6.	Banks are expected to put in place internal controls to manage E&S risks, in accordance with the three lines of defence approach.	🔴	🟢	🔴	🔴	🔴	🟢
1.3.7.	Banks are expected to seek the inclusion of clauses (e.g. covenants, representations & warranties) related to E&S issues in the loan documentation for bilateral and syndicated credit facilities.	🔴	🟢	🔴	🔴	🔴	🔴
1.3.8.	Banks are expected to put in place an internal process to monitor and address situations where clients are not compliant with the banks' E&S sector policies or with applicable laws and regulations.	🔴	🟢	🔴	🔴	🔴	🟢
Enabling environment							
3.1.1.	A multi-stakeholder sustainable finance initiative is in place, involving representatives from the banking industry, regulatory and supervisory authorities, as well as from civil society.	🔴	🟡	🔴	🔴	🟡	🟡
3.1.2.	The central bank, supervisor or banking association is supporting capacity. building efforts for the banking industry, on sustainable banking practices and related aspects.	🔴	🟢	🔴	🔴	🟢	🟢
3.1.3.	A classification system for sustainable activities (taxonomy) is in place and has been developed following a science-based and multi-stakeholder process.	🔴	🟡	🔴	🔴	🔴	🟡
3.1.4.	A classification system for unsustainable activities (taxonomy) is in place and has been developed following a science-based and multi-stakeholder process.	🔴	🔴	🔴	🔴	🔴	🔴

Source: WWF SUSREG Tracker (2022, March), "Assessments", online: https://www.susreg.org/assessments, viewed in November 2022; Profundo analysis.

Thailand and Vietnam seem to be mostly on par with each other, although Vietnam demonstrates a slightly lower maturity, in particular, as banks and financial institutions there are currently not expected to assess and mitigate their portfolio-level exposure to material E&S risks. However, Thailand's assessment suffers a bit since many of its national guidelines are issued by an industry-led national banking association, rather than by the central bank or a financial authority. Their application is voluntary, and there is often no verification of compliance performed by the supervisor. At the same time, Thailand's guidelines are often more comprehensive, in particular, when it comes to disclosures and transparency.

Though overall Vietnam seems to be a bit less advanced, it is the only one of the three assessed countries to have developed specific guidelines covering the banks' activities in sectors with high E&S risks and impacts. State Bank of Vietnam is the only central bank to have established sector-specific E&S checklists, and it also organizes technical training on E&S risk management and E&S due diligence for credit institutions.

Overall, macro-prudential supervision is perhaps the least developed policy area in terms of ESG maturity in all three countries. None of the banking supervisors are currently assessing the exposure of banks to material E&S risks and the implications for financial system stability by using forward-looking scenario analysis and stress-testing or have published a methodology for forward-looking scenario analysis and stress-testing for public consultation. None of the three countries has prudential rules to limit the exposure of banks to certain, risky activities, in order to prevent and protect against the build-up of systemic risk based on E&S considerations. Thus, macro-prudential supervision is the area that perhaps would benefit the most from future efforts to integrate ESG factors more comprehensively.

Climate change is the most well-covered topic in all three countries. However, it is often viewed through the lenses of fossil fuel-based emissions only, rarely considering emissions resulting from deforestation or broader land-use change. Though climate change is addressed better than other environmental concerns, just a few LMR countries have or are planning to introduce a carbon pricing mechanism. According to UNFCCC, Carbon Pricing '*effectively shifts the responsibility of paying for the damages of climate change from the public to the GHG emission producers. This gives producers the option of either reducing their emissions to avoid paying a high price or continue emitting but having to pay for their emissions.*'[3] As a policy instrument, it can incentivize forest stewardship and sustainable use.

Of the three countries, Thailand seems to be better positioned to include deforestation among the key ESG factors to be considered and integrated by its financial institutions.

Financial sector regulations and policy measures in Cambodia, Lao PDR and Myanmar have not yet addressed sustainable finance-related issues either in their supervision of the sector, their central banking measures or, in creating an enabling environment to transition to a more resilient and sustainable economy.

The remainder of this chapter presents the findings of the analysis of the regulatory environment per country.

As the research on companies and banks in the LMR region and China has demonstrated that commercial entities still have a long way to go to become mature in terms of their ESG policies and practices in general, and in terms of their attitudes towards deforestation and conversion of natural habitats, financial regulators should put more effort to adoption of such policies and practices. Regulators should adopt minimum E&S standards for banks and FIs and ensure there is relevant enforcement in place (that includes both incentives and penalties for non-compliance).

4.2 Cambodia

4.2.1 Banking supervision

Fair Finance Cambodia reported in 2022 that so far, the National Bank of Cambodia (NBC) had not issued any policies related to green financing. In addition, Fair Finance Cambodia states that the Securities and Exchange Regulator of Cambodia (SERC) "*is [currently] at the studying stage of developing a green financing-related policy, such as green bonds, based on the ASEAN Taxonomy. Like NBC, SERC has not issued any requirements for securities issuers to follow any green financing guidelines yet*".[4]

4.2.2 Central banking

Fair Finance Cambodia's report shows that '*the NBC acknowledges that capacity building is needed not only for NBC policymakers and implementers but also for other stakeholders working on developing and implementing green financing policy. There is a need for evidence-based research to serve as a reference for developing regulations or guidelines related to green financing. The NBC is researching the exposure of the banking sector to climate-related risks'*.[5] At the same time, ESG issues do not seem to be covered under the NBC's monetary policy activities. Thus, E&S considerations are not considered in its collateral framework, nor integrated in the management of its foreign exchange reserves portfolio. The central bank does not offer subsidized loans or preferentially targeted refinancing lines based on E&S considerations. Additionally, ESG issues are also not mirrored in the bank's internal organization, with no designated committee or department in place, which demonstrates that social and environmental considerations are still on the side-lines of Central Bank's activities and are still yet to be mainstreamed.

4.2.3 Enabling environment

Though Cambodia does not currently have a green taxonomy, its banking association introduced the Cambodian Sustainable Finance Principles, under which members '*commit to prioritize the environment, protect […] people and preserve […] cultural heritage by actively assessing, managing, mitigating, offsetting or avoiding potential risks or negative impacts arising from [their] clients' business activities, standards or practices*'.[6] The principles are accompanied by comprehensive implementation guidelines, which provide a list of sustainable activities, and also recommend that banks filter out potential prohibited/excluded activities.[7] The Association of Banks in Cambodia also established a Sustainable Finance Committee with 15 member banks.

According to Fair Finance Cambodia, '*the NBC has provided inputs to ASEAN, as the association is developing the ASEAN Taxonomy for Sustainable Finance. ASEAN issued the first version of the Taxonomy in November 2021; the member countries can adopt the basic requirements and develop details that are based on their national contexts. As a member state, Cambodia will follow the basic elements of the Taxonomy*'.[8]

It is not clear where the development of a carbon pricing mechanism in Cambodia currently stands. A UNFCCC report (2019) stated that '*Cambodia is not familiar with carbon pricing*'.[9] At the same time, in March 2018, the Phnom Penh Post reported that '*increasing the cost of carbon credits is required to make tropical forest conservation a viable alternative to the spread of rubber plantations in Cambodia'*.[10]

4.3 China

Of the three countries covered by SUSREG, China seems to be the most advanced in terms of integration of ESG aspects into its banking supervision and central bank's policies and procedures. It also has a relatively supportive environment to enable the development of its sustainable and green finance sector. And an overall 'greening' of the financial sector. It is important to take into account that unlike in Thailand and Vietnam, the central bank (People's Bank of China (PBOC) is responsible for the monetary policy, but not for the supervision of the financial sector, which is carried out by a designated institution – the China Banking and Insurance Regulatory Commission (CBIRC), which regulates both banking and insurance industries.[11]

4.3.1 Banking supervision

While assessing the ESG-maturity of banking supervision, SUSREG looks into micro-prudential supervision, both in terms of supervisory expectations and rules-based approach, macro-prudential supervision, disclosures and transparency, as well as at leadership and internal organization of the banking supervisory bodies.

SUSREG starts with the assessment of micro-prudential supervision (supervisory expectations). First, it determines whether principle-based regulations and supervisory expectations related to sustainable banking have been issued and are applicable to all supervised commercial banks. In China, CBRC local offices, policy banks, state-owned commercial banks, joint-stock commercial banks, financial asset management companies, the PBOC, provincial rural credit unions, as well as all trust firms, enterprise group finance companies and financial leasing firms directly regulated by the CBRC, must '*implement the macro adjustment policies provided for in the Integrated Working Plan of the State Council for Energy Conservation and Emission Reduction during the 12th Five-year Period and the Comments of the State Council on Strengthening.*

'Environmental Protection Priorities, and to follow the requirements of matching supervisory policies with industrial policies, the CBRC has formulated the Green Credit Guidelines for the purpose of encouraging banking institutions to, by focusing on green credit, actively adjust credit structure, effectively fend off environmental and social risks, better serve the real economy, and boost the transformation of economic growth mode and adjustment of economic structure. The Guidelines are […] printed and issued for implementation'. [12]

According to SUSREG, the regulations and supervisory expectations cover a broad range of environmental and social (E&S) issues, including '*the hazards and risks on the environment and society that may be brought about by the construction, production and operating activities of banking institutions' clients and key affiliated parties thereof, including environmental and social issues related to energy consumption, pollution, land, health, safety, resettlement of people, ecological protection, climate change, etc*.'[13]

SUSREG has also demonstrated that in China, the banking supervisor regularly assesses the banks' implementation of regulations or supervisory expectations, as stipulated in the China Banking and Insurance Regulatory Commission's Green Credit Guidelines.

At the same time, SUSREG demonstrated that the regulations and supervisory expectations in China currently do not extend beyond lending to cover other financial products & services provided by banks. It also states that no public consultation was carried out prior to the official issuance of regulations or supervisory expectations.

Overall, SUSREG positively assesses ESG integration in the strategy and governance of Chinese financial authorities and the broader financial system. Of the nine assessment criteria, eight are fully met, and one is partially met.

Thus, SUSREG confirmed that banks are expected to integrate E&S considerations in their business strategy, consistent with the size and nature of their operations and to factor both short-term and longer-term E&S considerations in their business strategy. According to the Green Credit Guidelines, '*banking institutions shall promote green credit from a strategic height, increase the support to green, low-carbon and recycling economy, fend off environmental and social risks, and improve their own environmental and social performance, thus optimizing their credit structure, improving the quality of services, and facilitating the transformation of development mode*'.[14]

Banks are also expected to include oversight of their E&S strategy implementation in their board's responsibilities and to regularly provide their board with relevant information related to the implementation of their E&S strategy. According to the Green Credit Key Performance Indicators (2014), the '*senior management shall report to the board of directors periodically - at least once each year - the implementation of green credit strategy*'.[15] Unlike in many other countries, in China, banks must include criteria related to their E&S strategy implementation in their appraisal and remuneration policy. Thus, according to the Green Credit Guidelines, '*salary committee of the board of directors [of banks and FIs] shall strengthen monitoring to make sure that the implementation of the green credit is appropriately reflected in the overall performance evaluation of the senior management and other related employees*'.[16] SUSREG also states, that in China, referring to the Green Credit Guidelines, '*the senior management of a banking institution shall assign a senior officer and a department and configure them with necessary resources to organize and manage green credit activities. Where necessary, a cross-departmental green credit committee can be set up to coordinate relevant activities*'.[17] Banks are also expected to conduct regular training on relevant E&S issues for their board, senior management, business lines and functions.

SUSREG further concludes that banks in China are encouraged to communicate with their stakeholders, however, it is not always clear if this fully applies to civil society representatives.

SUSREG also positively assesses ESG integration in the policies and processes of Chinese financial authorities and the broader financial system.

Banks in China are expected to develop and implement sector policies outlining minimum E&S requirements for their clients, particularly in sectors with high E&S risks and impacts and to align with good international practices in their E&S sector policies. They are also expected to engage with and support their clients in the adoption of best practices, based, at least partially, on internationally recognized sustainability standards and certification schemes.

According to SUSREG, banks in China are expected to integrate E&S considerations in their decision-making and risk management processes, as well as to put in place internal controls to manage E&S risks, in accordance with the three lines of defence approach. Banks should also seek the inclusion of clauses (e.g. covenants, representations & warranties) related to E&S issues in the loan documentation for bilateral and syndicated credit facilities. Thus, according to the Green Credit Guidelines, '*banking institutions shall, by improving contract clauses, urge their clients to strengthen environmental and social risk management. As for clients involving major environmental and social risks, the contract shall provide for clauses that require them to submit environmental and social risk reports, state and avow that they will strengthen environmental and social risk management, and promise that they are willing to be supervised by the lender; the contract shall also provide for clauses concerning the remedies banking institutions can resort to in the event of default on environmental and social risks made by the clients*.'[18]

Banks are also expected to put in place an internal process to monitor and address situations where clients are not compliant with the banks' E&S sector policies or with applicable laws and regulations. Green Credit Guidelines state that '*banking institutions shall strengthen credit approval management and define a reasonable level of credit granting authority and approval process according to the* *nature and severity of environmental and social risks faced by the clients. Credits may not be granted to clients whose environmental and social performance fails to meet compliance requirements*'.

At the same time, SUSREG has found out that specific guidelines or checklists covering the banks' activities in sectors with high E&S risks and impacts have not yet been issued by the Chinese banking supervisor.

Regarding portfolio risks & impacts, SUSREG has come up with a mixed assessment. On the one hand, banks in China are expected to assess and mitigate their portfolio-level exposure to material E&S risks at least partially and should '*take comprehensive measures to enhance post-loan management to clients involving potential major environmental and social risks'*. [19] Banks are also expected to '*treat environmental and social risks as important drivers in their stress tests for credit risks and incorporate these test results into asset allocation and internal pricing'*.[20]

At the same time, SUSREG has concluded that banks in China are currently not expected to assess and mitigate the material negative E&S impacts associated with their business relationships, at the portfolio level, nor to science-based climate targets to align their portfolio with the objectives of the Paris Agreement. They are also not required to set science-based targets to mitigate negative environmental impacts beyond climate, at the portfolio level.

SUSREG then goes on to assess financial authorities' leadership and internal organization in terms of integration of ESG factors. It refers to the issuance of Guidelines for Establishing the Green Financial System in September 2016. This document was jointly issued by the People's Bank of China, the Ministry of Finance, the National Development and Reform Commission, the Ministry of Environmental Protection, China Banking Regulatory Commission, China Securities Regulatory Commission, and China Insurance Regulatory Commission[iv] and is expected to '*provide an essential next step for implementing the overall strategy of promoting ecological civilization [and] also advance the development concepts of innovation, harmony, greenness, openness and sharing, and promote the establishment of China's green financial system*.'[21]

At the same time, SUSREG demonstrated that the supervisor (CBIRC) is not a member of the Network for Greening the Financial System (however, PBOC, China's central bank, is). SUSREG also states that CBIRC has not yet established an internal organization and allocated resources to the implementation of its E&S strategy or roadmap, nor has it conducted studies to assess the banking sector's exposure to and management of E&S risks and has not published its conclusions and recommendations.

While assessing China's regulations at the micro-prudential level (rules-based), SUSREG has found out that banks are currently not expected to integrate E&S considerations in their Internal Capital Adequacy Assessment Process (ICAAP), nor are there minimum capital requirements or capital add-ons for banks incorporate E&S considerations, through a differentiated risk-based approach. Banks are also not currently expected to integrate E&S considerations in their liquidity risk management process, and the liquidity ratios are not adjusted to take E&S considerations into account, through a differentiated risk-based approach.[22]

In terms of disclosures and transparency, SUSREG suggests that China demonstrates medium maturity. Thus, it found out that banks in China are expected to publicly disclose how E&S considerations are integrated in their business strategy, governance, policies, and risk management processes. According to Green Credit Guidelines issued by CBIRC, '*banking institutions shall make*

[iv] In 2018 the CBRC and CIRC merged, and the China Banking and Insurance Regulatory Commission (CBIRC) was formed to regulate both banking and insurance industries.

public their green credit strategies and policies, and fully disclose developments of their green credit business. As for credit involving major environmental and social risks, the banking institutions shall disclose relevant information according to laws and regulations and be subjected to the oversight by the market and stakeholders. Where necessary, an eligible, independent third party can be hired to assess or audit the activities of banking institutions in performing their environmental and social responsibilities'.[23]

Banks are also expected to include some information on their E&S strategy and its implementation in their annual report. According to Green Credit Guidelines, '*the banking institutions shall publish institution's green credit report/corporate social responsibility report/sustainability development report and disclose to stakeholders the information concerning institution's ideology, value, vision and goal of its environmental and social performance, strategy and policies on green credit, the progress of supporting green, low-carbon and recycling economies and of strictly retaining "high-pollution, high-emission and overcapacity" projects, quantified impacts of energy conservation and emission reduction contributed by institution's support to green, low-carbon and recycling economies, such as data of total amount of energy saved, reduced amount of pollutant from CO2, SO2, COD, and nitrogen oxides, as well as progress and activities of institutions to improve its own environmental and social performance*'. [24] In addition, banks are expected to report publicly on the material negative E&S impacts associated with their business relationships, presumably at least partially at the portfolio level.

At the same time, SUSREG demonstrated that banks in China are not currently expected to use internationally recognized sustainability reporting frameworks to guide their public disclosures, nor to publicly disclose their credit exposure by industry sub-sectors, based on international industry classification systems. Banks are also not expected to report publicly on their portfolio-level exposure to material E&S risks and the associated mitigation measures, as well as on their exposure to and management of climate-related risks and opportunities, in line with the TCFD recommendations.

At the macro-prudential level, according to SUSREG, China still falls short of integrating ESG factors. Thus, the financial supervisor has not yet assessed the exposure of banks to material E&S risks and the implications for financial system stability by using forward-looking scenario analysis and stress-testing and has not published its methodology for forward-looking scenario analysis and stress-testing for public consultation.

Accordingly, it has not published the aggregated results of its stress-testing exercises on material E&S risks, as well as its recommendations.

Specific risk indicators to monitor the exposure of banks to material E&S risks are also still to be developed. There are also currently no prudential rules to limit the exposure of banks to certain activities, in order to prevent and protect against the build-up of systemic risk based on E&S considerations.

4.3.2 Central banking

According to SUSREG, currently, the central bank (PBOC) does not take E&S considerations into account when implementing its corporate asset purchase programmes. However, PBOC partially takes E&S considerations into account in its collateral framework. Thus, '*on 1 June 2018, the PBOC announced three changes to the medium-term lending facility - MLF - collateral framework. First, the PBOC expanded the eligible collateral universe to include green bonds, bonds issued by SMEs, and bonds issued by agricultural corporations. Second, the PBOC lowered the credit quality requirement on all eligible bonds from AAA to AA. Third, at the early stage of this expansion, SMEs' bonds, green bonds as well as SMEs' and green loans were granted first-among-equals status'*.[25]

The Chinese central bank also partially integrates E&S considerations in the management of its foreign exchange reserves portfolio and aims to '*further increase the share of green bonds, limit* *investment in carbon-intensive assets, and incorporate climate risk factors into our risk management framework*'.[26] However, these measures currently seem to only cover climate change, but not broader environmental issues, or social considerations.

According to SUSREG, PBOC '*provides low-cost funds to financial institutions and guide the financial institutions to extend carbon reduction loans at rates close to the loan prime rate (LPR) of the same maturity. For the time being, the facility is available to financial institutions licensed to operate nationwide. For qualified carbon emission reduction loans, the PBOC provides the commercial lenders with funds worth 60 percent of the principal at the rate of 1.75 percent*'.[27] PBOC also takes E&S considerations into account in determining reserve requirements for banks. Thus, '*if a bank gets a high score of 90 or more — an A-level score — it can gain an extra 10 percent revenue of its reserve deposits' income at the PBOC*'.[28]

After assessing the integration of ESG factors into PBOC's monetary policy, SUSREG looks at its internal organization and leadership practices, which include membership in the NGFS, of which the People's Bank of China is both a founding member of the, and a permanent NGFS Steering Committee[29].

SUSREG also confirmed that PBOC published an official roadmap outlining measures to address E&S risks and opportunities in the financial sector, in line with its mandate – the Guidelines for Establishing the Green Financial System. This document aims to '*vigorously develop green lending [and] support green credit by central bank re-lending operations, specialized guarantee mechanisms and other measures*'.[30]

At the same time, SUSREG found out that PBOC has not yet established an internal organization and allocated resources to the implementation of its E&S strategy or roadmap and does not currently assess and disclose the exposure of its portfolios to E&S risks (for its policy, own, pension and third-party portfolios as applicable). It is also still to integrate E&S considerations in its asset management practices for its own, pension and third-party portfolios – as applicable. According to SUSREG, PBOC does not publicly disclose the share of its portfolios that is aligned with existing classification systems for sustainable or unsustainable activities.

4.3.3 Enabling environment

Significant efforts seem to be made by the central bank, banking supervisor, China Banking and Insurance Regulatory Commission (CBIRC), and banking association, the Green Finance Committee of the China Society for Finance, to support capacity-building efforts for the banking industry on sustainable banking practices and related aspects. Efforts include regular trainings, workshops, issuing guidance, etc[31].

SUSREG also reports that there is a quasi-taxonomy in place – People's Bank of China Green Bond Endorsed Project Catalogue, which is updated annually. It provides a comprehensive list of eligible green categories ranging from energy efficiency to agriculture, and the 2021 edition excludes coal and other fossil fuels from the list of eligible projects that can be financed through green bond issuance, but lacks technical screening criteria, like the EU Taxonomy. The Catalogue doesn't currently take into account social criteria, and there is no dedicated social taxonomy in place.[32] People's Bank of China and China Securities Regulatory Commission also issued China's Green Bond Verification Guidelines (2018), which '*introduce regulatory requirements for verifiers, including the required qualifications and credentials, verification methods, and reporting requirements*'.[33]

According to SUSREG, a carbon pricing mechanism is being implemented in the country. Thus, '*as part of China's effort to meet a 2060 carbon neutrality target, the Ministry of Environment and Ecology launched a national carbon emissions trading scheme, taking effect from 1 February 2021,* *require[ing] all enterprises in specific sectors with more than 26,000 mt/year of CO2 equivalent emissions to control and disclose their carbon emissions*'.[34]

At the same time, SUSREG reports that non-financial corporates in China are currently not required to disclose information on the alignment of their current and planned activities with existing taxonomies for sustainable or unsustainable activities, and that there are no incentives in place for banks to support certain industry sectors, based on E&S considerations. In addition, SUSREG demonstrated that in China there are no targeted mechanisms to promote adherence of sustainable financial products with internationally recognized standards.

4.4 Lao PDR

4.4.1 Banking supervision

The Bank of Lao PDR supervises commercial banks operating in Lao PDR. Currently, the banking regulations provide little attention to environmental and social issues. Thus, neither the Basel Master Plan and Implementation Plan for Bank Supervision Development toward Basel Standards from 2017-2025[35] (the central bank's key strategy document), nor its annual report[36] have any reference to ESG. However, the Law on Anti-Money Laundering and Counter-Financing of Terrorism refers to environmental crime, defined as '*an offence that causes great damage to the environment such as illicit traffic of protected wildlife and aquatic animals, unlawful exploitation of natural resources, destruction of forests, destruction of crops, illegal hunting, illegal fishing'.*[37]

4.4.2 Central banking

The Bank of Lao PDR currently does not seem to integrate environmental and social issues in its activities (including monetary policy), nor to have relevant structures (for example, a dedicated department) in place. However, in September 2022, the Bank signed a memorandum of understanding with the IFC. Under this document, and relying on IFC support, the bank plans to '*establish a green finance policy framework, creating an enabling environment for financial institutions to develop their green finance products that are widely accessible in the local market*'.[38]

4.4.3 Enabling environment

There is currently no national green or social taxonomy in place in Lao PDR. According to a recent study from the Asian Development Bank (ADB), '*as such, the concepts of sustainable finance—including a green definition or taxonomy, sustainability risk management, sustainability disclosure, and a sustainability index—are new to both regulators as well as market participants in the Lao PDR'*.[39] However, as an ASEAN member state, Lao PDR may rely on the ASEAN Green Taxonomy, which provides a good foundation for the development of a national classification of sustainable activities, as well as for the exclusion / no-go zones. According to a joint report by UNFCCC and the National Environmental Agency of Thailand '*carbon pricing is currently not an issue under consideration by the national government [of Lao PDR], and is in fact a very novel topic to the different ministries*'.[40] According to the ASEAN Sustainable Finance State of the Market report, overall, the development of the sustainable finance market '*remains very low in […], Cambodia, Lao PDR and Myanmar'*.[41]

4.5 Myanmar

4.5.1 Banking supervision

Banking supervision in Myanmar is executed by the Central Bank of Myanmar, However, at the moment, it does not seem to integrate ESG aspects into its regulatory framework. The only document to refer to environmental issues is the anti-money-laundering law, which also covers illicit funds related to environmental crime. Otherwise, ESG matters do not seem to be covered by its macro- and micro-prudential regulations.

4.5.2 Central banking

ESG issues do not seem to be covered under the Central Bank of Myanmar's monetary policy activities. Thus, E&S considerations are not taken into account in its collateral framework, nor integrated in the management of its foreign exchange reserves portfolio. The central bank does not seem to offer subsidized loans or preferentially targeted refinancing lines based on E&S considerations. ESG aspects also do not seem to be mirrored in the bank's internal organization, with no designated committee / department in place.

4.5.3 Enabling environment

Myanmar currently lacks a national green taxonomy which would have covered sustainable activities, as well as exclusion lists of unsustainable activities and assets. At the same time, it has been suggested that Myanmar can still benefit from green finance instruments, in particular, green bonds for its sustainable energy sector, building upon the ASEAN Taxonomy, as well on the ICMA principles and guidelines on green, social, and sustainability-linked bonds[42].

Myanmar doesn't have a carbon pricing mechanism in place. Thus, according to a UNFCCC report (2018), '*the government of Myanmar does not currently have plans to develop or introduce carbon pricing instruments. Carbon pricing is still a novel topic across national ministries and agencies, additionally, there is a lack of a general framework for the introduction of "polluter pays" principles and associated economic instruments". Furthermore, energy consumption is subsidized in Myanmar, implicitly putting a negative price on GHG emissions*'.[43]

Overall, commercial banks in Myanmar seem to demonstrate low maturity in terms of ESG. Thus, according to a position paper by PreventPlastics, just 7% of banks in the country detail their approach to sustainability and ESG, while no banks have an expert sitting on their Board with ESG/sustainability expertise, and no banks have set a target to have, for instance, a carbon-neutral portfolio.[44]

4.6 Thailand

4.6.1 Banking supervision

While assessing the ESG-maturity of banking supervision, SUSREG looks into micro-prudential supervision (both in terms of supervisory expectations and rules-based approach), macro-prudential supervision, disclosure, and transparency, as well as at leadership and internal organization.

In Thailand, there is no separate banking supervision body, and the financial system is regulated by the country's central bank – the Bank of Thailand. For the assessment of its ESG integration in leadership and internal organization, please refer to the 'Enabling environment' subsection.

At the micro-prudential level, while assessing supervisory expectations, SUSREG looks if principle-based regulations or supervisory expectations related to sustainable banking have been issued and are applicable to all supervised commercial banks. Sustainable Banking Guidelines - Responsible Lending, issued by the Thai Bankers' Association define the minimum expectations on responsible lending practices, and are applicable to all banks based in Thailand. In addition, according to the Sustainable Finance Initiatives for Thailand, '*the Sustainable Banking – Responsible Lending Guidelines initiated by the Thai Bankers Association, […] should be considered as mandatory requirements for all financial institutions operating in the Thai market and integrated into the financial regulator's supervision programme. These ESG requirements will increasingly require that institutions measure, monitor, and model the physical and transition risks they are exposed to, through an increasingly rigorous approach to stress testing and scenario analysis*'.[45]

SUSREG then goes on to assess the scope and implementation of the supervisory expectations. In this respect, Thailand seems to be relatively advanced, and is aligned and partially aligned for most of the assessment criteria. Thus, its regulations and supervisory expectations already cover a broad range of environmental and social (E&S) issues, including greenhouse gas emissions and climate change, deforestation and biodiversity loss, water stewardship, air/soil pollution and contamination, impact on ocean health, hazardous material and waste management, human rights, labour rights, occupational health and safety, community relations and community rights, excessive household debt, stakeholder engagement, and others.[46] SUSREG also confirms that some form of public consultation was carried out prior to the official issuance of regulations and supervisory expectations and that the supervisor regularly assesses the banks' implementation of regulations or supervisory expectations. However, the regulations and supervisory expectations currently do not extend beyond lending and do not cover other financial products & services provided by banks.

SUSREG then assesses the regulations and supervisory expectations in terms of strategy and governance. It confirms that banks are expected to integrate E&S considerations in their business strategy, consistent with the size and nature of their operations. Thus, banks are to establish internal policies and processes to address key ESG risks in their lending activities. These policies and processes should extend beyond legal compliance to reflect good environmental and social standards and frameworks.

SUSREG also confirms that banks in Thailand are expected to dedicate staff and resources to the definition and implementation of their E&S strategy, and to define the roles and responsibilities of the various teams (incl. senior management) involved in the implementation of such strategy. In particular, they are '*to dedicate resources and specify clear roles and responsibilities to support the implementation of the responsible lending strategy*'.[47]

At the same time, SUSREG found out that banks in Thailand are currently not expected to factor both short-term and longer-term E&S considerations in their business strategy. There are also no requirements or recommendations in place for banks to regularly provide their board with relevant information related to the implementation of their E&S strategy, nor to include criteria related to their E&S strategy implementation in their appraisal and remuneration policy. However, banks are still expected to include oversight of their E&S strategy implementation in their board's responsibilities and are '*to establish a board of directors, CEO and senior management's commitment to implement the responsible lending strategy*'.[48] In addition, banks are expected to build capacity for both senior management and staff on ESG and sustainability matters.[49]

While assessing relevant policies and processes, SUSREG looks if banks are expected to develop and implement sector policies outlining minimum E&S requirements for their clients, particularly in sectors with high E&S risks and impacts, to refer to internationally recognized sustainability standards and certification schemes in their E&S sector policies, and to engage with and support their clients on the adoption of best practices, based on internationally recognized sustainability standards and certification schemes. In Thailand, these issues are addressed in the Sustainable Banking and Responsible Lending Guidelines developed by the Thai Bankers' Association. According to this document, banks should 'rely on data-driven evidence to assess materiality, as well as to support E&S due diligence and decision-making processes, establish[…] effective responsible lending policies and processes with supporting governance structure [to] manag[e] and assess[…] ESG risks on both client and transaction level, [and to] establish internal policies and processes to address key ESG risks in their lending activities extend[ing] beyond legal compliance to reflect good environmental and social standards and frameworks'.[50]

SUSREG also assesses if banks are expected to integrate E&S considerations in their decision-making and risk-management processes. Thus, according to the Sustainable Banking and Responsible Lending Guidelines, banks in Thailand are to '*determine how ESG risks arising from their lending activities materialize as financial risks and how these risks are factored into policies and processes'*.[51]

At the same time, SUSREG has found out that in Thailand there are currently no specific guidelines or checklists covering the banks' activities in sectors with high E&S risks and impacts. It also concluded that banks in Thailand are not expected to put in place internal controls to manage E&S risks, in accordance with the three lines of defence approach nor to seek the inclusion of clauses (e.g. covenants, representations & warranties) related to E&S issues in the loan documentation for bilateral and syndicated credit facilities. SUSREG also states that banks are not expected to put in place an internal process to monitor and address situations where clients are not compliant with the banks' E&S sector policies or with applicable laws and regulations[52].

While assessing micro-prudential supervision (rule-based), SUSREG has found out that currently in Thailand banks are not expected to integrate E&S considerations in their Internal Capital Adequacy Assessment Process (ICAAP), not to have minimum capital requirements or capital add-ons to incorporate E&S considerations, through a differentiated risk-based approach. SUSREG also showed that banks are not expected to integrate E&S considerations in their liquidity risk management process, and the liquidity ratios are not adjusted to take E&S considerations into account, through a differentiated risk-based approach.

When assessing portfolio risks & impacts, SUSREG concludes that in Thailand, banks are expected to partially assess and mitigate their portfolio-level exposure to material E&S risks. It refers to the TBA-developed Sustainable Banking and Responsible Lending Guidelines, which says that 'identification and management of ESG risks, such as climate-related risks, at the portfolio level allow banks to build long-term resilience and unlock growth prospects. Having trained teams with clear roles and responsibilities enables these policies and processes to be implemented effectively."[53]. Banks are also expected 'to identify and seek to manage their lending portfolio exposure to ESG risks'. However, it is unclear to what extent banks are expected to mitigate their portfolio-level exposure to material E&S risks.

At the same time, SUSREG concludes that banks in Thailand are currently not expected to assess and mitigate their portfolio-level exposure to material E&S risks, by using forward-looking scenario analysis and stress-testing, nor to assess and mitigate the material negative E&S impacts associated with their business relationships, at the portfolio level.

It is also unclear if banks are expected to set science-based climate targets to align their portfolio with the objectives of the Paris Agreement. Banks are currently also not expected to set science-based targets to mitigate negative environmental impacts beyond climate, at the portfolio level.

When assessing the macro-prudential supervision, SUSREG showed that in Thailand specific risk indicators to monitor the exposure of banks to material E&S risks have been partially developed. Thus, the Sustainable Finance Initiatives for Thailand document discusses the '*assessment of climate and environmental related risks and opportunities and role of scenario analysis and stress testing*'. It also recommends '*assessing climate-related financial risks in the financial system by mapping physical and transition risk transmission channels within the financial system and adopting key risk indicators to monitor these risks'*.[54] Otherwise, the macro-prudential supervision is still to be improved in terms of how it integrates ESG factors. Thus, SUSREG has found out that currently in

Thailand the central bank is not yet assessing the exposure of banks to material E&S risks and the implications for financial system stability, by using forward-looking scenario analysis and stress-testing, nor has it published its methodology for forward-looking scenario analysis and stress-testing for public consultation. The BOT has not also issued prudential rules to limit the exposure of banks to certain activities, in order to prevent and protect against the build-up of systemic risk, based on E&S considerations.

In terms of disclosures and transparency, banks in Thailand are expected soon start to report publicly on their exposure to and management of climate-related risks and opportunities, in line with the TCFD recommendations. Thus, the BOT is planning to '*issue TCFD-aligned climate disclosure standards for banks in and has said that it will collaborate with other regulatory agencies to encourage disclosure by non-financial companies. It will also begin developing a data platform providing access to relevant environmental datasets from Q4 2022, similar to those being developed by the EU, Singapore and the UK'*.[55]

4.6.2 Central banking

When it comes to the assessment of central banks' activities, SUSREG assesses two broad categories: monetary policy and leadership & internal organization. Within the first scope, it looks at a number of criteria, which evaluate if a central bank takes E&S considerations into account when implementing corporate asset purchase programmes, in its collateral framework, and in the management of its foreign exchange reserves portfolio. SUSREG also assesses if a central bank offers subsidized loans or preferentially targeted refinancing lines based on E&S considerations and if E&S aspects are taken into account in determining reserve requirements for banks. In its assessment of Thailand, WWF concluded that none of these indicators are met[56].

While assessing internal organization and leadership, SUSREG looks if a central bank has published an official strategy or roadmap outlining measures to address E&S risks and opportunities in the financial sector, in line with its mandate. The Bank of Thailand (BOT)'s 2020-2022 strategic plan aims to '*embrace the organizational culture that always considers sustainability, including Environment, Social, and Governance (ESG) aspects, in all BOT's operations [and to] encourage financial service providers to embed the concept of sustainability, […] ESG aspects, into their organizational culture and various aspects of their business conducts'*. [57]

SUSREG also assesses if a central bank has established an internal organization and allocated resources to the implementation of its E&S strategy or roadmap. It demonstrated that in 2019, BOT '*has established a team, who will be mainly responsible for and driving the sustainable banking agenda, under the Financial Institutions Strategy Department in collaboration with knowledge partners such as TBA, IFC, WWF, Fair Finance Thailand and UNEPFI'*.[58]

Central bank's integration into the international ESG agenda and efforts is also part of SUSREG's assessment. Thus, it demonstrated that the Bank of Thailand has been a member of the Network for Greening the Financial System (NGFS) since January 2019.

At the same time, SUSREG found out that in Thailand, the central bank doesn't currently assess and disclose the exposure of its portfolios to E&S risks (for its policy, own, pension and third-party portfolios as applicable) and does not integrate E&S considerations in its asset management practices (for its own, pension and third-party portfolios as applicable). It is also unclear if the BOT will be publicly disclosing the share of its portfolios that is aligned with existing classification systems for sustainable or unsustainable activities (taxonomies), as such taxonomies are only now being developed and have not yet been published.

4.6.3 Enabling Environment

Thailand is currently developing an environment that would provide for the growth of its green finance. Though some initiatives and measures are already in place, much is still to be established.

For example, there already exists a multi-stakeholder sustainable finance initiative (Working Group on Sustainable Finance, WG-SF) which involves representatives from the Bank of Thailand, the Securities and Exchange Commission, the Office of Insurance Commission, the Ministry of Finance, and the Stock Exchange of Thailand, as well as from the International Finance Corporation. The WG-SG aims to steer and align the direction of Thailand's sustainable finance policies, including potentially developing a national sustainable finance taxonomy. However, it doesn't currently include representatives of the banking industry or from civil society[59].

The Bank of Thailand also supports capacity-building efforts for the banking industry focusing on sustainable banking practices and related aspects. Thus, BOT '*has been hosting a series of quarterly capacity building workshops and events for stakeholders across the Thai financial sector, covering a range of topics such as the impact of climate risk in infrastructure investment and responsible lending*'[60].

As for capital market regulations, The Securities and Exchange Commission of Thailand has issued Guidelines on the Issuance and Offer for Sale of Green Bond, Social Bond and Sustainability Bond, which are based on ASEAN standards for the respective instruments (green, social and sustainability bonds)[61]. However, no such regulations seem to be in place for the loan market.

Though there is currently no green or social taxonomy in place, the Bank of Thailand announced in August 2022 it was planning to develop one. According to The Responsible Investor, *'[a]t the core of BoT's plans is a transition-focused green taxonomy that will initially cover "industries that lag behind in the transition, especially those that emit large amounts of greenhouse gas". It will be aligned with the upcoming ASEAN taxonomy and the Climate Bonds Taxonomy and is expected to be released in January 2023'*[62].It is however unclear if the taxonomy will contain a classification system for unsustainable activities, developed following a science-based and multi-stakeholder process, nor if non-financial corporates will be required to disclose information on the alignment of their current and planned activities with existing taxonomies for sustainable or unsustainable activities.

According to SUSREG, Thailand currently lacks targets or incentives for banks to support certain industry sectors, based on E&S considerations. There are also no targeted mechanisms in place to promote adherence to sustainable financial products with internationally recognized standards. However, de-facto some of the regulations are based (or are planned to be based) on international standards, including the ASEAN taxonomy and the Climate Bonds Taxonomy.

According to the World Bank, which supports these measures through The Partnership for Market Readiness, '*the government [of Thailand] is developing laws for carbon pricing, such as the Climate Change Act, Greenhouse Gas Reporting Law, and Emission Trading System Law*.'[63] However, such carbon pricing mechanism is not yet in place.

4.7 Vietnam

4.7.1 Banking supervision

Vietnam seems to be relatively mature in terms of integrating ESG matters into its national banking supervision. Thus, it has already adopted a number of documents '*directing the banking activities toward green areas, limiting capital flows into projects that may cause negative impacts on the environment [and] promoting green credit growth and managing environmental and social risks in lending activities*'.[64]

The adopted regulations and supervisory expectations cover a broad range of environmental and social issues, which include exploitation of natural resources and energy, natural environment pollution, imbalance of ecosystem, climate change, damage to cultural heritage, threatening the safety, security and health of the community, labour inequality and forced resettlement[65]. The implementation of these documents is expected to be regularly monitored by the relevant supervisory bodies. Thus, the Credit Department of economic sectors, in coordination with units under the State Bank of Vietnam (SBV), monitors '*the implementation status of [SBV Directive 03/CT-NHNN - Promoting green credit growth and managing environmental and social risks in credit granting activities] and reports to the Governor of State Bank of Vietnam*'.[66]

At the same time, ESG regulations currently only apply to the lending process, and do not extend to cover other financial products & services provided by banks, including leasing, factoring, mortgage products, etc.

According to SUSREG findings, Vietnamese banks are expected to integrate E&S considerations in their business strategy, commensurate to their size and nature of operations, and to include oversight of their E&S strategy implementation in their board's responsibilities. In addition, credit institutions should '*research to establish the unit/division responsible for the implementation of environmental and social risk management and management and supervision of the implementation of green banks and green credit at banks*'.[67]

At the same time, regulations in Vietnam can be still improved, as currently, banks are not expected to regularly provide their board with relevant information related to the implementation of their E&S strategy or to include criteria related to their E&S strategy implementation in their appraisal and remuneration policy.

SUSREG also looks if banks are required to establish and develop adequate capacity to implement their ESG agenda. Thus, SUSREG has found that banks in Vietnam are expected to dedicate staff and resources to the definition and implementation of their E&S strategy, including well-defined roles and responsibilities of the various teams (incl. senior management) involved in the implementation of their E&S strategy, as well as to conduct regular training on relevant E&S issues for their board, senior management, business lines and functions. These requirements are established by State Bank of Vietnam's Decision 1604/Q-NHNN - Approving the Scheme for the development of green banks in Vietnam (August 2018).[68]

At the same time, SUSREG concludes that currently banks in Vietnam are not expected to conduct stakeholder engagement on relevant E&S issues, including with civil society representatives.

In its assessment of policies and processes, SUSREG found out that banks in Vietnam are not yet expected to develop and implement sector policies outlining minimum E&S requirements for their clients, particularly in sectors with high E&S risks and impacts, to refer to internationally recognized sustainability standards and certification schemes in their E&S sector policies, nor to engage with and support their clients on the adoption of best practices, based on internationally recognized sustainability standards and certification schemes.[69]

State Bank of Vietnam has '*established sector-specific E&S checklists and organizes technical training on E&S risk management and E&S due diligence for credit institutions'*.[70] It also expects banks to integrate E&S considerations in their decision-making and risk management processes and to put in place internal controls to manage E&S risks, in accordance with the three lines of defence approach. Banks in Vietnam also need to report to SBV on credit/loan applications declined or approved after being evaluated for E&S risks, the outstanding value of credits/loans granted which have been evaluated on E&S risks, as well as outstanding value of credits/loans being on hold due to E&S.

At the same time, according to SUSREG, banks are expected to seek the inclusion of clauses (e.g. covenants, representations & warranties) related to E&S issues in the loan documentation for bilateral and syndicated credit facilities.

In terms of regulations on portfolio level, banking regulations in Vietnam currently demonstrate low levels of maturity, according to SUSREG. Thus, they are not expected to assess and mitigate their portfolio-level exposure to material E&S risks, nor their material negative E&S impacts associated with their business relationships. Banks are also not required to set science-based climate targets to align their portfolio with the objectives of the Paris Agreement, nor to set science-based targets to mitigate negative environmental impacts beyond climate.[71]

SUSREG also demonstrates low ESG maturity of micro-prudential banking supervision in Vietnam. It states that banks are not expected to integrate E&S considerations in their Internal Capital Adequacy Assessment Process (ICAAP), nor to integrate E&S considerations in their liquidity risk management process. There are currently no minimum capital requirements or capital add-ons for banks to incorporate E&S considerations through a differentiated risk-based approach.[72]

In terms of disclosures and transparency, banking regulations in Vietnam are still to be improved. Banks are expected to regularly report on green credit growth and environmental and social risk management in credit granting activities to the central bank, but otherwise transparency regulations remain very basic. Thus, there are no regulations on the use of internationally recognized sustainability reporting frameworks to guide their public disclosures, and banks are not expected to include information on their E&S strategy and its implementation in their annual report. Banks are also not required to publicly disclose their credit exposure by industry sub-sectors, based on international industry classification systems. Portfolio-level exposure to material E&S risks and the associated mitigation measures are not expected to be disclosed.

At the macro-prudential level, banking regulations in Vietnam are also still to be established. SUSREG concludes that neither of the criteria it looks at in this section of its assessment, are met. Thus, regulators have not yet assessed the exposure of banks to material E&S risks and the implications for financial system stability, by using forward-looking scenario analysis and stress-testing. Regulators have not also published a methodology for forward-looking scenario analysis and stress-testing for public consultation. With now methodology and actual stress-testing in place, Viet Nam's financial regulators are not publishing aggregated results of its stress-testing exercises on material E&S risks, as well as its recommendations. Specific risk indicators to monitor the exposure of banks to material E&S risks are also not yet in place. No prudential rules to limit the exposure of banks to certain activities, in order to prevent and protect against the build-up of systemic risk, based on E&S considerations, are yet adopted.[73]

4.7.2 Central banking

When it comes to the assessment of central banks' activities, SUSREG looks at a number of criteria, which evaluate if a central bank takes E&S considerations into account when implementing corporate asset purchase programmes, in its collateral framework, and in the management of its foreign exchange reserves portfolio. SUSREG also assesses if a central bank offers subsidized loans or preferentially targeted refinancing lines based on E&S considerations and if E&S aspects are taken into account in determining reserve requirements for banks. In its assessment of Vietnam, WWF concluded that none of these indicators are met.[74]

In addition to monetary policy, SUSREG assesses Central Bank's internal organization and leadership. According to WWF, the central bank of Vietnam appointed a number of its structural divisions to be responsible for the implementation of its E&S roadmap. These include the Department of Finance and Accounting, which '*balances and allocates appropriate financial resources to build and deploy green banking and green credit activities, [and] Banking Supervision and Inspection Agency which studies, advises and supplements the mechanism of inspection and supervision of environmental and social risks of banks and credit institutions, and other relevant departments'*[75].

In terms of taking leadership in adopting and promoting sustainable finance practices, SUSREG found that the State Bank of Vietnam is not yet a member of the Network for Greening the Financial System. It also failed to publish an official strategy or roadmap outlining measures to address E&S risks and opportunities in the financial sector, in line with its mandate. The State Bank of Vietnam is not yet assessed and disclosed the exposure of its portfolios to E&S risks (for its policy, own, pension and third-party portfolios as applicable) and has not yet integrated E&S considerations in its asset management practices (for its own, pension and third-party portfolios as applicable). It is not currently disclosing the share of its portfolios that is aligned with existing classification systems for sustainable or unsustainable activities (taxonomies)[76].

4.7.3 Enabling environment

Overall, Vietnam is currently developing an environment that will enable a more comprehensive and deep ESG transformation of its financial landscape. Thus, its central bank is planning to develop and implement measures to promoting green credit growth (organize training courses to strengthen capacity for green credit and environmental and social risks management, guide credit institutions to develop and implement an environmental and social risks management system, etc.)[77]

The State Bank of Vietnam also released its Green Project Catalogue '*in which six green project categories are prioritized: renewable energy, energy saving and energy efficiency, land use conversion and management, sustainable forestry, sustainable waste management, and green agriculture'*[78].

A full-fledged Green Taxonomy which is expected to cover 8 sectors, 83 green economic activities and green investment projects with environmental screening criteria, thresholds, and indicators, contributing to eight environmental goals of Law on Environmental Protection (LEP), is still being developed, with next round of consultations planned for the last quarter of 2022.[79]

At the same time, though the Green Project Catalogue and the Green Taxonomy which is now being developed are expected to cover both climate change and a broader range of environmental issues, it is yet unclear if the social agenda is going to be addressed there, or if there are any plans to develop a designated social taxonomy. It is also yet unclear if the Green Taxonomy will also outline unsustainable activities and exclusion lists.

Vietnam also recently revised its Law on Environmental Protection (effective as of January 1, 2022) which laid the necessary legal foundations for the establishment of a carbon market in the country. The law aims to create '*a carbon pricing instrument that will penalize emitters of GHG emissions based on the principle of "polluter pays."*'[80]

Vietnam is still to develop targets or incentives for banks to support certain industry sectors, based on E&S considerations, as well as targeted mechanisms to promote adherence to sustainable financial products with internationally recognized standards.

5.

Conclusions and recommendations

Pulp and paper, timber, and rubber companies in the Lower Mekong Region run a large risk or becoming involved in deforestation, human rights violations, and other risky and unsustainable practices, in their own operations and in their supply chains. To address these risks, company policies on environmental, social and governance issues are essential, but through the analysis of the policies of 29 major companies in the region this report found that 20 have insufficient policies in place.

Complementing such efforts, financial institutions could leverage the adoption of stronger ESG policies by pulp and paper, timber, and rubber companies through their provision of credits and investments. As this study found that none of the 38 researched banks from the LMR and China comprehensively deal with the various ESG risks in these sectors, this chapter outlines how financial institutions could be challenged to become more pro-active and builds on this by analysing how present developments in the financial regulatory environments of the LMR and China could be encouraged and utilized to create incentives for financial institutions to prevent negative environmental and social impacts in the pulp and paper, timber and rubber sectors.

5.1 Pulp and paper, timber, and rubber companies

Our analysis of the policies of 29 major pulp and paper, timber, and rubber companies active in the Lower Mekong Region and China found that 20 have insufficient policies in place. The absence of such policies increases the risks that the companies become involved in deforestation, human rights violations, and other unsustainable practices, in their operations and in their supply chains. Companies should be made aware of these risks and should be stimulated to address them, in the first place by developing and implementing company policies on environmental, social and governance issues.

To encourage this development, two conclusions from our analysis are important:

- Nearly 50% of the pulp and paper, and timber companies assessed (seven out of 16) have adequate policies (scores of 5 or higher) to address the environmental, social and governance impacts of their operations. This finding is strongly related to the fact that these seven companies have achieved FSC certification. This certification system includes many of the criteria included in this assessment methodology in its list of certification criteria.
  In contrast, only two out of 13 rubber companies have adequate policies (scores of 5 or higher) to address the environmental, social and governance impacts of their operations. The absence of a reliable certification system in the rubber sector may therefore play an important role here.
- This research provides some indication that the rubber, pulp and paper, and timber companies that operate in the Lower Mekong Region and which are owned by corporate groups from OECD countries, will have more developed and better coverage from their ESG policies.
  Taken these conclusions into account, the following recommendations are made with regard to engagement with pulp and paper, timber and rubber companies active in the Lower Mekong Region and China:
- An information programme can be set up for pulp and paper, timber and rubber companies in the region, to raise awareness within companies about international standards on environmental, social and governance issues, and on the advantages of adhering to such standards: managing legal and reputational risks and securing continued access to product and finance markets. To elevate peer pressure and show best practices, it is recommended to start with reaching out to the nine companies (seven pulp and paper, and timber companies and two rubber companies) which scored reasonably well in our policy assessments. If these companies agree and are willing to share their experiences, practical advice can be provided to other companies. On top of providing information, the programme can then also provide trainings on the development and implementation of robust and comprehensive ESG policies.
- It would also be recommended to work closely together with sustainability certification schemes and frameworks, such as Accountability Framework, Global Platform for Sustainable Natural Rubber, PEFC, FSC, CCB, GAP and Rainforest Alliance, to learn from their experiences and to support the companies in the process of developing and implementing better ESG policies.
- To encourage the companies to participate in the programme, it is recommended that the connections between the producing companies and owners and/or buyers in OECD countries are further explored. These owners and buyers can be contacted to ask for their support in encouraging the companies in the Lower Mekong Region to improve their ERG policies and practices. Especially owners and buyers located in the European Union can be expected to be responsive to such collaboration requests, now the European Deforestation Regulation holds them to account for deforestation risks in their supply chains.

Finally, financial institutions are a key group of stakeholders that can be leveraged to encourage their client companies to participate in the programme proposed here. Their potential role is discussed further below.

5.2 Financial institutions

This research found that in the period January 2016 to September 2022 financial institutions provided US$ 11.4 billion in forest-risk loans and underwriting services to major pulp and paper, timber and rubber companies active in the Lower Mekong Region and China. More than half of this credit was provided by Chinese banks (US$ 6.6 billion), while banks from Thailand provided roughly a quarter of the forest-risk credit (US$ 2.9 billion). Banks from outside the region played only a small role.

An additional analysis of the ESG policies of 38 leading regional banks found, however, that none of the bands assessed dealt with the various ESG risks in the pulp and paper, timber, and rubber sectors in a comprehensive way. Only one bank, TMB Tanachart Bank from Thailand, was found to have almost sufficient ESG policy coverage with a score of five out of 10. Two additional banks score inadequately: Vietnam Prosperity Bank from Vietnam with a score of 4.2, and Industrial Bank

Company from China with a score of 3.9. The remaining 35 banks score poorly, lower than two points overall. Eight of them even score zero points, on a scale from one to 10.

Variations between average bank policy scores for each country of the region were found to be insignificant. Banks from Thailand scored the highest on average with a score of 1.9 out of 10, which could be related to the Sustainable Banking and Responsible Lending Guidelines in Thailand.

The absence of robust ESG policies among regional banks increases the risks that these banks will finance companies involved in deforestation, human rights violations, and other unsustainable practices, in their operations and in their supply chains. It is interesting to note, however, that the majority of banks assessed, 22 out of 38, report to have made some steps towards integrating sustainability criteria in their governance structure. This may indicate an interest in the topic and some initial awareness of its emerging relevance.

It is recommended that trainings are offered to the selected banks on how they could develop and implement ESG policies that would help them to avoid exposure to deforestation, human rights violations and other unsustainable practices. These trainings could be set up individually or at the national level, in the different LMR countries and China. The trainings should cover the different sustainability challenges in the pulp and paper, timber and rubber sectors and how these challenges could become risks for the banks themselves. Further, the trainings should clarify what steps banks can take to address these risks and which (inter)national standards and certification schemes could be used in this respect.

In developing the trainings, the organizers should look for collaboration with financial regulators in the LMR countries (see section 5.3) and with bank associations and other industry bodies. Endorsement from these institutions can be an effective signal to individual financial institutions. But it would also be valuable to explore collaborative opportunities with civil society, including WWF, the Forests & Finance coalition[81] and Fair Finance Asia[82], which have already been engaged trainings for banks in the LMR.

5.3 Financial regulators

The findings from the regulatory environment assessment are encouraging, suggesting that the environment is conducive to further steps in financial institution policy development and implementation.

In the financial sector, many ESG policies and guidelines are developed by industry associations and are voluntary by nature. Gains could be made from more effort to convert them into regulations that would be obligatory for all market players. A broader array of environmental issues, beyond climate change (including biodiversity and landscape conservation), as well as social issues (including human rights and gender), should be embedded in the financial sector regulations in all LMR countries, as well as in China. ESG issues should further be addressed by banks and financial institutions at a portfolio level, rather than being treated as separate issues associated with a specific client or sector. In all six countries, macro-prudential supervision should be significantly improved to better address the banking sector's ESG risk exposure. This may require supervisors to regularly assess such exposure using forward-looking scenario analysis and stress-testing, to develop specific risk indicators, and ultimately to issue prudential rules to limit the exposure of banks to certain high-ESG-risk sectors.

National green taxonomies should be developed and adopted in Cambodia, Vietnam, Lao PDR, Thailand, and Myanmar. The taxonomies should be based on the World Bank Guidelines, and ICMA and LMA principles. They should include measurable screening criteria and thresholds, a list of 'green', 'brown', and transition activities, and properly address the do no significant harm principle. Including transition activities in the taxonomies should also be considered, as this will likely help to make sustainable financial products available to a wide range of companies and industries. ALL countries should also more widely use the ASEAN taxonomy which is already in place and which could be used to already now review portfolios and earmark those assets that are compliant with it.

LMR countries will also likely benefit from adopting carbon price mechanisms at the country level, as it could help to foster sustainable use of forests.

Central banks and financial regulators should propose and apply incentives for banks that are aiming to offer green financial products and services, for example, by decreasing capital requirements and subsidizing the rates for green, social, and sustainability-linked loans, and including green, social, sustainability, and sustainability-linked bonds in their collateral framework.

The sections below provide country-specific recommendations for the five LMR countries and China that could be communicated to and discussed with the national financial regulators and central banks.

5.3.1 Cambodia

Central Bank of Cambodia should include ESG considerations, including on deforestation and forest degradation both in its banking sector regulatory activities (for example, by issuing relevant guidelines for FIs that will set out the framework for developing and implementing sustainable financial products).

The Central bank should also take E&S considerations into account when implementing corporate asset purchase programs, as well as in its collateral framework.

Banks should be urged to develop and implement sector policies outlining minimum E&S requirements for their clients, particularly in sectors with high E&S risks and impacts and be required to assess and mitigate their portfolio-level exposure to material E&S risks.

A national sustainable finance taxonomy should be considered. Such taxonomy should cover green (as well as 'brown' or unsustainable) activities, and transition activities, and have technical screening criteria in place.

Cambodia will also benefit from a carbon pricing mechanism, which can become an effective tool to foster sustainable use of the country's forests.

5.3.2 China

Regulations and supervisory expectations that cover ESG issues should extend beyond lending to cover other financial products & services provided by banks.

More public and civil society engagement is desired while developing ESG regulations and supervisory expectations.

Banking and Insurance Regulatory Commission should require banks to assess and mitigate the material negative E&S impacts associated with their business relationships at the portfolio level.

Banks should also be encouraged to set science-based climate targets to align their portfolio with the objectives of the Paris Agreement. They should also be encouraged to set targets to mitigate negative environmental impacts beyond climate, at the portfolio level.

China's quasi-taxonomy, the People's Bank of China Green Bond Endorsed Project Catalogue, should be enhanced by including technical screening criteria.

5.3.3 Lao PDR

Environmental and social considerations should be included in the banking supervision, including in the prudential regulations at both micro and macro levels.

The Bank of Lao PDR should establish a dedicated department that would be responsible for integrating ESG aspects both in its operations and in the monetary policy.

Lao PDR will benefit from a comprehensive sustainable finance taxonomy covering green (as well as 'brown' or unsustainable) activities, transition activities, and including technical screening criteria.

Banks should be first encouraged, and at a later stage required to assess, disclose and mitigate material ESG risks associated with their business relations at portfolio level.

Lao PDR will also benefit from a carbon pricing mechanism, which can become an effective tool to foster sustainable use of the country's forests.

5.3.4 Myanmar

Environmental and social aspects should be included in the banking supervision, including in the prudential regulations at both micro and macro levels.

For the micro-prudential regulations, a low-hanging fruit may be to start with issuing principle-based regulations or supervisory expectations related to sustainable banking that would apply to all supervised commercial banks and other FIs.

At the macro level, the Central Bank of Myanmar should start assessing the exposure of banks to material E&S risks and the implications for financial system stability, by using forward-looking scenario analysis and stress-testing.

Like many other LMR countries, Myanmar would benefit both from developing a comprehensive sustainable finance taxonomy and a carbon-proving mechanism.

5.3.5 Thailand

Commercial banks in Thailand should be required to assess and mitigate their portfolio-level exposure to material E&S risks.

The BOT should also assess and disclose the exposure of its portfolios to E&S risks (for its policy, own, pension and third-party portfolios as applicable) and integrate E&S considerations in its asset management practices.

The BOT should consider developing and implementing incentives for banks that are interested in actively offering green financial products and services, for example, by decreasing capital requirements and subsidizing the rates for green, social and sustainability-linked loans, and including such bonds in its collateral framework.

BOT's efforts to develop a national taxonomy, as well as the Government of Thailand's plans to design and implement a carbon pricing mechanism should be accelerated.

5.3.6 Vietnam

More efforts should be made to ensure that ESG regulations extend beyond the lending process, and also cover other financial products & services provided by banks, including leasing, factoring, mortgage products, etc.

Banks in Vietnam should be required to develop and implement sector policies outlining minimum E&S requirements for their clients, particularly in sectors with high E&S risks and impacts, including timber and rubber industries.

Banks should also be required to assess and mitigate their portfolio-level exposure to material E&S risks, as well as their material negative E&S impacts associated with their business relationships.

FIs should be encouraged to set science-based climate targets to align their portfolio with the objectives of the Paris Agreement.

Efforts to develop and launch a national Green Taxonomy (which is expected to cover 8 sectors, 83 green economic activities and green investment projects with environmental screening criteria, thresholds, and indicators) should be accelerated.

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Annex

Annex 1 Research methodology

Unsustainable logging and forest conversion are pervasive throughout the Lower Mekong Region and are a primary cause of deforestation and forest depredation. Across the region whole of Southeast Asia and Oceania, there are seven key fronts for deforestation, of which three are found in Lower-Mekong Countries.

Historically, large-scale Illegal logging and timber extraction, to supply both domestic and international timber markets, was followed by forest clearing for agricultural conversion. However, slowly large-scale logging is being replaced by smaller-scale timber operations that are more closely linked to domestic and regional markets, mainly for fuelwood and timber for construction. Infrastructure also plays an important enabling role for illegal logging; the steady development of roads is well associated with the expansion of mining and logging, allowing for the transport of heavy machinery into previously untouched areas, and for timber to be shipped out.

Without financing, large-scale forest exploitation projects would not be commercially feasible. Forest-based projects require capital not only to buy equipment and machinery, but also to pay the costs of harvesting the timber, processing it, and transporting the finished products to the markets. Banks also serve as important players in the trade of products produced by forest-based industries. They provide (among other things) credit for trade, letters of credit to guarantee payment of trade, facilities for discounted trade credit and other short-term financing instruments. Without bank financing, forest-based industries could not work their way into the equity and bond markets that allow them access to long-term financing.

Banks and fund managers involved in financing high-risk forest-based industries face legal risks resulting from banking regulations and anti-money laundering laws. Banking regulations require that banks know their customers, manage risk, and avoid financing projects harmful to the environment. Failure to adhere to these regulations can result in banks losing their licences and facing administrative sanctions and even criminal charges. Failure to fully understand this risk has led to a fragmentation in the financial services market, with many larger international banks placing exclusions on all deforestation-risk-related activities including those that are sustainable. While many smaller local banks lack the capacity to discern and assess deforestation-related risks and have continued to finance destructive forest-related activities.

This research was designed to assess the deforestation risk represented by the key forest-related sectors of timber, pulp and paper, and rubber, and the effectiveness of regional financial sector policies in mitigating that risk.

This was achieved by analysing the financing activities of the largest companies in each sector, firstly, to identify leading banks and investment funds that have exposure to the leading companies in each sector in the Mekong region through capital markets activities or direct financing; Secondly, to assess the extent to which the leading companies themselves are sufficiently mitigating their exposure to environmental and social risk through an analysis of their environmental, social and governance policies.

Thirdly, to assess the robustness of the ESG risk management policies of the banks that are active in the three sectors in the region. The objective is to identify points of intervention, where banks may be unknowingly exposed to risks associated with deforestation.

Twenty-nine of the leading companies across the three sectors were selected using data from official publications, company websites, market studies, and NGO and media reports. Financial data pertaining to corporate loans, credits, and underwriting facilities provided to these companies from 2016 to September 2022 was collected and analysed from multiple sources.

A consistent methodology was used to calculate estimated financing contributions based on publicly available data on deal specifics. In cases where the individual bank commitments in syndicated deals were unknown, the research estimated commitment by analysing the proportion of total fees received by each financial institution to the known total deal value. If deal fee data was incomplete, the book ratio was employed. A formula was developed to decrease the commitment assigned to bookrunners as the book ratio increases.

To understand the impact of upstream operations, such as potential deforestation and human rights issues for companies operating across more than one of the assessed value chains, segment adjusters were developed for the three forest-risk supply chains assessed. When deal specifics were insufficient, the adjusters were not applied, and the financing was treated as for general corporate purposes.

To consider companies operating in multiple countries necessitated the development of geographic adjusters. These were used to attribute financial flows to the relevant Lower Mekong Region countries. Various financial indicators such as geographic distribution of capital expenditures, assets, liabilities, revenues, and profit/loss informed the development of these adjusters.

The research also assessed the Environmental, Social, and Governance (ESG) policies of 29 companies in the Lower Mekong and China. The policies were evaluated against 32 environmental, social, and governance factors, using a methodology developed by Profundo. Points were awarded based on each met criterion or achieved sustainability certification.

In addition to thirty companies, thirty-eight banks from the Lower Mekong and China were assessed for their deforestation-risk policies. A methodology developed by the Forests & Finance Coalition was used, which required companies and their suppliers to commit to zero-deforestation and no-conversion of natural forests and ecosystems.

Finally, the regulatory landscape of the financial sector in the Lower Mekong countries and China was evaluated using two key resources: the WWF's SUSREG framework and an extensive literature review. The SUSREG framework, developed by WWF with an aim to fortify the stability and resilience of the financial sector against environmental and social risks, was specifically utilized for the assessments conducted in China, Thailand, and Vietnam. For the countries of Cambodia, Lao PDR, and Myanmar, the research offered concise overviews of their respective financial sector regulatory environments.

A. Selection of Timber, Pulp and paper, and Rubber Companies

As a first research step, a selection was made to identify the most important companies engaged in forestry and rubber plantations in the Lower Mekong Region countries and China. As far as possible, this selection process was based on information found in concession registers and other official publications. For several of the Mekong countries, such sources are not available or, do not provide comprehensive and up-to-date information. In these cases, the selection process was based on data available on company websites, in market studies, and in NGO and media reports. Companies were then ranked by the total size of the concession area they had under management.

The subsequent financing of a selection of 30 of the identified timber, pulp and paper, and rubber company groups was identified and analysed in the financial research phase. The methodology is described in appendix 1B. A selection of 29 timber, pulp and paper, and rubber companies was included in the company policy assessment research phase as shown in Table 29 and further described in appendix 1C.

B. Financial Research Methodology

The financial research step researched the financial flows of the selected companies presented in Table 28. This section further details how the financial flows mapping was conducted.

B1. Financial Institution Financing Contributions

Financial data was researched using a range of sources including, financial databases, including, Bloomberg, Refinitiv, formerly known as Thomson EIKON, TradeFinanceAnalytics, and IJGlobal, company reports, including annual, interim, quarterly reports, and other company publications, company register filings, as well as media and analyst reports. Corporate loans, credit and underwriting facilities provided to the selected companies were researched for the period 2016 until September 2022. Investments in bonds and shares of selected companies were identified through Refinitiv, Thomson EMAXX and Bloomberg, and Profundo's '*Pension Fund Portfolio Disclosure Database'* as of the most recently available filing dates in September 2022.

Financial databases often record loans and issuance underwriting when these are provided by a syndicate of financial institutions. The company reports and publications, company register filings, and the media will often provide information on loans provided bilaterally. For example, between one bank and the company in question. The level of detail provided per deal varies. Some sources may omit the maturity date or term of the loan, the use of proceeds, or even the exact issuance date. Financial databases often do not report on the proportions of a given deal that can be attributed to the participants in syndicate deals. In such instances, this research calculated an estimated contribution based on a consistent methodology, described below.

- **Loans & underwriting services**

  Individual bank contributions to syndicated loans and underwriting - bond & share issuance underwriting - were recorded to the largest extent possible when details were included in the financial database, or company or media publications.

  In many cases, the total value of a loan or issuance is known, as are the banks that participate in this loan or issuance. However, often the amount that each bank commits to the loan or issuance has to be estimated.

  When the amount that each bank commits in a syndicated deal is unknown, this research attempted to estimate each individual bank's commitment on the basis of the fee they received as a proportion of the total fees received by all financial institutions. This proportion, for example, Bank A received 10% of all fees in a deal. This proportion of total fees paid to Bank A was then applied to the known total deal value, for example, 10% of a total deal size of US$ 10 million would be US$ 1 million for Bank A.

  In instances where deal fee data is missing or incomplete, this research used the book ratio to determine the spread over bookrunners and other managers. Analysis of deals where the deal fee is known has been used to develop this proxy methodology.

  $$\text{Book ratio: } \frac{number\ of\ participants - number\ of\ bookrunners}{number\ of\ bookrunners}$$

  The table below shows the commitment assigned to bookrunner groups with our estimation method. When the number of total participants in relation to the number of bookrunners increases, the share that is attributed to bookrunners decreases. This prevents very large differences in amounts attributed to bookrunners and other participants.

Table 13 Commitment to assigned bookrunner groups

Book ratio	Loans	Issuances
> 1/3	75%	75%
> 2/3	60%	75%
> 1.5	40%	75%
> 3.0	**< 40%***	**< 75%***

* In case of deals with a book ratio of more than 3.0, we use a formula which gradually lowers the commitment assigned to the bookrunners as the book ratio increases. The formula used for this:

$$\frac{\frac{1}{\sqrt{bookratio}}}{1.443375673}$$

The number in the denominator is used to let the formula start at 40% in case of a book ratio of 3.0. As the book ratio increases the formula will go down from 40%. In the case of issuances the number in the denominator is 0.769800358.

The underlying deals dataset can be provided for verification of deals and contributions when requested. This dataset includes data sources and dates of access.

- **Shareholdings**
  The number and values of shares held by financial institutions are reported in financial databases, they were not subject to adjustment.
- **Bondholdings**

  The number and values of bonds held by financial institutions are reported in financial databases, they were not subject to adjustment.

B2. Segment adjusters

Several of the companies selected for the financial flows research are active across multiple sectors, including those not in the scope of this study. Segment adjusters were developed to adjust the identified financing figures to more accurately reflect financial flows attributable to the focus business activities within each of the pulp and paper, rubber, and timber sectors.

This section explains the methodology by which segment adjusters for the three forest-risk supply chains in the scope of this study were calculated and applied. The approach used is based on that developed by *Forests & Finance.*[lxxxiii]

Segment adjusters were developed for all companies and for each year for which financing was identified. Since it is not possible to consistently breakdown the supply chains of the analysed companies into up-, mid- and downstream segments, this research developed sector adjusters for whole supply chains, with the understanding that the impact of upstream operations, such as, destruction of natural capital, potential deforestation and human rights issues, is driven by the demand from the mid-and downstream segments.

Segment adjusters were not applied to project finance. When project finance was identified, this research investigated the purpose of the identified project finance to determine whether or not it fell within the scope of this research, and how to attribute it; to rubber, timber, pulp and paper. When there was insufficient detail to attribute it, project finance was treated with the segment adjuster. When the identified financing had multiple uses of proceeds, the deal was treated as financing for general corporate purposes.

Segment adjusters were developed using the segment reporting in annual reports to the fullest extent possible, where necessary complemented by additional information from company publications and websites and estimations. The following financial indicators were used in order of preference:

segment capital expenditures;
additions to non-current assets;
segment liabilities;
segment assets;
segment revenues; and
segment profit/loss.

Where financing was identified at the subsidiary level, this research identified the segment activities using company publications. Where financing was identified for a financing vehicle, the group-level adjuster was applied.

The segment adjusters, including source, details of the methodology and indicators used are available on the *Forests & Finance* website and available also on request.

Below is an example calculation to illustrate how segment adjusters are developed for each company and applied to identified financing:

> In January 2016, Siam Cement Group (SCG) issued bonds worth US$ 700 million, which were underwritten by Bangkok Bank, Mitsubishi UFJ Financial, Kasikornbank, Krung Thai Bank and Siam Commercial Bank. Siam Commercial Bank underwrote US$ 295 million, Kasikornbank US$ 178 million, Bangkok Bank US$ 137 million, Krung Thai Bank US$ 60 million and Mitsubishi UFJ Financial US$ 31 million.
>
> SCG has four reportable operating segments:
>
> 1. Cement-Building Materials Business;
> 2. Chemicals Business;
> 3. Packaging Business, and;
> 4. Other.
>
> Pulp and paper activities all relate to segment 3 (SCG Packaging). Details for the segment additions to non-current assets / capital expenditures were available and thus used. Using these segment definitions and figures, 18.89% of SCG's capital expenditures were pulp and paper in 2016.
>
> Therefore, US$ 125 million of the US$ 700 million bond issuance was attributed to pulp and paper. At the individual financial institution level, the pulp and paper adjusted underwriting values were:
>
> - Siam Commercial Bank: US$ 53 million
> - Kasikornbank: US$ 32 million
> - Bangkok Bank: US$ 24 million
> - Krung Thai Bank: US$ 11 million
> - Mitsubishi UFJ Financial: US$ 6 million

B3. Geographic adjusters

Several of the companies selected for the financial flows analysis are active in multiple countries, including countries not in the scope of this study. Therefore, geographic adjusters were developed to adjust the identified financing figures to take into account only those financial flows attributable to the relevant LMR countries.

Geographic adjusters were developed for each company analysed and for each year for which financing was identified.

Geographic adjusters were not applied to project finance. In cases where project finance was identified, this research investigated the location of the identified project finance to determine whether or not it fell within the scope of this research, and how to attribute it, for example, as timber, rubber or pulp and paper. When there was insufficient detail, project finance was treated with the geographic adjuster. When the identified financing had multiple uses of proceeds, the deal was treated as financing for general corporate purposes.

Where financing was identified at the subsidiary level, this research identified the location of its activities using company publications. Where financing was identified for a financing vehicle, the group-level adjuster was applied.

Geographic adjusters were developed using the segment, geographic and general reporting in annual reports to the fullest extent possible and complemented by further information from company publications and websites and estimations where necessary. Geographic adjusters were applied to segment adjusters.

To establish the geographic adjusters, the following financial indicators were used in order of preference:

geographic distribution of capital expenditures;
geographic distribution of additions to non-current assets;
geographic distribution of liabilities;
geographic distribution of assets;
geographic distribution of revenues; and
geographic distribution of profit/loss;

For several of the companies analysed, the geographic distribution of assets was used to establish the geographic adjuster. For example, Hoang Anh Gia Lai (HAGL) subsidiary HAGL Agrico has rubber operations in Cambodia, Lao PDR and Vietnam. According to the annual report, in 2018, 38% of its assets were Cambodia, 44% in Lao PDR, and 18% in Vietnam. These geographic adjusters were then applied to the rubber segment adjuster of 29% for HAGL Agrico to result in segment adjusters further adjusted for countries of operations i.e., in rubber in Cambodia (11%), rubber in Lao PDR (13%) and rubber in Vietnam (5%).

The combined segment and geographic adjusters were then applied to each identified financial relationship identified.

The geographic adjusters, including source, details of the methodology and indicators used are available on the *Forests & Finance* website and also available on request.

C. Company policy assessment methodology

The Environmental, Social and Governance (ESG) policies of 29 companies (13 rubber companies and 16 timber and pulp and paper companies) active in the Lower Mekong Region and China are assessed with a modified version of the *Forests & Finance* policy assessment methodology.[lxxxiv] For the company selection, please see Table 29.

The *Forests & Finance* methodology has been developed by the *Forests & Finance Coalition*, of which Profundo is a founding member, to assess the ESG policies of banks and investors which are financing, or investing in, companies involved in deforestation-risk commodity sectors: beef, palm oil, pulp and paper, rubber, soy and timber. For this study, an adjusted version of the methodology was developed to assess the policies of rubber, timber, and pulp and paper companies active in the Lower Mekong Region and China. This methodology assesses the policies and practices of these companies against 32 environmental, social and governance factors, as summarized in Table 14.

Table 14 Policy assessment methodology for rubber, pulp and paper, and timber companies

Environmental criteria	
1	The company and its suppliers commit to zero-deforestation and no-conversion of natural forests and ecosystems.
2	The company and its suppliers do not drain or degrade wetlands and peatlands.
3	The company and its suppliers do not convert or degrade High Carbon Stock (HCS) in tropical forest areas.
4	The company and its suppliers do not operate in, or have negative impacts on, protected areas.
5	The company and its suppliers do identify and protect High Conservation Value (HCV) areas under their management.
6	The company and its suppliers do not use fire for land clearing activities and fight fires.
7	The company and its suppliers do minimize their impacts on groundwater levels and water quality.
8	The company and its suppliers do not harvest, nor trade in, endangered species and does protect the habitats of endangered species.
9	The company and its suppliers do not use nor introduce genetically modified species or invasive alien species into the environment.

10	The company and its suppliers do minimize or eliminate the use of pesticides.
Social criteria	
11	The company and its suppliers do respect the right of Indigenous peoples to give or withhold Free, Prior and Informed Consent (FPIC) if they could be affected by planned operations.
12	The company and its suppliers do respect the right of all communities with customary land rights to give or withhold Free, Prior and Informed Consent (FPIC) if they could be affected by planned operations.
13	The company and its suppliers do establish human rights due diligence processes and monitoring systems.
14	The company and its suppliers do respect the broader social, economic and cultural rights of communities affected by their operations, including the right to health and the right to an adequate standard of living.
15	The company and its suppliers do commit to the resolution of complaints and conflicts through an open, transparent and consultative process.
16	The company and its suppliers do maintain zero tolerance towards violence and the criminalization of land, environmental, and human rights defenders.
17	The company and its suppliers do not engage in forced labour or child labour.
18	The company and its suppliers do uphold the rights to freedom of association, collective bargaining and freedom from discrimination.
19	The company and its suppliers do pay at least a living wage.
20	The company and its suppliers do protect the safety and health of workers.
21	The company and its suppliers do have a gender-sensitive zero-tolerance policy towards all forms of gender-based discrimination and violence.
Governance Criteria	
22	The company has integrated sustainability objectives into its governance structure.
23	The company is transparent about the actions through which its forest-risk policies are implemented and enforced.
24	The company discloses its forest-related impacts, including its forest-related GHG emissions and its forest footprint.
25	The company commits to a transparent and effective State-based grievance mechanism.
26	The company and its suppliers do provide proof of legality of their operations and commodity supplies, in particular proof of compliance with all prevailing laws and regulations on land acquisition and land operation.
27	The company and its suppliers do ensure supply chain transparency and traceability.
28	The company and its suppliers do publish geo-referenced maps of all the concession areas and, farms under their management.
29	If the company is starting new operations or expanding its operations, it does publish a social and environmental impact assessment.
30	The company and its suppliers do not get engaged in corruption, bribery and financial crimes.
31	The company and its suppliers do comply with the letter and the spirit of the tax laws and regulations in the countries in which they operate and do not set up corporate structures solely for tax avoidance purposes.
32	The company and its suppliers do publish their group structure and country-by-country data.

For each criterion listed in Table 14 fully met by the company, the company is rewarded with 100 points. If the criterion is met with some minor exception, the company is awarded 85 points. If a company has achieved certification by a third-party validated sustainability standard, criteria included in the standard are then assumed to be present in the company's policy.

The points granted per category (Environmental, Social or Governance) are added up and normalized on a scale from 1 to 10. This normalization is also done for all points for the three categories together.

A more extensive version of the methodology used in this study to assess the policies and practices of rubber, pulp and paper, and timber companies, including guidance on when 85 or 100 points are granted for each criterion is provided in Annex 3.

D. Financial institution policy assessment methodology

In the next phase of this research, the deforestation-risk policies are assessed for a selection of banks that are most likely active in financing timber, pulp and paper, and rubber companies in the Lower Mekong Region and China. Most banks selected for this research phase were selected because they have financing relationships with the selected rubber, timber and pulp and paper, companies identified in Annex 2. Chapter 1 provides more information on these financing relationships.

In addition to those with established financing relationships with the rubber, timber and pulp and paper companies analysed in Annex 2, a number of banks from the Lower Mekong countries were added to the selection. To select these banks, the analysis focused on the largest banks in each country and on banks that focus specifically on the agriculture sector. The selection of 38 banks is presented in Table 8.The Environmental, Social and Governance (ESG) policies of the 38 selected banks were assessed with the *Forests & Finance* policy assessment methodology.[lxxxv] This methodology has been developed by the *Forests & Finance Coalition*, which includes Profundo, to assess the ESG policies of the banks and investors that are financing, or investing in, companies involved in deforestation-risk commodity sectors: beef, palm oil, pulp and paper, rubber, soy and timber. The methodology assesses the policies and practices of the banks against 35 environmental, social and governance factors, as summarized in Table 15.

Table 15 Policy assessment methodology for financial institutions

Environmental criteria	
1	Companies and their suppliers must commit to zero-deforestation and no-conversion of natural forests and ecosystems.
2	Companies and their suppliers must not drain or degrade wetlands and peatlands.
3	Companies and their suppliers must not convert or degrade High Carbon Stock (HCS) in tropical forest areas.
4	Companies and their suppliers must not operate in, or have negative impacts on, protected areas.
5	Companies and their suppliers must identify and protect High Conservation Value (HCV) areas under their management.
6	Companies and their suppliers must not use fire for land clearing activities and fight fires.
7	Companies and their suppliers must minimize their impacts on groundwater levels and water quality.
8	Companies and their suppliers must not harvest, nor trade in, endangered species and must protect the habitats of endangered species.
9	Companies and their suppliers must not use nor introduce genetically modified species or invasive alien species into the environment.
10	Companies and their suppliers must minimize or eliminate the use of pesticides.
Social criteria	
11	Companies and their suppliers must respect the right of Indigenous peoples to give or withhold Free, Prior and Informed Consent (FPIC) if they could be affected by planned operations.
12	Companies and their suppliers must respect the right of all communities with customary land rights to give or withhold Free, Prior and Informed Consent (FPIC) if they could be affected by planned operations.
13	Companies and their suppliers must establish human rights due diligence processes and monitoring systems.
14	Companies and their suppliers must respect the broader social, economic and cultural rights of communities affected by their operations, including the right to health and the right to an adequate standard of living.
15	Companies and their suppliers must commit to the resolution of complaints and conflicts through an open, transparent and consultative process.
16	Companies and their suppliers must maintain zero tolerance towards violence and the criminalization of land, environmental, and human rights defenders.
17	Companies and their suppliers must not engage in forced labour or in child labour.

18	Companies and their suppliers must uphold the rights to freedom of association, collective bargaining and freedom from discrimination.
19	Companies and their suppliers must pay at least a living wage.
20	Companies and their suppliers must protect the safety and health of workers.
21	Companies and their suppliers must have a gender-sensitive zero-tolerance policy towards all forms of gender-based discrimination and violence.
Governance criteria	
22	The financial institution has integrated sustainability objectives into its governance structure.
23	The financial institution is transparent about the actions through which its forest-risk policies are implemented and enforced.
24	The financial institution applies its forest-risk policies to the entire corporate group
25	The financial institution is transparent about its investments and financings in forest-risk commodity sectors.
26	The financial institution discloses its forest-related impacts, including its forest-related financed GHG emissions and its forest footprint.
27	The financial institution is transparent in its engagements with companies in forest-risk commodity sectors.
28	The financial institution commits to a transparent and effective grievance mechanism regarding its financing of, or investments in, companies in forest-risk commodity sectors.
29	Companies and their suppliers must provide proof of legality of their operations and commodity supplies, in particular proof of compliance with all prevailing laws and regulations on land acquisition and land operation.
30	Companies and their suppliers must ensure supply chain transparency and traceability.
31	Companies and their suppliers must publish geo-referenced maps of all the concession areas and farms under their management.
32	Companies starting new operations or expanding their operations must publish a social and environmental impact assessment.
33	Companies and their suppliers must not get engaged in corruption, bribery and financial crimes.
34	Companies and their suppliers must comply with the letter and the spirit of the tax laws and regulations in the countries in which they operate and must not set up corporate structures solely for tax avoidance purposes.
35	Companies and their suppliers must publish their group structure and country-by-country data.

For each of the criteria listed in Table 15 that is fully met by a bank, a bank is rewarded with 100 points. If the criterion is partially met, with some minor exceptions the bank is rewarded 85 points. If a bank has achieved certification by a third-party validated sustainability standard, criteria included in the standard are then assumed to be present in the company's policy.

The points granted per category, Environmental, Social or Governance, are added up and normalized on a scale from 1 to 10. This normalization is also done for all points for the three categories together.

Annex 4 provides a more extensive version of the methodology used in this study to assess the policies and practices of banks involved in deforestation-risk commodities, including guidance on when 85 or 100 points are granted for each criterion.

E. Financial sector regulatory environment

The final research phase of this study assessed the regulatory environment related to environmental, social and governance risk mitigation by the financial sectors in the Lower Mekong Region countries and China, related to the exposure of financial institutions to ESG-risks specifically from the timber, pulp and paper, and rubber sectors. This analysis was conducted using data from two sources: WWF SUSREG and literature research.

WWF developed the SUSREG framework for Sustainable Financial Regulations and Central Bank Activities as part of the WWF's Greening Financial Regulation Initiative (GFRI). Three of the countries in the region, China, Thailand, and Vietnam, are covered by SUSREG. These are three countries whose financial sectors are among the largest regional financiers of pulp and paper, timber and rubber exploitation in the region.

SUSREG is an assessment framework developed by WWF that aims to '*provide a practical roadmap for central banks, financial regulators and supervisors, as well as relevant policymakers, to enhance the financial sector's stability and resilience to climate-related and other environmental & social risks, while enabling the mobilization of capital for the transition to a low-carbon, resilient and sustainable economy*'[lxxxvi]. The framework assesses several policy areas, including banking supervision (insurance and asset management supervision are planned to be added at a later stage), central banks' activities, and the creation of an enabling environment for sustainable finance. Overall, countries are assessed based on 68 indicators.

The assessment may result in a positive, partial, or negative rating. In addition, the results '*clearly display the scope of the underlying measure(s) assessed: either only applicable to climate-related risks, to climate-related and broader environmental risks, or to the entire range of environmental & social risks*'[lxxxvii].

This analysis summarizes the SUSREG assessments for China, Thailand, and Vietnam to provide a description of the financial sector policy environment, and to determine the extent to which deforestation can be mitigated through the financial sector within the described financial sector policy environment.

The SUSREG assessment has been based primarily on publicly available sources, which include, among others, institutional websites of central banks, banking regulators and supervisors, official announcements, speeches, and publications such as annual reports and financial stability reports, public databases on regulations, reports from the Network for Greening the Financial System (NGFS) or websites of other relevant regulators and organizations.

As part of the SUSREG assessment, WWF shares preliminary results with the relevant institutions, such as regulators, supervisors, and central banks, to fill in data gaps and to ensure that the collected data was correct and up-to-date.

The assessment results are then generalised at a country level and published on the SUSREG Tracker platform.

Criteria overview*

Banking supervision

This section covers the various tools and measures that banking supervisors can use to ensure both the safety and soundness of individual banks and the financial system stability, with regards to environmental & social risks. It also includes measures that supervisors themselves can take to show leadership and better understand these risks and their implications for the financial sector. Including:

- Micro-prudential supervision (supervisory expectations)
- Micro-prudential supervision (rule-based)
- Disclosure & transparency
- Macro-prudential supervision
- Leadership & internal organization

Central banking

This section covers the various measures that central banks can take to address environmental & social risks, in keeping with their key mandates of ensuring money supply and price stability. It also includes measures that central banks themselves can take to show leadership and better understand these risks and their implications. Including:

- Monetary policy (conventional and unconventional)
- Own portfolio management
- Leadership & internal organization

Enabling environment

This section covers several measures that would be key for the financial sector to fully support the transition to a low-carbon, resilient and sustainable economy. Some of these measures may be outside the remit of central banks or financial supervisors. Including:

- Multi-stakeholder initiatives
- Taxonomies for (un)sustainable activities
- Standards for financial products, incentives, carbon pricing, etc.

* Based on summarised SUSREG criteria framework

For the three Lower-Mekong countries that were not covered by the SUSREG assessment, Cambodia, Lao PDR and Myanmar, the regulatory policy environments were assessed using the same categories as the SUSREG assessment: Banking supervision; Central banking, and; Enabling environment. Since the financial sectors of these three countries are not as developed as other peers in the LMR, and more in-depth research was beyond the scope of this current research, this research only provides brief summaries based on literature review and open-access sources related to the financial sector regulatory environment in Cambodia, Lao PDR and Myanmar.

Annex 2 Identifying the leading companies in timber, pulp, and rubber in the Lower Mekong Region

This chapter identifies the leading companies in the main forest risk industries of timber, pulp and paper companies across the Lower Mekong Region and China. This research has been based on an analysis of official concession registries, market studies and, NGO and media reports.

A. Cambodia

A1. Pulp and paper, and timber companies

According to the EU FLEGT publications, most timber in Cambodia is derived from land clearing activities in Economic Land Concessions (ELCs) regulated by the Ministry of Agriculture, Forestry and Fisheries (MAFF) and Ministry of Environment (MoE), as well as Community Forests' licenses. [lxxxviii] Although Cambodia's Forestry Administration has reportedly instituted a recording system for wood processing at the country's mills, the system is unregulated with inconsistencies in the availability of data and records, with data only recorded at the local Forestry Administration office. As a result, the report found that "*The majority of timber (90%) originates from land clearing activities in ELCs […] no material was recorded from Community Forests*".[lxxxix]

Various reports state that the vast majority of timber not used domestically is exported to Vietnam before reaching other international markets. The unrecorded exports of timber through the eastern boarders of districts such as, among others, O'Yadav and Memot, Ratanakiri and Kratie provinces, are also confirmed by a local NGO person interviewed by the author in preparation of this study.

Table 16 Key pulp and paper, and timber companies in Cambodia

Company name	Corporate group	Country of origin	Area (ha)	Comments	Source
Phea Phimex	Owned by CPP Senator Lao Meng Khin & his wife, Choeung Sophea	KH	ELC: 315,028 ha	Kampong Chhnang (176,065 ha in 3 districts) and Pursat Provinces. Purpose: Trees Plantation and Papers Factory; Status of Development unknown, 2017 study reports 30,000 ha cassava plantation.	xc
Green Sea Agriculture	Unclear (reportedly linked to Chinese investors)	n/a	ELC: 100,852 ha (Likely reduced)	Stung Treng Province; Purpose: Trincomali plantation; LICADHO: est. 21,590 ha; May 2022 media reports at least partly developed mango plantations.	xci
Think Biotech	Angkor Plywood	TW	34,007 ha	Concession	xcii
Siemon (Cambodia) Agriculture Comprehensive Development	Unknown (likely linked to Chinese investors)	n/a	26,990 ha	Concession; Stung Treng Province; Media reports that location aimed at restoring forestland previously owned by Green Sea Agriculture.	xciii
Wuzhishan L.S Group	Unclear ((linked to Chinese investor Liu Wei, reportedly connected to Phea Phimex)	n/a	ELC: 10,000 ha	Moudulkiri Province Reportedly: 10,000ha represent initial part of 199,999 ha pine-tree concession (NGO Forum).	xciv
Sopheak Nika Investment Agro-industry Plants	Unknown	n/a	ELC: 10,000 ha	Reportedly downsized; Purpose: Acacia, Trincomali, other crops.	xcv
Siv Guek Investment	Huayue Group	CN	ELC: 10,000 ha	Reportedly downsized; Purpose: Acacia, Trincomali, other crops	xcvi
Phou Mady Investment Group	Unknown (likely linked to Chinese investors)	n/a	ELC: 10,000 ha	Stung Treng Province; Purpose: Acacia, Trincomali, other crops; OHCHR (2007): Chinese national, An Yang Yin Chang, controls Phou Mady as well as Grand Land Agricultural Development (Cambodia, 9,854 ha for agro-industrial crops), and GG World Group (Cambodia, 5,000 ha for agro-industrial crops).	xcvii
Grandis Timber	Nath Land Development	KH	ELC: 9,820 ha (resized to 7,900ha)	Kampong Speu Province; Purpose: Maysak plantation, but website states eucalyptus, mahogany, and teak.	xcviii
Global Agricultural Development (Cambodia)	Unknown (Linked to US or Chinese investor?)[a]	n/a	ELC: 9,800 ha	Kratie Province; Purpose: Teak tree plantation and processing factory	xcix
Global Forest Partners		US	Concession: 9,000 ha	Since 2013; Global investments in timberland.	c

a. MAFF contract signed by U.S. national; however, urgent appeal by Asian Human Rights Commission mentions Chinese investment company that caused conflicts with local communities in 2007.

A2. Rubber plantation companies

No official reporting on rubber concessions issued by relevant ministries in Cambodia could be identified. Therefore, the company selection has to mainly rely on secondary data. Open Development Cambodia[5] lists a total of 148 ELCs for rubber production,[ci] which increases to 157 ELCs when the maps of the local NGO, LICADHO[6] are included.[cii]

For most of the largest rubber concessionaires listed on Open Development Cambodia, the research could not find reliable cross-checking information confirming that these ELCs have indeed been developed into actual rubber production businesses. For example, Global Initiative reports that PNT and Thy Nga Development and Investment, which both Open Development Cambodia and LICADHO show as holding 7,900 ha and 6,060 ha of rubber ELCs, respectively, "*[…] were seemingly only interested in the lucrative timber harvest from the concession and were not intent on developing other commercial crops*".[ciii] Similarly, the Malaysian investor Mega First Corp. reported in 2013 that it obtained 9,477 ha in Cambodia, "*[…] primarily for the development and cultivation of rubber".*[civ] However, more recent information indicates that it turned the ELC into a coconut and macadamia nut plantation.[cv] These, and other examples, illustrate that several land concessions that the Cambodian authorities provided to companies for the purpose of developing rubber plantations, were not used for the intended purpose. Table 17 lists a selection of companies for which additional sources point to rubber production, however, insecurities remain in relation to the planting of additional crops and concession sizes.

Table 17 Key rubber plantation companies in Cambodia

Company name	Corporate group	Country of origin	Area (ha)	Comments	Source
An Mady Group	An Mady Group	KH	ELC: 9,993 ha	Preah Vihear and Kampong Thom Provinces; Purpose: Rubber and other crops; Possibly an additional 9,913 ha in Preah Vihear Province through Sovannaphum Viniyok Kase-Usahakam's ELC.	cvi
Pacific Pride; Pacific Pearl; Pacific Lotus	Gemadept Corporation	VN	ELCs: 9,773 ha 9,614 ha 9,014 ha	All in Mondulkiri Province Purpose: Rubber plantations.	cvii
Hoang Anh Andong Meas; Hoang Anh Lumpath; Hoang Anh Oyadav; CRD; Heng Brothers; Hoang Anh Rattanakiri	Hoang Anh Gia Lai (HAGL)	VN	ELCs: 9,775ha 9,173ha 9,000ha (likely reduced to 5,305 ha) 7,591 ha 2,361 ha unknown	All in Ratanakiri Province; Purpose: Rubber and other crops; The company reports also fruit trees, oil palm; 2019 media article: 21,789 ha rubber in KH.	cviii
Dong Phu Kratie Aphivath Caoutchouc; KaoSu Eah Leo BM; Ta Bien Kampong	Vietnam Rubber Group (VRG)	VN	ELCs: 9,194 ha 8,400 ha 8,100 ha 7,289 ha 7,541 ha	Kratie, Ratanakiri, Kampong Thom Provinces; Purpose: Rubber plantations; In 2016, VRG reported 90,500 ha in Cambodia	cix

[5] Open Development Cambodia (ODC) is an 'open data' website, the first of its kind in Southeast Asia. The **open data** movement is based on the simple premise that data collected for public interest should be publicly available without restrictions. Information or data in the public domain should be freely available to everyone to use and republish as they wish

[6] LICADHO is a national Cambodian human rights organization. Since its establishment in 1992

Company name	Corporate group	Country of origin	Area (ha)	Comments	Source
Thom Rubber; CRCK Aphivath Caoutchouc; Mekong Rubber; Dong Nai - Kratie Rubber; Mang Yang - Rattana Kiri Rubber; Krong Buk Rubber; Vietnam Co. Cambodia Economy Trade and Industry; Chu Se Rubber			7,090 ha 6,891 ha 6,695 ha 5,059 ha 1,946 ha		
Coviphama; Varanasi; Sethikula	Sofcin Group (58%)	LU	3 ELCs: 7,127ha in total (likely reduced from the original area)	Moudulkiri Province;	cx

B. China

B1. Pulp and paper, and timber companies

In China, plantations are the main source of timber, from either collectively, individually, or corporately owned commercial plantations, and state-managed plantations. Due to the Natural Forest logging ban, natural forests are not an important source of wood.[cxi] The industrial tree plantation sector has increased rapidly during the last two decades, with Guangxi province being particularly important. Large foreign investors are APP and Stora Enso, both investing in eucalyptus plantations for pulp and paper, as shown in Table 18.

Table 18 Key pulp and paper, and timber companies in China

Company name	Corporate group	Country of origin	Area (ha)	Comments	Source
APP China	Sinar Mas	ID	271,100 ha	Since 1995; Plantations in Guangdong, Guangxi, Hainan, Yunnan	cxii
Guangxi Forestry Group	Guangxi Forestry Group [a]	CN	100,000 ha	Guangxi	cxiii
Guangxi Stora Enso Forestry	Stora Enso (89.5%)	FI	77,000 ha (Productive: 68,000 ha)	Since 2002; 53,600 ha leased from state-owned forest farms; 23,400 ha social land leased from village collectives, individual households, local forest farms.	cxiv

Note: [a] State-backed, founded by Guangxi Forestry Department.

B2. Rubber plantation companies

Rubber plantations have mainly expanded in Southern China. Guangxi and Yunnan are key rubber-growing regions, with Xishuangbanna prefecture in the south of Yunnan accounting for a large share of rubber produced in the province.[cxv] Important rubber plantation companies are listed in Table 19.

Table 19 Key rubber plantation companies in China

Company name	Corporate group	Country of origin	Area (ha)	Comments	Source
China Hainan Rubber Industry Group	Hainan State Farms Group	CN	235,333 ha	17 cities and counties in Hainan Province, China	cxvi
Guangdong Guangken Rubber Group	Guangdong State Farms	CN	43,333 ha	In 2017, 32 rubber farms;	cxvii
Yunnan Natural Rubber Industry Xishuangbanna Jingyang Co.	Yunnan State Farms Group	CN	~10,000 ha	33,000 ha in Yunnan Province, Lao PDR and Myanmar – distribution unclear	cxviii
Xishuangbanna New Gaoshen Rubber	Gaoshen Group	CN	n/a		cxix

C. Lao PDR

C1. Pulp and paper, and timber companies

Current legislation in Lao PDR does not allow for the allocation of commercial timber harvesting concessions in natural forests. This is only allowed under annual national logging quotas for selective logging in production forest areas, or for land clearance for development projects.

More than half of the land area of the country is zoned as forestland. This is divided into National Production Forest Areas (PFAs, around 3.1 million ha), primarily for the production of wood, fibre and non-timber forest products, Protection Forest Areas (PtFAs, around 7.8 million ha), including both forest and agricultural land, and Conservation Forestland Areas (CFAs, around 4.5 million ha), including protected areas. In addition, there are around 3.3 million ha of forests outside of the three categories.[cxx]

In 2019, the government opened 600,000 ha of degraded state forest land within the PFAs for private tree plantations. Therefore, more companies may invest in the future.[cxxi] However, an uncertain policy landscape has delayed investment timeframes and increased transaction costs in the past, impeding plantation development. In recent years, several companies withdrew from the country. For example, Indian company Aditya Birla with its subsidiary Birla Lao Pulp & Plantations was granted a concession for 50,000 ha in Savannakhet Province but sold its investment in 2018 with reportedly only around 12,500 ha established. Similarly, Finish pulp and paper giant Stora Enso decided to downsize from its aim of 35,000 ha and eventually sold its operation in early 2021 to SilviCarbon. Swedish-owned Burapha Agroforestry changed its strategy and adapted to a more participatory model. Meanwhile, others took advantage and expanded, such as China's Sun Paper, which took over Birla Lao's plantations.[cxxii] There seem to be currently only four companies active in tree plantations and wood processing in the country (see Table 20).

Table 20 Key pulp and paper, and timber companies in Lao PDR

Company name	Corporate group	Country of origin	Area (ha)	Comments	Source
Mekong Timber Plantations	New Forests / Government of Lao PDR	AU/LA	24,000 ha	Mainly Bolikhamxay and Khammouane Provinces; According to World Bank PFA 29,110 ha.	cxxiii
Burapha Agro-Forestry Co.	SilviCapital (95%) / individual (5%)	SE/LA	8,400 ha (4,000 ha planted)	Eucalyptus & acacia; Received US$ 5 mln from FMO in 2018 to expand operations to 7,000 ha; According to World Bank PFA 4,500 ha.	cxxiv
Sun Paper Holding Lao PDR	Sun Paper Group	CN	7,324 ha	Mainly in Attapue, Champasack, Salavanh, Savannakhet, Khammuan and Bolikhamxay Provinces; Eucalyptus pulp wood forest; Initial plan: 30,000 ha concession and 70,000 ha contract farming, but contract was later limited; According to World Bank PFA 29,000 ha (via sub-contractor Khamseng Agro Forestry Development Co.); Planted area unclear.	cxxv
SilviCarbon Agroforestry Sole (SCALA)	SilviCarbon [a]	NL / US	3,800 ha	Planted area unknown (2017: ~3,000 ha); Acquired from Stora Enso (2021); According to World Bank PFA 3,000 ha.	cxxvi

a Silvicarbon (Netherlands) acquired SilviCarbon Agroforestry (Sweden) in 2021. SilviCarbon is 51% owned by Varo Energy, which in turn is for 66% owned by Carlyle International Energy Partners and 33% by Vitol.

C2. Rubber plantation companies

Lao PDR has seen a rapid expansion of rubber plantations in the last few years. The planted area increased from around 29,000 hectares in 2007 to 258,000 hectares in 2018.[cxxvii] Foreign companies play an important role in rubber plantation development in Lao PDR (see Table 21).

Table 21 Key rubber plantation companies in Lao PDR

Company name	Corporate group	Country of origin	Area (ha)	Comments	Source
Quasa-Geruco; Viet Lao Rubber; Dau Tieng; VRG - Oudomxay	Vietnam Rubber Group	VN	28,016 ha	Savannakhetm Binh Duong, Oudomxay Provinces	cxxviii
China-Lao Ruifeng Rubber Company	Kunming Ruipu Biotechnology / Lao PDR military	CN	10,000 ha	Muang Long Province; Signed in 2009.	cxxix
Guangdong Guangken Rubber Group	Guangdong State Farms	CN	~10,000 ha	Total of 20,000 ha across Lao PDR, Cambodia. [a]	cxxx
Hoang Anh Attapeu; Hoang Anh – Quang Minh Rubber Industrial and Agricultural	Hoang Anh Gia Lai (HAGL)	VN	20,000 ha (5,530 ha planted); ~2,500 ha	Attapeu, Xekong Province; Rubber and palm oil; 2019 media article: 20,361 ha rubber in Lao PDR.	cxxxi

a Controlled via Thai Hua Rubber, which was acquired by Guangdong Agribusiness Group Corporation.

D. Myanmar

D1.1 Pulp and paper, and timber companies

All land in Myanmar is owned by the state. Forest management in natural Reserved Forests (RF) in Myanmar is exclusively conducted by the Forest Department. Other designations of forest use are Public Protected Forests (PPF) and Protected Areas System. Myanmar Timber Enterprise (MTE), a state-owned enterprise, oversees the harvesting and extraction of timber. Various countries, including the EU, the UK and the U.S. have imposed sanctions on MTE. Myanmar has the largest area of natural teak forests, representing nearly 50% of the global are, and is the top producer of teak logs globally. Next to teak from natural forests, Myanmar has the third-largest planted teak area in the world an estimated 395,000 hectares.[cxxxii]

Table 22 Key pulp and paper, and timber companies in Myanmar

Company name	Corporate group	Country of origin	Area (ha)	Comments	Source
Nature Timber Trading (NTT)	Jewellery Luck Group	MY	16,187 ha	Plantations: Ye' Yaman, Dakaung, Mawlite	cxxxiii
Habras-MZZ Plantation Myanmar Co,	JK Paper (50%) / Myo Zin Zar International (20%) / Min Nwe Trading Co. (50%) / Mu Mu International Trading (5%)	IN/MY/SG	5,059 ha	Eucalyptus, Acacia plantations for pulpwood	cxxxiv
Global Agriculture Joint Venture Co.	Excellent Fortune Development (10%) / Cruilight (90%)	MY/VG	4,047 ha	Bago, Yangon regions; Teak plantations.	cxxxv
Timberland Plantations Investment Co. (TPI)	JV – Global Greenery (65%) & Nay Wun Myat & ITS	SG/MY/MY	2,040 ha	Ayerwady Region; Acacia, Yemane plantation.	cxxxvi
Phyo Sithu Private Plantation & Trading Co.	-	MY	1,020 ha	Taung Na Win Forest reserve; >1 million teak trees planted.	cxxxvii

D2. Rubber plantation companies

Larger rubber plantations in Myanmar are often linked to the Myanmar military, which awarded concessions for rubber and palm oil development in the late 1990s / early 2000s. Some of these large operations have since been abandoned or, are of unknown status. Overall, most rubber plantations in Myanmar are small-scale operations, with around 90% of production in the important region close to the Thai border, taking place on plantations with less than 8 hectares.[cxxxviii]

Table 23 Key rubber plantation companies in Myanmar

Company name	Corporate group	Country of origin	Area (ha)	Comments	Source
Shwe Yaung Pya Agro	Max Myanmar Group	MY	Total: 2,023 ha, Planted: 1,335	Belin division; the remainder of area for community use	cxxxix
Pho La Min	Pho La Min Group	MY	Total: 1,302 ha Planted: 692 ha	5 rubber plantations	cxl
Royal Golden Pearl	Myanmar national	MY	405 ha	Bago Region	cxli
Eastern Plantations	Eastern Company	MY	263 ha	Thnintharyi Division	cxlii
Dagon Rubber Plantation	Dagon Group of Companies	MY	202 ha	Bago Division	cxliii

E. Thailand

E1. Pulp and paper, and timber companies

Since 1989, logging in natural forests has been prohibited in Thailand, but illegal logging, forest fires, and encroachment continue to threaten the country's forests.[cxliv] Most of the wood used in Thailand now comes from plantations, which consist of either timber species (such as teak and eucalyptus) or wood from agricultural by-products, such as mango and durian trees, with rubberwood being the most significant source.[cxlv]

The primary players in the production of wood are large private companies. Major pulp and paper companies mainly source from contract farmers,[cxlvi] while the state-owned Forest Industry Organization (FIO) manages 1.11 million rai (or around 177,280 hectares) of plantations.[cxlvii] A few of the larger timber plantation companies are listed in Table 24, but there is no official database on large private forestry companies available.

Table 24 Key pulp and paper, and timber companies in Thailand

Company name	Corporate group	Country of origin	Area (ha)	Comments	Source
Siam Forestry	Siam Cement Group	TH	Plantation promotion: 24,000 ha; Secure plantation: 12,000 ha	Eucalyptus for pulp and paper	cxlviii
Agro Lines	Kaset Rungrueng Perchpol Group	TH	Size unknown	Eucalyptus plantation	cxlix
Asia Teak Thailand	Anglo Asia Forestry	UK	Size unknown	3 teak plantations	cl

E2. Rubber plantation companies

In Thailand, rubber is cultivated on around 3.3 million hectares, making the country the largest rubber producer in the world.[cli] Of this total, around 1.7 million smallholders account for the largest share with cultivation on around 3 million hectares.[clii] While there are several large rubber processors active in the country, little information on larger rubber plantation operators could be identified from public sources (Table 25).

Table 25 Key rubber plantation companies in Thailand

Company name	Corporate group	Country of origin	Area (ha)	Comments	Source
Sri Trang Agro-Industry	Sri Trang Group	TH	7,200 ha	Plantations in 19 provinces; 11,000 ha mature	cliii
Lastica	TCC Group	TH	7,200 ha	Rayong Province	cliv
Tong Thai Rubber Group	Tong Thai Rubber Group	TH	1,600 ha	Nakorn Srithammarat, Chumporn, Rayong and Chantaburi provinces	clv

F. Vietnam

F1. Pulp and paper, and timber companies

At the end of 2019, Vietnam's Forestry Administration estimated that the country's total forested land was over 14.6 million hectares, of which about 10.3 million hectares were natural forests, and the remaining 4.3 million hectares consisted of planted forests.[clvi] Timber from Vietnam mostly originates from the planted forest because of logging bans.

By the end of 2019, the country's total forest area was divided between 58.7% is publicly owned and managed by various authorities, such as protection forest management boards, Communal People's Committees, Special Use Management boards etc. and the remaining 41.3% is privately owned. Of the privately owned land, 50% was held by households and individuals, 8.3% by residential communities and just over 12% by 'economic organizations.[clvii]

The research could not identify public records or any relevant studies that show the names of companies holding forest concessions for timber production in Vietnam. Three companies that report the extent of their forest concessions however were identified and are shown in Table 26.[clviii]

Table 26 Key pulp and paper, and timber companies in Vietnam

Company name	Corporate group	Country of origin	Area (ha)	Comments	Source
D&G Viet Nam Co., Ltd (Công Ty Tnhh D&G Việt Nam)	D&G Viet Nam	VN	103,574 ha (planted: 50,000 ha)	Spread over 8 provinces; Harvests about 100,000 tons of timber a year	clix
Viet Nam Forestry Corporation (VINAFOR)	State of Vietnam (51%) / T&T Group (40%)	VN	80,222 ha	51 member units; also involved in wood processing, investments, trading	clx
Truong Thanh Furniture Corporation	Unknown	VN	50,000 ha	Company: out of 50,000 ha, 14,000 ha ready to be exploited. 13 wood factories in 2 provinces	clxi

F2. Rubber plantation companies

Vietnam's Office of General Statistics reported that in 2020 the country had a total of 932,400 ha covered with rubber plantations, a slightly lower value compared to previous years. The majority of rubber plantations are managed via smallholding tenures, which accounted for 51.0% of the area planted with rubber trees with 479,564 hectares in 2019, followed by 40.3% controlled by rubber state-owned enterprises with 371,284 hectares, and finally, the private sector which made up 9.7%, with an area of 90,411ha.[clxii] Smallholdings, therefore, represent more than half of Vietnam's total surface covered in rubber plantations, with the remaining state-owned and private estates covering a relatively smaller area. The remaining large-scale rubber plantations are highly concentrated. Table 27 combines business entities that Vietnam Rubber Group (VRG) states are also involved in rubber plantations with data from other sources, including shipment records of rubber exports.

Table 27 Key rubber plantation companies in Vietnam

Company name	Corporate group	Country of origin	Area (ha)	Comments	Source
29 fully owned subsidiaries; 77 majority-owned companies; 6 entities as minority shareholders; 5 admin. units	Vietnam Rubber Group (97% State-owned)	VN	288,101 ha	Across Vietnam in 2020; Equals ~30% of Vietnam's total rubber surface; VRG controls ~78% of rubber state-owned land; Rubber plantations also in Cambodia, Lao PDR.	clxiii
Dak Lak Rubber (DAKRUCO)	Dak Lak Rubber (DAKRUCO)	VN	~13,000 ha		clxiv
Dong Phu Rubber		n/a	5,939 ha	The website mentions also 10,000 ha in Cambodia, Kratie province (Cong Ty Co Phan Cao Su Dong Phu – Kratie / Dong Phu Kratie))	clxv
Hoang Anh Gia Lai (HAGL)	HAGL Group	VN	4,853 ha	Increasing investment in fruit plantations, away from rubber; 2019 media report: 4,972 ha of rubber in VN.	clxvi

G. Companies selected for further research

Table 28 provides an overview of the pulp and paper, timber, and rubber companies for which the financings and investments are researched in chapter 1. Some of these companies are active in more than one country. For each company, the corporate group(s) owning the company are indicated, including the countries of origin of these corporate groups.

Table 28 Pulp and paper, timber and rubber companies selected for financing research

Angkor Plywood	Taiwan	Think Biotech	Cambodia	Timber
An Mady Group	Cambodia	An Mady Group	Cambodia	Rubber
Angkor Plywood	Taiwan	Think Biotech	Cambodia	Timber
Anglo Asia Forestry	United Kingdom	Asia Teak Thailand	Cambodia	Timber
APP / Sinar Mas	Indonesia / China	APP China	China	Pulp and paper
BAFCO Investa	Sweden	Burapha Agro-Forestry Co.	Lao PDR	Timber
Cruilight	British Virgin Islands	Global Agriculture Joint Venture Co	Myanmar	Timber

Angkor Plywood	**Taiwan**	**Think Biotech**	**Cambodia**	**Timber**
Dak Lak Rubber (DAKRUCO)	Vietnam	Dak Lak Rubber (DAKRUCO)	Vietnam	Rubber
Do Chu Dat	Vietnam	D&G Viet Nam Co., Ltd	Vietnam	Timber
Gemadept Corporation	Vietnam	Pacific Pride Gemadept Corporation	Cambodia Cambodia, Vietnam	Rubber Rubber
Grandis Timber	Cambodia	Grandis Timber	Cambodia	Timber
Guangdong Guangken Rubber Group	China	Guangdong Agribusiness Group Corporation Guangdong State Farms Guangdong Guangken Rubber Group	China China China, Lao PDR	Rubber Rubber Rubber
Guangxi Forestry Group	China	Guangxi Forestry Group	China, Lao PDR	Pulp and paper, Timber
Hainan State Farms Group	China	China Hainan Rubber Industry Group Hainan State Farms Group	China China	Rubber Rubber
Hoang Anh Gia Lai (HAGL)	Vietnam	Hoang Anh Gia Lai (HAGL)	Cambodia, Lao PDR, Vietnam	
Huayue Group	China	Siv Guek Investment	Cambodia	Pulp and paper, Timber
Huayue Group	China	Huayue Group	China	Pulp and paper, Timber
JK Paper	India	Habras-MZZ Plantation Myanmar Co JK Paper JK Paper Mills	Myanmar India India	Pulp and paper Pulp and paper Pulp and paper
JL Myanmar Group	Myanmar	Nature Timber Trading (NTT) JL Myanmar Group	Myanmar Myanmar	Timber Timber
Kunming Ruipu Biotechnology	China	China-Lao Ruifeng Rubber Company	Lao PDR	Rubber
Max Myanmar Group	Myanmar	Shwe Yaung Pya Agro Max Myanmar Group	Myanmar Myanmar	Rubber Rubber
Min Nwe Trading Co.	Myanmar	Habras-MZZ Plantation Myanmar Co	Myanmar	Pulp and paper
New Forests Tropical Asia Forest Fund	Australia	Mekong Timber Plantations New Forests Tropical Asia Forest Fund	Lao PDR Australia, Lao PDR	Timber Timber
Phea Phimex	Cambodia	Phea Phimex	Cambodia	Pulp and paper, Timber
Pho La Min	Myanmar	Pho La Min	Myanmar	Rubber
SCG Packaging	Thailand	Siam Forestry SCG Packaging Siam Cement	Thailand Thailand Thailand	Pulp and paper Pulp and paper Pulp and paper

Angkor Plywood	Taiwan	Think Biotech	Cambodia	Timber
Sri Trang Agro-Industry	Thailand	Sri Trang Agro-Industry	Thailand	Rubber
		Sri Trang Holdings Co Ltd	Thailand	Rubber
Stora Enso	Finland	Guangxi Stora Enso Forestry	China	Pulp and paper
Stora Enso	Finland	Stora Enso	China, Finland	Pulp and paper
Sun Paper Group	China	Sun Paper Holding Lao PDR	Lao PDR	Pulp and paper

Table 29 provides an overview of the selected major pulp and paper, timber, and rubber companies active in six countries in the Lower Mekong Region and China selected for in-depth policy analysis (see chapter 2). A total of 13 rubber companies were selected as well as 16 pulp and paper, and timber companies. Some of these companies include are active in more than one country. For each company, the corporate group(s) owning the company are indicated, including the countries of origin of these corporate groups.

Table 29 Rubber and timber companies selected for policy research

Company	Active in	Commodity	Corporate group	Country of origin	Ownership share
An Mady Group	Cambodia	Rubber	An Mady Group	Cambodia	majority
APP China	China	Timber	Sinar Mas	Indonesia	majority
Asia Teak Thailand	Thailand	Timber	Anglo Asia Forestry	United Kingdom	majority
Burapha Agro-Forestry Co.	Lao PDR	Timber	SilviCapital	Sweden	95%
China Hainan Rubber Industry Group	China	Rubber	Hainan State Farms Group	China	majority
China-Lao Ruifeng Rubber Company	Lao PDR	Rubber	Kunming Ruipu Biotechnology	China	majority
D&G Viet Nam Co.	Vietnam	Timber	D&G Viet Nam	Vietnam	majority
Dak Lak Rubber (DAKRUCO)	Vietnam	Rubber	Dak Lak Rubber (DAKRUCO)	Vietnam	majority
Global Agriculture Joint Venture Co.	Myanmar	Timber	Excellent Fortune Development Group	Myanmar	10%
			Cruilight	British Virgin Islands	90%
Grandis Timber	Cambodia	Timber	Nath Land Development	Cambodia	100%
Guangdong Guangken Rubber Group	China, Lao PDR	Rubber	Guangdong State Farms	China	majority
Guangxi Forestry Group	China	Timber	Guangxi Forestry Group	China	majority
Guangxi Stora Enso Forestry	China	Timber	Stora Enso	Finland	89.5%
Habras-MZZ Plantation Myanmar	Myanmar	Timber	JK Paper	India	50%
			Myo Zin Zar International	Myanmar	20%
			Min Nwe Trading	Myanmar	25%
			Mu International Trading	Singapore	5%
Hoang Anh Gia Lai - various subsidiaries	Cambodia, Vietnam	Rubber	HAGL Group	Vietnam	majority
Lastica	Thailand	Rubber	TCC Group	Thailand	majority
Mekong Timber Plantations	Lao PDR	Timber	New Forests	Australia	majority

Company	Active in	Commodity	Corporate group	Country of origin	Ownership share
Nature Timber Trading (NTT)	Myanmar	Timber	Jewellery Luck Group	Myanmar	majority
Pacific Pride and other subsidiaries	Cambodia	Rubber	Gemadept Corporation	Vietnam	majority
Pho La Min Rubber	Myanmar	Rubber	Pho La Min Group	Myanmar	majority
Shwe Yaung Pya Agro	Myanmar	Rubber	Max Myanmar Group	Myanmar	majority
Siam Forestry	Thailand	Timber	Siam Cement Group	Thailand	majority
Siv Guek Investment	Cambodia	Timber	Huayue Group	China	majority
Sri Trang Agro-Industry	Thailand	Rubber	Sri Trang Group	Thailand	majority
Sun Paper Holding Lao PDR	Lao PDR	Timber	Sun Paper Group	China	majority
Think Biotech (Cambodia)	Cambodia	Timber	Angkor Plywood	Taiwan	majority
Tong Thai Rubber	Thailand	Rubber	Tong Thai Rubber Group	Thailand	majority
Viet Nam Forestry Corporation (VINAFOR)	Vietnam	Timber	T&T Group	Vietnam	40%
Vietnam Rubber Group - various subsidiaries	Cambodia, Lao PDR, Vietnam	Rubber	Vietnam Rubber Group (VRG)	Vietnam	majority

Annex 3 Policy assessment methodology for rubber and timber companies including scoring guidance.

Criteria		Points	Scoring guidance
Environmental criteria			
1	The company and its suppliers commit to zero-deforestation and no-conversion of natural forests and ecosystems.	0	The company has no policy on the protection of natural ecosystems.
		85	The company has a policy not to contribute to the conversion or degradation of natural ecosystems, but the policy makes exceptions (for instance for minor forms of degradation or direct and indirect suppliers) or has set an incredible cut-off date.
		100	The company commits for its own operations and for its direct and indirect suppliers not to contribute to the conversion or degradation of natural ecosystems (after a credible cut-off date or no cut-off date at all) or promises adherence to international standards which include this requirement.
2	The company and its suppliers do not drain or degrade wetlands and peatlands.	0	The company has no policy on the protection of wetlands and peatlands.
		85	The company has a policy on the protection of wetlands, but the policy makes exceptions (for instance for minor forms of degradation or direct and indirect suppliers), has set an incredible cut-off date, or does not mention peatlands explicitly.
		100	The company has a policy that explicitly protects all wetlands and peatlands at any depth (after a credible cut-off date or no cut-off date at all) or promises adherence to international standards which include this requirement.
3	The company and its suppliers do not convert or degrade High Carbon Stock (HCS) tropical forest areas.	0	The company has no policy on the protection of High Carbon Stock (HCS) tropical forest areas.
		85	The company has a policy on the protection of High Carbon Stock (HCS) tropical forest areas, but the policy makes exceptions (for instance for minor forms of degradation or for direct and indirect suppliers) or has set an incredible cut-off date.
		100	The company has a policy that explicitly promises the application of the High Carbon Stock Approach to protect all High Carbon Stock (HCS) tropical forest areas (after a credible cut-off date or no cut-off date at all) in countries with a national HCS interpretation.
4	The company and its suppliers do not operate in, or have negative impacts on, protected areas.	0	The company has no policy on the protection of protected areas.
		85	The company has a policy on the protection of protected areas, but the policy makes exceptions (for instance for minor impacts or for direct and indirect suppliers) or has set an incredible cut-off date.
		100	The company has a policy that explicitly promises the protection of all protected areas (after a credible cut-off date or no cut-off date at all) or promises adherence to international standards which include this requirement.
5	The company and its suppliers do identify and protect High Conservation Value (HCV) areas under their management.	0	The company has no policy on the identification and protection of High Conservation Value (HCV) areas.
		85	The company has a policy on the identification and protection of High Conservation Value (HCV) areas, but the policy makes exceptions (for instance for minor impacts or for direct and indirect suppliers).
		100	The company has a policy that makes explicit that High Conservation Value (HCV) areas need to be identified and protected or promises adherence to international standards which include this requirement.
6	The company and its suppliers do not use fire for land clearing activities and fight fires.	0	The company has no policy on the use of fire for land clearing.
		85	The company has a policy on the use of fire for land clearing, but the policy makes exceptions (for instance for small fires or for direct and indirect suppliers).
		100	The company has a policy that categorically prohibits the use of fire for land clearing use and the obligation to fight fires or promises adherence to international standards which include this prohibition. Exceptions for traditional fire practices used by indigenous peoples and local communities are acceptable.
7		0	The company has no policy on water scarcity and quality.

Criteria		Points	Scoring guidance
	The company and its suppliers do minimize their impacts on groundwater levels and water quality.	85	The company has a policy on water scarcity and quality, but the policy is not very specific on what is expected of companies and/or does not apply to direct and indirect suppliers.
		100	The company commits to its operations and for its direct and indirect suppliers to take concrete steps to minimize their impacts on groundwater levels and water quality or promises adherence to international standards which include this requirement.
8	The company and its suppliers do not harvest, nor trade in, endangered species and does protect the habitats of endangered species.	0	The company has no policy on the protection of endangered species.
		85	The company has a policy on the protection of endangered species, but the policy only covers trade and not habitat protection or makes exceptions (for instance for minor impacts or direct and indirect suppliers).
		100	The company has a policy that makes explicit that endangered species and their habitats need to be protected or promises adherence to international standards which include this requirement.
9	The company and its suppliers do not use nor introduce genetically modified species or invasive alien species into the environment.	0	The company has no policy on the introduction of genetically modified species or invasive alien species.
		85	The company has a policy on the introduction of genetically modified species or invasive alien species, but the policy only covers genetically modified species and not invasive alien species (or vice versa), or makes exceptions (for instance for direct and indirect suppliers or for species which are already widely in use.
		100	The company has a policy that makes explicit that the introduction and use of genetically modified species or invasive alien species is not allowed, or the company promises adherence to international standards which include this prohibition.
10	The company and its suppliers do minimize or eliminate the use of pesticides.	0	The company has no policy on the use of pesticides.
		85	The company has a policy on the use of pesticides, but the policy makes exceptions (for instance for certain types of pesticides or for direct and indirect suppliers).
		100	The company has a policy that makes explicit that the use of pesticides needs to be minimized or eliminated or promises adherence to international standards which include this requirement.
Social criteria			
11	The company and its suppliers do respect the right of Indigenous peoples to give or withhold Free, Prior and Informed Consent (FPIC) if they could be affected by planned operations.	0	The company has no policy on the principle of Free, Prior and Informed Consent (FPIC).
		85	The company promises to respect the right of indigenous peoples to give or withhold Free, Prior and Informed Consent (FPIC) if they could be affected by planned operations, or it promises adherence to international standards which include this requirement, but the company does not provide any details or does not mention direct and indirect suppliers.
		100	The company promises that the company and its direct and indirect suppliers will respect the right of indigenous peoples to give or withhold Free, Prior and Informed Consent (FPIC) of all indigenous peoples if they could be affected by planned operations, or it promises adherence to international standards which include this requirement. The company also clarifies how it will fulfil FPIC rights, how it will co-design and document the FPIC procedures, and what best practices will be adhered to in forest-risk sectors.
12		0	The company has no policy on the rights of land users with customary land rights (other than indigenous peoples).
		85	The company promises to respect the right of all communities with customary land rights to give or withhold Free, Prior and Informed Consent (FPIC) if they could be affected by planned operations, or it promises adherence to international standards which include this requirement, but the company does not provide any details or does not mention direct and indirect suppliers.

Criteria		Points	Scoring guidance
	The company and its suppliers do respect the right of all communities with customary land rights to give or withhold Free, Prior and Informed Consent (FPIC) if they could be affected by planned operations.	100	The company promises that the company and its direct and indirect suppliers will respect the right of all communities with customary land rights to give or withhold Free, Prior and Informed Consent (FPIC) of all land users with customary land rights that could be affected by planned operations. The company also clarifies how it will fulfil FPIC rights, how it will co-design and document the FPIC procedures, and what best practices will be adhered to in forest-risk sectors.
13	The company and its suppliers do establish human rights due diligence processes and monitoring systems.	0	The company has no policy on the protection of human rights.
		85	The company has a policy on human rights, without explicitly committing that the company and its direct and indirect suppliers establish human rights due-diligence processes and monitoring systems.
		100	The company commits for its operations and for its direct and indirect suppliers to establish human rights due-diligence processes and monitoring systems or promises adherence to international standards which include this requirement.
14	The company and its suppliers do respect the broader social, economic and cultural rights of communities affected by their operations, including the right to health and the right to an adequate standard of living.	0	The company has no policy on the protection of the economic, social and cultural rights of communities.
		85	The company has a policy on the economic, social and cultural rights of communities, but only some rights are mentioned, or exceptions are made for direct and indirect suppliers.
		100	The company commits to its operations and for its direct and indirect suppliers to respect the economic, social and cultural rights of communities affected by their operations, or promises adherence to international standards which include this requirement.
15	The company and its suppliers do commit to the resolution of complaints and conflicts through an open, transparent, and consultative process.	0	The company has no policy on human rights grievance mechanisms.
		85	The company has a policy on human rights or land rights which refers to “access to remedy”, without explicitly committing to the resolution of complaints and conflicts through an open, transparent, and consultative process.
		100	The company commits to its operations and for its direct and indirect suppliers to the resolution of complaints and conflicts through an open, transparent, and consultative process.
16	The company and its suppliers do maintain zero tolerance towards violence and the criminalization of land, environmental, and human rights defenders.	0	The company has no policy on land, environmental, and human rights defenders.
		85	The company has a policy on land, environmental, and human rights defenders, without explicitly requiring zero tolerance or without mentioning direct and indirect suppliers.
		100	The company commits for its operations and for its direct and indirect suppliers to maintain zero tolerance towards violence and the criminalization of land, environmental, and human rights defenders, or promises adherence to international standards which include this requirement.
17	The company and its suppliers do not engage in forced labour or in child labour.	0	The company has no policy on forced labour and child labour.
		85	The company has a policy not to make use of forced labour and child labour, in its operations and in its supply chains. Or it promises adherence to international standards which include this requirement.
		100	The company expects companies to take pro-active steps to assess if forced labour or child labour is occurring in any way in its operations and its supply chains, detailing steps they will take (with their direct and indirect suppliers if relevant) to abolish these practices.
18		0	The company has no policy on rights to freedom of association, collective bargaining and freedom from discrimination.

Criteria		Points	Scoring guidance
	The company and its suppliers do uphold the rights to freedom of association, collective bargaining, and freedom from discrimination.	85	The company has a policy on labour rights, but this policy does not mention explicitly the right to freedom of association, the right to collective bargaining and/or the right to freedom from discrimination. Or the policy does not cover direct and indirect suppliers.
		100	The company commits to its operations and for its direct and indirect suppliers to uphold the rights to freedom of association, collective bargaining and freedom from discrimination. Or it promises adherence to international standards which include this requirement.
19	The company and its suppliers do pay at least a living wage.	0	The company has no policy on living wage.
		85	The company has a policy on living wage, but does not clarify that this needs to be earned in a standard working week. Or the company makes exceptions for direct and indirect suppliers.
		100	The company commits to its operations and for its direct and indirect suppliers to pay a living wage to their employees and ensure that their suppliers pay a living wage to their employees. Or it promises adherence to international standards which include this requirement.
20	The company and its suppliers do protect the safety and health of workers.	0	The company has no policy on occupational safety and health.
		85	The company has a policy on occupational safety and health but does not mention the company's direct and indirect suppliers or make other exceptions.
		100	The company explicitly commits to protecting the safety and health of its workers as well as the workers of its direct and indirect suppliers. Or it promises adherence to international standards which include this requirement.
21	The company and its suppliers do have a gender-sensitive zero - tolerance policy towards all forms of gender-based discrimination and violence.	0	The company has no policy on gender-based discrimination.
		85	The company has a policy on gender-based discrimination, but this policy does not apply to the company's direct and indirect suppliers and/or makes other exceptions.
		100	The company commits to its operations and for its direct and indirect suppliers to have a gender-sensitive zero-tolerance policy towards all forms of gender-based discrimination, including psychological harm and verbal, physical and sexual harassment and violence. Or it promises adherence to international standards which include this requirement.
Governance criteria			
22	The company has integrated sustainability objectives in its governance structure.	0	The company has no sustainability objectives or does not make clear how these objectives are integrated in its governance structure.
		85	The company has made at least one of the following three steps: it has formulated strategic sustainability objectives, and/or it has assigned responsibility for oversight of sustainability objectives and risks to a Board member and/or it has integrated clear sustainability targets and incentives in the remuneration structure of its employees.
		100	The company has made all of the following three steps: it has formulated strategic sustainability objectives, and it has assigned responsibility for oversight of sustainability objectives and risks to a Board member and it has integrated clear sustainability targets and incentives in the remuneration structure of its employees.
23	The company is transparent on the actions through which its forest-risk policies are implemented and enforced.	0	The company does not disclose how its forest-risk policies are implemented.
		85	The company publishes a general overview of the implementation of its forest-risk policies, in which one to three important actions (as mentioned above) are mentioned.
		100	The company publishes a detailed overview of the implementation of its forest-risk policies, providing details on at least four important actions.
24	The company discloses its forest-related impacts, including its forest-related GHG emissions and its forest footprint.	0	The company does not disclose its forest-related emissions nor its forest footprint.
		85	The company discloses a rough estimate, or a calculation for part of its operations, of its forest-related emissions or its forest footprint.
		100	The company discloses a calculation of the forest-related GHG emissions (following GHG Protocol scope 1-3) and the forest footprint attributable to all its operations, based on a credible methodology.

Criteria		Points	Scoring guidance
25	The company commits to a transparent and effective State-based grievance mechanism.	0	The company does not have, or does not participate in, a transparent and effective grievance mechanism and does not commit to State-based grievance mechanisms.
		85	The company refers complaints to external grievance mechanisms such as the OECD National Contact Points, but does not clearly commit to respect and cooperate in good faith with these grievance mechanisms.
		100	The company has established, or participates in, a transparent and effective grievance mechanism, or has committed to respect and cooperate in good faith with State-based grievance mechanisms.
26	The company and its suppliers do provide proof of legality of their operations and commodity supplies, in particular proof of compliance with all prevailing laws and regulations on land acquisition and land operation.	0	The company has no policy on the legality of operations and commodity supplies, nor on compliance with all prevailing laws and regulations on land acquisition and land operation.
		85	The company has a policy on the legality of operations and commodity supplies, but does not offer proof of compliance with all prevailing laws and regulations on land acquisition and land operation.
		100	The company provides proof of the legality of its operations and commodity supplies, in particular proof of compliance with all prevailing laws and regulations on land acquisition and land operation.
27	The company and its suppliers do ensure supply chain transparency and traceability.	0	The company has no policy on supply chain transparency and traceability.
		85	The company has a policy on supply chain transparency and traceability, but does allow exceptions or is not clear about what supply chain transparency and traceability entails.
		100	The company publicly discloses its full supply chain, ensuring full traceability to its direct and indirect suppliers' farms, plantations or land-based operations. The company is able to publicly trace the forest-risk commodities it buys, processes and/or sells back to a specific operation of one of its suppliers.
28	The company and its suppliers do publish geo-referenced maps of all the concession areas and, farms under their management.	0	The company has no policy on concession maps.
		85	The company does publish concession maps but does not require this from its subsidiaries or its direct and indirect suppliers.
		100	The company publishes geo-referenced maps of all its concession areas and farms under its management, including those of its subsidiaries and direct and indirect suppliers.
29	If the company is starting new operations or expanding its operations, it does publish a social and environmental impact assessment.	0	The company has no policy on social and environmental impact assessments.
		85	The company has a policy to make social and environmental impact assessments when they are starting new operations or expanding their operations, but it does not publish the outcomes or make exceptions for certain types of companies or situations.
		100	The company has a policy that explicitly promises that before starting new operations or expanding its operations it will publish a social and environmental impact assessment. Or it promises adherence to international standards which include this requirement.
30	The company and its suppliers do not get engaged in corruption, bribery and financial crimes.	0	The company has no policy on corruption, bribery and financial crimes.
		85	The company has a policy on corruption, but this policy is not very specific or does not cover direct and indirect suppliers.
		100	The company implements for its operations and for its direct and indirect suppliers clear anti-corruption policies which ensure that the company will not get engaged in corruption, bribery and financial crimes.
31		0	The company has no policy on tax evasion and avoidance.
		85	The company has a policy on tax evasion and avoidance, but this policy is not very specific or does not cover its direct and indirect suppliers.

Criteria		Points	Scoring guidance
	The company and its suppliers do comply with the letter and the spirit of the tax laws and regulations in the countries in which they operate and do not set up corporate structures solely for tax avoidance purposes.	100	The company commits to its operations and for its direct and indirect suppliers to comply with the letter and spirit of the tax laws and regulations in the countries in which they operate. Or it promises adherence to international standards which include this requirement.
32	The company and its suppliers do publish their group structure and country-by-country data.	0	The company does not publish its group structure nor country-by-country data.
		85	The company does publish its group structure or (when applicable) country-by-country data but does not demand this from its direct and indirect suppliers.
		100	The company publishes clear data on its group structure and (when applicable) country-by-country data, and demands this from its direct and indirect suppliers as well.

Annex 4 Policy assessment methodology for financial institutions including scoring guidance

Criteria		Points	Scoring guidance
Environmental criteria			
1	Companies and their suppliers must commit to zero-deforestation and no-conversion of natural forests and ecosystems.	0	The financial institution has no policy on the protection of natural ecosystems.
		85	The financial institution has a policy that requires companies not to contribute to the conversion or degradation of natural ecosystems, but the policy makes exceptions (for instance for minor forms of degradation or for direct and indirect suppliers) or has set an incredible cut-off date.
		100	The financial institution has a policy that explicitly requires companies and their direct and indirect suppliers not to contribute to the conversion or degradation of natural ecosystems (after a credible cut-off date or no cut-off date at all) or requires adherence to international standards which include this requirement.
2	Companies and their suppliers must not drain or degrade wetlands and peatlands.	0	The financial institution has no policy on the protection of wetlands and peatlands.
		85	The financial institution has a policy on the protection of wetlands, but the policy makes exceptions (for instance for minor forms of degradation or for direct and indirect suppliers), has set an incredible cut-off date or does not mention peatlands explicitly.
		100	The financial institution has a policy that explicitly protects all wetlands and peatlands at any depth (after a credible cut-off date or no cut-off date at all) or requires adherence to international standards which include this requirement.
3	Companies and their suppliers must not convert or degrade High Carbon Stock (HCS) tropical forest areas.	0	The financial institution has no policy on the protection of High Carbon Stock (HCS) tropical forest areas.
		85	The financial institution has a policy on the protection of High Carbon Stock (HCS) tropical forest areas, but the policy makes exceptions (for instance for minor forms of degradation or direct and indirect suppliers) or has set an incredible cut-off date.
		100	The financial institution has a policy that explicitly requires the application of the High Carbon Stock Approach to protect all High Carbon Stock (HCS) tropical forest areas (after a credible cut-off date or no cut-off date at all) in countries with a national HCS interpretation.
4	Companies and their suppliers must not operate in, or have negative impacts on, protected areas.	0	The financial institution has no policy on the protection of protected areas.
		85	The financial institution has a policy on the protection of protected areas, but the policy makes exceptions (for instance for minor impacts or for direct and indirect suppliers) or has set an incredible cut-off date.
		100	The financial institution has a policy that explicitly requires protection of all protected areas (after a credible cut-off date or no cut-off date at all) or requires adherence to international standards which include this requirement.
5	Companies and their suppliers must identify and protect High Conservation Value (HCV) areas under their management.	0	The financial institution has no policy on the identification and protection of High Conservation Value (HCV) areas.
		85	The financial institution has a policy on the identification and protection of High Conservation Value (HCV) areas, but the policy makes exceptions (for instance for minor impacts or for direct and indirect suppliers).
		100	The financial institution has a policy that makes explicit that High Conservation Value (HCV) areas need to be identified and protected or require adherence to international standards which include this requirement.
6	Companies and their suppliers must not use fire for land clearing activities and fight fires.	0	The financial institution has no policy on the use of fire for land clearing.
		85	The financial institution has a policy on the use of fire for land clearing, but the policy makes exceptions (for instance for small fires or for direct and indirect suppliers).
		100	The financial institution has a policy that categorically prohibits use of fire for land clearing use and the obligation to fight fires, or requires adherence to international standards which include this prohibition. Exceptions for traditional fire practices used by indigenous peoples and local communities are acceptable.

Criteria		Points	Scoring guidance
7	Companies and their suppliers must minimize their impacts on groundwater levels and water quality.	0	The financial institution has no policy on water scarcity and quality.
		85	The financial institution has a policy on water scarcity and quality, but the policy is not very specific on what is expected of companies and/or does not apply to direct and indirect suppliers.
		100	The financial institution makes clear that companies and their direct and indirect suppliers must take concrete steps to minimize their impacts on groundwater levels and water quality, or requires adherence to international standards which include this requirement.
8	Companies and their suppliers must not harvest, nor trade in, endangered species and must protect the habitats of endangered species.	0	The financial institution has no policy on the protection of endangered species.
		85	The financial institution has a policy on the protection of endangered species, but the policy only covers trade and not habitat protection or makes exceptions (for instance for minor impacts or direct and indirect suppliers).
		100	The financial institution has a policy that makes explicit that endangered species and their habitats need to be protected or require adherence to international standards which include this requirement.
9	Companies and their suppliers must not use nor introduce genetically modified species or invasive alien species into the environment.	0	The financial institution has no policy on the introduction of genetically modified species or invasive alien species.
		85	The financial institution has a policy on the introduction of genetically modified species or invasive alien species, but the policy only covers genetically modified species and not invasive alien species (or vice versa), or makes exceptions (for instance for direct and indirect suppliers or for species which are already widely in use.
		100	The financial institution has a policy that makes explicit that the introduction and use of genetically modified species or invasive alien species is not allowed, or the financial institution requires adherence to international standards which include this prohibition.
10	Companies and their suppliers must minimize or eliminate the use of pesticides.	0	The financial institution has no policy on the use of pesticides.
		85	The financial institution has a policy on the use of pesticides, but the policy makes exceptions (for instance for certain types of pesticides or direct and indirect suppliers).
		100	The financial institution has a policy that makes explicit that the use of pesticides needs to be minimized or eliminated, or requires adherence to international standards which include this requirement.
Social criteria			
11	Companies and their suppliers must respect the right of Indigenous peoples to give or withhold Free, Prior and Informed Consent (FPIC) if they could be affected by planned operations.	0	The financial institution has no policy on the principle of Free, Prior and Informed Consent (FPIC).
		85	The financial institution requires companies to respect the right of indigenous peoples to give or withhold Free, Prior and Informed Consent (FPIC) if they could be affected by planned operations, or it requires adherence to international standards which include this requirement, but the financial institution does not provide any details or does not mention direct and indirect suppliers.
		100	The financial institution requires companies and their direct and indirect suppliers to respect the right of indigenous peoples to give or withhold Free, Prior and Informed Consent (FPIC) of all indigenous peoples if they could be affected by planned operations, or it requires adherence to international standards which include this requirement. The financial institution also clarifies how companies should fulfil FPIC rights, how they should co-design and document the FPIC procedures, and what best practices must be adhered to in forest-risk sectors.
12		0	The financial institution has no policy on the rights of land users with customary land rights (other than indigenous peoples).

Criteria		Points	Scoring guidance
	Companies and their suppliers must respect the right of all communities with customary land rights to give or withhold Free, Prior and Informed Consent (FPIC) if they could be affected by planned operations.	85	The financial institution requires companies to respect the right of all communities with customary land rights to give or withhold Free, Prior and Informed Consent (FPIC) if they could be affected by planned operations, or it requires adherence to international standards which include this requirement, but the financial institution does not provide any details or does not mention direct and indirect suppliers.
		100	The financial institution requires companies and their direct and indirect suppliers to respect the right of all communities with customary land rights to give or withhold Free, Prior and Informed Consent (FPIC) of all land users with customary land rights that could be affected by planned operations. The financial institution also clarifies how companies should fulfil FPIC rights, how they should co-design and document the FPIC procedures, and what best practices must be adhered to in forest-risk sectors.
13	Companies and their suppliers must establish human rights due diligence processes and monitoring systems.	0	The financial institution has no policy on the protection of human rights by the companies they finance or invest in.
		85	The financial institution has a policy on human rights, without explicitly requiring that companies and their direct and indirect suppliers establish human rights due-diligence processes and monitoring systems.
		100	The financial institution has a policy that explicitly requires companies and their direct and indirect suppliers to establish human rights due-diligence processes and monitoring systems or requires adherence to international standards which include this requirement.
14	Companies and their suppliers must respect the broader social, economic and cultural rights of communities affected by their operations, including the right to health and the right to an adequate standard of living.	0	The financial institution has no policy on the protection of economic, social and cultural rights of communities by the companies they finance or invest in.
		85	The financial institution has a policy on the economic, social and cultural rights of communities, but only some rights are mentioned, or exceptions are made for direct and indirect suppliers.
		100	The financial institution has a policy that explicitly requires companies and their direct and indirect suppliers to respect the economic, social and cultural rights of communities affected by their operations or requires adherence to international standards which include this requirement.
15	Companies and their suppliers must commit to the resolution of complaints and conflicts through an open, transparent and consultative process.	0	The financial institution has no policy on human rights grievance mechanisms.
		85	The financial institution has a policy on human rights or land rights that refers to “access to remedy”, without explicitly requiring that companies and their direct and indirect suppliers commit to the resolution of complaints and conflicts through an open, transparent and consultative process.
		100	The financial institution has a policy that explicitly requires companies and their direct and indirect suppliers to commit to the resolution of complaints and conflicts through an open, transparent and consultative process.
16	Companies and their suppliers must maintain zero tolerance towards violence and the criminalization of land, environmental, and human rights defenders.	0	The financial institution has no policy on land, environmental, and human rights defenders.
		85	The financial institution has a policy on land, environmental, and human rights defenders, without explicitly requiring zero tolerance or without mentioning direct and indirect suppliers.
		100	The financial institution has a policy that explicitly requires companies and their direct and indirect suppliers to maintain zero tolerance towards violence and the criminalization of land, environmental, and human rights defenders, or requires adherence to international standards which include this requirement.
17		0	The financial institution has no policy on forced labour and child labour.
		85	The financial institution has a policy that requires companies not to make use of forced labour and child labour, in their operations and in their supply chains. Or it requires adherence to international standards which include this requirement

Criteria		Points	Scoring guidance
	Companies and their suppliers must not engage in forced labour nor in child labour.	100	The financial institution expects companies to take proactive steps to assess if forced labour or child labour is occurring in any way in their operations and their supply chains, detailing steps they will take (with their direct and indirect suppliers if relevant) to abolish these practices.
18	Companies and their suppliers must uphold the rights to freedom of association, collective bargaining and freedom from discrimination.	0	The financial institution has no policy on rights to freedom of association, collective bargaining and freedom from discrimination.
		85	The financial institution has a policy on labour rights, but this policy does not mention explicitly the right to freedom of association, the right to collective bargaining and/or the right to freedom from discrimination. Or the policy does not cover direct and indirect suppliers.
		100	The financial institution has a policy that explicitly requires companies and their direct and indirect suppliers to uphold the rights to freedom of association, collective bargaining and freedom from discrimination. Or it requires adherence to international standards which include this requirement.
19	Companies and their suppliers must pay at least a living wage.	0	The financial institution has no policy on living wage.
		85	The financial institution has a policy on living wage but does not clarify that this needs to be earned in a standard working week. Or the financial institution makes exceptions for direct and indirect suppliers.
		100	The financial institution has a policy that explicitly requires companies and their direct and indirect suppliers to pay a living wage to their employees and ensure that their suppliers pay a living wage to their employees. Or it requires adherence to international standards which include this requirement.
20	Companies and their suppliers must protect the safety and health of workers.	0	The financial institution has no policy on occupational safety and health.
		85	The financial institution has a policy on occupational safety and health but does not mention the company's direct and indirect suppliers or make other exceptions.
		100	The financial institution has a policy that explicitly requires companies to protect the safety and health of their workers as well as the workers of their direct and indirect suppliers. Or it requires adherence to international standards which include this requirement.
21	Companies and their suppliers must have a gender-sensitive zero tolerance policy towards all forms of gender-based discrimination and violence.	0	The financial institution has no policy on gender-based discrimination.
		85	The financial institution has a policy on gender-based discrimination, but this policy does not apply to the company's direct and indirect suppliers and/or makes other exceptions.
		100	The financial institution has a policy that explicitly requires companies and their direct and indirect suppliers to have a gender-sensitive zero-tolerance policy towards all forms of gender-based discrimination, including psychological harm and verbal, physical and sexual harassment and violence. Or it requires adherence to international standards which include this requirement.
Governance criteria			
22	The financial institution has integrated sustainability objectives in its governance structure.	0	The financial institution has no sustainability objectives or does not make clear how these objectives are integrated in its governance structure.
		85	The financial institution has made at least one of the following three steps: it has formulated strategic sustainability objectives, and/or it has assigned responsibility for oversight of sustainability objectives and risks to a Board member and/or it has integrated clear sustainability targets and incentives in the remuneration structure of its employees.
		100	The financial institution has made all of the following three steps: it has formulated strategic sustainability objectives, and it has assigned responsibility for oversight of sustainability objectives and risks to a Board member, and it has integrated clear sustainability targets and incentives in the remuneration structure of its employees.
23		0	The financial institution does not disclose how its forest-risk policies are implemented.

Criteria		Points	Scoring guidance
	The financial institution is transparent on the actions through which its forest-risk policies are implemented and enforced.	85	The financial institution publishes a general overview of the implementation of its forest-risk policies, in which one to three important actions (as mentioned above) are mentioned.
		100	The financial institution publishes a detailed overview of the implementation of its forest-risk policies, providing details on at least four important actions.
24	The financial institution applies its forest-risk policies to the entire corporate group	0	The financial institution is not applying its deforestation-risk policies to the entire corporate group to which the client or investee company belongs.
		85	The financial institution is applying a significant part of its deforestation-risk policies to the entire corporate group to which the client or investee company belongs.
		100	The financial institution is applying its deforestation-risk policies to the entire corporate group to which the client or investee company belongs.
25	The financial institution is transparent on its investments and financings in forest-risk commodity sectors.	0	The financial institution is not transparent on its investments in, or financings of, companies in forest-risk commodity sectors.
		85	The financial institution publishes a breakdown of its portfolio by region, size and industry which is detailed enough to get a good indication of the financial institution's exposure to forest-risk commodity sectors.
		100	The financial institution publishes the names of companies active in forest-risk commodity sectors to which it is providing financing or in which it is investing.
26	The financial institution discloses its forest-related impacts, including its forest-related financed GHG emissions and its forest footprint.	0	The financial institution does not disclose its forest-related financed emissions nor its forest footprint.
		85	The financial institution discloses a rough estimate, or a calculation for part of its financings, of its forest-related financed emissions or of its forest footprint.
		100	The financial institution discloses a calculation of the forest-related financed GHG emissions (following GHG Protocol scope 1-3) and the forest footprint attributable to its full portfolio, based on a credible methodology.
27	The financial institution is transparent on its engagements with companies in forest-risk commodity sectors.	0	The financial institution is not transparent about its engagements with companies in forest-risk commodity sectors.
		85	The financial institution publishes information on its engagements with companies in forest-risk commodity sectors, but important details (names of companies, topics, or results) are missing.
		100	The financial institution provides detailed and comprehensive information on its engagements with companies active in forest-risk commodity sectors.
28	The financial institution commits to a transparent and effective grievance mechanism regarding its financing of, or investments in, companies in forest-risk commodity sectors.	0	The financial institution does not have, or does not participate in, a transparent and effective grievance mechanism and does not commit to State-based grievance mechanisms.
		85	The financial institution refers complaints to external grievance mechanisms such as the OECD National Contact Points, but does not clearly commit to respect and cooperate in good faith with these grievance mechanisms.
		100	The financial institution has established, or participates in, a transparent and effective grievance mechanism, or has committed to respect and cooperate in good faith with State-based grievance mechanisms.
29	Companies and their suppliers must provide proof of legality of their operations and commodity supplies, in particular proof of compliance with all prevailing laws and regulations on land acquisition and land operation.	0	The financial institution has no policy on the legality of operations and commodity supplies, nor on compliance with all prevailing laws and regulations on land acquisition and land operation.
		85	The financial institution has a policy on the legality of operations and commodity supplies, but does not require proof of compliance with all prevailing laws and regulations on land acquisition and land operation.
		100	The financial institution has a policy that explicitly requires companies to provide proof of legality of their operations and commodity supplies, in particular proof of compliance with all prevailing laws and regulations on land acquisition and land operation. Or the financial institution requires adherence to international standards which include this requirement.

Criteria		Points	Scoring guidance
30	Companies and their suppliers must ensure supply chain transparency and traceability.	0	The financial institution has no policy on supply chain transparency and traceability.
		85	The financial institution has a policy on supply chain transparency and traceability but does allow exceptions or is not clear about what supply chain transparency and traceability entails.
		100	The financial institution has a policy that explicitly requires companies to publicly disclose their full supply chain, ensuring full traceability to their direct and indirect suppliers' farms, plantations or land-based operations. The financial institution requires the company to be able to publicly trace the forest-risk commodities it buys, processes and/or sells back to a specific operation of one of its suppliers.
31	Companies and their suppliers must publish geo-referenced maps of all the concession areas and farms under their management.	0	The financial institution has no policy on concession maps.
		85	The financial institution recommends companies publish concession maps but does not require this explicitly or make exceptions for subsidiaries or for direct and indirect suppliers.
		100	The financial institution has a policy that explicitly requires companies to publish geo-referenced maps of all their concession areas and farms under their management, including those of their subsidiaries and direct and indirect suppliers. Or it requires adherence to international standards which include this requirement.
32	Companies starting new operations or expanding their operations must publish a social and environmental impact assessment.	0	The financial institution has no policy on social and environmental impact assessments.
		85	The financial institution has a policy that expects companies to make social and environmental impact assessments when they are starting new operations or expanding their operations, but the policy does not require companies to publish the outcomes or make exceptions for certain types of companies or situations.
		100	The financial institution has a policy that explicitly requires companies starting new operations or expanding their operations to publish a social and environmental impact assessment. Or it requires adherence to international standards which include this requirement.
33	Companies and their suppliers must not get engaged in corruption, bribery and financial crimes.	0	The financial institution has no policy on the anti-corruption policies of the companies it is financing or investing in.
		85	The financial institution has a policy on corruption, but this policy is not very specific on what is expected of the companies it is financing or investing in or does not cover direct and indirect suppliers.
		100	The financial institution has a policy that explicitly requires companies and their direct and indirect suppliers to implement clear anti-corruption policies which ensure that the company will not get engaged in corruption, bribery and financial crimes.
34	Companies and their suppliers must comply with the letter and the spirit of the tax laws and regulations in the countries in which they operate and must not set up corporate structures solely for tax avoidance purposes.	0	The financial institution has no policy on the tax policies of the companies it is financing or investing in.
		85	The financial institution has a policy on tax evasion and avoidance, but this policy is not very specific on what is expected of the companies it is financing or investing in or does not cover their direct and indirect suppliers.
		100	The financial institution has a policy that explicitly requires companies and their direct and indirect suppliers to comply with the letter and spirit of the tax laws and regulations in the countries in which they operate. Or it requires adherence to international standards which include this requirement.
35	Companies and their suppliers must publish their group structure and country-by-country data.	0	The financial institution does not require the companies it is financing or investing in to publish their group structure nor country-by-country data.
		85	The financial institution has a policy that does require the companies it is financing or investing to publish their group structure or country-by-country data, but without being very specific about the data required or without mentioning the company's direct and indirect suppliers.
		100	The financial institution has a policy that explicitly requires the companies and their direct and indirect suppliers to publish their group structure or country-by-country data, describing specifically which data should be published.

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