# CORPORATE CLIMATE CHANGE RISK ASSESSMENT PROCEDURE AND OUTCOME



### 1. CLIMATE CHANGE RISK MANAGEMENT

Corficolombiana recognizes the real and potential effects that climate change may cause on its operations, given that its current strategic investment sectors, as well as potential future investments, are vulnerable to climate variations. Climate Change Management is a high-impact material issue relevant to the business and its stakeholders. Hence, we are committed to managing climate risks and implementing adaptation and mitigation actions that strengthen the Corporation's climate action framework.

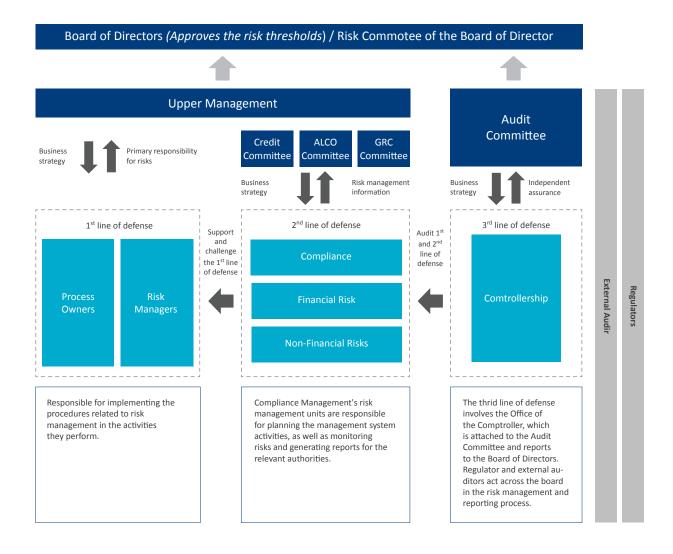
### 1.2. Integration of Climate Change Risk Management into Corporate Risk Management

Risk Management is a fundamental pillar of our operation. Our risk management strategy seeks to ensure an adequate relationship between profitability and risk through our business lines so that the risk level assumed by the shareholders falls within the framework of the objectives and limits defined for Corficolombiana. We have a Governance, Risk, and Compliance Model in place that allows us to continuously monitor the behavior of those risks to which we are exposed, and established the following policies and procedures:

	Corporate Risk Management	Corporate Compliance Management
I.	Financial Risks  Market  Liquidity  Credit	<ul><li>Money Laundering and Terrorist Financing Risks</li><li>Regulatory Compliance</li></ul>
II.	Non-Financial Risks	O Financial Consumer Service System
	<ul> <li>Operational</li> <li>SOX</li> <li>Third-party Risk Management (TPRM)</li> <li>Strategic and Emerging</li> <li>Climate change</li> </ul>	Personal Data Protection
III.	Technology-Related Risks  Cybersecurity  Information Technology Resource Management (ITRM)	

Our risk management processes consist of three lines of defense, along with a basic Enterprise Risk Management (ERM) model. Each line of defense has specific roles and responsibilities, this risk management framework articulates the quantitative and qualitative assessment of climate risks (physical and transition), which is aligned as follows:





The first line of defense includes the Process Owners and Risk Managers, while the Credit, Assets, and Liabilities Committee (ALCO) and the Governance, Risk, and Compliance Committee (GRC) Committees are in the second. Both the first and second lines engage with the Corporation's Upper Management, which in turn reports to the Board of Directors and its Risk Committee to approve the risk thresholds. The foregoing applies to all the risk systems mentioned above.

As for our companies, each one also has a very similar governance model where the Board of Directors of each company determines, approves, and monitors the climate strategy, which is then rolled out by the Office of the President and the different areas responsible for sustainability and risk issues. When analyzing risks, each company applies the risk cycle and generates a map that includes the identification, assessment, and management of measures.



### 1.3. Climate Change Risk Management Mechanisms

The climate change risk management procedure is bolstered by the following guidelines:

- Corficolombiana Sostenible Strategy and ESG Indicators serve as the foundation on which we have built our business objectives and goals for the next five years, including actions, projects, and initiatives that will allow us to continue to lead in the generation of economic, social, and environmental value for our stakeholders.
- The Responsible Investment Policy establishes the framework for the inclusion of responsible and sustainable investment principles in Corficolombiana's current and future investments. This policy reiterates the Corporation's commitment to the introduction, measurement, and monitoring of environmental, social, and corporate governance criteria (also known as ESG criteria) in the decision-making process and the definition and management of risks, opportunities, and investment management issues. This policy guides the Corporation's actions to generate value for our shareholders, our stakeholders, and society in general. It also helps subsidiaries to set goals and objectives aimed at improving their performance in managing environmental and social risks and impacts.
- The Climate Change Policy establishes Corficolombiana's commitment to the management of this essential issue under the framework of the Task Force for Financial Related Disclosures TCFD.
- The Climate Change Strategy explains in detail the process for the measurement of physical and transition risks presented by climate change to which Corficolombiana and its companies are exposed, as well as the opportunities identified in the sectors of interest.

### 2. CLIMATE CHANGE RISK MANAGEMENT PROCEDURE

### 2.1. Methodology

Climate change enhances various current and future risks to socioeconomic systems and all human activities in general. The risks associated with climate change, based on the Recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD), may be physical or transitional.

Climate risks are assessed under the Corporation's Governance, Risk and Compliance Model. Climate change is part of a category within Corficolombiana's risk classification defined as the Operational Do-



main. An analysis is conducted based on probability and impact criteria. Risks may be physical (acute or chronic) or transitional (political/legal, market, technological and reputational). The Corporation utilizes a tool to qualitatively and quantitatively evaluate climate risks, based on publicly available information and databases, on the knowledge of internal experts and process consultants, and at a quantitative level, through the established corporate thresholds.

### Domain Category Climate risk Acute physical risks Chronic physical risks Political and legal risks Market risks Technology-related risks Reputational risks

### **Integration of Climate Change Risks into ERM Classification**

This methodology is implemented across the Corporation and applies to all the sectors in which we invest. Given that climate change risk is considered strategic for the Corporation and its investments, we conduct annual risk reviews. The following is a list of the methodological stages of the corporate climate change risk management procedure.

### 2.1.1. Scope and context analysis

To understand the operational and geographic context of each sector, and its exposure to climate risks, we analyzed public information sources<sup>1</sup>, including:

- Third National Climate Change Communication (TCNCC)
- ➤ Integrated Sectoral Climate Change Management Plans

The public information analysis assumed a limit in the amount of national information on climate change scenarios by territory, in addition to information associated with extreme weather events and their projection over time.



- Sectoral Action Mitigation and Adaptation Plans<sup>2</sup>.
- > Vulnerability and Risk Assessment for Climate Change in Colombia
- Municipal Disaster Risk Management Plans
- Regional and sectoral technical studies

### 2.1.2. Risk Assessment

The following is a list of the activities performed for the identification of risks, risk assessment, and evaluation of climate change risks:

### 2.2.2. Climate Scenario Analysis

Two scenarios were considered when analyzing the climate risks of each company:

### Physical Risk Scenario

## For the physical Risk Assessment, the IPCC's RCP 6.0 scenario with a temperature increase of 3.0°C by 2100 for precipitation and temperature variables adapted by the TCNCC, corresponds to a current climate policy scenario that does not constitute sufficient measures to achieve the objectives and commitments adopted by each country under the Paris Agreement, and an average emissions trajectory that foresees a stabilization of emissions after 2100, resulting in a deterioration of living conditions globally, a detriment to ecosystems, health, and economic consequence of a greater occurrence of physical risks. These make it possible to assess a spectrum of future climate possibilities specific to the territory, to guide the decision-making process to mitigate and adapt to possible climate risks.

### Transitional Risk Scenario

This scenario is aligned with the Net Zero 2050 initiative of the Network for Greening of the Financial System (NGFS) and another that assesses physical risks taking into account the RCP 6.0 climate change scenario of the United Nations (UN) Intergovernmental Panel on Climate Change (IPCC) as adapted in the Third National Climate Change Communication (TCNCC).

The Integrated Sectoral Climate Change Management Plans and Sectoral Action Mitigation and Adaptation Plans are subject to modification and updating because the data included in this analysis were taken from the reduction targets of the first NDC, established when Colombia committed to signing the Paris Agreement, whereby the national government pledged to reduce greenhouse gas (GHG) emissions by 20% by 2030, based on the 2010 national emissions inventory. These goals were updated in 2021.



### 2.2.3. Identification of risks

Considering the initial risk map identified by Corficolombiana for 2021, a desktop review was performed for each sector to update and analyze the general risks by categories or specific risks to generate a more detailed analysis for each company, according to its geographic location. It is important to mention that the type of assessment performed was an acid test, that is, it was conducted on the most relevant financial impact for each company.

The identification of physical risks was based on the analysis of climate change scenarios for precipitation and average temperature variables in Colombia. The identification of transitional risks was based on the analysis of the operational context of each company and the implications of domestic political, legal, technological, and market changes to address the need for climate change-related mitigation and adaptation measures and the transition to a low-carbon economy. Depending on the assessment of the nature, speed, and focus of these changes, transitional risks may pose various levels of financial, market, and reputational risks to the organization.

### 2.2.4. Climate-related risk assessment and risk thresholds

The risk assessment was based on an expert evaluation that integrated available data and information on climate and the physical effects of climate change, policies, and trends related to the transition. A qualitative assessment was also conducted for each of the identified physical and transition risks.

The variables and scales used in Corficolombiana, and its companies' corporate risk methodology were used in the assessment; i.e., probability and impact, which have the following levels:

Probability levels	Financial impact	
Very low	Lower	
Low	Minor	
Moderate	Significant	
High	Major	
Very high	Higher	

The physical risk probability assessment is based on the analysis of available technical information on climate variables and extreme events in the territory where the companies operate, as well as information on the adaptive capacity to risk of the territories. This allows for a spatial characterization, where, depending on the conditions of each territory, the occurrence, recurrence, and duration of events are



favored to a greater or lesser extent. Based on this characterization, the probability of risk was classified between very low and very high.

Regarding the evaluation of transitional risks, an analysis of the company's carbon footprint was carried out, followed by a survey of domestic and international public policy, currently available technology, and market requirements aimed at directing the company's actions toward a decarbonization scenario, facilitating the path to carbon neutrality.

For the physical and transitional risk probability assessment, the time horizons of the TCNCC short-term (2011-2040), medium-term (2041-2070), and long-term (2071-2100) were used to clarify the proximity of the materialization of the risk in the operations of each company.

Additionally, the assessment of the impact was based on the financial consequence of the risk in the operation of Corficolombiana's businesses over time, considering the values of the company's financial impact scales concerning risk exposure.

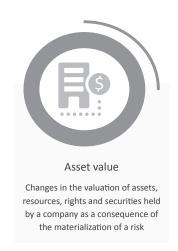
Based on the identification of the probability and impact of the risk, the risk assessment was conducted, which comprises an interdisciplinary task involving the company's risk area and technical personnel responsible for the business operation. As a result of the combination of probability and impact levels, risks are classified into four levels: Low, Moderate, High, and Extreme.

Given our exposure to climate change, due to climatic variations and possible changes in policies, markets, and technology, which translates into transitional risks, we identified the following impact paths:

### **Main Financial Impact Paths**









To identify and analyze the main impact paths of climate risks assessed as high and extreme, working sessions were held with leaders from each company, and the support of Corficolombiana. Financial impact scales were used as a reference to establish the risk appetite and provide an approximate quantification of the physical and transitional risk; these values are updated annually.

Risk levels	Risk threshold	Interpretation
Extreme	Capacity	The maximum deviation limit has been exceeded, compared to the risk posed by its strategy.
High	Tolerance	This exposure is an admissible deviation from the fulfillment of the strategy and does not put the entity at excessive risk.
Moderate	Appetite limit	The risk has been increasing or deteriorating.
Low	Appetite	The risk is at a normal level.

### **Assumptions**

The analysis of climate risks and opportunities for each company was based on three assumptions:

- The first assumption for the definition of the transitional risk scenario presented to meet the objectives of the Paris Agreement will require implementing drastic measures by governments and the private sector to avoid exceeding an increase in the Earth's temperature within 1.5 and 2.0°C by 2050, this path includes significant GHG reductions by 2030. The above will entail an increase in transitional risks that will significantly affect each company.
- Second, to define the physical Risk Assessment scenario, if net CO2-eq emissions are not reduced by 2050 and the average temperature increases by more than 1.5°C, a triggering effect will be generated, which will result in temperature increasing by 3 to 4°C by 2100. This implies drastic and permanent changes in weather patterns, and ecosystem dynamics and, therefore, impacts on the organization's assets and capacity to generate income. It is important to highlight that by 2021 the average temperature of the Earth has increased by 1.2°C as compared to pre-industrial temperatures, which has already been reflected in impacts and harm to the country's productive sectors.
- The third establishes that, although there are extreme weather events that are unlikely to occur in the geographic territory where each company operates, these were included in the risk assessment to provide more analysis. These risks were classified with a "lower" probability of occurrence as they are not expected to manifest themselves and thus the financial consequence of the risk materializing in the business will not have an impact..



### 3. RESULTS

### 3.1. Corficolombiana's climate risk heat map

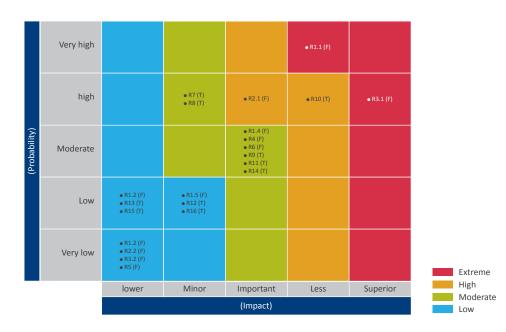
Risk prioritization is performed by consolidating risks originated by the companies that affect Corfico-lombiana, using a two-step process following the aggregate method of higher valuation. To consolidate risks assessed by the company within the corresponding sector (agroindustry, infrastructure, hospitality, and energy and gas) the shareholding interest of each of the of the companies' carrying value assessed in Corficolombiana's portfolio was considered. Subsequently, for each sector assessed, Corficolombiana's direct and indirect shareholding interest was taken to escalate the risks to the holding company.

To determine Corficolombiana's aggregate Risk Assessment the following companies were included: infrastructure (Coviandina, Covipacífico, Covioriente, PISA), Estelar Hotels Caribbean Region (Cartagena, Santa Marta, and Barranquilla), agroindustry (Mavalle, Pajonales, and Unipalma) and energy and gas (Promigas), for the construction of this analysis we considered all the activities included in the value chain and for the energy sector the activities related to distribution.

The following is the heat map indicating the consolidated result of the Risk Assessment for Corficolombiana, which groups the risk valuations for the different sectors according to the impact and probability levels.



### **Corporate Heat Map of Climate Change Risks**



### Physical Risks (F)

- R1.1 Heavy rains
- R1.2 Droughts
- R1.3 Frost
- R1.4 Heat waves
- R1.5 Extreme winds
- R2.1 Increase in mean temperature
- R3.1 Increase in rainfall
- R3.2 Decrease in rainfall
- R4 Soil degradation
- R6 Rising sea level

### Transitional risks (T)

- R7. Increase in the price of carbon tax
- R8. Increased environmental disclosure requirements.
- R9. Changes in regulation of existing products and services.
- R10. Substitution of existing products and services with low-carbon products
- R11. Transition costs to low-emission technology
- R12. Changes in public perception of the sector (stigmatization).
- R14: Decrease in demand for products or services
- R16: Increase in the cost of raw materials



### 3.2. Risk Assessment with high and extreme risk levels

### 3.2.1. Heavy rains

**D Description of risk:** Correspond to those rainfall events that exceed the historical average rainfall data recorded in a given territory

Classification and type of risk: Physical - Acute

Timeframe according to TCNCC: Short-term

Risk level

Extreme

Risk threshold

Capacity

Value of Impact for the Corporation in 2022 COP \$115,000,000,000 and above

**Consequences**: Floods, rising and overflowing rivers and streams. Increased soil saturation which in the case of moderate and high slopes, leading to landslides.

Sector	Company	Impact path	Financial Impact
Infrastructure	Coviandina	Income	Decreased income due to road closures caused by landslides and soil degradation.
	Covioriente	Costs / Expenses	Costs incurred for unscheduled maintenance work due to weather events that may lead to landslides in critical locations. In addition, additional costs are foreseen in the design of road infrastructure to mitigate the risk.
	Covipacífico	Costs / Expenses	Additional costs incurred for unscheduled maintenance works, corrective activities, or increased insurance premiums due to weather-related claims.
	Pisa	Costs / Expenses	Additional costs for minor works as a result of flooding at critical locations identified by PISA.
Energy & Gas	Promigas	Income	Costs incurred for unscheduled maintenance work due to weather events that may lead to landslides in critical locations. In addition, additional costs are foreseen in the design of road infrastructure to mitigate the risk.
Agroindustry	Mavalle	Income	Loss of income due to the spread of diseases and pests that reduce productivity and, in extreme cases, the death of individual trees, as well as broken trees due to torrential rains. In addition, it generates downtime of personnel and product loss due to mixing with rainwater, negatively affecting production.
	Pajonales	Income	Loss of income due to damage or loss of the rice crop due to the tilting of the crop, which prevents mechanical harvesting and, therefore, its sale. On the other hand, it can generate low seed germination, affecting the initial establishment of the crop, producing very low populations with cost overruns, and delays due to replanting.
	Unipalma	Income	<ul> <li>Results in susceptibility to pests</li> <li>Reduction of FGR production: 10-20%.</li> <li>Decrease in the average number and weight of bunches.</li> <li>Decrease in crop production due to failure of personnel to perform tasks.</li> <li>Decrease in income due to reduced productivity</li> </ul>



### 3.2.2. Increase in rainfall

**Description of risk**: Under the climate change and global warming framework, the risk of average temperature increase manifests itself in increasing long-term temperature records, both locally and globally, as compared to pre-industrial average temperature.

Classification and type of risk: Physical- Chronic

Timeframe according to TCNCC: Short-term



COP \$115,.000,000,000 and above

**Consequences**: Floods, rising and overflowing rivers and streams. Increased soil saturation, which in the case of moderate and high slopes, leads to landslides.

Sector	Company	Impact path	Financial Impact
Infraestructure	Covipacífico	Costs / Expenses Income	Additional costs incurred for unscheduled maintenance works, corrective activities, or increased insurance premiums due to weather-related claims.
Energy & Gas	Promigas		

### 3.2.3. Substitution of existing products and services with low-carbon products

**Description of risk**: Public policy is moving towards the transition to products and services with lower greenhouse gas emissions, and important regulations affecting supply chains are expected.

Classification and type of risk: Transitional - Technological

Timeframe according to TCNCC: Short-term



**Value of Impact for the Corporation in 2022**Between COP \$23,000,000,000 - 114,999,999,000

**Consequences**: For Colombia's road infrastructure, the implementation of the river network of the Magdalena River for cargo transport is foreseen, which would reduce the volume of land cargo.

Sector	Company	Impact path	Financial Impact
Infraestructure	Coviandina	Income	Decrease in income associated with the reduction of the cargo vehicle fleet due to the change in transport mode to river transport, in response to Colombia's commitment to promote river transport on the Magdalena River.
Infraestructure	Covipacífico	Income	Decrease in toll collection associated with the decrease in traffic flow due to the change in the cargo vehicle fleet, in response to Colombia's commitment to promoting river transportation along the Magdalena River.



### 3.2.4. Aumento de temperatura media

**Description of risk**: Under the climate change and global warming framework, the risk of average temperature increase manifests itself in increasing long-term temperature records, both locally and globally, as compared to pre-industrial average temperature.

Classification and type of risk: Physical- Chronic

Timeframe according to TCNCC: Mid-term



**Value of Impact for the Corporation in 2022**Between \$23,000,000,000 - 114,999,999,999 COP.

Consequences: directly affects the normal development of the region's activities, including outdoor tourism and the increase in power consumption, as well as triggering other threats such as droughts and fires, potentially affecting the area's agricultural activities. An increase in temperature means higher ultraviolet radiation.

Sector	Company	Impact path	Financial impact
Infraestructure	Covioriente	Costs / Expenses	Costs associated with investments in air conditioning equipment for operations offices and repairing damage to asphalt layer due to high temperatures
	Covipacífico	Costs / Expenses	Additional costs incurred for unscheduled maintenance works, corrective activities, or increased insurance premiums due to weather-related claims.
Tourism	Hoteles Estelar Región Caribe	Costs / Expenses	Expenditures on refrigeration equipment suitable for the region's temperature without decreasing its efficiency.

### 4. ACTIONS TO MITIGATE AND ADAPT TO CLIMATE CHANGE RISKS

Corficolombiana's Climate Strategy is framed within the Sustainable Corficolombiana (Corficolombiana Sostenible) corporate strategy and its investment plans and aims to consolidate a low-carbon investment portfolio that is resilient to the effects of climate change.

### Actions to mitigate physical risks

- O Disaster Risk Management Plan in compliance with Decree 2157 of 2017
- O Ongoing monitoring of climatic variables and establishing an early warning system
- O Study and monitoring of critical landslide points
- O Ongoing inspection of physical infrastructure
- O Implement nature-based solutions to strengthen vulnerability to extreme weather events
- O Corrective measures for disaster risk reduction in coordination with departmental and national authorities, especially concerning structural measures



### Actions to adapt to transitional risks

### Infraestructure

- O Gradual renovation of the vehicle fleet with hybrid vehicles
- O Changing the lighting system
- O Incorporation of solar energy in outdoor areas
- O Optimization of the ventilation system in tunnels
- O Conversion of vehicle engines to gas
- O Optimization of asphalt plant boiler

### Agroindustry

- O Detailed soil study
- O Industrial Wastewater Treatment Plant
- O Diesel Particulate Filters (DFP)
- O Ozone generator
- O Forestry and grazing system with live fences
- Biodigesters

### **Energy & Gas**

Promigas established its roadmap to achieve zero greenhouse gas emissions by 2040, expeting by this date that all Scope 1 and 2 emissions, and even a percentage of those emitted by third parties over which it has control, will leave a net zero carbon footprint

### **Hoteles Estelar in the Caribbean**

- O Optimization of cooling systems
- O Photovoltaic energy
- O Energy cogeneration

### 5. OPPORTUNITIES

As part of the strategy, we identified opportunities for Corficolombiana and its companies in terms of efficiency (reduction of operating costs, energy efficiency, materials, water, and waste management), new energy sources using low-emission alternatives, innovation and development of products and services, and the search for opportunities in markets or types of assets (such as, for example, green bonds), among others.

We conducted an analysis that allowed us to classify the companies in our sectors according to their level of maturity and their capacity to respond both in terms of adaptation to climate change and concerning the measures used to mitigate GHG emissions. The analysis of opportunities is an ongoing process and so far, we can highlight actions such as:

- > Promigas launched the first green hydrogen pilot and injection into natural gas networks in Colombia.
- > Promigas, together with Sumitomo Corporation Andes, one of Japan's leading business conglomerates, signed a Memorandum of Understanding to explore and develop the green hydrogen-electric mobility market in Colombia and Peru.
- Our rubber plantation in Mavalle, which has more than 5 million natural rubber trees, captured 144,188 tons of CO2e in 2022 under the BioCarbon Registry methodology. We expect to commercialize these credits in 2023. Mavalle is thus consolidating its position as a company that captures more greenhouse gases than it produces.



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