



# Climate Change

ISA Group's Climate Strategy  
Energy Transmission Business

May 2023

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## **Context**

- Global trends

## **Concepts**

- Climate change phenomenon
- Extreme weather events
- Global emissions and vulnerability to climate change
- Integrated climate change management plan
- Task Force on Climate-related Financial Disclosures (TCFD) recommendations

## **Adopting the TCFD recommendations**

- Governance
- Strategy
- Risk management
- Metrics and Targets

# Global trends

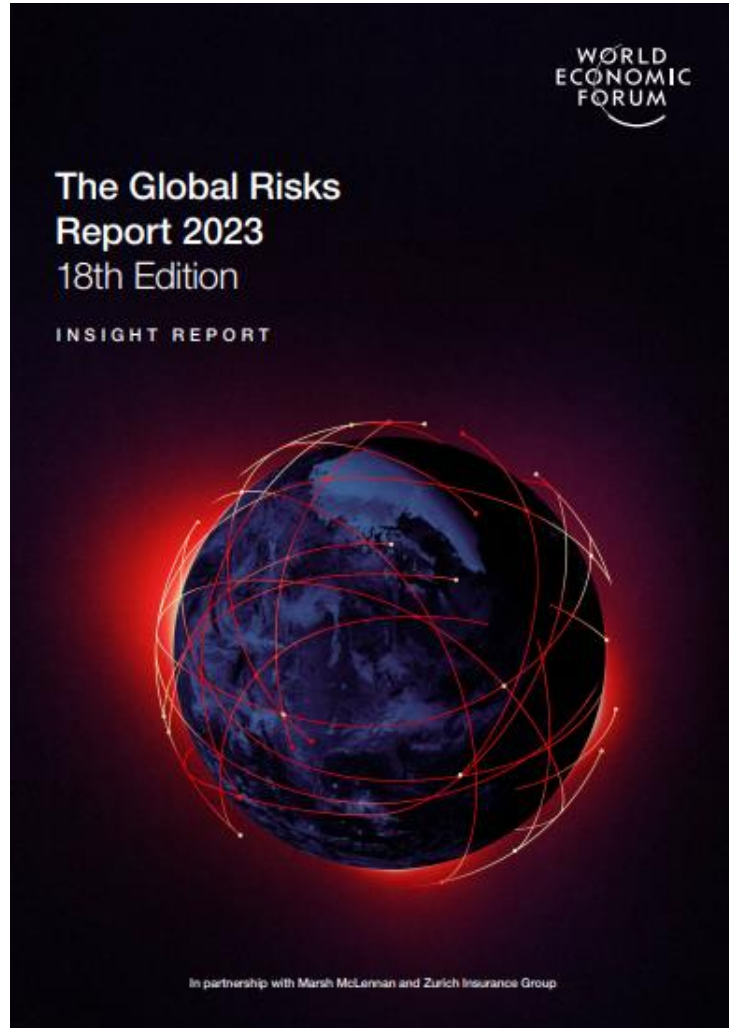


FIGURE A

## Global risks ranked by severity over the short and long term

*"Please estimate the likely impact (severity) of the following risks over a 2-year and 10-year period"*



Obtained from: [Global Risks Report 2023 | World Economic Forum \(weforum.org\)](https://www.weforum.org/publications/global-risks-report-2023/)



## CONCEPTS

- Climate change phenomenon
- Extreme weather events
- Global emissions and vulnerability to climate change
- Integrated climate change management plan
- Task Force on Climate-related Financial Disclosures (TCFD) recommendations



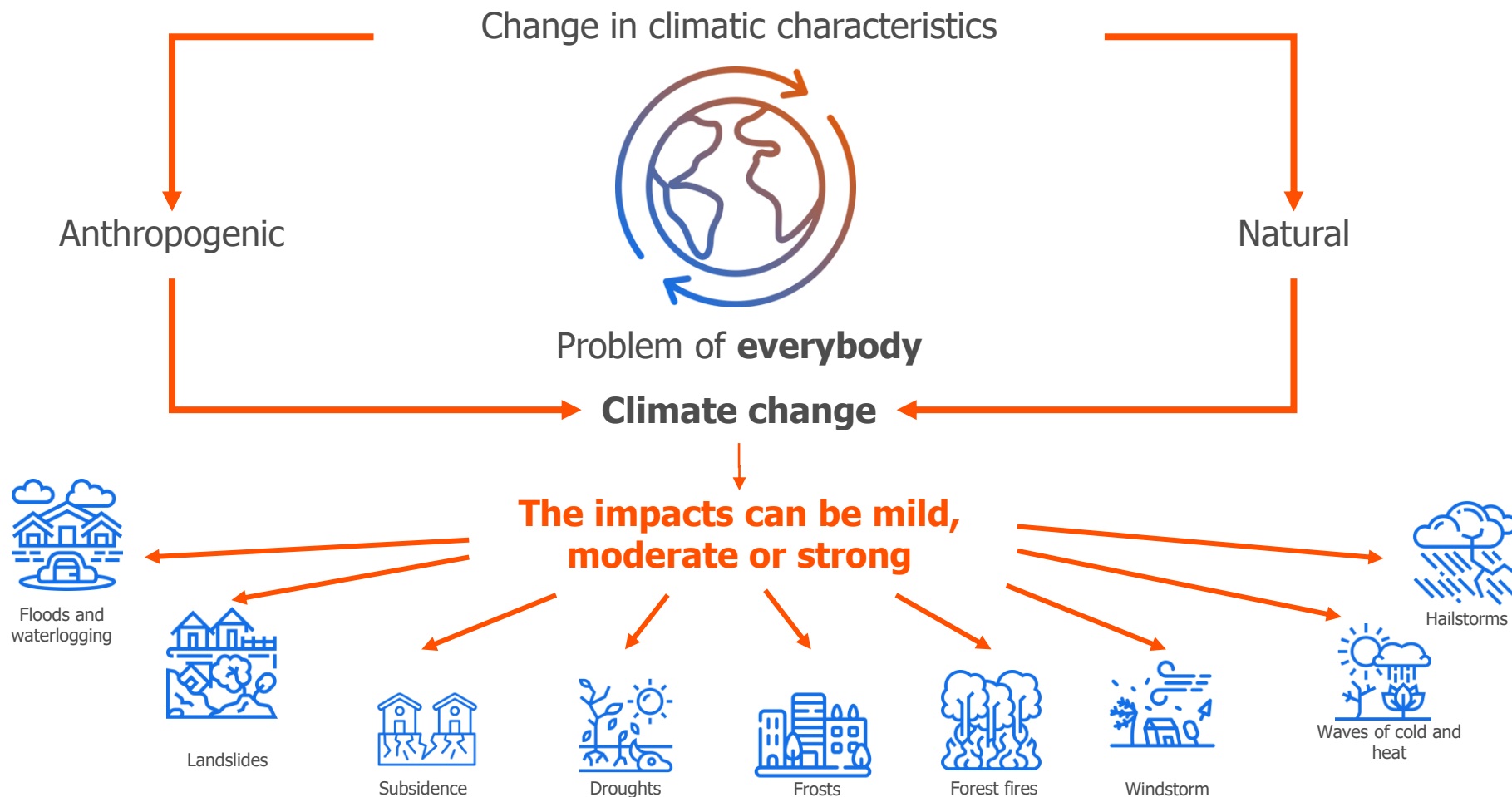


# Climate change phenomenon



## Weather

Set of atmospheric conditions typical of a place, consisting of the amount and frequency of rainfall, humidity, temperature, winds, etc.



# Extreme weather events

Effects of Climate Variability



Climate change will intensify extreme events

**"El Niño"**  
phenomenon

Drought



**"La Niña"**  
phenomenon

Floods



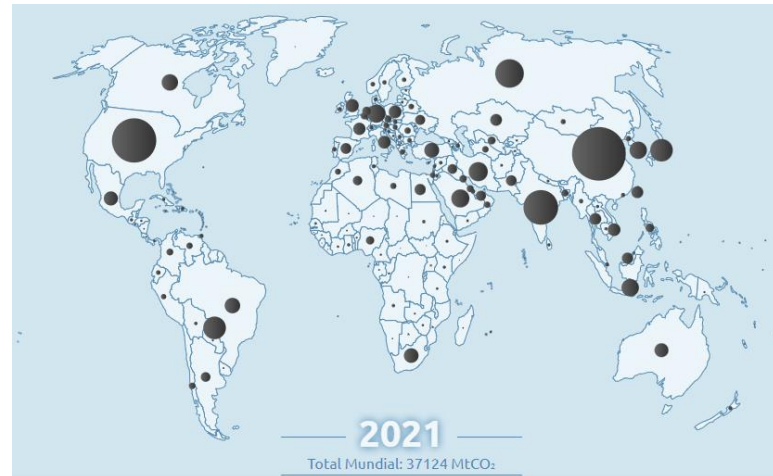
**Increase in frequency, intensity and duration**

# Global emissions and vulnerability to climate change



In countries where ISA is present, there is a **low contribution** to global emissions but **high vulnerability** to the effects of climate change

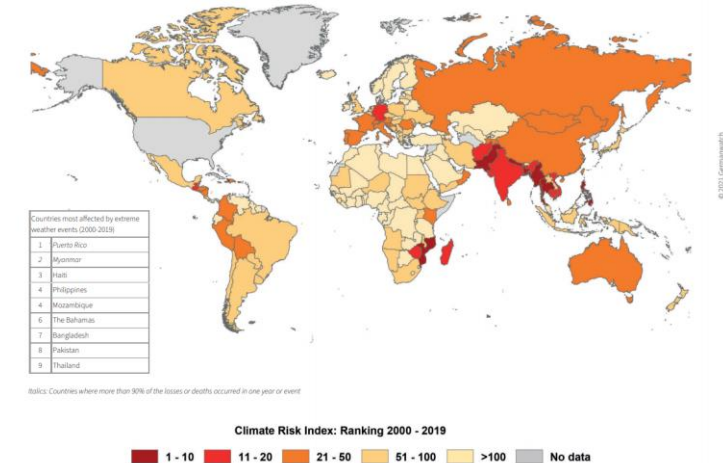
## Contribution to global emissions



Country	Rank
Brazil	#12
Colombia	#43
Chile	#44
Peru	#55
Bolivia	#82

Source: Global Carbon Atlas, 2021,  
<https://globalcarbonatlas.org/emissions/carbon-emissions/>

## Vulnerability to climate change



Country	Rank
Brazil	#27
Colombia	#28
Peru	#46
Chile	#25
Bolivia	#10

Source: Global Climate Risk Index, 2021  
file:///C:/Users/ISA4259/Downloads/Global%20Climate%20Risk%20Index%202021\_1.pdf

# Task Force on Climate-related Financial Disclosures (TCFD) recommendations



## Governance

- a) The organization's governance around climate-related risks and opportunities.
- b) Management's role in assessing and managing climate-related risks and opportunities.

## Strategy

- a) Climate-related risks and opportunities the organization has identified over the short, medium, and long term.
- b) Impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.
- c) Resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

## Risk management

- a) Organization's processes for identifying and assessing climate-related risks.
- b) Organization's processes for managing climate-related risks.
- c) Describe how the processes for **identifying, assessing**, and managing climate-related risks are integrated into the overall risk management of the organization

## Metrics & Targets

- a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.
- b) Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks.
- c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.



# Adopting the TCFD recommendations, Index



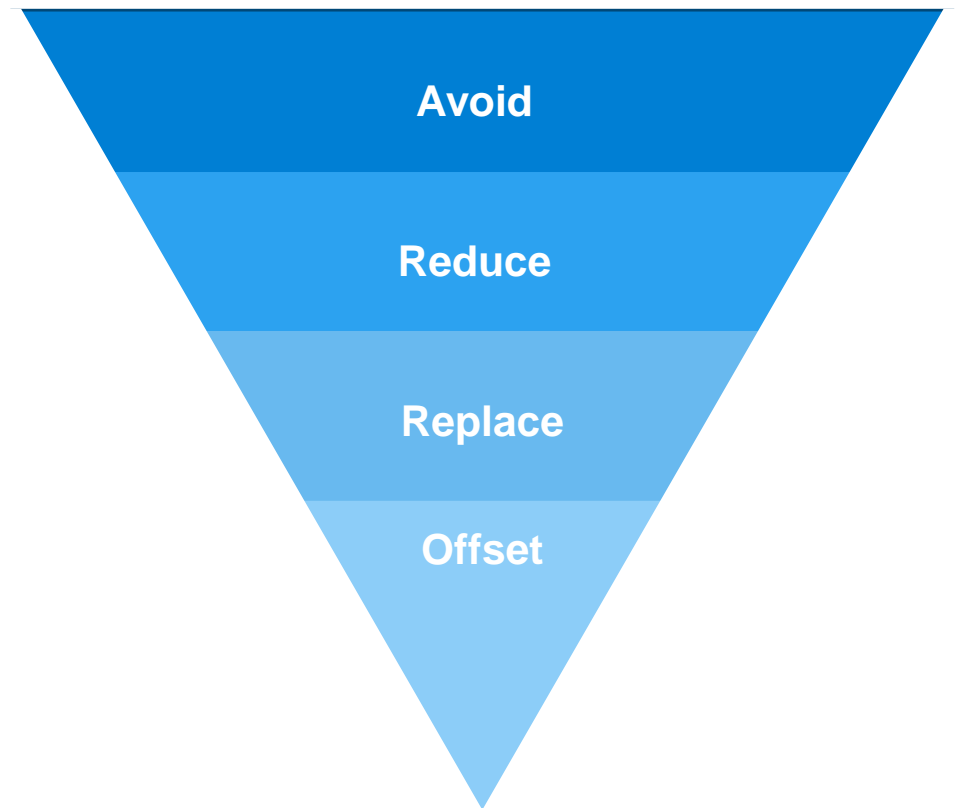
In 2020 we began the alignment exercise of our climate strategy to the TCFD recommendations for disclosure of the risks and opportunities related to climate change.

Element	Contents	Location reference
Governance	a) The organization's governance around climate-related risks and opportunities. b) Management's role in assessing and managing climate-related risks and opportunities.	Pages 11-13
Strategy	<ul style="list-style-type: none"><li>• Climate-related risks and opportunities</li><li>• Impact of climate-related risks and opportunities</li><li>• Scenario Analysis</li></ul>	Pages 14-38
Risk Management	Processes to identify, assess and manage climate-related risks and opportunities	Pages 39-45
Metrics and targets	a). Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process. b). Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks. c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	Pages 46-60 b) Environmental performance indicators: <a href="https://www.isa.co/en/environmental-performance-indicators/">https://www.isa.co/en/environmental-performance-indicators/</a>

# References



# Mitigation Hierarchy



Source: Adapt The Impact Mitigation Hierarchy (DEA et al., 2013)



## ADOPTING THE TCFD RECOMMENDATIONS

- **Governance**
- Strategy
- Risk Management
- Metrics and targets

# Climate Change Risks Governance



- a) The organization's governance around climate-related risks and opportunities.
- b) Management's role in assessing and managing climate-related risks and opportunities.

## Board of Directors

- Within the framework determined by the group's parent company, establish, direct and review strategy and policies.
- Define the relationship model of ISA and its companies within the group's governance model.
- Follow-up of the main risks.

Corporate bylaws, article 34, paragraph 38

## Corporate Governance, Sustainability, Technology and Innovation Committee

- Guides and oversees sustainability management, which includes environmental protection and the effects of climate change.
- Assists the Board of Directors in its role of guidance and oversight and includes comprehensive climate change management.

Board of Directors Agreement 129, article 3, paragraphs 21 - 33 sustainability functions

## Audit and Risk Committee

- Approve the model and policy for comprehensive risk management.
- Monitor and follow-up on risks that may affect corporate validity and their management measures

Board of Directors Agreement 128, article 3, risk functions

## Senior Management\*

- Executive Committee: Manages sustainability and risks under the parameters defined by the Board and its Committees. Chief Institutional Relations Office, Chief Strategy Office, Chief Energy Transmission Office and Chief Road Concessions Office.

Corporate bylaws, articles 38 and 42

Follow-up and escalation scheme

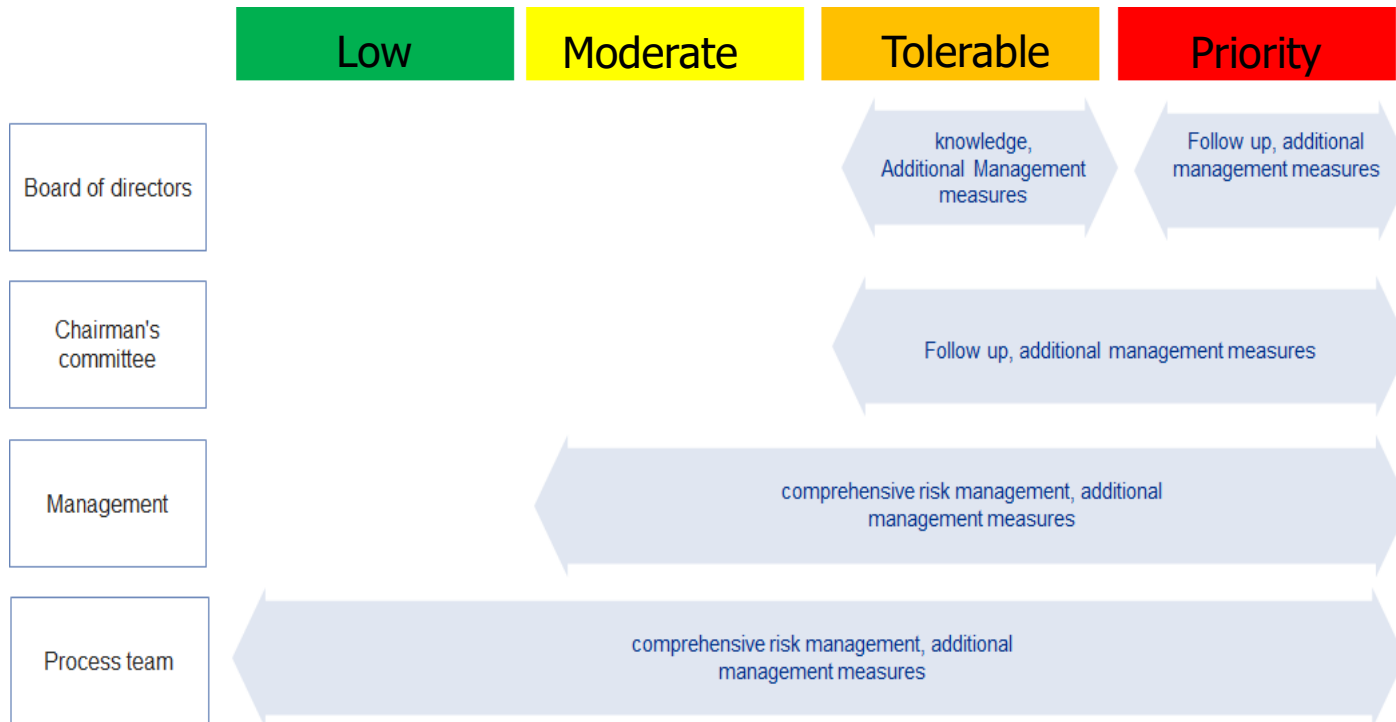


Climate-related risks

\* Climate change working group: lead by corporate risk, sustainability and operations management. Develops actions, guidelines, and projects to be implemented by companies. In turn, each company forms its work team according to the project to be developed.



# Governance taking into account the Risks



•The Board of Directors regularly monitors relevant risks across the organization through the Audit and Risk Committee

Also, every year, it reviews and approves criteria for prioritizing risks, establishing the Group's appetite and tolerance for business and operations.

Each affiliate of the group applies the risk cycle and then generates a map that includes identification, assessment, and administration measures. This information is updated and consolidated on a quarterly basis.

The escalation of risks is related to their prioritization criteria. The risks associated with climate change are integrated into ISA's risk management system.



## ADOPTING THE TCFD RECOMMENDATIONS

- Governance
- **Strategy**
- Risk Management
- Metrics and targets

# Strategy



- a) Climate-related risks and opportunities
- b) Impacts on business, strategy and financial planning

Risk	Types of Risks	Time horizon	Main impact
Physical Risks	<b>Extreme Natural Phenomena:</b> <ul style="list-style-type: none"> <li>• Change in rainfall patterns</li> <li>• Floods</li> <li>• High temperatures and potential fires</li> <li>• Desertification and Drought</li> <li>• Change in vegetation cover</li> <li>• Winds, Storms - Hurricanes</li> <li>• Mass removal</li> <li>• Atmospheric electrical discharges</li> </ul>	Short term/medium term	<ul style="list-style-type: none"> <li>• Infrastructure failure and impact on the energy service</li> <li>• Increased maintenance costs</li> <li>• Increased complexity of the operation of the electrical system due to water stress.</li> <li>• Rationing of energy.</li> <li>• Higher economic offset for service failures</li> </ul>
Transition Risks	<b>Regulatory changes</b> <ul style="list-style-type: none"> <li>• Increased licensing and licensing requirements</li> <li>• Obligation to conduct inventories of Greenhouse Gases.</li> <li>• Denominations to the activities of impact in emissions and felling of trees.</li> <li>• Incentives and Benefits for Clean Low Carbon Businesses</li> </ul>	Medium term/long term	<ul style="list-style-type: none"> <li>• Increased costs and project timelines for new infrastructure projects</li> <li>• Increased maintenance costs</li> </ul>
Transition Risks	<b>Market:</b> <ul style="list-style-type: none"> <li>• Changes in user preferences</li> <li>• Uncertainty over the speed of incorporating the green trend into business and correlation with social demands</li> </ul>	Long term	<ul style="list-style-type: none"> <li>• Decreased need for energy transmission services and decreased road traffic</li> </ul>
Transition Risks	<b>Technology</b> <ul style="list-style-type: none"> <li>• Unsuccessful investment in new technologies.</li> </ul>	Medium term/long term	<ul style="list-style-type: none"> <li>• Direct cost increase</li> </ul>

# Strategy

- a) Climate-related risks and opportunities
- b) Impacts on business, strategy and financial planning



Risk	Types of Risks	Time horizon	Main impact
Transition Risks	<b>Reputation</b> Negative impact on stakeholder confidence, on the attitude of key audiences or press coverage, social networks and channels related to the support of projects or activities with negative impacts on the climate	Short term/medium term	<ul style="list-style-type: none"> <li>• Higher direct costs</li> <li>• Growth impact</li> </ul>
Opportunities	Types of opportunity	Time horizon	Main impact
Resilience	<ul style="list-style-type: none"> <li>• Initiatives of new technologies, products and services</li> <li>• Working table of Ministries for adaptation measures</li> </ul>	Short term/medium term	<ul style="list-style-type: none"> <li>• Increase of the income</li> <li>• Returns on investment in low-carbon technologies</li> <li>• Lower maintenance costs</li> </ul>
Energy resources	<ul style="list-style-type: none"> <li>• Use of less carbon-intensive energy sources*</li> <li>• Use of regulatory incentives</li> <li>• Use of new technologies</li> <li>• Carbon markets*</li> </ul>	Short term/medium term	<ul style="list-style-type: none"> <li>• Decrease direct costs</li> <li>• Returns on investment in low-carbon technologies</li> </ul>
Resource efficiency	<ul style="list-style-type: none"> <li>• Move to more efficient buildings</li> <li>• Use recycling</li> <li>• Eco-efficiency actions to reduce our own impacts: water, waste, energy, SF6, sustainable mobility and teleworking.</li> </ul>	Short term/medium term	<ul style="list-style-type: none"> <li>• Decrease direct costs</li> </ul>
Products and services	<ul style="list-style-type: none"> <li>• Development of new products or services through R + D + I.</li> <li>• Ability to diversify business activities</li> <li>• New energy businesses</li> </ul>	Medium term/long term	<ul style="list-style-type: none"> <li>• Increase of the income</li> </ul>
Market	<ul style="list-style-type: none"> <li>• Use of public sectoral incentives</li> <li>• Green bonds</li> </ul>	Medium term/long term	<ul style="list-style-type: none"> <li>• Increase of the income</li> </ul>

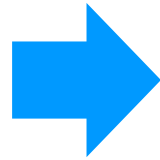


# Strategy



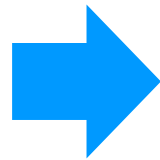
c) Resilience of the organization strategy

Environmental protection and efforts to combat climate change were incorporated into the ISA 2030 strategy from its inception



- The strategic horizon to 2030 is in harmony with the great challenges of humanity, to ensure a timely contribution.
- Compliance with the sustainable development goals is validated.
- The balance is made on the accomplishment of the objectives of COP 21.

**The higher purpose was the starting point of the strategy.  
4 out of 11 maxims are associated with the vulnerability of the environment, co-responsibility in conservation**



- We recognize that our planet is fragile, and we must take care of it
- We understand that our actions, no matter how small, have an impact
- We are sure that our well-being is linked to everyone's
- We are committed to having constructive and responsible participation in decision-making

# Strategy



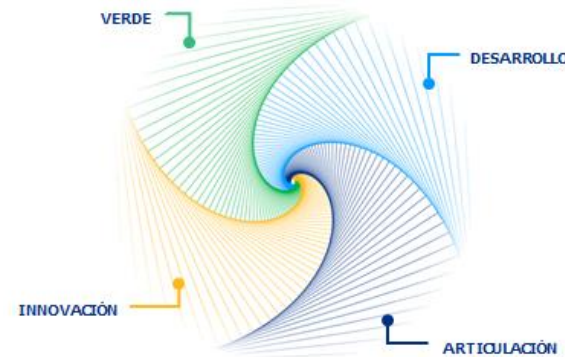
## c) Resilience of the organization strategy

The triad of Growth with sustainable value, in which we are based to define the corporate strategy ISA 2030, is also the base to structure the Climate strategy in order to manage the Climate change as a factor of sustainability for business, society and planet.



### GROWTH WITH SUSTAINABLE VALUE

Add value with potential solutions for social and environmental challenges, among them climate change as a priority



### LIFE

- Minimize environmental impacts in operations
- Promote initiatives that generate positive environmental impact
- Develop businesses with a high contribution to decarbonization



### BALANCED PORTFOLIO

The investment decisions will reflect the balance between businesses and geographies; profitability and risk criteria; adjacency and vision; diversification and concentration

## The environmental dimension of ISA 2030 is reflected in specific high-level strategic objectives

**V**erde  
(Green)

**I**nnovación  
(Innovation)

**D**esarrollo  
(Development)

**A**rticulación  
(Articulation)

Shareholder  
value



Invest USD 8.3 billion in **current businesses and geographies**

Achieve USD 100 million **TOTEX** efficiencies for core processes and support

Invest USD 2.2 billion in **new geographies**

Achieve a minimum increase of 70% in **EBITDA**

Incorporate **strategic** partners for growth

Social and  
environmental  
impact



Reduce 11 million tons of **CO2e to the planet**

Invest USD 150 million in **entrepreneurship**

Generate benefits with **high impact social programs**

Ensure **operational excellence** by meeting 100% of service standards

Build **alliances** to develop social and environmental programs

Corporate  
validity



Invest USD 2 billion in **new energy businesses**

Achieve **superior performance** by 90% of employees and cover 70% of **critical positions** with internal personnel

Step up the **digitization** of core and support processes and incorporate it into new value proposals

Build **alliances** to improve competitiveness and build capacity

## c) Resilience of the organization strategy

### **Comprehensive risk management policy of the ISA Group, to manage risks that may deviate the achievement of the strategic objectives**

See: <https://isasapaginaswebisa001.blob.core.windows.net/paginawebisawordpress/2021/04/INTEGRATED-RISK-MANAGEMENT-POLICY.pdf>

#### OBJECTIVE

To declare the corporate decisions leading Integrated Risk Management, through which it seeks to generate and protect the value of ISA and its companies, the integrity of enterprise resources, the continuity and sustainability of business.

#### STATEMENTS

- ISA companies understand risks as uncertain events that may divert them from achieving their strategic objectives or affect business resources.
- ISA companies manage their risks at all levels, in a permanent, standardized and systematic way, through the implementation of the group's integrated risk management model, described in the Risk Management Manual of ISA and its companies, which is aligned to best practices and methodologies. The model is periodically evaluated and feedbacked with internal and external experiences.
- The management of the risks to which ISA and its companies are exposed to, is coordinated with the different areas of the companies, promoting a risks holistic view.
- Decision-making at different levels of the organization is supported by the results of risk management; which is considered transversal and a priority for companies.
- The employee's individual commitment is promoted with an active identification, assessment, treatment, monitoring and communication of risks in their activity's development.
- Business continuity management and crisis management are promoted for critical processes and scenarios for corporate continuity and sustainability.



# Strategy



## c) Resilience of the organization strategy

**Climate Change Scenarios:** In ISA, possible physical risks derived from climate change and climate variability are evaluated by scenarios.

Threats	Climate variability	Climate Change Scenario
<ol style="list-style-type: none"><li>1. Water shortage</li><li>2. Floods</li><li>3. Mass removal</li><li>4. Forest fires</li><li>5. Temperature Increase (Heat Waves)</li><li>6. Sea level rise and related events</li><li>7. Storms - Hurricanes</li></ol>	<ol style="list-style-type: none"><li>1. "La Niña" phenomenon</li><li>2. "El Niño" phenomenon</li></ol>	<p>In Colombia, within the framework of PIGCC (Climate Change Management Plan in the Energy Sector) led by the Ministry of Mines and Energy with the Energy Sector and the support of Universidad Nacional and INERCO the RCP 6.0 was considered: is one of four GHG concentration scenarios adopted by the IPCC for AR5 in 2014. These scenarios are characterized by possible range of radiative forcing values in the year 2100. RCP 6.0 is a stabilization scenario in which emissions peak around 2080 and then decline. These scenarios consider the effects of policies to limit climate change and is consistent with certain socio-economic assumptions</p> <p>For 2022 ISA INTERCOLOMBIA conducted a descriptive and predictive analysis of the significant scenarios of risk and opportunity in the face of climate change in its operations, framed in the science and climate management of the Sixth Report (AR6<sup>1</sup>) of the IPCC<sup>2</sup>.</p>

**Risk = Threat x Vulnerability**

**Vulnerability = Sensitivity / Adaptive Capacity**

1. AR6: Sixth Assessment Report IPCC.

2. IPCC: Intergovernmental Panel of Climate Change.

# Strategy



## c) Resilience of the organization strategy: Phisycal Scenario Analysis

Results of the PIGCC (Climate Change Management Plan in the Energy Sector) led by the Ministry of Mines and Energy with the Energy Sector and the support of Universidad Nacional and INERCO for Colombia

Event	Components and Subcomponents					
	Generation					Transmission
	Big Hidroelectrics	Small Hidroelectrics	Thermal Plants	Wind Plants	Unconventional Energy Sources - Solar Photovoltaic	
Floods	Very Low	Very Low	Very Low			Very Low
Mass removal	High	High		Low		Moderate

The estimated sectoral vulnerability of the sensitivity and adaptive capacity from indexes for both components

## Scenario of prospective risks of the El Niño phenomenon

Event	Components and Subcomponents					
	Generation					Transmission
	Big Hidroelectrics	Small Hidroelectrics	Thermal Plants	Wind Plants	Unconventional Energy Sources - Solar Photovoltaic	
Water shortage	High	High	High			High
Temperature Increase	High	High	Very High	High		High

## Vulnerability of the system for the electric power sector

Aspect	Generation	Transmission
Sensitivity	Low	Low
Adaptive Capacity	High	High
System Vulnerability	Low	Low

## c) Resilience of the organization strategy: Phisycal Scenario Analysis

### Scenario results of prospective risks per event and component of the system for the electric power sector, caused by climate change

Results of the PIGCC (Climate Change Management Plan in the Energy Sector) led by the Ministry of Mines and Energy with the Energy Sector and the support of Universidad Nacional and INERCO for Colombia

Event	Components and Subcomponents					Transmission
	Generation					
	Big Hydroelectrics	Small Hydroelectrics	Thermal Plants	Wind Plants	Unconventional Energy Sources - Solar Photovoltaic	
Water shortage	Moderate	Moderate	High		High	
Floods	Very Low	Very Low	Very Low		Very Low	Very Low
Mass removal	High	High		Moderate	Moderate	High
Forest fires						High
Temperature Increase (Heat Waves)	Moderate	Moderate	Moderate	High	Moderate	Moderate
Sea level rise and related events			Very Low	Moderate	Moderate	
Storms - Hurricanes			Very Low	Moderate	Moderate	

# Strategy

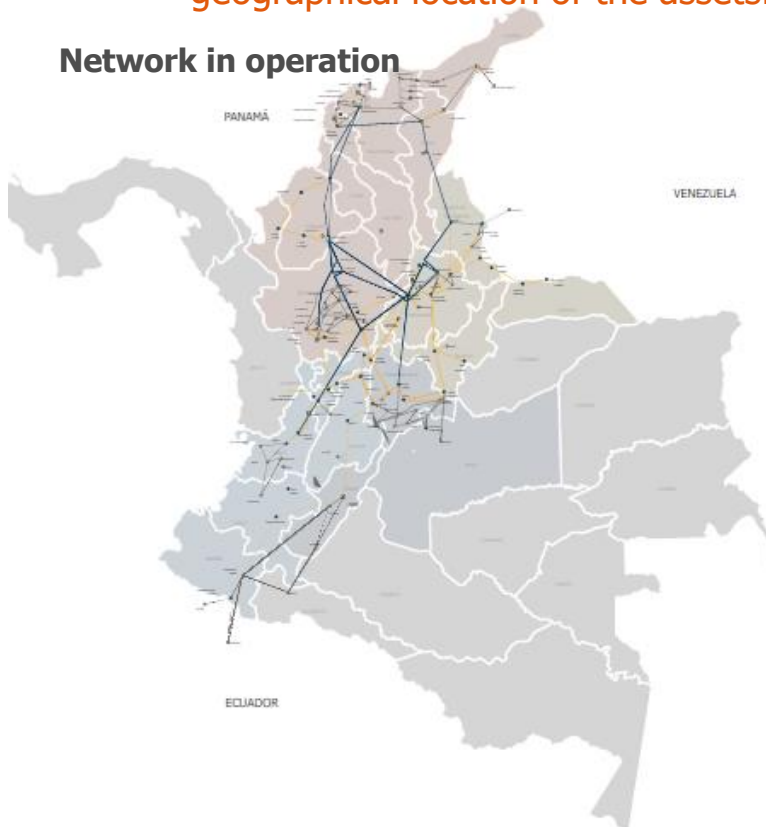


## C) Resilience of the organization strategy: Physical Scenario Analysis

### Management of physical risks and their evolution in view of climate-related issues

In Colombia, considering the PIGCC, a specific exercise was conducted using the geographical location of the assets.

#### Network in operation



A threat and vulnerability analysis was performed using a parametric methodology with a spatial approach based on geographic information systems, which consists of the sequential weighting and qualification of the various factors generating threats and vulnerabilities.

Analysis of threats and vulnerabilities on assets in operation and maintenance stages

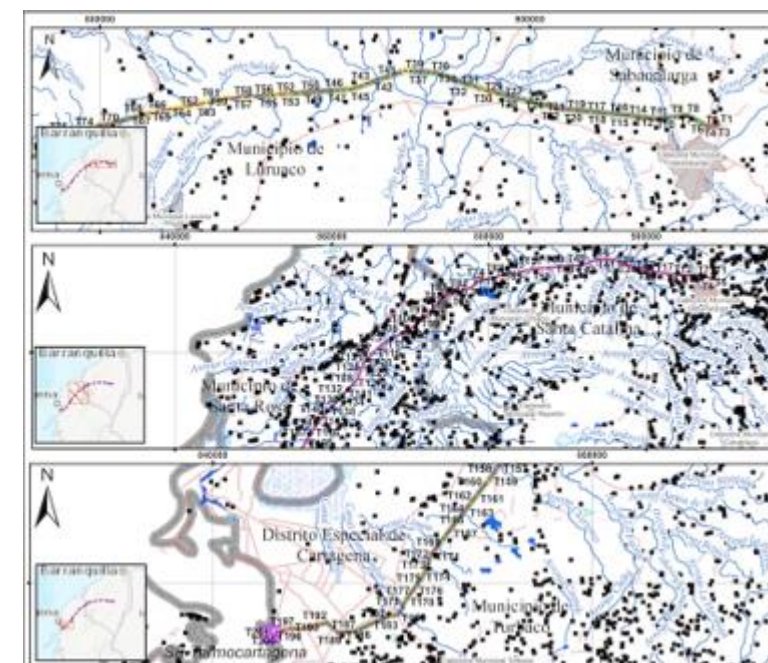


Figura	CONVENCIONES:			
AMENAZA POR MOVIMIENTOS EN MASA LÍNEA DE TRANSMISIÓN SABANALARGA - TERMOCARTAGENA	SE	Subestación eléctrica	Zonas urbanas	NO
	Área de estudio	Vía pavimentada	SI	Ciénaga
	Límite departamental	Vía sin pavimentar	Laguna	Pantano
	Límite municipal	Vía sin afirmado		
	Límite veredal	Viviendas		



# Strategy



## C) Resilience of the organization strategy: Phisycal Scenario Analysis

### Management of physical risks and their evolution, considering climate-related issues

Profile of risk in ISA and its companies, category Natural phenomena and extreme climate changes

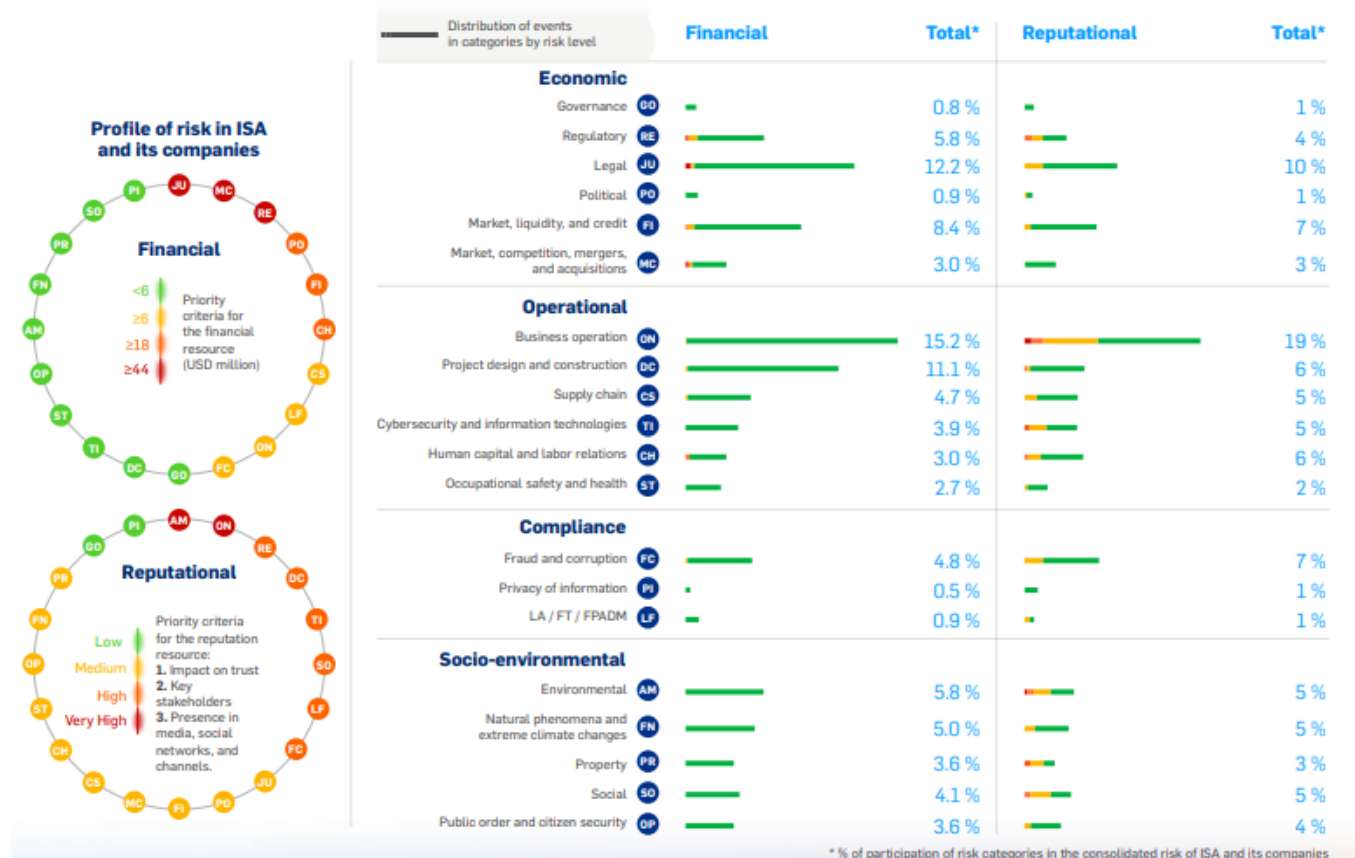
Considering the analysis of threats and vulnerabilities, the physical risks were evaluated within a short- and medium-term time horizon

#### Physical Risks

##### FC -Natural phenomena and extreme climatological changes

F	R	Damage to own infrastructure and interruption of public service due to torrential floods
F	R	Damage to own infrastructure and interruption of public service due to flooding
F		Damage to own and/or third party infrastructure and interruption of public service due to erosion and scour
F	R	Damage to own and/or third party infrastructure and interruption of public service due to mass wasting
F	R	Damage to own and/or third party infrastructure and interruption of public service due to high winds
F	R	Damage to own and/or third-party infrastructure and interruption of public service due to forest fire (TL/SE)
F	R	Damage to own and/or third-party infrastructures and interruption of public service due to electrical discharges (TL/SE)

These results are being qualitatively cross-checked with climate change scenarios to identify key points for improvement of adaptation plans



# Strategy

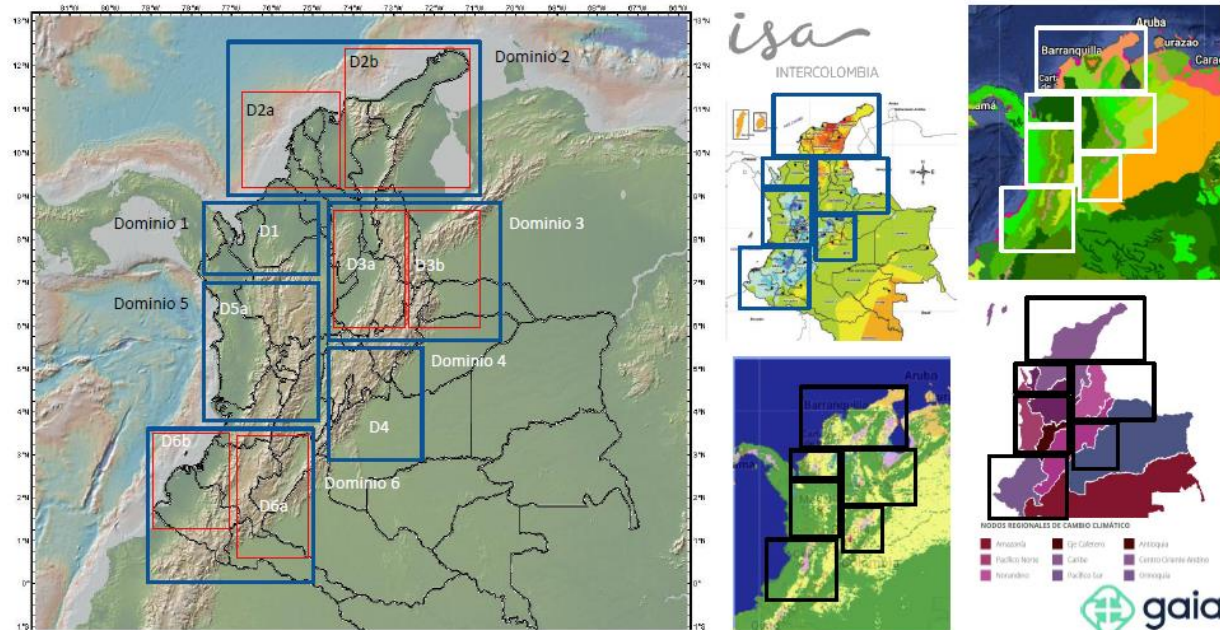


## C) Resilience of the organization strategy: Physical Scenario Analysis

For 2022 ISA INTERCOLOMBIA conducted a descriptive and predictive analysis of the significant scenarios of risk and opportunity in the face of climate change in its operations, framed in the science and climate management of the Sixth Report (AR6<sup>1</sup>) of the IPCC<sup>2</sup>.

Considering the location of the assets, the history of materialized events related to natural phenomena (Physical risks) and the Hazard and vulnerability análisis of the disaster risk management plans, 6 domains of interest were determined.

### Zoning according to registry and risk management with respect to climate disasters



Maps of climatic variables and suystems were prepared based on their trends, extreme events, and climate correlations with the selected domains.

To analyze the **CMIP5**<sup>3</sup> scenarios with IPCC RCP 2.6, 4.5 and 8.5 trajectories, the following hypotheses were defined:

- Mass movement events increase (coinciding with deforestation and precipitation).
- Fires respond to extreme drought events and temperatura increase (coinciding with environmental degradation).
- Increased lightning and thunderstorm events (coinciding with precipitation and cloudiness).

1. AR6: Sixth Assessment Report IPCC.  
2. IPCC: Intergovernmental Panel of Climate Change.  
3. CMIP5: Coupled Model Intercomparison Project 5

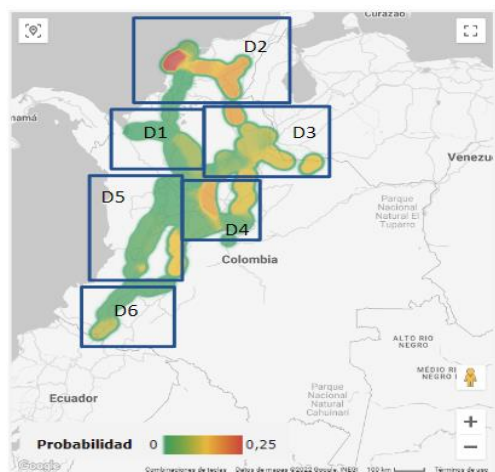
# Strategy



## C) Resilience of the organization strategy: Physical Scenario Analysis

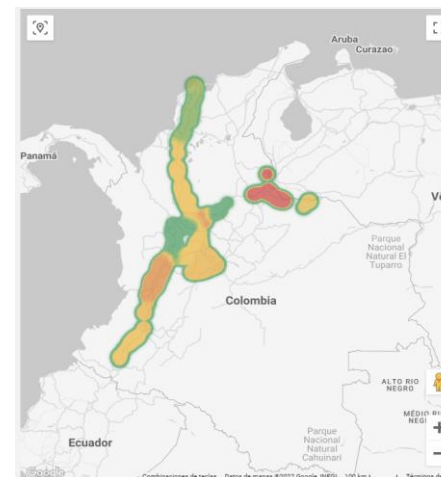
Physical variables of temperature and precipitation were projected, along with uncertainties associated with the distances of the assets to the weather stations.

### RCP8.5 Scenario ( $\Delta T_{2050}=2.2^{\circ}\text{C}$ $\Delta P_{2050}=4.8\%$ ) and IEA WEO Current Policies "Announced Pledge Scenario" – hypothesis 3 (D3b) – Risks

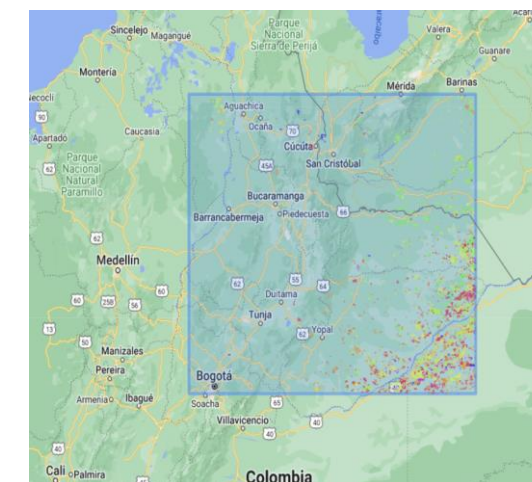


Zoning according to registry and risk management with respect to climate disasters

**Risk associated with fire conditions uninhabitability and extreme heat waves:** Drought and heat-related events such as wildfires, uninhabitability and heat waves have severe consequences on the value chain, operations, assets, and surrounding communities. The increase in temperature and relative humidity means a severe risk for the transmission of high voltage energy with consequences for the energy security of multiple socio-economic sectors of the country. Examples are loss of transmission efficiency and corrosion of materials



Zoning according to registration and risk management with respect to climatic disasters



<https://www.globalforestwatch.org/map/>

The level of risk for the assets was qualified and the analysis was summarized in recommendations for adaptation to the most significant risks.

**The results obtained made it possible to prioritize areas and assets with greater vulnerability to climate change and to adjust the adaptation plans associated with critical assets.**

ISA Will continue to deepen this exercise for more companies and assets.

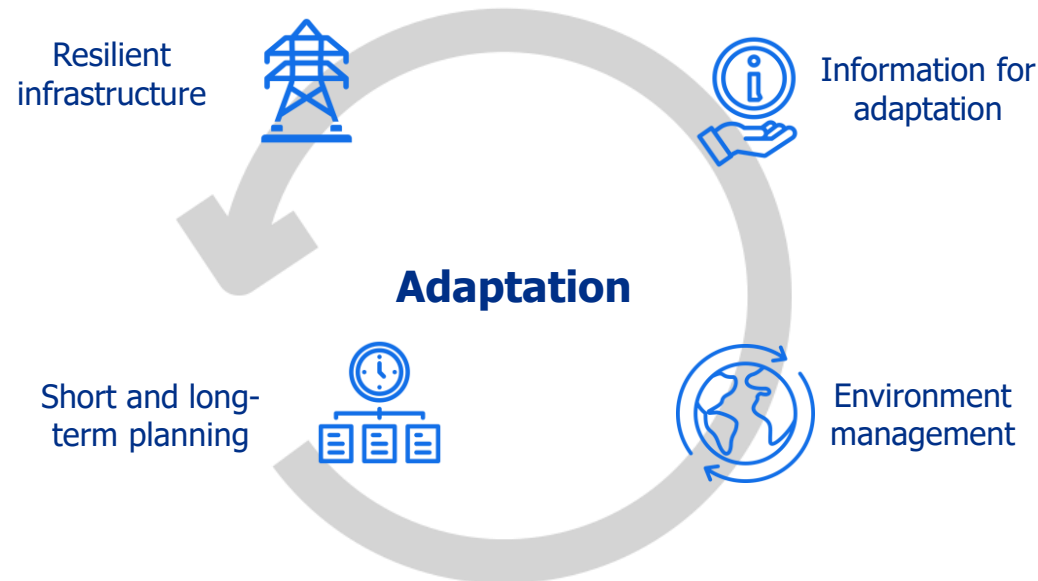
# Strategy



## C) Resilience of the organization strategy: Phisycal Scenario Analysis

### Adjustment of adaptation plans based on climate change scenario modeling.

Based on the results obtained, the adaptation plan is adjusted along the different strategic lines for assets in operation and new projects, for example, **civil works and structure reinforcement**



The assessment of climate-related risks and adjustments of adaptation plans are a source of information for financial planning processes:

**0.45%** of the company's operating revenues (period)



# Complementary approaches in comprehensive risk management

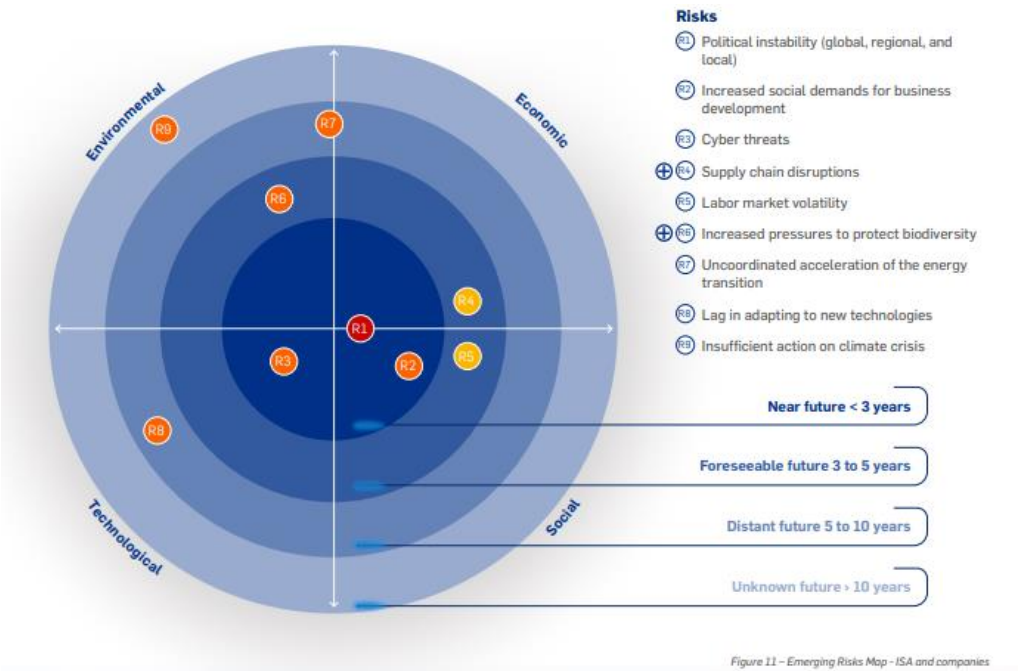


As part of the process of understanding emerging and business risks, we include climate-related issues.

[Integrated Management Report 2022 - ISA](#)

## Emerging risks

## Business risk map for ISA and its companies



Signals from the environment that may affect our business model, which must be acted upon in advance so that they can be transformed into opportunities - Medium- and long-term time horizon



Distribution of events in categories by risk level		Financial	Total*	Reputational	Total*
<b>Economic</b>					
Governance	GO	—	0.8 %	—	1 %
Regulatory	RE	—	5.8 %	—	4 %
Legal	LU	—	12.2 %	—	10 %
Political	PO	—	0.9 %	—	1 %
Market, liquidity, and credit	FI	—	8.4 %	—	7 %
Market, competition, mergers, and acquisitions	MC	—	3.0 %	—	3 %
<b>Operational</b>					
Business operation	ON	—	15.2 %	—	19 %
Project design and construction	DC	—	11.1 %	—	6 %
Supply chain	CS	—	4.7 %	—	5 %
Cybersecurity and information technologies	TI	—	3.9 %	—	5 %
Human capital and labor relations	CH	—	3.0 %	—	6 %
Occupational safety and health	ST	—	2.7 %	—	2 %
<b>Compliance</b>					
Fraud and corruption	FC	—	4.8 %	—	7 %
Privacy of information	PI	—	0.5 %	—	1 %
LA / FT / FPADM	LF	—	0.9 %	—	1 %
<b>Socio-environmental</b>					
Environmental	AM	—	5.8 %	—	5 %
Natural phenomena and extreme climate changes	PN	—	5.0 %	—	5 %
Property	PR	—	3.6 %	—	3 %
Social	SO	—	4.1 %	—	5 %
Public order and citizen security	OP	—	3.6 %	—	4 %

\* % of participation of risk categories in the consolidated risk of ISA and its companies

Events that may affect **achievement of the current strategy** - Short and Medium-term time horizon

**Based on these analyses, climate-related risks and their impacts on the business are identified to establish climate change mitigation and adaptation actions.**

# Strategy

## c) Resilience of the organization strategy: Scenario Analysis

**Climate Change Scenarios: Possible transition risks derived from climate change are evaluated by scenarios based on DDPP and IRENA**



Variables or questions	Hypothesis or Response to 2030		Analysis Scenarios			
	Equal	High	More Probable	Less Probable	More Favorable	Less Favorable
Optimization of energy resources	1	1	1	1	1	1
Decarbonization	2	2	2	2	2	2
Market adaptation	3	3	3	3	3	3
More active social participation	4	4	4	4	4	4
Digital transformation	5	5	5	5	5	5

**There are made two hypotheses for the year 2030 in the variables of optimization of energy resources, decarbonization, market adaptation, more active partner participation, and digital transformation, among others, the information of the DDPP scenarios was available for the decarbonization and IRENA especially for energy efficiency and the renewable market**



# Strategy



## c) Resilience of the organization strategy

### Adaptation measures for the system as well as restoration of service and infrastructure management

- Identification of adaptation measures for infrastructure
- Initiatives of new technologies, products and services\*
- Working table of Ministry of Mines
- Supplier evaluation conditions strategies
- Management of innovation and continuous improvement systems\*

#### Adaptability systems

- Business continuity plans
- Emergency plans
- Contingency plans
- Reputation crisis management\*
- Reestablishment protocols

#### Recovery service

- Reliability criteria for the expansion and operation of the infrastructure
- Reliability-based maintenance
- Supply chain management\*
- Emergency maintenance protocols
- Regulatory management\*

#### Infrastructure management

\*Transition risk measures Measures for physical risks

## c) Resilience of the organization strategy

### Detail of the proposed adaptation measures

Climate variable involved	Consequences for the transmission infrastructure	Proposed adaptation measures
<ul style="list-style-type: none"> <li>Drought</li> <li>Prolongation of periods without rain</li> <li>Decrease in water supply</li> <li>Decrease in plant cover</li> </ul>	<ul style="list-style-type: none"> <li>Increased maintenance</li> <li>Accelerated degradation of the elements (useful life) by increased pollution, corrosive processes.</li> <li>Water dents for maintenance that require washing.</li> <li>Damage in the equipment by increased air pollution by loss of vegetation surrounding the substations that serves as a natural barrier</li> </ul>	<p>For contamination and corrosion:</p> <ul style="list-style-type: none"> <li>Greater replenishment</li> <li>Change materials in the design of components</li> <li>Greater maintenance (washing, painting, changing components, etc.).</li> <li>Increase inspections.</li> <li>Gummed in substations</li> </ul>
Landslides on steep slopes	<ul style="list-style-type: none"> <li>Fall of transmission lines</li> <li>Allocation of Substations</li> </ul>	<ul style="list-style-type: none"> <li>Modify Civil Works</li> <li>Construction of complementary civil works of protection (erosion).</li> <li>Construction of line variants</li> <li>Re-foundation of towers</li> </ul>
Strong winds	<ul style="list-style-type: none"> <li>Fall of transmission lines</li> <li>Change of design criteria and operation</li> <li>Disconnections / shots</li> </ul>	<ul style="list-style-type: none"> <li>Reinforcement of transmission lines in structures in sections where required according to technical studies.</li> <li>Redesign of the current vulnerable infrastructure</li> <li>Further inspection and monitoring</li> <li>Acquisition of new monitoring equipment (technology).</li> <li>Increased maintenance</li> <li>Regulatory management (# of departures per year, wind projections).</li> <li>Design according to the climate projection</li> </ul>

# Strategy



## c) Resilience of the organization strategy

### Detail of the proposed adaptation measures

Climate variable involved	Consequences for the transmission infrastructure	Proposed adaptation measures
Strong rains Flood Breaking of Dams	<ul style="list-style-type: none"> <li>• Flooding of towers: reduction of vain, corrosion, shots and accidents with people.</li> <li>• Weakening of foundations by rivers and streams</li> <li>• Flooding of substations</li> <li>• Need to turn off the SE</li> </ul>	<ul style="list-style-type: none"> <li>• Construction of barriers and pumping in the SE</li> <li>• Modify the conditions of the installation (eg. boards)</li> <li>• Modify Civil Works</li> <li>• Increase of inspections and maintenance (frequency, costs, eg. divers).</li> <li>• Construction of complementary civil works of protection (erosion).</li> <li>• Construction of line variants</li> <li>• Re-foundation of towers</li> </ul>
Forest fires	<ul style="list-style-type: none"> <li>• Disconnections / shots</li> </ul>	<ul style="list-style-type: none"> <li>• Construction of fire barriers (SE)</li> <li>• Further inspection and monitoring</li> <li>• Regulatory management (# of departures per year)</li> </ul>
Keraunic level rise	<ul style="list-style-type: none"> <li>• Change in design and operation criteria</li> <li>• Lines out of service</li> </ul>	<ul style="list-style-type: none"> <li>• Change of design criteria and operation</li> <li>• Regulatory management (# of departures per year)</li> <li>• Carry out more specialized and coordinated scientific technical studies</li> </ul>

## c) Resilience of the organization strategy

### Detail of the proposed adaptation measures

Climate variable involved	Consequences for the transmission infrastructure	Proposed adaptation measures
Overview of climate change	<ul style="list-style-type: none"> <li>• Changes in the planning and operation of the electrical system</li> <li>• Changes in maintenance strategy</li> <li>• Changes in the business model.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased electrical expansion in renewables, interconnections, demand management, batteries</li> <li>• Incorporation of the criterion of climate change in the expansion plans.</li> <li>• OPERATION: for replenishment, improve the restoration, management of inventories (emergency towers) etc.</li> <li>• Communication Campaigns</li> <li>• Estimation of the allocation of management measures to the business model (profitability)</li> </ul>
Colombian regulation	<ul style="list-style-type: none"> <li>• It is not foreseen in the medium term a possible substitution of SF6 refrigerant gas for the electrical industry</li> <li>• The designs obey to (global) norms because a design of greater exigency has a greater value and can affect the competitiveness</li> </ul>	<ul style="list-style-type: none"> <li>• ISA participates in a committee with the Colombian Ministry of Mines and Energy to prepare the Action Plan for the Electric Power Sector</li> <li>• The gas disposal and management has been strengthened in the maintenance process.</li> <li>• It is recommended to relate the environmental requirements of offset for biodiversity with the reduction of CO2 emissions.</li> <li>• Communication Campaigns</li> <li>• Estimation of the allocation of management measures to the business model (profitability)</li> </ul>

# Strategy



## c) Resilience of the organization strategy

### Detail of the proposed adaptation measures

Climate variable involved	Consequences for the transmission infrastructure	Proposed adaptation measures
Colombian regulation	<ul style="list-style-type: none"><li>• Unfavorable regulatory changes</li><li>• Affect the competitiveness</li><li>• Changes in the business model.</li></ul>	<p>Contribution to commitment to the Colombian government</p> <ul style="list-style-type: none"><li>• To increase the resilience and the aptitude of the country, through 10 sectoral and territorial actions prioritized to 2030.</li><li>• Promote the exchange of knowledge, technology and financing to accelerate the contributions proposed in terms of adaptation and mitigation of greenhouse gases</li></ul>
Brazilian regulation	<ul style="list-style-type: none"><li>• Unfavorable regulatory changes</li><li>• Affect the competitiveness</li><li>• Changes in the business model.</li></ul>	<p>Contribution to commitment to the Brazilian government</p> <ul style="list-style-type: none"><li>• The Brazilian plan aims at the implementation of knowledge management systems, to promote research and technology for adaptation, to develop processes and tools that support governmental adaptation initiatives.</li><li>• Adaptation policies will take high regard to urbanization processes.</li><li>• Strengthen implementation of the national water safety plan and forest code</li><li>• Actions for use sustainable of bioenergy, change in the use of earth and forests and Energy supply</li></ul>

# Strategy



## c) Resilience of the organization strategy

### Detail of the proposed adaptation measures

Climate variable involved	Consequences for the transmission infrastructure	Proposed adaptation measures
Chilean regulation	<ul style="list-style-type: none"><li>• Unfavorable regulatory changes</li><li>• Affect the competitiveness</li><li>• Changes in the business model.</li></ul>	<p>Contribution to commitment to the Chilean government</p> <ul style="list-style-type: none"><li>• Recover 100,000 hectares of forest and plant 100,000 hectares more, mainly native, by 2030 conditioned to legislative development of the law of forest development.</li><li>• Chile has a National Adaptation Plan for Climate Change, which provides the guidelines for adaptation and provides an operational structure for its coordination and implementation</li></ul>
Peruvian regulation	<ul style="list-style-type: none"><li>• Unfavorable regulatory changes</li><li>• Affect the competitiveness</li><li>• Changes in the business model.</li></ul>	<p>Contribution to commitment to the Peruvian government</p> <ul style="list-style-type: none"><li>• The commitments made by Peru for adaptation are based on the National Climate Change Strategy, the regional strategies and the Adaptation and Mitigation Action Plan facing climate change.</li></ul>



# Strategy



## c) Resilience of the organization strategy

### Opportunities

In the opportunities associated with the infrastructure we identify:

- Development of solutions for energy and sustainable transmission lines with different materials that reduce the weight and height of the lines.
- Lines with superconductors without modifying the structure. This allows to repower existing lines, increasing the transport capacity.
- The use of renewable energy has been implemented for the lighting of the substations, as well as the use of rainwater for the energy substations, with zero discharges and moisture condensers.
- Equipment Monitoring: ISA conducts satellite monitoring of fires in Brazil and aims to expand it to other countries. Additionally, as an experimental initiative, ISA implements online monitoring to analyze insulation contamination, monitor structural inclination, and monitor conductors with DLR (Dynamic Line Rating).



# Strategy

## c) Resilience of the organization strategy

### Opportunities

The ISA2030 Strategy - Sustainable Value, includes within its goals the incursion into new energy businesses to diversify its business portfolio and impact positively the environment by decarbonization of the energy system.

As an analysis, four lines of business were prioritized for development: Energy Storage, Distributed Energy Resources (DER), Grid connection for renewable energy projects and Regional Energy Integration.

There are incentives aimed at different employees associated with the development of projects that will enable services such as large-scale energy storage and Distributed Energy Resources (DER), projects that contribute directly to the reduction of CO2 emissions in the energy system.

As part of its contribution to the accomplishment of the Sustainable Development Goals, and the Nationally Determined Contributions, the Group ISA has developed different kinds of solutions that will improve the trust in the environmental markets. Solutions like EcoRegistry, EcoGoX, Ecotrade and Appimotion will present new opportunities for the development of sustainable projects.

BioRegistry: Is a registry platform to record and track the units and biodiversity looking to preserve and restore ecosystem services, ensuring transparency in the market.

EcoREP: To develop and implement a registry platform that allows the traceability, security, and availability of information on the flow of residual materials through the value chain

Carbonlytics: The solution estimate carbon removals in agricultural crops and includes several stages, from the diagnosis and feasibility of the project to the transaction of carbon credits. Crop information is captured using unmanned aerial devices



<https://www.ecogox.com/about>



<https://www.xm.com.co/nuestra-empresa/innovacion>



<https://www.appimotion.com/>

**Energy Storage  
solution**

<https://acortar.link/VEIzjE>

**Carbonlytics**

<https://acortar.link/UBsmbe>



## ADOPTING THE TCFD RECOMMENDATIONS

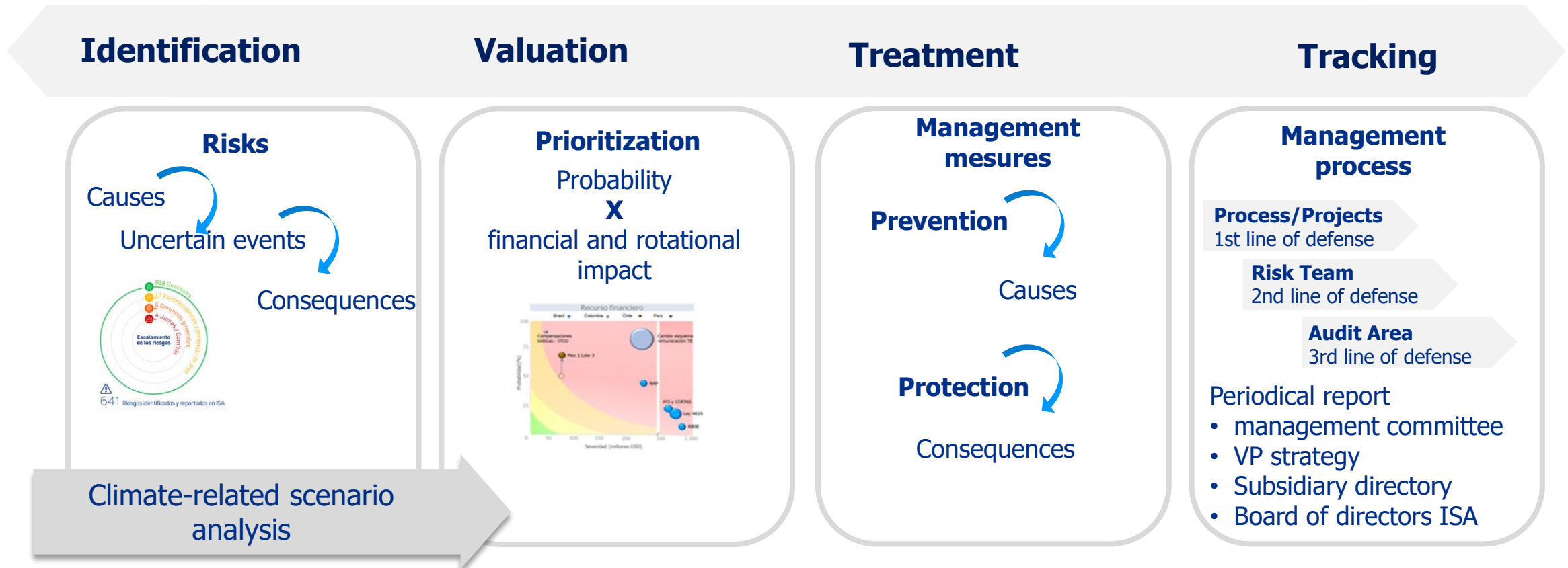
- Governance
- Strategy
- **Risk Management**
- Metrics and targets

# Risk management

- a) Processes for identifying and assessing climate-related risks
- b) Process for managing climate-related risks



## Enterprise Risks Management



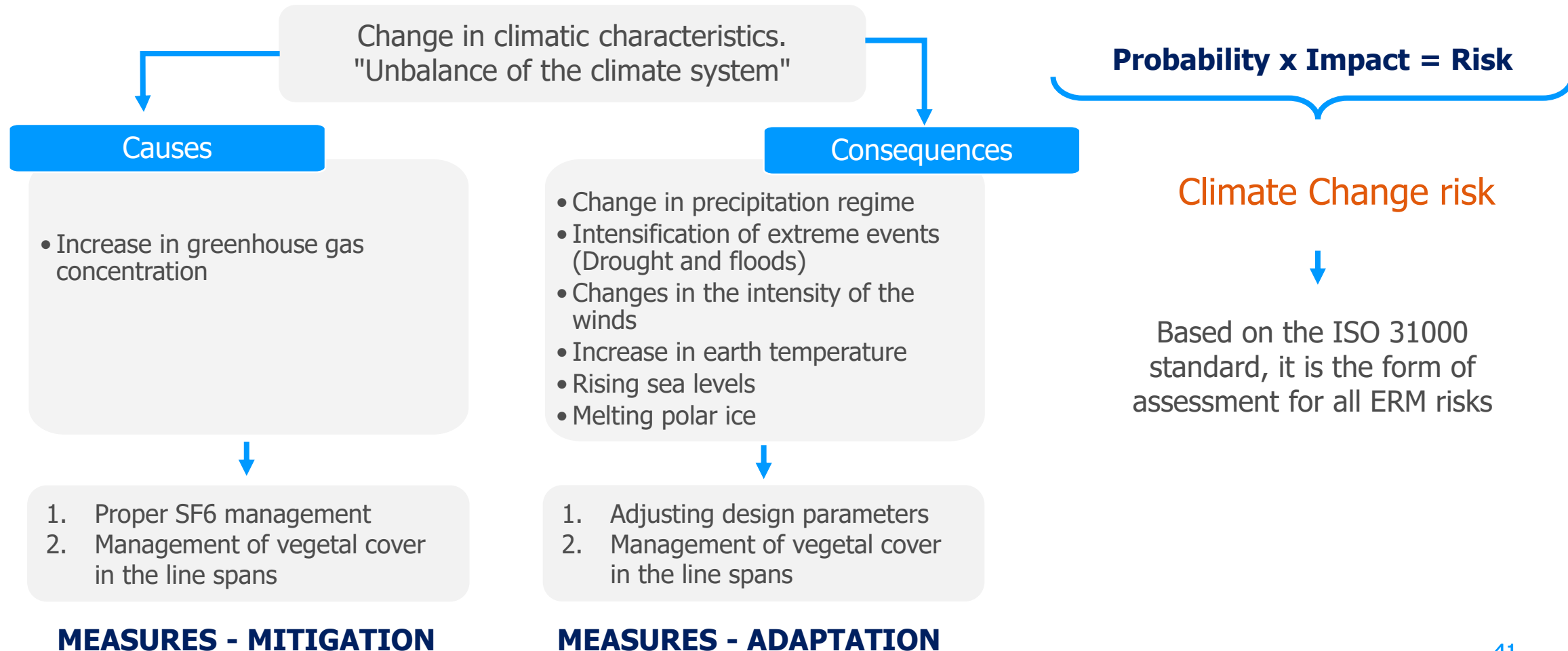
"Risk governance" accompanies the application of the risk cycle - information supports decision making.

# Risk management

a) Processes for identifying and assessing climate-related risks



## Definition of the climate change risk approach and valuation



# Risk management

c) Integration of climate-related risks into the overall risk management



## Risks Management Framework

Dimensions	Categories
<b>Economic</b>	<ul style="list-style-type: none"><li>• <b>Governance</b></li><li>• <b>Regulatory</b></li><li>• <b>Legal</b></li><li>• Politics</li><li>• Market, liquidity, credit</li><li>• Market, competence, mergers, acquisitions</li></ul>
<b>Operational</b>	<ul style="list-style-type: none"><li>• <b>Business operations</b></li><li>• Project design and construction</li><li>• Supply chain</li><li>• Cybersecurity and information technologies</li><li>• Human capital and labor relations</li><li>• Occupational health and safety</li><li>• Compliance</li></ul>
<b>Social environmental</b>	<ul style="list-style-type: none"><li>• <b>Environmental</b></li><li>• <b>Natural phenomena and extreme weather changes</b></li><li>• Property Tax</li><li>• Social</li><li>• public order and public safety</li></ul>

The risks associated with climate change are part of the ERM and are mainly grouped into the category of natural phenomena and extreme weather changes. They are additionally related to the categories of Business Operation, Legal Regulatory, and Environmental



# Risk management

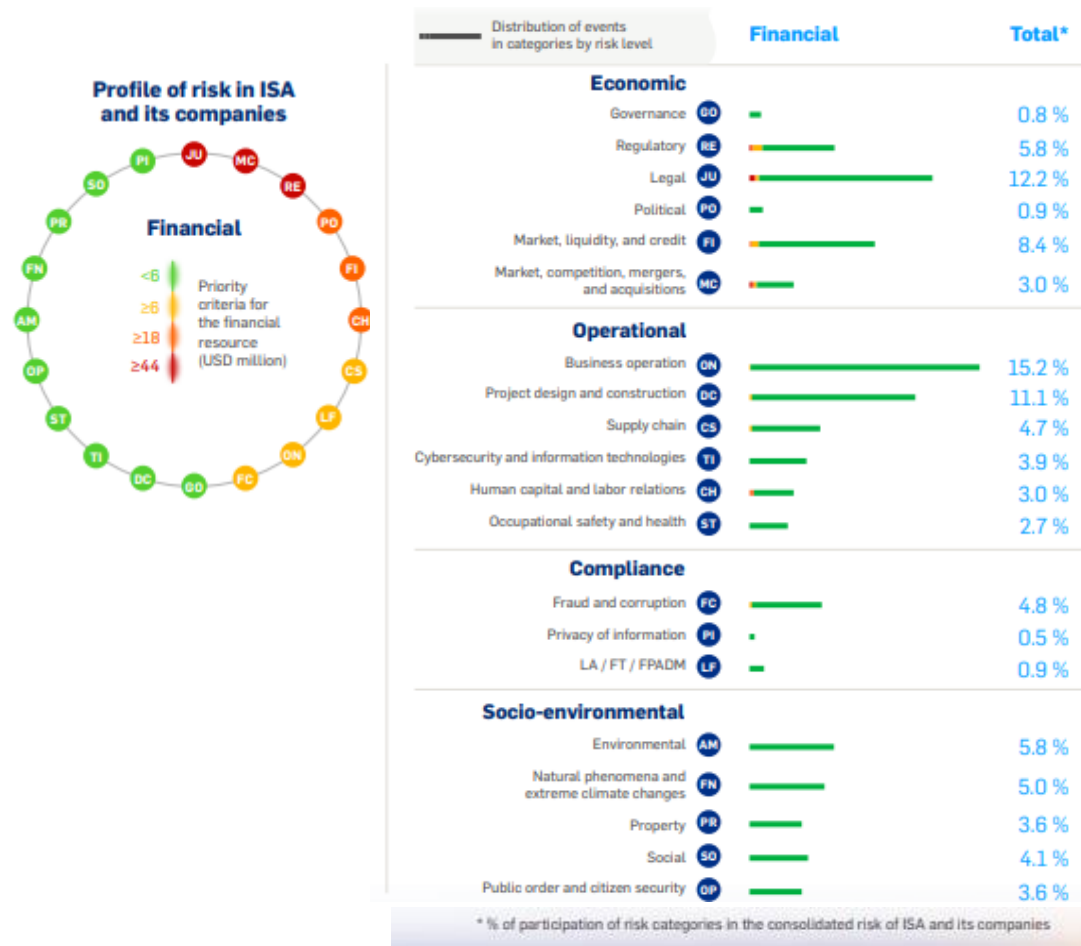


c) Integration of climate-related risks into the overall risk management

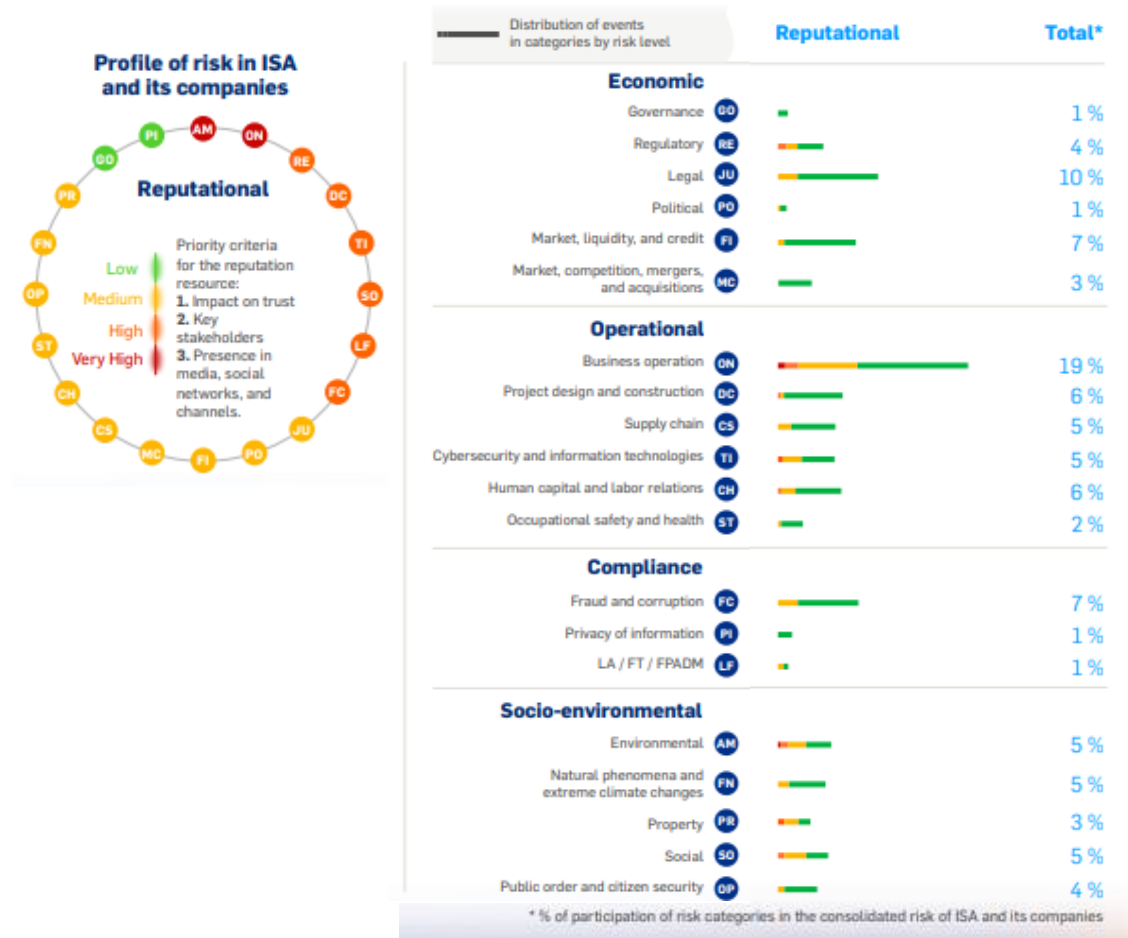
## Risks Management Framework

[Integrated Management Report 2022 - ISA](#)

### Risk profile by categories that impact financial resources



### Profile of risks by categories that impact the reputation resource

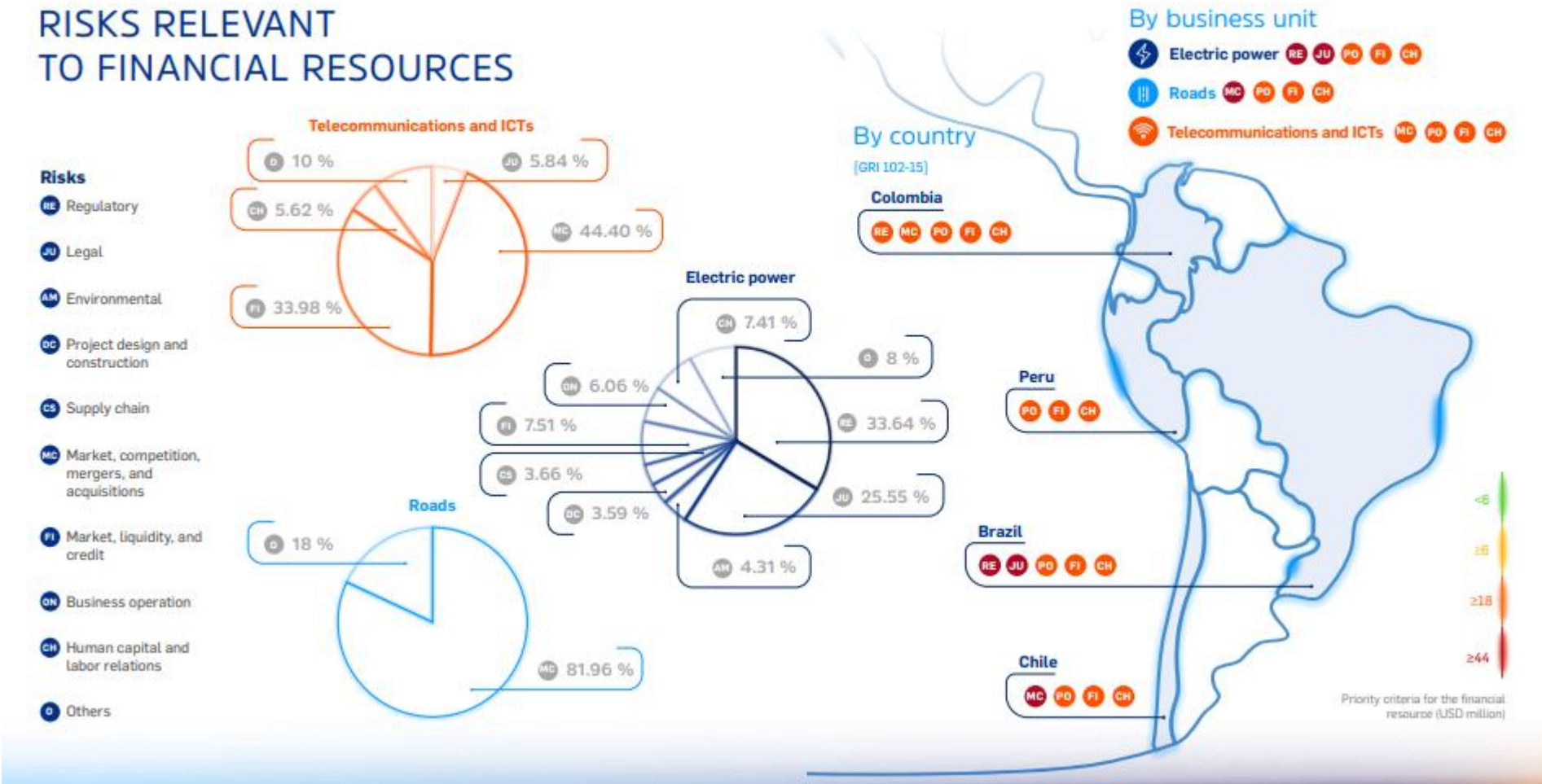


# Risk management



c) Integration of climate-related risks into the overall risk management

## Risks Management Framework

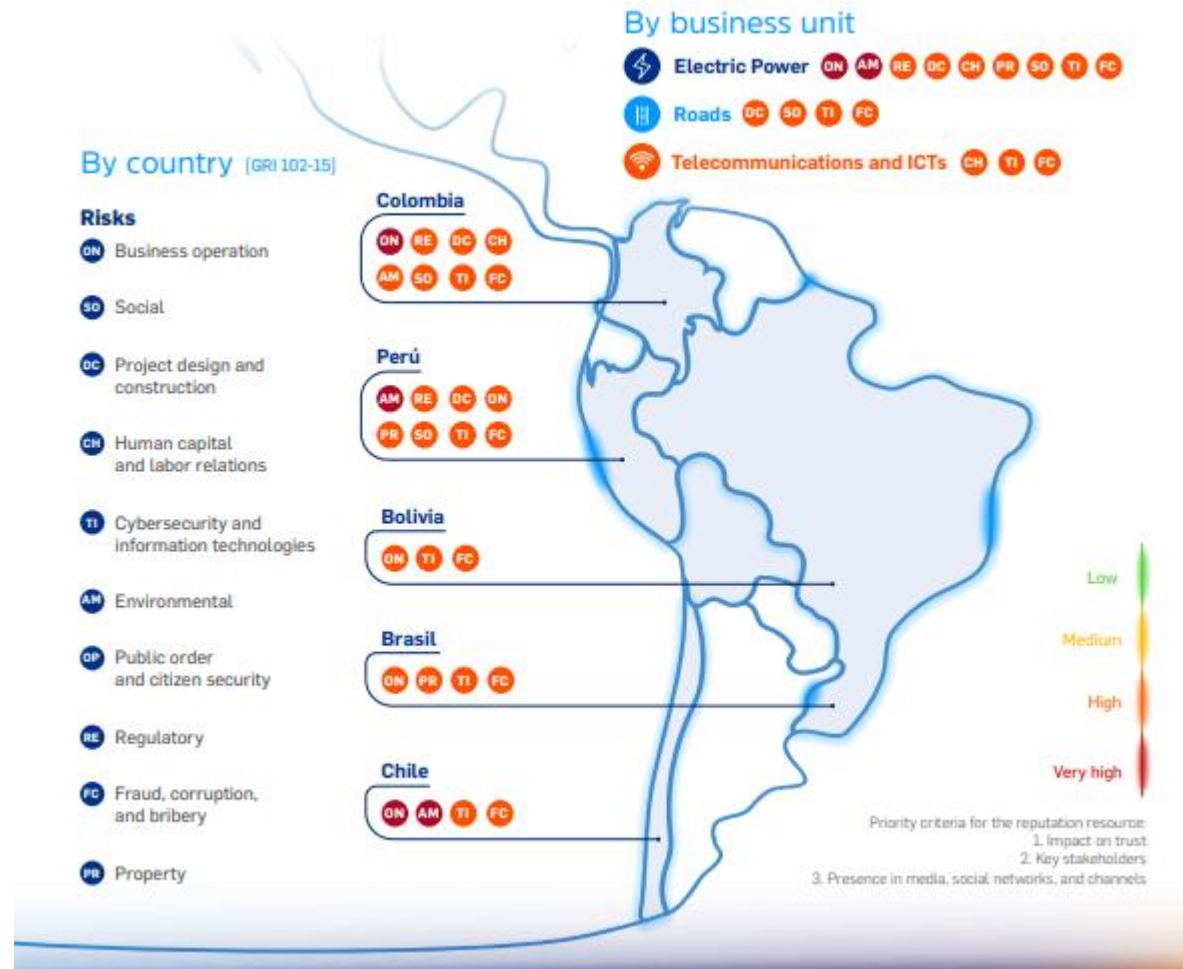


# Risk management

c) Integration of climate-related risks into the overall risk management



## Risks Management Framework





## ADOPTING THE TCFD RECOMMENDATIONS

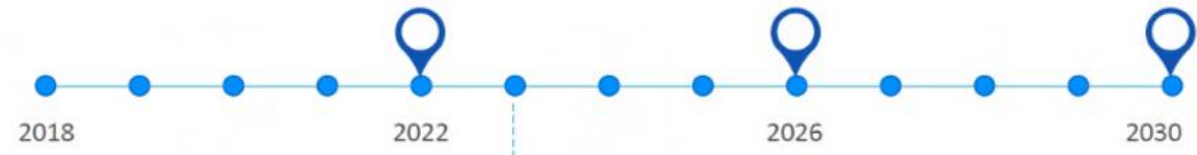
- Governance
- Strategy
- Risk Management
- **Metrics and targets**

# Metrics and targets

## a) Climate-related metrics



## Goals of ISA 2030 strategy, oriented towards creating sustainable value



Shareholders value

USD 8,300M in **current** business and geographies

USD 100M efficiency at **TOTEX**

USD 2,200M in **new geographies**

70% **increase** in EBITDA

Social and Environment impact

**11 million tCO2e reduction for the planet**

USD 150M for **entrepreneurship**

Corporate Validity

USD 2000M in **new energy business**

**50% of employees with** superior performance

### Management Incentives

- Indicator "CO2e emissions reduction by eco-efficiency improvement" is included in our monetary incentive System.
- Under the strategic axis of decarbonization and diversification, the company has established an incentive in the variable salary of the CEO, other executives and other levels.
- En la Movida "program: Incentive given to company's workers by their greater participation in different forms of sustainable mobility like parking fee reduction and employee's redeemable bonuses



# Metrics and targets

## a) Climate-related metrics



## Goals of ISA 2030 strategy, oriented towards creating sustainable value

Social and  
Environment  
impact

**11 million tCO2e reduction for the planet**

Corporate  
Validity

**USD 2000M in new energy business**

ISA set more challenging reduction goals, which not only reduce its own emissions, but also contribute to the planet with investment in new energy businesses such as distributed network systems, and connections to renewables, among others, and has implemented a voluntary program to reduce emissions through the conservation of biodiversity "Conexión Jaguar" (<https://conexionjaguar.org/>)

- The ISA2030 Strategy seeks to contribute in a decisive, proactive, and transcendent manner to addressing climate change through mitigation and through the promotion of initiatives that generate a positive impact, as well as the protection and conservation of ecosystems and their biodiversity. Through this strategy, ISA seeks to reduce 11 million tons of CO2 e before 2030 for the planet, according to the following distribution:
- **As a contribution to the planet:**
  - ✓ 9 million tons of CO2e from our Conexión Jaguar Program.
  - ✓ 2 million tons of CO2e: As a contribution to the decarbonization of energy matrixes, through our new energy businesses.
- **Reduce our own impacts:** 102,500 tCO2e for voluntary actions of eco-efficiency and circular economy, this reduction is reflected in the reduction of our consumption of water, energy, generation and disposal of waste, detection, and management of SF6 leaks. and to our sustainable mobility and telecommuting programs.
- To achieve the goal of reducing its own emissions, ISA and its companies apply the Mitigation Hierarchy; finally, the emissions that are not reduced or avoided are offset through carbon credits from the Jaguar Connection Program.

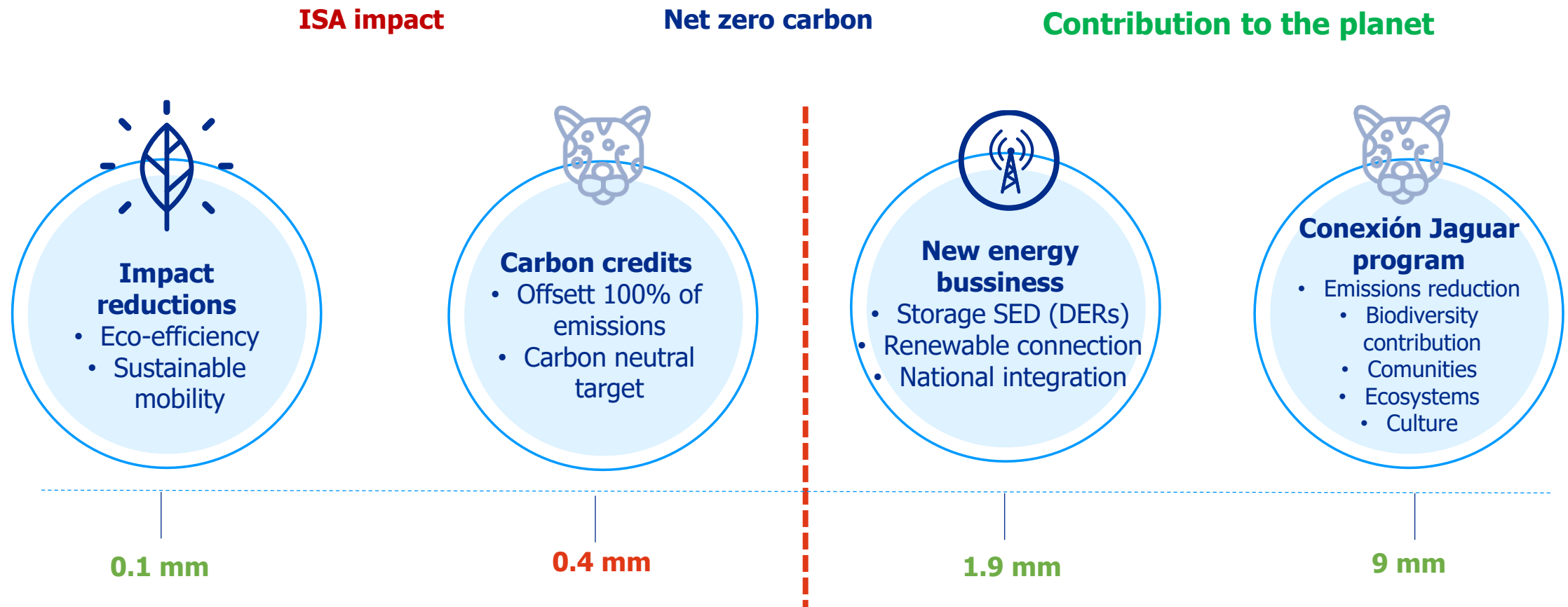


# Metrics and targets

## a) Climate-related metrics



The following diagram shows the distribution of the target 11 million tCO<sub>2</sub>e reductions for the planet, framed in ISA's 2030 strategy and ISA's net-zero commitment

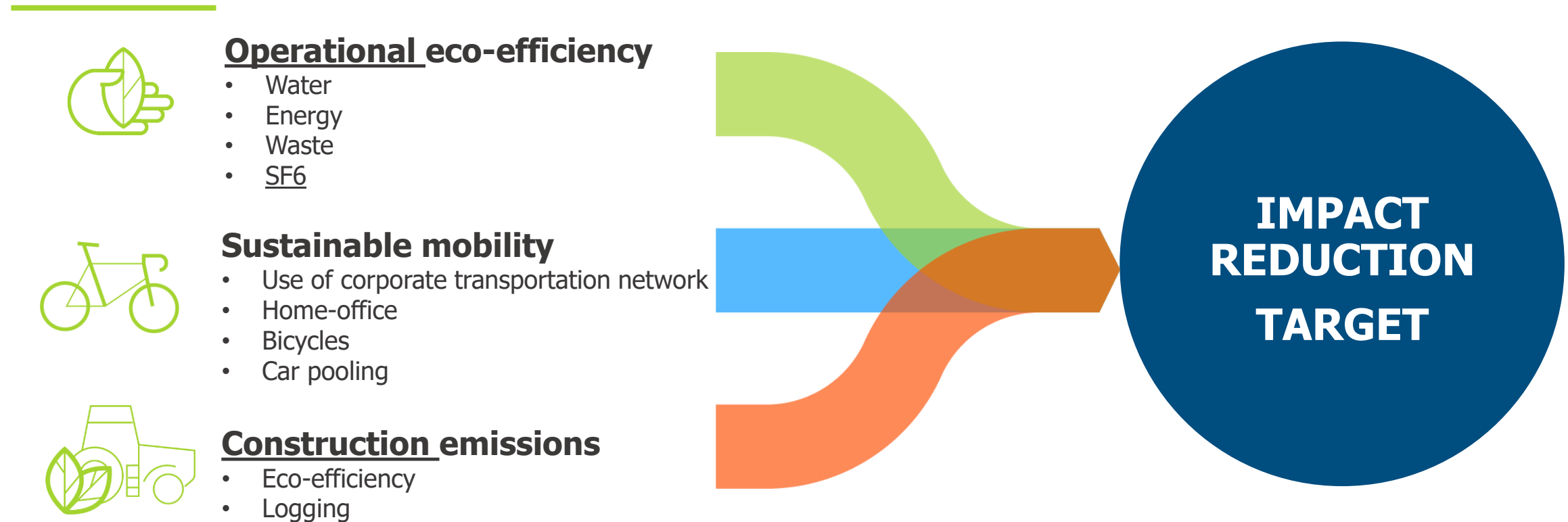


# Metrics and targets

## a) Climate-related metrics



The impact reduction target corresponds to the reduction of emissions in the following processes:



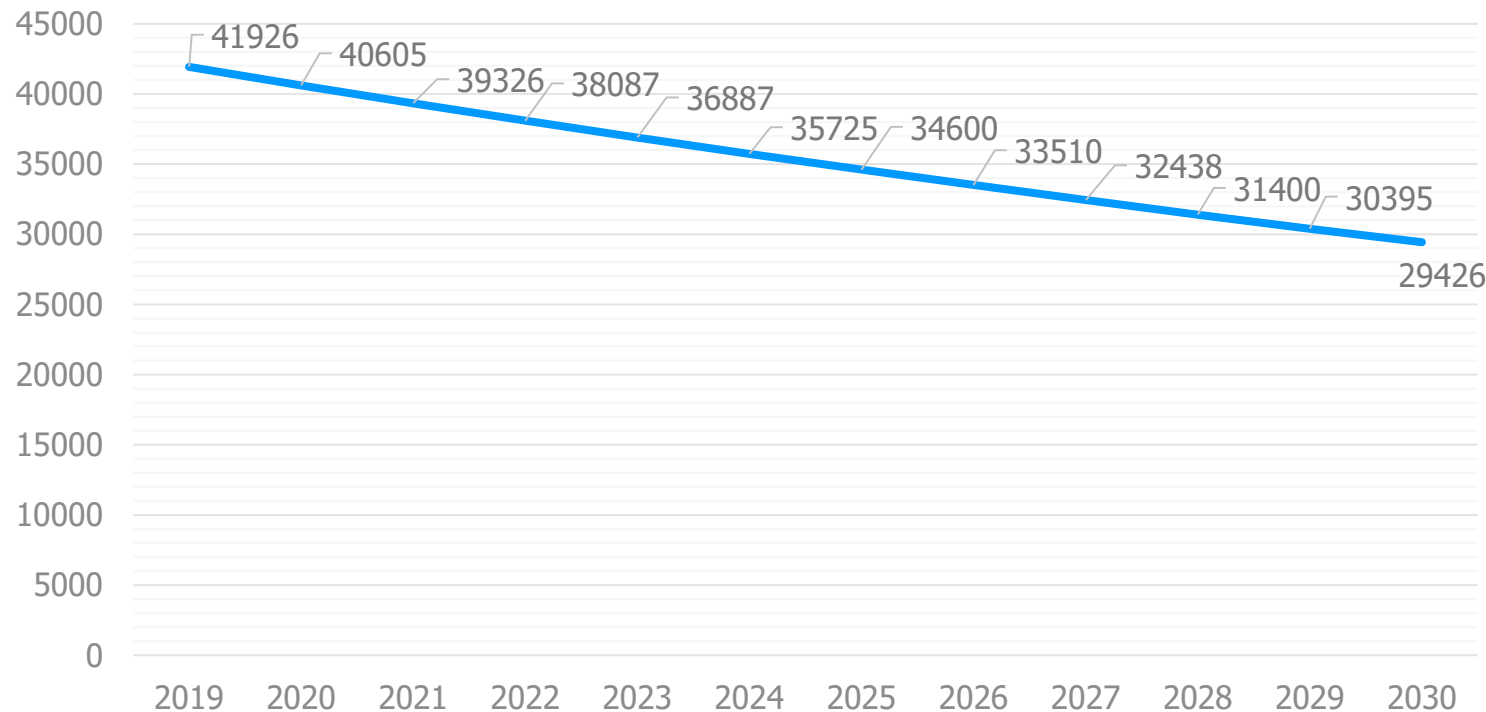
# Metrics and targets

## a) Climate-related metrics



### Our 2019-2030 Operation and Maintenance Emissions Reduction Target:

#### 2019 – 2030 GHG Reduction Target



The reported emissions reduction target includes all of ISA and its companies, and it is aimed at reducing GHG emissions in our operation and maintenance for the period of 2019 – 2030, including our Scopes 1, 2 and 3 – purchased goods and services (water consumption), Transportation and treatment of waste and employee commuting.

The target looks to reduce 12,500 tons of equivalent CO<sub>2</sub> which corresponds to a 30% reduction for 2019 - 2030, approximately 3.2% per year

# Metrics and targets

- a) Climate-related metrics
- c) Climate-related targets



Our climate strategy is aligned with the priorities and joint actions of governments, society and companies. This strategy is based on emissions reduction practices and offset for GHG produced by the operation of the Electric Transmission Business. The Company reviewed its approach to this issue in accordance with the commitments of COP 21 and the phenomena of climate variability in recent years, adjusting its risk map and planning a series of actions by 2022.

## Countries-related targets:

- **Colombian regulation:** Reduce the country's GHG emissions by 51% in relation to projected emissions by 2030.
- **Brazilian regulation:** Reduce GHG emissions by 37% by 2025 target year and 43% by 2030 target year. Taking 2005 as reference year, it considers the entire national territory and all economic sectors
- **Chilean regulation:** Chile commits to a GHG emissions budget that will not exceed 1,100 MtCO<sub>2</sub>eq, between 2020 and 2030, with a maximum of GHG emissions (peak) by 2025, and to

reach a GHG emissions level of 95 MtCO<sub>2</sub>eq by 2030. A reduction of at least 25% of total black carbon emissions by 2030, compared to 2016. This commitment will be implemented mainly through national policies associated with air quality. In addition, it will be monitored through permanent and periodic work on improving the information of the investor.

- **Peruvian regulation:** 40% reduction in projected GHG emissions by 2030. The Peruvian state considers that a 30% reduction will be implemented with internal resources, public and private and that the remaining 10% will be contingent on international financing, as well as to favorable economic conditions.

# Metrics and targets



## b) Scope 1, 2 and 3 of GHG

**The different scopes of the GHG inventory are reported annually.**

	Performance Data	Unit	2019	2020	2021	2022	GRI Indicator
GHG Emissions	Scope 1 Emissions	Ton CO2eq	25232	29924	30562	29438	305-1
	Scope 2 Emissions	Ton CO2eq	6018.7	6098.3	3644.9	4902.8	305-1
	Scope 3 Emissions	Ton CO2eq	5842.2	3342.1	40946.5	4915.5	305-2
	SF6 Emissions	Ton	1.00	1.08	1.15	1.06	305-3

\*\*\* 2021 ISA and INTERCOLOMBIA expanded the scope 3 measurements, other categories were included, such as Capital goods purchased or acquired by the company and the category of acquired goods and services

For details about other indicators and targets related to water, energy and waste, see environmental performance indicators: <https://www.isa.co/en/environmental-performance-indicators/>

# Metrics and targets



- a) Climate-related metrics
- c) Climate-related targets

- From our corporate GHG emissions inventories, we identified that direct emissions from SF6 gas leaks, which has a climate change potential of 23,500 times greater than CO2, account for more than 80% of direct CO2 emissions equivalent in the operation of the business. Therefore, ISA and its companies recognize the importance of SF6 as the main greenhouse gas in their operations, which is required in some high-voltage equipment.
- Thus, in order to achieve a better performance in accordance with the international standards for electrical equipment (National Electrical Manufacturers Association -NEMA- and International Electrotechnical Commission Standard –IEC-), which establishes that over a service life of 50 years, the emissions of SF6 gas due to its use in electrical equipment must not exceed 0.5% leakage with respect to the inventory of SF6 installed.
- ISA established as a consolidated corporate target by 2022 that leakage of this gas does not exceed 0.5% of SF6 installed. This value was calculated considering the inventory of equipment in operation and the commitment of reduction of 10% of the leaks yearly to up 2022 for CTEEP. In INTERCOLOMBIA, REP, TRANSELCA, INTERCHILE, and ISA BOLIVIA, it was established not to exceed the leaks in 0.5% of the inventory because they are already under the standard value.
- Until 2022 the consolidated value at the business group level achieved the corporate goal of keeping the level of the leaks below the 0.5% of the total Installed SF6 as indicated by the IEC 62272-203, used as a reference: The result for 2021 was 0.428% and in the same year ISA established a goal for 2030 to exceed the requirement of the standard, by reducing the goal by 15% and going from 0.5% to 0.425% of the total SF6 installed.
- In 2022 a consolidated leakage rate was 0.348%.

# Metrics and targets

- a) Climate-related metrics
- c) Climate-related targets

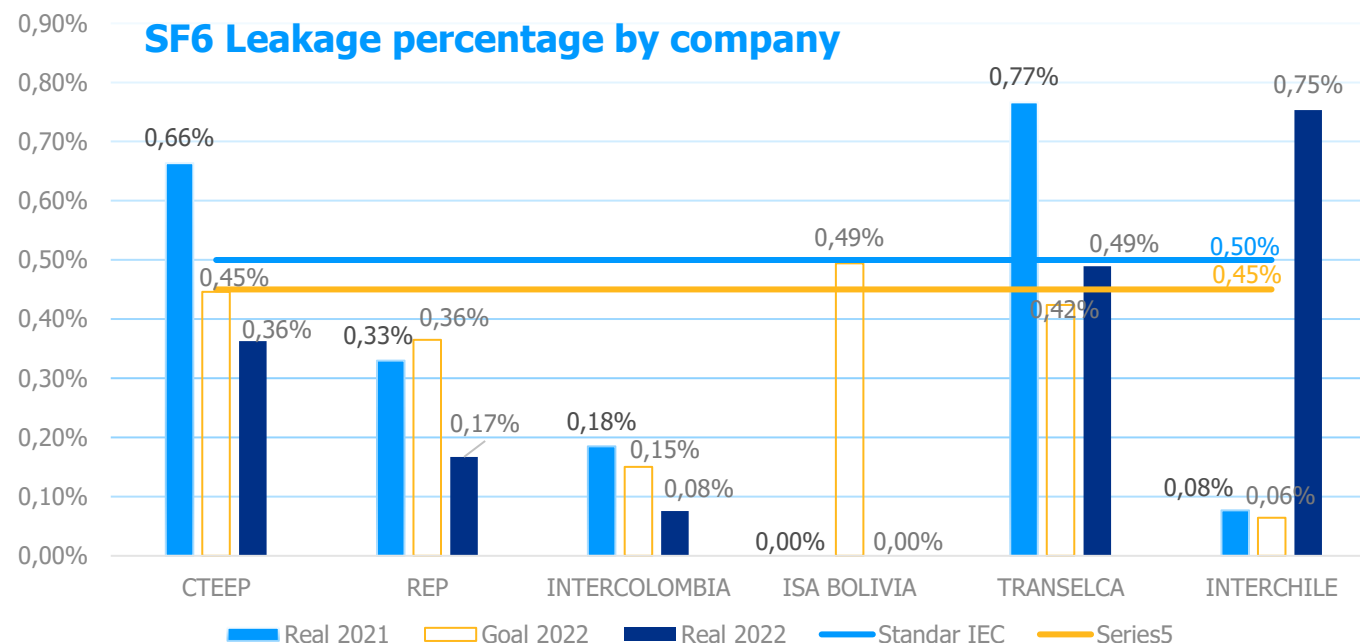
## Mitigation Measures – SF6 Management

Implementation of good practices, proper operation and maintenance of the equipment:

- Renewal of GIS (Gas-insulated Substations) and circuit breakers at the end of their useful life.
- Regular preventive maintenance to GIS and circuit breakers, thus preventing gas leakage, continuous improvement in leak record in the SAP system.
- Use of infrared cameras for the timely detection of uncontrolled leaks during the operation of the equipment, to overhaul or major maintenance to circuit breakers
- We are working in innovative actions to avoid leaks to the atmosphere, capturing and controlling the leaked gas in containers.

The greater amount of leakage of SF6 from CTEEP is because its assets have a high percentage of GIS substations, which represents a higher inventory of SF6 installed. It should be noted that this equipment corresponds to previous technological generations that had higher percentages of leaks.

Direct emissions increased in 2022 especially due to an incident (currently under correction) at a substation in ISA INTERCHILE, where SF6 gas leaked.





# Metrics and targets

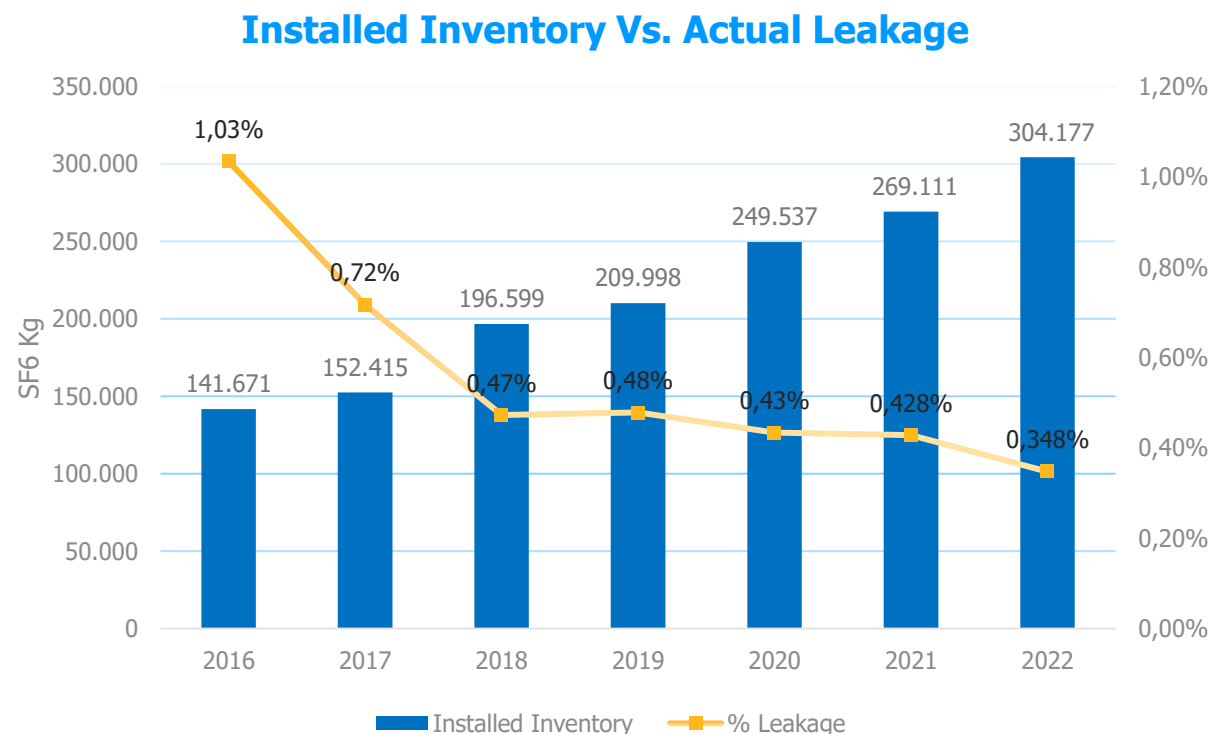
- a) Climate-related metrics
- c) Climate-related targets



## Mitigation Measures – SF6 Management

Since 2016, ISA set annual reduction targets of 10% for companies in the group with high leakages, so that their levels become equal to or less than 0.5% by 2020, under the International Electrotechnical Commission (IEC) quality standard. The goal was achieved since 2018 at the Group level, and by 2021 the Group achieved a consolidated leakage rate of 0,43% and in 2022 a consolidated leakage rate was 0.35% .

- In 2022, ISA INTERCHILE leakage was 0.112% of the total installed SF6 inventory, which is higher than the IEC standard of 0.5% leakage. It is worth noting that this company has the largest inventory of this gas. The challenge to conform to the IEC standard is due to the age of the equipment, and the technical complexity of leak elimination. For this company to be below the standard as of 2023, a leakage level of 0.56% was defined as a target for 2022.



# Metrics and targets

- a) Climate-related metrics
- c) Climate-related targets



## Mitigation Measures – SF6 Management

Although the installed SF6 inventory has increased, the subsidiaries maintain their good consolidated performance.

ISA companies will continue to meet the international standard, and, in the interests of continuous improvement, a more challenging goal was set, which is to go beyond the 2030 standard by 15% for all energy transmission subsidiaries.

Cantidad SF6 (kg)	Kg SF6 Installed inventory 2022	% SF6 Leaked Out 2022	Kg SF6 Leaked Out 2022	SF6 emissions (tCO2) 2022
CTEEP	148,161.4	0.363%	537.6	12.632.7
REP	37,004.0	0.167%	61.8	1,452.8
INTERCOLOMBIA	57,913.0	0.075%	43.7	1,027.4
ISA BOLIVIA	809.0	0.000%	0.0	0.0
TRANSELCA	15,104.6	0.489%	73.9	1,736.7
INTERCHILE	45,184.6	0.753%	340.4	7,999.9
TOTAL	304,176.6	0.348%	1,057.4	24,849.4

# Metrics and targets

## Some eco-efficiency actions implemented to reduce greenhouse gas emissions

- a) Climate-related metrics
- c) Climate-related targets



## ACTIONS RELATED TO GHG AND ADAPTATION

The identification, analysis, assessment, and handling of climate change risks are integrated with the corporate risk management in the short and medium term. In the long term, they are included in the analysis of emerging risks. The reporting of climate change risks and opportunities follows the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

In 2022, a more in-depth analysis of the risks associated with infrastructure adaptation to climate change was conducted for Colombia. For more information, see the climate strategy at:



### Climate roadmap highlights

#### Mitigation

##### ISA INTERCOLOMBIA

**Emissions avoided** by optimizing server management and tools that facilitate teleworking

GHG measurement pilot for the construction of the **Costa Caribe Reinforcement project**, Cerromatoso-Chinú-Copey 500 kV Transmission Line (CECO)

Drafting of the **first green clause for contractors** that includes the measurement and reporting of their GHG inventory in the freight transportation and substation equipment assembly categories

##### ISA TRANSELCA

**Training plans** on hazardous waste management, environmental aspects in processes, efficient use of resources, among others

##### ISA CTEEP

For the third year, the company was awarded the Brazilian GHG Protocol Program's **Gold Seal**

##### ISA INTERVIAL

Use of **recycled asphalt** in Ruta de la Araucanía, Ruta de los Ríos, and Ruta del Maipo

Organic waste from the cleaning of Ruta de la Araucanía and Ruta de los Ríos is **used for energy generation**

##### SIER – Sistemas Inteligentes en Red

**Appimotion:** Sustainable mobility application

**Sustainable Business Mobility Plan**, whereby employees use modes of transportation that generate fewer emissions, with 100% employee participation, reducing 7 tons of CO<sub>2</sub>, which is equivalent to planting 887 oak trees

#### Adaptation

##### ISA INTERCOLOMBIA

**Development of scenario analyses according to TCFD** recommendations for operations in Colombia, based on 30 years of historical information from Ideam and on CMIP5 scenarios with IPCC RCP 2,6, 4,5, and 8,5 trajectories

##### RUTA COSTERA

**There were damages of external origin not attributable to the concessionaire**, which, added to the unusual increase in rainfall in the area, affected the infrastructure. The concessionaire implemented the required measures to guarantee traffic and avoid affecting users, and continues to work with the National Infrastructure Agency (ANI) to find a definitive solution

ISA companies in Colombia participate in the updating of the Integrated Climate Change Management Plan for the Mining and Energy Sector and in the Carbon Neutral Energy Sector Initiative led by the Ministry of Mines and Energy.

##### ISA BOLIVIA

**Application for real-time weather forecasting via satellite** (storms, winds, temperature, precipitation)

**Civil works on towers** at risk due to erosion or nearby rivers

# Metrics and targets

- a) Climate-related metrics
- c) Climate-related targets



## Climate-related metrics and targets: Financial impacts, cost savings and internal carbon price

### Climate Strategy Impacts

The financial annual impacts related to climate change are calculated in ISA according to:

Investments required:

- Value of I-REC
- Compliance with the IEC standard to achieve 0.5% leakage in the subsidiaries that have not yet achieved it\*.
- The operation of the micro-grid of solar panels installed at the headquarters of Medellin Colombia.
- In 2020, the investment of the "En la Movida" program was included
- Investment in renovation and maintenance measures for TRANSELCA was added\*.

\* The annual investment required to meet SF6 leak reduction targets involves major circuit breaker and GIS repairs, consisting of chamber gasket replacement and mechanism repair, and in some cases complete overhaul of the devices. equipment.

### Cost savings

The anticipated total cost savings are calculated in ISA based on:

- Savings in the purchase of carbon credits.
- Savings associated with the decrease in the purchase of energy thanks to the microgrid installed at Headquarters,
- Savings generated in equipment maintenance to prevent SF6 leakage from equipment and estimated costs for annual SF6 replacement.
- Avoid penalties for unavailability of assets

### Internal Carbon Price

ISA defines its internal carbon price as the sum of the savings generated by the reduction of SF6 gas leaks, the purchase of carbon credits for the compensation of GHG emissions, and the purchase of certified renewable energy through I-RECs. Currently, ISA is monitoring new commercial developments for high voltage equipment that may allow the replacement of SF6 by another less polluting product.

We have calculated the internal carbon price in order to include and implement it in regulatory evaluations, stakeholder expectations, changing internal behavior, promoting energy efficiency, promoting low carbon investments, and identifying and taking advantage of low carbon opportunities. carbon and achieve commitments with suppliers.



CONEXIONES QUE INSPIRAN

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