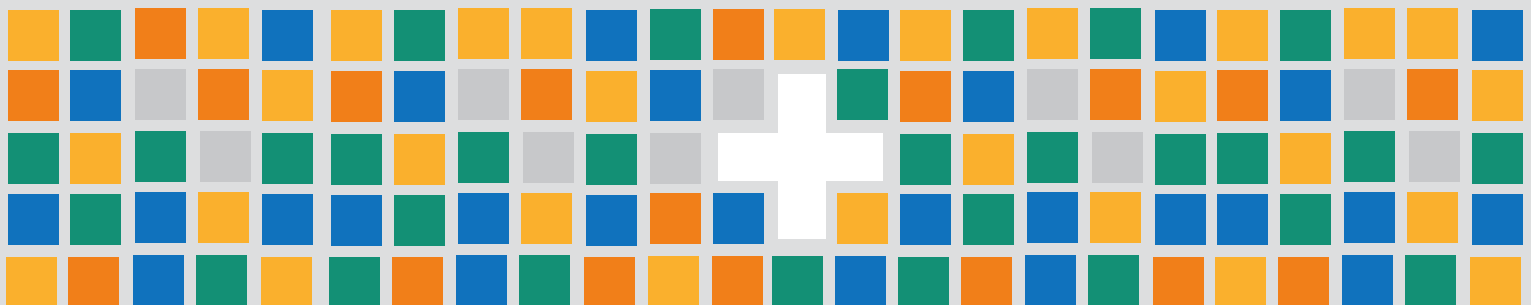




TRANSFORMA

Consistency case study: actions supporting Article 2.1c of the Paris Agreement in Colombia

Alejandra Lopez Carbajal, Ximena Rojas Squella and Charlene Watson



Consistency case study: actions supporting Article 2.1c of the Paris Agreement in Colombia



Alejandra Lopez-Carbajal, Ximena Rojas-Squella and Charlene Watson

March 2021

© iGST 2021

Cite as: Lopez Carbajal, A., Rojas Squella, X. and Watson, C. (2021) 'Consistency case study: actions supporting Article 2.1c of the Paris Agreement in Colombia'. San Francisco and London: Climate Works Foundation and ODI. Part of 'Climate-consistency of finance flows: iGST case study series'.

↓ Download the report
www.independentgst.org





About the iGST initiative and the Finance Working Group

The Independent Global Stocktake (iGST) is a consortium of civil society actors working together to support the Global Stocktake (GST), the formal process established under the Paris Agreement to periodically take stock of collective progress toward its long term goals.

The iGST aligns the independent community — from modelers and analysts, to campaigners and advocates — so we can push together for a robust GST that empowers countries to take greater climate action. www.independentgst.org

The Finance Working Group (FWG) is an open partnership bringing together expert perspectives from the global north and south on the progress made towards financing climate action. Considering the provision of support to developing countries to mitigate and adapt to climate change and the consistency of finance flows with climate objectives, the FWG aims to support the UNFCCC GST process as well as independently benchmark the official GST. The group is co-chaired by Charlene Watson of ODI and Courtnae Bailey of Imperial College London.



Acknowledgements

The authors would like to thank all of the interviewees and reviewers for their invaluable input, including Giovanni Pabón, Mariana Rojas, Germán Romero, María Lemos, Maritza Florián, Santiago Briceño, Angela Rivera, Carolina Figueroa, Diana Barba, Isabel Mantilla, Anibal Pérez and Carlos Casallas. The authors would also like to thank the Finance Working Group members for their valuable contributions, in particular the steering group for ‘Climate-consistency of finance flows: iGST case study series’, including Julia Binger (ETH), Courtnae Bailey (Imperial College London) and Stephan Kellenberger (WWF Switzerland), and reviewers Carolina Aguirre Echeverri, Manuela Ríos (MOFA, Colombia), María Laura Rojas (Transforma), Camila Cristancho (Transforma), Sarah Colenbrander (ODI), Chavi Meattle (CPI) and Hannah Roeyer (Climate Works Foundation). The authors are thankful to the Climate Works Foundation for providing the resources and support to make this case study possible. All omissions and errors remain the authors’ own.

Climate-consistency of finance flows: iGST case study series



Contents

Acronyms	5
+ Executive summary	6
+ 1. Why collate country actions supporting Article 2.1c of the Paris Agreement?	11
+ 2. Country framing: interpreting the consistency of finance flows at the country level	13
2.1 Key economic sectors facing climate-related risks in Colombia	14
2.2 Nationally relevant targets for the consistency of finance flows	15
2.3 The potential impact of Covid-19 on Colombia's climate objectives	16
+ 3. Public levers supporting the consistency of finance flows with low-emission, climate-resilient development pathways in Colombia	17
3.1 Key actions considered to be consistent with climate objectives	17
3.2 Key actions considered to be inconsistent with climate objectives	23
3.2.1 Deforestation and agriculture in Colombia	23
3.2.2 Energy transition in Colombia	23
+ 4. Private sector actions towards the consistency of finance flows with low-emission, climate-resilient development pathways	26
4.1 Colombia's private sector and market structure	26
4.2 Bank lending	31
4.3 Bond markets	31
4.4 Insurance sector	33
4.5 Listed equity	34
4.6 Private equity	34
4.7 Investment decision-making	35
+ 5. Conclusion	36
+ References	39





Acronyms

CCADI	Colombian Climate Asset Disclosure Initiative
CDM	Clean Development Mechanism
CGF	Financial Management Committee (Comité de Gestión Financiera)
ESG	environmental, social and governance
GHG	greenhouse gases
GST	Global Stocktake
iGST	Independent Global Stocktake
MRV	measurement, reporting and verification
NAMA	Nationally Appropriate Mitigation Action
NDC	nationally determined contribution
SFC	Financial Superintendence of Colombia (Superintendencia Financiera de Colombia)
TCFD	Task Force on Climate-related Financial Disclosures
UNFCCC	United Nations Framework Convention on Climate Change



+ Executive summary



The third long-term goal of the Paris Agreement, if operationalised, stands to have tremendous impact. Article 2.1.c is a commitment from Parties to ‘mak[e] finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development’ (UNFCCC, 2015). This long-term goal recognises that we not only need an increase in finance that supports climate action, but must also redirect the finance, both public and private, that is locking countries into high-emission, low-resilience futures. It is only through meeting this third long-term goal, and the very idea of consistency of public and private financial flows, that we can also deliver on the two other long-term goals of the Paris Agreement, on adaptation and mitigation. This goal is relevant to developing and developed countries alike, although it should not detract from the obligation of developed countries to provide and mobilise climate finance for mitigation and adaptation to countries that have not historically contributed to climate change (Article 9, UNFCCC, 2015).

Article 14 of the Paris Agreement obliges Parties to assess collective progress toward the purpose and long-term goals of the Paris Agreement, including Article 2.1.c. The first of these Global Stocktakes (GST) is to be completed in 2023. As of today, there is no formal United Nations Framework Convention on Climate Change (UNFCCC) guidance on how to make financial flows consistent with climate action. This is likely to hinder the assessment of collective progress in the first GST. As appropriate transparency will ultimately build trust and confidence for effective implementation of the Paris Agreement, it becomes critical therefore that measurement and reporting of the consistency of finance flows towards low-emission, climate-resilient development pathways is continuously increased. While interpretation might vary across countries and stakeholders, country case studies are intended to be conversation starters, highlighting progressive and best practice examples arising from these efforts.

Colombia is an upper-middle-income country (World Bank, 2020a) with steady economic growth. Over the past decade, the economy grew by an average of 4.6% per year (Delgado et al., 2020) and growth projected to continue at an average 2.9% per year towards 2050 (Bataille et al., 2020). This has helped the country to reduce poverty and increase social security, and to become a member of the Organisation of Economic Cooperation and Development (OECD) in 2020. Economic growth over the past decade has been linked to growth in the mining and oil sectors, as well as to an increase in foreign investment and high prices for oil and basic products. However, a higher income has also increased the demand for fossil fuels, especially in the transportation, manufacturing and power generation sectors (Calderón et al., 2016). Colombia’s economy remains highly dependent on natural resources, which makes it particularly vulnerable to the adverse effects of climate change (Murillo, 2017),¹ and a high share of its current greenhouse gas (GHG) emissions come from agriculture, forestry and other land use (AFOLU) (Gobierno de Colombia, 2015). These factors present pressing social and economic challenges for the decarbonisation and climate-resilience transition of the country. It is further foreseen that the recession due to the Covid-19 pandemic will have a strong negative effect on poverty rates and on the overall economic performance of the country. Gross domestic product (GDP) is projected to have fallen by 8.2% in 2020 (IMF, 2020) due to Covid-19, and a post-Covid-19 recession will have a direct impact on

¹ According to the National Unit for Risk Disaster Management, between 1998 and 2012, 90% of the country’s emergencies were related to hydroclimatic events.



poverty rates, raising them by over 10% in the Latin American region (Cárdenas and Guzmán Ayala, 2020).

Like most developing nations, Colombia's early climate action focused on the elaboration of National Communications (2001, 2010), as well as on the implementation of the Clean Development Mechanism (CDM)² of the Kyoto Protocol followed by Nationally Appropriate Mitigation Actions (NAMAs),³ the latter two of which aimed to attract international resources to domestic climate action. Nevertheless, in the past decade Colombia has seen an increasing number of public and private climate actions, policies and investments. Among these, the most relevant are the Climate Change National Policy (2017) and the Climate Change Law (2018), which have enabled more specific institutional, financial and economic instruments (i.e. the National Strategy on Climate Finance (2017), the Carbon Tax (2017), renewable energy auctions (2019) and the Adaptation Fund (2010)). These recent policies and investments are mostly driven by the implementation of the Paris Agreement, and in turn have led to the adoption of a domestic long-term goal of reaching carbon neutrality by mid-century (Presidencia de Colombia, 2019)⁴ and an updated 2020 nationally determined contribution (NDC) that has the goal of reducing Colombia's GHG emissions by 51% by 2030 (Gobierno de Colombia, 2020) (Figure 1).

The private sector has also started to lead actions to align its financing activities with a low-emission, climate-resilient pathway. The banking sector has led the elaboration of a Green Protocol (2017), in which government and private financial institutions join to make a more sustainable and climate-resilient financial system; certified green bonds have been issued since 2015; and the insurance sector leads the way in integrating climate risk into business and investment decision-making and has developed climate scenario assessments of its aggregate portfolio.

This case study finds a nascent process of alignment of Colombian public and private financial flows with low-emission, climate-resilient development pathways (Figure 2 and Figure 3). However, additional measures are required. In particular, there needs to be a shift away from market dependence on fossil fuel production and exporting and from the continuing investment in fossil fuels. This requires the promotion of a just transition of the energy sector, a transition that enhances industrial competitiveness and modernisation of transport systems. A thorough social and economic transformation to reduce agriculture- and deforestation-related emissions, while ensuring economic development and poverty alleviation, access to energy and rural development, with strong, active participation of the private sector, would also be necessary. These measures ought to be in line with Colombia's carbon neutrality goal and its updated 2020 NDC.

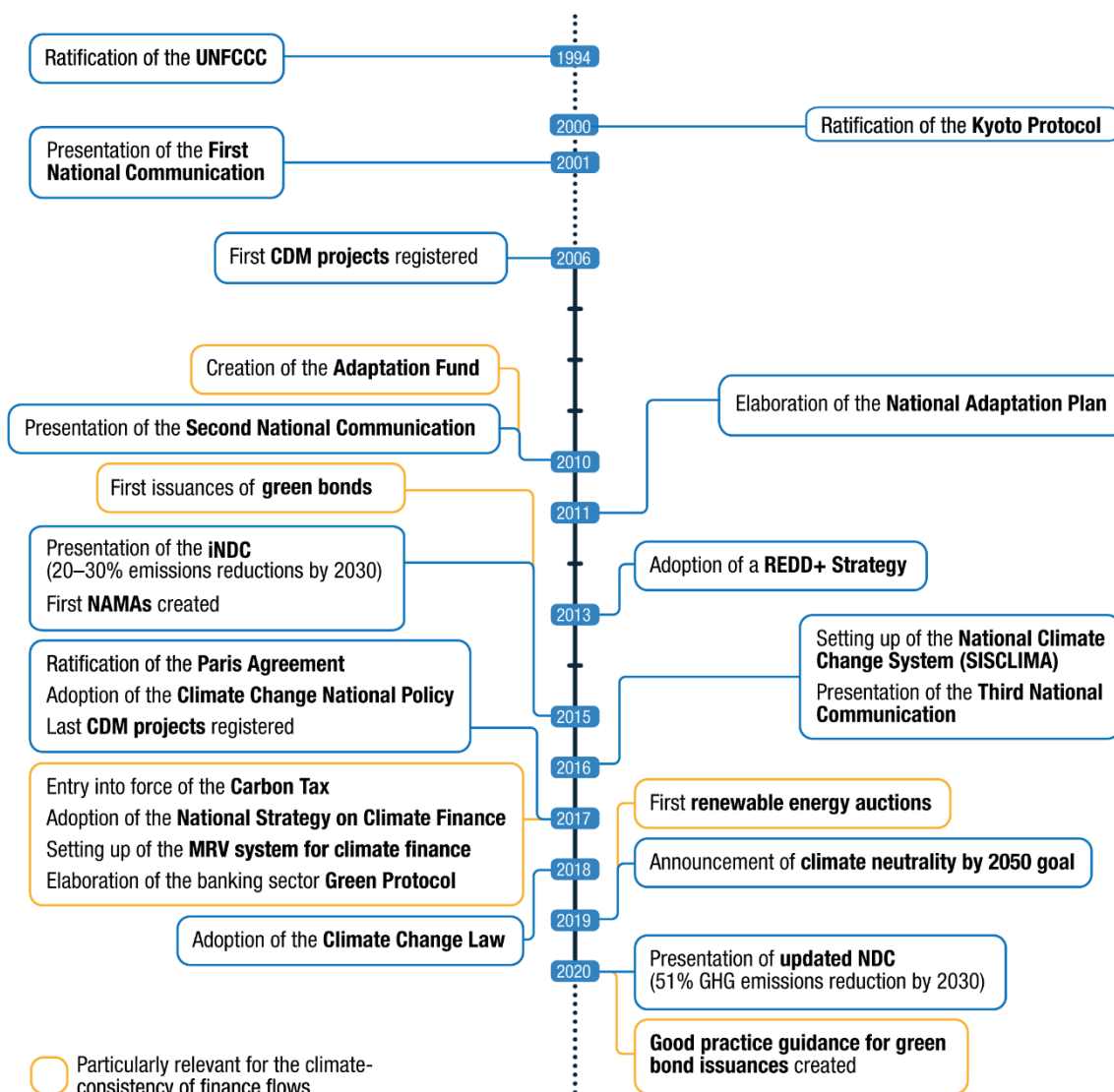
² From 2006 to 2017, Colombia registered 67 CDM projects (CDM Registry, 2020).

³ Between 2015 and 2016, Colombia elaborated 17 NAMAs for the agriculture, energy, transportation, industry, waste, livelihoods and forestry sectors (MADS, 2016). Some of these NAMAs continue to be implemented, and the coffee NAMA was integrated into Colombia's 2020 updated NDC (Gobierno de Colombia, 2020).

⁴ As part of Colombia's announcements during the UN Climate Action Summit held in September 2019.



Figure 1 Timeline of climate action in Colombia



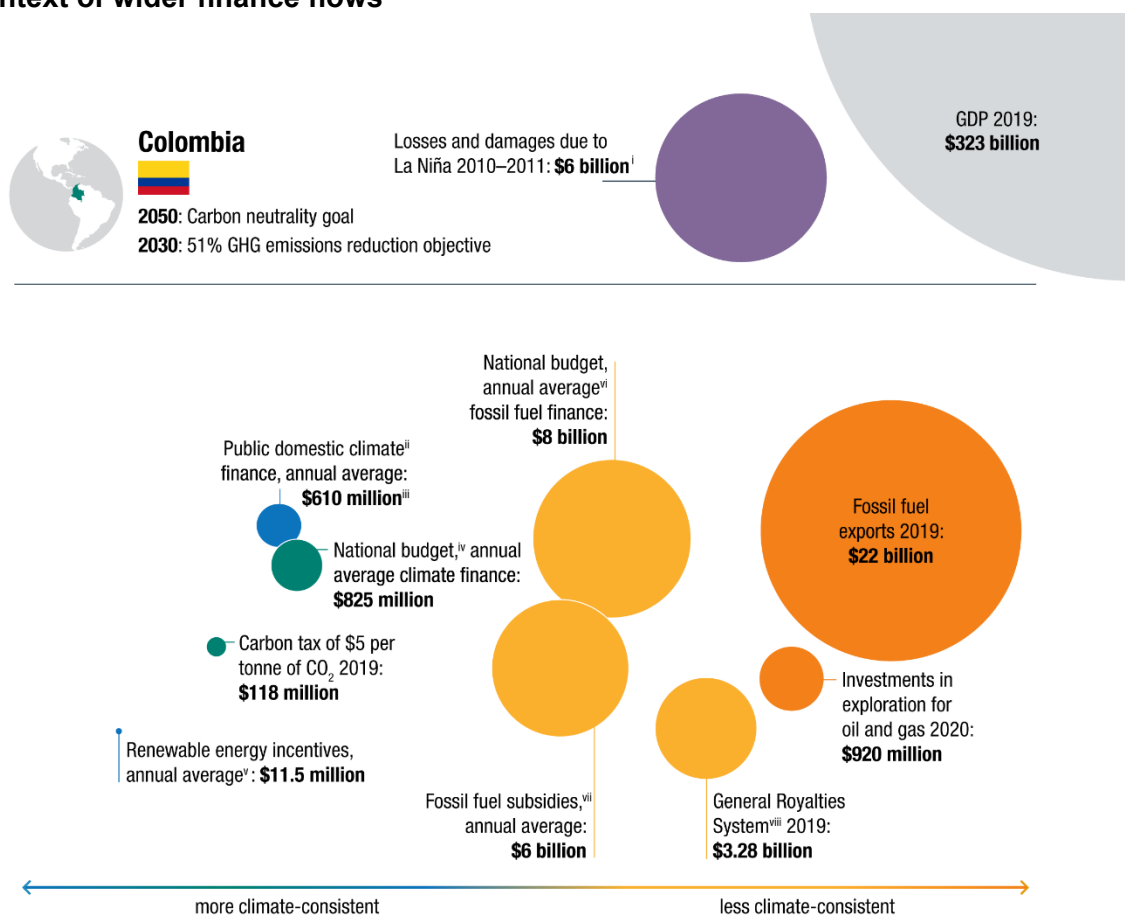
Source: Authors' own elaboration

It is important to note that this report corresponds to a high-level review⁵ of Colombia's progress towards Article 2.1c. However, the research did not follow a census method or use a statistically representative sample. In this sense, although the sources analysed may not represent the universe of public and private financial flows in the country, the results do provide a general overview and, hopefully, will help to initiate a conversation about the consistency of these flows with climate objectives in Colombia.

⁵ The research comprised an extensive literature review, analysis of existing legislation and interviews with key stakeholders.



Figure 2 Consistency of public finance flows with climate objectives in Colombia in the context of wider finance flows



ⁱ Although there is no direct attribution of losses and damages to climate change, this particular La Niña event had social and economic consequences to the country that continue to be addressed a decade after and which led to the creation of the Colombian Adaptation Fund.

ⁱⁱ This includes the accounting of budgetary measures (39.8% federal budget, 38.5% municipal budget, 4.2% departmental budget) plus financial resources coming from the General Royalties System and destined to be climate finance (17.4%). The coverage of the federal budget may therefore overlap with the accounting of climate finance from the national budget, but this cannot be analysed due to lack of detailed public information.

ⁱⁱⁱ Average for the period 2011 to 2019. Of the \$610 million, there is an annual average of \$70 million for mitigation and \$300 million for adaptation; \$240 million is cross-cutting. 'Adaptation' includes finance by the Adaptation Fund. However, it does not represent the total amount of financing provided by the Fund (\$2.25 billion) because since 2011 a significant amount of the Fund's resources have been directed to La Niña post-disaster management.

^{iv} The national budget is negotiated for the full duration of each government, in this case 2019–2022.

^v For the period 2016 to 2020 (as of November). These incentives are provided in the form of a 50% reduction in the associated cost of rent for non-conventional renewable energy projects for up to 15 years, an exemption from paying VAT (with a value of 19%) and a customs duty exemption for imported machinery for projects.

^{vi} The national budget is negotiated for the full duration of each government, in this case for the period 2019 to 2022. In the budget, a specific amount is allocated to renewable energy, but lack of detailed public information means this cannot be separated from fossil fuel finance.

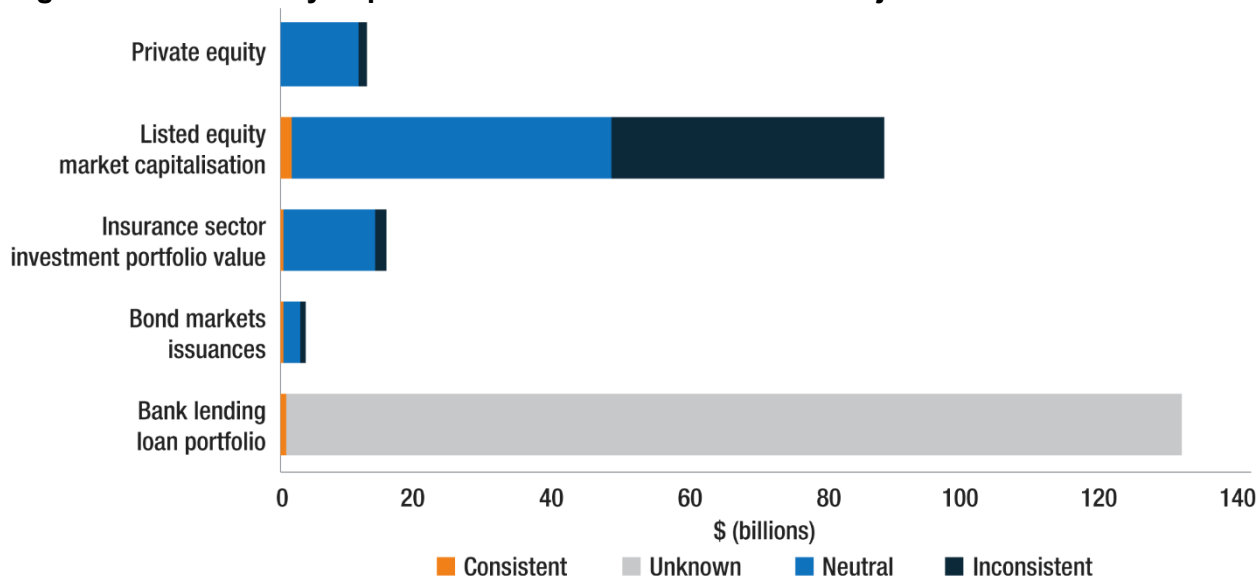
^{vii} Subsidies on petroleum have been annualised for the period 2014 to 2019, while subsidies for electricity and gas are already accounted on an annual basis. Of the \$6 billion, \$5.4 billion is for petroleum, \$0.6 billion is for electricity and gas.

^{viii} This system comprises revenues from fossil fuel exploration and production, resources that are in turn invested in public projects, including climate finance. The royalties are reported biennially, hence an annual average is presented for the period 2019 to 2020.

Source: Authors' own elaboration



Figure 3 Consistency of private finance flows with climate objectives in Colombia



Note: Bank lending loan portfolio correct as of December 2019; bond market issuances correct as of 15 December 2020; insurance sector investment portfolio value correct as of December 2018; listed equity market capitalisation correct as of October 2019; cumulative private equity investments reported in the 2015–2019 period.

Source: Authors' own elaboration



+ 1. Why collate country actions supporting Article 2.1c of the Paris Agreement?



The long-term goal of making finance flows consistent with a pathway towards low GHG emissions and climate-resilient development is neither defined nor fully articulated under the UNFCCC process. Nor has there been a place in the negotiations to discuss and develop the concept of the climate-consistency of finance flows (Bodle and Noens, 2018) or any requirements for Parties to the Paris Agreement to report on this consistency.⁶ Furthermore, the foundations of the GST do not have highly detailed provisions and, so far, allow ample flexibility, including in how to take stock of collective progress towards Article 2.1c (Watson and Roberts, 2019). Developing discussion on how to operationalise Article 2.1c can create useful lessons and encourage further action, and it may also support a meaningful discussion at the first of these GSTs in 2023 (UNFCCC, 2015). Despite the lack of clarity of the concept, commitments to ‘align’ with the Paris Agreement are being made in both public and private institutions. These emerging initiatives towards the alignment of finance flows with the Paris Agreement are largely based on guiding statements (MDBs, 2018; Cochran and Pauthier, 2019). Unpacking how to fully operationalise these commitments on Paris alignment remains work in progress (Carter, 2020).⁷

Accountability under the Paris Agreement will fall upon governments. As such, there is a rationale to focusing on the levers that public actors create for finance flows, both public and private, by generating incentives and disincentives. Recognising that public flows alone are not sufficient for a transition to low-emission, climate-resilient pathways, these public levers could include financial policy and regulation, fiscal policy, public investment and information instruments (GGBP, 2014; Watson and Schindler, 2017; Whitley et al., 2018) (Table 1). However, a transformation of the financial system as a whole that is consistent with climate action will still require additional regulatory, structural and capacity efforts for both public and private flows.

The Independent Global Stocktake (iGST) (Box 1) can use its independence to work with a diversity of actors across political and technical challenges. In this case, the challenge relates to the progression of discussions on the consistency of finance flows with low-emission, climate-resilient development pathways. This case study of action towards consistency of finance flows in Colombia includes the concise and high-level early mapping of government-led policy levers and, where feasible, private initiatives. Building on a framework of government levers that can help to operationalise consistency (Whitley et al., 2018), this case study identifies the financial policy and regulation, fiscal policy, public finance and information instruments relevant to climate action, as well as different initiatives and consistency trends in private flows that are already present in Colombia. It also highlights future challenges for the country’s pursuit of consistency. The case study is intended to be a thought-provoker and conversation starter.

⁶ It has, however, been suggested that countries could voluntarily choose to do so in their biennial transparency reports (Whitley et al., 2018).

⁷ There are, however, a few examples of alignment that could be followed by financial institutions, e.g. the European Investment Bank’s commitment to align all of its financing activities with the principles and goals of the Paris Agreement by the end of 2020, and to dedicate 50% of its financing to climate action by 2025, while ensuring that the other 50% is consistent with and does not undermine the EU’s climate mitigation and adaptation objectives (EIB, 2020).



Table 1 Government-led tools to encourage the consistency of finance flows with climate ambitions

Financial policies and regulations (primarily influence behaviour through force of law)	Fiscal policy levers (primarily influence behaviour through price)	Public finance (primarily influence behaviour by shifting financial risk)	Information instruments (primarily influence behaviour through awareness)
<ul style="list-style-type: none"> • lending requirements • accounting systems • mandates of supervisory authorities • standards • plans and strategies • disclosure requirements (where mandatory and enforced) 	<ul style="list-style-type: none"> • taxes • levies • royalties • price support or controls • public procurement (including for establishment of public funds and finance institutions and state-owned enterprises) • budget support 	<ul style="list-style-type: none"> • grants • debt • equity • guarantees • insurance (from public pension funds, sovereign wealth funds and public finance institutions) 	<ul style="list-style-type: none"> • certification and labelling • transparency initiatives • corporate strategies • awareness campaigns • statistical services • scenario analysis and stress testing • standards • plans and strategies • disclosure requirements (where voluntary)

Source: Whitley et al. (2018)

Box 1 What is the iGST and the Finance Working Group?

The Independent Global Stocktake (iGST) is a data and advocacy initiative, led by the ClimateWorks Foundation, that brings together climate modellers, analysts, campaigners and advocates to support the Paris Agreement. The iGST is structured into four working groups (covering adaptation, mitigation, finance and equity) with additional activities undertaken by an umbrella group of iGST partners. The objective of the iGST is to positively influence the official GST, by supporting information collection, technical assessment and political consideration, as well as bolstering national, regional and subnational relevance in the process.

The Finance Working Group (FWG) of the iGST is an open partnership that brings together a wide range of expert perspectives from its members from the Global North and South. Focusing on the finance-related aspects of the Paris Agreement, 'finance' as used by the working group encompasses two core, interrelated topics. It considers both the provision of support to developing countries to mitigate and adapt to climate change (Article 9), and the consistency of all finance flows with climate objectives (Article 2.1c).

The ultimate goal of the FWG is to support more ambitious country pledges and domestic actions by 2025, which will lead to substantial progress towards meeting all three of the long-term goals of the Paris Agreement. To achieve this goal, the FWG's long-term objective is to have direct influence of the UNFCCC GST process, through the production of knowledge, outreach and support for appropriate data inputs, and to support a benchmarking of the official GST through the assessment of progress on financing the commitments to the Paris Agreement. It will also support an active, independent civil society on the issues surrounding the financing of climate action.



+ 2. Country framing: interpreting the consistency of finance flows at the country level



The Paris Agreement adopts a bottom-up, country-driven approach. It has shifted multilateral negotiations away from a top-down, target-setting approach, so that countries themselves define their own pathways to becoming low-emission, climate-resilient economies. For the operationalisation and pursuit of consistency of finance flows and in the absence of predefined criteria, this suggests there will be nationally-driven interpretations, but it also necessitates transparency, whereby each country's interpretation of 'consistency' can be scrutinised to give it legitimacy. This further allows country progress to be acknowledged in light of common but differentiated responsibilities and respective capabilities.

This section outlines the relevant country and market contexts within which Colombia will need to make finance flows consistent with a low-emission, climate-resilient development pathway (see also Box 2).

Box 2 Colombia at a glance

Colombia is an **upper-middle-income economy** (World Bank, 2020a).

Gross domestic product (GDP): \$323.8 billion (World Bank, 2020b)

GDP per capita: \$6,432.4 (World Bank, 2020c)

Population: 46 million (77.1% living in urban areas)

Credit rating: BBB– (Fitch Ratings, 2020)ⁱ

Poverty: 35.7% of Colombia's population are in a situation of povertyⁱ and 9.6% are in extreme monetary povertyⁱⁱ (DANE, 2020a)

As of 31 December 2019, Colombia's Consolidated General Balance for the national and territorial levels and the public sector had \$381.1 billion (136.3% of GDP) in assets, \$424.7 billion (151.9% of GDP) in liabilities and \$–43.66 billion (15.6%) in equity (Bohórquez Ramírez, 2020).

Colombia is a Party to the UNFCCC, the Kyoto Protocol and the Paris Agreement, a Non-Annex I country under the UNFCCC and a member of the G77/China and the Independent Association of Latin America and the Caribbean (AILAC) negotiation group.



i As of November 2020. The rating was downgraded from BBB in April 2019 due to 'risks to fiscal consolidation and the trajectory of government debt, the weakening of fiscal policy credibility, and increasing risk from external imbalances (Fitch Ratings 2019).

ii Poverty is defined as an income below the value in money that a given person requires monthly to acquire basic food, services and minimum goods to live (DANE, 2020c).

iii Extreme monetary poverty is defined as an income below the value in money that a given person requires monthly to acquire basic food to live with a minimum calorific value of 2,105 for urban inhabitants and 2,079 for rural inhabitants (DANE, 2020c).

Source: Authors' own elaboration



2.1 Key economic sectors facing climate-related risks in Colombia

In 2010–2011, the phenomenon of La Niña caused losses and damage totalling \$6 billion, equivalent to 2.2% of GDP. More than 3.2 million people were affected, 3.5 million hectares (ha) were flooded and 845 main and secondary roads were closed throughout the country (Gobierno de Colombia, 2015). Although it is difficult to attribute specific weather events to climate change, it has been estimated that 88% of disasters in Colombia are related to floods, droughts and mudslides (DNP, 2018), events that, according to climate change scenarios, will most likely increase in frequency and intensity, representing a direct risk to the Colombian economy and its population in the short and long terms.

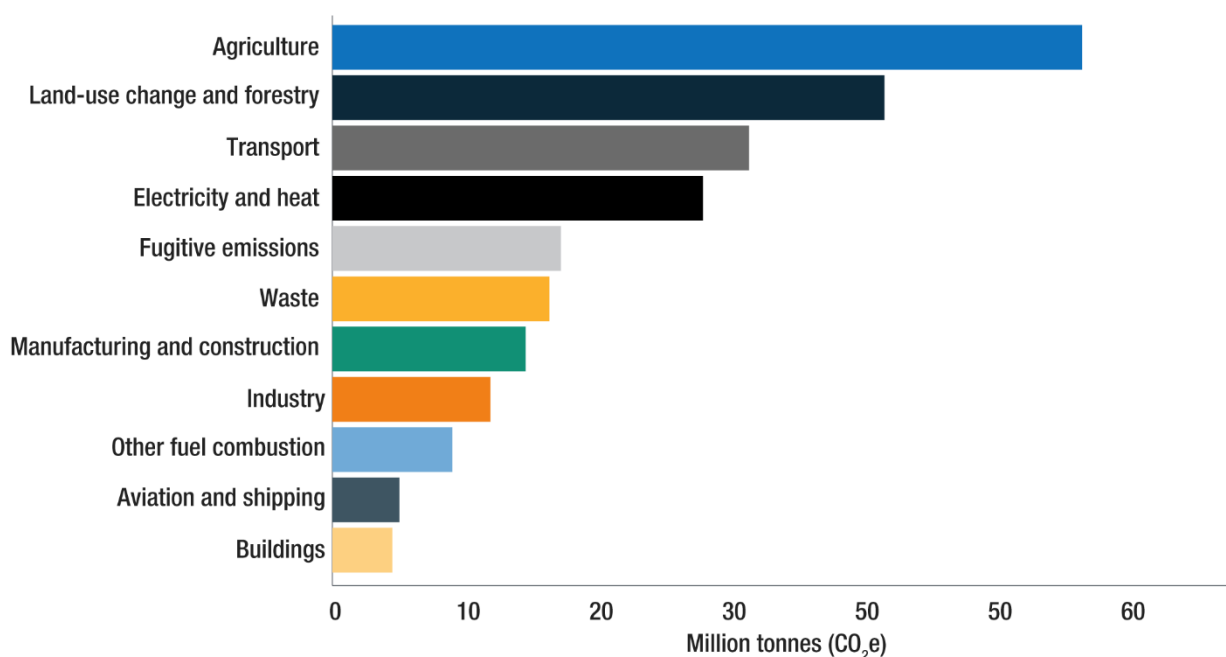
Also, Colombia has a high dependence on fossil fuel exports, creating transition risks. In the past 10 years, 60% of Colombia's exports have been related to fossil fuels and extractive industry products; in 2019 alone, exports of fossil fuels, particularly oil and coal, and products of the extractive industries represented \$22 billion (DANE, 2020b) (equivalent to 6.7% of GDP).

Colombia's electricity production has relatively low emissions due to a large share of hydroelectricity production (76%) (Delgado et al., 2020). However, Colombia also has 38 operational fossil fuel projects, comprising four natural gas terminals, eight oil pipelines, three gas pipelines and 23 coal-fired units (Browning et al., 2020) and is continuing to invest in exploration for oil and gas, including \$920 million in 2020 (70% onshore and 30% offshore) (ACP, 2020). Oil and gas reserves are limited to a few years (6.3 and 8.1 years, respectively), but coal reserves have a much longer horizon, being sufficient for the next 180 years (CCADI, 2020a).

The largest share (58%) of Colombia's emissions comes from deforestation and agriculture (Gobierno de Colombia, 2015), followed by energy (38.5%) (Figure 4). Major drivers of deforestation are the expansion of the agricultural frontier and the transformation of forest into pastures for cattle ranching. In recent decades, illicit activities have been part of the driving force behind deforestation, mainly through illegal cropping, mining, logging and land grabbing. Deforestation and some agricultural practices are not only a source of risk, in increasing climate change vulnerability, but could also contribute to climate change adaptation where used efficiently and sustainably.



Figure 4 Colombia's GHG emissions by sector, 2016



Source: Our World in Data (<https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions>).

2.2 Nationally relevant targets for the consistency of finance flows

Colombia's GHG emissions represent 0.41% of global emissions (Ge and Friedrich, 2020). In its 2015 NDC, Colombia included a mitigation objective to reduce its GHG emissions by 20% from the business-as-usual scenario by 2030, which could be increased to 30% emissions reduction, conditional on international support. **The 2020 updated version of Colombia's NDC includes an economy-wide mitigation objective to reduce its GHG emissions by 51% by 2030** (Presidencia de Colombia, 2020a). The NDC also includes 148 specific national, sectorial and territorial mitigation measures⁸ owned by governmental ministries, territorial entities and companies – which may help to ensure budgetary provisions for their implementation – and contemplates the elaboration of carbon budgets by 2023 at the latest. It includes a goal to reduce the deforestation rate from 158,894 ha per year to 50,000 ha per year by 2030 (Gobierno de Colombia, 2020), as well as a 40% emissions reduction objective for black carbon by 2030. The updated NDC, which constitutes Colombia's first Adaptation Communication, includes detailed risk and vulnerability information and maps, as well as specific sectorial and territorial goals to reduce vulnerability and increase adaptive capacity through adaptation planning and governance, ecosystem-based adaptation, risk assessment and management, and resilient infrastructure, and through monitoring and evaluation for households and water, health, energy, trade, industry and tourism, agriculture and transport (MADS, 2020). Through this Adaptation Communication, it is initially estimated that an annual

⁸ These measures relate to: energy (energy efficiency, fugitive emissions, generation and supply management); cities and livelihoods (waste management, waste water management, sustainable construction); agriculture and rural development (sustainable agriculture, cocoa, rice and coffee production); industry and tourism (energy efficiency in industrial facilities, efficiency in brick kilns, fertilisers, cement production efficiency, logistics efficiency); transportation (electric mobility, modernisation of freight vehicles, development oriented to transportation, train transport); environment (ecosystem conservation and restoration, substitution of wood-burning stoves for efficient cooking stoves, HFC reduction, deforestation reduction); and finance (carbon tax) (Gobierno de Colombia, 2020).



adaptation investment of 0.2% of GDP (approximately \$600 million) is required up to 2030 to cover Colombia's finance adaptation gap (Gobierno de Colombia, 2020).

The government of Colombia estimates the total amount of investment needed in relation to the 2015 NDC to be \$2.07 billion by 2030 for mitigation alone (AILAC, 2020). Some mitigation actions under the NDC are already included in the National Development Plan 2018–2022, hence they rely, to a certain extent – at least during the implementation period of the Plan – on the public budget for their completion. Further international cooperation in the form of technical and financial assistance is still required for the fulfilment of the NDC, particularly now that its ambition has been significantly increased, although there is no clarity on the amounts required as the costs of specific measures have not yet been presented.

While Colombia's national Climate Change Law (Congreso de Colombia, 2018a) provides general guidelines to ensure that climate scenarios are integrated into public and private finance planning (ibid.), this has been irregularly implemented, partly because the Law's regulatory framework is due to be agreed in 2021. The upcoming regulatory framework constitutes a great opportunity to foster a more preventive approach to adaptation, different from that of risk management. It will also enable a more consistent pathway in the use of public and private finance for the implementation of the country's NDC and its first Adaptation Communication, as well as for future development planning processes that internalise climate scenarios and associated physical, financial and transition risks for both public and private entities.

Colombia has a long-term goal to reach carbon neutrality by 2050. A long-term low-emissions strategy for the country is also currently being developed.

2.3 The potential impact of Covid-19 on Colombia's climate objectives

In the second and third quarters of 2020, the economy contracted by 15.8% and 9%, respectively, due to the Covid-19 pandemic (Gobierno de Colombia, 2020). Hence, a 2020–2022 Covid-19 recovery plan is being developed. The plan has five policy elements: job creation, clean growth, support to vulnerable groups, agriculture and peace, and health, with the investment of over \$26 billion (around 8% of GDP) and the creation of 1 million direct and indirect jobs. The plan includes health policy measures, plus the acceleration of 27 energy projects for renewable energy and transmission (including nine wind, five solar, three geothermal and one hydropower project, as well as nine transmission lines), the planting of 180 million trees, with incentives for silvopastoral production and agroforestry schemes that have community support, and provisional increased non-conditional payments to vulnerable groups (Presidencia de Colombia, 2020b). In particular, the renewable energy and reforestation goals of this plan are intended to accelerate the country's climate commitments through the recovery package. However, the plan does not explicitly refer to the climate or biodiversity crises, and it emphasises how the mining and energy sectors are central to regaining productivity. Moreover, since early 2020, Colombia has committed at least \$378.59 million to supporting different energy types through new or amended policies, of which at least \$374.17 million is destined for unconditional fossil fuels (oil and gas) and \$4.42 million for unconditional clean energy (Energy Policy Tracker, 2021). Therefore, a thorough follow up to the implementation of the Covid-19 recovery plan would be necessary to assess the consistency between these investment flows and the climate goals of the country and the Paris Agreement.



+ 3. Public levers supporting the consistency of finance flows with low-emission, climate-resilient development pathways in Colombia



3.1 Key actions considered to be consistent with climate objectives

Climate change has gradually become an essential component of the development planning processes in Colombia – particularly after the adoption of the Paris Agreement – which are increasingly being guided by the overall objectives of reaching carbon neutrality by mid-century and enhancing climate resilience in Colombia’s most vulnerable ecosystems, regions and populations.

The Climate Change National Policy contemplates that Colombia’s NDC 2015, as well as subsequent NDCs, need to be embedded within each National Development Plan (approved every four years), with explicit sectoral and budgetary contributions towards their accomplishment (DNP, 2018). The last three national development plans (for 2010–2014, 2014–2018 and 2018–2022) incrementally feature green growth and climate change. This illustrates the integration of these issues into the country’s planning processes. The 2018–2022 National Development Plan includes concrete goals to: reduce deforestation by 30% relative to the business-as-usual scenario; double the existing railway infrastructure; and increase the use of non-conventional renewable energy, to reach 2,500 MW (DNP, 2018), which would represent growth from less than 1% to 10% of the energy mix (Ministerio de Minas y Energía, 2020a). The Climate Change Law has also created a more complete institutional setting within which to manage climate public policy, and has driven initial specific actions, such as the Carbon Tax, the measurement, reporting and verification (MRV) system for climate finance (Congreso de Colombia, 2018a) (which will also soon start tracking climate-misaligned finance), and the future development of an emissions trading scheme.

Table 2 outlines in more detail the government-led actions that the Government of Colombia is taking and which might be considered relevant to making finance flows consistent with low-emission, climate-resilient development pathways. It should be noted that plans, policies and regulations described in the context column in Table 2 are not specifically finance-related, as per the ODI framework. However, the authors consider that this political framework forms the basis of more specific actions for consistency of financial flows, therefore they have been included.


Table 2 Government-led actions supporting consistency of finance flows in Colombia

Government lever	Context	Mitigation-relevant actions		Adaptation-relevant actions	
		Quantitative information	Qualitative information	Quantitative information	Qualitative information
Financial policy and regulation	<p>The Energy Plan 2050 (2016) aims to diversify the country's energy resources and ensure a reliable energy supply through greater use of non-conventional renewable sources of electricity (IEA, 2020). The Plan can be implemented through enhanced use of renewable energy auctions to ensure greater use of renewable sources of energy.</p> <p>The Climate Change National Policy (2017) has a 12-year timeframe within which climate policy is to be regularly revised and updated. Building upon previous policy instruments, it aims to influence public and private developmental decision-making and mainstream adaptation and mitigation rationales at the territorial and sectoral levels (Murillo, 2017).</p> <p>The Climate Change Law (Law 1931, 2018) was enacted as a way to establish the general regulatory guidelines for climate action in the country. It establishes a Financial Management Committee (CGF) to be in charge of coordinating and facilitating a dialogue for public and private climate finance actions and to ensure the necessary flow of resources for the implementation of the Climate Change National Policy (Congreso de Colombia, 2018a).</p>	<p>Carbon neutrality by 2050 goal</p> <p>NDC 2020, with a mitigation objective to reduce GHG emissions by 51% by 2030 (Presidencia de Colombia, 2020a)</p>	<p>Renewable energy auctions were initiated in 2019 as a way to facilitate clean energy investment and enable renewable goals in an emerging market for non-conventional renewable energy. These auctions have already helped increase the use of non-conventional renewable energy to 1,500 MW (6% of the energy matrix) (Ministerio de Minas y Energía, 2020a).</p>		<p>The National Adaptation Plan (2011) was one of Colombia's first policy instruments. It defines for sectors and territories the main guidelines on prioritising actions that reduce vulnerability and including climate change and variability in their planning processes. There are 11 territorial adaptation plans and sectorial plans. The continuous implementation of these plans is envisaged in the Climate Change Law (Gobierno de Colombia, 2011).</p> <p>NDC 2020, which represents the first Adaptation Communication, includes detailed risks and vulnerability information as well as specific sectorial goals to reduce vulnerability and increase adaptive capacity (MADS, 2020).</p>



Government lever	Context	Mitigation-relevant actions		Adaptation-relevant actions	
		Quantitative information	Qualitative information	Quantitative information	Qualitative information
Fiscal policy	<p>The implementation of the Carbon Tax created a national voluntary carbon market by certifying net emission reductions achieved through mitigation projects in Colombia, mostly in the forest sector (MADS, 2017).</p> <p>Revenues generated by the Carbon Tax are to be transferred to the fund Colombia in Peace, where 70% are directed to the peace process and 30% to environmental action (Congreso de Colombia, 2018b).</p> <p>It will be important to see whether the Carbon Tax is expanded to include coal or other GHGs, and how it relates to the upcoming national emissions trading scheme and/or is used for the implementation of the International Civil Aviation Organization's compensation scheme (CORSIA) and Article 6-derived markets.</p>	<p>Carbon Tax:</p> <ul style="list-style-type: none"> - tax of ~\$5/tonne of CO₂ on fossil fuels (except coal) in place since 2017 (started at \$3.9/tonne of CO₂)ⁱⁱ - cumulative carbon revenue ~\$367 million, as of July 2020 - covers 27% of Colombia's GHG emissions (DIAN, 2020), mainly from road transportation - increases every February, in line with the inflation rate plus 1% (MADS, 2017). <p>Between 2016 and 2020 (as of November), the Ministry of Energy has provided economic incentives to renewable energy projects totalling \$46.2 million (UPME, 2020)ⁱⁱⁱ which represents an average annual amount of \$11.5 million.</p>	<p>Carbon Tax Law 1819, adopted in 2016, came into force in 2017 (Presidencia de Colombia, 2017).</p> <p>The Ministry of Finance is currently working on the issuance of green sovereign bonds to diversify its debt management through green investments, which could enhance the visibility of its green bonds market (CBI, 2020).</p>		



Government lever	Context	Mitigation-relevant actions		Adaptation-relevant actions	
		Quantitative information	Qualitative information	Quantitative information	Qualitative information
Public finance	<p>A Climate Finance National Strategy was presented in 2017 with the view to identify economic and financial instruments that can be used to advance climate action, as a general guideline for the work of the CGF (CGF 2017).</p>	<p>As part of the MRV system for climate finance, it has been estimated that between 2011 and 2019, public domestic finance^{iv} destined for climate action totalled \$5.6 billion, of which \$0.66 billion was destined for mitigation finance and \$2.3 billion for cross-cutting finance (mitigation and adaptation) (DNP, 2020).</p> <p>Average annual public finance for climate action is estimated at \$0.61 billion, equivalent to 0.15% of Colombia’s GDP (CGF, 2017).^v</p> <p>On the other hand, the national budget 2019–2022 provides \$3.3 billion for the environment sector, which can be considered Paris-aligned (1.15% of the total budget), and an additional \$9.6 billion (3.39%) may be related to climate action in regard to sustainable transport, water infrastructure and sanitation, sustainable public expenditure and local development (Congreso de Colombia, 2019). There is no clarity over the specific budget for renewable energy.</p>		<p>Between 2011 and 2019, public domestic finance for adaptation totalled \$2.8 billion, of which 39.4% came from the Colombian Adaptation Fund for projects directly related to adaptation.</p> <p>Over the same period, the Adaptation Fund allocated a total of \$2.25 billion to address the direct effects of the 2010–2011 La Niña events in affected areas, directed to the health, infrastructure (livelihoods, transportation, water and sanitation, and education), economic recovery and environment sectors (Pineda Tellez, 2019).</p>	<p>Decree 4819 for the creation of the Adaptation Fund, 2010, which aimed to address the reconstruction and social and economic recovery after the 2010–2011 La Niña events (Pineda Tellez, 2019).</p> <p>Over time, this Fund has increasingly focused its work on mainstreaming an approach that involves increasing the resilience and reducing the vulnerability of municipalities, communities and infrastructure that are being financed for recovery or reconstruction. The approach uses ecosystem-based and/or community-based adaptation, including through several macro-projects directly related to structural and social adaptation.^{vi}</p>



Government lever	Context	Mitigation-relevant actions		Adaptation-relevant actions	
		Quantitative information	Qualitative information	Quantitative information	Qualitative information
Information instruments	<p>The National Climate Change System (SISCLIMA, 2016; constituted by an Inter-ministerial Commission on Climate Change^{vii}), nine Regional Climate Change Nodes and local authorities together form the institutional axis through which climate action and development plans are managed (Murillo, 2017).</p> <p>The national MRV system for climate finance (2017) tracks climate finance flows, both domestic and international (DNP, 2020). For the time being, the system does not measure alignment with either the Climate Change Law or the NDC. Private finance was originally tracked, but there are significant data gaps in the tracking.</p> <p>The financial regulator, Superintendencia Financiera, is also working on a new taxonomy for climate finance that may help reduce information gaps and better inform decision-making, including by the private sector.</p>		<p>A regulatory roadmap for the development of a green finance taxonomy and promotion of the adoption of environmental, social and governance (ESG) criteria by financial companies, to enhance transparency and disclosure and build institutional capacity, was adopted by Superintendencia Financiera (2019) (CCADI, 2020b)</p> <p>Superintendencia Financiera and the Central Bank of Colombia are members of the Network for Greening the Financial System, which can contribute to the development of guidelines and regulations for creating a greener financial system (NGFS, 2019).</p>		

ⁱ The CGF membership comprises: National Development Department, Ministry of Finance, Ministry of Foreign Affairs, Ministry of Environment and Sustainable Development, Ministry of Trade, Industry and Tourism, Presidential Cooperation Agency, Hydrology, Meteorology and Environmental Studies Institute, Fund for Financing the Agriculture Sector, National Development Trustee, Development Trustee, Adaptation Fund, Green Protocol, Foreign Trade Bank of Colombia, the Inter-ministerial Commission on Climate Change and the Regional Nodes on Climate Change.

ⁱⁱ It is estimated that the implementation of the 2015 NDC would require a marginal cost of \$20 per ton of CO_{2e} by 2030 (Delgado et al., 2020), to align mitigation efforts and carbon pricing with the carbon neutrality goal. A higher would be required to ensure implementation of the 2020 updated NDC.

ⁱⁱⁱ These incentives are provided in the form of a 50% reduction in the associated cost of rent for non-conventional renewable energy projects for up to 15 years, an exemption from VAT (with a value of 19%) and a customs duty exemption for machinery imported for projects.



^{iv} This includes the accounting of budgetary measures (39.8% federal budget, 38.5% municipal budget and 4.2% departmental budget) plus financial resources coming from the General Royalties System and destined to climate finance (17.4%). These estimates are not absolute; rather, a conservative approach that refers to 'associated' investment for mitigation and adaptation to climate change is used. Actions are classified as highly associated or potentially associated to climate change and national policy instruments.

^v To achieve the 2015 NDC, it has been estimated that public funding for mitigation action needed to increase its annual investments by 86%, although specific quantification of adaptation needs is still required (CGF, 2018). These estimates need to be updated for the 2020 updated NDC.

^{vi} Overall, however, public adaptation funding is insufficiently aligned with the country's climate vulnerabilities (i.e. food security has a 35% climate-related risk, but public adaptation funding for this issue is only 1%) (CGF, 2018).

^{vii} The Commission membership comprised: Ministry of Environment and Sustainable Development, Ministry of the Interior, Ministry of Finance, Ministry of Agriculture, Ministry of Mines and Energy, Ministry of Transport, Ministry of Foreign Affairs, Ministry of Livelihoods, Cities and Territories, Ministry of Trade, Industry and Tourism, National Planning Department, and National Unit for Risk Disaster Management.

Source: Authors' own elaboration



3.2 Key actions considered to be inconsistent with climate objectives

In addition to capturing the positive aspects of government-led action on consistency, it is important to consider the more inconsistent aspects of public action. These can indicate areas in which progress is required and challenges that are likely to be faced when operationalising the concept of consistency. In Colombia, there are two major areas that stand out: deforestation and agriculture, and energy.

3.2.1 Deforestation and agriculture in Colombia

In 1990, 56.4% of Colombia's land territory was covered by natural forests. In the period between 1990 and 2014, deforestation, mainly in the Colombian Amazonia (which has 66.7% of the country's forest area), reduced forest coverage to 51.6% (IDEAM, 2020a). After the signing of a peace agreement in 2016, 79% of Colombian Protected Areas experienced increased deforestation, with a dramatic and highly significant 177% increase in the deforestation rate (158,894 ha in 2019). Major drivers of deforestation are the expansion of the agricultural frontier, the transformation of forest into pasture for cattle ranching, and land grabbing. In recent decades, illicit activities have also been part of the driving force behind deforestation, mainly in relation to illegal cropping, mining and logging. Another factor in the exacerbation of deforestation is the exit of the Revolutionary Armed Forces of Colombia (FARC), which used to control a large part of the country. Agriculture and its expansion often leads to deforestation and is a source of emissions, but it is also a potential mitigation solution (Searchinger et al., 2020).

Although in the past couple of years the deforestation rate has started to decline (from 219,973 ha in 2017 to 158,894 ha in 2019) (IDEAM, 2020b), in looking to the future (and awaiting data for 2020, when the deforestation rate seems to have increased) it will still be necessary to enhance law enforcement, promote rural land use regulation and ensure effective conservation of protected areas, together with an integrative, comprehensive understanding of local communities' needs, sustainable development and long-term management (Clerici et al., 2020). Public levers – including public agricultural support, social protection and access to green finance – play an important role in shifting incentives and disincentives in agriculture and forestry.

3.2.2 Energy transition in Colombia

Colombia's energy matrix currently has a high share of hydroelectricity (76% of total electricity generation) (Calderón et al., 2016). Notwithstanding this fact, an energy transformation of Colombia's economy is needed – to achieve the 2020 updated NDC and the carbon neutrality goal – which must address the following issues:

- **The economy's strong dependence on the exportation and continuous exploitation of fossil energy.** Fossil fuels and products of the extractive industries made up an average of 60% of national exports over the past 10 years, representing about 8% of the country's GDP (DANE, 2020b);⁹ 90% of Colombia's coal is exported and Colombia is the world's sixth largest coal exporter, although coal mining only represents about 1.3% of the country's GDP (Strambo and González Espinosa, 2020). Colombia also has 38 fossil fuel projects in operation, comprising four natural gas terminals, eight oil pipelines, three gas pipelines and 23 coal-fired units (Browning et al., 2020) and is continuing to invest in exploration for oil and gas, including \$920

⁹ Percentages are estimates using official public information from 2010 to 2020.



million in 2020 (70% onshore and 30% offshore) (ACP, 2020). In addition, the national budget for 2019–2022 includes a provision of \$32.1 billion for the energy and mining sectors (11.15% of the total budget), which can be considered to be inconsistent with the Paris Agreement (Congreso de Colombia, 2019); however, an unidentified percentage of this budget is specifically for renewable energy.

- **The economic relevance of fossil fuels to public investments.** Colombia operates a General Royalties System (GRS),¹⁰ whereby individuals pay for the right to exploit non-renewable natural resources, in this case, minerals and hydrocarbons, that belong to the state (EITI, 2019). This establishes a more favourable environment for the exploration and production of these resources. It also generates income that can be translated into public investment projects in the regions where the resources are extracted, through a regional savings and stabilisation fund (Ministerio de Minas y Energía, 2020b). During the period 2019 to 2020 (up to July), resources collected and transferred by the GRS amounted to \$3.28 billion, of which hydrocarbons accounted for \$2.33 billion (71%) and mining \$0.95 billion (29%). The GRS represents 3.1% of the public budget for the implementation of the National Development Plan 2019–2022 (Congreso de Colombia, 2019) and 20% of the royalties are directed to climate finance (DNP, 2020).
- **The current subsidisation of fossil fuels.** Since 2014, \$33.1 billion has been spent in subsidies on petroleum (Ministerio de Hacienda, 2020)¹¹ and the accumulated deficit from these subsidies amounts to more than 1.3% of GDP (~\$4.3 billion). At the same time, \$550 million is spent annually in subsidies for electricity (90% of households) and gas (60% of households), and at least 40% of the households that receive subsidies do not live below the poverty line (Ortiz Jara et al., 2020).
- **The projected intensification of demand for energy in future decades.** Energy demand is expected to increase due to higher incomes, leading to increased GHG emissions (Delgado et al., 2020).

The transformation of the Colombian energy system ought to put at its centre the diversification of energy sources. This includes reducing the country's economic dependence on fossil fuel exports. Non-conventional renewable technologies and electricity should be included as the main sources of energy (Ministerio de Minas y Energía, 2020c) to reduce the economic and energy shares of fossil fuels, including natural gas. Such diversification would require a strong emphasis on urban planning and public transportation, including early planning for the electrification of public transport systems (Delgado et al., 2020). It also requires a framework for a just transition, which acknowledges the impacts on the economy

¹⁰ The General Royalties System is regulated by Law 1530 of 2012 and derives from Article 320 of the Political Constitution of Colombia.

¹¹ Fossil fuels subsidies are the result of a combination of tax exemptions for liquid fuels sold in municipalities at the border and a complex fuel price stabilisation formula which sometimes acts as a tax (when internal fuel prices are above international prices) and as a subsidy (when internal fuel prices are below international prices). As such, there is no explicit fossil fuel subsidy in Colombia, but rather a combination of policies that result in subsidy-like effects. The purpose of the Fuel Price Stabilization Fund (FEPC) is to mitigate the impact of strong changes in international gasoline and diesel prices on the retail price of fuels. Thus, in cases where the international price is higher than the income to the producer, the FEPC covers the difference for the volumes produced by national refiners. In cases where the international price is lower than the income to the producer, savings are generated by the FEPC, since national producers make a contribution equivalent to the differential to the FEPC.



of reducing, redirecting or better focusing current fossil fuel subsidies, diminishing or redirecting the current dependence on fossil fuel royalties for low-emission social investments, enhancing or creating industries where Colombia has a comparative advantage and avoiding the risk of fossil fuel-related stranded assets (in 2019, the government reported that non-renewable natural resource assets represented 6.6% of GDP (Bohórquez Ramírez, 2020)).



+ 4. Private sector actions towards the consistency of finance flows with low-emission, climate-resilient development pathways



Legally, the Paris Agreement addresses states, and not private or other actors that have a role in determining finance flows (Bodle and Noens, 2018). The growing appreciation that climate change presents material risks to economic activity and the financial system is, however, leading to the growth of private-led commitments to align investments and portfolios with climate targets, as well as increased disclosure of climate risks (Bolton et al., 2020; NGFS, 2019; IMF, 2019; Batten et al., 2016). Financial institutions, including private institutions, have the capacity to influence the real economy in the absence of policy direction (RMI, 2020).

4.1 Colombia's private sector and market structure

In 2019, the 1,000 largest companies in Colombia reported total operating revenues of \$312.3 billion (96.4% of 2019 GDP). Table 3 shows that the energy and financial sectors had the largest operating revenues (52.5% combined). The top five companies accounted for 17.8% of total revenues (Table 4), with **Ecopetrol, the national oil company, having the largest share (\$21.9 billion, 6.7% of GDP)** (EMIS, 2020).

Table 3 Total operating revenue of top 1,000 Colombian companies in 2019

Sector	Total operating revenue		Number of companies
	\$ billion	Share (%)	
Energy (oil, gas and coal)	82.2	26.3	141
Finance	81.9	26.2	138
Agriculture, food and beverage	32.4	10.4	173
Pharma and healthcare	19.1	6.1	104
Technology, media & telecoms	15.2	4.9	55
Sum of other industries	81.4	26.1	389
Total	312.3	100	1,000

Table 4 Total operating revenue of top five Colombian companies in 2019

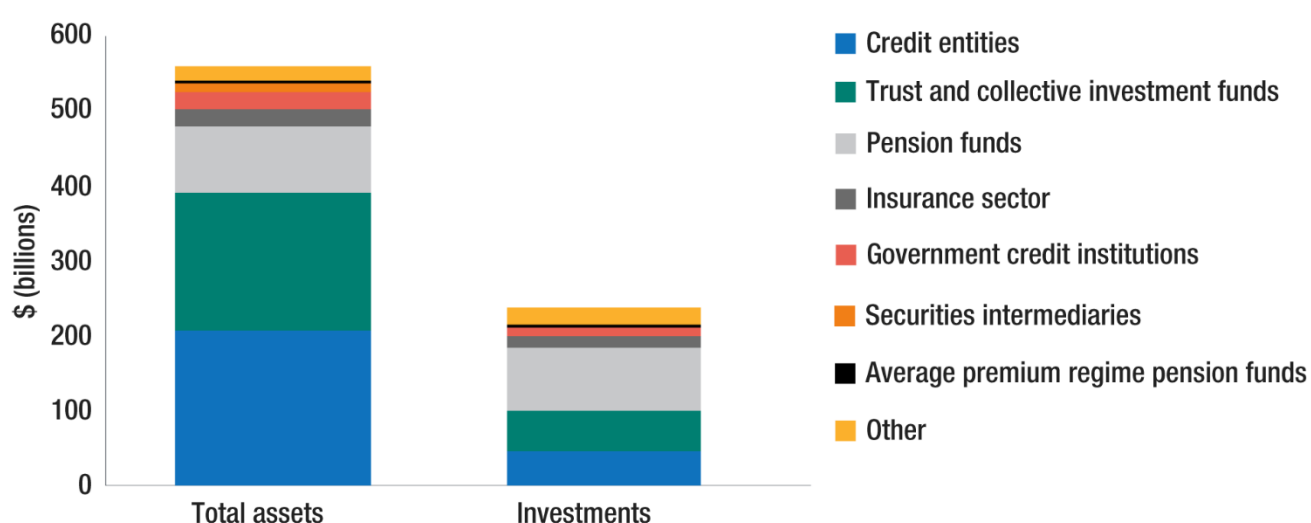
Company	Sector	Total operating revenue	
		\$ (billion)	%
Ecopetrol S.A.	Energy	21.9	7
Grupo De Inversiones Suramericana S.A.	Finance	11.2	4
Grupo Aval Acciones y Valores S.A.	Finance	9.1	3
Organizacion Terpel S.A.	Energy	6.9	2
Grupo Bolivar S.A.	Finance	6.4	2
Total		55.5	18



The Colombian financial system is made up of three main types of institution: (1) credit entities, which include banks and other credit institutions, such as cooperatives and leasing companies; (2) financial services companies, which include pension funds, trust funds, asset managers and stockbrokers; and (3) public credit institutions and insurers.

In July 2020, the Colombian financial system had total assets of \$560.63 billion, of which \$235.31 billion was in investment portfolios (SFC, 2020a). The ratio of total assets to Colombia's 2019 GDP was 163.87%. Figure 5 and Table 5 show assets and investment portfolios by type of financial institution. Banks (credit entities) hold the largest amount of assets, at \$206.18 billion (36.8%), while pension funds have the largest investment portfolios, at \$84.07 billion (35.7%).

Figure 5 Colombian financial system as of July 2020



Source: Accounts published by Superintendencia Financiera de Colombia (SFC)

Table 5 Colombian financial system assets by type of financial institution, July 2020

Type of financial institution	Assets		Investments	
	\$ billions	Share (%)	\$ billions	Share (%)
Credit entities	206.18	36.8	\$45.81	19.5
Trust and collective investment funds	184.84	33.0	\$53.36	22.7
Pension funds	87.72	15.6	\$84.07	35.7
Insurance sector	24.31	4.3	\$16.62	7.1
Government credit institutions	23.36	4.2	\$10.82	4.6
Securities intermediaries	10.72	1.9	\$0.00	9.8
Average Premium Regime Pension Funds	3.27	0.6	\$1.50	0.0
Other	20.23	3.6	\$23.13	0.6
Total	560.63	100	\$235.31	100

Of the aggregate investment portfolio of the Colombian financial sector, 38.19% is made up of investments in the private capital market of Colombia – \$38.10 billion in equity instruments

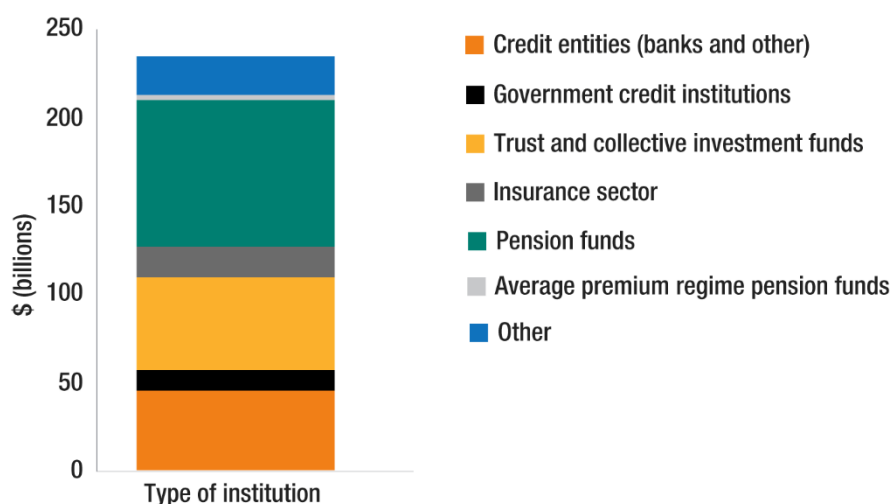


and \$51.49 billion in debt instruments. Table 6 and Figure 6 show the specific investment portfolios by type of financial institution.

Table 6 Investment portfolio of Colombian financial institutions, July 2020

Type of investment	Investment portfolio by type of institution (\$ billions)							
	Credit entities (banks and other)	Government credit institutions	Trust and collective investment funds	Insurance sector	Pension funds	Average premium regime pension funds	Other	Total
Government bonds	15.06	3.30	12.41	5.13	29.12	0.92	0.86	66.81
Colombian private debt	3.25	1.13	26.54	7.28	8.99	0.37	3.94	51.50
International equity	11.08	0.02	1.20	0.30	26.71	0.14	0.31	39.76
Colombian private equity	8.10	0.20	11.21	2.37	13.75	0.02	2.45	38.10
Trading derivative	3.23	0.05	0.01	0.02	0.00	0.00	15.49	18.80
International debt	1.12	5.86	1.11	0.84	2.91	0.01	0.03	11.88
Other government securities	3.85	0.25	0.77	0.69	1.77	0.04	0.03	7.40
Hedging derivative	0.14	0.01	0.11	0.01	0.81	0.00	0.00	1.08
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02
Total	45.83	10.82	53.36	16.62	84.06	1.50	23.13	235.34

Figure 6 Colombian financial system aggregate portfolio, July 2020



Source: Authors' own elaboration; accounts published by Superintendencia Financiera de Colombia (SFC)

A number of private sector-led actions in Colombia, across a range of activities in the financial sector, can be interpreted as being consistent with climate objectives, while others can be considered inconsistent. These are outlined in Table 7 and elaborated further in Sections 5.2 to 5.7.

**Table 7 Summary of private sector-led actions in Colombia with relevance to the consistency of finance flows with climate objectives**

	Actions considered consistent with climate objectives		Actions considered inconsistent ⁱ with climate objectives	
	Qualitative	Quantitative	Qualitative	Quantitative
Bank lending	50% of Colombia's commercial banks have become signatories to the Green Protocol (Asobancaria, 2017).	\$0.70 billion is identified as a green loan portfolio 0.55% of the total banking system loan portfolio (Asobancaria, 2019)	–	Unknown
Bond markets	In September 2020, the SFC published good practice guidance for green bonds issuances (SFC, 2020b).	\$884 million certified green bond issuances, cumulative from 2016 to 2020 \$211 million issuances of green bonds in 2020 (as of 15 December) 6.4% of total bond market issuances in 2020 were certified green bonds or renewable energy bonds (BVC, 2020a)	–	\$597 million issuances of green bonds in 2020 (as of 15 December) 18.3% of total bond market issuances in 2020 were from the energy (oil and electricity) sector (BVC, 2020a)
Insurance sector	19 life insurance companies, 23 general insurance companies and two insurance cooperatives disclosed their portfolio information in the 2018 Climate Scenario Report with the Federation of Colombian Insurers (Fasecolda and 2 ^o ii, 2020).	\$0.10 billion invested in renewable energy (as of 2018), equivalent to 0.68% of the total insurance sector aggregate portfolio (SFC, 2018–2020; Fasecolda and 2 ^o ii, 2020)	–	\$1.34 billion invested in carbon assets (as of 2018), equivalent to 9% of the total insurance sector aggregate portfolio (SFC, 2018–2020, Fasecolda and 2 ^o ii, 2020)
Listed equity	In 2021, COLCAP (the flagship Colombian market index since 2013) will be replaced by MSCI COLCAP (MCSI and BVC, 2020). The new index will be designed to bring greater transparency and consistency to the Colombian equity universe. Although this index will not include environmental, social or governance (ESG) or climate factors, MSCI is constantly improving transparency in its frameworks.	\$1.3 billion in renewable energy assets (as of August 2020) 1.5% of the total market capitalisation (BVC, 2020b)	–	\$39.39 billion in carbon-related assets (as of August 2020) 45.4% of the total market capitalisation (BVC, 2020b)



Private equity	The SFC issued best practice guidance on investment in private equity funds, which includes ESG factors and ESG risk assessments (SFC, 2020c).	\$12.2 million in clean energy in the period 2015 to 2019 0.1% of the total private equity investments reported in the same period (Colcapital, 2020)	–	\$1.04 billion in oil and gas-related assets in the period 2015 to 2019 8.5% of the total private equity investments reported in the same period (Colcapital, 2020)
Investment decision-making	23 institutional investors participate in the Colombian Climate Asset Disclosure Initiative (CCADI, 2019) and 18 asset owners and managers and service providers have become signatories to the Principles for Responsible Investment.	–	–	–

ⁱ Inconsistency is measured for bonds or stocks directly related to fossil fuel assets.

Source: Authors' own elaboration



4.2 Bank lending

A Green Protocol between the Colombian government and some of the most relevant commercial and development banks in the Banking Association of Colombia (Asobancaria), insurers and pension funds was signed in 2012 and ratified in 2017. The Green Protocol is a voluntary framework collaboration between the Colombian government and the financial system. It aims to promote green and sustainable finance through the construction of guidelines and tools, promoting sustainable consumption of renewable natural resources, and considering climate-related risks in their financing and investment processes (Asobancaria, 2017). The signatories to the Protocol represent more than 50% of the national credit institutions.

Asobancaria has been a member of the Sustainable Banking Network since 2012. Its membership comprises 32 of the 33 commercial banks of Colombia and its annual sustainability report (Asobancaria, 2019) measures their performance against the Sustainable Development Goals and environmental, social or governance (ESG) criteria (83 indicators), however there is no direct measurement of alignment with the Paris Agreement nor any relation to the implementation of the 2015 NDC. In this report, the green loan portfolio amounts to \$0.7 billion for 2019 (0.55% of the total amount of the bank lending portfolio). However, this amount is based on information provided by only seven commercial banks, so the actual share of green lending might be higher. There is no clarity over fossil fuels lending in the available data. Table 8 shows the aggregate portfolio for all Colombian banks, as of December 2019, with the magnitude of the green loan portfolio contrasted with the total loan portfolio.

Table 8 Colombian banks' aggregate loan portfolio, 2019

Type of loan	\$ billions	Share (%)
Commercial	66.90	52
Free use	41.37	32
Housing	18.13	14
Microcredit	3.48	3
Total	129.88	100
Green loan portfolio reported in Asobancaria's 2019 Sustainability report	0.70	0.55

Note: Data as of December 2019.

4.3 Bond markets

Since 2016, an estimated \$884 million has been issued as certified green bonds in Colombia, mostly by banks (Bancolombia, Davivienda, Bancoldex, Findeter and Banco de Bogotá) and energy/electricity companies (Celsia and ISA) (see Figure 7). Table 9 summarises bond issuances in the Colombian market for the year 2020, showing that of the \$3.271 billion issued, 18.3% was issued by energy (oil and electricity) companies (TCFD, 2017),¹² while \$158 million was issued as green bonds and \$53 million was issued by renewable energy companies. Hence, a total 6.4% of bond issuances could be classified as consistent with the Paris

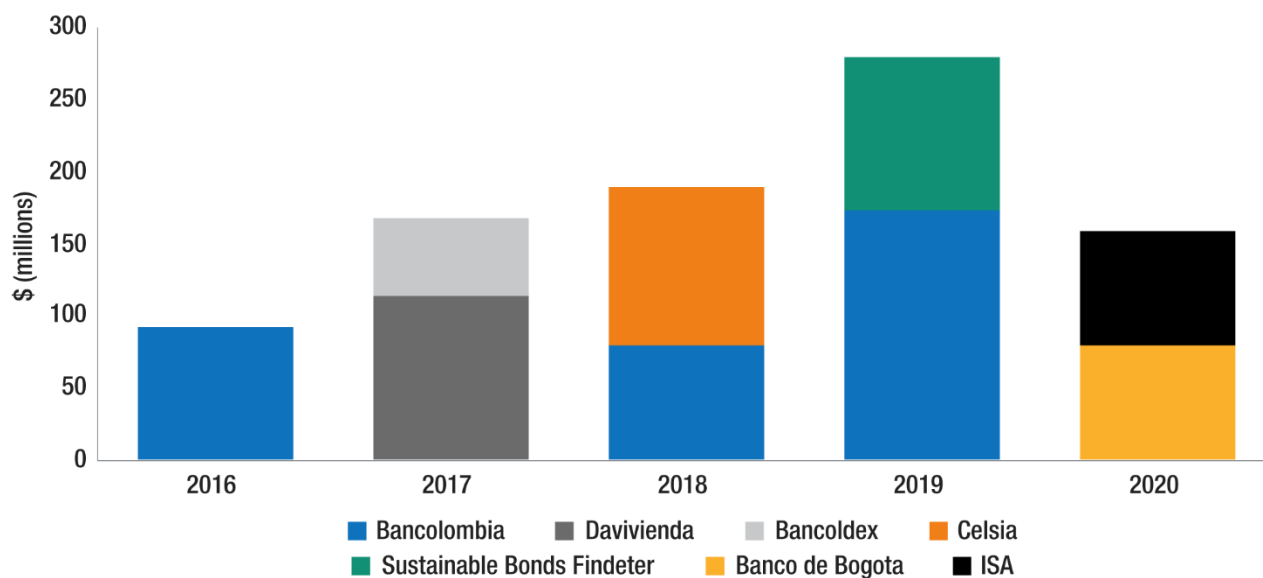
¹² Task Force on Climate-related Financial Disclosures (TCFD) carbon-related assets are assets tied to the energy and utilities sectors under the Global Industry Classification Standard, excluding water utilities and independent power as well as renewable electricity producer industries.



Agreement, 18.3% as inconsistent (energy companies – oil and electricity), while the remaining 75.3% are Paris-neutral.

In September 2020, the SFC published good practice guidance for green bond issuances (SFC, 2020b). This first step by the financial regulator defines what a green investment is, in order to better standardise green bonds issuances in the Colombian financial sector.

Figure 7 Green/sustainable bond issuances, 2016–2020



Source: Issuances published by BVC

Table 9 Bond market issuance in 2020

Security type/sector	Allocated by issuance	
	\$ billions	Share (%)
Energy (electricity)	0.250	7.6
Government	0.368	11.3
Public bonds total	0.618	18.9
Finance	1.591	48.6
Energy (oil and electricity)	0.597	18.3
Materials and buildings	0.102	3.1
Professional services	0.079	2.4
Infrastructure	0.074	2.3
Renewable energy	0.053	1.6
Private bonds total	2.495	76.3
Finance	0.079	2.4
Energy (electricity)	0.079	2.4
Green bonds total	0.158	4.8
Total	3.271	100

Note: Data as of 15 December 2020.

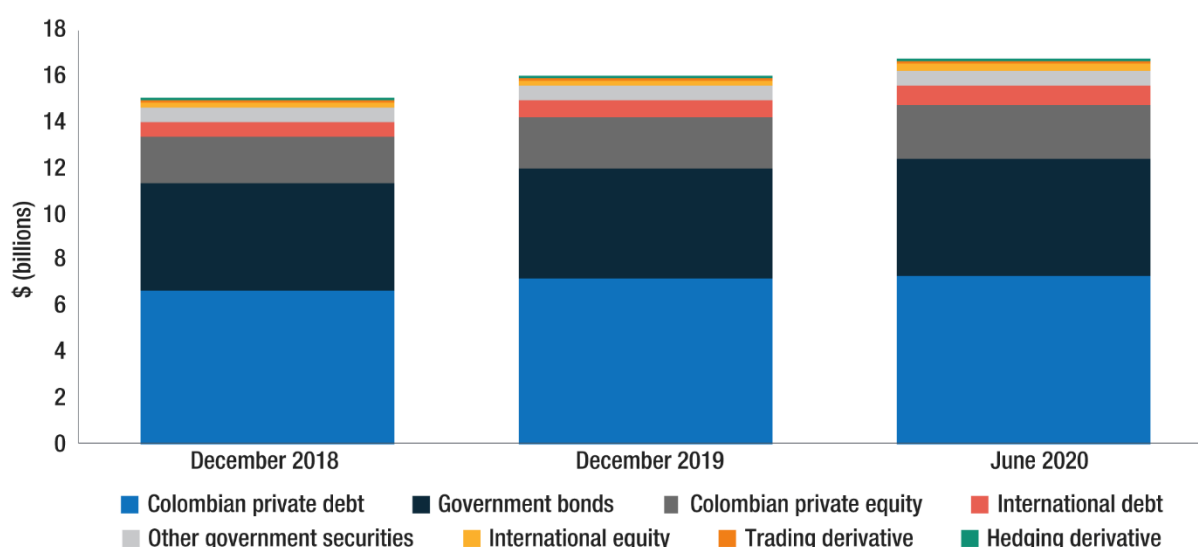
Source: BVC (2020a)



4.4 Insurance sector

The insurance sector holds approximately 7% of the aggregate investment portfolio of the Colombian financial sector (SFC, 2018–2020). In 2018, the Federation of Colombian Insurers (Fasecolda) partnered with the 2° Investing Initiative (2°ii) to conduct climate change scenario analyses of the insurance sector's investment portfolio (Fasecolda and 2°ii, 2020), both at the level of individual insurers and at the aggregate¹³ market level. In 2018, the sector's aggregate investment portfolio totalled \$14.9 billion (as of 31 December): 45% in Colombian private debt, 32% in government bonds, 13% in Colombian private equity, 5% in international debt, 4% in other government securities and 2% in international equity (see Figure 8). The 2018 scenario analysis report reveals that \$1.34 billion (9%) of the portfolio is invested in carbon-related assets (oil and electricity companies) and \$0.10 billion of green bonds are invested in renewable energy (0.68%). The scenario report is a first step by the insurance sector to adopt climate-related financial disclosure. It would be valuable if this assessment was done in annual reporting, so that the exposure of the portfolio to systemic changes can be closely monitored and the alignment of financial flows to the Paris Agreement can be better understood.

Figure 8 Insurance sector investment portfolio, 2018



Note: Data as of 31 December 2018.

Source: Accounts published by SFC

The penetration of insurance provision in the agricultural sector in Colombia is low. However, it has been increasing since 2011, when the government raised insurance premium subsidies for the sector. In the period 2010 to 2015, farmers invested \$18.78 million, while the government allocated \$34.8 million to subsidising insurance premiums, which equates to a 35–65% private–public participation. In 2010, 42,800 ha of crops were insured, but by 2015 this had increased to 186,884 ha, out of the approximate 7.1 million ha available for crops in Colombia in 2014 (CGF, 2018).

¹³ Aggregate portfolio for 19 life insurance companies, 23 general insurance companies and three insurance cooperatives.



4.5 Listed equity

In 2011, Colombia's stock market had 83 issuers and \$207.96 billion¹⁴ in market capitalisation. Since then, the stock market has contracted, mainly because of the retirement of issuers and a fall in the price of the major stock (Ecopetrol). In August 2020, the stock market had 68 issuers and a \$86.65 billion total market capitalisation (Table 10). Of the 68 issuers, 38 (\$9.60 billion market capitalisation) have low or no liquidity. The other 30 issuers account for 88.9% of the total market capitalisation, the vast majority (86.9%) corresponding to sectors prioritised by the Task Force on Climate-related Financial Disclosures (TCFD) (high carbon emissions and natural resource and water consumption sectors). A total of 45.5% of its market value comes from carbon-related assets,¹⁵ followed by 31.2% from the financial system. Of these issuers, only Celsia (1.5% market value) is a renewable energy company considered consistent with the Paris Agreement (BVC, 2020b). It is also important to note that nine issuers, which together represent 34% of the total market value, were part of the Dow Jones Sustainability Index and Corporate Sustainability Assessment (CSA) of 2019: two in the agriculture, food and forest products sector, two in the energy sector, three in the finance sector, one in the materials and buildings sector and one transport company.

Table 10 Equity market capitalisation

Sector or type	Number of issuers	Market capitalisation	
		\$ billion	Share (%)
Energy	7	39.39	45
Finance	9	27.02	31
Agriculture, food and forest	3	4.00	5
Materials and buildings	6	4.86	6
Energy-renewables	1	1.30	2
Telecoms	1	0.20	0
Infrastructure	2	0.26	0
Transport	1	0.02	0
Low liquidity stocks	38	9.60	11
Total	68	86.65	100

Note: Data as of August 2020.

4.6 Private equity

In recent years, Colombia has attracted a steady flow of private equity and capital investments. Between 2015 and 2020, the number of investments ranged from 25 to 38 per year. In 2019, 36 investments were held. By December 2019, Colcapital (Association of Private Equity Funds) had 131 members: 56 professional managers and 75 service providers. Colcapital's

¹⁴ Using the Colombian peso to \$US exchange rate of 1,942.70 (31 December 2011).

¹⁵ The TCFD carbon-related assets are those tied to the energy and utilities sectors under the Global Industry Classification Standard, excluding water utilities and independent power and renewable electricity production industries.



2019 annual report states that from 2015 to 2019, capital invested was estimated at \$12.19 billion (Colcapital, 2020), 38% of which was invested in the energy sector, 29% in real estate and construction, 5.9% in oil and gas, 5.4% in infrastructure, 2.6% in hydrocarbons and 0.1% in clean energy.

In February 2020, the SFC issued a guide to best practice in investments in private equity funds (SFC, 2020c). This guide aims to establish best practice for the supervision of due diligence processes carried out by pension fund administrators during the processes of investing their affiliates' resources in private equity funds. The guide recommends the inclusion of ESG factors and ESG risks in investment processes.

4.7 Investment decision-making

Since 2019, the Colombian Climate Asset Disclosure Initiative (CCADI) has been working with Colombia's institutional investors (pension funds and insurance companies) to raise awareness on the importance and benefits of climate-smart investment strategies, with a view to ultimately catalysing a climate-smart financial system in Colombia. CCADI relies on information disclosure practices and awareness-raising as the first steps in the process of incorporating climate change as a relevant and necessary variable in decision-making in portfolio management. It promotes the adoption of the recommendations of the TCFD. These include voluntary disclosures, through the publication of a ranking based on the implementation of the recommendations (CCADI, 2019), and the inclusion of climate change in investment decision-making processes. In its first disclosure cycle, 23 institutional investors participated in the ranking, with one investor achieving a score of 82%, followed by three investors scoring between 50% and 75%, and the rest scoring below 50%. CCADI engages actively with the participating investors, to help them build capabilities and to provide tools for implementing TCFD's recommendations.

Also, since 2014 the Principles for Responsible Investment initiative has been actively engaging with Colombia's investors. As of November 2020, 11 investment managers, five asset owners and two service providers have become signatories to the initiative.



+ 5. Conclusion



Colombia's GHG emission-reduction objectives for the short term (51% GHG emissions reduction by 2030) and long term (carbon neutrality by 2050) have set an ambitious trajectory for a developing country that represents less than 0.5% of global emissions. Yet, these commitments are in line with what is required by science to ensure that global temperature increases do not surpass 1.5°C (Mihatsch, 2020). The implementation of these goals will require a significant transformation of the country, one that must be driven by ambitious action. It will be necessary to impose a just transition, one which addresses the social and economic consequences of reducing emissions from deforestation as well as reducing the economic dependence on fossil fuels as exports and as sources for public investment. This report shows that the road to ensuring the implementation of this trajectory has been paved by the initial policy, institutional and economic steps taken in recent years. However, there is still a long way to actually achieving the transformational changes that these goals require and ensuring consistency at scale of public and private flows, as required by Article 2.1c of the Paris Agreement.

To conclude this report, we present the following recommendations, to help ensure that Colombia's public and private financial flows are consistent with low-emission and climate-resilient development.

1. The public budget designated for climate action (1.15% of the total budget) needs to be increased significantly and mainstreamed at the territorial and sectorial levels, while public funding for fossil fuels (11.15% of the total budget) and investments in fossil fuels need to be reduced, and eventually stopped, in order to accomplish the country's ambitious mitigation and adaptation goals.
2. The Colombian energy system needs to undergo a just transition financially. This requires that current subsidies and investments in fossil fuels are addressed in a way that enables their gradual redirection towards non-conventional renewable energy sources and other low-emission actions for the transportation and industry sectors. It also requires an evaluation of how to enable diversification away from the current economic dependence on fossil fuel exports and incomes, and to avoid the risk of creating stranded assets. The continued use of measures such as renewable energy auctions and an increasingly more stringent carbon tax, and the upcoming implementation of an emissions trading scheme, can act as useful public levers to enhance consistency.
3. There is an important amount of public investment that may be considered carbon neutral (e.g. in health, education and livelihoods) – which has not been taken into account in this report – that should be analysed in a granular way, in order to better understand how consistent it is with the country's climate action. The new green taxonomy (currently under preparation) will be particularly relevant here, as it could enhance transparency of climate finance from public and private flows and, at the same time, set a higher benchmark for climate-compatible investments.
4. The new green taxonomy will also be particularly relevant to adaptation finance flows, which are often intertwined with development finance and, hopefully, will be further clarified by upcoming enhanced adaptation regulation through the Climate Change Law and driven by priorities and vulnerabilities stated in the country's first Adaptation Communication. The updated NDC already provides initial estimates for the increased annual public investment in adaptation that will be required towards 2030 (0.2% of the



GDP). Closing the adaptation finance gap could be aided by transitioning the current Adaptation Fund to an institution that is dedicated to the provision of financial resources and incentives to climate-change resilience and the reduction of vulnerability to present and future climate events.

5. It is clear that reducing deforestation is one of the most important environmental, social and economic challenges for Colombia. Addressing this challenge holistically has a legal component, through the need for enhanced law enforcement and promotion of rural land-use regulation, but it also requires financial support to enable local development that is legal and sustainable. This should be facilitated by providing sufficient public funding to the environmental sector to ensure the effective conservation of protected areas, and by enabling the de facto use of revenues from the Carbon Tax to foster conservation and reforestation efforts. Additionally, the potential growth of the national carbon market – with higher carbon prices that are in line with the country’s mitigation objectives – may generate supplementary sources of finance to this end, which can be coupled with vital international collaboration.
6. Despite some initial positive signals around sustainability and climate action by several private institutions, only a very small percentage (approximately 0.8% of GDP) of private financial flows are consistent with low-emission and climate-resilient pathways. It appears that climate change is insufficiently understood or mainstreamed as an investment rationale (either as an opportunity or a risk) in Colombian private and financial flows. Sustainability reports – aligned with the Sustainable Development Goals – are increasingly being taken into account, and most private institutions have, to some extent, ESG policies. It is important that efforts to raise the awareness and capacity of the Colombian financial sector are made or enhanced over the next decade, to enable the financial system to foster and facilitate a just transition towards net-zero emissions by understanding the importance of including investments in local climate-compatible projects and assets and providing transitional support to industry. Recognition needs to be given to current capacity-building efforts by private initiatives, such as CCADI, Principles for Responsible Investment, the 2°ii, and others, working with financial sector actors. The financial system has an unparalleled ability to address our current societal and environmental issues; many opportunities for mitigation and adaptation through climate-smart investments have always been available but overlooked. Hence, to achieve the country’s 2030 and 2050 mitigation goals will require the active and committed engagement of the financial sector. Corporate actors will have to develop their own companies’ commitments, embedding climate action into their economic and financial priorities and improving the climate compatibility of their operations, as well as by managing and disclosing the climate, environmental and social risks associated with their financing activities. This will also mean diversifying investments away from high-carbon assets in order to protect the long-term financial interests of beneficiaries in affected sectors (Robins et al., 2018).
7. Through the research carried out for this report, we have identified that the SFC already has an extensive financial information disclosure system, which collects monthly data from most financial actors. This system could be used to collect additional information, such as the sectors and subsectors of the financial system that borrowers, issuers, subscriptions and clients come from. This could be accompanied by a thorough taxonomy of financial flows, from which consistency with low-emission, climate-resilient development could be identified, hence providing the information needed to steer a transition in financial flows towards a low-carbon economy.



8. Although not yet quantified for the updated 2030 and 2050 goals, international cooperation and foreign investment will be critical for ensuring that transition towards decarbonisation and climate-resilience in Colombia occurs consistently for both public and private flows. This needs to be taken into account when the first GST happens in 2023 and political ambition as well as implementation by developed and developing countries is assessed. As a result, an enhanced global system of international cooperation is being driven by the UN multilateral system on climate change, which will enable the transition that the Paris Agreement calls for.



+ References



- ACP – Asociación Colombiana del Petróleo (2020) *Tendencias de inversión E&P en Colombia 2019 y perspectivas 2020*. Enero 2020. Bogotá: ACP (<https://acp.com.co/web2017/es/asustos/economicos/676-informe-economico-no-1-2020-tendencias-de-inversion-en-exploracion-y-produccion-e-p-en-colombia-2019-y-perspectivas-2020/file>).
- AILAC – Independent Association of Latin America and the Caribbean (2020) ‘Needs of AILAC countries in the implementation of the Convention and the Paris Agreement’. Submission to UNFCCC. AILAC (<https://unfccc.int/topics/climate-finance/workstreams/needs-report/repository-of-information-on-the-needs-of-developing-country-parties#eq-2>).
- Asobancaria (2017) ‘Protocolo Verde, protocolo agenda de cooperación colaboración entre el gobierno nacional y el sector financiero colombiano’. Cartagena: Asobancaria (www.asobancaria.com/wp-content/uploads/2017/12/Protocolo-Verde-Versi%C3%B3n-firma-presidencia.pdf).
- Asobancaria (2019) *Informe de sostenibilidad 2019*. Cartagena: Asobancaria (is.gd/SDy9CL).
- Bataille, C., Waisman, H., Vogt-Schilb, A. et al. (2020) *Net-zero deep decarbonization pathways in Latin America: challenges and opportunities*. IDB working paper. Washington DC: Inter-American Development Bank (<https://doi.org/10.1016/j.esr.2020.100510>).
- Batten, S., Sowerbutts, R. and Tanaka, M. (2016) *Let’s talk about the weather: the impact of climate change on central banks*. Bank of England Staff Working Paper no. 603. London: Bank of England (www.bankofengland.co.uk/working-paper/2016/lets-talk-about-the-weather-the-impact-of-climate-change-on-central-banks).
- Bodle, R. and Noens, V. (2018) ‘Climate finance: too much on detail, too little on the big picture?’ *Carbon & Climate Law Review* 12(3): 248–257 (<https://doi.org/10.21552/cclr/2018/3/11>).
- Bohórquez Ramírez, P. (2020) *Situación financiera y resultados consolidados sector público a 31 de diciembre de 2019 en Colombia*. Bogotá: Contaduría General de la Nación (www.contaduria.gov.co/situacion-financiera-y-de-resultados-sector-publico/-/document%20library/StmOSKiDjADQ/view%20file/356094?com_liferay_document_library_web_portlet_DLPortlet_INSTANCE_StmOSKiDjADQ_redirect=https%3A%2F%2Fwww.contaduria.gov.co%3A443%2Fsituacion-financiera-y-de-resultados-sector-publico%3Fp_id%3Dcom_liferay_document_library_web_portlet_DLPortlet_INSTANCE_StmOSKiDjADQ%26p_lifecycle%3D0%26p_state%3Dnormal%26p_mode%3Dview).
- Bolton, P., Despres, M., Pereira da Silva, L., et al. (2020) *The green swan: central banking and financial stability in the age of climate change*. Basel: Bank for International Settlements (www.bis.org/publ/othp31.pdf).
- Browning, J., Cherot, N., Clark, G. et al. (2020) *Global Fossil Project Tracker*. Global Energy Monitor (https://greeninfo-network.github.io/fossil_tracker/).
- BVC – Bolsa de Valores de Colombia (2020a) ‘Informe mensual de renta fija’. Webpage (www.bvc.com.co/pps/tibco/portalbvc/Home/Mercados/informesbursatiles?action=dummy).



- BVC (2020b) 'Informe mensual de renta variable'. Webpage (www.bvc.com.co/pps/tibco/portalbvc/Home/Mercados/informesbursatiles?action=dummy).
- Calderón, S., Alvarez A., Loboguerrero, A. et al. (2016) 'Achieving CO₂ reductions in Colombia: effects of carbon taxes and abatement targets' *Energy Economics* 56:575–586 (<https://doi.org/10.1016/j.eneco.2015.05.010>)
- Cárdenas, M. and Guzmán Ayala, J.J. (2020) *Planeando una recuperación sostenible para la pospandemia en América Latina y el Caribe*. PNUD LAC C19 PDS No. 21. New York: United Nations Development Programme.
- Carter, L. (2020) *The ecosystem of private investment in climate action*. New York: United Nations Development Programme (www.undp.org/content/undp/en/home/librarypage/climate-and-disaster-resilience-/private-investment-in-climate-action.html).
- CBI – Climate Bonds Initiative (2020) *Latin America and the Caribbean green finance state of the market 2019*. London: CBI (www.climatebonds.net/files/reports/cbi_lac_sotm_19_web_02.pdf).
- CCADI – Colombian Climate Asset Disclosure Initiative (2019) 'Ranking de inversionistas institucionales'. Webpage (<https://ccadi.co/inicio-2/ranking/>).
- CCADI (2020a) *Activos varados, un riesgo real: implicaciones para Colombia*. CCADI (<https://ccadi.co/wp-content/uploads/2020/11/20201124-Activos-varados-un-riesgo-real.pdf>).
- CCADI (2020b) *Policy Paper No. 1*. CCADI (https://ccadi.co/wp-content/uploads/2020/09/CCADI_Primer_Informe_de_politica.pdf).
- CDM Registry (2020) 'Projects by host country'. Webpage, UNFCCC (<https://cdm.unfccc.int/Projects/projsearch.html>).
- CGF – Comité de Gestión Financiera (2017) *Estrategia Nacional de Financiamiento Climático*. DNP, GCF Readiness Programme, BMU.
- CGF (2018) *Colombian Climate Public and Private Expenditure and Institutional Review (CPEIR)* (<https://colaboracion.dnp.gov.co/CDT/Ambiente/Finanzas%20del%20Clima/Documento%20CPEIR.pdf>).
- Clerici, N., Armenteras, D., Kareiva, P. et al. (2020) 'Deforestation in Colombian protected areas increased during post-conflict periods' *Scientific Reports* 10: 4971 (<https://doi.org/10.1038/s41598-020-61861-y>).
- Cochran, I. and Pauthier, A. (2019) 'A framework for alignment with the Paris Agreement: why, what and how for financial institutions?' Discussion Paper. Paris: Institute for Climate Economics (www.i4ce.org/download/framework-alignment-with-paris-agreement-why-what-and-how-for-financial-institutions/).
- Colcapital (2020) *Impactando la economía Colombiana*. Report 2019. Bogotá: Colcapital (<https://colcapital.org/estudio-anual/>).
- Congreso de Colombia (2018a) Ley de Cambio Climático 1931 del 27 de julio de 2018 (<https://dapre.presidencia.gov.co/normativa/normativa/LEY%201931%20DEL%2027%20DE%20JULIO%20DE%202018.pdf>).



Congreso de Colombia (2018b) Ley de Páramos 1930 del 27 de julio de 2018 (<https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=87764>).

Congreso de Colombia (2019) Ley No. 1955 por la cual se expide el Plan Nacional de Desarrollo 2018-2022 Pacto por Colombia, Pacto por la Equidad, 25 de mayo de 2019, Tabla II. Distribución por Pactos del PND (<https://colaboracion.dnp.gov.co/CDT/Prensa/Ley1955-PlanNacionaldeDesarrollo-pacto-por-colombia-pacto-por-la-equidad.pdf>).

DANE – Dirección Nacional de Estadística (2020a) *Pobreza monetaria en Colombia. Resultados 2019*, updated to October 2020. Bogotá: DANE (www.dane.gov.co/files/investigaciones/condiciones_vida/pobreza/2019/Presentacion-pobreza-monetaria_2019.pdf).

DANE (2020b) 'Exportaciones'. Webpage, updated to October 2020. DANE (www.dane.gov.co/index.php/estadisticas-por-tema/comercio-internacional/exportaciones).

DANE (2020c) 'Actualización metodológica de la medición de pobreza monetaria'. Webpage (www.dane.gov.co/files/investigaciones/condiciones_vida/pobreza/2019/infograf%C3%ADa-pobreza-monetaria-actuzalizacion-metodologica.jpg).

Delgado, R., Wild, T., Arguello, R. et al. (2020) 'Options for Colombia's mid-century deep decarbonization strategy' *Energy Strategy Reviews* 32: 100525 (<https://doi.org/10.1016/j.esr.2020.100525>).

DIAN – Dirección de Impuestos y Aduanas Nacionales (2020) Resolución 000009, 31 January 2020 (www.dian.gov.co/normatividad/Normatividad/Resolución%20000009%20de%2031-01-2020.pdf).

DNP – Departamento Nacional de Planeación (2018) *Pacto por Colombia, pacto por la equidad, Plan Nacional de Desarrollo 2018–2022: Retos, estrategias y metas*. Bogotá: DNP.

DNP (2020) *Sistema de MRV de financiamiento climático*. Webpage, updated to August 2020 ([https://mrvapp.dnp.gov.co/MostrarReporte?Path=/MRV/Publico01&FromDTiempoAño=\[SK%20Tiempo%20Inicio\].\[Año\].\[Año\].%26\[2011\]&ToDTiempoAño=\[SK%20Tiempo%20Inicio\].\[Año\].\[Año\].%26\[2019\]&IdModulo=1](https://mrvapp.dnp.gov.co/MostrarReporte?Path=/MRV/Publico01&FromDTiempoAño=[SK%20Tiempo%20Inicio].[Año].[Año].%26[2011]&ToDTiempoAño=[SK%20Tiempo%20Inicio].[Año].[Año].%26[2019]&IdModulo=1)).

EIB – European Investment Bank (2020) *Climate Bank Roadmap*. Webpage (www.eib.org/en/about/priorities/climate-action/index.htm).

EITI – Iniciativa de Transparencia de las Industrias Extractivas (2019) *Sistema General de Regalías en Colombia: su funcionamiento y distribución* (www.eiticolombia.gov.co/static/sites/default/files/inline/files/220518_ABC_sistema_gral_regalias.pdf).

Energy Policy Tracker (2021) 'Colombia. Public money commitments to fossil fuels, clean and other energy in recovery packages, USD billion, as of 20 January 2021'. Webpage (www.energypolicytracker.org/country/colombia/).

EMIS – Emerging Markets Information System (2020) 'Colombia company reports'. EMIS Professional database (www.emis.com).



Fasecolda and 2^oii – Federación de Aseguradores Colombianos and 2^o Investing Initiative (2020) *Análisis de escenarios climáticos: exposición a riesgos de transición*. Bogotá:

Fasecolda and 2^oii

(<https://revista.fasecolda.com/index.php/revfasecolda/article/view/624/606>).

Fitch Ratings (2019) 'Fitch revises Colombia's outlook to negative'. Rating Action Commentary webpage. Fitch Ratings (www.fitchratings.com/research/sovereigns/fitch-revises-colombia-outlook-to-negative-affirms-idr-at-bbb-23-05-2019).

Fitch Ratings (2020) 'Colombia Ratings'. Webpage (www.fitchratings.com/entity/colombia-80442260).

Ge, M. and Friedrich, J. (2020) 'Four charts explain greenhouse gas emissions by countries and sectors'. Blog, 6 February. World Resources Institute

(www.wri.org/blog/2020/02/greenhouse-gas-emissions-by-country-sector).

GGPB – Green Growth Best Practice Initiative (2014) *Green growth in practice: lessons from country experiences*. Seoul: GGPB (<https://greengrowthknowledge.org/research/green-growth-practice-lessons-country-experiences>).

Gobierno de Colombia (2011) *Plan Nacional de Adaptación al Cambio Climático. ABC: adaptación bases conceptuales, marco conceptual y lineamientos*

(www.minambiente.gov.co/index.php/plan-nacional-de-adaptacion-al-cambio-climatico-pnacc/plan-nacional-de-adaptacion-al-cambio-climatico-pnacc).

Gobierno de Colombia (2015) *Intended Nationally Determined Contribution 2015*

(www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Colombia%20First/INDC%20Colombia.pdf).

Gobierno de Colombia (2020). *Actualización de la contribución determinada a nivel nacional de Colombia (NDC)*

(www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Colombia%20First/NDC%20actualizada%20de%20Colombia.pdf).

IDEAM – Instituto de Hidrología, Meteorología y Estudios Ambientales (2020a) 'Monitoreo y seguimiento al fenómeno de la deforestación en Colombia'. Webpage

(www.ideam.gov.co/web/bosques/deforestacion-colombia).

IDEAM (2020b) *Resultados monitoreo de la deforestación 2019*.

(www.ideam.gov.co/documents/10182/105413996/presentacionbalancedeforestacion2019/7c9323fc-d0a1-4c95-b1a1-1892b162c067).

IEA – International Energy Agency (2020) 'Colombia'. Country profile, IEA

(<https://www.iea.org/countries/colombia>).

IMF – International Monetary Fund (2019) 'Climate change and financial risk: central banks and financial regulators are starting to factor in climate change' *Finance and Development*

56(4): 26–29 (www.imf.org/external/pubs/ft/fandd/2019/12/climate-change-central-banks-and-financial-risk-grippa.htm?utm_medium=email&utm_source=govdelivery).

IMF (2020) *World Economic Output. A long and difficult ascent*. October. Washington DC: IMF.

MADS – Ministerio de Ambiente y Desarrollo Sostenible (2016) 'Acciones nacionalmente apropiadas NAMAs'. Webpage. MADS (www.minambiente.gov.co/index.php/estrategia-colombiana-de-desarrollo-bajo-en-carbono/acciones-nacionalmente-apropiadas-namas).



MADS (2017) *ABC: Principales preguntas frente al impuesto nacional al carbono y la solicitud de no causación por carbono neutralidad* (www.minambiente.gov.co/images/abc_carbono_final29ago.pdf).

MADS (2020) 'Consultas pública'. Webpage. MADS (www.minambiente.gov.co/index.php/ministerio/consultas-publicas).

MDBs – Multilateral Development Banks (2018) 'The MDBs' alignment approach to the objectives of the Paris Agreement: working together to catalyse low-emissions and climate-resilient development'. Joint declaration by the MDBs (<http://pubdocs.worldbank.org/en/784141543806348331/Joint-Declaration-MDBs-Alignment-Approach-to-Paris-Agreement-COP24-Final.pdf>).

Mihatsch, C. (2020) *Show your budgets. Pathways to net-zero emissions for various CO₂ budgets: Colombia*. Webpage (www.showyourbudgets.org/?country=colombia).

Ministerio de Hacienda (2020) *Marco fiscal de mediano plazo*. Bogotá: Ministerio de Hacienda (www.minhacienda.gov.co/webcenter/ShowProperty?nodeId=%2FConexionContent%2FWC_C_CLUSTER-135563%2F%2FidcPrimaryFile&revision=latestreleased).

Ministerio de Minas y Energía (2020a) 'Incorporación de fuentes no convencionales de energía renovable en la matriz energética de Colombia' (www.minenergia.gov.co).

Ministerio de Minas y Energía (2020b) 'ABC: reforma al sistema general de regalías' (www.minenergia.gov.co/documents/10192/24159529/ABC_Regalias_Agosto2020.pdf).

Ministerio de Minas y Energía (2020c) *Plan Energético Nacional 2020–2050* (www1.upme.gov.co/DemandaEnergetica/PEN_documento_para_consulta.pdf).

MSCI and BVC – Bolsa de Valores de Colombia (2020) 'MSCI and Bolsa de Valores de Colombia launch the MSCI COLCAP index' (www.msci.com/documents/10199/f90c8e00-fd91-18fb-59b4-b8f46b8fda32).

Murillo, L. (2017) *Política nacional de cambio climático: documento para tomadores de decisiones*. Bogotá DC: Ministerio de Ambiente y Desarrollo Sostenible.

NGFS – Network for Greening the Financial System (2019) *A call for action: climate change as a source of financial risk*. NFS (www.ngfs.net/en/first-comprehensive-report-call-action).

Ortiz Jara, R., Pérez-Arriaga, J., Dueñas, P., et al. (2020) *Cierre de brechas, mejora de la calidad y diseño y formulación eficiente de subsidios*. Foco No. 4, Misión de Transformación Energética y Modernización de la Industria Eléctrica: Hoja de Ruta para la Energía del Futuro. Banco Interamericano de Desarrollo and Banco Mundial (www.minenergia.gov.co/documents/10192/24202647/Foco+4+-+Informe+Final.pdf).

Pineda Tellez, L. (2019) *Informe Especial de Seguimiento: Fondo de Adaptación*, 31 December (www.contraloria.gov.co/documents/487635/521530/Informe+especial+seguimiento+diciembre2019.pdf/9c47b459-1c1d-40e6-b65f-bce8abc63493?version=1.0).

Presidencia de Colombia (2017) Decreto 926 (<http://es.presidencia.gov.co/normativa/normativa/DECRETO%20926%20DEL%2001%20DE%20JUNIO%20DE%202017.pdf>).



Presidencia de Colombia (2019) *Intervención del Presidente Iván Duque en la Cumbre sobre el Cambio Climático en Naciones Unidas*. Speech to the United Nations, 23 September (<https://id.presidencia.gov.co/Paginas/prensa/2019/Intervencion-del-Presidente-Ivan-Duque-en-la-Cumbre-sobre-el-Cambio-Climatico-en-Naciones-Unidas-190923.aspx>).

Presidencia de Colombia (2020a) 'Anuncio del Presidente Duque sobre la actualización de la NDC de Colombia'. Twitter, 27 November (<https://twitter.com/MinAmbienteCo/status/1332122372154007553>).

Presidencia de Colombia (2020b) 'Nuevo compromiso por el futuro de Colombia'. Webpage (<https://id.presidencia.gov.co/especiales/200803-Compromiso-por-Colombia/index.html#call-to-action>).

RMI – Rocky Mountain Institute (2020) *Breaking the code: deciphering climate action efforts in the financial sector*. Basalt: Rocky Mountain Institute (<https://rmi.org/insight/breaking-the-code/>).

Robins, N., Brunsting V. and Wood, D. (2018) *Investing in a just transition: why investors need to integrate a social dimension into their climate strategies and how they could take action*. Grantham Research Institute on Climate Change and the Environment and the Centre for Climate Change Economics and Policy.

Searchinger, T., Malins, C., Dumas, P. et al. (2020) *Revising public agricultural support to mitigate climate change*. Development Knowledge and Learning. Washington DC: World Bank Group (www.ifpri.org/publication/revising-public-agricultural-support-mitigate-climate-change).

SFC – Superintendencia Financiera de Colombia (2018–2020) *Actualidad del sistema financiero Colombiano*. Online dataset, December 2018, December 2019 and June 2020. Bogotá: SFC (www.superfinanciera.gov.co/inicio/informes-y-cifras/informes/informe-actualidad-del-sistema-financiero-colombiano-60765).

SFC (2020a) *Actualidad del sistema financiero Colombiano*. Bogotá: SFC (www.superfinanciera.gov.co/descargas/institucional/pubFile1048243/comsectorfinanciero072020.pdf).

SFC (2020b) *Guía de buenas prácticas para las emisiones de bonos verdes*. Bogotá: SFC (www.superfinanciera.gov.co/descargas/institucional/pubFile1047743/guiabonosverdes.docx).

SFC (2020c) *Mejores prácticas en el proceso de inversión en fondos de capital privado*. Bogotá: SFC (www.superfinanciera.gov.co/descargas/institucional/pubFile1042908/20200212documentotecnico practicas proceso inversion fcp.docx).

Strambo, C. and González Espinosa, A. (2020) 'Extraction and development: fossil fuel production narratives and counternarratives in Colombia' *Climate Policy* 20(8): 931–948 (<https://doi.org/10.1080/14693062.2020.1719810>).

TCFD – Task Force on Climate-related Financial Disclosures (2017) *Recommendations of the Task Force on Climate-related Financial Disclosures*. TCFD (www.fsb-tcfd.org/recommendations).

UNFCCC – United Nations Framework Convention on Climate Change (2015) Paris Agreement. Bonn: UNFCCC (https://unfccc.int/sites/default/files/english_paris_agreement.pdf).



UPME – Unidad de Planeación Minero Energética (2020) ‘Estadísticas de incentivos tributarios a fuentes no convencionales de energía’

www1.upme.gov.co/Incentivos/Paginas/reportesfnce.aspx.

Watson, C. and Roberts, L. (2019) ‘*Understanding finance in the Global Stocktake*’. iGST Designing a Robust Stocktake Discussion Series. London and San Francisco: ODI and ClimateWorks (www.odi.org/publications/16513-understanding-finance-global-stocktake).

Watson, C. and Schindler, H. (2017) *Financing the transition from brown to green: how to track country performance towards low carbon, climate-resilient economies*. Berlin: ODI and HUMBOLDT-VIADRINA Governance Platform (www.climate-transparency.org/wp-content/uploads/2017/12/Financing_the_transition.pdf).

Whitley, S., Thwaites, J., Wright, H. and Ott, C. (2018) *Making finance consistent with climate goals: insights for operationalising Article 2.1c of the UNFCCC Paris Agreement*. London: ODI, WRI, E3G and RMI (www.odi.org/sites/odi.org.uk/files/resource-documents/12557.pdf).

World Bank (2020a) ‘World Bank lending and country groups’. World Bank Data Help Desk. World Bank Group (<https://datahelpdesk.worldbank.org/knowledgebase/articles/906519>).

World Bank (2020b) ‘GDP’. World Bank Open Data. World Bank Group (<https://data.worldbank.org/country/colombia>).

World Bank (2020c) ‘GDP per capita’. World Bank Open Data. World Bank Group (<https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=CO>).



TRANSFORMA



iGST

Independent Global Stocktake

