



# Climate Finance Landscape In Colombia

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# In-country delivery partner



## Acknowledgements

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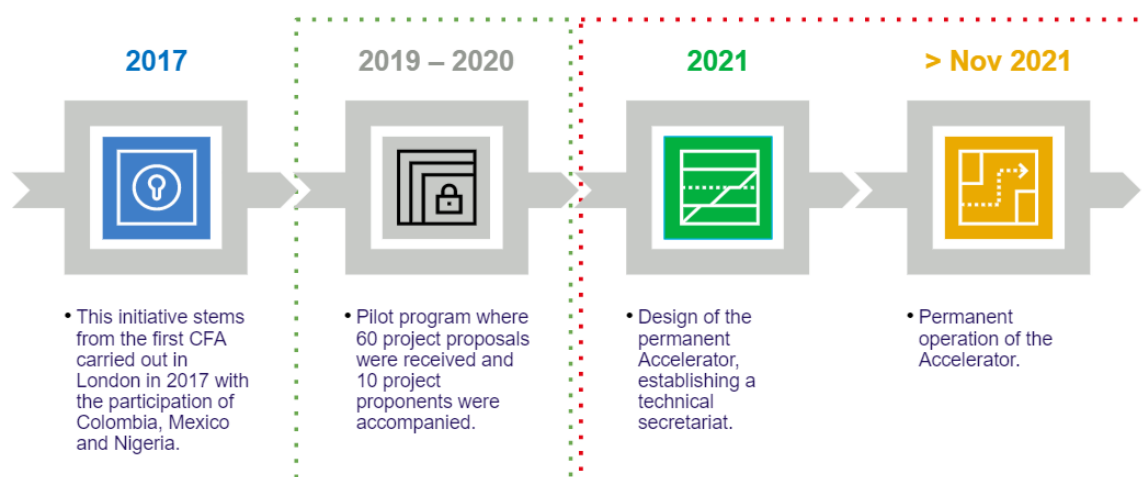
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# The climate finance landscape in Colombia

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.

Figure 1 CFA programme journey in Colombia



In the design stage, one of the most relevant activities is an analysis of the finance ecosystem in Colombia. This document aims to provide this analysis, in the form of a profile of the country, together with information about the climate finance landscape there, based on the CFA programme's journey in Colombia so far, which includes the following elements:

1. The lessons learned from the first stage of the CFA in 2017.
2. The second stage (2019–2020), where Colombia participated in the pilot programme.
3. Desktop research carried out to identify the principal financial products in the climate finance ecosystem and the sectors which the CFA will be focused on during its permanent operation in Colombia.

The climate finance analysis involved the following elements. First, a sectoral analysis was carried out in order to develop factsheets for the energy, transport, and agriculture, forestry and other land use (AFOLU) sectors, to provide important data about each sector in Colombia, with the aim of identifying relevant aspects that the CFA might prioritise in the permanent programme. Additionally, an enablers and barriers analysis was carried out in order to determine the enabling environment in the country for the implementation of the CFA. Barriers and enablers were identified in relation to the following categories: policy, regulatory and institutional, financial and economic, technology and market, information and capacity, and social, cultural and behavioural. Regarding the social, cultural and

behavioural barriers and enablers identified, we aim to complete this analysis through progressive meetings with gender equality and social inclusion (GESI) stakeholders and the focus groups that we will develop with them.

In addition, based on previous phases of the programme and the desktop research undertaken by the CFA Colombia team, we developed a database of information about relevant stakeholders within the financial community. This information was the starting point for analysing how the products provided by these financiers are available at each stage of the climate finance supply chain, in order to identify important gaps in Colombia's financial ecosystem and to identify the finance providers by sector.

Finally, this report includes a conclusions and recommendations chapter where we provide insights and recommendations for the permanent implementation of the programme in the country.

## List of abbreviations

<b>AFOLU</b>	Agriculture, forestry and other land use
<b>CFA</b>	Climate Finance Accelerator
<b>CCADI</b>	Colombian Climate Asset Disclosure Initiative
<b>ESG</b>	Environmental, social and governance
<b>DANE</b>	The National Administrative Department of Statistics
<b>GDP</b>	Gross domestic product
<b>GESI</b>	Gender equality and social inclusion
<b>GHG</b>	Greenhouse gases
<b>IDB</b>	Inter-American Development Bank
<b>NBI</b>	<i>Necesidades básicas insatisfechas</i> (Index of Unmet Basic Needs)
<b>NDC</b>	Nationally Determined Contributions
<b>NPCC</b>	National Policy for Climate Change
<b>OCHA</b>	United Nations Office for the Coordination of Humanitarian Affairs
<b>OECD</b>	Organization for Economic Co-operation and Development
<b>PPA</b>	Power purchase agreements
<b>RAG</b>	Red, amber, green
<b>RISE</b>	Regulatory Indicators for Sustainable Energy
<b>UPME</b>	Unidad de Planeación Minero Energética
<b>WEF</b>	World Economic Forum

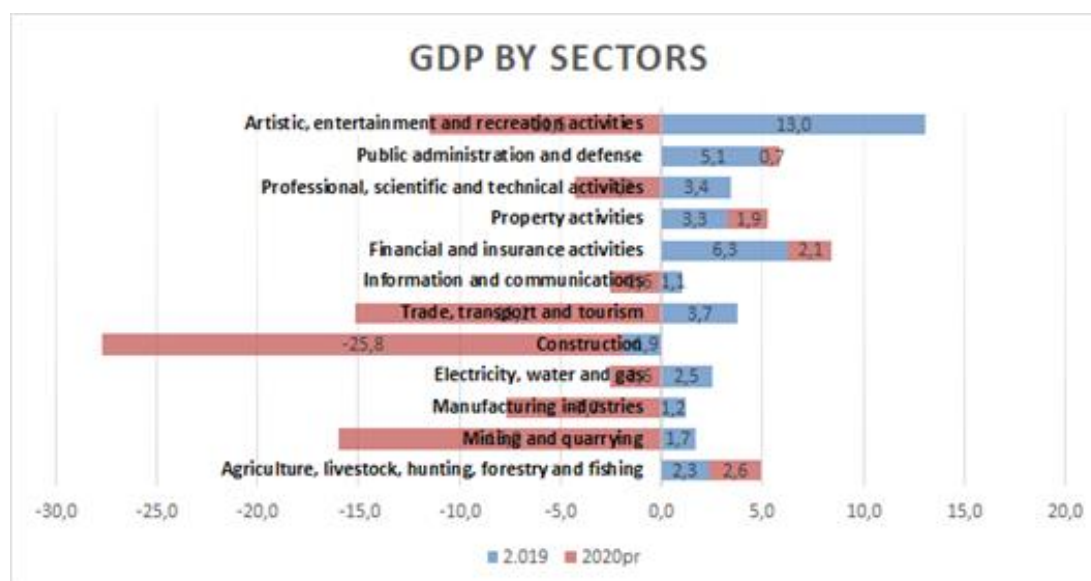
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# 1. Country profile

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).

Figure 2. GDP by sectors in Colombia. Source: Authors' own elaboration – data from The National Administrative Department of Statistics (DANE).



Colombia's economy is still recovering from the effects of the COVID-19 pandemic. The Bank of the Republic of Colombia forecast 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) (Refer to Section 1.1, 'Demographics and economy', for more details).

Regarding the GESI context, it is important to highlight the peace agreement the Government signed in 2016 with the armed group FARC. However, notwithstanding this agreement, massacres and forced displacements have continued. Colombia has also received more than 1.7 billion Venezuelans, which has presented a social challenge in regard to meeting their basic needs. Although the pandemic has caused some backwards steps in Colombia's, significant progress towards gender equality is reported by the World Economic Forum (WEF), with Colombia now having achieved gender parity (WEF, 2020).



More information is provided in Section 1.4, 'Key GESI issues'.

Beyond COVID-19, climate change also has the potential to severely affect Colombia's economy, representing a high risk to economic and social development. Colombia contributes to 0.57% of total global emissions of greenhouse gases (GHG) (PwC, 2021). The whole country faces some level of threat from the effects of climate change, with 56% of its departments in the highest threat category, mainly in the Andean and Caribbean regions, 13% of its departments having a high level of vulnerability to climate change, and all departments facing some risk from climate change (Ministerio de Ambiente, n.d.). The recent entrance of Colombia as a formal member of the Organization for Economic Cooperation and Development (OECD) has led the country to adopt new, and to strengthen existing, environmental policies, including the implementation of economic instruments to improve the efficient use of natural resources and reduce the social costs of using natural resources, as well as reducing waste and pollution (PwC, 2021).

This section presents an overview of the political, economic and social context of the country. This will help the CFA to understand the current landscape and the related risks and opportunities.

## 1.1. Demographics and economy

Table 1 below provides a country snapshot for Colombia, describing key indicators for the country as regards economic, political and social variables.

Table 1. Economic, political and social indicators

Indicator	Value	Source/additional comments
Population	50,882, 891 51.2% women 48.8% men. Most of the population is aged between 15 and 64 years old.	DANE – National Population and Housing Census (CNPV) 2018
Urban/rural split	Urban 77.1% Rural 22.9%	DANE – CNPV 2018
Gini index	2020: 0.544 2019: 0.526	DANE A result of 1 means maximum income inequality.
Index of Unmet Basic Needs (NBI)	14.28% with unmet basic needs. 3.8% in misery.	DANE – CNPV 2018 The NBI measures: inadequate homes, homes



		with critical overcrowding, homes with inadequate services, homes with high economic dependence, and homes with school-age children who do not attend school. Those whose basic needs are unmet are considered poor.
Monetary poverty and extreme monetary poverty	<p>Monetary poverty:</p> <p>2020: 42.5%</p> <p>2019: 35.7%</p> <p>In 2020, monetary poverty increased by 6.8 percentage points compared to 2019.</p> <p>Extreme monetary poverty:</p> <p>2020: 15.1%</p> <p>2019: 9.6%</p> <p>In 2020, extreme monetary poverty increased by 5.5 percentage points compared to 2019.</p>	DANE
Informal employment as percentage of total employment	<p>2019: 62.1%</p> <p>2018: 62.4%</p>	STATISTA
Inflation	<p>2021 – June: 3.63%</p> <p>2020: 1.61%</p> <p>2019: 3.80%</p> <p>2018: 3.18%</p>	Bank of the Republic of Colombia
GDP	<p>2020: -6.8%</p> <p>2019: 3.3%</p> <p>2018: 2.6%</p>	<p>Bank of the Republic of Colombia</p> <p>Constant prices – 2015.</p>

Credit rating	As at December 2020:  Fitch Ratings: BBB-, negative perspective.  Standard & Poor's: BBB-, negative perspective.  Moody's: Baa2, negative perspective.	Bancolombia Group
Global Competitiveness Index	Colombia is ranked 57 out of the 141 economies that form part of the index.  Score: 62.7/100	WEF, 2019  The index 'measures the capacity of a country to generate opportunities for citizens for economic development. It considers the factors that drive productivity and provide the conditions for social progress and the achievement of the sustainable development agenda.' ( <i>Sistema Nacional de Competitividad e Innovación</i> )
Corruption Perceptions Index	Rank: 92/180  Score: 39/100	Transparency International, 2020  The index offers an annual snapshot of the relative degree of corruption by ranking countries and territories from all over the globe.
Human Capital Index	0.6	World Bank, 2020  The index is designed to capture the amount of human capital a child born today could expect to attain by 18, given the risks to poor health and poor education that prevail in the country where she lives.
Currency appreciation/depreciations vs US\$ in last five years	3,089.65 → 3,756.67, 21.6% depreciation of Colombian peso.	Bank of the Republic of Colombia  Historical exchange rate.

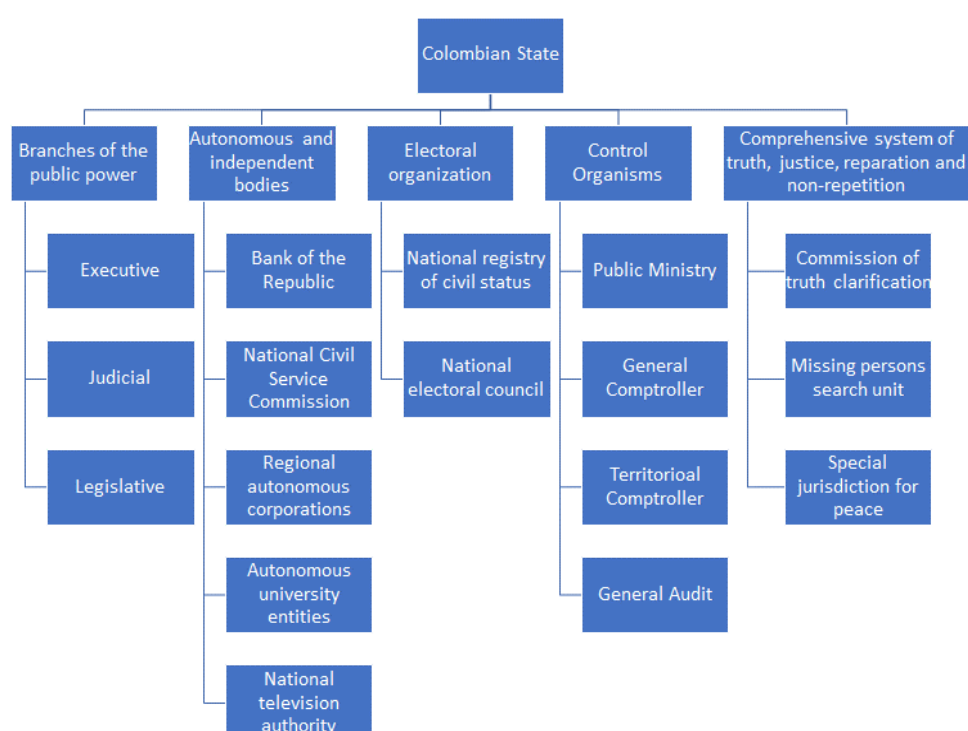
## 1.2. Political and legal framework

This subsection presents a broad overview of the political landscape and legal framework in Colombia. It includes information regarding the state structure and the frequency of elections. Furthermore, it shows Colombia’s position on the Doing Business Index and the country background and policy targets relating to GESI.

### 1.2.1 Political structure and elections

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.

Figure 3. State structure. Source: Authors’ creation, using information from the Función Pública (n.d.)



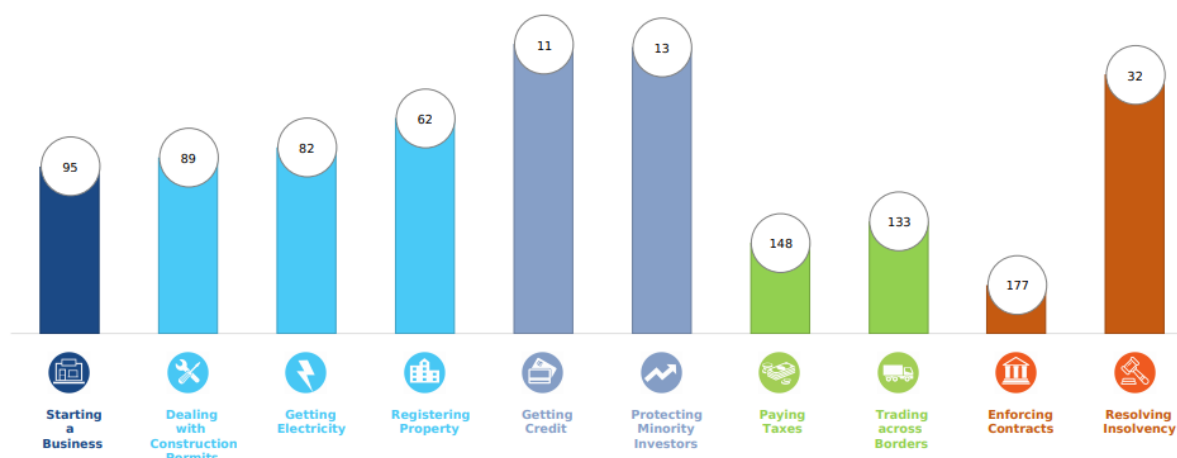
The Government (the executive branch) is currently led by President Iván Duque Márquez. Elections are held every four years, and the next elections (for president and vice-president) will be held on 29 May 2022. If the president and the vice-president do not together obtain half plus one of the valid votes, a second round of elections will be held. Elections for the congress (legislative branch) will be held on 13 March 2022. The legislation period lasts for four years.

## 1.3 Ease of doing business

The World Bank’s Doing Business Index considers the ease of doing business in a given country, looking at the following variables: opening a business, securing a business location, accessing finance, dealing with day-to-day operations, and operating in a secure business environment. 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.

Figure 4. Colombia ranking on doing business topics. Source: World Bank Group (2020).



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).

## 1.4 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).

According to OCHA, the humanitarian situation has been 'further exacerbated by the impact of natural disasters, presence of landmines and unexploded ordnance and, now, the impact of the COVID-19 pandemic. The latter has led to an increase in the number of food-insecure people from 3.3 million to over 10 million' (OCHA, n.d.).

Regarding immigrants, according to the United Nations High Commissioner for Refugees (UNHCR): 'Colombia is host to 1.7 million Venezuelans, which represent more than 37 per cent of the estimated 4.6 million Venezuelan refugees and migrants in Latin America and the Caribbean. More than half of the Venezuelan population in Colombia lack regular status, affecting their ability to access essential services, protection and assistance' (UNHCR, 2021). The Colombian Government has announced that it is committed to providing added protection, security and stability for immigrants. According to UNHCR: 'The Temporary Protection Status will also provide access to basic services including the national health system and COVID-19 vaccination plans' (UNHCR, 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.

#### 1.4.1 Key legislation and policies on GESI

- Colombia's 1991 Constitution recognises women's equality and outlaws gender-based discrimination; recognises and protects Colombia's ethnic and cultural diversity; and declares that it is a duty of the state and its people to protect the country's cultural and natural richness.
- The National Policy for Gender Equality addresses important challenges facing women in Colombia, such as challenges concerning women's rights and access to the justice system.
- The Quota Law of 2000 establishes that women must hold at least 30% of the top decision-making positions in the public administration.
- The Electoral Reform Law of 2011 requires that at least 30% of the candidates on party lists in elections must be women.
- Law 1413 of 2010 aims to include the economy of unpaid care work in the National Accounts System, in order to measure the contribution of women.
- Decree 1232 of 2018 establishes mechanisms for the protection of the rights of indigenous populations in isolation or in a state of nature and creates and assembles the Sistema Nacional de Prevención y Protección de los derechos de los Pueblos Indígenas en Aislamiento o Estado Natural (National System for the Prevention and Protection of the Rights of Indigenous Populations in Isolation or in a State of Nature).
- Decree 4633 of 2011 sets out the process for providing assistance, attention, reparation and restitution in respect of the territorial rights of indigenous populations and communities. The state guarantees the right of indigenous populations in voluntary isolation to remain in such conditions and to live freely, in line with their culture and ancestral territories. As subjects of special protection, they can never be stripped of their territories, nor can they be the object of policies, programmes or actions, whether private or public, which promote contact or incite intervention in their territories for any purpose.

## 1.5. Climate change priorities, strategies and institutions

Colombia is committed to climate change mitigation and adaptation. This section presents a broad overview of the legal framework and public institutions involved in tackling climate change. Furthermore, it presents the NDC update, which shows an ambitious goal as regards decreasing GHG emissions.

### 1.5.1 Legal framework and institutions for tackling climate change

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. As mentioned in previous deliverables, 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.

### 1.5.2 Colombia's NDC

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.).



## 2. Demand-side analysis

Based on the pilot phase of the CFA, which was implemented between 2019 and 2020, three sectors were selected on which CFA Colombia will focus: energy, transport, and AFOLU.

The national inventory of GHG (IDEAM, 2016) indicates that the AFOLU sector contributes to 71% of the total emissions in the country and that the energy sector has an average share of 23% of emissions. These two sectors together therefore contribute more than 90% of the country's GHG emissions. Within the energy sector, the biggest contribution is made by transportation activities, with a share of 38% of the total emissions attributed to the energy sector. Thus, the demand-side analysis presented in this section focuses on the three sectors/areas mentioned above (AFOLU, energy, and transport), as they are prioritised in the Colombian NDC for their mitigation potential and impact. The enabling environment analysis presented in this chapter looks at each of the three sectors selected and identifies barriers and enablers in the following categories: policy/regulatory; financial and economic; technology and market; information and capacity; social inclusion; and cultural/behavioural aspects.

### 2.1 Sectoral analysis

The objective of the demand-side analysis is to ensure that the CFA works in prioritised sectors (i.e., Energy, Transport and AFOLU) for climate change mitigation in the country, and to provide information to be able to evaluate projects in a comparative and evidence-based manner. Those prioritised sectors were analysed taking into account their structure, the government participation in them and relevant data regarding each sector context. Additionally, the mitigation potential of these sectors and their pathways towards decarbonisation were also considered and described in reference to the country's NDC and priorities for each sector. Moreover, the Energy, Transport and AFOLU sectors were prioritised not only for their GHG emissions mitigation potential, but also because they represent an important portion of the Colombian economy with great potential for attracting national and international investors.

For the demand-side analysis, sector factsheets were developed for the Energy, Transport and AFOLU sectors (the factsheets can be found in the appendices of this document). Each factsheet presents an overview of the enabling environment analysis which includes a description of the policy and regulatory framework, governance set-up, key institutions, financial incentives, social risks and opportunities, as well as relevant cultural and behavioural considerations.

Finally, a commercial maturity assessment was carried out, looking at the technological maturity, commercial maturity and maturity of investors' interest in the three sectors. Based on the information and insights presented in these factsheets, we provide recommendations for the prioritisation within these sectors, under the CFA programme.

#### 2.1.1 Energy sector

The energy sector in Colombia draws on the abundant renewable and non-renewable natural resources in the country to supply the country's 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 stakeholders participation. Government plays a role mainly in regulation and planning. Since the past few years, with the issue of a renewable energy law in 2014, the electricity sector has evolved according to sustainability

principles, aiming to diversify the energy supply, limiting its reliance on hydroelectric power and moving towards a higher integration of renewable sources. In addition, great efforts have been made to achieve net zero emissions within the sector 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, as stated in Section 1.2 above. The measures adopted for mitigation, and their potential, are featured in the Comprehensive Climate Change Management Plan for the Energy and Mining Sector (PIGCCme), which aims to strengthen and protect the sustainability and competitiveness of the electricity generation and mining industry through mitigation, adaptation and governance actions (MinMinas, 2018). The mitigation potential of the energy sector can vary between 2.48 Mton CO<sub>2</sub>eq and 12.38 Mton CO<sub>2</sub>eq according to different mitigation scenarios. The energy sector is responsible for around 30% of the national GHG emissions with an important participation of the energy demanded by the transport, manufacturing and construction sectors.

The Colombian policy and regulatory framework developed in the last years 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. As a result, Colombia is experiencing an electricity mix diversification, away from the dependency on water resources for power generation and aligned with international trends as regards energy transition. 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, as this is a crucial element of ensuring a healthy investment environment. The technologies were selected, evaluated and assigned with a RAG (red, amber, green) rating, taking into consideration public and private initiatives and government plans regarding the development and integration of low-carbon technologies in the energy matrix. Also, the level of development of the energy market in the country, and recent mechanisms for the integration of renewable energy (such as energy auctions and long-term power purchase agreements (PPAs)) were assessed. The most mature technology is the large-scale hydroelectricity, being the mainstone of the national electric system. This technology is followed by solar energy and onshore wind, which have experienced an 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 for the development of Battery energy storage systems (BESS) in the country which means that some conditions are already in place for the development of this technology. 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 in 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, our analysis identified that energy matrix diversification offers great potential as regards emissions mitigation. Secondly, we have identified that the second action (transformation of the off-grid regions) would have a positive impact as regards reducing inequalities and improving the quality of life of remote communities. Therefore, as a recommendation for prioritisation under the CFA programme we have

identified that the second NDC action can provide the following benefits: the promotion of distributed generation; increased energy competitiveness; and the participation of small-scale self-generation. It is also important to note that the PIGCCme has developed a toolbox for the implementation of programmes, projects, plans and policies with a gender perspective.

### 2.1.2 Transport sector

The transport sector in Colombia presents many opportunities for the incorporation of low-carbon technologies. According to the national inventory of GHG, the transport sector is one of the largest contributors of 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 fleet in the country, by means of different incentives. Nevertheless, there remain various barriers that limit the transition to low-carbon transportation in Colombia. The principal barrier is the non-competitive cost of these technologies in comparison with conventional fossil-burning vehicles (UPME, 2020). Despite the fact that in 2020 acquisitions of electric cars increased considerably in comparison with previous years, due to the launch of Law 1964 of 2019,<sup>1</sup> the cost involved means that acquisition of this kind of technology is only possible for families with higher incomes (Torres et al., 2020). Additionally, regarding freight electric 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 the acquisition of electric vehicles due to the lack of support for operating these vehicles in comparison with traditional vehicles (UPME, 2020).

In recent years, Colombia has had an improvement in the adoption of electric transport technologies, which leads to great opportunities in the diversification of sources and modes in the transport sector. Main opportunities are related to 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 in the last years 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 modes, driven mainly for the level of international development, commercial maturity has still some barriers to overcome, such as the lack of financial access, low economic competitiveness compared with internal combustion vehicles, and the still early penetration of electric public transport in the main cities of the country.

Despite the fact that the RAG assessment does not include hydrogen as an unconventional source of energy that can be used in the transport sector, it is important to note that although this technology does not currently have a high maturity level, there are great opportunities for this technology, due to the Energy Transition Law 2021.

The commercial maturity assessment for the transport sector shows that despite the fact that Colombia still has different limitations in the insertion of low-carbon technologies for transportation, the interest of investors in the sector has been increasing thanks to the country's regulatory framework, and that the transport sector in Colombia has many opportunities in the incorporation of low-carbon technologies.

The transport sector has been selected for prioritisation by CFA Colombia due to the fact

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<sup>1</sup> This law details schemes to promote the use of electric and zero-emissions vehicles, in order to contribute to sustainable mobility in the country.

that it is one of the priority sectors within the NDC and one of the sectors where more mitigation strategies should be developed. Additionally, there are still some gaps that can be addressed by the CFA that could help the country to achieve its mitigation goals. The non-competitive costs of low-carbon transport technologies, the gaps in regard to finance for freight transport and the lack of infrastructure for the correct operation of this kind of technology are areas where the CFA can provide important support to help Colombia advance on its path towards clean transportation.

## 2.13 AFOLU sector

As stated before, 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 – 2.6%. This growth was mainly 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 the green growth of the country. 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, the AFOLU sector currently involves great inefficiencies in the use of resources, such as soil and water, and inputs, such as fertilisers and pesticides, which results in competitiveness and productivity problems (DNP, 2018). For example, agricultural activity consumes more than half of the country'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, it is estimated that 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 km<sup>2</sup> 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. Furthermore, AFOLU is crucial for the development of the rural sector within the context of the peace agreement, which aims to promote sustainable and rural development.

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, in relation to 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 the 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). As has recently been stated: 'Currently there is enough forage genetic diversity to develop varieties that can mitigate nutrition and consequently reduce methane emissions' (Restrepo, cited in CODS, 2021). Investing in these varieties can boost the sustainable development of the sector and contribute to climate change mitigation and adaptation.

## 2.2 Enabling environment analysis

This subsection presents the analysis of the main barriers to and enablers of climate finance in Colombia in regard to the three sectors that are being focused on: 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. It is also important to note that one category of barrier/enabler will have different ratings of relevance for each of the three sectors.









As shown in Figure 5, the enabling environment analysis has been classified by reference to the following categories:

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

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

		Energy	Transport	AFOLU
				
		Barrier	Barrier	Enabler
<b>Policy and Regulatory</b> 	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
<b>Financial and Economic</b> 	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
<b>Technology and market</b> 	Lack of infrastructure and technology	Orange	Orange	Green
	The financial sector has limited knowledge about technology trends and market risks	Red	Red	Red
<b>Information and capacity</b> 	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
<b>Social, cultural, behavioural</b> 	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

In regard to the **policy and regulatory** category, Colombia has taken significant steps to achieve its international 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, including through the design and creation of a National Climate Change System (SISCLIMA), as a national coordinating body that aims to prepare the country for the challenges and opportunities generated as a result of climate change.

SISCLIMA has been consolidated within the framework of the National Climate Change Policy (Law 1931 of 2018) and the Colombian Strategy for Low-Carbon Development (Minambiente, 2018). It has four permanent committees at the base of its structure, one of them being the Finance Committee, which acts as the coordinator of financing activities, offering support to initiatives seeking financial opportunities and directing efforts to identify and coordinate sources of finance available at the national and international levels (Jaramillo, 2014).

The general stability in recent years as regards 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 the articulation of sector policies for public and private entities (E3, 2017).

According to CCADI (Arévalo et al., 2019), a significant barrier to the incorporation of climate change in the identification of risks and opportunities for institutional investors is the fact that in Colombia there is no compulsory regulatory requirement for the incorporation of climate change in investment decisions, due to the perception of high risks in these kinds of investments. This barrier could affect the country's capacity to achieve its NDC goals because the environmental, social and governance (ESG) approach, and more specifically climate change, is not always considered a relevant variable in investment policies.

In addition, one current weakness in the regulatory framework related to climate and environmental justice is the fact that Colombia has not yet ratified the Escazú Agreement. This barrier also falls under the category of information and capacity, since 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, due to the fact that 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 category. Due to the above, the failure to ratify the agreement is identified as a critical barrier to the sustainable development of all three analysed sectors.

The second category of barriers and enablers is **financial and economic** aspects, which, in broad terms, may include barriers such as 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. The incentives available in relation to renewable energy and energy efficiency were set out 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 have a positive impact on the profitability of projects, improving economic indicators such as internal rate of return on investment and levelised cost of energy. Furthermore, as an additional enabler, it is important to highlight the fact that the major national and international banks and financial institutions have put in place 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 the development of some low-carbon projects, since the capital investment required for non-conventional technologies remains slightly higher today than in the case of conventional technologies. Also, an important 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.

In regard to the **technology and market** category, we identified barriers such as limited performance track records of new technologies and limited market penetration that might have negative effects on low-carbon investments. In this respect, we found that the electric and transport infrastructure can be perceived as a technological barrier due to its 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).

In regard to the **information and capacity** category, important barriers were identified, such as a lack of knowledge and information about low-carbon technologies and practices, which means that there is still a need for capacity building strategies in the three sectors analysed. Regarding the energy sector, there is a lack of capacities in regard to 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 finance products within national financial institutions. Some of these institutions do not have sufficient capacity to promote and offer climate finance products, which limits access to financing for low-carbon and climate-related projects. Moreover, the most relevant barrier identified in this category is the lack of capacity of project proponents to structure projects that are attractive and commercially viable, 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, as shown in the stakeholder log tap in the Colombia Country Mapping Sheet.

Our analysis identified gender equity guidelines and policies in the energy, transport and AFOLU sectors as enablers. 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 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).

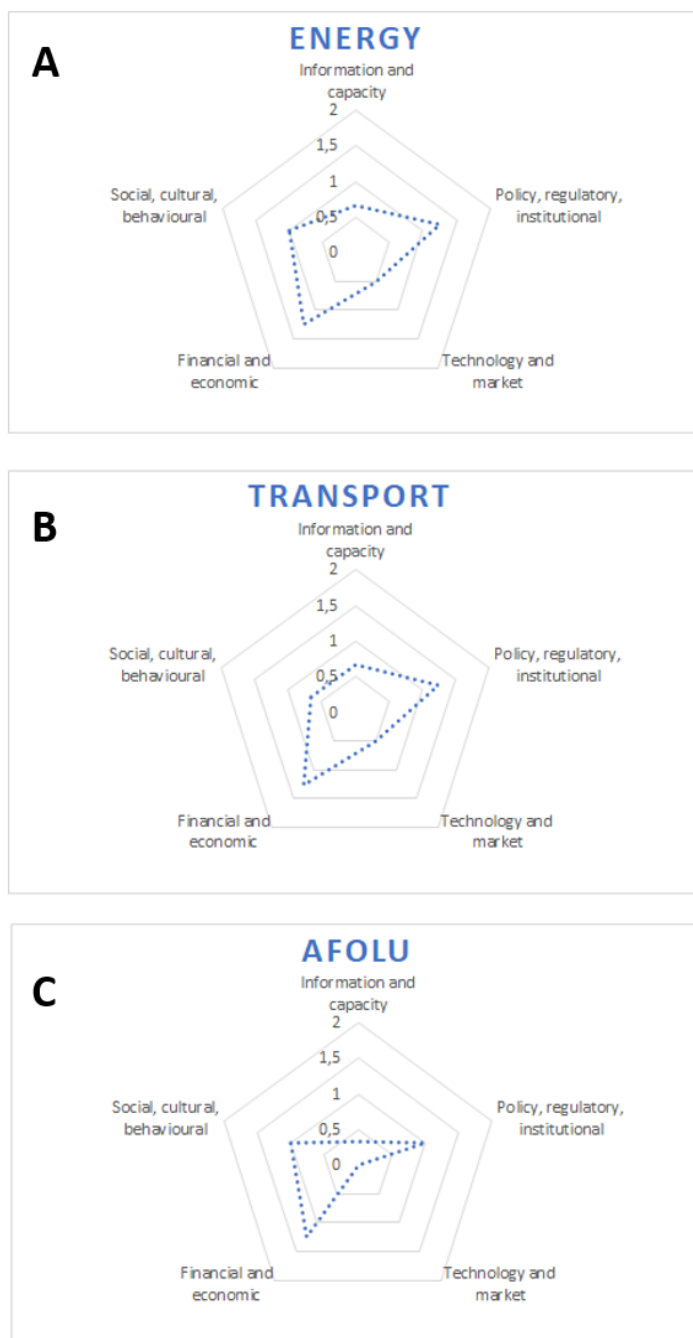
In regard to social acceptance, a key barrier is the mistrust that often exists in regard to using a different technology to those which have prevailed in the market previously, for which services have already been developed.

As was stated in the country profile within the GESI assessment, one of the biggest challenges in the promotion of low-carbon projects, such as large-scale solar and wind farms, has been the fact 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.

Furthermore, there are some issues related to land rights and engagement and consultation with local communities that need to be taken into consideration in order to prevent the exacerbation of local inequalities. In this regard, there is a lack of recognition of indigenous knowledge, and a lack of participation by indigenous peoples in the management and conservation of forest and biodiversity. It is important to ensure community participation in order to develop sustainable agriculture projects that contribute to the reduction of GHG emissions.

Figure 6 shows spider diagrams presenting the status of each sector in regard to the aspects mentioned above. This analysis was carried out in order to determine the sectoral status based on the barriers and enablers identified above, and to weigh them all as one numerical value where 0 represents barriers and 2 represents enablers. In other words, lower values mean an aspect has more barriers than enablers in the Colombian context, within a given sector. On the other hand, where an aspect has more enablers than barriers the values should tend to be closer to 2.

Figure 6 Results of enabling environment analysis for (A) energy sector, (B) transport sector and (C) AFOLU sector



As shown in Figure 6, the energy sector has lower values for the information and capacity, social, cultural and behavioural, technology, and markets categories, which means that there are more barriers than enablers in these categories in this sector. On the other hand, the financial and economic, and policy and regulatory, categories present higher values, indicating that there are important enablers in these areas, due to the regulatory framework developed in the country for this specific sector and the package of tax incentives that are 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, mainly due to the lack of information about low-carbon technologies and the development and promotion of green financing products, and the limited knowledge about technology trends and market risks within the financial community as regards these kinds of projects.

In the enabling environment analysis exercise, we identified that one of the most important enablers in the Colombian case, for all three sectors, is the successful development of the country's public climatic policy, as a result of collaborative work between different government bodies, and also the coordination with commercial and development banking actors under the SISCLIMA strategy. Additionally, the tax incentives framework for environment investment has made Colombia attractive for international investments in low-carbon technologies.

Based on the foregoing analysis, we have identified that the main barriers that the CFA could seek to overcome in Colombia relate to the **information and capacity** category. As shown in Figure 6 above, for the sectors analysed, this is the category with the greatest number of barriers in the country as regards the financing of 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 to achieve its GHG commitments. The analysis also found that while there are important enablers within the **financial and economic** category in Colombia, the CFA could help support further improvements in this area, by reducing the gap between project proponents and investors throughout the whole climate finance supply chain.

## 3. 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).

The objective of this exercise was to gather relevant and applicable data for the proper development and operation of a permanent CFA secretariat in Colombia. The sources of information for this database include datasets, surveys, desktop research (public reports), and interviews. Despite the general lack of knowledge of the concept of blended finance, but given the considerable interest in climate finance, one-on-one interviews were prioritised to both introduce the concept of the CFA initiative and to publicise its existence. The main goal of this effort was to identify the gaps in both financing and information that exist in each stage of the climate finance supply chain, between the financing community and project proponents. This will allow CFA Colombia to play a better role as an articulator between all players in the climate finance ecosystem in the country, and to better address its recommendations.

The CFA Colombia team held conversations with many of the over 50 financing players in the country we identified, which provided significant insights. Before all else, we need to highlight that the institutions that operate in the local market have a very conservative approach because their risk tolerance is very low, and the financial products currently offered are very traditional. At the same time, they are very open to working with new partners, to being educated about new financial structures that can help them expand their business, and to developing new products.

It is of note that we identified a generalised unfavourable perception surrounding new internationally funded programmes like the CFA. These initiatives are perceived as fads, being seen as short term, so there is a reluctance to give effort or attention to them. Consequently, in order to increase the long-term engagement with the CFA programme, and commitment to it, we need to be able to assure the CFA stakeholders that the programme is not a short-term initiative and that the permanent CFA secretariat currently being designed has at least five more years of funding secured.

### 3.1 Climate finance supply chain – gap analysis

This section presents some of the information from the climate finance database, as it stands today, including the key players in the climate finance supply chain, as well as the availability of finance at each stage of the chain. The colour used in the tables below illustrate both the importance of finance and its availability at each project stage. The colour convention adopted is as follows:

- **Green:** Investors are currently active and involved in that specific segment.
- **Yellow:** Investors are partially active and involved in that specific segment.
- **Red:** Investors are not active or involved in that specific segment.
- **Grey:** Source/instrument is not relevant at this stage of project financing.

With the information provided in both tables below, the Colombia CFA will be in a more favourable position to know where to better focus its efforts and recommendations.

Table 2 Climate finance supply chain in Colombia

SOURCES	PROJECT INITIATION	PROJECT DEVELOPMENT	PRIMARY PROJECT FUNDING	SECONDARY MARKETS AND REFINANCING
Development banks	Yes	Yes	Yes	Yes
Government funders	Yes	Yes	Yes	Yes
Commercial banks	No	No	Yes	Yes
International finance institutions	Yes	Yes	Yes	Yes
Institutional investors	No	No	Yes	Yes
Private equity	No	Yes	Yes	No
Venture capital	No	Yes	Yes	No
Angel investors/seed investors	No	Yes	Yes	No
Impact investors	Yes	Yes	Yes	No
Investment banks (local and international)	No	Yes	Yes	Yes

As shown in Table 2, it is important to highlight that there is a common theme among development banks, government funders, international finance institutions and some impact investors: financing is available in the early stages but it is somewhat limited or conditioned. This is due to the public funding that many of these entities share, which also imposes conditions or prior requirements for grant access. To better explain this issue we can use the example of some credit lines that the Inter-American Development Bank (IDB) has given to the Colombian Government that do include early-stage financing and support. The reason why the IDB provides early-stage support and financing in some cases, while denying it in others, is because each line is usually custom-fitted to the requirements of the Government at a specific time. So, on a case-by-case basis, early-stage support and financing will be provided with resources approved for each credit line.

Notably, a good example of this case-by-case approach is when, at a specific moment in time, the Government decides to prioritise a certain agricultural sector. Credit lines and types of support will be tailored to a certain region, as well as to the Government's priorities within that same sector, which can result in a form of exclusion in terms of eligibility for financing if people involved in that activity fall outside of the prioritised region, do not cultivate specific products or have the wrong size of operation.

The same type of dynamic can be seen in Colombia's national development banks, where, although financing is available, because of similar subtleties as described earlier many of the support options and credit lines are conditioned or restricted to a region of the country, the type of product being cultivated, or the size of the operation. In a conversation with a member of one of these national development banks (who asked not to be quoted), it was expressed that size requirements, among other types of restrictions, were a significant hurdle in articulating larger initiatives that could render better and greater outcomes in regard to climate issues.

A deeper look at the financial players and their characteristics is provided in the following paragraphs.

## **Commercial banks**

Out of 51 financial players analysed to date, 16 are commercial banks. Of these, 44% have global objectives, 37% have locally driven purposes, and 19% lean towards regional goals. In terms of the financial products, most of these banks (81%) offer debt (commercial, unlisted); however, we must keep in mind that debt is not the only product offered, as 31% offer debt (listed), others offer structured finance (25%), while 6% offer grants or debt (concessional, unlisted).

Commercial banks usually act late in the supply chain, as they are risk-averse in regard to this type of investment, a quality that is evident in the fact that one of their financing requirements is having collateral. In addition, when these financial players do provide support in the early stages of the supply chain it is only in the form of grants – but, as mentioned before, these are only offered by 6% of commercial banks.

As for strategies to tackle climate change, all commercial banks have one, although they differ in regard to type. Some banks have concrete figures that they intend to use in green or ecological projects, while others commit to increasing investments in sectors with environmental plans by a specific percentage, while others even commit to stopping investing in certain sectors, such as the thermoelectric sector, by a precise year. It is worth noting that most of the commercial banks with global and regional interests do not have clear investment goals in regard to climate change strategies in Colombia, while banks with national purposes do, reaching US\$ 2.43 billion in financing for green projects and initiatives.

## **Development banks, development financial institutions, international financial institutions, and government funds**

Development banks, development financial institutions, international financial institutions, and government funds represent 31.3% of the analysed entities (51). Out of such financial players, 44% have national goals, 37% have regional goals, while 19% have global purposes. Both development banks and government funds have an exclusively local approach. Regarding the financial products offered by these players, debt (commercial, unlisted) stands out, as it is offered by at least 69% of these entities, followed by guarantee/risk mitigation instruments (63%), grants (44%), structured finance (13%), debt (concessional, unlisted) (38%), equity (unlisted) (19%), debt (listed) (19%), venture capital (13%), equity (listed) (6%), and mezzanine financing (6%).

In regard to government funds, despite numerous bureaucratic requirements for providing funding, these funds can impact the first stages of the supply chain (project identification and project development), as they are interested in accompanying projects with great environmental potential from their outset. This is not the case with development banks and development finance institutions, because, despite being interested in helping the country and the region, these usually provide their support in later stages of the supply chain.

Development banks, development financial institutions and government funds have adopted multiple strategies to offset climate change; however, they are not very explicit in terms of concrete amounts (US\$, COP, EUR, etc.), as regards their desired or actual investment in the country or the region. In fact, the sum of the existing funding values to date, or those related to climate change, barely reaches US\$ 8.3 billion.

## **Venture capital funds, private capital funds, asset managers, facility managers, and impact investors**

Venture and private capital funds, asset managers, facility managers, and impact investors account for 27.44% of the players analysed to date; half of these have national goals, 43% have global objectives, and only 7% seek to impact the region. Regarding finance products, most of these players (64%) offer venture capital, as well as equity (unlisted) (21%), mezzanine financing (14%), grants (7%), debt (concessional, unlisted) (7%), debt (listed)



(7%), debt (commercial, unlisted) (7%), and structured finance (7%).

Most of these financial players invest in the primary project finance and project development stages because while they are interested in investing in green projects that may yield positively in the future, they are risk-averse. Also, these players are open to any project that is in line with their return and risk objectives, such as the EPM Ventures program. It is worth noting that although some of these funds and investors have been able to channel billions of US dollars into green projects, their goals in Colombia are unclear, both in terms of the amounts of money available for future projects and the portion of their portfolios that they are willing to target for ecological initiatives in the country. However, those with clear figures of eco-investment in Colombia have reported US\$ 131.5 million, in total.

## **Climate funds**

Climate funds account for 9.9% of the financial players analysed; all of these (100%) have global goals. Grants are the most relevant financial product offered by these entities (100%), followed by guarantee/risk mitigation instruments (20%), and debt (concessional, unlisted) (20%).

An important quality of these types of financial players is that they participate in different stages of the supply chain. By offering grants, many of them focus on the primary project finance and project development stages. Climate funds mobilise billions of dollars a year for green and environmental projects, but as none of them have goals at the national level, there is no available information as to the resources intended to be directed to Colombia in green investments.

Moving forward, now that we know that there are resources that can be better utilised, and have identified the sources of some of these common hurdles, it is clear there is a unique opportunity for the CFA initiative in Colombia to better educate many of the local players, with the goal of generating substantial climate impacts that also align with the UN Sustainable Development Goals.

Turning our attention now to the instruments that are applicable to climate financing, in Table 3 we undertake the same type of exercise as before, but we focus our attention on the instruments that the financial players who were analysed typically offer. We can see here the importance and the availability of the financial products at each stage of the climate finance supply chain. Grey is used for instruments that are not usually used at that stage, mainly because there are other instruments that can be applied more efficiently.



Table 3 Climate finance supply chain in Colombia, by instruments

INSTRUMENT	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				
Guarantee/risk mitigation instrument				
Grants				

As shown in Table 3, the financial players that were analysed generally apply a conservative approach and have a low-risk appetite in their offering of financial products, especially in the early stages. Unfortunately, this is a constant even with the national development banks, because of the way their operations are structured. In Colombia, national development banks operate as second-tier banks that can only provide funding through commercial banks, but within a legal framework that makes the commercial banks 100% responsible for the funds they manage. Thus, while the funds come from the development bank, the commercial bank has a management role and it has to return 100% of those resources back to the second-tier bank plus interest at a low rate. In practice, this translates into the commercial bank retaining 100% of the risk. This in turn means that although the project proponents may have a lower interest rate when the funding is approved by a local development bank, they must also receive the approval of the commercial bank which holds all the risk. This naturally limits the access to financial instruments like commercial unlisted debt for project proponents.

In contrast, the exact opposite happens when the project is at a later stage, with a proven concept and when it is already generating regular cash flows. Financial institutions strongly compete to provide funding through different instruments to refinance entire projects and companies at this stage of development.

It is important to clarify that these hurdles are seen on an economy-wide basis, regardless of whether the projects are climate-related. When thinking about the concept of ‘blended finance’ aimed at climate goals and sustainable development, it is clear that in such a risk-averse environment, there is great potential for blended finance.

The following paragraphs take a deeper look at the financial instruments offered in Colombia.

## **Debt (commercial, unlisted)**

A characteristic of this financial product is that its funding occurs late in the supply chain; in 100% of the cases, it is executed beginning in the primary project finance stage. It is worth noting that, due to the nature of the financial product, funding is often provided because of the project sponsor, rather than because of the qualities of the project itself.

## **Debt (concessional, unlisted)**

Out of 51 financial players analysed to date, 17.64% offer debt (concessional, unlisted). Of all the players offering debt (concessional, unlisted), 45% have regional objectives, 22% have global-driven goals, and 33% have national goals. However, players offer these types of products in advanced stages of the supply chain – as primary project finance. Although the concessions they offer to applicants vary depending on the player, they are sometimes quite favourable, with a certain percentage of the debt written off. The types of players that offer debt (concessional, unlisted) include development financial institutions, climate funds, development banks and, to a small extent, commercial banks.

## **Debt (listed)**

18% of the analysed financial players offer debt (listed). Of these, 56% are commercial banks, followed by development financial institutions (22%), international financial institutions (11%), and asset managers (11%). This type of investment is usually made in the refinancing stage of the supply chain. Colombia has witnessed increasing value of debt (listed): COP 2.8 billion (US\$ 723 million) was raised between 2016 and 2021 with the issuing of five green bonds.

## **Venture capital**

Venture capital investments are offered by 21.56% of the analysed financial players, mainly venture capital funds (46%), followed by private investment funds (27%), development financial institutions (9%), asset managers (9%), and development banks (9%). Venture capital investments are made in the project development and primary project finance stages of the supply chain. However, figures for the money invested in green projects using venture capital are often non-existent, or merely relate to the money funnelled by financial players into green projects. The exact amounts of venture capital investments made to tackle climate change in Colombia are not available.

## **Equity (listed)**

Globally oriented development financial institutions are the only financial players offering equity (listed), representing 2% of all the players analysed. Equity (listed) investments are made in the latter stages of the supply chain, such as refinancing, and are difficult to access. It is worth noting that, to date, there are no concrete investment plans for green projects through equity (listed) in Colombia.

## **Equity (unlisted)**

Equity (unlisted) is offered by 14% of the analysed financial players. Out of all the players offering equity (unlisted), 29% are development financial institutions, 29% are private equity funds, 29% are asset managers, and the remaining 13% are international financial institutions. One of the characteristics of equity (unlisted) is that they disburse funds in advanced stages of the supply chain. In fact, 86% of the equity (unlisted) is invested in primary project finance and 14% in refinancing. Nonetheless, investment data for equity (unlisted) invested in green projects in Colombia is sparse or non-existent.

## Mezzanine financing

It is worth noting that 25% of the investments made through mezzanine financing are made in the intermediate stage of the project development supply chain and are difficult to access. The other 25% are made in the primary project finance stage, while 50% are offered in the refinancing stage, where other financial products, such as debt (commercial, unlisted) are more useful.

## Structured finance

16% of the analysed financial players offer structured finance. Of these, 50% are commercial banks, 25% are development financial institutions, 12.5% are development banks, and 12.5% are asset managers. 89% of structured finance investments are made in the primary project finance stage and 11% in refinancing. However, during the primary project finance stage, there are several requirements for obtaining funding, while in the refinancing stage, investing with structured finance is less relevant, as it is more common to use other instruments, such as debt (commercial, unlisted).

## Guarantee/risk mitigation instruments

Guarantee/risk mitigation instruments are offered by 20% of the financial players analysed. Out of the total players offering this product, 50% are development financial institutions, 20% are development banks, 20% are international financial institutions, and 10% are climate funds. Investments made using guarantee/risk mitigation instruments are conducted throughout the supply chain; however, those made in relation to project identification and project development, which account for 58% of the investments through this type of financial product, face many obstacles to being effective. Those made in the primary project finance stage (50%) are more likely to obtain approval.

## Grants

Grants are offered by 27% of the analysed financial players. Out of the total financial players that offer this type of product, 50% have global goals, 21% have regional goals, and 29% have national goals. 36% are climate funds, 14% are government funds, 7% are commercial banks, 7% are development banks, 29% are development financial institutions, and 7% are asset managers.

Grant investments are mostly offered (67%) in the project development stage of the supply chain, and 33% are in primary project finance. Although there are pre-requirements to access grants, investments made at these stages have a great impact. It is worth mentioning that the main sources of grants, such as development institutions that are government funded, are subject to the dynamics of government policy and priorities described earlier, which might limit or condition the access to them.

It is very important to highlight that local financial players are very open to learning from new partners and working with them, not only with the main objective of expanding their business, but also to include new aspects and variables in their investments and product analysis. Although international institutions generally have more robust knowledge of, and give greater priority to, gender and ESG issues, local entities have started to increasingly include these matters in their internal processes; this is something that the CFA permanent secretariat in Colombia can greatly support. In fact, the Government is currently pursuing several initiatives to achieve gender equality, such as pilot projects to finance women's entrepreneurship through the general royalties system. It is also working with the United Nations to develop gender-oriented planning systems and public budgets.

### 3.1.1 International comparison

Although the information provided thus far in this report is helpful in understanding the specifics of the Colombian context, it is also very useful to compare this information to the

broader 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 4 Climate finance supply chain international comparison

Available	Partially available
Significant gap	Not relevant

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				
Climate funds				
Bilateral development partners				
Development financial institutions				
NGOs and philanthropic organisations				

INSTRUMENTS	PROJECT INITIATION	PROJECT DEVELOPMENT	PRIMARY PROJECT FUNDING	SECONDARY MARKETS AND REFINANCING
Company balance sheets				
Corporate bank loans				
Project finance				
Structured finance				
Bonds				
Green/blue/social/sustainable bonds				
De-risking products				
Concessional finance				
Grants				
Government budget spend				
Microfinance				

A key difference between the two sets of tables that it is interesting to highlight is sources. To better understand the Colombian market, we disaggregated the ‘government budget’ source into development banks, development financial institutions (which include bilateral development institutions), international financial institutions and government funds. This is because, as we explained earlier, and as we will also see later in this report, these players are very important by themselves, have a wide range of special rules that apply to each of them, and are also heavily dependent on the government budget, whether because they are directly funded by it, or because they can only execute total or partial investments that are backed by government loans or other types of guarantees.

Another thing to highlight about the Colombian market is that corporate funding for new projects of this type is very rare, and when it happens, instead of being done directly (i.e. using the company’s balance sheet), it is usually done through more specialised investors like venture capital firms.

In the case of instruments like bonds, because of the lack of a deeper market, green, blue, social or sustainable bonds are as available and regulated as normal listed debt. Even some green bonds that have been issued, for example, by commercial banks, although the demand has been high, mostly because of the AAA issuers, and buyers willing to accept a slightly lower return; these raised funds have the intended purpose of strongly prioritising green investments, but it is not guaranteed that 100% of the funds will go to green projects. Nonetheless, they will still go to clients that fulfil certain green standards held by the bank.

It is important to consider that, as mentioned earlier, 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.

## 3.2 Climate finance landscape by sector

This section summarises the climate finance landscape by sector by highlighting the key finance providers by type of institution. For the CFA exercise in Colombia, we have identified three main sectors that embrace most of the financing and investment efforts in the country, and at the same time that offer the most potential in the climate finance space.

### 3.2.1 Energy

Energy is a critical sector in Colombia, with oil and coal constituting most the country's exports. Hydropower generates around 68% of the country's electricity according to the national association of hydro generators (Acolgen). Most of these activities are performed by large well-established companies that, from a financial perspective, have regular access to most financial institutions and instruments.

Although many of these companies are initiating endeavours in the energy efficiency and renewable energy spaces, the country's NDC calls for a faster and greater development of these areas. To this end, a government fund called FENOGE aims to support such developments.

Energy is one of the most important sectors in Colombia, and 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 loans placement by the end of 2020 of COP 13.629 million (US\$ 3.5 million).

### 3.2.2 Transport

In Colombia the transport sector is usually associated with the infrastructure sector, which in general has been prioritised over the last two decades. The sector is supported by two of the main national development banks, Financiera de Desarrollo Nacional and Bancoldex, with most of the operations and budget of the former going into the sector.

The legal and regulatory framework in Colombia provides assurance and guarantees to institutional investors like pension funds seeking to invest in prioritised projects in this sector, which also helps to attract private investments to it.

The National Government provides multiple incentives to the transportation sector for the procurement of electric vehicles, such as a vehicle tariff exemption, a reduction in VAT from 19% to 5%, and exempting vehicles from traffic restrictions (*pico y placa*). This type of investment, along with the political will of certain dignitaries, has allowed Bogotá to become a Latin American benchmark for electric buses, thanks to the Transmilenio S.A. bidding process early in 2021, which awarded 596 fully electric buses, for a value of COP 1.82 billion (US\$ 480 million), adding to the existing 889 electric buses in the city, of which 401 were provided by Enel-Codensa with an investment of US\$ 100 million. Bogotá thus now has a fleet of 1,485 electric buses. Also, 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, by the



city of Bogotá, and by multilateral banks.

In addition, 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 worth mentioning that during a conversation with the manager of an inter-municipal transportation company, who requested that his identity be kept confidential, he explained that domestic passenger transportation in Colombia still does not have any incentives to migrate to electric cars, and that electric vehicles are not offered or approved for use on national roads by the Ministry of Transportation. He noted that the situation is similar for cargo vehicles.

It is also important to mention that many of the transportation projects that have been partially financed with the help of special green credit lines were already in the country's infrastructure projects pipeline, and emissions reduction being 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.

### 3.2.3 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 in regard to 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.



## 4. Conclusion and recommendations for CFA approach

The CFA permanent programme can play an important role in overcoming the barriers identified within the information and capacity category in the Colombia context, through the capacity building strategy that will be developed with relevant stakeholders of the programme.

Regarding the design of the permanent CFA process in Colombia, we recommend that the strategy for capacity building should be designed in a way that allows more project proponents to access relevant information about project development and finance instruments. This recommendation is because there are a large number of possible project proponents in Colombia that might be interested in the capacity building materials that could be developed by the CFA programme. 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.

In the demand-side analysis, three sectors were analysed: energy, transport and AFOLU. The main findings of this analysis are summarised in the sectoral factsheets. Regarding the energy sector in Colombia, it is important to highlight that this includes not only electricity generation but also activities related to the mining and oil sub-sectors, and 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 has the capacity to 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 towards the energy transition. However, commercial and market barriers need to be overcome, especially in regard to 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 in regard to 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 to promote the transformation into a more sustainable energy sector.

Concerning the transport sector, this is a priority sector within the NDC and is a sector where more mitigation strategies should be developed. Despite the fact that the Government has developed different incentives related to this sector in order 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 in relation to GESI, considering the high inequality in land distribution and the poverty and lack of development of rural areas, among other issues.

Finally, despite the fact that 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, in order 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 to 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.

## 5. Bibliography

Arévalo, D., Cecotti, C. and Rojas, M. (2019) 'Barreras para la incorporación del cambio climático como variable relevante en la identificación de riesgos y oportunidades para los inversionistas institucionales'. CCADI. Colombian Climate Assets Disclosure initiative.

Banco de la República (n.d.) 'Cuáles son las proyecciones económicas del equipo técnico del Banco?' <https://www.banrep.gov.co/es/cuales-son-las-proyecciones-economicas-del-equipo-tecnico-del-banco> [Retrieved 08 June 2021].

Banco de la República (n.d.) 'Inflación total y meta. Serie inflación total y meta'. <https://www.banrep.gov.co/es/estadisticas/inflacion-total-y-meta>. [Retrieved 08 June 2021].

Bancolombia (2021) 'Rebaja de la calificación de Colombia en 2021?: probabilidades, efectos y recomendaciones', Capital Inteligente. <https://www.grupobancolombia.com/wps/portal/empresas/capital-inteligente/actualidad-economica-sectorial/calificacion-riesgos-colombia-2021> [Retrieved 08 June 2021].

Caracol Radio (2021) 'Así quedó el calendario electoral para las elecciones a Congreso de 2022'. *Caracol Radio*, 13 March 2021. [https://caracol.com.co/radio/2021/03/13/politica/1615651342\\_911941.html](https://caracol.com.co/radio/2021/03/13/politica/1615651342_911941.html)

CODS (2021) 'Los retos de la agricultura colombiana frente al cambio climático'. <https://cods.uniandes.edu.co/los-retos-de-la-agricultura-colombiana-frente-al-cambio-climatico/>

Colombia competitiva (n.d.) 'Indicadores a nivel internacional'. *Índice de Competitividad Global — ICG (Global Competitiveness Index)*. <http://www.colombiacompetitiva.gov.co/snci/indicadores-internacionales/indice-competitividad-global> (Retrieved 08 June 2021).

CONPES (2018) *Política de Crecimiento Verde*. <https://colaboracion.dnp.gov.co/CDT/Conpes/Econ%C3%B3micos/3934.pdf>

DANE. (n.d.) *Necesidades básicas insatisfechas (NBI)*. <https://www.dane.gov.co/index.php/estadisticas-por-tema/pobreza-y-condiciones-de-vida/necesidades-basicas-insatisfechas-nbi> (Retrieved 08 June 2021).

DANE.(n.d.) 'Boletín Censo General 2005'. *Necesidades Básicas Insatisfechas*. [https://www.dane.gov.co/files/investigaciones/boletines/censo/Bol\\_nbi\\_censo\\_2005.pdf](https://www.dane.gov.co/files/investigaciones/boletines/censo/Bol_nbi_censo_2005.pdf)

DANE (n.d.) *Censo nacional de población y vivienda 2018. ¿Cuántos somos?* <https://www.dane.gov.co/index.php/estadisticas-por-tema/demografia-y-poblacion/censo-nacional-de-poblacion-y-vivenda-2018/cuantos-somos> [Retrieved 08 June 2021].

Departamento Nacional de Planeación (n.d.) *Comité de Gestión Financiera del SISCLIMA*. <https://www.dnp.gov.co/programas/ambiente/CambioClimatico/Finanzas-del-Clima/Paginas/Comite-de-Gestion-Financiera-del-SISCLIMA.aspx>

DNP (2018) *Estrategia Nacional de Financiamiento Climático*. <https://finanzasdelclima.dnp.gov.co/Que%20hacemos/Paginas/Estrategia-Nacional-Financiamiento-Climatico.aspx>

E3 (2017) 'Climate Finance Accelerator – Outline NDC Financing Plan – Colombia'.

Función Pública (n.d.) *Estructura del Estado. Manual de Estructura del Estado Colombiano*. <https://funcionpublica.gov.co/eva/gestornormativo/manual-estado/index.php>

IDEAM (2016) *Inventario Nacional y Departamental de Gases Efecto Invernadero - Colombia*. <http://documentacion.ideam.gov.co/openbiblio/bvirtual/023634/INGEI.pdf>

IDEAM, PNUD, MADS, DNP, CANCELLERÍA (2018) 'Segundo Reporte Bienal de Actualización de Colombia ante la CMNUCC'.  
[http://documentacion.ideam.gov.co/openbiblio/bvirtual/023848/PNUD-IDEAM\\_2rba.pdf](http://documentacion.ideam.gov.co/openbiblio/bvirtual/023848/PNUD-IDEAM_2rba.pdf)

IICA, Minagricultura, Banco Mundial (n.d.) *Estrategia de Política Pública para la Gestión Integral de Riesgos Agropecuarios en Colombia*.  
<https://www.minagricultura.gov.co/Documents/LIBRO%20ESTRATEGIA%20VERSION%20FINAL.pdf>

Jaramillo, M. (2014) 'The coordination of climate finance in Colombia', Overseas Development Institute. <https://odi.org/en/publications/the-coordination-of-climate-finance-in-colombia/>

Medellín, P. (2019) 'Estas son las principales barreras para la implementación de buses eléctricos en las áreas urbanas'. Instituto de Estudios Urbanos, Universidad Nacional de Colombia. <http://ieu.unal.edu.co/medios/noticias-del-ieu/item/estas-son-las-principales-barreras-para-la-implementacion-de-buses-electricos-en-las-areas-urbanas>

MinAgricultura (2017) *Política pública en pro de la mujer rural*.  
<https://www.minagricultura.gov.co/noticias/Paginas/Pol%C3%ADtica-p%C3%ABblica-en-pro-de-la-mujer-rural.aspx>

Minambiente (2018) *Estrategia Colombiana de Desarrollo Bajo en Carbono*.  
<https://www.minambiente.gov.co/index.php/component/content/article/469-plantilla-cambio-climatico-25>

MinEnergía (2018) *Política Pública Nacional de Equidad de género para las Mujeres y el Plan Integral para garantizar a las mujeres una vida libre de violencias*.  
<http://www.equidadmujer.gov.co/ejes/Paginas/politica-publica-de-equidad-de-genero.aspx>

MinEnergía (2020) *Lineamientos de género para el sector minero energético*.  
<https://www.minenergia.gov.co/documents/10192/24180065/Lineamientos-de-pol%C3%ADtica-p%C3%ABblica-con-enfoque-de-g%C3%A9nero-del-sector-minero-energ%C3%A9tico.pdf>

Ministerio de Ambiente (n.d.) *Actualización de la Contribución Determinada a Nivel Nacional de Colombia (NDC)*.  
[https://www.minambiente.gov.co/images/cambioclimatico/pdf/NDC\\_Colombia/informe\\_NDC\\_de\\_Colombia\\_2020\\_Versi%C3%B3n\\_Final.pdf](https://www.minambiente.gov.co/images/cambioclimatico/pdf/NDC_Colombia/informe_NDC_de_Colombia_2020_Versi%C3%B3n_Final.pdf)

Ministerio de Ambiente y Desarrollo Sostenible (2016) *Decreto 298*.  
<https://www.minambiente.gov.co/images/AsuntosMarinosCosterosyRecursosAcuatico/DECRETO298-DEL-24-DE-FEBRERO-DE-2016-sisclima.pdf>

MinMinas (2018) *Plan Integral de Gestión del Cambio Climático para el sector minero energético*.  
<https://www.minenergia.gov.co/documents/10180/23517/15333066739365700Presentaci%C3%B3n+PIGCCME.pdf>

PwC (n.d.). 'Doing Business in Colombia'.  
<https://docs.google.com/document/d/1qbrOy0z5ywcsIzdrKG9jJEEFtMk9R6vu/edit#>

Ramírez, J.M., Flórez, C. and Botero, C. (2015) 'Aligning Colombia's Financial System with Sustainable Development'. World Bank.  
<https://documents1.worldbank.org/curated/pt/791821487660696586/pdf/112805-WP-Aligning-Colombias-Financial-System-with-Sustainable-Development-PUBLIC.pdf>

The World Bank Group (2020) *RISE. Regulatory Indicators for Sustainable Energy*.  
<https://rise.esmap.org/country/colombia>

Torres, D., Duarte, J. and Amezcuita, N. (2020) 'Análisis del mercado de vehículos eléctricos en Colombia con base al modelo de Estados Unidos'. Universidad Agustiniana, Facultad de Ciencias Económicas y Administrativas. Programa de negocios internacionales.<https://repositorio.uniagustiniana.edu.co/bitstream/handle/123456789/1478/DuartePulido-JennyferLorena-2020.pdf?sequence=1&isAllowed=y>

Transparencia por Colombia. (n.d.) *Country Data*. Transparency International.  
<https://www.transparency.org/en/countries/colombia>. [Retrieved 08 June 2021].

UPME (ed.) (2015) 'Integración de las energías renovables no convencionales en Colombia'.

UPME (ed.) (2019) *Estrategia Nacional de Movilidad Eléctrica*.  
<https://www1.upme.gov.co/DemandaEnergetica/ENME.pdf>.

UPME (2020) 'Informe final caracterización energética del transporte [Realizar la caracterización energética del transporte automotor carretero de carga urbano e interurbano en el Territorio Nacional, con el propósito de fortalecer la construcción de las proyecciones de demanda, de los balances energéticos del país y de las]'.  
[https://www1.upme.gov.co/DemandayEficiencia/Documents/Informe\\_final\\_caracterizacion\\_transporte.pdf](https://www1.upme.gov.co/DemandayEficiencia/Documents/Informe_final_caracterizacion_transporte.pdf)

UPME (2020) 'Movilidad Sostenible'.  
<https://www1.upme.gov.co/DemandayEficiencia/Paginas/Movilidad-Sostenible.aspx>

World Bank (n.d.) *Doing Business 2020 Colombia*.  
<https://www.doingbusiness.org/content/dam/doingBusiness/country/c/colombia/COL-LITE.pdf>

World Bank (n.d.) *Human Capital Index. Data Bank*.  
<https://databank.worldbank.org/source/human-capital-index> [Retrieved 08 June 2021].

World Bank Group (ed.) (n.d.) *Doing Business 2020*. 10.1596/978-1-4648-1440-2

WEF (2019) 'Global Competitiveness Report 2019: How to end a lost decade of productivity growth'. <https://www.weforum.org/reports/how-to-end-a-decade-of-lost-productivity-growth>

WEF (2020) 'Fostering Effective Energy Transition 2020 edition'. weforum.  
[http://www3.weforum.org/docs/WEF\\_Fostering\\_Effective\\_Energy\\_Transition\\_2020\\_Edition.pdf](http://www3.weforum.org/docs/WEF_Fostering_Effective_Energy_Transition_2020_Edition.pdf)

WWF (2021, 06 29) 'Mira por qué Colombia tiene la #NDCqueQueremos. Our news'.  
<https://www.wwf.org.ec/?uNewsID=368330>

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