ANNEX 1

Country deep dives

This annex is part of the working paper titled: "Exclusion Risks in Climate-Related Financial Regulation: An Analytical Framework."

Bangladesh

After an overview of the broader country context, this note outlines key aspects of Bangladesh's climate-related financial sector regulations and describes how they could impact financial inclusion, with a focus on cottage, micro, small and medium enterprises (CMSMEs) and low-income households. The findings are based on a literature review and stakeholder interviews conducted in the first semester of 2024.

COUNTRY CONTEXT

Bangladesh is one of the world's most climate-vulnerable countries but contributes with only 0.48 percent to global emissions. It faces frequent natural disasters such as cyclones, floods, and droughts, which severely impact its economy and population, particularly in coastal areas. Ranked 168th in the Notre Dame Global Adaptation Initiative (ND-GAIN) index for climate readiness,[1] Bangladesh needs significant improvements to adapt to climate change. With millions living in high-risk regions, climate change could displace more than 13 million people by 2050.

Several national strategies guide the country's climate action, and despite being a low emitter, Bangladesh has committed to significantly reducing its emissions. Relevant strategies include the 2018 Bangladesh Delta Plan (BDP) 2100, the 2021 Mujib Climate Prosperity Plan (MCPP) 2022-2041, and the National Adaptation Plan (NAP) 2023-2025. The BDP is a 100-year plan for the sustainable management of water, ecology, environmental and land resources. The MCPP works to counteract climate-induced damages and losses by equipping vulnerable groups, the industry and the government with financing tools and models to bring about resilience and stability, especially for CMSME[2] and low-income populations. The NAP establishes a path to climate-resilient development and reduction of climate risks and vulnerabilities. It urges the central bank, Bangladesh Bank, to implement appropriate policy and regulatory reforms. It also compels FSPs to develop products to support adaptation and mitigation and to build climate resiliency.

The financial sector plays a crucial role in advancing the climate agenda, and inclusive climate finance has been a strategic priority for Bangladesh Bank since its Strategic Plan 2010–2014. Access to financial services is crucial for building climate resilience in Bangladesh, particularly for low-income households and CMSMEs. Yet, low-income populations still lack access to

1 Ranking according to the ND-GAIN, which summarizes a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience. It aims to help governments, businesses and communities better prioritize investments for a more efficient response to the immediate global challenges ahead. https://gain.nd.edu/our-work/country-index/rankings/

2 A cottage enterprise is a manufacturing business run by a family or individual, typically from their home.

adequate financial products like savings, insurance, and credit, which are essential for coping with climate shocks. This limits their ability to recover from climate impacts, hindering Bangladesh's progress towards a climate-resilient, low-carbon economy. To address this, Bangladesh Bank has been promoting inclusive climate finance through various tools, while also tackling stability, and safety and soundness concerns through the regulatory reforms discussed in this note.

CLIMATE-RELATED REGULATION AFFECTING CREDIT PROVISION

Bangladesh Bank's actions to address environmental risks started in 2011, issuing early risk management requirements. The 2011 Environmental Risk Management (ERM) Guidelines established an early foundation for integrating these risks into FSPs' credit risk management processes. It required FSPs to use an Environmental Due Diligence checklist and a qualitative environmental rating in their credit underwriting process. In 2017 the ERM Guidelines were replaced by the Guidelines on Environmental and Social Risk Management (ESRM Guidelines), which expanded the scope to include social and climate risks and provided a standardized approach to environmental risk assessment. It also introduced a list of activities that need to be classified as high environmental and/or social risk (exclusion list, since these activities cannot be classified as green). In 2022 the ESRM was updated with further guidance on the environmental risk assessment process, detailing eligibility criteria by sector and helping FSPs determine whether a loan request must be subject to environmental and social due diligence (ESDD) and, in the case of infrastructure projects, a third-party environmental and social impact assessment.

Bangladesh Bank has imposed a classification system for sustainable – including green – products and disclosure requirements. The Policy Guideline for Green Banking (GBP) issued in 2011 and expanded between 2013 and 2017 introduced green banking as a strategic component of banking activities and provided a system to identify green products by classifying 55 activities as green. In 2020, the Sustainable Finance Policy (SFP) complemented the GBP Guidelines by introducing two taxonomies: sustainable finance and green finance taxonomies expanding the product list to 68 green products/projects/initiatives under 11 sectors. In 2023 the SFP was updated to, among other things, add a gender lens,[3] introduce the climate finance taxonomy and further expand green products/projects/initiatives to 94 products under 14 sectors. The policy also provides guidance for the identification of green and sustainable finance, particularly in agriculture, cottage, MSMEs finance, and socially responsible finance. Both the GBP and SFP set disclosure and reporting requirements aligned with standards such as the Global Reporting Initiative (GRI), strengthened in 2018 with a standardized reporting format for sustainable finance that became enforceable from 2020 onwards.[4] In December 2023, Bangladesh Bank issued guidelines on sustainability and climate-related financial disclosure for banks and finance companies in line with IFRS sustainability and climate disclosure standards (IFRS S1 and S2), which will be implemented in a phased manner over five years. By 2027 the new standards are to be fully incorporated into financial disclosures of FSPs.

In addition, Bangladesh Bank has imposed minimum lending targets of 5 percent and 40 percent of all loan disbursement and investments for green and sustainable financing, respectively, and a requirement for FSPs to form a Climate Risk Fund. Further, FSPs are required to allocate at least 10 percent of their corporate social responsibility (CSR) budget to a Climate Risk Fund to support responses to climate emergencies.

3 For example, it introduces requirements for gender disaggregated data, prevents gender-based discrimination and seeks to promotes solutions adapted to women, especially entrepreneur, as well as third gender individuals.

4 In the taxonomy climate finance is considered within green activities

In 2020, Bangladesh Bank introduced sustainability rating for banks and non-bank financial institutions that comprises five dimensions (sustainable finance, corporate social responsibility, green refinance, core banking sustainability, and banking services), and names of the top FSPs are disclosed in the Bangladesh Bank's website. Table 2 summarizes Bangladesh Bank's climate-related regulation. Several instruments modifying the regulations listed have not been included.

A key pillar of Bangladesh Bank's strategy to boost sustainable finance is the use of promotional tools in line with the country's climate agenda. In addition to the minimum sustainable and green lending targets already mentioned, Bangladesh Bank offers incentives like TROs with concessional rates and limits the interest rates FSPs can charge from borrowers. A large proportion of the sustainable and green finance transactions that FSPs report to Bangladesh Bank are subsidized in this manner and the TROs help FSPs

TABLE 2. **Summary of the Bangladesh Bank's climate-related regulation**

Date	Regulation	Main aspects covered
Requirements to address risks		
Broad risk management obligations / Credit underwriting and portfolio management requirements		
(I) 2011 (R1) 2017 (R2) 2022	(I) BRPD Circular No. 1 (R1) SFD Circular No. 2 (R2) SFD Circular No. 3	(I) Introduces the ERM Guidelines, requiring credit operations over a certain threshold to undergo a 4-stage process: i) identifying risks; ii) evaluating/rating; iii) mitigating risks and monitoring; and: iv) controlling. Defines environmental risks, their sources, types of risks, and their link to credit risk. Assigns responsibilities within the FSP organizational structure; requires identifying, within the non-performing loan (NPL) database, when the source of default is environmental. Introduces a general environmental due diligence (EDD) checklist, with 10 sector-specific checks, and a decision tree based on the checklist results. (R1) Introduces the ESRM Guidelines, expanding to social and climate risks and introducing a more detailed and standardized assessment process for environmental risks, including a quantitative environmental and social (E&S) rating and inclusion of social risk, turning the EDD checklist into a ESDD checklist. Requires a E&S Management System (a set of policies, procedures, tools, and internal capacity to identify, monitor, and manage an FSP's exposure to E&S risks). Introduces an exclusion list of activities. Recommends recognizing and addressing E&S risks within credit management processes, rather than avoiding operations with high E&S risks. (R2) Provides further details for the ESRM process by sector, including requirements for the ESDD for infrastructure financing that require a third party environmental and social impact analysis.
Disclosure requirements		
Social, environmental and climate risks and opportunities disclosures / sustainability reporting standards		
(I) 2011/13 (U1) 2018 (U2) 2023	(I) BRPD Circular No.02 / GBCSRD Circular No. 04/05 (R) SFD Circular No. 1	The GBP guidelines (see below) include disclosure and reporting of green banking activities with external verification and international standards such as GRI; (U1) Update with a standardized format from 2020. (U2) Introduces Guidelines on Sustainability and Climate-Related Financial Disclosures, aligned with IFRS S1 and IFRS S2 with a phased implementation over five years until 2027.

TABLE 2. **Summary of the Bangladesh Bank's climate-related regulation** (continued)

Date	Regulation	Main aspects covered
Sustainable finance taxonomy and product standards		
(I) 2011 (R) 2013 (U1) 2014 (U2) 2015 (U3) 2016 (U4) 2017 (U5) 2020 (U6) 2021 (U7) 2023	(I) BRPD Circular No.02 (R) GBCSRD Circular No. 04/05 (U1) GBCSRD Circular No. 04 (U2) GBCSRD Circular No. 04 (U3) SFD Circular No. 2 (U4) SFD Circular No. 04 (U5) SFD Circular No. 5 (U6) SFD Circular No. 1 (U7) SFD Circular No. 3	(I) Phased implementation of the GBP, covering green and environmental policy, including sensitive sectors, top management involvement, a dedicated unit at FSPs. ERM is incorporated into the policy, which also requires FSPs to have green strategic planning allocating funds for green banking and reducing financing of environmentally harmful activities. It creates the Climate Risk Fund to finance climate-vulnerability and support emergency situations, requires capacity building of employees and clients, and disclosure of green banking activities in financial reports. (R) Extended implementation timeline and expanded to other FSPs. (U1) Sets minimum target for green finance set at 5 percent of total funded loan disbursement or investment, modified in 2020 to apply to total funded term loans. (U2) Minimum Climate Risk Fund allocation of at least 10 percent of the FSP's CSR budget. (U3) Requirement for FSPs to create a Sustainable Finance Audit Team (SFAT) and a Sustainable Finance Committee comprised of senior management. SFAT's functions include overseeing the measurement of the FPS's carbon footprint and managing climate risk. (U4) Introduction of a list of green finance products. (U5) SFP integrating previous developments on green policies and introducing the sustainable finance taxonomy, green finance taxonomy and climate finance taxonomy, which extended the previous list of 55 green and sustainable products introduced by the GBP to 68 green products/projects/initiative. The sustainable finance taxonomy covers green finance, social finance, and responsible finance (governance). (U6) Annual target for Sustainable Finance set as a percentage of net loan outstanding and advance balance from the previous year. (U7) SFP updated, expanding to 94 products/projects/initiatives covered by the taxonomies, introducing gender aspects, a climate finance framework and a climate finance taxonomy.

Note: (I): Issued. (U): Updated/additional guidance. (R) Replaced.

meet the minimum targets. For example, since 2009, a revolving refinance scheme was introduced to encourage green lending. Initially covering six green activities, it grew to cover 68 activities by 2022. Another initiative, the Green Transformation Fund, initially targeted the textile, leather, and jute sectors but was later expanded to all export-oriented industries. These TROs are accessible only to banks, but banks may allocate the funds by partnering with MFIs. When doing so, banks must ensure that MFIs/customers meet the minimum regulatory requirements, including environmental due diligence.

FINANCIAL INCLUSION IMPACT OF CLIMATE-RELATED REGULATIONS

Financial inclusion is a key mandate of Bangladesh Bank, which has special regard for CMSMEs, women, low-income households and populations affected by climate hazards. Financial inclusion is embedded in

Bangladesh Bank's sustainable finance responsibilities, reflecting the bank's strategic goal of promoting inclusive sustainable finance. Climate-related regulations mention financial inclusion as a policy goal.

Despite Bangladesh Bank's early regulatory efforts and its attention to financial inclusion issues, our interviews indicate that the risk of exclusion among low-income segments and CMSMEs could increase. Bangladesh Bank's published data on the sustainable loan portfolio does not allow for an assessment of the regulatory impact on financial inclusion. However, our interviews suggest that both Bangladesh Bank and FSPs face challenges that impact regulatory implementation and could exacerbate financial exclusion. For instance, the ratio of green finance to total bank advances has been consistently below the minimum target, remaining between 1.6 and 2.8 percent during 2013-2016,[5] while green finance stayed between 0.7 and 1.7 percent of all bank loans during 2019-2023.[6] Further, although CMSMEs finance increased over 200 percent during 2021-2023, it accounted for only 5 percent of total green finance in 2023.[7] Moreover, sustainable and green finance disbursements concentrate in urban areas such as Dhaka and Chittagong.

Some customers struggle to meet customer eligibility requirements and deal with the complexity and costs of information requirements. For instance, potential borrowers may fail to meet the requirements of the ESDD checklist because they cannot afford or otherwise obtain green certifications. Such requirements may include a business license that the overwhelming majority of CMSMEs lack; or compliance with additional reporting requirements once the loan is approved, to allow FSPs to monitor sustainability and climate impacts. For small loans, these extra costs can be a deal breaker, even when benefiting from subsidies.

Moreover, the sustainable finance taxonomy is focused on climate mitigation activities, directing green lending to large enterprises and projects that more easily fit climate mitigation objectives. The focus of the taxonomy could also lead funders to put pressure on FSPs to finance more mitigation activities, crowding out other types of finance that could benefit CMSMEs and low-income populations.

FSPs have also noted that the additional costs of regulatory implementation, including costs to implement disclosure and reporting standards can be significant, potentially discouraging less profitable, smaller loans. For instance, preparing and submitting disclosure reports is time-consuming and may become more challenging if it involves data collection about small transactions with CMSMEs and low-income households. Implementing the new IFRS S1 and S2 standards in a phased approach might help in this regard, by giving FSPs more time to change their processes and systems and train staff. Some banks have already aligned their processes, data infrastructure and human resources capabilities with some of Bangladesh Bank's disclosure requirements, but these changes have cost implications.

The exclusion risk is not only caused by climate-related regulation, but also its interaction with the broader country environment. Broader context issues impact regulatory implementation and could exacerbate the risk of excluding the most vulnerable segments. For example, MFIs, which traditionally serve these segments, cannot access Bangladesh Bank's refinancing lines. While banks are allowed to allocate such funds via MFIs, they cannot verify eligibility criteria and creditworthiness, because MFI borrower information, including their credit history, is not available to banks via the credit bureau. As a

5 See Nabi et al. 2016. "Are We Greening the Economy? Recent Trends of Green Financing in Bangladesh." https://www.bb.org.bd/pub/research/workingpaper/wp1618.pdf

6 Bangladesh Bank revealed that green finance in the banking sector was 4.97 percent of term disbursement at the end of 2022 and this increased to 7.25 percent ate the end of 2023.

7 Bangladesh Bank's annual report.

result, subsidized credit is used only to a limited extent to meet the needs of low-income populations and CMSMEs. The lack of business licenses by CMSMEs, previously mentioned, effectively makes them ineligible to obtain environmental certificates, which potentially makes them ineligible to obtain credit.

Other challenges relate to capacity constraints, evolving expertise at FSPs, and limited knowledge by potential borrowers. Our stakeholder interviews suggest that FSPs may lack sufficient awareness and understanding of green and sustainable finance, especially on how to apply such concepts to low-income segments and CMSMEs. Additionally, low-income segments, especially in rural areas, have limited knowledge about sustainable or green finance opportunities.

Table 3 summarizes the pathways for potential and observed financial exclusion impacts of the climate-related regulation, as described above.

TABLE 3. **Financial exclusion impact pathways in Bangladesh**

Pathways	Description	Related regulation
Increased cost	FSPs must help educate customers through cumbersome and time-consuming processes to obtain certificates to meet the eligibility requirements. FSPs must also monitor compliance with environmental plans and adjust reporting systems to new disclosure and reporting requirements, leading to increased costs that may discourage lending to riskier customers and smaller loans. The requirements affecting FSP organizational structure such as specialized units and senior level responsibilities also contribute to increased costs. The exclusion risk is amplified by the imposition of interest rate caps.	• ESDD checks • Sustainable finance taxonomy • IFRS S1 and IFRS S2 • Broad risk management standards
Increased supervisory scrutiny and capacity constraints	The introduction of new risk management requirements considering the current level of expertise at FSPs, even when the implementation is phased and despite Bangladesh Bank providing implementing tools, can lead overly conservative approaches that shun operations with higher climate or environmental risks. Overcompliance may also be the result of fear related to increased supervisory scrutiny and actions such as fines.	• First introduction of ERM guidelines • Green and environmental policy • IFRS S1 and IFRS S2
New customer eligibility barriers	Regulatory requirements to comply with laws such as environmental and business laws to access credit may disproportionality impact CMSMEs, which are often non-compliant with minimum legal requirements due to costs and complex bureaucracy for obtaining business licenses. The high level of informality among CMSMEs and weak law enforcement discourage FSPs from lending to CMSMEs, in the face of additional requirements set in the climate-related regulation.	• ESDD checks and green and sustainable finance lending
New customer eligibility barriers and reduced access to funding	The sustainable finance taxonomy is focused on climate mitigation activities, directing green lending to clients with climate mitigation needs and objectives, which are mainly large enterprises. This could restrict the availability of adaptation and resilience finance for low-income populations and CMSMEs, including via pressure of funders for FSPs to align with the taxonomy. This risk is exacerbated by the minimum lending requirements.	• Sustainable Finance Taxonomy (SFP)

Brazil

After an overview of the broader country context, this note outlines key aspects of Brazil's climate-related financial sector regulations, and describes how they could impact financial inclusion, focusing on rural credit to smallholder farmers. The findings are based on a literature review, data analysis and stakeholder interviews conducted in the first half of 2024.[8]

COUNTRY CONTEXT

Brazil plays a global role in fighting climate change, but its vulnerability to climate risks and their economic impacts are increasing. Brazil has abundant natural resources[9] and is the sixth largest global emitter of GHGs,[10] predominantly from land use change and agriculture, which account for 52 and 24 percent of Brazil's emissions, respectively (World Bank 2023b). Brazil is the 49th most vulnerable country but is ranked 124th in terms of country readiness.[11] According to the IMF (2023), the effects of climate change are already impacting Brazil's economy, while the World Bank (2023b) estimates that extreme events have caused average annual output losses of 0.13 percent of GDP over the past 20 years. The financial sector could be impacted by these developments, as around 20 percent of the total credit portfolio is exposed to climate-vulnerable sectors, with agriculture accounting for around 11 percent of total loans in the financial sector.[12]

Agriculture is central to Brazil's sustainability agenda. The 2008 National Climate Change Policy (PNMC) coordinates climate action at the national level.[13] Agriculture is featured prominently in these documents for being both a major contributor to climate change and economic output, and key for mitigation, adaptation and resilience. In 2011, the Brazilian Plan for Adaptation and Low Carbon Emission in Agriculture (ABC Plan 2010-2020) was issued, followed by ABC+ Plan 2020—2030. These promote sustainable agriculture, emphasizing adaptation and resilience via financial incentives for the green transition of agriculture, including for smallholders, which account for the lion's share of rural properties in Brazil.

The national rural credit policy, managed by the Central Bank of Brazil (BCB in its Portuguese acronym), is the main instrument for agricultural development and a key element of BCB's climate-related regulation. Rural credit is regulated by the BCB, which requires deposit-taking FSPs to allocate around 30 percent of deposit balances in rural credit (directly or via other FSPs). Rural credit has lower interest rates compared to conventional credit, thanks to government subsidies that apply inversely to the size of the financed property. The National Program to Strengthen Family Agriculture (Pronaf), in particular, is dedicated to smallholders and offers subsidies for improving family farming practices.[14] BCB's rural credit regulation enforces some rules set in environmental laws, most

8 The Brazil case draws heavily from an extensive literature review and data analysis conducted by Agroícone, commissioned by CGAP.

9 Biomes like the Amazon and the Cerrado are essential components of the global ecosystem services and are crucial for mitigating the impacts of climate change and maintaining environmental stability.

10 The top five emitters as of 2024 are China (30.1%), US (11.3%), India (7.8%), EU27(6.1%), and Russia (5%). https://edgar.jrc.ec.europa.eu/

11 Ranking according to the Notre Dame Global Adaptation Initiative (ND-GAIN), which summarizes a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience. It aims to help governments, businesses and communities better prioritize investments for a more efficient response to the immediate global challenges ahead. https://gain.nd.edu/our-work/country-index/rankings/

12 Meeting with the Central Bank of Brazil on 5 October, 2024.

13 Several documents have been produced based on the PNMC, including the 2026 National Plan for Adaptation to Climate Change (PNA) and the 2024 Ecological Transformation Plan of the Ministry of Finance, which promotes sustainable finance via the development of a green taxonomy (currently underway), green bonds, and fiscal policies (e.g., carbon tax).

14 Pronaf resources are managed by the national development bank, BNDES, but the participation of licensed lenders is subject to BCB's regulation and supervision since 2008.

BOX 7. **CAR and SICOR (Green Credit Bureau), key elements of BCB's rural credit regulation and supervision**

CAR ("Cadastro Ambiental Rural"-Rural Environmental Registry), introduced by the Forest Code, is a geo-referenced, public electronic register that contains a wealth of information about rural properties, including the areas designated for the conservation of native vegetation, hydric resources, and biodiversity. CAR entries are originated from self-declared information, which later must be verified by regional environmental agencies (producing a "validated" CAR). According to the Forest Code, having a CAR is mandatory for all rural properties and also for accessing rural credit. All CAR-linked information – regardless of being validated or not – is contained in the National Rural Environmental Registry System (SICAR), which is operated by the Ministry of Environment and Climate Change (MMAMC) and used for environmental and economic control, monitoring, and planning and for combating deforestation. Validated CARs are crucial for environmental control and rural credit provision, but only around 4 percent of all CARs are validated, creating data quality issues such as misreporting.

SICOR ("Sistema de Operações do Crédito Rural" or Rural Credit Operations System) is a database operated by the BCB containing details about all rural credit operations in the financial system. Each loan is tagged to a CAR, which allows the BCB to gather additional information by integrating SICOR to SICAR and other databases that use CAR, such as those of the Ministry of Justice and environmental agencies. With the extra information, BCB can automatically check for environmental compliance, overlaps with protected lands such as national forests and indigenous territories, and other issues such as the existence of lawsuits against the property owner due to poor workers' conditions. This mechanism allows monitoring of rural properties as a whole, not only of financed plots. For instance, if another plot of the property is subject to embargo for environmental damage, a rural credit can be blocked. In 2021 SICOR was revamped and rebranded as the Green Credit Bureau, increasing the range of automatic checks and allowing FSPs access and functioning similarly to a credit bureau. The Green Credit Bureau also allows borrowers to provide access to their data by third parties, using an open finance concept, which could increase the borrower's bargaining power before lenders and facilitate access to programs to promote sustainable agricultural practices or other incentives. Finally, operating SICOR also allows the BCB to publish extensive rural credit data on its website, including granular information on the loans benefiting from receiving subsidies.

notably the Forest Code.[15] Another key initiative of the agricultural policy is Proagro, an agricultural credit guarantee scheme also overseen by the BCB. In managing the rural credit policy, the BCB relies on two key elements: the Rural Environmental Registry (CAR) and SICOR (rebranded as Green Credit Bureau in 2021), both of which are explained in Box 7.

CLIMATE-RELATED REGULATION AFFECTING CREDIT PROVISION

The BCB's approach to climate-related regulation has been to gradually integrate social and environmental risks and, later, CRFR risks into regulation and supervision. The BCB articulated its BC# Sustainability Agenda in 2021 – the same year in which it joined the NGFS – to promote sustainable finance and improved management of climate and environmental risks within the financial system and integrate sustainability

15 The Forest Code (Law n. 12,651/2012) governs native vegetation and provides guidelines for the agricultural sector. It also creates the Environmental Regularization Program (PRA), which guides landowners and landholders to adopt actions to restore degraded and altered areas.

into the management of international reserves.[16] The first environmental requirements for rural credit underwriting were set in 2008. Between 2008 and 2021, FSPs were gradually required to: i) design and implement a Social and Environmental Responsibility Policy (PRSA); ii) include social and environmental risk into their risk management and capital framework; and iii) incorporate climate, environmental and social risks into FSP obligations, including broad risk management and capital frameworks.[17] BCB has built specialized regulatory and supervisory teams in rural credit and broader climate-related regulation and supervision. Table 4 details the main BCB regulations in place, and the Sustainable Taxonomy currently being drafted by the Ministry of Finance.

The rural credit underwriting requirements have been gradually tightened up to mitigate environmental and social risks and improve monitoring and control. Since

TABLE 4. **Summary of the BCB's climate-related regulation**

Year	Regulation	Main aspects covered
Requirements to address risks		
Broad risk management obligations and governance / differentiated capital requirements (Pillar 2) / scenario analysis and stress testing		
(I) 2014 (R) 2021 (U) 2023	(I) Resolution CMN 4,327 (R) Resolution CMN 4,945 (U) Resolution BCB 331	(I) Requires FSPs to have a Social and Environmental (SE) Responsibility Policy (PRSA in its Portuguese acronym), focusing on governance and SE risk (R) Replaced PRSA by PRSAC, by including climate-related factors. PRSAC must cover: (i) impacts on FSP's activities; (ii) strategic objectives and opportunities; and (iii) the competitiveness and regulatory environment in which the FSP operates. Requires continuous monitoring and disclosure. (U) Extends PRSAC to type 3 conglomerates (FSPs led by a payments entity).
(I) 2017 (U) 2021 (U2) 2022	(I) Resolution CMN 4,557 and Circular BCB 3,846 (U) Resolution CMN 4,943 and Resolution CMN 4,944 (U2) Resolution BCB 265	(I) Introduces SE risks into the risk and capital management frameworks and into the ICAAP (excluding small FSPs). (U) extends SE risks and includes physical and transition climate risks into the risk and capital management frameworks. Requires identification, measurement, evaluation, monitoring, control, reporting and mitigation of SE and climate risks; monitoring of exposure concentrations in sectors or regions more vulnerable to SE and climate damages; introduces climate scenario analysis and stress testing and analysis of impacts over traditional financial risks; inclusion of smaller institutions in scope (simplified requirements are set in Resolution 4,606/2017, updated by Resolution 4,944/2021). (U2) Extended SE and climate risk management to type 3 conglomerates.
(I) 2021 (U) 2023	(I) Resolution BCB 151 (U) Resolution BCB 353	Submission of bi-annual regulatory reporting related to SE and CRFR risks, via document 2030 - Risk Document Social, Environmental and Climate (DRSAC). Several BCB Normative Instructions (IN) defined the reporting templates.

16 In 2015 the BCB started monitoring the effects of drought on the financial system. It published its first Report on Social, Environmental, and Climate-Related Risks and Opportunities in 2021, the first assessment of the financial system exposure to transition risks and scenario analysis for extreme drought in 2022, and a scenario analysis for intense flood in 2023.

17 The PRSA was then replaced by the Social, Environmental, and Climate Responsibility Policy – PRSAC.

TABLE 4. **Summary of the BCB's climate-related regulation** (continued)

Year	Regulation	Main aspects covered
Credit underwriting requirements		
(I) 2008 (R) 2021	(I) Resolution CMN 3,545 (R) Resolution CMN 4,903	Requirements for environmental compliance for rural credit in the Amazon Biome; revoked by CMN Resolution 4,903/2021. Subsequent resolutions have updated SE and climate compliance requirements for rural credit.
(I) 2010 (R) 2021	(I) Resolution CMN 3,876 (R) Resolution CMN 4,903	Prohibits granting rural credit to individual producers or legal entities listed in the Register of Employers who have maintained workers in conditions analogous to slavery.
(I) 2018 (R) 2021 (U) 2021 (U2) 2023	(I) Resolution CMN 4,663 (R) Resolution CMN 4,903 (U) Resolution BCB 140 (U2) Resolution CMN 5,081	Requires CAR (see Box 1) for accessing rural credit from January 2019. In 2021 and 2023, requirements included verification of canceled/suspended CAR, embargoed areas (federal and state), and overlaps with public forests across all biomes.
Disclosure requirements		
Prudential disclosures (Pillar 3) /sustainability reporting standards / disclosure of transition plans and public commitments / Risks and opportunities report		
(I) 2021 (U) 2023	(I) Resolution BCB 139 (U) Resolution BCB 306 & BCB 354	(I) Annual disclosure of the Social, Environmental and Climate Risks and Opportunities Report (GRSAC Report) on the FSPs' website, according to the PRSAC, with qualitative disclosures aligned with the TCFD recommendations. Scope of the GRSAC Report is extended in 2023 to type 3 conglomerates, with first reporting delayed until the end of 2024.
2024	BCB Public Consultation No. 100	Consultation on enhancement of GRSAC Report based on: i) the issuance of IFRS S1 and S2 by the ISSB; and ii) the BCBS's 2024 public consultation on Pillar 3 standards for SE risks and CRFR. Consultation closed on June 28, 2024.
Sustainable taxonomy		
2023	Ministry of Finance's public consultation of the Brazilian Sustainable Taxonomy Draft.	Classification system that defines activities, assets and/or categories of projects that contribute to climate, environmental and/or social objectives. Provides criteria and indicators to assess whether an activity contributes to sustainability and/or the transition to a sustainable economy. The Sustainable Taxonomy Draft covers various sectors, including agriculture, and one of its key features is the classification of land use activities such as crop production, cattle, and forestry, and the activities that contribute to social and racial equality. The assessment criteria and measurement indicators were put for public consultation in November 2024 (Ministério da Fazenda 2024). The Sustainable Taxonomy will come into force in 2026.

Note: (I): Issued; (U): Updated; (R): Revoked.

the first underwriting rules issued in 2008, a significant change has been to start enforcing, in 2019, the Forest Code's requirement for farmers to produce a CAR (see Box 1) when seeking rural credit. Since then, all rural credit registered in the Green Credit Bureau (see Box 1) is tagged to a CAR number, allowing the BCB and FSPs to check information contained in other databases that also use CAR to identify a rural property, for underwriting and monitoring purposes. Rural credit is subject to special oversight by the BCB: when a loan is approved by an FSP, it is sent to the Green Credit Bureau and the BCB runs an automated compliance check covering over 1,300 items, to complement the FSP's own due diligence, acting as a second line of defense. Operations blocked by the system cannot be disbursed by FSPs.

In addition to the BCB regulation, the most relevant initiatives are the disclosure requirements of the securities regulator and the forthcoming Brazilian Sustainable Taxonomy being drafted by the Ministry of Finance.[18] Resolution 193, issued by the securities regulator CVM in October 2023, establishes a timetable for the voluntary use by listed corporations of IFRS S1 and S2 for the year 2024 until they become mandatory from 2027 onwards. This means that listed FSPs will need to adjust their data gathering and reporting systems, possibly affecting customers, as these may be required to provide additional information in line with IFRS S1 and S2. CVM also issued Resolutions 217 and 218 in late 2024, making it mandatory for listed companies to comply with additional sustainability disclosure standards set by the Brazilian Committee for Sustainability Pronouncements, a self-regulatory body. Also, the Ministry of Finance is coordinating extensive consultations to support the drafting of the Sustainable Taxonomy, which will define activities, assets and/or categories of projects – across all economic sectors – that contribute to climate, environmental and/or social objectives. Its adoption is scheduled for January 2026, and there will be a consultation process to define which sector regulations must incorporate the taxonomy, and how.

FINANCIAL INCLUSION IMPACT OF CLIMATE-RELATED REGULATIONS

Evidence shows that the rural credit regulation has played a role in reducing deforestation and improving the lives of farmers. BCB regulation works to mitigate the socio-environmental and climate risks of projects financed by public policy, as studies show that rural credit contributes to reducing deforestation in the Amazon biome, which could not only combat climate change effects but also increase the resilience of local communities. Moreover, there is evidence that rural credit plays a role in improving the lives of rural producers via positive impacts on the Gross Value of Production; agricultural GDP and total factor productivity; impact on the planted area; the amount harvested and cattle herds and in the family farmer's income and productivity.

The existence of environmental and other databases supports regulatory implementation and improvements in the rural credit policy. Tagging each loan to CAR makes it possible for FSPs and the BCB to run checks against other databases that use CAR, improving compliance with regulatory and legal requirements, including the credit underwriting requirements imposed by BCB. The benefits may extend to increased protection of vulnerable communities such as quilombolas[19] and indigenous groups, against land-grabbing and environmental crimes. For considerably expanding the information on each borrower, this mechanism has also allowed the BCB to

18 The insurance regulator, SUSEP, is also relevant, but its regulations are not assessed in this report. For instance, its Circular 666/2022 requires insurers to have sustainability policies. It is developing regulation to define sustainable insurance products which is expected to align with the draft Sustainable Taxonomy. It is also collaborating with the Ministry of Finance to create a National Stabilization Fund for catastrophic risk. Effective insurance coverage could improve credit access by segments highly exposed to climate risks.

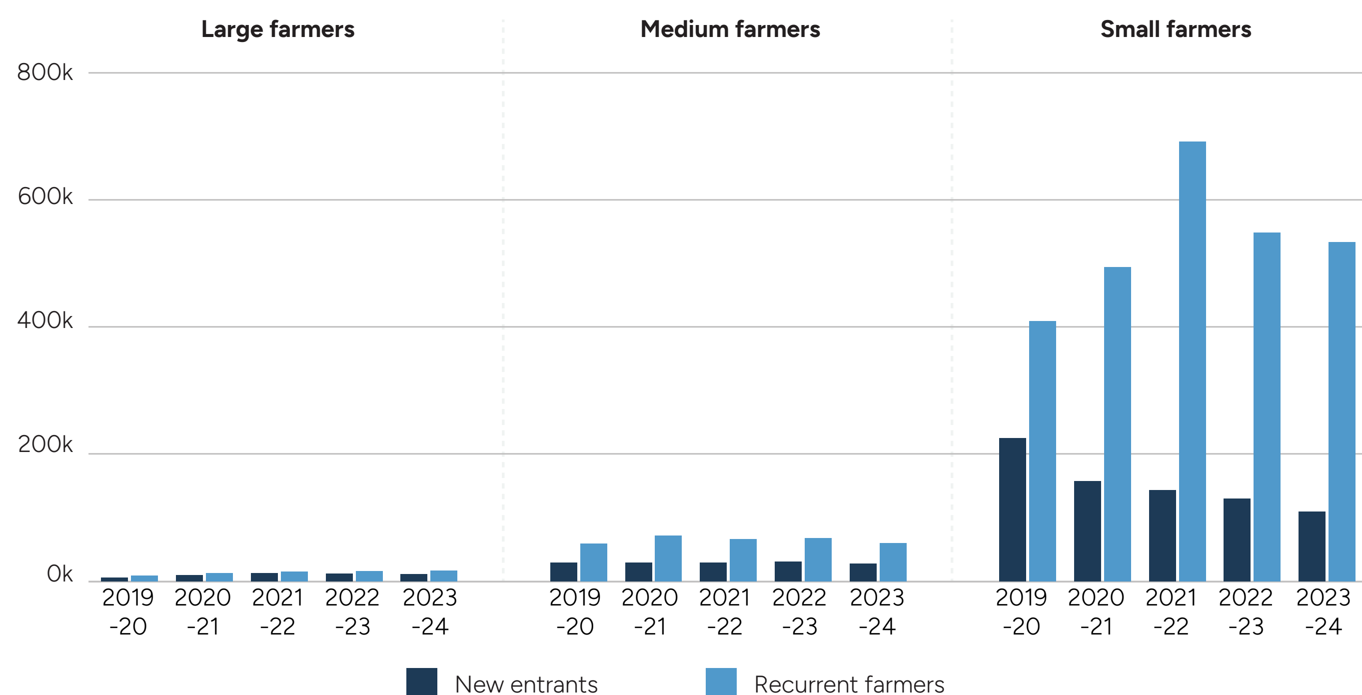
19 According to Decree 4,887/2003, quilombolas are ethnic groups with their own historical trajectories, endowed with specific territorial relationships, with presumed ancestry related to resistance to historical oppression.

gradually improve incentives for sustainable farming, based on a borrower's compliance with the Forest Code and the Native Vegetation Law, including farmers who are taking measures to become compliant. In addition to the Green Credit Bureau, other data also helps FSPs adhere to sustainable finance standards.[20]

However, and despite the wealth of information available for decision-making by lenders, credit to smallholder farmers has been decreasing over the years. Currently, it is estimated that 85 percent of small rural properties have no access to credit and that this number is even higher in poorer regions.[21] Figure 4 shows that while large farmers are increasing participation in rural credit that benefits from public subsidies, the number of new small farmers in this group has fallen from 263.8 thousand in 2019/2020 to 137.6 thousand in 2023/2024, despite the fact that family farmers represent 77 percent of all rural properties in Brazil. The fall was especially acute in the Northeast region, where the most vulnerable subsistence farmers are located. In this region, the number of new borrowers fell from 136.1 thousand in 2019/2020 to only 62.6 thousand in 2023/2024 (Figure 5).

Potential drivers of this downward trend include BCB's stricter requirements as well as a range of other contextual factors. Making CAR a regulatory requirement in 2019 may have excluded small farmers with no CAR or having had their CAR registration canceled or suspended, although this is not the only reason for the reduction in loans to family farmers. Likewise, properties located in conservation units, indigenous land, quilombola territory, public forests, or embargoed land due to illegal deforestation were

FIGURE 4. **Number of new entrants and recurrent borrowers with rural credit (with subsidies) by farmers' size**

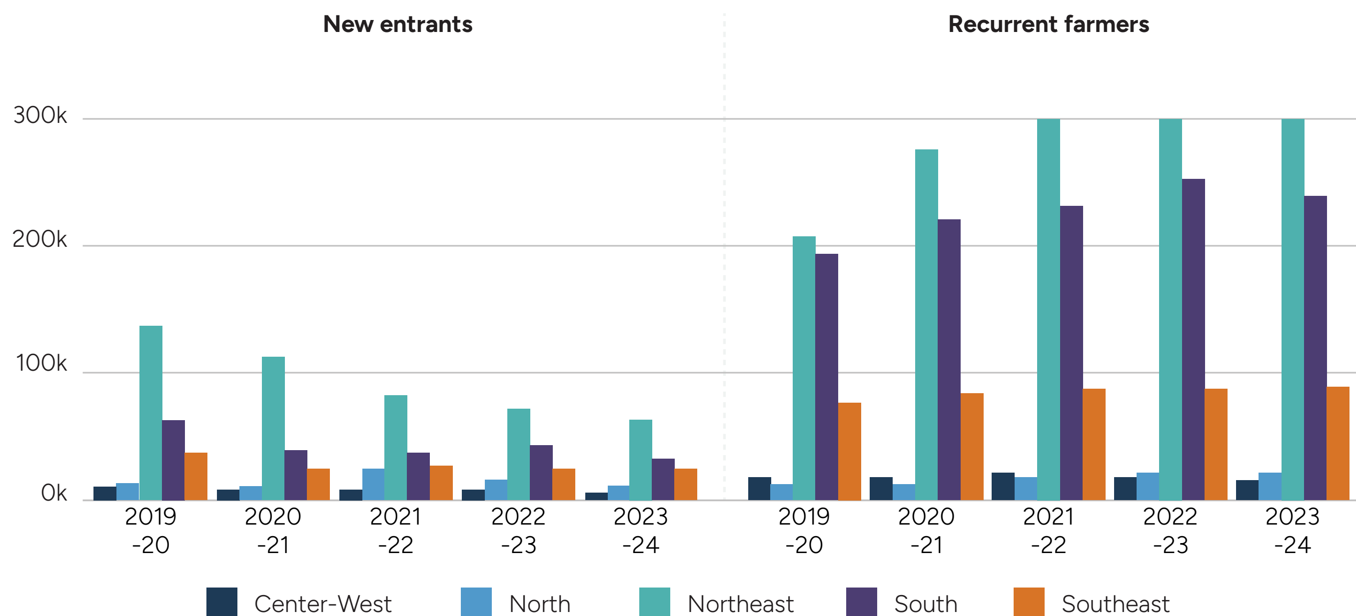


Source: Based on Sicor/BCB. Elaborated by Agroicone

20 One example is the National Emissions Registration System (SIRENE), which has comprehensive data about GHG emissions in sectors such as Waste, Agriculture, Land Use, Land-Use Change and Forestry, Energy, Industrial Processes, and the Use of Other Products.

21 Agroícone estimate based on SICOR data and total number of small rural properties in Brazil.

FIGURE 5. **Number of new entrants and recurrent farmers in Pronaf**



Source: Based on Sicor/BCB. Elaborated by Agroicone

all subject to increased scrutiny and potentially lost access to credit. Additionally, research shows that some socioeconomic factors correlate with increased access to rural credit, including the education level, the size of the rural property, participation in associative organizations, access to the internet and electricity, and adoption of best agricultural practices. Conversely, being a female, non-white, or old correlates to lower credit access. Finally, Pronaf programs have well-defined sustainability and resilience purposes, but the take-up is limited by challenges faced by farmers and FSPs:[22]

The challenge for the BCB is to maximize the benefits of increased compliance and control in a context where smallholder farmers face challenges that are beyond the BCB's remit. The BCB faces the trade-off between moral hazard and transaction costs: less control leads to abuse of government subsidies and does not provide incentives for the adoption of sustainable agricultural practices, while documentation and certification requirements increase transaction costs and complexity, especially for the most vulnerable. The challenges smallholder farmers face – such as no access to the internet to create a new CAR; no access to technical assistance to adopt sustainable farming – are largely outside the BCB's remit but impact the implementation of BCB regulations. The regulations, such as using CAR as a policy, regulatory and supervisory tool, have clear benefits for all stakeholders, including small borrowers, so it is crucial that the contextual challenges faced by smallholder farmers are fully and immediately addressed.

Except for rural credit regulation, there is little evidence of the impacts of the climate-related regulation listed in Table 4 above. However, our interviews suggest that the risk of financial exclusion is real. A study found that the 2017 regulations requiring large FSPs to incorporate social, environmental and climate into risk management and capital frameworks led smaller banks to reduce

22 These challenges have been well documented in the literature, and compiled by Agroícone for this report.

TABLE 5. **Challenges for family farmers and lenders in Brazil**

Challenges for farmers	Challenges for lenders
• Lengthy and complex bureaucracy to obtain documentation. • Requirement to get costly organic certification. • Perception that Pronaf's loan conditions are uninteresting due to higher transaction costs and time involved. • Lack of understanding of Pronaf rules and financing conditions. • Excessive delay in project approval, leading to withdrawal.	• Risk aversion and limited advertisement by FSPs of Pronaf lines. • Lack of knowledge about sustainable farming practices, which leads to loan repayment schedules and terms and conditions that do not fit the production process and cycle (e.g. investment in short-cycle crops such as corn, beans, and cassava, combined with the planting of trees, which are long-cycle).
Challenges for both farmers and lenders	
• Lack of knowledge of sustainable financing lines. • Low coverage of technical assistance to farmers for project construction and monitoring.[a] • Lack of knowledge about sustainable small scale farming practices such as agroforestry and agroecological projects.[b]	

a Technical assistance is a requirement for only some Pronaf lines but FSPs often require it for other lines. Technical assistance costs can be financed too, but the challenge is the availability of technical assistance for small farmers.

b Studies have shown that the lack of knowledge about sustainable farming practices such as agroforestry, by bank staff, has led farmers, who were looking to finance their green transition, to take up loan to continue with traditional farming. Another example is where lenders require investment in input packages incompatible with sustainable farming.

lending to SMEs and a reduction in SME employment (Faruk et al 2022). The FSPs we interviewed highlighted the risk of higher compliance costs that could render small-value loans unattractive, although concrete actions in this regard have not been reported. The risk of requiring excessive documentation from small farmers and MSMEs (e.g. for FSPs to meet disclosure standards) was also emphasized. Another concern is the risk of tightening credit conditions for whole sectors due to domestic and foreign taxonomies and simplistic sustainability measurements (e.g. GHG emissions), which could lead to knock-on effects in productive value chains upon which many vulnerable segments depend, or reduced credit for activities crucial to climate mitigation, adaptation, and resilience. FSPs also reported that the current state of knowledge and expertise in environmental and climate risk management, together with the risk of supervisory action and the reputation and litigation risks from increased disclosures, may lead FSPs to be more conservative.

Table 6 summarizes the pathways for potential and observed financial exclusion impacts of the climate-related regulation described above.

TABLE 6. **Financial exclusion impact pathways in Brazil**

Pathways	Description	Related regulation
New customer eligibility barriers	The requirement of verified CAR to access rural credit under the national policies, which, together with other requirements depending on the type of credit, can lead to excessive transaction costs and delays and could lead to the exclusion of small farmers.	Rural credit underwriting requirements.
	Requirement for borrowers to obtain organic or green certification for some rural credit lines.	Rural credit underwriting requirements
	The requirement for farmers to have technical assistance for project construction and monitoring for certain credit lines, in a context where technical assistance is not reaching most small farmers, including those seeking to transition to sustainable practices.	Rural credit underwriting requirements.
Reduced access to funding	International funders linking funding to climate-related objectives mostly dictated by the EU taxonomy. This leads FSP to prioritize financing activities and sectors that do not include activities that support resilience and adaptation of low-income communities and MSMEs.	EU taxonomy affecting funders, particularly multilaterals.
Capacity constraints	FSPs lacking proper social, environmental and climate risks management frameworks, as well as knowledge about adaptation and sustainable transition strategies of vulnerable communities (e.g. small-scale agroforestry systems) and MSMEs tend to impose requirements on borrowers in addition to those set in the regulation. Examples include green certification, technical assistance, and investment in unnecessary input packages.	Broad risk management obligations incorporating social, environmental and climate risks.
Increased supervisory scrutiny	FSPs (even those with high technical capacity) are likely to adopt conservative strategies to avoid supervisory scrutiny, even in the face of proportional regulations. This impact has been measured with regard to the 2017 regulation requiring large banks to incorporate social, environmental and climate risks into their ICAAP.	Broad risk management obligations, incorporating social, environmental and climate risks and capital (Pillar 2) requirements.
Increased litigation and reputation risk	Fearing potential drawbacks from increased public disclosure and control about lending operations, FSPs may avoid lending to borrowers in areas or sectors that could potentially create reputational and litigation risks, such as areas in or close to the Amazon biome and indigenous lands, or parts of the meat industry that adopt sustainable practices.	Disclosure requirements related to social, environmental, and climate factors (GRSAC report), and prudential reporting requirements.
Increased costs	FSPs reported the risk that increased overall costs involved in building specialized environmental and climate risk teams, methodologies, and systems, together with increased reporting and disclosure obligations and supervisory costs, could have a negative impact on small-value loans.	Broad risk management obligations incorporating social, environmental and climate risks and capital (Pillar 2) requirements, reporting requirements, IFRS S1 and S2.

Colombia

After an overview of the broader country context, this note outlines key aspects of Colombia's climate-related financial sector regulations and describes how they could impact financial inclusion, with a focus on MSMEs and low-income segments. The findings are based on a literature review and stakeholder interviews conducted in the first semester of 2024 with key stakeholders in Colombia.

COUNTRY CONTEXT

Colombia is a low contributor to global GHG emissions, accounting for just 0.40 percent of the global total,[23] but it is highly vulnerable to the impacts of climate change. The country is placed 38th in the long-term Global Climate Risk Index (GCRI) and 28th in the 2019 GCRI. According to the UNDP (2023), Colombia's primary natural disaster risks include flooding, earthquakes, drought, landslides, and wildfires, with floods posing the greatest economic burden. World Bank projections indicate that, without adequate adaptation measures, climate change could reduce Colombia's GDP by up to 2.5 percent by 2050, disproportionately affecting low-income populations (World Bank 2023d).

Still, Colombia has committed to an ambitious emissions reduction target, which has ramifications across all economic sectors, particularly agricultural and livestock activities. In 2020, Colombia updated its Nationally Determined Contribution (NDC)[24], committing to a 51 percent reduction in GHG emissions by 2030 and aiming for a net-zero, climate-resilient economy by 2050. Land-use sectors —encompassing land use and change, forestry, and agriculture— account for 59 percent of Colombia's GHG emissions which are driven by deforestation for the expansion of agricultural and livestock activities. Hence, transitioning to sustainable land use practices, better controlling deforestation, promoting reforestation, and improving climate-smart agriculture and livestock systems, are crucial for Colombia to meet its climate commitments. Beyond land use, other critical sectors include energy, transport, waste management, and industry.

Financial services play a critical role in fostering a climate transition and adaptation efforts and increase resilience of vulnerable groups like rural communities and MSMEs, but these groups continue to face challenges in accessing credit. Colombia's smallholder farmers, who comprise a large portion of the agricultural sector, often lack access to financial services, particularly credit, which hinders the adoption of climate-smart agriculture technologies and sustainable practices. This contributes to the sector's low productivity, reinforcing a deforestation cycle: nearly three-quarters of the increase in agricultural production between 2001 and 2021 was achieved by geographical expansion rather than improvements in productivity (World Bank 2023d). Additionally, the complex connections between land use, Colombia's peace efforts, and rural job creation underscores the need for integrated solutions.

CLIMATE-RELATED REGULATION AFFECTING CREDIT PROVISION

The Financial Superintendence of Colombia (SFC) has followed a phased approach to integrating climate-related risks and opportunities into the regulatory framework. The SFC is the integrated supervisory authority for the financial sector, overseeing banks, financial intermediaries, insurance companies, securities, and pension funds. It has applied the principles to gradually and proportionally regulate climate action, by conduction research on international development practices and engaging in extensive

23 Ranking 40th worldwide, according to the EDGAR database (Emissions Database for Global Atmospheric Research, 2022).

24 According to the United Nations, Nationally Determined Contributions (NDCs) are climate action plans established by each party to the Paris Agreement to set targets for mitigating GHG emissions and adapting to climate impacts. These plans, which must be updated every five years, define how each country will achieve the targets.

consultations with FSPs to better understand the local context, including the identification and measurement of environmental and social risks in the financial system. SFC published its first biennial survey on climate-related risks and opportunities in 2018; set up a dedicated team and joined the SBFN in the same year and joined the NGFS in 2019. These actions were complemented by measures to facilitate innovation, improve data availability and transparency, test regulatory and supervisory tools, and build capacity in the sector. Also, in 2020 the SFC became a permanent member of the Financial Management Committee,[25] helping articulate and coordinate measures to implement the National Climate Finance Strategy, that aims to ensure funding for climate adaptation and mitigation action.

SFC's first climate-related regulations came in 2021 and SFC has allowed FSPs to gradually implement the new standards that evolve from voluntary guidelines to mandatory rules. Most measures to date continue to be non-binding for FSPs but are increasingly being turned into mandatory instruments. This approach gives time for FSPs to gradually adapt their practices, avoiding sudden increases in compliance costs and technical challenges in regulatory implementation.[26] The only binding regulations indirectly affecting credit provision are Circular 31/2021, which mandates sustainability-related disclosures aligned with the standards set by the Task Force on Climate-related Financial Disclosures (TCFD) and the Sustainability Accounting Standards Board (SASB). This regulation is applicable only to large companies issuing instruments in the capital markets. Additionally, External Circular 005/2022, requires FSPs to align their disclosures of green operations with Colombia's Green Taxonomy (Taxonomía Verde de Colombia –TVC), or otherwise explain any difference. Another key instrument is the (non-binding) 2022 ESRM Guidelines that provide guidance on governance, climate risk management, and financial risk disclosure for credit institutions. A consultation paper was issued in 2023, with the intent of turning the ESRM requirements into mandatory regulation in 2025.

The Colombian government launched the TVC in 2022, which was quickly incorporated into SFC regulation.[27] The TVC's initial focus is on climate change mitigation goals, with adaptation and resiliency goals being left for a subsequent stage. The SFC quickly followed with the External Circular 005/2022 to require FSPs to align with the TVC (or explain any disparity), and the (non-binding) 2023 Green Taxonomy Guidelines for Credit Institutions in 2023. The SFC published a comparison between the EU taxonomy and the TVC aimed at facilitating the interoperability between both taxonomies for disclosure of aligned activities.

Table 7 summarizes the evolution of SFC's climate-related regulations affecting credit provision.

SFC has taken other measures to complement the above framework. In 2022 and 2023 the SFC issued a few circulars to promote and support green finance. In 2024, FSP incorporated an adverse climate scenario into the stress tests conducted within the supervisory framework. Also, the SFC is developing a sustainability dashboard to track progress on: i) FSPs' exposure to climate risks through financing and investment; ii) FSPs sustainability measurement; and iii) financing of projects to achieve the Sustainable Development Goals (SDGs). Other SFC measures include the Technical Document on Best Practices for Green Bond Issuance (2020) and the 2023 Supervisory Expectations on the management of climate risks and opportunities for the insurance sector.

25 The Financial Management Committee (Comité de Gestión Financiera - CGF) is part of Colombia's National Climate Change System (SISCLIMA), which coordinates climate-related policies across sectors, bringing together public and private actors to integrate climate change considerations into the country's financial planning.

26 SFC's latest biennial survey found significant progress in the adoption of the non-binding instruments.

27 The drafting of the TVC counted with technical support from the IFC, the World Bank, and the SBFN.

TABLE 7. **Summary of the SFC's climate-related regulation**

Year	Regulation	Main aspects covered
Requirements to address risks		
Broad risk management obligations / governance / stress testing and scenario analysis		
2022	Non-binding: SFC Technical Paper on Climate Risk and Opportunity Management (2022 ESRM guidelines)	Supervisory expectations regarding the management of environmental and social risks covering 4 dimensions: i) governance and strategy in the face of current and potential impacts, positive and negative, from climate change; ii) management of environmental and social risks (identification, measurement, monitoring, mitigation and reporting); iii) use of prospective tools such as scenario analysis and stress testing; iv) disclosure of information on risks and opportunities. Integration of the above in the SFC's risk-based supervision is foreseen for 2025.
Stress testing and scenario analysis		
2024	Circular letter 28 (binding)	Requires integrating an adverse climate scenario into the 2024 stress test conducted within the supervisory review framework.
Disclosure requirements		
Risks and opportunities disclosures / sustainability reporting standards		
2021	SFC External Circular 031 (binding)	(I) Issuers required to disclose social and environmental information, including climate exposures as per TCFD and SASB standards. First disclosures must be done in 2024. A 2-year implementation period is allowed for new issuers. IFRS S1 and IFRS S2 will replace the use of TCFD and SASB standards once the SFC incorporates these into regulation.
Green taxonomy		
2022	SFC External Circular 005 (binding)	Adoption of the first phase of the Colombian Green Taxonomy (Taxonomía Verde de Colombia – TVC). The TVC includes more than 50 green activities that focus on: 1) climate change mitigation across seven sectors (energy, construction, waste management and emissions capture, water supply and treatment, transportation, information and communication technologies, and manufacturing); 2) five cross-cutting environmental objectives (climate change mitigation, climate change adaptation, land management, biodiversity and ecosystem services, and water management) covering three land-use-related sectors (livestock, agriculture, and forestry). Financial products can only be disclosed as green when they are fully aligned with the TVC. There is ongoing work to better integrate climate adaptation and biodiversity protection and restoration objectives into the TVC.
2023	Non-binding: Green Taxonomy Guidelines for Credit Institutions	Guidelines for the implementation of the Colombian Green Taxonomy in the management of green loans.

Self-regulation has also been key in guiding implementation of SFC climate-related regulations by FSPs, including key non-binding instruments such as the 2022 ESRM Guidelines. Since it joined the SBNF in 2012, Asobancaria, the bank association, has made substantial progress in promoting sustainability among its members. It develops toolkits and protocols that, despite their voluntary nature, are observed by a significant number of members. Key initiatives include: i) the Green Protocol issued in 2012 and updated in 2022; ii) the General Guidelines for the Implementation of Environmental and Social Risk Analysis and Management (SARAS, in its Spanish acronym) introduced in 2016 and updated in 2021; iii) the 2023 Guidelines for Risk Management of Deforestation; iv) the 2023 Net Zero Calculator; and v) the 2024 Social Protocol. SARAs is especially relevant, since it provides guidance for FSPs to improve management of environmental and social risks, effectively working as a precursor of SFC's ESRM binding regulation planned for 2025.

Finally, there are various public support instruments to promote agricultural credit through national development banks, such as Finagro and Bancoldex. These programs facilitate credit access by low-income populations in the agricultural sector and among MSMEs, helping support their transition to a low-carbon economy. There is also the Agricultural Guarantee Fund (FAG), as well as incentives for agricultural insurance and the Rural Capitalization Incentive (ICR), a non-reimbursable financial incentive for farmers and agricultural enterprises.

FINANCIAL INCLUSION IMPACT OF CLIMATE-RELATED REGULATIONS

Financial inclusion is fundamental for SFC's sustainability mandate, which emphasizes preventing the exclusion of "less profitable and more vulnerable" sectors, such as rural and low-income households, and MSMEs. Financial inclusion is also central to the mandate of Colombia's national development banks, which prioritize support for underserved populations and sectors, particularly the rural sector and, more broadly, MSMEs.

It is early days to measure the impact of climate-related regulations in Colombia, but emerging evidence points to real risks of exclusion, with the taxonomy playing a major role. For instance, the implementation of the TVC could have exclusionary impacts due to its initial focus on mitigation. Although FSPs are not required to only finance activities in the TVC, funders such as multilateral organizations and international investors are increasingly prioritizing taxonomy-aligned activities, meaning that the adaptation and resilience needs of vulnerable segments, including smallholder farmers and MSMEs (which represent 98 percent of Colombia's enterprises), are not prioritized at least for the time being. SFC pilots have confirmed that FSPs face significant challenges in applying the TVC to extend credit to these segments, including:

- **Lack of alignment between the current focus on adaptation and the financing needs of vulnerable segments**. The TVC's initial green eligibility and impact measurement requirements are not well-aligned with the financial realities of MSMEs, many of which operate on a subsistence level. For instance, MFIs are working to improve their SARAS (see Table 7) to meet the standards for accessing green funds. However, their clients' immediate needs are often working capital and investment to sustain or grow their businesses. Identifying green opportunities as defined in the taxonomy is challenging when an MSME's survival is at risk.
- **Geographical, demographic and infrastructural barriers.** Colombia's geography and its dispersed population, coupled with insufficient transportation infrastructure, present significant obstacles for FSPs to access the most vulnerable productive units in rural areas to perform verification and measurement tasks required by TVC implementation.
- **Lack of knowledge, by MSMEs and FSP branch staff, about green finance.** For example, while green financing could help mitigate the effects of Colombia's extreme weather patterns such

as droughts and floods, MSMEs and smallholder farmers often do not view it as a viable or desirable option due to their more pressing financial needs.

- **Capacity constraints.** Verifying environmental and social eligibility conditions set in the TVC and measuring the impact of the financed activities towards adaptation goals prove very difficult and costly, even when FSPs use alternative measurement methods (proxies) approved by SFC. Building capacity within FSP branch networks and correspondents to perform green verification and impact measurement tasks has proven to be a significant challenge, particularly in rural and remote areas. Even relatively simple tasks, such as using mobile applications to verify if the property being financed overlaps with a protected area,[28] have been difficult to implement.
- **Lack of borrower compliance with environmental and other laws.** Informality is widespread in Colombia, with over 50 percent of workers being informally employed. MSMEs, including formal ones, also fail to comply with laws such as environmental laws. Weak enforcement, combined with the limited resources of MSMEs, are key reasons of low compliance, making many potentially viable green finance projects that could benefit green funds, ineligible for recognition under the TVC.

Table 8 summarizes the pathways for potential and observed financial exclusion impacts of the climate-related financial regulation described above.

28 Protected areas in Colombia are regions designated for the preservation of natural ecosystems, biodiversity, and cultural heritage. These areas are legally protected and managed by the government or other entities to conserve their environmental value and prevent harmful human activities such as deforestation, resource extraction, and habitat destruction. Colombia's protected areas system is extensive, covering national parks, nature reserves, and wildlife sanctuaries.

TABLE 8. **Financial exclusion impact pathways in Colombia**

Pathway	Description	Related regulation
New customer eligibility barriers and Increased costs	Certain areas are protected by law but the FSP have no tools to verify the boundaries between these areas and properties seeking finance. Since the environmental agencies do not provide effective means for FSPs to verify whether rural properties seeking finance are inside protected lands, FSPs are unable to verify the legal compliance of a property or need to spend extra resources with alternative verification methods. This impacts credit provision near the boundaries of protected areas, particularly impacting smaller loans to rural MSMEs.	• SARAS (self-regulation) • 2022 ESRM Guidelines, which are expected to be substituted by mandatory requirements in 2025.
New customer eligibility barriers and Increased supervisory scrutiny	Definition by law of an agricultural frontier (delimitation of the area that can be used for agriculture) but this definition cannot be used by FSPs for credit decisions. This inconsistency creates uncertainty for FSPs implementing the 2022 ESRM Guidelines and the SARAS (self-regulation), affecting credit provision to rural MSMEs. Effective implementation of these regulations could steer FSPs away from high-risk operations, which in this case could include small farmers located outside the agricultural frontier.	• SARAS (self-regulation by Asobancaria) • 2022 ESRM Guidelines, which are expected to be substituted by mandatory requirements in 2025.
New customer eligibility barriers	MSMEs, most of which are informal enterprises, struggle to comply with the requirements of the environmental law. The effective implementation of the 2022 ESRM Guidelines and SARAS (self-regulation) could lead to further contraction of credit provision to MSMEs due to this lack of compliance.	• SARAS (self-regulation by Asobancaria) • 2022 ESRM Guidelines, which are expected to be substituted by mandatory ESRM requirements in 2025.
Reduced access to funding	International funders engaged with FSPs in Colombia are already linking their funding to climate-related objectives, by tying funds to TVC assessment criteria that are currently focused on mitigation rather than adaptation and resilience objectives (which are more relevant for MSMEs and vulnerable segments). Hence, access to funds is reduced or shifted to support lending to the corporate segment.	• TVC.
Capacity constraints	Educating FSP branch staff and MSME clients, about the need to implement climate-related regulations including the 2022 ESRM Guidelines and the SARAS (self-regulation), as well as the TVC measurement requirements, has been challenging for FSPs, especially in rural and remote areas. Challenges arise even for simple tasks like using mobile applications to verify protected areas. This leads FSPs to be conservative, potentially restricting credit to MSMEs.	• SARAS (self-regulation by Asobancaria) • 2022 ESRM Guidelines, which are expected to be substituted by mandatory ESRM requirements in 2025.