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**Climate changes**

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**BANORTE**

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**evolves**

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## Letter from the Chairman of the Board of Directors

It is my sincere pleasure to present this first report according to the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD), which demonstrates how we at Grupo Financiero Banorte have placed sustainability at the core of our business.

Throughout the past decade, we have witnessed the impact of climate change on our world. Grupo Financiero Banorte has joined in various global sustainable development initiatives, recognizing the key role played by the financial industry in fighting climate change, and convinced that it is only by working together that we can face this challenge.

We are conscious of our role in the transition to a zero-carbon economy. That is one reason we have pledged to decarbonize all of our loan and investment portfolios by the year 2050, or even before.

Furthermore, we have worked together with our stakeholders to encourage a sustainable recovery amid the challenges of the pandemic. The climate change agenda must be addressed with a comprehensive vision, considering all its factors and its consequences for the environment, the economy, and human beings.

As a Mexican financial group and situated in the Latin America and the Caribbean region, we are aware of the tremendous natural wealth afforded us by our geographic position, and this entails a commitment to protecting it.

We have the opportunity to work for a more just, resilient and sustainable society and economy. We know that climate action is an immediate need. That

is why every company should adopt a comprehensive sustainability program and prioritize the change toward cleaner, more efficient technologies.

The financial industry plays a key role in combating climate change, and to generate measurable action, we must consider the following variables:

- **Time:** Time for defining plans and strategies is increasingly short given the urgency of the climate crisis.
- **Data:** To shift the flow of capital toward sustainable, nature-positive activities, the financial industry requires more research, information and analysis.
- **Training** on climate and biodiversity: Financial institutions in many regions of the world still lack experience and knowledge of climate risks. We need specialized teams to provide guidance, especially in emerging markets.

We are fully convinced that by working together with you, we can achieve the change that the world needs.

**Carlos Hank González**

Chairman of the Board of Directors  
Grupo Financiero Banorte

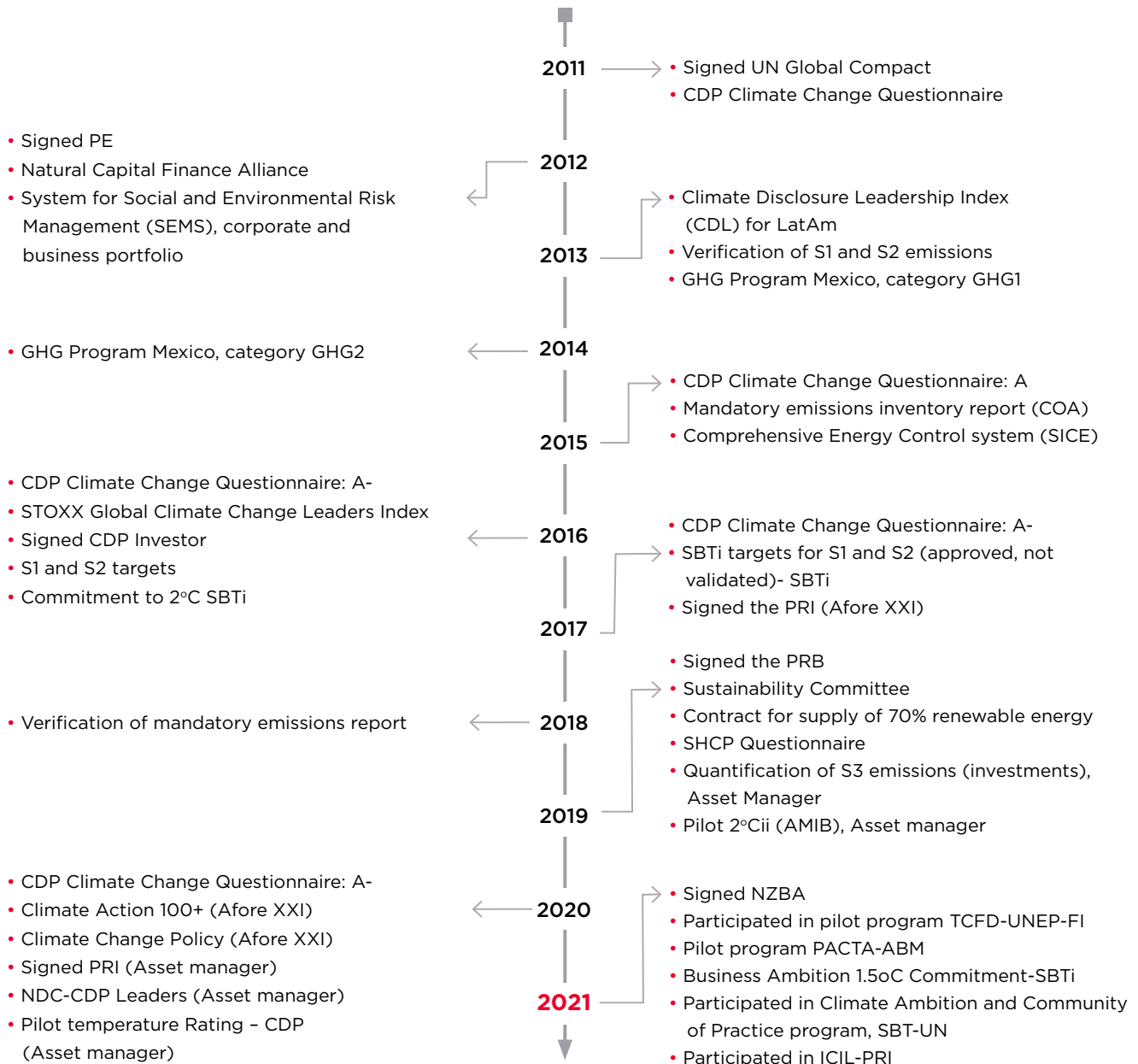
## Overview

The financial industry plays a key role in the battle against climate change, serving as an intermediary between the various financial actors and climate mitigation and adaptation efforts. But climate change poses a systemic risk which may have severe repercussions for financial stability and the economy as a whole.

As a financial institution, we understand how important it is to incorporate physical climate aspects

and transition goals into decision-making, so that we can properly manage the direct and indirect impacts we have when operating and doing business.

To this end, throughout the past decade, Grupo Financiero Banorte (GFNorte or the group) has joined in leading national and international initiatives in order to take the measures necessary to fight climate change. The following is a timeline showing the landmarks in this process.



We are also aware of how important this issue has become for our various stakeholder groups, so it is increasingly essential that we report on our efforts to mitigate risks and take advantage of the associated opportunities, while reducing the negative impacts and amplifying the positives ones, to the extent possible.

To address the financial risks associated with this global situation, we have prepared this report in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), which was created by the Financial Stability Board (FSB) in 2015 as a framework for disclosure of climate-related information.



These recommendations are structured into four pillars, which we will address throughout this report.

1. **Governance:** The organization's governance around climate-related risks and opportunities.
2. **Strategy:** The actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.
3. **Risk Management:** The processes used by the organization to identify, assess, and manage climate-related risks.
4. **Metrics and Targets:** The metrics and targets used to assess and manage relevant climate-related risks and opportunities.



For this first exercise, we formed an internal work group on climate change made up of various strategic areas, in order to build awareness about the importance of climate change, generate capacities, develop tools and align ourselves with the four pillars of the TCFD recommendations, qualitatively and quantitatively. The scope includes Banorte operations and the customers that are classified in the most significant segments of our portfolios.

We formed an internal work group in order to build awareness about the importance of climate change, generate capacities, develop tools and **align ourselves with the four pillars of the TCFD recommendations, qualitatively and quantitatively.**

## Recommendation 1. Governance

Since its creation in 2019, the Sustainability Committee is the governance body in charge of approving and managing the group's sustainability strategy. In matters of climate change, its duties are as follows:

- (i) Defining the climate strategy aligned with the business, and its action plan.
- (ii) Regularly reviewing climate change policies.
- (iii) Setting performance goals focused on greenhouse gas (GHG) emission and tracking results.
- (iv) Incorporating climate aspects into risk analysis.
- (v) Communicating climate-related matters within and outside the organization.
- (vi) Promoting strategic partnerships.

(vii) Fostering involvement of areas that affect climate action.

(viii) Allocate the necessary budget.

The Sustainability committee meets twice a year, and is made up of the Managing Director for Sustainability (chairman), the Deputy Managing Director of Sustainability (secretary), the Chief Administrative Officer, the Managing Directors of Risk Management and Credit, Product Development, Wholesale Banking, Retail Banking, Government Banking, Digital Business Development and Investor Relations, the Chief Legal Officer, Managing Director of Communication and Public Affairs, and a representative of the Internal Audit Department.

The Sustainability Committee reports to the Risk Policies Committee, which in turn reports directly to the Board of Directors of the group.

In 2021, the following climate-related issues were presented to this committee:

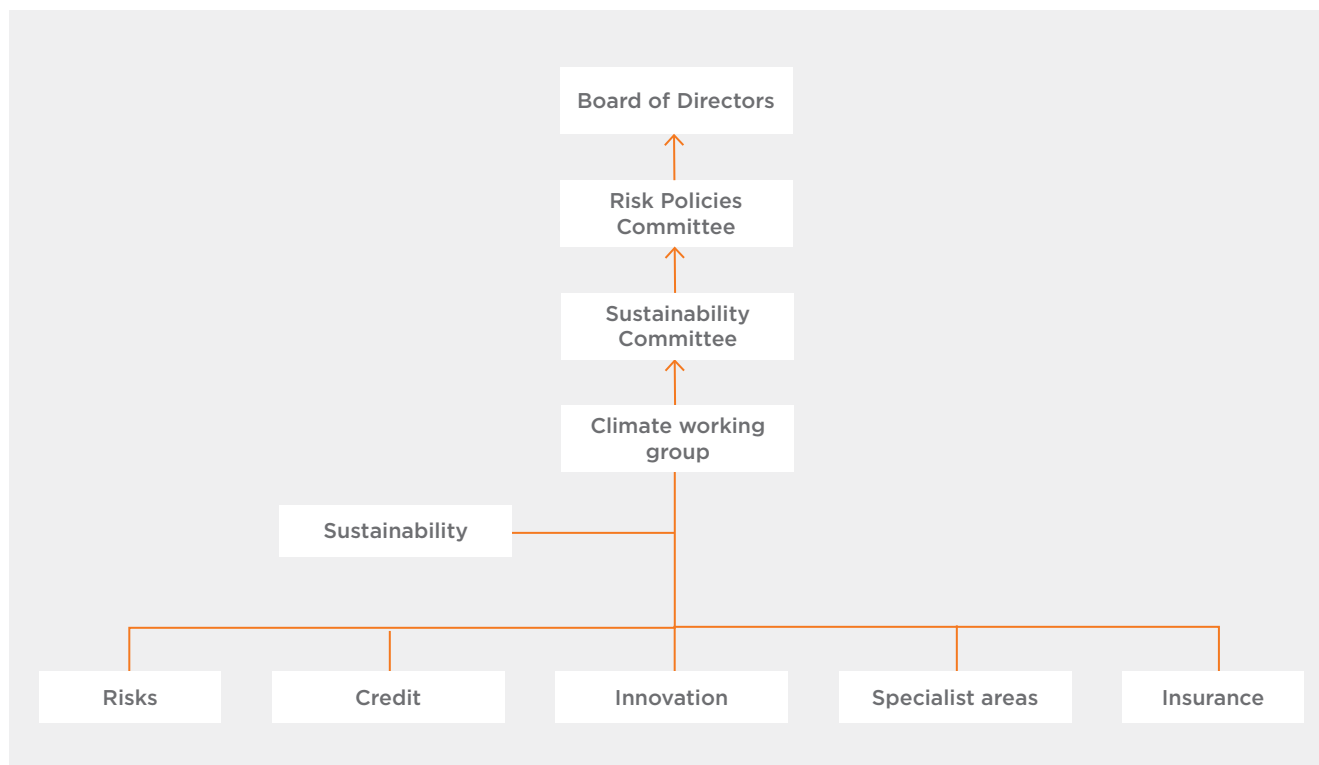
### Sustainability Committee Meetings

Meeting	Issues covered	Attendance
First meeting	<ul style="list-style-type: none"> <li>• Global Context</li> <li>• Net-Zero Banking alliance and SBTi</li> <li>• Target setting and work plan</li> </ul>	92%
Second meeting	<ul style="list-style-type: none"> <li>• Global Context</li> <li>• Status of renewable energy supply</li> <li>• Climate strategy</li> </ul>	83%

For the purpose of developing and executing climate strategy according to the various pillars, at the start of the year we created an internal working group on climate change. In 2021, the group focused primarily on structuring the process of assessing climate risk in our operations and in the business and analyzing various methodologies for temperature scenarios and climate stress testing.

Made up of 36 members of the Sustainability, Risk, Credit, Specialized Areas, Innovation and Insurance departments, the group meets each week, with additional meetings called when necessary, depending on the issue in question. The results of this group were presented at the second meeting of the Sustainability Committee.

## Climate governance structure



Additionally, we created a scheme of monetary and non-monetary incentives for employees who carry out activities relating to climate strategy.

### Incentives aligned with climate goals

Department	Incentive	Goals
Chief Administrative Officer	Monetary	Efficiency in the use of inputs necessary for operations
Chief Risk and Credit Officer	Monetary	Incorporation of environmental, social and governance (ESG) risks into the risk analysis process
Managing Director for Sustainability	Monetary	Climate strategy performance
Internal working group on climate change	Monetary and non-monetary	Development and execution of climate strategy

## Recommendation 2. Strategy

### GFNorte Climate Strategy

GFNorte recognizes global climate change as the greatest environmental threat humanity is facing today. We know that efforts are urgently needed to reduce dependency on fossil fuels and lower the amount of greenhouse gases emitted into the atmosphere to avoid irreversible consequences for society, the environment, and productive activity.

We are convinced that the financial industry can play a crucial role in mitigating and adapting to the problem of climate change and help transition toward a resilient, low-carbon economy. That is why we have made climate change one of our material priorities in terms of risk and developed a comprehensive climate

strategy that considers the commitments we have assumed nationally and internationally, understanding that climate change pervades all ESG issues.

Accordingly, we have structured our climate action lines into six pillars: Governance, Strategy, Risk Management, Metrics and targets, Stakeholders, and Transparency. Each pillar has short-, medium- and long-term goals, in line with the recommendations of the TCFD, the Carbon Disclosure Project (CDP), the Science Based Targets initiative (SBTi), the Net-Zero Banking Alliance (NZBA), the Principles for Responsible Banking (PRB), the Equator Principles (EP), the Principles for Responsible Investment (PRI) and the Task Force on Nature-related Financial Disclosures (TNFD).

	2021 - 2025	2026 - 2030	2031 - 2035	2036 - 2040	2041 - 2045	2046 - 2050
<b>Governance</b>	Develop policies, processes and work groups on climate change to support decision-making by governance bodies and ensure that these permeate the entire organization. CDP / TCFD / PRB / PRI					
<b>Strategy</b>	Guarantee the group's resilience to the effects of climate change and accelerate the transition to a low-carbon economy. CDP / TCFD / PRB / PRI					
<b>Risk management</b>	Analyze risks and impacts relating to climate, nature and society, and identify opportunities under possible future scenarios. CDP / TCFD / EP / PRB / PRI / TNFD					
<b>Metrics and targets</b>	Measure the group's direct and indirect impact on climate change and define decarbonization targets based on science and responsible financing. CDP / TCFD / SBTi / NZBA / PRB / PRI					
<b>Stakeholders</b>	Participate actively with clients, regulatory bodies and other stakeholders to encourage climate action. CDP / EP / PRB / PRI					
<b>Transparency</b>	Publicize the group's commitments and actions regarding climate change. CDP / TCFD / SBTi / NZBA / EP / PRB / PRI / TNFD					



## Scope of the Report

This report was limited to a scope that enabled us to determine a starting point for defining and analyzing the climate-related risks and opportunities that are most relevant to GFNorte operations and activities. This scope was defined on the basis of our interest in having an initial experience for more easily addressing physical and transition risks, establishing concrete foundations, streamlining processes, defining replicable methodologies for the rest of our portfolio, and identifying areas of opportunity.

**Operations:** We considered the physical and transition risks and opportunities on the operating side of our banking subsidiary (Banorte), which accounts for 74.4% of the group's net income.

**Business:** In keeping with the guidelines of international initiatives to which we have committed in terms of climate change and emissions reduction, we defined 28 industries with exposure to climate-related risks IECR (SEC by the initials in Spanish), which enabled us to arrive at a classification of economic activities that make up the internal taxonomy of Banorte's loan portfolio.

The SEC selected for the first scope of application in this TCFD report were Real Estate and Tourism for analysis of physical risks, and Oil & Gas for transition risks, as well as their respective opportunities. **These activities account for 43% of the Corporate, Business and Federal Government portfolios.**

### Banorte industries exposed to climate-related risks

Industries exposed to climate-related risks (SEC)	
1. Agriculture	
2. Poultry farming	
3. Communications	
4. Miscellaneous	
5. Electrical energy	
6. Cement manufacture	
7. Concrete manufacture	
8. Livestock	
9. Food	
10. Beverages	
11. Lumber	
12. Metallurgy	
13. Paper	
14. Plastics	
15. Pharmaceuticals	
16. Chemicals	
17. Textiles	
18. Infrastructure	
19. Real Estate	
20. Manufacturing	
21. Construction materials	
22. Mining	
23. Fishing	
24. Oil & Gas	
25. Waste management	
26. Forestry	
27. Transportation	
28. Tourism	

## Climate-Related Risks And Opportunities

The following is a description of the most relevant risks and opportunities for the scope defined above. We labeled each risk or opportunity with a code starting with “R” or “O,” respectively, e.g. R1, R2... Rn and O1, O2, and so on.

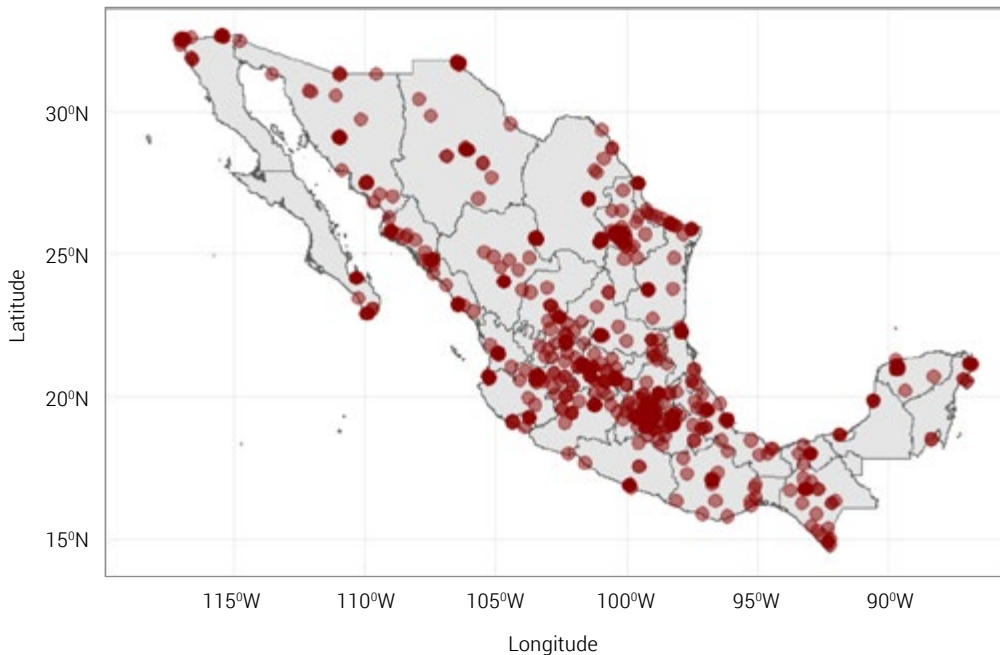
### Risks and opportunities in operations

**R1. Acute physical risk: greatest severity and frequency of extreme climate events such as cyclones and flooding**

According to Mexico’s National Climate Change Institute, the degree of direct exposure to tropical storms in any of their categories is high in at least 17 states of Mexico, and the level of vulnerability to a catastrophic event is severe in five of these.

We have 1,177 branches throughout Mexico, 377 of which are exposed to tropical storms and 47 are considered high-risk (located less than 50 kilometers from the coast). In addition, 67 of our branches are exposed to flood risk.

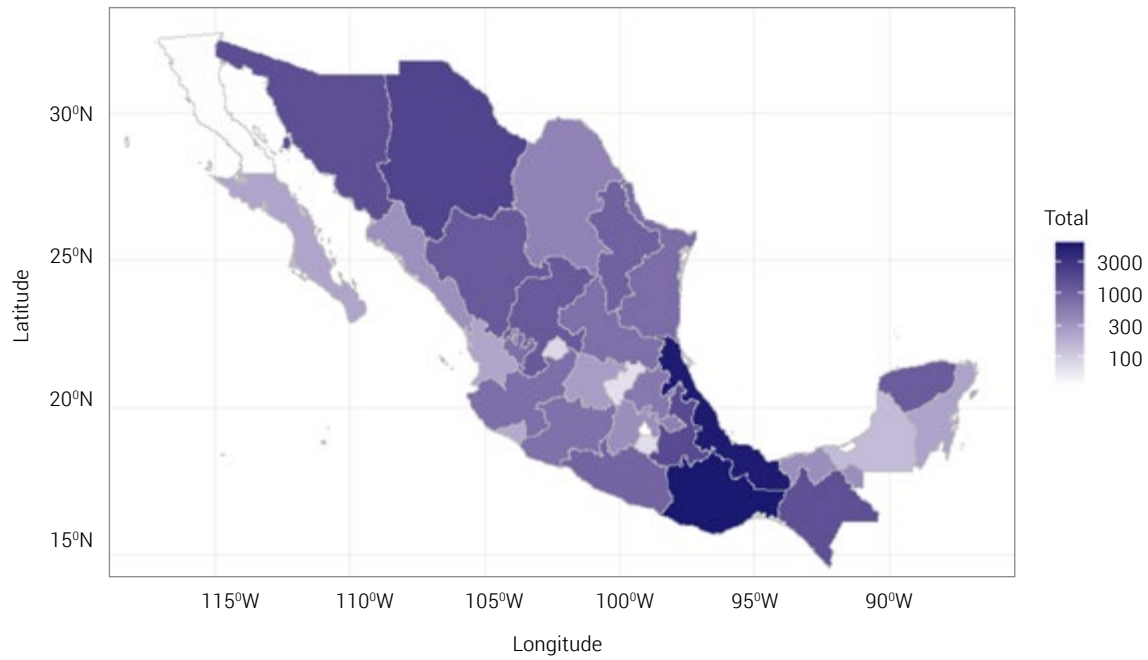
Georeferencing of branches



Source: Banorte, 2021

To put the risk of climate disaster emergencies in perspective, the map below illustrates the history of hydro-meteorological events, such as tropical storms and floods, between May 1999 and January 2021.

### Hydrometeorological events (May 1999-January 2021)



Source: INEGI

The next map shows average rainfall in each state of Mexico.

### Average precipitation 2020



Source: INEGI

**NOTE:** In both cases, the darker the color on the map, the greater the number of events occurred or the higher the precipitation in terms of millimeters of rainfall.

As we can see, much of Mexico's territory is exposed to meteorological events or severe precipitation in the north and south of the country, which shows the vulnerability we face due to our geographic location.

#### **Financial impact: Increase in direct costs**

The increase in the severity and frequency of climate-related events can cause monetary losses due to the disruption or temporary closure of operations and damage to property. In 2021 we recorded 40 such events, three of which caused economic losses to 42 of our branches. The cost of physical damage to these buildings totaled close to Ps. 843,000, and in terms of our profits we estimate a loss of about Ps. 11.2 million in net operating income due to the interruption of operation for 416 hours.

#### **O1. Changing consumer preferences**

The use of online or mobile banking has increased exponentially in recent years, due to the rising penetration of mobile devices and internet access. These trends have enabled commercial banking clients to access any service remotely without having to visit a branch, saving them time and money. The transition to digital banking also will allow us to reduce the number of operating branches and save on operating costs and any additional expense caused by climate-related events.

#### **R2. Regulatory: Obligation to report GHG emissions**

Under the Mexican Law on Climate Change, regarding the National Emissions Registry, article 3. VI-h, financial companies that issue more than 25,000 tCO<sub>2</sub>e in their total operations must report their emission through an Annual Certificate of Operation, and this report must be verified by a third party accredited by the Ministry of the Environment and Natural Resources.

#### **Financial impact: Increase in direct costs**

Because our annual GHG emissions do exceed the regulatory threshold, we are obligated to prepare the abovementioned report and have it verified every third year. Failing to comply with this law due to poor information management, or failing to report altogether, would result in economic sanctions for Banorte. At the close of 2021, Banorte had not received any economic or noneconomic sanction for climate-related reasons.

#### **O2. More efficient buildings**

Building or adapting buildings for increased efficiency and automation (including real-time readings of consumption of inputs like energy) may eventually exempt us from mandatory GHG emission reporting if we can reduce them to below the regulatory threshold. We consider this a possibility because 90% of our annual GHG emissions come from the energy consumption of our buildings (scope 2). Better data management can also help us improve efficiency through the operation of "smart buildings," which would make it easier for us to calculate our carbon footprint and increase the reliability of the data.

#### **R3. Technological: Transition to low-emission technologies**

According to Our World in Data, a publication of the University of Oxford, Mexico's energy matrix is comprised of 75.2% non-renewable sources, and therefore the price of energy is subject largely to fluctuations in the price of fossil fuels. Furthermore, recent energy reform bills in this country are focused on empowering state-owned productive enterprises, which could slow private investment in renewable energy projects and foster uncertainty in the operation of the electrical market.

#### **Financial impact: Increase in direct costs**

Any increase in the price of fossil fuels results directly in a rise in electricity prices. We have seen this effect first-hand in the cost of the electrical energy we consume, as the average annual price per kilowatt hour has risen by approximately 1.12% in the last three years.

#### **O3. Use of low-emission energy sources**

In the short term, we seek to replace the supply of electrical energy with renewable sources, which are between 20% and 30% cheaper, because they do not depend on fuel prices, and also do not generate contaminating emissions. Although the current political climate in Mexico obscures visibility on the matter of energy, we are exploring alternatives for the supply of electrical energy, like the Wholesale Power Market (WPM) and distributed generation.

## Business risks and opportunities

We understand that the climate risks to which our clients are directly exposed pose an indirect risk to ourselves. These risks in turn will depend on the nature of the industry in which each of them operates.

The materialization of climate risk could increase the probability of default by clients, or an impairment of the

value of the collateral backing our loans, which would require increased reserves, additional capital to meet regulatory requirements, and a reduction in Banorte profits.

### 1. Real Estate and Tourism

The following figures show the geographic distribution and concentration of loans analyzed in Real Estate and Tourism SEC, according to the geolocation of the project we are financing.

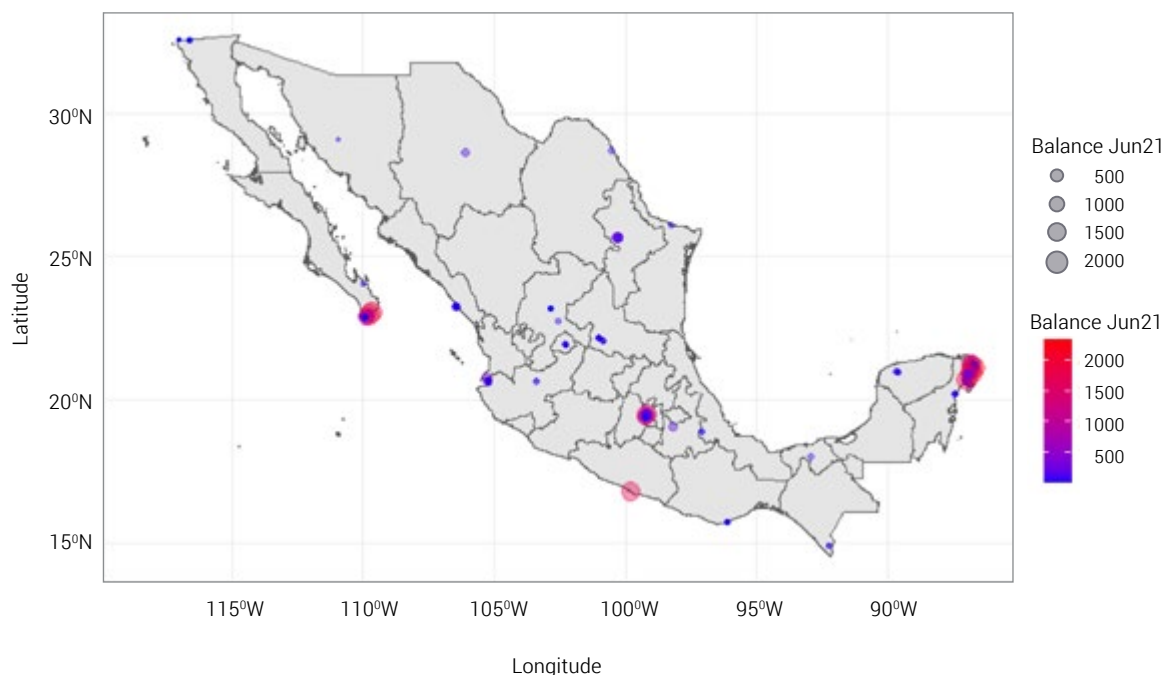


Source: Banorte, 2021.

**NOTE:** The size of the circles represents the size of the outstanding loan balance at the close of June 2021, in millions of pesos. The color range indicates the size of the loan, with the blue end of the scale indicating smaller amounts and the red end larger amounts.

## Georeference of SEC Real Estate and Tourism Portfolio (June 2021)

### Tourism



Source: Banorte, 2021.

**NOTE:** The size of the circles represents the size of the outstanding loan balance at the close of June 2021, in millions of pesos. The color range indicates the size of the loan, with the blue end of the scale indicating smaller amounts and the red end larger amounts.

#### R4. Acute physical risk: **Greater severity and frequency of extreme climate events like cyclones and flooding**

The increase in average global surface temperatures results in more frequent, intense and unpredictable climate events, primarily in coastal regions. Specifically for clients in the Real Estate and Tourism SEC, these hydrometeorological phenomena may disrupt business and physically affect assets, which may in turn increase their insurance premiums.

As can be seen in figures 4 and 5, the regions most exposed to such climate events are the eastern, southeastern and southwestern regions of the country. If we superimpose this data on figure 6, we can also see a certain concentration of projects in these zones, particularly for the clients in the Tourism SEC.

#### Financial impact: **Higher credit risk**

The materialization of hydrometeorological phenomena may affect disrupt our clients' operations, increase the capital expenditures necessary to repair damage, and erode the value of assets. This deterioration of their assets may shorten their useful life, which could in turn affect our clients' payment capacity and the collateral that guarantees their loans.

#### O4. Increase in revenues from new products and access to new and emerging markets

Bearing in mind that hydrometeorological phenomena may cause physical damage to our clients' properties and affect their business continuity, an increase in the severity and frequency of extreme climate events is an opportunity for extending additional financial support, like higher credit lines or the opening of new lines under a specific scheme, and appropriately designed for such scenarios, as well as additional insurance.

## 2. Oil and Gas

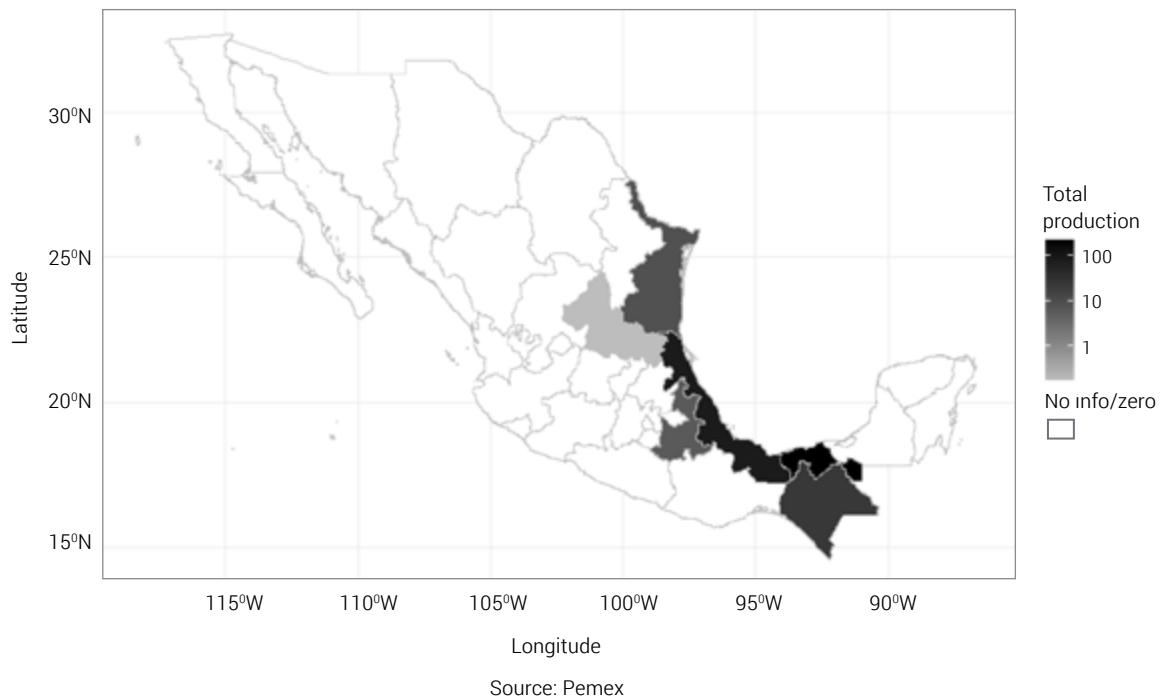
### R5. Current regulations: Carbon pricing mechanisms

To encourage an orderly reduction in GHG emissions, Mexico began a pilot project in 2020 to introduce an Emissions Trading System (ETS) that will formally take effect in 2023, to include the Oil & Gas industry, among others. The companies regulated under this system are those emitting more than 100,000 tCO<sub>2</sub> from direct sources a year—together accounting for approximately 40% of the country's GHG emissions.

Mexico's Excise Tax Law stipulates the amount of taxes on carbon applicable to all productive sectors that produce or import fossil fuels, encompassing 23% of Mexico's total GHG emissions. The tax is levied on the difference in their CO<sub>2</sub> emissions compared to natural gas, a fuel that is exempt from the tax.

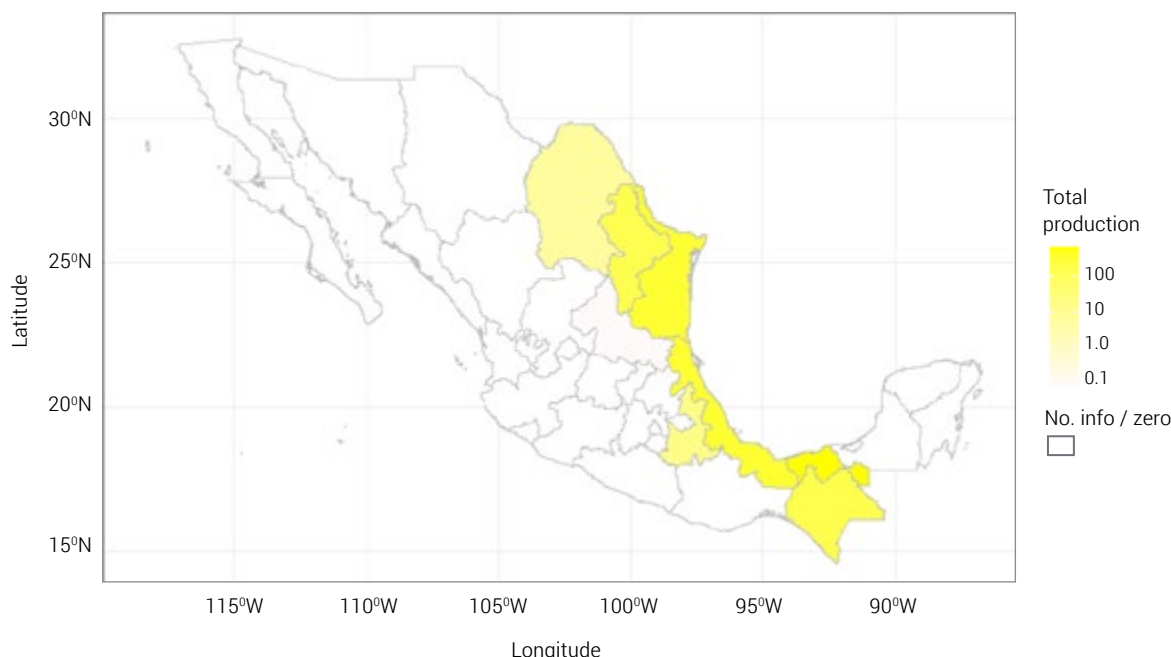
With an average production of 1.75 million barrels of oil a day, Mexico is one of the world's leading producers (ranking 11th in 2021). The following shows the states where oil and gas are currently extracted (including nitrogen for the latter), as well as the volume they operate in millions of cubic feet of fuel between August 2020 and July 2021.

Oil drilling in Mexico (August 2020-July 2021)



**NOTE:** the greater the saturation of the color on the map, the more oil or gas is produced (in millions of cubic feet).

### Gas extraction in Mexico (August 2020-July 2021)



Source: Pemex

Most of Mexico's oil and gas is produced in the eastern and northeastern portions of the country, primarily in off-shore territorial waters controlled by the Mexican government.

#### Financial impact: Increase in credit risk

Client of GFNorte who are regulated by the ETS and/or who pay taxes on the use of fossil fuels will experience a rise in direct and indirect operating costs. Because the Oil & Gas industry is the most affected by both these regulations due to the nature of its operations, its financial stability may be significantly compromised in the event of a constant and significant increase in carbon prices under either of these mechanisms, and this may contribute to an inability to fulfill their financial obligations.

ETS-regulated companies are also subject to a GHG emissions cap, and for every metric ton of carbon dioxide they emit over that threshold they must buy emission permits in government auctions, on the secondary market, or through carbon offsets in the voluntary market (up to 10% of the total). The cap on GHG emissions established by the ETS in the first year will be 273.1 million tCO<sub>2</sub>e, and this amount will

gradually decline each year, in accordance with the Nationally Determined Contributions (NDC) to which Mexico committed in the Paris Agreement. Although the price will be set according to market supply and demand, the average in 2021 was USD 17.20/ tCO<sub>2</sub>e in global markets, fluctuating between a low of USD 1.12 in the pilot program in Shenzhen, China, and a high of USD 49.78/ tCO<sub>2</sub>e in the European Union (World Bank).

Taxes on carbon may be as much as 3% of the selling price of fuel, which would indicate a range between Ps. 7.00/ tCO<sub>2</sub>e and Ps. 65/ tCO<sub>2</sub>e (approximately USD 0.40 and USD 3.00, respectively). These taxes would be paid monthly.

#### O5. Preparing more quickly for current regulation and potentially stricter laws in the future.

Considering the goal of both the ETS and the excise tax on carbon, we see an opportunity to provide new



sustainability advisory services to our clients, including training in climate-related issues, and to encourage the development of projects that reduce GHG emissions. This could mean an increase in credit placements.

Although the financial sector is not directly involved in the ETS, we might be able to act as an intermediary in the trading GHG emission permits through government auctions, on the secondary market or voluntary markets to offer them to clients who fall within the scope of the regulations. Market volatility may present another opportunity for hedging the price of carbon emission permits, using derivatives handled by the bank.

#### **R6. Emerging regulations: International mandates and regulation of existing products and services**

In line with the goal of keeping the average increase in global surface temperatures to at most 1.5° C compared to pre-industrial levels, GHG emissions from global economic activity must be limited to only 360 gigatons of tCO<sub>2</sub>e by 2050. In a scenario of orderly transition, new regulations can be expected to restrict drilling for fossil fuels, which would mean a number of stranded assets: (i) oil and gas reserves left unburned; (ii) exploration and development infrastructure yielding no profit; (iii) idle production and processing facilities; and (iv) unused distribution channels.

#### **Financial impact: Increase in credit risk**

For our clients in the Oil & Gas SEC, emerging regulations that limit drilling for fossil fuels or the use of infrastructure to operate may cause a significant loss of revenue, which translates into lower liquidity that could affect their payment capacity and credit rating. They could also lead to the cancellation of potential projects throughout the fossil fuel value chain, along with exponential devaluation and early decommissioning of existing assets.

According to research at the University of Exeter, England, around half of the world's fossil fuels will lose their value by 2036, which would represent losses of between USD 11 billion and 14 billion. In this context, Mexico would cease to exploit between 58.4% and 64.4% of its proven, probable and possible reserves of oil and gas.

#### **O6. Preparing more quickly for current regulation and potentially stricter laws in the future.**

We understand that the profitability of our clients in the Oil & Gas SEC may be affected by emerging regulations on climate change, which are becoming increasingly strict as the world moves toward decarbonization. It will be crucial to anticipate these regulatory changes, imposing limits on our portfolio exposure to these industries and adjusting the risk profiles of our clients according to models that factor in climate scenarios and climate stress testing.

#### **R7. Technological/Market: Transition to low-emission technologies**

To achieve the goal of net-zero emissions by 2050, investment flows and firm commitments are required from various economic agents aimed at making the transition to low-carbon technologies. This will allow for increasingly efficient, cheap and stable renewable energy (including nuclear energy). At the same time, fossil fuel prices will probably become more volatile as climate scenarios assume the reduction in demand for primary energy, lower use and exploitation of fossil fuels, and lower emissions.

#### **Financial impact: Increase in credit risk**

Lower demand for fossil fuels would mean lower prices, which would have a negative impact on our clients in the Oil & Gas SEC, because this is their primary source of revenue. Furthermore, considering market dynamics, lower prices will also lead to lower supply. These effects would reduce revenues for GFNorte because they would mean less credit placed in the industry, and this credit would also yield increasingly lower returns.

#### **O7. New revenue sources from new environmentally-focused products**

As efforts and international pressures intensify for a transition to a low-carbon economy, the demand for energy generation from renewable sources will grow, which represents an opportunity to redirect capital flows from financing or investing in fossil fuels toward renewable energy alternatives. Banorte is deeply committed to financing renewable energy projects, so it will be important to develop sustainable financial products that have the features that benefit the parties involved.

## Results

In order to estimate the magnitude of the impact of the identified risks, we created the following matrix organizing impacts by likelihood of occurrence and severity, with a qualitative approach, which classifies the impacts as low (green zone), medium (orange) and high (red).

### Impact Matrix

Probability / Severity	Low	Medium low	Medium	Medium high	High
High			R7		R6
Medium high		R4	R1		R5
Medium	R3				
Medium low					
Low	R2				

The next table shows a classification of existing risks according to the timeline for their materialization: short, medium and long term.

### Time horizons

Horizon	Risk	From	To
Short Term	R1, R2, R3, R4	0 years	4 years
Medium term	R5, R7	5 years	14 years
Long term	R6	15 years	30 years

To identify the significance of physical and transition risks within the selected portfolio, we use the impact matrix, the time horizon table and the experience of specialized areas. This exercise was conducted with a qualitative focus in order to arrive at a first approach to the possible impacts associated with each risk.

### Risk significance

Scope	Risks identified	Physical risks	Transition risks
Operations – Banorte	R1, R2, R3	Medium	Low
Business – Real Estate and Tourism SEC	R4	Medium	-
Business – Oil & Gas SEC	R5, R6, R7	-	High

Based on this analysis, we see that, in terms of the operations of Banorte itself, physical risks have a medium level of significance relating to the number of properties located in regions exposed to extreme climate events. We also found that transition risks are low because finance is a low-carbon intensity industry.

However, we did identify a medium significance for the physical risks to which our clients in the Real Estate and Tourism SEC, given their dependence on physical assets which may be affected by extreme climate events. Also, for our clients in the Oil & Gas SEC, we assigned a high significance to transition risks, because their financial stability depends on the dynamics of the energy market, specifically demand for fossil fuels.

## Climate scenario models

While participating in the UNEP-FI pilot program for banks, GFNorte has come to understand the importance of modeling scenarios and conducting stress testing to be able to manage climate-related risks. For this reason, in our first prospective exercise, we decided to use the climate scenarios published by the Network for Greening the Financial System (NGFS).

The NGFS scenarios explore the impact of climate change on physical and transition risks, in order to provide a common reference framework for financial institutions. The second phase of these scenarios was published in June 2021 and will be used as the basis for models and subsequent stress testing by Banorte.

### Climate scenarios

We will be implementing three of the six scenarios described, one for each quadrant, in order to prepare a broader comparison of the different test results.

The assumptions that apply to the scenarios we will be exploring are the following:

- **Divergent Net Zero:** Reaches net zero around 2050 but with higher costs due to divergent policies introduced across sectors leading to a quicker phase out of oil use.
- **Net Zero 2050:** Limits global warming to 1.5°C through stringent climate policies and innovation, reaching global net zero CO<sub>2</sub> emissions around 2050.
- **Current Policies:** Assumes that only currently implemented policies are preserved, leading to high climate risks.

For the climate variables, we used the various integrated assessment models (IAM) provided by NGFS, considering the greatest possible granularity of the variables for Mexico, as well as the National Institute Global Econometric Model (NiGEMI) which enables us to link the results of the climate models with macroeconomic variables.

### Climate stress testing

At present, the National Banking and Securities Commission (CNBV) requires Mexican banks to conduct annual stress testing in order to evaluate their capital adequacy. These requirements do not yet include climate stress testing. Considering global trends and Banorte's importance in the Mexican financial system, we have decided to conduct the first climate stress tests in order to determine our capacity to withstand extreme economic and climate scenarios in the future.

Based on the suggestions of UNEP-FI, we are drafting a plan of activities and assembling the team to participate in this pilot exercise, which will be developed in 2022. The following are the guidelines we will follow:

Climate modeling and link with macroeconomic variables: These first two blocks will consider the above-mentioned NGFS scenarios, in particular using the GCAM and NiGem models, due to the granularity of variables reported at the Mexico level.

- **Time horizon:** To 2050 (NGFS scenarios reach as far as 2100).
- **Selected scenarios:** Divergent Net-Zero, Net-Zero 2050 and Current policies.
- **Sectorial granularity:** Subset of the wholesale portfolio in the Real Estate, Tourism, and Oil & Gas industries.
- **Geographic granularity:** Exposure of the above-mentioned industries.
- **Variables:** We will review the different input and output variables calculated in the NGFS scenarios and select those that have the greatest relevance for the selected industries.
- **Impact on the loan portfolio:** Considering the exposure of the selected industries, we will estimate the impacts of each scenario on risk parameters (likelihood of default, severity of loss, exposure to default).

Execution of this first pilot climate stress test will enable us to identify the type of information, the models, abilities and knowledge required to conduct this type of exercise, building knowledge within the institution. It will also make it possible to evaluate whether the strategy is appropriate for facing the

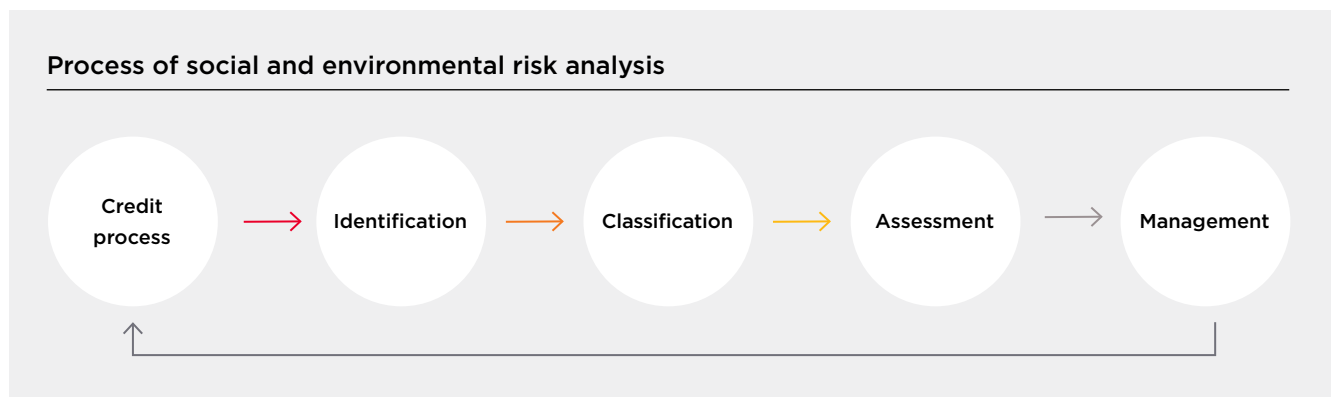
risks and opportunities of climate change, identify the industries and clients that will be most affected by the various scenarios, and the necessary mitigation measures. Finally, it will lay the basis for continuing to integrate climate risk into our comprehensive risk management framework and improve disclosure of climate-related risks.

## Recommendation 3. Climate risk management

### Process of identifying, evaluating and managing climate risks and opportunities.

GFNorte's System for Social and Environmental Risk Management (SEMS) considers climate change a priority within its risk management. In line with the Equator Principles it supports the goals of the Paris Agreement and recognizes the need to improve the availability of climate-related information by evaluating the physical and transition risks of the projects financed.

This system helps avoid negative climate effects and when this is not possible, to minimize, mitigate and/or offset them. For this reason, it incorporates climate risk into every phase of the process of social and environmental risk assessment.



- **Identification.** In this phase, SEMS identifies the industries with the greatest emission intensity and climate vulnerability, considering them to be sensitive industries.
- **Classification.** Projects are classified according to the magnitude of possible social and environmental risks and impacts, including climate risk. Risks are labeled as A (high risk), B (medium risk) and C (low risk).
- **Assessment.** This consists of verifying the compliance of projects to be financed with national regulations and the guidelines of the Equator Principles. Specifically, version IV of these Principles requires that category A or B projects present a climate risk assessment and that projects whose combined scope 1 emissions (resulting from the combustion of fuel in fixed, mobile or fugitive sources) and scope 2 emissions (resulting from the purchase of electricity, steam, heat, or cooling) are expected to be more than 100,000 tCO<sub>2</sub>e annually have an analysis completed which evaluates lower GHG intensive alternatives.

- As part of the assessment, SEMS examines projects' performance according to International Finance Corporation Performance Standards, as regards PS 1: Assessment and management of environmental and social risks; PS 3: Resource efficiency and pollution prevention; and PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
- Management. The assessed loans are monitored throughout the financing life cycle, paying special attention to improving climate risk management, and are subject to an annual progress review.

SEMS is an integral part of the bank's lending process and was regulated in 2015 as part of the Credit Manual and Credit Study. Additionally, with the approval of the Risk Policies Committee in 2020, the Specialized Social and Environmental Risk Area, which is in charge of the system, is a member with speaking rights of the Central Credit Committee and National Credit Committee.

In 2022, internal risk management processes and policies will be updated, formally incorporating the typology of environmental, social, governance, climate and nature-related risks into the Risk Manual. For more information on how SEMS works, see our most recent [Equator Principles report](#).

## Recommendation 4. Climate metrics and targets

### Climate metrics

#### Metrics for operations

We quantify our carbon footprint through a financial control approach that uses methodologies like the Corporate Accounting and Reporting Standard (CARS), the GHG Protocol and national guidelines on calculation of GHG emission inventories. The emissions inventory is also backed by independent assurance from a specialist recognized by the Mexican Accreditation Agency.

GFNorte total GHG emissions				
Year	2019	2020	2021	Chge. 21/20
Metric	(tCO <sub>2</sub> e)	(tCO <sub>2</sub> e)	(tCO <sub>2</sub> e)	
Natural gas (S1)	1.40	0.67	0.13	-81%
Diesel (S1)	166.2	256.20	149.95	-41%
LP Gas (S1)	76.73	108.44	49.98	-54%
Gasoline (S1)	3,960.31	3,147.14	2,624.44	-17%
Electricity (S2)	67,855.07	63,339.46	60,090.37	-5%
Total tCO <sub>2</sub> e (S1 + S2)	72,058.08	66,851.91	62,714.81	-6%
tCO <sub>2</sub> e/employee	2.39	2.23	2.10	-6%
tCO <sub>2</sub> e/mdp net income	1.97	2.19	1.79	-18%
Employee scope	100%	100%	100%	

Scope 1 emissions were calculated on the basis of factors published by SEMARNAT in the Official Gazette of the Federation, in the agreement establishing the technical details and formulas to be applied in methodologies for calculating greenhouse gas or compounds.

Scope 2 emissions (S2) were calculated using the national electrical emissions factor for 2020.

Calculations on emissions intensity assume Ps. 35.05 billion in net income and a staff of 29,987 employees (full-time employees, those working on a fee basis and other professional service providers).

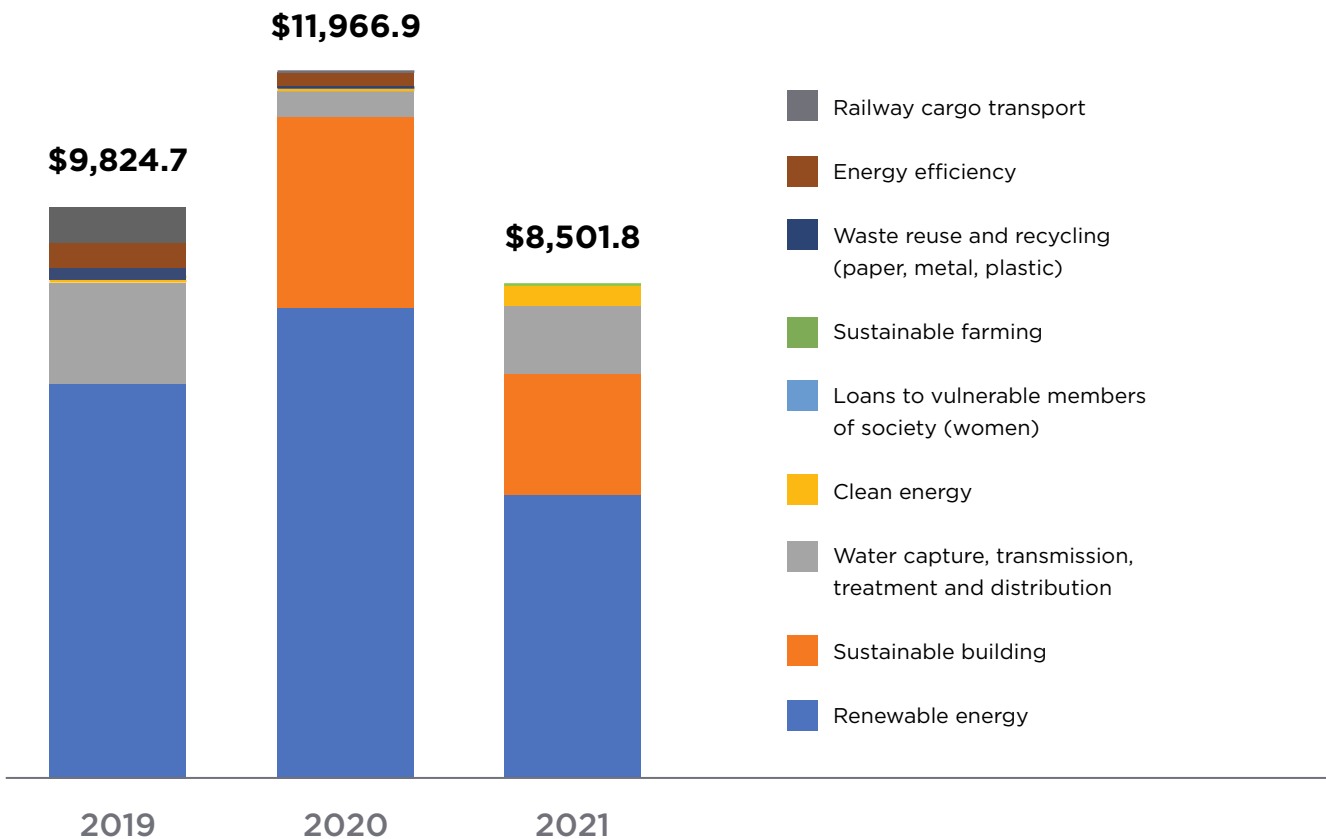
## Business metrics

One of the most important metrics for climate opportunity is measuring sustainable portfolio. Being able to quantify the amount of financing placed in projects that have a positive impact on the environment and society and which also help to mitigate or adapt to climate change help us create achievable goals that favor deployment of our climate strategy.

As the figure below shows, in the last three years our sustainable portfolio has focused on renewable energy generation, sustainable building, and the capture, transmission, treatment and distribution of water.

We have identified a need to strengthen our involvement in industries that help combat climate change and which might eventually become strategic sectors for expanding our loan portfolio or the supply of differentiated products at Banorte.

## Sustainable portfolio



## Climate targets

### Commitments on GHG emission reduction

Committed to intensifying efforts to reduce GHG emissions, and together with more than 70 global institutions, we have publicly pledged to set targets for emission reduction using methodologies

developed by the SBTi since 2016. In 2021 we became founding members of the NZBA initiative, and we also sit on the board of that organization. With this, we reiterate our support for the ambitious goal of limiting the increase in global surface temperature to 1.5° C.

We continue to work on aligning our operational and business targets with the SBTi and NZBA methodologies to match the ambition of our commitments with those of the initiatives themselves.

### Operational targets

In line with the Nationally Determined Contributions (NDC) that Mexico assumed in the Paris Agreement, we set short- and medium-term targets on reducing GHG scope 1 and 2 emissions, which were approved by our Sustainability Committee in its first meeting of the year.

### Direct GHG emission reduction targets (scopes 1 and 2)

Target	KPI	Target	Base year	Target year
Reduce absolute CO <sub>2</sub> emissions by the group	tCO <sub>2</sub> e	50%	2020	2030
Reduce absolute CO <sub>2</sub> emissions by the group	tCO <sub>2</sub> e	100%	2020	2050
Reduce CO <sub>2</sub> emissions per employee (intensive) by the group	tCO <sub>2</sub> e / employee	30%	2020	2025
Reduce CO <sub>2</sub> emissions per employee (intensive) by the group	tCO <sub>2</sub> e / employee	60%	2020	2030

### Business targets

To ensure comprehensive implementation of our climate strategy, we continued to work on setting short-, medium- and long-term goals considering our priorities for facilitating transition to a low-carbon economy and eventually decarbonizing altogether. These targets are now being validated by the business areas. The following table shows only the most significant action lines.

### Business goals in progress

Target	KPI
Reduce scope 3 emissions (corresponding to investment)	tCO <sub>2</sub> e
Increase sustainable portfolio in Wholesale Banking	Ps. mn
Increase sustainable portfolio in Consumer Banking	Ps. mn
Issue sustainable debt	Ps. mn
Reduce exposure to fossil fuels	Ps. mn

## Conclusions

This exercise has helped us understand the risks and opportunities of climate change, according to TCFD guidelines. We want to impress upon all of the areas involved the urgency of acting to mitigate climate change, so we are certain that efforts will intensify in the years ahead.

As in every pilot study, we encountered certain limitations that we thought would be useful to mention toward improving our next report, and to share with other companies and institutions that plan to align their reporting with TCFD standards.

- Availability of human and technological resources: We need to increase internal capacities and bolster specialized work teams with the tools needed to implement a climate risk management framework.
- Availability of climate information in Mexico: In this country, historical information on physical and transition risks, and on methodologies or application of detailed climate models remains very limited, although there are a number of companies who have joined the TCFD project. We need more references, particularly scientific papers, on sources, criteria, processes and results, so we can compare experiences between industries.

The exercise enabled us to confirm that even though the impact of physical and transition risk is moderate on our direct operations, it is rather more significant for our clients in industries where we are heavily invested. Therefore, our business profitability could experience substantial financial repercussions, mainly in the medium and long term, if climate-related risks materialize.

The next steps will be managing climate risks and opportunities quantitatively, using climate scenarios and climate stress testing, and gradually broadening the scope of this exercise to more SEC. It will also be highly important to continue with the internal work group on climate change and bring in new areas to fine-tune the results, adjust the necessary processes and set climate targets.



# List of acronyms

<b>S1</b>	Scope 1 emissions
<b>S2</b>	Scope 2 emissions
<b>S3</b>	Scope 3 emissions
<b>ASG</b>	Environmental, social and governance
<b>DOF</b>	Official Gazette of the Federation
<b>CDP</b>	Carbon Disclosure Project
<b>CNBV</b>	National Banking and Securities Commission
<b>RPC</b>	Risk Policies Committee
<b>CO<sub>2</sub></b>	Carbon dioxide
<b>EMA</b>	Mexican Accreditation Agency
<b>CARS</b>	Corporate Accounting and Reporting Standard
<b>EP</b>	Equator Principles
<b>FSB</b>	Financial Stability Board
<b>GHG</b>	Greenhouse gases
<b>GCAM</b>	Global Change Analysis Model
<b>GFNorte</b>	Grupo Financiero Banorte
<b>IAM</b>	Integrated Assessment Models
<b>IFC</b>	International Finance Corporation
<b>INEGI</b>	National Institute of Statistics and Geography
<b>WPM</b>	Wholesale Power Market
<b>NDC</b>	Nationally Determined Contributions
<b>NGFS</b>	Network for Greening the Financial System
<b>NIGEM</b>	National Institute Global Econometric Model
<b>PS</b>	Performance Standards
<b>NZBA</b>	Net-Zero Banking Alliance
<b>PRI</b>	Principles for Responsible Investment
<b>PBR</b>	Principles for Responsible Banking
<b>SBTi</b>	Science Based Targets initiative
<b>ETS</b>	Emission Trading System
<b>SEC</b>	Industries with exposure to climate-related risks
<b>SEMARNAT</b>	Ministry of the Environment and Natural Resources
<b>TNFD</b>	Task Force on Nature-related Financial Disclosures

# Glossary

## **Stranded assets**

In the context of climate change, these are assets that at some point before the end of their useful life are no longer economically profitable due to changes in the regulatory climate and in the market due to decarbonization of the economy.

## **Adaptation**

Adaptation refers to changes in ecological, social or economic systems in response to real or expected climate effects or impacts. It refers to changes in processes, practices and structures to moderate the potential damages or benefit from the opportunities associated with climate change.

## **Climate change**

Article 1 of the United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.” The UNFCCC differentiates between climate change attributable to human activities that alter the composition of the atmosphere from climate variability attributed to natural causes.

## **Sustainable portfolio**

Financing for the development of activities or projects that have a positive impact on the environment and society, according to Banorte's Sustainable Taxonomy.

## **Fossil fuel**

A general term to refer to underground geological deposits of combustible organic material that are formed from the decomposition of plants and animals that after hundreds of millions of years of heat and compression in the earth's crust becomes crude oil, coal, natural gas or heavy oil.

## **Scope 1 GHG emissions**

Direct emissions from the combustion of fuel from fixed or mobile sources, fugitive emissions, farming, deforestation, waste generation and changes in land use.

## **Scope 2 GHG emissions**

Indirect emissions resulting from the purchase of electrical, steam or cooling energy.

<b>Scope 3 GHG emissions</b>	<p>Other indirect emissions not under the company's control: products and services purchased, business travel, employee commuting, waste disposal, use of products sold, transportation and distribution (upstream and downstream), investments, leased assets and franchises.</p> <p>For financial institutions, scope 3 emissions from investment are the most significant category.</p>
<b>Greenhouse gases</b>	<p>Gaseous constituents of the atmosphere, both natural and manmade, that absorb and re-emit infrared radiation, for example, carbon dioxide (CO<sub>2</sub>).</p>
<b>Mitigation</b>	<p>Efforts to reduce or prevent greenhouse gas emissions. May include the use of new technologies and renewable energies, improvements in the energy efficiency of old equipment or change in management practices or consumer habits.</p>
<b>IFC Performance Standards</b>	<p>Environmental and Social Sustainability guidelines created by the International Finance Corporation to guide IFC clients in identifying, preventing and mitigating social and environmental risks and impacts. An integral part of the risk management approach, the eight standards together define the aspects the clients must respect during the investment cycle.</p>
<b>Equator Principles</b>	<p>A voluntary framework for identification, assessment and management of social and environmental risks in credit operations. These are the most important standards in this field for the financial industry and are intended to ensure financing is only given to clients who can prove that their projects are managed with social and environmental responsibility.</p>
<b>Physical risk</b>	<p>Risks resulting from climate change such as natural disasters that are more frequent and intense in the short term (acute) or longer-term shifts (chronic) in climate patterns.</p> <ul style="list-style-type: none"> <li>• <b>Acute Risk:</b> Refers to those that are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, or floods.</li> <li>• <b>Chronic Risk:</b> Refers to longer-term shifts in climate patterns (e.g., sustained higher temperatures) that may cause sea level rise or chronic heat waves.</li> </ul>

## Transition risk

Risks stemming from the transition to a low-emission economy, including extensive policy, legal, technology, and market changes to address mitigation and adaptation requirements related to climate change. Depending on the nature, speed, and focus of these changes, transition risks may pose varying levels of financial and reputational risk to organizations.

- **Legal risk:** Potential losses from noncompliance with the applicable legal and administrative provisions, from administrative or court rulings against the organization, and sanctions, regarding the operations Banorte engages in.
- **Market risk:** Potential losses from changes in risk factors that affect the valuation or expected results of borrowing, lending or contingent transactions.
- **Regulation risk:** Potential loss due to inspections, examination, investigation and regulatory audits that may result in sanctions or the imposition of corrective measures.
- **Emerging regulation risk:** Potential losses due to frequent reviews and changes in government regulation.
- **Reputational risk:** Potential losses from the operations of each of the group's entities caused by diminished perceptions among internal and external stakeholders regarding its solvency and viability.
- **Technological risk:** Potential losses due to the inability to promptly improve or effectively upgrade our information technology infrastructure and our data management systems.

## Real Estate IERC

Includes the following industries: (i) Building management, (ii) Shopping center leasing, (iii) Leasing of non-residential land, locales and buildings, (iv) Leasing of residential properties, (v) Purchase and sale of homes and other properties, (vi) Purchase and sale of land and construction of tourist condominiums, (vii) Construction of office buildings, schools, hospitals, hotels and other non-residential properties, (viii) Construction of sustainable buildings for offices, schools, hospitals, hotels and other non-residential facilities, (ix) Construction of affordable entry-level homes and reserve homes, (x) Construction of buildings for industrial and similar uses, (xi) Construction of buildings for housing, (xii) Construction of upper-income housing, (xiii) Construction of middle-income housing and housing development, and (xiv) Real estate brokerage.

**Oil & Gas IERC**

Includes the following activities: (i) Purchase and sale of gas for domestic or commercial use, (ii) Purchase and sale of gasoline and diesel, (iii) Purchase and sale of lubricants, (iv) Purchase and sale of fuel oil, construction of refinery and petrochemical plants, (v) Manufacture of asphaltic materials for paving and roofing, (vi) Manufacture of basic petrochemical products, (viii) Federal Government Clients, (viii) Drilling of oil and gas wells and installation services, and (ix) Maintenance of machinery and equipment by specialized companies.

**Tourism IERC**

Includes the following activities: (i) City hotels, (ii) Beach hotels and services and exploitation of beaches and rest parks, (iii) Hunting and fishing hiking clubs, and (iv) Rental of boats, horses, carriages and others for recreational purposes and sports.

**Sensitive industry**

A sector of the economy that has the potential to cause significant adverse environmental and social impacts (displacement of communities, loss of species, damage to cultural heritage, human rights violations, and others) in areas whose natural, cultural, social and economic characteristics are highly valuable and highly vulnerable (mangroves, reefs, indigenous regions). Some examples of sensitive industries are mining, oil & gas, energy, tourism, and others.

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Héctor Manuel Armendáriz Cantú

### **Real Estate Technical Area**

Manuel Alejandro Soto Madinaveitia

### **Tourism Technical Area**

Ángel de Jesús Popoca Espinosa  
Eduardo Lemus Brambila  
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Marcela Rodríguez Leal

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Ana Paulina Pérez Romero  
Luis Héctor Hernández Magro Miranda  
Nallely Yuridia Vargas Torices

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Daniel Cortés Suárez  
Daniela Quintana Verduzco  
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Maria Estela Patiño Gorbea

## **Loan Review**

Gema Eloísa Hernández Morfín

## **Wholesale Credit Risk**

Leonardo Jorge Granados

## **Portfolio Risk**

Andrés García González  
Mauro Ángel Garza San Miguel

## **Insurance**

Cindy Susana Rocha Zamudio  
Román Iglesias Morineau

## **Wholesale Credit Risk**

Imelda Abigail Miranda  
Ricardo Iván Sandoval  
Rosa Isela Valdés Ruiz

## **Sustainability**

Abigail Arellano Sánchez  
Ana Regina Ramírez Hoyos  
Andrés González  
Britzia Silva Enciso  
Diana Jiménez Márquez  
Fernando Puente Flores  
Ivonne Beltrán Bahena  
Mariuz Calvet Roquero  
Salvador Rosales Reyes

## **Headquarters:**

### **Monterrey, N.L.**

Edificio Torre Koi  
Av. David Alfaro Siqueiros #106  
Col. Valle Oriente  
San Pedro Garza García, C.P. 66260  
+52 (81) 8319 6500

### **Mexico City**

Edificio Santa Fe  
Prolongación Paseo de la Reforma #1230  
Col. Cruz Manca Santa Fe, C.P. 05349  
+52 (55) 1103 4000

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# Contact

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**Managing Director of Corporate Development,  
Investor Relations and Sustainability**

Tomás Lozano Derbez  
Tel. +52 (55) 1103 4000 ext. 2256  
[investor@banorte.com](mailto:investor@banorte.com)

**Investor Relations, Sustainability  
and Responsible  
Investment**

José Luis Muñoz Domínguez  
Tel. +52 (55) 1670 2276  
[sustentabilidad@banorte.com](mailto:sustentabilidad@banorte.com)

**Sustainability and Responsible Investment**

Beatriz Sánchez Covarrubias  
Tel. +52 (55) 1670 1722  
[sustentabilidad@banorte.com](mailto:sustentabilidad@banorte.com)

