

Climate Finance Landscape

In Colombia

March 2022

The Climate Finance Landscape

Colombia Summary

The Climate Finance Accelerator (CFA) is a £10 million capacity building programme funded by International Climate Finance through the UK Government's Department for Business, Energy, and Industrial Strategy (BEIS). The programme runs in eight emerging economy countries, which includes Colombia. The CFA is supporting Colombia to develop a sustainable pipeline of bankable, low-carbon projects, and is identifying suitable financing options for those projects. The programme will also embed a permanent CFA process in Colombia that can continue to identify financing for low-carbon projects in order to support efforts to achieve the country's Nationally Determined Contributions (NDC) and to raise its overall climate ambition.

The following document provides an overview of the climate finance landscape in Colombia, including the supply and demand of finance for low carbon investments and barriers and enablers to access and mobilise funding – all taking into account gender equality and social inclusion (GESI) and 'Just Transition' considerations. It also provides insights and recommendations for the permanent implementation of the programme in the country.



Country profile

The following section provides an overview of the political, economic and social context in Colombia. Analysing these factors will help the CFA to understand the current landscape and the related risks and opportunities.

Demographics and the economy

During 2020, Colombia's gross domestic product (GDP) contracted by -6.8% due to the negative effects of COVID-19 on the economy. The sectors that contributed the most to this were trade, transport and tourism, which each experienced a contraction of around -5.1%; construction (-27.7%); and mining and quarrying exploitation (-15.7%) (PwC, 2021). Few sectors presented a positive trend: one of these was the AFOLU sector, where production increased by 3 percentage points compared to 2019 (2.6% in 2020 and 2.3% in 2019). Inflation also decreased at a lower rate than the Bank of the Republic's goal, according to which inflation limits should fluctuate between 2% and 4%, with an inflation target of 3%; by contrast, by the end of 2020 inflation was 1.61% (PwC, 2021).

Colombia's economy is still recovering from the effects of the COVID-19 pandemic. The Bank of the Republic of Colombia forecasts economic growth of 6% by the end of 2021, which would present an improvement considering that before April 2021 it was 4.6%. According to the Bank, more dynamic economic activity, an expected increase in public spending, and increases in the prices of some export products will contribute to this higher GDP forecast. In addition, monetary policy has been managed with low interest rates to boost investments and spending, and consumer confidence has also been rising (Banco de la República, 2021). The unemployment rate is expected to decrease at a moderate pace: the forecast by the end of the year is between 12.8% and 15.0% (Banco de la República, 2021).

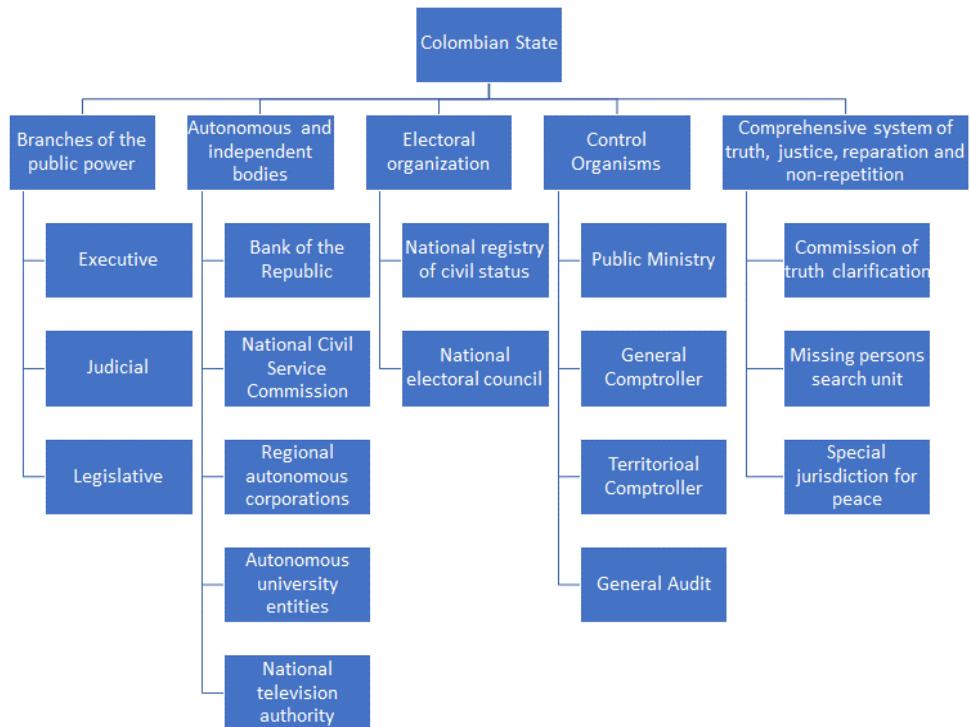
Beyond the economic impacts, COVID-19 has also had socio-economic impacts. For example, the gender gap increased during 2020. Furthermore, there was an increase of 1.5 percentage points in the informal employment rate (PNUD, 2021). In addition, income has decreased, and poverty and inequality have risen (PNUD, 2021).

Political and legal framework

Colombia's state is made up of the three branches of public power (executive, legislature and judiciary), together with autonomous and independent bodies, the electoral organisation, the control organisms, and the comprehensive system of truth, justice, and non-repetition.

The Government (the executive branch) is currently led by President Iván Duque Márquez. Elections are held every four years, and the next elections (for president and vice-president) will be held on 29 May 2022. If the president and the vice-president do not together obtain half plus one of the valid votes, a second round of elections will be held. The legislation period lasts for four years.

Figure 1. State structure. Source: Authors' creation, using information from the Función Pública (n.d.)



Ease of doing business

The World Bank's Doing Business Index considers the ease of doing business in a given country. As stated by the World Bank: 'The ease of doing business score measures an economy's performance with respect to a measure of regulatory best practice across the entire sample of 41 indicators for 10 Doing Business topics' (World Bank, 2020). The highest score is 100, meaning that the country provides a perfect environment for doing business. According to the Business Report 2020, Colombia received a score of 70.1 and ranked 67 out of the 190 assessed economies.

Despite entering its first recession since 1999 due to the impacts of COVID-19, Colombia's strong institutions and relatively robust pre-coronavirus economy put it in a better position than many countries in the region as regards bouncing back in 2021. The Colombian Government is continuing to work on improving its business climate; however, corruption and ensuring the fulfilment of indigenous rights remain challenges (World Bank, 2020).

Key GESI issues

In 2016 the peace agreement between the Government and the FARC-EP was signed, aiming to end 'decades of civil war and to make progress on improving economic and social conditions'. However, in some regions of the country hostilities and armed violence continue, with significant humanitarian impacts and protection challenges. More than 400,000 people have been newly displaced as a result of conflict since the agreement. (Office for the Coordination of Humanitarian Affairs (OCHA), n.d.). In addition, according to the Peace Special Jurisdiction, more than 900 social leaders have been killed since 2016. In the first semester of 2021, 48,597 Colombian people were displaced, a higher

number than in 2020. Only 21% of displaced people have been able to return to their homes (OCHA, 2021).

Regarding gender equality, it is important to highlight that Colombia has made significant progress towards gender equality in recent years and is reported by the WEF to have achieved gender parity (WEF, 2020). The country's commitment to gender equality is reflected, for example, in the ratification of all current international treaties on human rights and women's rights. Furthermore, Colombia ranked 22nd out of 153 countries in the WEF's 2020 Global Gender Gap Index, up from 40th out of 149 countries in 2018 (WEF, 2020). Although several laws have been put in place to address violence against women, such violence has increased during the COVID-19 pandemic. In 2020 – which saw six months of lockdown – 229 femicides were recorded.

Regarding poverty and inequality, Colombia has made great strides in reducing poverty, yet inequality persists. For example, the NBI has been reduced from 27.7% in 2005 to 14.28% in 2018. However, Colombia remains one of the countries with the highest levels of income inequality and labour market informality in Latin America (World Bank, 2020). Furthermore, while the country has more than halved extreme poverty over the past 10 years of Colombia's 50 million people, 35% live below the national poverty line (World Bank, n.d.) and gaps between urban and rural areas persist. For example, in 2017, extreme poverty was over three times higher in rural areas than in urban areas (World Bank, 2018). The Government's National Development Plan aims to remove 1.9 million people from extreme poverty and 2.4 million from monetary poverty. Prior to the COVID-19 pandemic, President Iván Duque Márquez set a target to reduce the national unemployment rate from 9.4% to 7.9% with the creation of 1.6 million jobs, a target that would see unemployment fall to its lowest rate since the 1990s. However, unemployment and poverty levels have risen due to the impacts of the pandemic.

Climate change priorities, strategies and institutions

The vision and the action framework for Colombia's climate governance is established under the National Policy for Climate Change (NPCC), which was approved in 2017 (SISCLIMA Financial Management Committee, n.d.; Ministerio de Ambiente, n.d.). This policy aims to include climate change in public and private decisions taken to achieve low-carbon development and an economy that is resilient to climate change (SISCLIMA Financial Management Committee, n.d.). The policy sets the pathway for a carbon-neutral economy, by defining short-, medium- and long-term goals to reduce GHG emissions, increase carbon sinks and reduce losses due to climate change. It has four instrumental lines: climate change management planning; information, science, technology and research; education; and finance and economic instruments (SISCLIMA Financial Management Committee, n.d.). At a regional level, climate change is considered in the instruments for sectoral and territorial planning, through the definition of Comprehensive Climate Change Management Plans at the sectoral (PIGCCS) and territorial (PIGCCT) levels.

Furthermore, in 2016, through Decree 289, the National Government approved the National Climate Change System (*Sistema Nacional de Cambio Climático*) (SISCLIMA), whose objective is to coordinate, articulate, formulate, monitor and evaluate the policies, norms, strategies, plans, programmes, projects, actions and measures regarding climate

change adaptation and mitigation. It is defined as the aggregate of the private and public sector, as well as policies, norms, process, resources, plans, strategies and instruments that manage GHG mitigation and adaptation to climate change in the country. SISCLIMA includes a Financial Management Committee, the purpose of which is to 'generate the public policy guidelines for the inclusion of climate change criteria in the economic and financial planning of the country' (DNP, n.d.).

SISCLIMA assesses the need for, and availability of, financial resources to achieve the country's NDC (SISCLIMA, 2018). According to the Strategy, the total investment needed to achieve Colombia's goal for GHG emissions reduction is Colombian Pesos (COP) 57,400 billion, equivalent to COP 3,100 billion annually. However, current financial resources available for climate change mitigation and adaptation projects are only COP 780 billion annually. This means that Colombia's investment gap is COP 2,300 billion annually (SISCLIMA, 2018).

Although this is a preliminary estimation, this investment gap shows the need to increase and to better allocate investment resources in climate-driven projects to achieve Colombia's NDC. However, there is a lack of good projects in most sectors, with a great need to develop financeable and sustainable ('bankable') projects to achieve the targets. At a national level, the financial needs of the country are defined based on the mitigation and adaptation goals (SISCLIMA Financial Management Committee, n.d.). The country's financial perspective is framed in the mobilisation of resources needed for complying with the NDC (SISCLIMA Financial Management Committee, n.d.). In 2020 Colombia updated its NDC goals, setting a target of a decrease of 51% in its GHG emissions by 2030. This was an ambitious goal considering that the first NDC, presented in 2015, targeted a reduction of 20% for the same time period, and a maximum of 30% if international aid was received. The goals set by the country are considered some of the most ambitious not only within the region but in the whole world (WWF, 2021).

To achieve the NDC, the country has defined more than 30 adaptation and 148 mitigation measures. One measure is limiting the deforestation rate to a maximum of 50,000 hectares per year by 2030, which will require a great effort considering that in 2020 the rate of deforestation was 171,685 hectares (WWF, 2021). Specific initiatives have been defined for the energy, transport and AFOLU sectors, among others. In addition, the update to the NDC also considers the vehicles for executing the actions required to achieve the goals (Ministerio de Ambiente, n.d.). The NDC also integrates considerations that are transversal to climate change action, such as human rights, intergenerational equity, gender equality and the empowerment of women, a differentiated approach for ethnic communities and vulnerable populations, the protection of biodiversity, safeguarding food security and eradication of poverty, and sustainable production and consumption, among others (Ministerio de Ambiente, n.d.). This promotes the consolidation of the country's efforts to achieve its objectives of development, peace, equity and education in the medium and long term (Ministerio de Ambiente, n.d.).

Demand-side analysis

Based on the pilot phase of the CFA pilot (2019 -2020), three sectors were selected as a focus for CFA Colombia: energy, transport, and AFOLU.

Sectoral analysis

The objective of the demand-side analysis is to ensure that the CFA works in prioritised sectors for climate change mitigation in the country and to provide information to ensure projects can be evaluated in a comparative and evidence-based manner. The structure, government participation and relevant data were analysed for the priority sectors. Additionally, the mitigation potential of these sectors and their pathways towards decarbonisation was considered and described in reference to the country's NDC and priorities for each sector. Moreover, the Energy, Transportation and AFOLU sectors are prioritised not only for their GHG emissions mitigation potential but also because they represent a significant portion of the Colombian economy with great potential for attracting national and international investors.

Energy sector

The energy sector in Colombia draws on the abundance of natural resources in the country to supply the growing energy demand. The energy sector can be divided into three main sub-sectors: Mining, Oil and gas and Electricity. An important source of the country's revenue today is the export of oil, coal and mining products, representing more than 50% of the national exports in the last year and the main source of regional royalties. Regarding the electricity sector, the energy market has been open since the early 90s to private stakeholder participation. The Government plays a role primarily in regulation and planning. Recently, the electricity sector has evolved according to sustainability principles, aiming to diversify the energy supply, limiting its reliance on hydroelectric power and moving towards higher integration of renewable sources in the coming decades.

In the same way, the energy sector can play a key role in contributing to the country's decarbonisation, as it is targeted by specific actions in the latest update of Colombia's NDC. The measures adopted for mitigation, and their potential, are featured in the Comprehensive Climate Change Management Plan for the Energy and Mining Sector (PIGCCme). The mitigation potential of the energy sector can vary between 2.48 Mton CO₂eq and 12.38 Mton CO₂eq according to different mitigation scenarios. The energy sector is responsible for around 30% of the national GHG emissions with important participation in the energy demanded by the transport, manufacturing and construction sectors.

The Colombian policy and regulatory framework developed has been focused on renewable energy and energy efficiency. The Government has taken significant steps forward in the adoption of fiscal incentives and investment programmes in these areas. According to the WEF, Colombia is the Latin American country which has made the greatest progress towards the energy transition: from 2019 to 2020, it climbed nine positions in the WEF Energy Transition Index, from 34 to 25 (WEF, 2020).

We assessed the technological and commercial maturity of the renewable energy technologies outlined in the current regulation and policy framework. The most mature technology is large-scale hydroelectricity, being the main stone of the national electric system. This technology is followed by solar energy and onshore wind, which have experienced accelerated growth in the last years and have excellent prospects to continue to grow in the coming years. Regarding Energy Storage, the current situation of the transmission infrastructure has presented an opportunity to develop Battery energy storage systems (BESS) in the country. Offshore wind, Geothermal and Green hydrogen are the least mature of the assessed technologies. However, there are already private initiatives and some interest from the government to support these technologies as they are seen as relevant to the Colombian decarbonization pathway.

The commercial assessment for the energy sector shows that its overall commercial maturity can be rated as green, indicating the sector's readiness to integrate low-carbon technologies and measures at different scales within the energy and electric supply chain. The latest research indicates that the sector has achieved a level of commercial maturity that is sufficient to meet the mitigation goals under the country's international commitments.

According to the update of the Colombian NDC, there are two specific actions for the electricity generation measure: (1) energy matrix diversification; and (2) transformation of the off-grid regions. Firstly, the analysis identified that energy matrix diversification offers potential for emissions mitigation. Secondly, we identified that the transformation of the off-grid regions would reduce inequalities and improve the quality of life of remote communities. We believe that the second NDC action point can provide the following benefits; the promotion of distributed generation, increased energy competitiveness, and the participation of small-scale self-generation.

Transport sector

The transport sector in Colombia presents many opportunities to incorporate low-carbon technologies. According to the national inventory of GHG emissions, the transport sector is one of the largest contributors to emissions in the country and one of the prioritised sectors in Colombia's NDC. For this reason, the Government has developed different strategies to promote the updating of the transportation fleets. Nevertheless, there are various barriers that limit the transition to low-carbon transportation in Colombia. The principal barrier is the non-competitive cost of these technologies compared with conventional fossil-burning vehicles (UPME, 2020). Although in 2020, acquisitions of electric cars increased considerably in comparison with previous years, due to the launch of Law 1964 of 2019, the cost involved means that acquisitions of this kind are only possible for families with higher incomes (Torres et al., 2020). Regarding electric freight transport, between 70% and 80% of the automotive cargo fleet in the country is in the hands of small owners who have unstable incomes. This generates uncertainty and therefore limits new investments in low-carbon technologies. The situation is worsened due to the high cost of low-carbon technologies and the restricted access to credit for cargo truck owners and drivers (UPME, 2020). Finally, the lack of infrastructure for this kind of transport reduces people's confidence in this area, leading them to avoid purchasing electric vehicles due to the lack of support for operating these vehicles (UPME, 2020).

In recent years, Colombia has had an improvement in the adoption of electric transport technologies, leading to opportunities to diversify the transport sector. The primary opportunities are electric cars for private and public use, freight transport and the immersion of mass public transport modes such as electric buses and trains.

The market for electric vehicles in Colombia has been growing recently due to different government incentives aimed at promoting technological advancement of the country's automotive fleet. We assessed the technological and commercial maturity for electric cars, electric trucks and mass public electric transport, providing a RAG rating for each transport mode. Although the technological maturity is relatively high for all of the above, commercial maturity still has some barriers to overcome. These barriers include; the lack of financial access, low economic competitiveness compared with internal combustion vehicles, and the nascent penetration of electric public transport in cities.

The commercial maturity assessment for the transport sector shows the interest of investors in the sector has been increasing thanks to the country's regulatory framework, and that the transport sector has many opportunities to incorporate low-carbon technologies.

Transportation is one of the priority sectors within Colombia's NDC and a sector where further mitigation strategies should be developed. However, there are still gaps that can be addressed by the CFA to help support the country to achieve its mitigation goals.

AFOLU sector

The AFOLU sector was one of the few sectors that presented a positive picture in 2020, growing by 3 percentage points from 2019 to 2020. This growth was primarily driven by a rise in fishing and aquaculture, agricultural crops, plant propagation, support activities for agriculture and livestock, and hunting – sub-sectors that all saw growth compared to 2019.

The AFOLU sector was identified by the Green Growth Policy (CONPES 3934/2018) as one of the key sectors for boosting green growth in Colombia. The policy recognises the importance of bioeconomy and forest development as new sources of sustainable growth compatible with the preservation of natural capital (DNP, 2018). Colombia is the second most biodiverse country in the world, which gives it a comparative advantage for the production of new cosmetic, chemical, pharmaceutical and food products from biodiversity and residual biomass generated through the application of knowledge and innovation.

Despite its great potential to promote green growth, there are currently inefficiencies in the use of natural resources, including soil, water, fertiliser and pesticide, which result in competitiveness and productivity problems (DNP, 2018). For example, agricultural activity consumes more than half of Colombia's water supply (55%) but only generated 6% of GDP in 2016. For every cubic metre of water used, the country produces US\$ 18.1 of food production, while other middle-income countries in Latin America produce US\$ 20.3, and OECD countries produce US\$ 114.4 (FOLU, 2019). Additionally, approximately 16% of the country's soils are over-exploited, and 13% are under-utilised (DNP, 2018b). This generates very low land productivity: while Colombia produces US\$ 33,000 per km² of

arable land, OECD countries produce an average of US\$ 179,000 (DNP, 2018).

The Colombian countryside is highly vulnerable to climate change: it is estimated that climate change could lead to a 7.4% decrease in agricultural productivity due to changes in rainfall and temperatures (MinAmbiente, 2017). At the same time, AFOLU is the sector with the highest GHG emissions and thus is prioritised in the NDC measures. Colombia is already engaged in the FOLU Coalition, which aims to transform food systems and land use into drivers of sustainable growth and a regenerative economy. Moreover, the country has developed a legal, institutional and political framework for supporting the sustainable development of the AFOLU sector.

Investment opportunities have been identified in the sector. These include processed foods, cocoa, cocoa by-products and chocolate, fruits and vegetables, livestock, commercial plantation forests, and the palm industry. These areas are seeing increasing participation in international markets.

A lot of work is needed to decrease GHG emissions from the AFOLU sector, and different programmes and policies are being implemented to this end. There remains an urgent need to reduce extensive livestock, unproductive crops, accelerated deforestation, large inefficient subsidies, unhealthy diets, and increased imports (Centro de los Objetivos de Desarrollo Sostenible para Latinoamérica (CODS), 2021). To do this, it is important to 'value the multidimensional role of agrobiodiversity, which makes it possible to combat malnutrition, create new value chains and increase resilience and contribute to ecological restoration' (CODS, 2021).

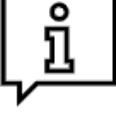
Enabling environment analysis

This subsection presents the analysis of the main barriers to and enablers of climate finance in Colombia regarding the three priority sectors: energy, transport and AFOLU. The analysis found that the barriers and enablers are interrelated, and one specific barrier/enabler can be identified in more than one category, therefore they may not be exclusively ranked solely in one sector. The RAG rating was used to define the issues as either a barrier (red), an enabler (green), or a barrier that has been addressed by the Government, with significant progress achieved (amber).

Figure 2 shows that the enabling analysis classified by the following categories

- policy, regulatory and institutional;
- financial and economic;
- technology and market;
- information and capacity; and
- social, cultural and behavioural.

Figure 2. Identified barriers to, or enablers of, the development of the CFA programme in Colombia

Barrier	Enabler	Energy	Transport	AFOLU
Policy and Regulatory 	Existence of the National Climate Change System (SISCLIMA)	Green	Green	Green
	Colombia is attractive for international investment in low-carbon technologies due to the regulatory framework	Green	Green	Green
	There is no regulatory requirements for the incorporation of the climate change in the investment decisions	Orange	Orange	Orange
	Escazú Agreement project has not been approved by the government	Red	Red	Red
Financial and Economic 	Tax incentives framework for environment investment	Green	Green	Green
	Some financial institutions already have targets on climate finance	Green	Green	Green
	High upfront costs for the development of some low-carbon projects	Orange	Orange	Orange
	The insistence on maintaining the national production strategy for growth focused on hydrocarbons	Red	Red	Red
Technology and market 	Lack of infrastructure and technology	Orange	Orange	Orange
	The financial sector has limited knowledge about technology trends and market risks	Red	Red	Red
	Lack of information about low-carbon technologies	Orange	Orange	Orange
	Lack of information about the development and promotion of green financing products	Red	Red	Red
Information and capacity 	Lack of capacity of project proponents to structure commercial viable projects	Red	Red	Red
	Gender Equity guidelines and policies in the Energy, Transport and AFOLU sectors	Green	Green	Green
	Lack of acceptance for technology changes	Orange	Orange	Orange
	Lack of attention to compliance with the rights of vulnerable people in the acquisition of land	Red	Red	Red
Social, cultural, behavioural 	Lack of information about low-carbon technologies	Orange	Orange	Orange
	Lack of information about the development and promotion of green financing products	Red	Red	Red
	Lack of capacity of project proponents to structure commercial viable projects	Red	Red	Red

Policy and regulatory: Colombia has taken significant steps to achieve its international climate commitments and to fulfil the goals defined in the NDC. In this regard, the country has developed a complete and strong regulatory framework and institutional environment for promoting mitigation and adaptation actions. Frameworks include the creation of the National Climate Change System (SISCLIMA) as a national coordinating body that aims to prepare the country for the challenges and opportunities generated from climate change.

The general stability in recent years regarding the national regulatory framework, especially in the energy sector, has made Colombia an attractive country for international investment in renewable energies such as wind and solar. If the policy framework in the transport sector is strengthened, this could also be the case for low-carbon technologies and infrastructure for transportation. In the AFOLU sector, although the country has defined a National Climate Change policy, there is still a lack of technical capacity for policies for public and private entities (E3, 2017).

According to CCADI (Arévalo et al., 2019), a significant barrier to incorporating climate change in identifying risks and opportunities for institutional investors is the lack of compulsory regulations to incorporate climate change in investment decisions. This barrier could affect Colombia's capacity to achieve its INDC targets because climate change is not always considered a relevant variable in investment policies.

In addition, one current weakness in the regulatory framework is that Colombia has not yet ratified the Escazú Agreement. This barrier also falls under the category of information and capacity. This regional agreement aims to ensure the rights of all persons to have access to information about the decisions that affect their lives and their environment. In addition, since the Escazú Agreement focuses on the most vulnerable people and the defence of their rights, this barrier can also be included in the social, cultural and behavioural categories. The failure to ratify the agreement is identified as a critical barrier to the sustainable development of all three analysed sectors.

Financial and economic: Barriers include the technology cost gap between high and low-emissions alternatives and high initial costs for developers. Some important enablers in this category have been identified, such as a portfolio of tax incentives for investments in projects/technologies in the areas of environment control, renewable energy, energy efficiency and, most recently, energy transition. Incentives available for renewable energy and energy efficiency are established in Law 1715 of 2014, which promotes the development and integration of renewable energy technologies in Colombia. According to the Unidad de Planeación Minero Energética (UPME, 2015), those incentives impact the profitability of projects, improving economic indicators such as internal rate of return on investment and Levelized cost of energy. Furthermore, as an additional enabler, it is important to highlight that major national and international banks and financial institutions have established climate change strategies and specific commitments to climate finance (Ramírez et al., 2015).

Despite the above enablers, there are still high upfront costs in Colombia for developing low-carbon projects since the capital investment required for non-conventional technologies remains slightly higher today than in the case of conventional technologies. Also, a barrier that was identified is the national economic strategy targeted at the exploration of conventional energy resources. According to CCADI (Arévalo et al., 2019), as Colombia's economic strategy relies on mining and oil, it is unlikely that the Government will be interested in institutional investors seeking to diversify their portfolio with less carbon-intensive investments.

Technology and market: We identified that limited performance track records of new technologies and limited market penetration might have negative effects on low-carbon investments. In this respect, we found that the electricity and transport infrastructure are perceived as technological barriers due to their outdated state and the lack of readiness for the integration of innovative technologies such as smart grids, high penetration of electric vehicles and community-oriented public transportation systems. Additionally, the national financial sector has limited knowledge about technology trends and market risks. As a result, risk assessments and financing options can be unfavourable and limited for low-carbon projects and technologies (Medellín, 2019; UPME, 2019; UPME, 2015).

Information and capacity: Lack of knowledge and information about low-carbon technologies and practices were identified as relevant barriers to investment. Therefore, there is a need for capacity building strategies in the three prioritised sectors. There is a limited understanding of renewable technologies and resources, especially in isolated and remote regions. In the transport sector, there is still a scarcity of knowledge about new alternatives for mobility that can reduce emissions. In the AFOLU sector, there is an absence of knowledge about new technologies and sustainable practices (UPME, 2015; UPME, 2019).

It is also important to note the lack of information about green financial products within national financial institutions. Some of these institutions do not have sufficient capacity to promote and offer climate finance products, limiting access to financing for low-carbon and climate-related projects. Moreover, the most relevant barrier identified is the lack of capacity of project proponents to structure attractive and commercially viable projects, which makes it difficult for banks to finance them.

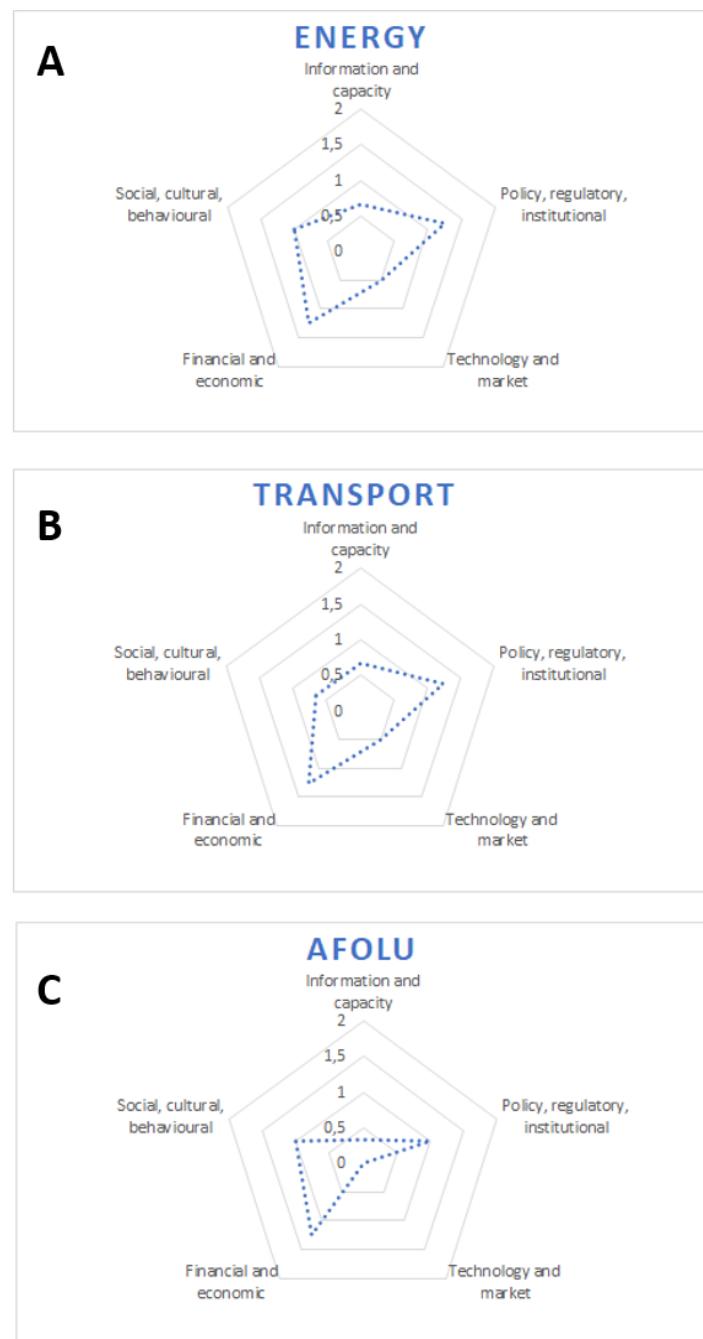
The last category to be considered in this analysis is **social, cultural and behavioural** elements, where cross-cutting themes, such as social acceptance, cultural misconceptions and aspects such as GESI, are taken into consideration. It is important to note that this exercise also identified key civil society actors working on this topic, as well as key aspects of the policy and regulatory context related to GESI for each sector.

Our analysis identified gender equity guidelines and policies in the energy, transport and AFOLU sectors as enablers to investment. In the energy sector, the Ministry of Energy has created a roadmap for formulating guidelines for the gender equity policy of the energy and mining sector (MinEnergía, 2020). The Ministry of Agriculture and Rural Development promotes different actions that aim to review, evaluate and follow up on the various programmes and laws that seek to empower rural women (MinAgricultura, 2017). Finally, the Ministry of Transport, through the Sectorial Committee for the implementation of the National Public Policy of Gender Equality for Women, guarantees plans, projects and strategies that support the rights of women in the transportation sector (MinEnergía, 2018).

One of the biggest challenges in the promotion of low-carbon projects is that social and cultural dimensions within Colombia's regions have not been sufficiently considered. Additionally, there is a lack of acceptance of technological changes among local communities and final users, within the three analysed sectors.

Figure 3 shows spider diagrams presenting the status of each sector regarding the aspects mentioned above. This analysis was carried out in order to determine the sectoral status based on the barriers and enablers identified.

Figure 3. Results of enabling environment analysis for (A) energy sector, (B) transport sector and (C) AFOLU sector



The energy sector has lower values for the information and capacity, social, cultural and behavioural, technology, and markets categories, meaning there are more barriers than enablers. The financial and economic and policy and regulatory categories present higher values, indicating there are significant enablers in these categories. Particular enablers include; regulatory frameworks and the package of tax incentives available for renewable energy and energy efficiency projects.

The transport sector analysis reveals a similar situation to the energy sector: the financial and economic, and policy and regulatory, categories enable the development of projects in this sector. Nevertheless, it is important to remark that there are significant barriers related to technology and markets that mean that the transition to new forms of cleaner mobility is proceeding at a slow pace in the country.

Finally, the AFOLU sector faces challenges in the technology and market, and the information and capacity categories. These challenges are primarily due to the lack of information about low-carbon technologies and the development and promotion of green financial products, and the limited knowledge about technology trends and market risks within the financial community regarding these kinds of projects.

Based on the analysis, we have identified that the main barriers that the CFA could seek to overcome in Colombia relate to **information and capacity**. For the sectors analysed, this is the category with the greatest number of barriers in Colombia to financing green projects. Therefore, the capacity building strategy of the CFA could play an important role by contributing to the development of new low-carbon projects, thus helping the country achieve its GHG commitments. The analysis also found that while there are important enablers within the **financial and economic** category, the CFA could help support further improvements by reducing the gap between project proponents and investors throughout the whole climate finance supply chain.

Supply-side analysis

A database was developed to capture information on the climate finance landscape in Colombia, with data fed into it by the CFA Colombia team. The database includes information on national market players (e.g. national development banks, commercial banks, microfinance banks, private equity/debt, venture capital/angel investors etc.), as well as international climate finance streams (e.g. climate funds, development financial institutions, multilateral institutions, bilateral development partners, and other domestic sources of finance).

Climate finance supply chain – gap analysis

Table 1 Climate finance supply chain in Colombia

Available	Partially available			
Significant gap	Not available			
SOURCES	Project Initiation	Project Development	Primary Project Funding	Secondary Markets and Refinancing
Development banks				
Government funders				
Commercial banks				
International finance institutions				
Institutional investors				
Private equity				
Venture capital				
Angel investors/				
Impact investors				
Investment banks				

Table 2 Climate finance supply chain in Colombia, by instruments

INSTRUMENTS	Project Initiation	Project Development	Primary Project Funding	Secondary Markets and Refinancing
Debt (commercial, unlisted)				
Debt (concessional, unlisted)				
Debt (listed)				
Venture capital				
Equity (listed)				
Equity (unlisted)				
Mezzanine finance				
Structured finance				
Risk mitigation instrument				
Grants				

International comparison

Although the information provided thus far is helpful in understanding the specifics of the Colombian context, it is also very useful to compare this information to the wider international context. The following table presents the information set out earlier in the report but adapts it to the types of tables and conventions that are used by the CFA programme for other countries in which it is being implemented, while keeping the same colour convention as was used earlier:

Table 3 Climate finance supply chain international comparison

SOURCE	Project Initiation	Project Development	Primary Project Funding	Secondary Markets and Refinancing
Commercial banks				
Institutional investors				
Private equity				
Corporate funders				
Asset managers				
Venture capital				
Impact funds				

Angel investors				
Microfinance and credit unions				
Government budgets	Yellow	Yellow	Yellow	Cyan
Climate funds		Yellow	Yellow	
Bilateral development partners	Yellow	Yellow	Yellow	Cyan
Development financial institutions	Yellow	Yellow	Yellow	Cyan
NGOs and philanthropic organisations	Yellow	Yellow	Yellow	

Table 5. Climate finance supply chain by instruments, international comparison

INSTRUMENT	Project Initiation	Project Development	Primary Project Funding	Secondary Markets and Refinancing
Company balance sheets			Red	
Corporate bank loans			Yellow	Cyan
Project finance			Yellow	Yellow
Structured finance			Yellow	Yellow
Bonds				Yellow
Green/blue/social/sustainable bonds				Yellow
De-risking products		Yellow	Yellow	Cyan
Concessional finance		Yellow	Yellow	
Grants	Yellow	Yellow	Yellow	
Government budget spend	Yellow	Yellow	Yellow	Cyan
Microfinance			Yellow	

Corporate funding for new projects of this type is rare, and when it happens, it is usually done through more specialised investors like venture capital firms. In the case of bonds, green, blue, social and sustainable bonds are available, but are regulated as normal listed debt.

It is important to consider that the Colombian market has a conservative bias, starting with the Government's own investment policy and the regulations it imposes on the financial players in the country. This is especially important for large financial institutions that manage the public's money, like institutional investors, asset managers and commercial banks.

Climate finance landscape by sector

This section summarises the climate finance landscape by sector and highlights the key finance providers by type of institution.

Energy

Energy is one of the most important sectors in Colombia, and is one of the fastest growing in terms of green investments. According to ProColombia, Colombia's investment promotion agency, between 2018 and 2020, 41 new energy development investment projects were signed in businesses worth over US\$ 5.029 million. Also, the country has dedicated US\$ 50 million through the National Royalties System for the environmental sector, including unconventional renewable energy projects. Since 2018, the Government has approved a VAT discount of nearly COP 938.000 million (US\$ 247.6 million), of which COP 145.000 million (US\$ 38.6 million) is for non-conventional energy projects and COP 793.000 million (US\$ 209 million) is for energy efficiency projects. This is in line with approximate investments of COP 823.000 million (US\$ 217 million) in the former and COP 4.23 billion (US\$ 1.11 billion) in the latter.

Additionally, in 2020 FINAGRO (a development bank for the agriculture sector) started offering credits for non-conventional renewable energy sources with green loan placement by the end of 2020 of COP 13.629 million (US\$ 3.5 million).

Transport

The National Government provides multiple incentives to the transportation sector. Incentives for the procurement of electric vehicles, such as a vehicle tariff exemption, a reduction in VAT from 19% to 5%, and the exemption of vehicles from traffic restrictions (*pico y placa*).

Investment in electric vehicles has led to Bogotá becoming a Latin American benchmark for electric buses. Notably, in early 2021 the Transmilenio S.A. bidding process awarded 596 fully electric buses, for a value of COP 1.82 billion (US\$ 480 million). This investment added to the existing 889 electric buses in the city. As a result, Bogotá now has a fleet of 1,485 electric buses. Furthermore, the construction of the Metro de Bogotá, the first line of which had a cost of COP 12.9 billion (US\$ 3.4 billion), is one of the biggest investments made in sustainable transportation; it was funded by the Government, the city of Bogotá, and by multilateral banks.

Initiatives to tackle climate change in the transportation sector are promoted by commercial banks, such as BBVA, which, aside from extending credit lines to access electric vehicles, granted RCI Colombia financing for electric vehicles for COP 7,000 million (USD 1.8 million).

It is important to mention that many of the transportation projects that have been partially financed by special green credit lines were already in the country's infrastructure projects pipeline, and emissions reduction is a secondary outcome or objective of the processes. This presents an opportunity for capacity building for the permanent CFA secretariat in Colombia for projects moving forward in the future.

AFOLU

The agricultural sector in Colombia has historically been prioritised both from a political and a financing perspective. From a financing standpoint, this sector has its own national development bank, called FINAGRO, which acts as a second-tier bank. As made clear in our interview with them, FINAGRO's operations are geared towards small credits: for example, out of their total allocated loans, 80% are under US\$ 2,700, while only 10 loans exceed US\$ 5.1 million.

In 2020, FINAGRO reached the highest placement since statistics became available: COP 24.2 billion (US\$ 6.3 billion) across 513,235 operations, which presents an increase of 26% in value and 24% in the number of operations compared to 2019. Sustainable loans for COP 2.73 billion (US\$ 712 million) were placed in 2020 for products that contribute to the mitigation of and adaptation to climate change and other environmental objectives. Likewise, FINAGRO made loans for silvopastoral crops and sources of non-conventional energy for COP 13,629 million (US\$ 3.5 million). Also, between 2012 and 2020, FINAGRO handed out loans for COP 101,169 million (US\$ 26.6 million) relating to establishing and sustaining forests through the Forestry Incentive Certificate. Since 2017, FINAGRO's portfolio of sustainable loans has amounted to COP \$ 5.25 billion (US\$ 1.3 Million), benefitting 695,683 producers.

In addition, the agricultural sector also benefits from its own government-funded commercial bank, called Banco Agrario. The latter has the same limitations as were described earlier regarding working with second-tier banks and is focused mainly on very small loans that, according to the bank's own statistics, average US\$ 2,300. This bank disbursed COP \$7.4 billion (USD\$ 1.97 million) to agribusinesses in 2021.

It is worth noting that besides FINAGRO loans, and excluding Banco Agrario, commercial banks, which represent 29.4% of financial actors in Colombia, are not currently focused on lending to the agricultural sector.

In short, the main challenges in this sector come from the aforementioned government policies and priority dynamics, the risk-averse environment in Colombia's financial sector, and the lack of proper support in the early stages of development.

Conclusion and recommendations for CFA approach

The CFA permanent programme can play a vital role in overcoming the barriers identified within the information and capacity category in the Colombia context.

Regarding the design of the permanent CFA process in Colombia, we recommend that the strategy for capacity building should be designed to allow more project proponents to access relevant information about project development and finance instruments. We recommend that the capacity building strategy include tools such as videos, open resources and open talks that support the capacity building of a broader range of stakeholders than solely those selected in the call for proposals for the technical accompaniment.

From a supply side perspective, the articulating efforts by the Colombian CFA programme can have a large impact in closing the gaps in the climate finance supply chain by leveraging the appetite for knowledge about new financial structures in a risk-averse environment, the growth of productive networks, and promoting inclusive and sustainable development through a committed secretariat with long-term ambitions.

Regarding the energy sector in Colombia, it is critical to highlight that this includes not only electricity generation but also activities related to the mining and oil sub-sectors. It is important to note that energy is one of the economic sectors in the country with the greatest mitigation potential. According to the last update of the country's NDC, the energy sector can avoid emissions of 11.16 million Tonnes of carbon dioxide equivalent by 2030 if the appropriate mitigation measures are implemented. Having this in mind, the National Government has developed a strong regulatory framework and a portfolio of fiscal incentives for the promotion of low-carbon technologies across the whole energy supply chain. Thanks to this, Colombia has shown good performance in its progress toward the energy transition. However, commercial and market barriers need to be overcome, especially regarding cutting-edge technologies entering the country. Keeping in mind the sectoral measures established in the NDC, an important recommendation for prioritisation in the CFA programme relates to the design of strategies to reduce barriers to and boost opportunities for the implementation of mitigation actions for energy generation. In particular, actions linked to the transformation of off-grid regions will have a positive impact on the reduction of inequalities and the improvement of the quality of life of remote and isolated communities. The CFA programme can provide the required instruments to overcome the barriers in the sector and promote the transformation into a more sustainable energy sector.

The transport sector is a priority within the NDC and is a sector where more mitigation strategies should be developed. Although the Government has developed different incentives related to this sector to achieve its mitigation goals, there are still some gaps related to the non-competitive costs, the finance of freight transport, and the lack of infrastructure. Based on our analysis, we have identified that the CFA could provide support through a strong capacity building strategy for project proponents focused on solving the problems related to the aforementioned gaps. Additionally, the CFA could connect relevant

financiers who are interested in the transport sector with project proponents that have projects that will help the country to achieve the desired technological updating of its transportation to ensure cleaner transport in Colombia.

The AFOLU sector has great potential to promote green growth but is also the sector with the highest rates of GHG emissions in Colombia. The sector is on the agenda of the Government, which has developed different policies and regulations for AFOLU. In addition, the country has gained international visibility in respect of other products in this sector beyond the traditional products. However, there are still a lot of gaps and inefficiencies to be closed regarding, for example, the use of resources such as soil, water and inputs (fertilisers and pesticides), which currently results in competitiveness and productivity problems. Furthermore, the sector faces issues concerning GESI, considering the high inequality in land distribution and the poverty and lack of development in rural areas, among other issues.

Finally, although the Government has included GESI aspects and guidelines in its sectoral policies, we recommend that GESI stakeholders be involved in the whole GESI stakeholders in the whole design stage of the CFA to achieve the objective of obtaining an inclusive programme. To this end, we aim to convene GESI stakeholders to participate in different focus groups to help us complete the barriers and enablers analysis related to the social, cultural and behavioural perspective and to generate guidelines for project proponents and host institution selection criteria.

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