

A tall, lattice-structured power line tower stands against a cloudy sky. The tower is supported by multiple cross-arms, each holding several high-voltage power lines. The background shows a hazy landscape with trees and hills. A large, white, wavy graphic element is on the right side of the image.

isa

Climate change

ISA climate strategy

December 2024

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Concepts

- Climate change phenomenon
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- Global emissions and vulnerability to climate change
- Integrated climate change management plan
- Task Force Recommendations on Climate-Related Financial Disclosures (TCFD)

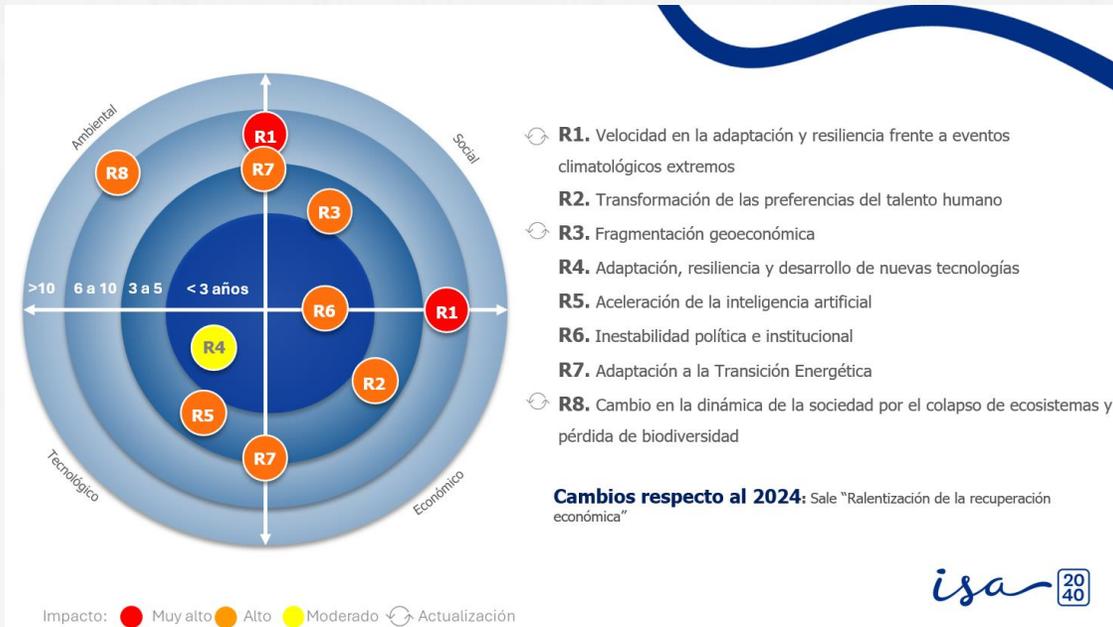
Adopting TCFD recommendations

- Governance
- Strategy
- Risk management
- Metrics and targets

Climate change is a current global challenge, evidenced in our ISA 2040 strategy



Emerging risk roadmap



Materiality matrix



- 17 Driver of solutions to facilitate the energy transition and mitigate and adapt to climate change
- 16 Management of environmental and climatic impacts associated with the activities
- 15 Leader in initiatives to contribute to the protection of ecosystems and biodiversity

Global Risks: 70% of the main **global risks** for 10 years are environmental and social

Source: [Global Risks Report 2023 | World Economic Forum \(weforum.org\)](https://www.weforum.org/reports/global-risks-2023)

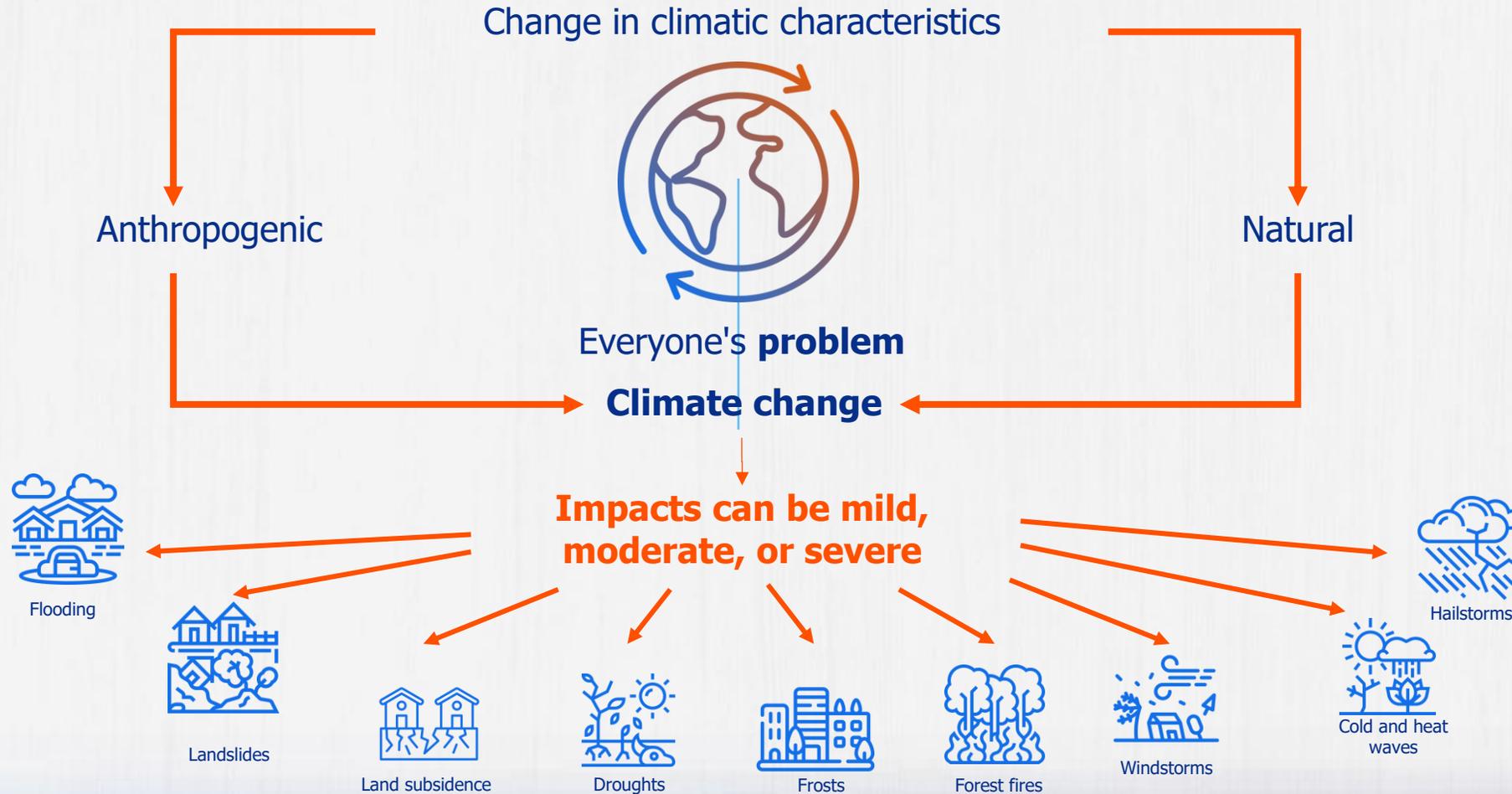
CONCEPTS

- ❖ Climate change.
- ❖ Extreme weather events.
- ❖ Global emissions and vulnerability to climate change.
- ❖ Integrated climate change management plan
- ❖ Task Force Recommendations on Climate-Related Financial Disclosures (TCFD).

Climate change



Climate Atmospheric conditions typical of a place, made up by the amount and frequency of precipitation, humidity, temperature, winds, etc. (behaviors evidenced in periods of 30 years or more)



Extreme weather events

Effects of climate variability

Climate change will intensify extreme weather events

"El Niño"
phenomenon

Droughts



"La Niña"
phenomenon

Floods



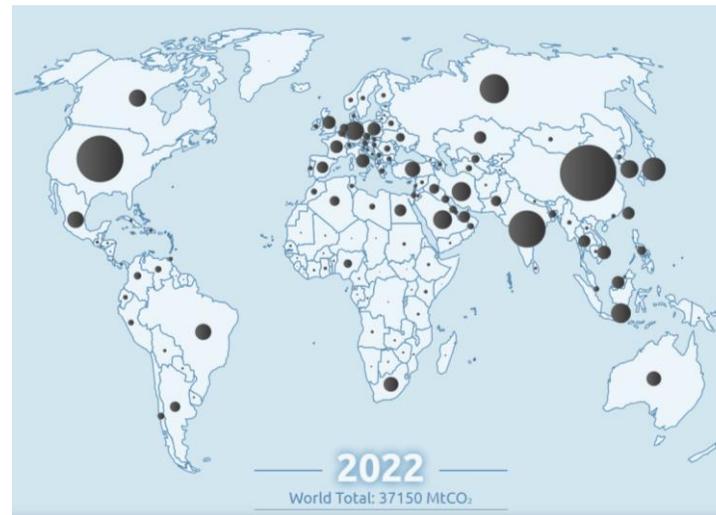
Increased frequency, intensity, and duration

Global emissions and vulnerability to climate change



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

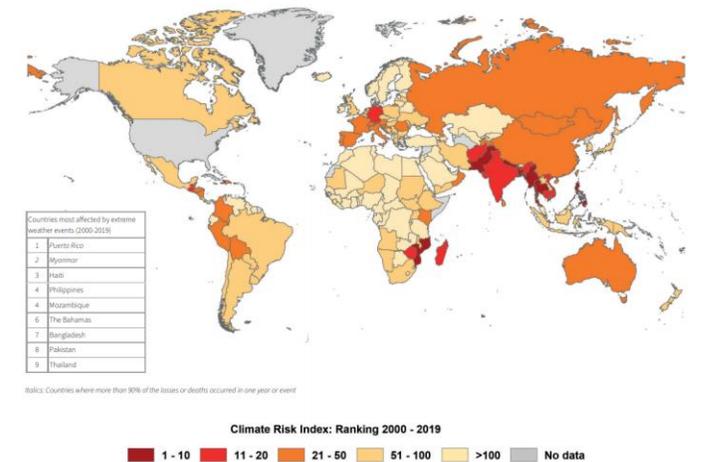
Contribution to global emissions



Country	Ranking
Brazil	#13
Colombia	#41
Chile	#44
Peru	#52
Bolivia	#85

Source: World Carbon Atlas, 2022
<https://globalcarbonatlas.org/emissions/carbon-emissions/>

Vulnerability to climate change



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

Source: Global Climate Risk Index, 2021
<https://www.germanwatch.org/sites/default/files/Resumen%20Index%20of%20Risk%20Clim%C3%A1tic%20Global%202021.pdf>

References for the construction of ISA's climate strategy



Mitigation hierarchy



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

Task Force Recommendations on Climate-Related Financial Disclosures (TCFD)



Corporate Governance

- a) Corporate governance around climate-related risks and opportunities.
- b) The role of management in assessing and managing climate-related risks and opportunities.

Strategy

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

Risk management

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

Metrics and targets

- a) Disseminate the metric used by the organization to assess climate-related risks and opportunities that are aligned with its risk management strategy and process.
- b) Disclose Scope 1, Scope 2, and, if applicable, Scope 3 greenhouse gas (GHG) emissions, as well as related risks.
- c) Describe the objectives used by the organization to manage climate-related risks and opportunities and outcomes compared to the objectives.

Adoption of TCFD recommendations (Index)



Item	Contents	Location reference
Governance	<ul style="list-style-type: none"> Corporate governance around climate-related risks and opportunities. The role of management in assessing and managing climate-related risks and opportunities. 	Pages 11-20
Strategy	<ul style="list-style-type: none"> Climate-related risks and opportunities Impact of climate-related risks and opportunities Scenario analysis 	Pages 21-59
Risk management	Processes for identifying, assessing, and managing climate-related risks and opportunities.	Pages 60-68
Metrics and targets	<ul style="list-style-type: none"> Disseminate the metrics used by the organization to assess climate-related risks and opportunities that are aligned with its risk management strategy and process. Disclose Scope 1, Scope 2, and, if applicable, Scope 3 greenhouse gas (GHG) emissions, as well as related risks. Describe the objectives used by the organization to manage climate-related risks and opportunities and outcomes compared to objectives. 	Pages 69-86 <ul style="list-style-type: none"> Environmental performance indicators: https://isaasprods-d87a26cb809c1f43d1f1-endpoint.azureedge.net/blob/saasprods27f2ae9b77/wp-content/uploads/2025/06/Environmental-performance-indicators_IN.pdf



ADOPTING TCFD RECOMMENDATIONS

- **Governance**
- Strategy
- Pages 69-86
- Metrics and targets

Governance of climate change risks



- a) Corporate governance around climate-related risks and opportunities.
- b) The role of management in assessing and managing climate-related risks and opportunities.

Board of Directors

- Within the framework determined by the group's parent company, establishes, directs, and reviews strategy and policies.
 - Defines the relationship model of ISA and its companies within the group's governance model.
 - Follow-up on the main risks.
- Corporate Bylaws, article 34, paragraphs 1, 2, 4, 9, 12, 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

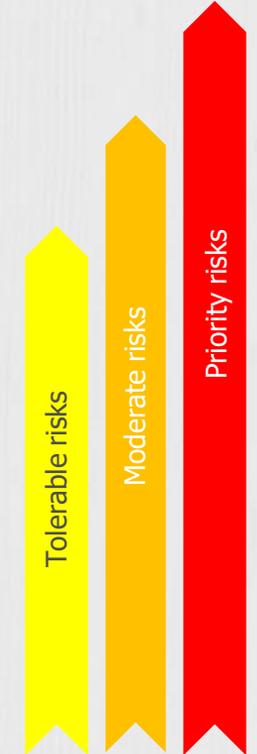
- Approves the model and policy for comprehensive risk management.
 - Monitoring and follow-up on risks that may affect corporate validity and their management measures.
- Board of Directors Agreement 136, Article 3, risk functions

Senior Management*

- Manages sustainability and risks under the parameters defined by the Board and its Committees. Composed of the CEO and Chief Officers of Institutional Relations, Risks & Compliance, Energy Transmission, and Roads.
- Articles 38 and 42 of the Bylaws

* Climate Change Task Force: led by Corporate Risk, Sustainability, Operations, Planning, and Roads management. Develops actions, guidelines, and projects to be implemented by ISA companies. In turn, each company forms its work team according to the project to be developed.

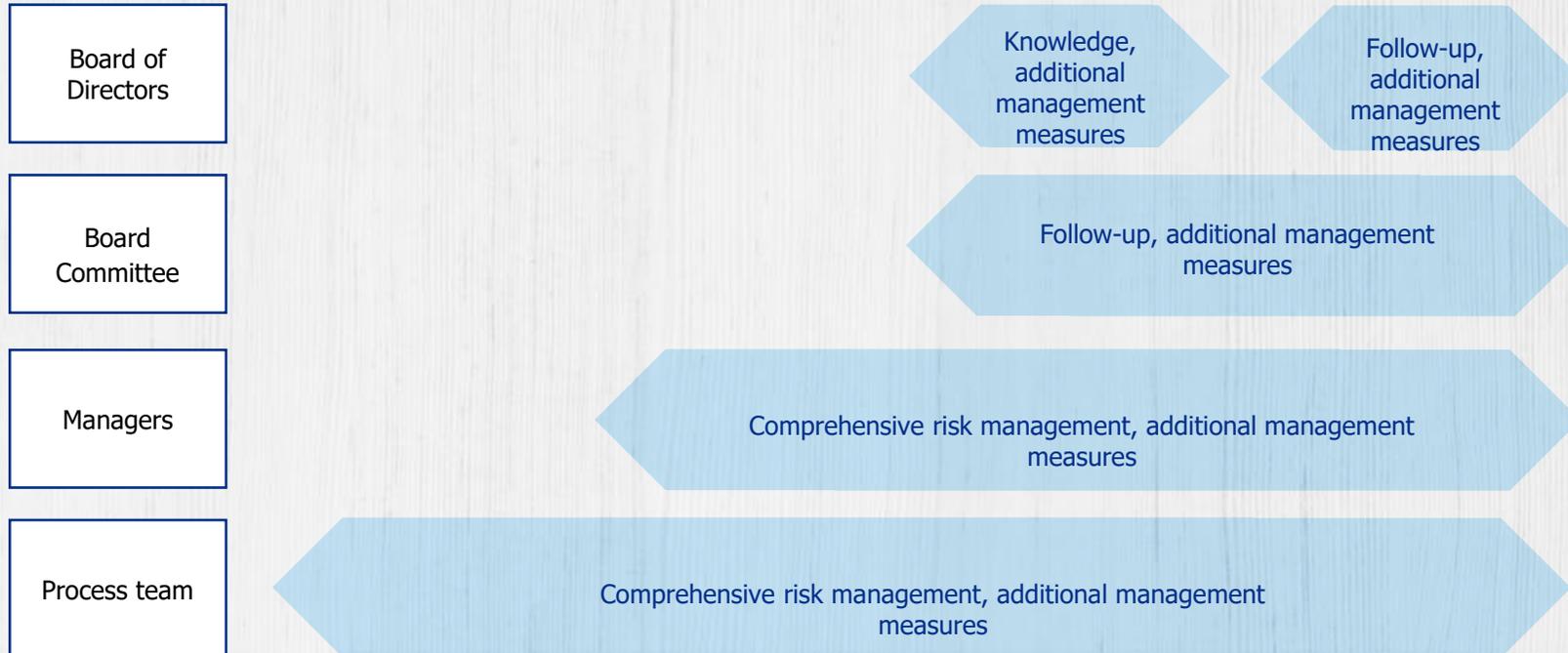
Follow-up and escalation scheme



Climate-related risks

Board of Directors – Corporate Bylaws, article 34, paragraph 38: <https://isasapaginaswebisa001.blob.core.windows.net/paginawebisawordpress/2022/05/2022-ESTATUTOS-INGLE%CC%81S.pdf>
 Agreement 129, Corporate Governance, Sustainability, Technology, and Innovation Committee https://isasapaginaswebisa001.blob.core.windows.net/paginawebisawordpress/2022/06/Acuerto-129-de-2022-Modificacio%CC%81n-ReglamentoComite%CC%81GobiernoCorporativoSostenibilidadTecnologi%CC%81aeInnovacion_VF_en.pdf
 Agreement 128, Audit and Risk Committee [Acuerdo-136_Modificaci%CC%81n-ReglamentoFuncionamientoComiteAuditoria-Riesgos_VF_en.pdf](https://isasapaginaswebisa001.blob.core.windows.net/paginawebisawordpress/2022/06/Acuerto-136-Modificaci%CC%81n-ReglamentoFuncionamientoComiteAuditoria-Riesgos_VF_en.pdf) (windows.net)

Governance with risk in mind



The Board of Directors periodically monitors **(at least once a year)** the risks that are relevant to the entire organization through the Audit and Risk Committee.

It also reviews and approves risk prioritization criteria annually, establishing the appetite and tolerance of ISA and its companies for business and operations.

Each ISA company applies the risk cycle and then generates a roadmap that includes measures for identification, assessment, and management. This information is updated and consolidated on a quarterly basis.

Risk escalation is related to their prioritization criteria. Climate change risks are integrated into ISA's risk management system.

Governance of climate change risks



Board Oversight:

At ISA, climate governance issues are defined and monitored collectively by the Climate/Sustainability/ESG (Corporate Governance, Sustainability, Technology, and Innovation Committee) and the Audit and Risk Committee, respectively.

Corporate Governance, Sustainability, Technology, and Innovation Committee: guides the Board in the adoption, monitoring, and improvement of sustainable practices when making environmental, social, and economic dimensions; ensures that sustainability is a way of doing business, a cultural attribute, and a fundamental part of the long-term strategy of ISA and its companies; proposes the corporate strategy for sustainability management to the Board of Directors; evaluates and ensures that sustainability management is aligned with materiality, reputation, risk management, and business strategy analyses; suggests the adoption of best practices on Sustainable Development Goals (SDGs) to the Board of Directors; analyzes and follows up on national and international best practices in sustainability and recommends the implementation of those considered appropriate; approves and follows up on the application of the Environmental Policy; and assesses and gives recommendations on ISA companies' initiatives to address the risks and opportunities derived from climate change.

Audit and Risk Committee: monitors ISA and its companies' main risks (including climate risks) according to the comprehensive risk management model and its governance.

The climate change issue is escalated to these two bodies, and both report to the Board of Directors on their performance.

The functions and responsibilities of the Audit and Risk Committee focus on governance, culture, monitoring, and performance of the Comprehensive Risk Management.

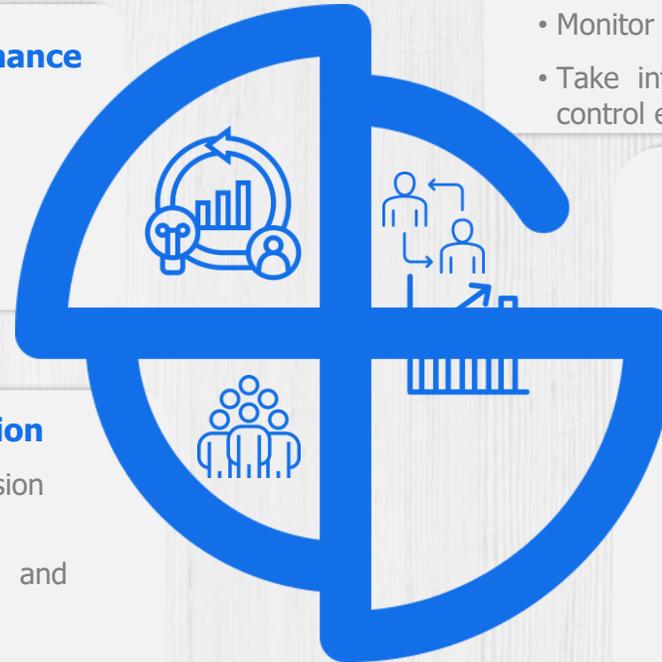


Corporate governance

- Approve and periodically review the policy, manual, prioritization criteria, and monitoring indicators.
- Review and evaluate the integrity and adequacy of the risk management operation.

Culture and communication

- Promote an organizational culture of risk-based decision making.
- Involve business unit leaders in reporting risks and trends in their respective business units.



Monitoring

- Promote relationships with audit and compliance.
- Monitor the information reported by stakeholders.
- Take into account recommendations made by supervisory authorities and control entities.

Performance

- Promote the development of the model according to strategic objectives.
- Analyze and evaluate risk control systems and tools.
- Identify and assess emerging risks.
- Monitor and follow up on the main risks and their management measures, taking into account the risk monitoring and escalation scheme.
- **Review and follow-up on reports and work plans**
- Recommend additional measures for Expost analyses.
- Ensure proper management of crises resulting from the materialization of risks.

The Committee's responsibility for climate risk management:

1. Review and evaluate the methodology defined for climate risk identification and assessment.
2. Participate in the definition of actions (adaptation plans) for managing these risks.
3. Monitor the evolution of risks and adaptation plans to evaluate management.



Key players in the management of climate risks and opportunities in ISA



Roles and responsibilities

Besides the corporate governance plan that involves the Board of Directors and board committees, at the senior management level, ISA leads and guides risk management through the following chief officers:

Climate Change Team

- Chief **Energy Transmission** Officer:
 - Operations Management
 - Business Planning Management
- Chief **Institutional Relations** Officer:
 - Sustainability Management
 - Corporate Communications Management
- Chief **Risk and Compliance** Officer:
 - Risk Management
- Chief **Corporate Finance** Officer
- Chief **Roads** Officer
- Chief **Strategy** Officer

	R Responsable	A Aprueba	C Comunica	I Informa
	Marco de referencia	Contexto, Valoración, Tratamiento, Monitoreo y Comunicación	Análisis Expost	Aseguramiento
Junta Directiva	A	C*	C*	I
Comité Corporativo	C	A	A	I
VP Riesgos y cumplimiento	R	C	C	C
Auditoría	I			R
VP	C	R	R	C
Direcciones	I	R	R	C
Equipos	I	R	R	C

C* Conocimiento, seguimiento del riesgo y propuesta de medidas de administración adicionales

Climate risk management entails the work of a **multidisciplinary team**, considering its scope and importance

Key players in the management of climate risks and opportunities in ISA



Responsibilities:

Along with the governance structure that involves the Board of Directors and its committees, at the senior management level, ISA leads and guides the Group's companies through the Climate Change Team, which belongs to the Chief Institutional Relations Officer (through the Corporate Sustainability Department), the Chief Risk and Compliance Officer (through the Risk Department), the Chief Energy Transmission Officer (through the Operations and Business Planning Departments), and the Chief Roads Officer.

The Climate Change Team conducts studies and develops guidelines on climate issues for the companies of the ISA Group, and each company has its own climate change teams made up of different areas, which are structured according to the study or project to be developed.

Sessions held in 2024



Subject	Month	Committee
Key Sustainability Issues: including Climate Change	March	Governance, Sustainability, Innovation, and Technology Committee
ISA and its companies' climate change roadmap	June	Governance, Sustainability, Innovation, and Technology Committee
Conexión Jaguar program (climate change opportunity)	July	Governance, Sustainability, Innovation, and Technology Committee
TBG advances: emissions reduction	October	Governance, Sustainability, Innovation, and Technology Committee
Managing and addressing physical risks from climate change	October	Audit and Risk Committee

In the committees where all the chief officers participate, the topics to be addressed in the Board of Directors committees are discussed

Sessions held in 2024



ACTA 40 COMITÉ DE GOBIERNO CORPORATIVO, SOSTENIBILIDAD, TECNOLOGÍA E INNOVACIÓN (GSTI)

Acta No.:	40	Fecha:	21 de junio de 2024
Tema:	Comité de GSTI sesión ordinaria No. 40		
Lugar/Modalidad:	Oficina de ISA Bogotá / Presencial		
Hora de inicio:	10:00 a. m.	Hora fin:	1:00 p. m.

El comité manifestó que ISA debe desarrollar una gestión institucional y regulatoria que permita evidenciar los desafíos de la transición energética y el cambio climático en los sectores y negocios de ISA.

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Igualmente, solicitó analizar la aplicación para ISA de la ley 1715 de 2014 en su artículo 30, modificada por el artículo 237 de la Ley 2294 de 2023, sobre el componente de eficiencia energética en el marco de las metas de reducción de emisiones. La Administración manifestó que verificará lo correspondiente frente a las instalaciones de ISA en relación con las auditorías energéticas que contempla la normatividad señalada.

ACTA 43 COMITÉ DE GOBIERNO CORPORATIVO, SOSTENIBILIDAD, TECNOLOGÍA E INNOVACIÓN (GSTI)

Acta n.º:	43	Fecha:	19 de septiembre de 2024
Tema:	Comité de GSTI sesión ordinaria n.º 43		
Lugar/Modalidad:	Oficina de ISA Bogotá / Presencial		
Hora de inicio:	10:00 a. m.	Hora fin:	12:00 m.

acuerdan las metas, revisan cuál sería su contribución al cumplimiento por medio de la construcción de los NBPSAP (*National Biodiversity Strategies and Action Plans*), los cuales detallan las estrategias y planes de acción nacionales para la biodiversidad y los mecanismos de implementación de las metas nacionales. Cada dos años, durante la conferencia de las partes, los países revisan el estado de avance de dichas metas.

El comité solicitó hacerle seguimiento a la gestión integral de la biodiversidad, con énfasis en las acciones implementadas de acuerdo con la jerarquía de la mitigación, los avances de las metas que se tengan definidas y las cifras clave que den cuenta del progreso.

El comité recomendó a la Administración hacer más evidentes las acciones en torno a la biodiversidad y frente a la meta planteada a 2050, además de aclarar que ya se están ejecutando acciones significativas.

Finalmente, solicitó empezar a cuantificar las cifras de cada línea de negocio en afectaciones a la biodiversidad.

Sessions held in 2024



COMITÉ DE AUDITORIA Y RIESGOS DE ISA ACTA N°169



El día 17 de octubre de 2024 se llevó a cabo la sesión No.169 del Comité de Auditoría y Riesgos de ISA, con el siguiente orden del día:

Tema	Carácter
1. Aprobación orden del día de la sesión	Decisorio
2. Aprobación acta Comité No. 168	Decisorio
3. Informe Gestión de Riesgos	Seguimiento
4. Informe Gestión de Cumplimiento	Seguimiento
5. Varios	Informativo

Miembros Comité de Auditoría y Riesgos de ISA:

Camilo Zea	Miembro de Junta Directiva - Presidente Comité
Lucía Cristina Díaz	Miembro de Junta Directiva
David Riaño	Miembro de Junta Directiva
Luis Ferney Moreno	Miembro de Junta Directiva
Carlos Raúl Yepes	Miembro de Junta Directiva

Invitados de la Administración:

Nombre	Cargo
Jorge Andres Carrillo Cardoso	Presidente (e) ISA
Carlos Ignacio Mesa Medina	Vicepresidente Auditoría y Secretario del Comité
Gabriel Jaime Melguizo	Vicepresidente Negocio Transmisión Energía
Nicolas Genoni	Vicepresidente de Riesgos y Cumplimiento
Nelson Javier Mesa	Director Operaciones Corporativas
Pablo Javier Franco	Experto en Regulación

b. Gestión y desafíos ante los riesgos físicos generados por el cambio climático:

Se presentó un análisis de los eventos de riesgos para la infraestructura eléctrica de ISA y sus empresas, derivados del cambio climático; con una visión de uno (1) a tres (3) años, en los que se destacan como probables impactos:



Acta N° 169 Comité de Auditoría y Riesgos ISA

A 2030 se estima que:

- 27% de la infraestructura en Colombia podría tener aumentos de temperatura que reducirían la capacidad de transmisión.
- 11% de las torres podrían estar sujetas a vientos superiores a 100 km/h.
- 0.3% de las subestaciones podrían estar afectadas por inundaciones.

Y a 2050:

- Aumento de la temperatura que podría reducir la capacidad de transmisión en un 5% en promedio, y hasta un 10% en algunas líneas.
- 2.5% de las subestaciones en Colombia podrían estar amenazadas por inundaciones.

Principales medidas de administración implementadas:

- Desarrollo de modelos para otras amenazas priorizadas (deslizamientos, descargas atmosféricas, incendios e inundaciones marinas), con implementación de una hoja de ruta climática que integra acciones de mitigación y adaptación.
- Análisis y priorización de riesgos.
- Medidas de adaptación para los activos eléctricos.
- Alineación de los procesos de continuidad de negocio y atención de emergencias.
- Actualización de planes financieros e instrumentos de gestión.



ADOPTING THE TCFD RECOMMENDATIONS

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

We redefined leadership in the energy transition. We connected territories, communities, and generation with sustainable development. Environmental protection and the fight against climate change were incorporated into the ISA 2040 strategy:

ENERGÍA VIDA TRANSICIÓN

Tres palabras que definen la esencia de nuestra estrategia:

ISA es energía, es la fuerza que impulsa la transformación hacia un futuro sostenible, con el compromiso de priorizar la vida en todas sus formas para asegurar **una transición energética resiliente, segura, limpia y justa.**



- ❑ The strategic horizon to 2040 is aligned with the great challenges of humanity to ensure a timely contribution.
- ❑ The achievement of sustainable development goals is validated.
- ❑ The balance is made on the fulfillment of the objectives of COP 21.



- ❑ We understand that our planet is fragile, so we must take care of it.
- ❑ We understand that our actions, however small, can have an impact.
- ❑ We are certain that our well-being is linked to everyone else's.
- ❑ We are committed to engaging constructively and responsibly in decision-making.

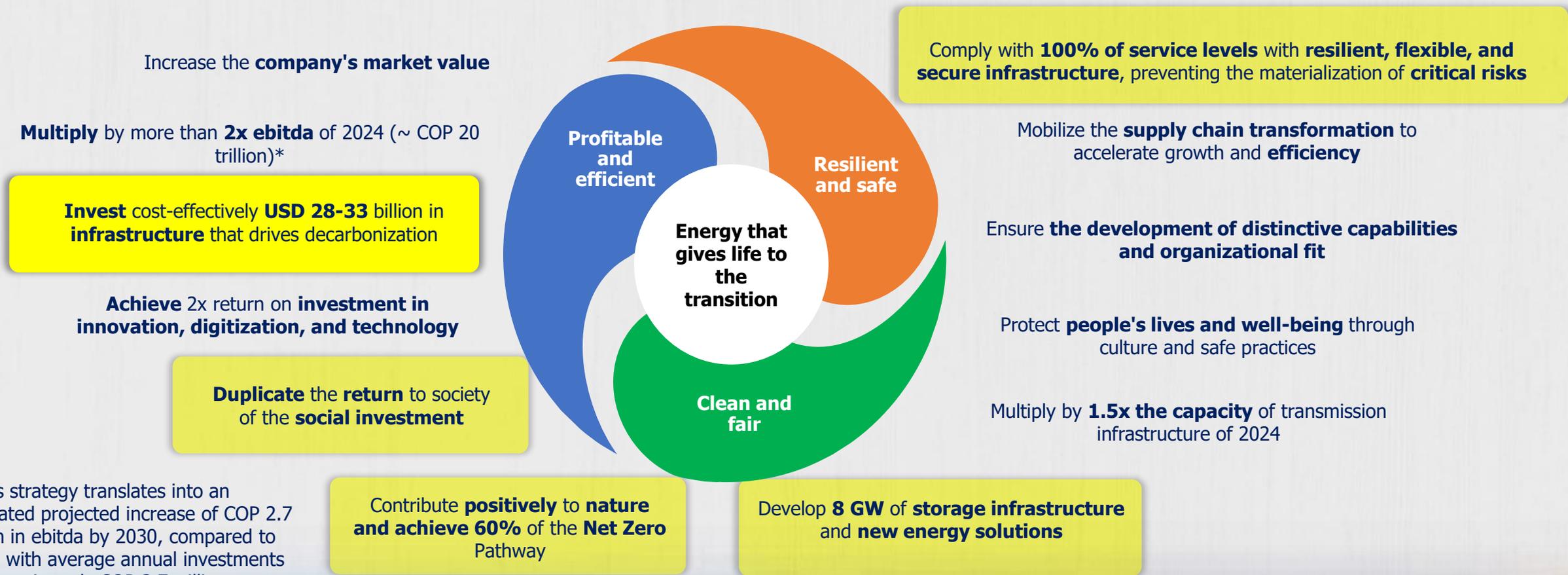
c) Resilience of the organization's strategy

The ISA 2040 corporate strategy is the basis to structure the Climate Strategy to manage Climate Change as a factor of sustainability for partners, society, and the planet.



c) Resilience of the organization's strategy

The environmental dimension of ISA 2040 is reflected in specific high-level strategic objectives



* This strategy translates into an estimated projected increase of COP 2.7 trillion in ebitda by 2030, compared to 2024, with average annual investments of approximately COP 3.7 trillion over the last 5 years (2020-2024).

Comprehensive risk management policy of the ISA Group to manage risks that may hinder strategic objectives

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

OBJECTIVE

Declare the corporate decisions by the Integral Risk Management through which it seeks to generate and protect the value of ISA and its companies, the integrity of corporate resources, and the continuity and sustainability of the business.

STATEMENTS

- ISA companies understand risks as uncertain events that could 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 manner through the implementation of the comprehensive risk management model, described in the Risk Management Manual, which is aligned with best practices and methodologies. The model is evaluated periodically and is fed back with internal and external experiences.
- The management of the risks to which ISA and its companies are exposed is discussed with the different departments of the companies, promoting a holistic view of the risks.
- Decision-making at different levels of the organization relies on the results of risk management, which is considered cross-cutting and priority for companies.
- We promote the individual commitment of our employees through active identification, assessment, treatment, monitoring, and communication of risks in the execution of our activities.
- Business continuity management and crisis management are promoted for processes and scenarios critical to corporate continuity and sustainability.

* To identify risks, internal and external sources related to the value chain (including upstream and downstream activities) are considered.

c) Resilience of the organization's strategy: Physical scenario analysis

Climate Roadmap: Adaptation – Physical Risks in Energy Transmission

1 Preliminary analysis of risk scenarios

RCP 2.6 (SSP1 2.6)
RCP 4.5 (SSP2 4.5)
RCP 7.0 (SSP3 7.0)
RCP 8.5 (SSP5 8.5)

2024...

2024 - 2025

2 Risk analysis and prioritization



Model development for **prioritized threats** (landslides, extreme winds, fires, floods, high temperatures - MVP-)

Supplement to the analyses carried out with third parties

3 Adaptation measures for assets

2025...

- ✓ Develop and adopt **models** for **non-prioritized threats**
- ✓ **Validate the results** of the models with results from other companies and peers
- ✓ **Update of MVP models** based on the higher accuracy of the modeling
- ✓ Align with **business continuity and emergency handling** processes

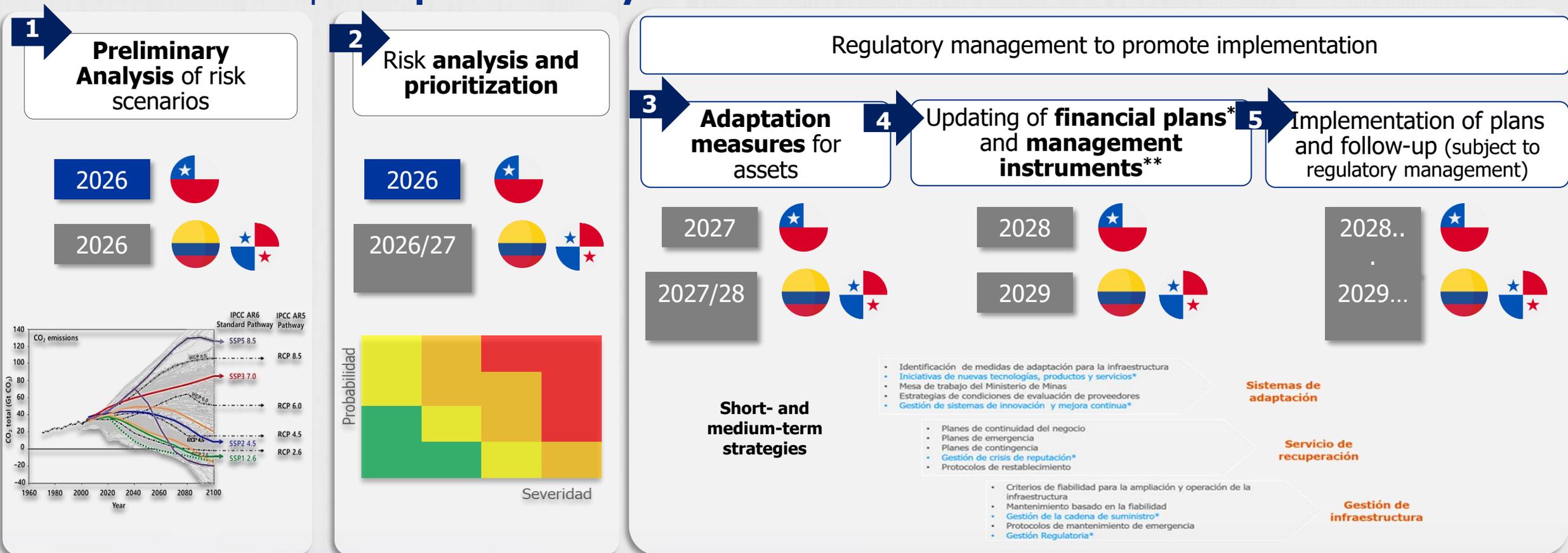
4 Updating of **financial plans and management instruments**

2026...

5 Implementation of plans and follow-up

2026...

Climate Roadmap: Adaptation – Physical Risks and Business Transition in Roads



Once the adaptation measures have been identified, the cost of implementation and the financial impact if the risk materializes are estimated. This is followed by the evaluation and prioritization of interventions, which is subject to regulatory management and agreements with the grantor (complementary works, complementary agreements, etc.). Management instruments**: any emergency, contingency, maintenance, or risk management plans established. Once phases 1, 2, and 3 have been completed, it is recommended that these plans be updated according to results obtained (Maintenance plan subject to regulatory management).

Roadmap for updating ISA and its companies' transition risks

2025



1

Identify risks

Develop descriptive exercises of a progression of events that could lead to different futures. These offer a greater capacity to propose changes to the system by including critical factors that challenge it, such as cultural or value changes or characteristics of institutions.

● **Implemented**

2

Identify and define the scenarios to be used

Develop descriptive exercises of a progression of events that could lead to different futures. These offer a greater capacity to propose changes to the system by including critical factors that challenge it, such as cultural or value changes or characteristics of institutions.

● **Implemented**
NGFS scenarios: Current policies and Net Zero 2050

3

Document and **itemize** the information

Critical input parameters, assumptions, and analytical choices for the scenarios used, especially if they relate to key areas such as policy assumptions, time assumptions, and correlation with identified risks.

◐ **In process**

4

Analyze the **impacts** on the business

The impacts can affect different financial items: raw material costs, operating costs, revenues, supply chain, etc. How do the results of the different scenarios affect my strategy and finances? What are the main sensitivities of my business? At this point in the process, these questions must be answered.

○ **Not started**

5

Evaluate the **possible responses**

The results may be such that part of the business portfolio benefits from a specific scenario, while another part may lose value in one or all of the scenarios analyzed. This is why the company's responses may require changes to the business model, portfolio composition, or technology investments, for example. Although this is not a definitive roadmap, as scenarios do not predict the future, these conclusions can be useful for prioritizing risk management in certain business activities. Use the results to make realistic decisions to manage the risks and opportunities identified.

○ **Not started**

Time Horizons of Climate Opportunities and Risks in ISA

- Long term: 7 to 15 years (2031 – 2040)
- Medium term: 4 to 6 years (2028 – 2030)
- Short term: 1 to 3 years (2025 – 2027)

Time horizons were defined **according to the management tools** set out in the **Strategy 2040 of ISA and its companies**

Strategy

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



Physical risks

The evaluation of the acute and chronic risks associated with climate change **is updated as the development and evolution of the downscaling analysis carried out by the companies** progresses, based on the different scenarios proposed by the IPCC. For these analyses, a proprietary methodology was designed based on the calculation of threats, using global databases on various physical phenomena, such as CHIRPS, ERA5, NOAA, CORDEX, WORLDCLIM, NEXT-GDDP-CMIP6, among others

Type of	Risks	Business/All geographies	Description of the main impact	Impact assessment SSP2 4.5. Effectiveness of adaptation plan not included	Impact assessment SSP5 8.5. Effectiveness of adaptation plan not included
Acute	Land slides		<ul style="list-style-type: none"> • Infrastructure failure and impact on energy service • Increased maintenance costs • Increased direct costs 	Short-term Medium [0.5% - 1% ebitda]	Short-term High [1% - 3% ebitda]
	Extreme winds			Medium-term High [1% - 3% ebitda]	Medium-term Very high [3% - 4% ebitda]
	Atmospheric discharges			Long-term Very high [3% - 4% ebitda]	Long-term Very high [3% - 4% ebitda]
			Short-term Medium [0.5% - 1% ebitda]	Short-term Medium [0.5% - 1% ebitda]	
			Medium-term High [1% - 3% ebitda]	Medium-term High [1% - 3% ebitda]	
			Long-term Very high [3% - 4% ebitda]	Long-term Very high [3% - 4% ebitda]	
			Short-term Low [<0.5% ebitda]	Short-term Low [<0.5% ebitda]	
			Medium-term Low [<0.5% ebitda]	Medium-term Low [<0.5% ebitda]	
			Long-term Low [<0.5% ebitda]	Long-term Low [<0.5% ebitda]	

Quantitative financial impact:

- Low
- Medium
- High
- Very high

Time horizon:

Short term: 1 to 3 years - Medium term: 2030 (4 to 6 years) - Long term: 2040 (7 to 15 years)

Business Unit

Electric Power Roads Telecom



Strategy

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



Physical risks

Type	Risks	Business	Description of the main impact	Impact assessment SSP2 4.5 does not include effectiveness adaptation plan	Impact assessment SSP5 8.5 Does not include effectiveness of adaptation plan
Chronic	High temperatures		<ul style="list-style-type: none"> • Increased direct costs • Increased financial compensation for service failures • Infrastructure failure and impact on energy service 	Short-term Low [<0.5% ebitda] Medium-term Long-term High [1% - 3% ebitda]	Short-term Low [<0.5% ebitda] Medium-term Long-term High [1% - 3% ebitda]

Quantitative financial impact:

- Low
- Medium
- High
- Very High

Time horizon:

Short term: 1 to 3 years - Medium term: 2030 (4 to 6 years) - Long term: 2040 (7 to 15 years)

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Transition risks

The energy transition, in response to climate change, requires significant investments in transmission infrastructure. It is estimated that between 2020 and 2050 this infrastructure will grow 2.5 x. The new ISA 2040 strategy focuses on consolidating transmission as a key enabler of the energy transition, as well as on developing new businesses in the energy sector.

The definition of this strategy and the updating of climate-related transition risks/opportunities are based on projections from two scenarios developed by the International Energy Agency (IEA): the Net Zero Emissions by 2050 (NZE) Scenario and the Stated Policies (STEPS) Scenario:

Risk	Description of the risk	Business/ geography	Description of the main impact	Impact assessment - Includes effectiveness of prevention and protection measures (definitions and strategic initiatives 2040)
Regulatory	Regulation of economic mechanisms on carbon, such as carbon taxes and tradable quota schemes, environmental and licensing regulations, and mandatory reporting of greenhouse gas emissions		<ul style="list-style-type: none"> • Increased costs and timelines of new infrastructure projects • Increased maintenance costs • Incentives and benefits for clean, low carbon companies 	<ul style="list-style-type: none"> • Short-term ● Low [<0.5% ebitda] • Medium-term ● High [1% - 3% ebitda] • Long-term ●
Legal	Increase in climate-related litigation proceedings filed in court by owners, municipalities, states, insurance companies, shareholders, and public interest organizations		<ul style="list-style-type: none"> • Increased number of licenses and requirements for granting • Denominations for activities relating to emission impacts and tree logging 	<ul style="list-style-type: none"> • Short-term ● Low [<0.5% ebitda] • Medium-term ● • Long-term ● Medium [0.5% - 1% ebitda]

Semi-quantitative financial impact:

- Low
- Medium
- High
- Very High

Time horizon:

Short term: 1 to 3 years - Medium term: 2030 (4 to 6 years) - Long term: 2040 (7 to 15 years)

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Transition risks

Risk	Description of the risk	Business/geography	Description of the main impact	Impact assessment - Includes effectiveness of prevention and protection measures (definitions and strategic initiatives 2040)
Technological	The speed, scale, and success of useful technologies, alongside the scope of transformation (or disruption), and technological changes will affect (positively or negatively) competitiveness, and it is likely that new technology will displace old systems.	 	<ul style="list-style-type: none"> • Increased direct costs 	<ul style="list-style-type: none"> • Short-term ● • Medium-term ● • Long-term ● <p style="text-align: right;">Low [$<0.5\%$ ebitda] Medium [$0.5\% - 1\%$ ebitda]</p>
Market	The change in user preferences could make it harder to get materials in some markets, where some suppliers might focus on supplying customers in economies that are further along in the transition.	 	<ul style="list-style-type: none"> • Changes in the need for energy transmission and roads services • Increased direct costs • Growth impact 	<ul style="list-style-type: none"> • Short-term ● • Medium-term ● • Long-term ● <p style="text-align: right;">Low [$<0.5\%$ ebitda] Medium [$0.5\% - 1\%$ ebitda]</p>
Social	Changes in the perception of customers or the community regarding the organization's contribution to the transition to a low-carbon economy or its distancing from it.	 	<ul style="list-style-type: none"> • Higher direct costs • Project delays 	<ul style="list-style-type: none"> • Short-term ● • Medium-term ● • Long-term ● <p style="text-align: right;">Low [$<0.5\%$ ebitda] Medium [$0.5\% - 1\%$ ebitda]</p>

During **2025**, a **calibration** of transition risks is being carried out using the **climate scenario modeling** developed by the **NGFS** to carry out the quantitative financial assessment.

Semi-quantitative financial impact:

- Low
- Medium
- High
- Very High

Time horizon:

Short term: 1 to 3 years - Medium term: 2030 (4 to 6 years) - Long term: 2040 (7 to 15 years)

Business Unit

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Strategy



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Opportunities

ISA identifies investment opportunities worth between USD 25 and 30 billion, which will double ebitda. Financial opportunities explain the increase in ISA's ebitda to 2040. These opportunities fall under the "Regulation" and "Other climate-related opportunities" categories. They rely on the relevant position of ISA and its companies in the electric power market in Colombia, Peru, Chile, and Brazil to take advantage of opportunities in transmission (ISA's core business).

Opportunity	Description of the opportunity	Business/geography	Description of the main impact	Positive impact - time horizon
Resilience	<ul style="list-style-type: none"> • Initiatives for new technologies, products, and services • Ministry roundtable for adaptation measures 		<ul style="list-style-type: none"> • Revenue growth • Return on investment in low carbon technologies • Lower maintenance costs 	<ul style="list-style-type: none"> • Short-term ● • Medium-term ● • Long-term ●
Resource efficiency	<ul style="list-style-type: none"> • Moving to more efficient buildings • Recycling 		<ul style="list-style-type: none"> • Reducing direct costs 	<ul style="list-style-type: none"> • Short-term ● • Medium-term ● • Long-term ●
Products and services	<ul style="list-style-type: none"> • Development of new products or services through R&D&i. • Ability to diversify business activities 		<ul style="list-style-type: none"> • Revenue growth 	<ul style="list-style-type: none"> • Short-term ● • Medium-term ● • Long-term ●

Semi-quantitative financial impact:
● Low ● Medium ● High ● Very High

Time horizon:
 Short term: 1 to 3 years - Medium term: 2030 (4 to 6 years) - Long term: 2040 (7 to 15 years)

Business Unit
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Relationship between transition risks and opportunities and the 2040 strategic objectives

The 2040 strategic choices are a management response to the risks and opportunities of transition arising from climate change	Risks					Opportunities		
	Regulatory	Legal	Technological	Market	Social	Resilience	Resource efficiency	Products and services
Multiply the ebitda by more than 2 x	•	•	•	•		•		•
Contribute positively to nature and achieve 60% of the Net Zero pathway	•		•	•	•		•	
Increase the market value of the company	•	•	•	•	•	•		•
Invest cost-effectively USD 28-33 billion in infrastructure that drives decarbonization	•		•	•	•	•		•
Achieve 2 x return on investment in innovation, digitization, and technology	•		•			•		•
Double the return of social investment in society					•		•	
Develop 8 GW of storage infrastructure and new energy solutions	•		•	•	•	•		•
Multiply by 1.5 x the capacity of transmission infrastructure of 2024	•		•	•	•	•		•
Protect the life and well-being of people through culture and safe practices			•		•			
Ensure the development of distinctive capabilities and organizational fit					•			
Mobilize supply chain transformation to accelerate growth and efficiency			•	•				
Fulfill 100% of the service levels with resilient, flexible, and secure infrastructure , preventing the materialization of critical risks	•	•	•			•		•

Strategy

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

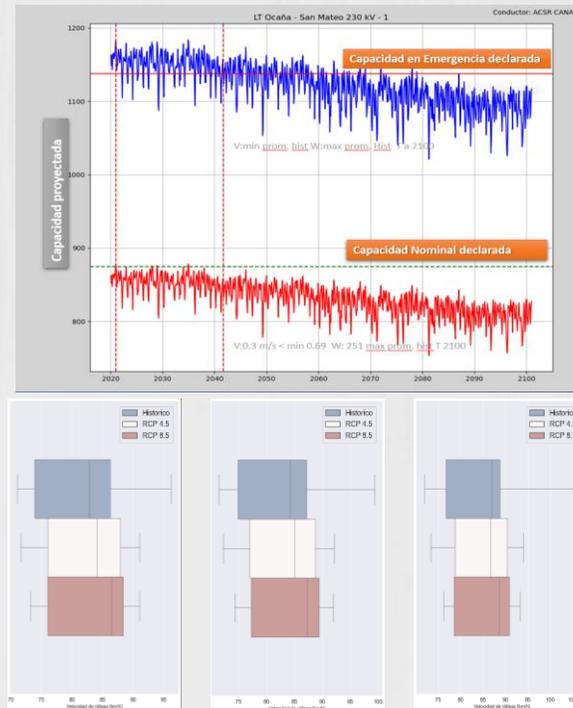
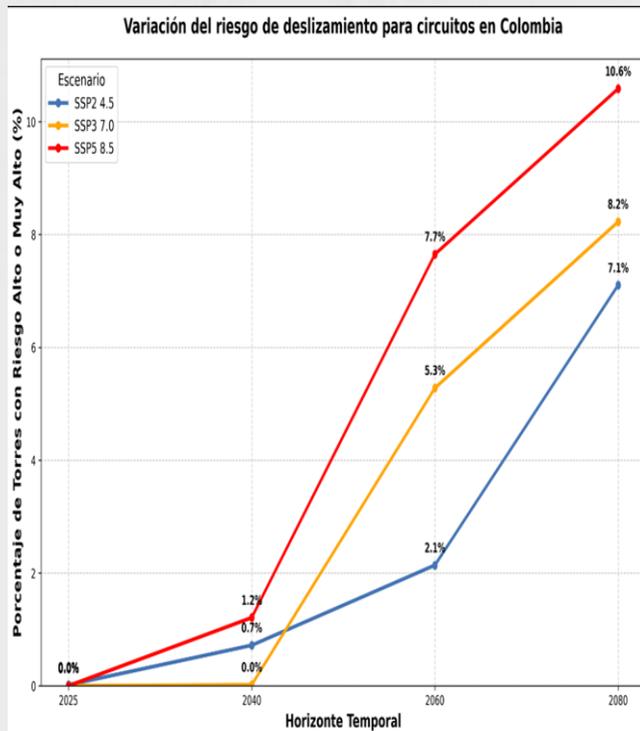


Relationship between transition risks and opportunities and business risks

Business Risk Categories	Climate-related Transition Risks					Climate-Related Opportunities		
	Regulatory	Legal	Technological	Market	Social	Resilience	Resource efficiency	Products and services
Legal		•		•	•		•	
Political	•	•		•	•			
Regulatory	•		•	•	•	•		•
Market, liquidity, credit	•					•		•
Market, competition, mergers, acquisitions	•		•	•	•		•	•
Business operations	•		•	•	•	•		•
Project design and construction	•		•	•	•	•		•
Supply chain			•	•		•		
Cybersecurity and information technologies			•			•		
Human capital and labor relations						•		
Environmental	•		•	•	•	•		•
Property		•			•			
Natural phenomena and extreme weather changes	•		•		•			
Social					•			

c) Resilience of the organization's strategy: Physical scenario analysis

By 2024, ISA Colombia, Brazil, Peru, and Chile continued to develop descriptive and predictive analyses of significant risk and opportunity scenarios related to climate change in their operations, based on the climate science and management outlined in the IPCC's Sixth Assessment Report (AR6¹) for different climate threats.



Impacts of temperature and winds in Colombia for different scenarios.

New analyses of climate variables and subsystems were made based on their trends, extreme events, and climate correlations with the selected domains.

Analyzing **CMIP5³** scenarios with CPR and SSP trajectories of the IPCC, the following risk increase was identified:

- Significant reduction in declared transmission capacity in the event of extreme temperatures.
- Greater impact of flooding in some regions due to higher level of overflows caused by extreme rainfall.
- Massive landslides in regions with increased rainfall.
- Increased fire risk in certain regions.
- Wind hazards in some system assets.
- Increased risk of atmospheric electric discharges.

By 2024, all ISA assets operated by INTERCOLOMBIA have Disaster Risk Management Plans. These integrate climate change adaptation strategies and are aligned with territorial plans, including community participation.

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

c) Resilience of the organization's strategy: Analysis of physical scenarios / Colombia / Extreme temperatures

By 2024 in Colombia, there are impact analyses available for physical threats. The assessment of physical risks is carried out considering the climate scenarios, time horizons, and geographical location of the assets, as illustrated in the following images:

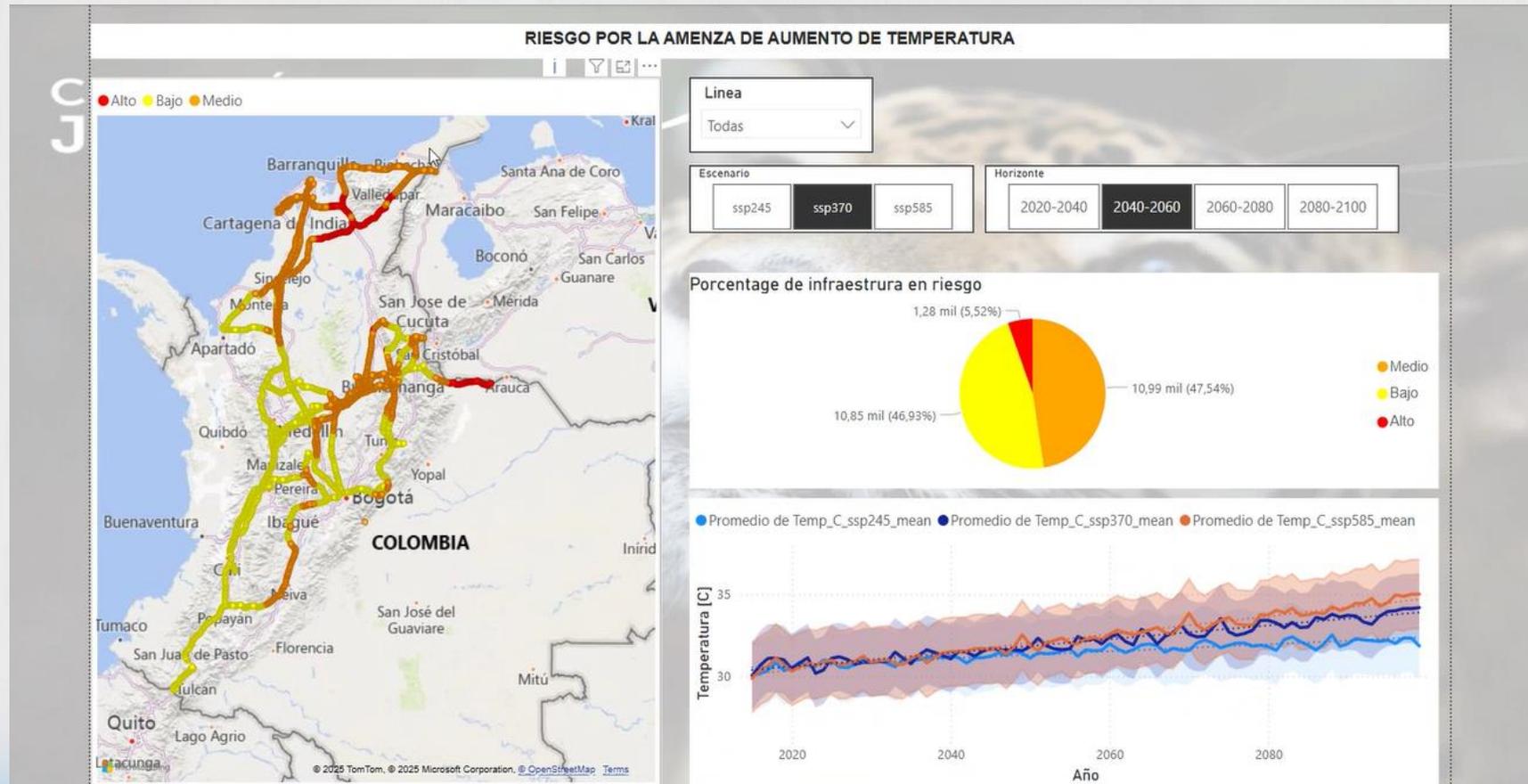


Illustration of circuits and their sections at risk of reduction in their transmission capacity due to the **increase in extreme temperatures** at some times in the selected period (2040 – 2060) according to the scenario in the image (SSP 3-7.0)

Strategy



c) Resilience of the organization's strategy: Physical Scenario Analysis / Colombia / Extreme Winds

For 2024, ISA Colombia has an impact analysis for physical threats available. The assessment of physical risks is carried out considering the climate scenarios, time horizons, and geographical location of the assets as illustrated in the following images:

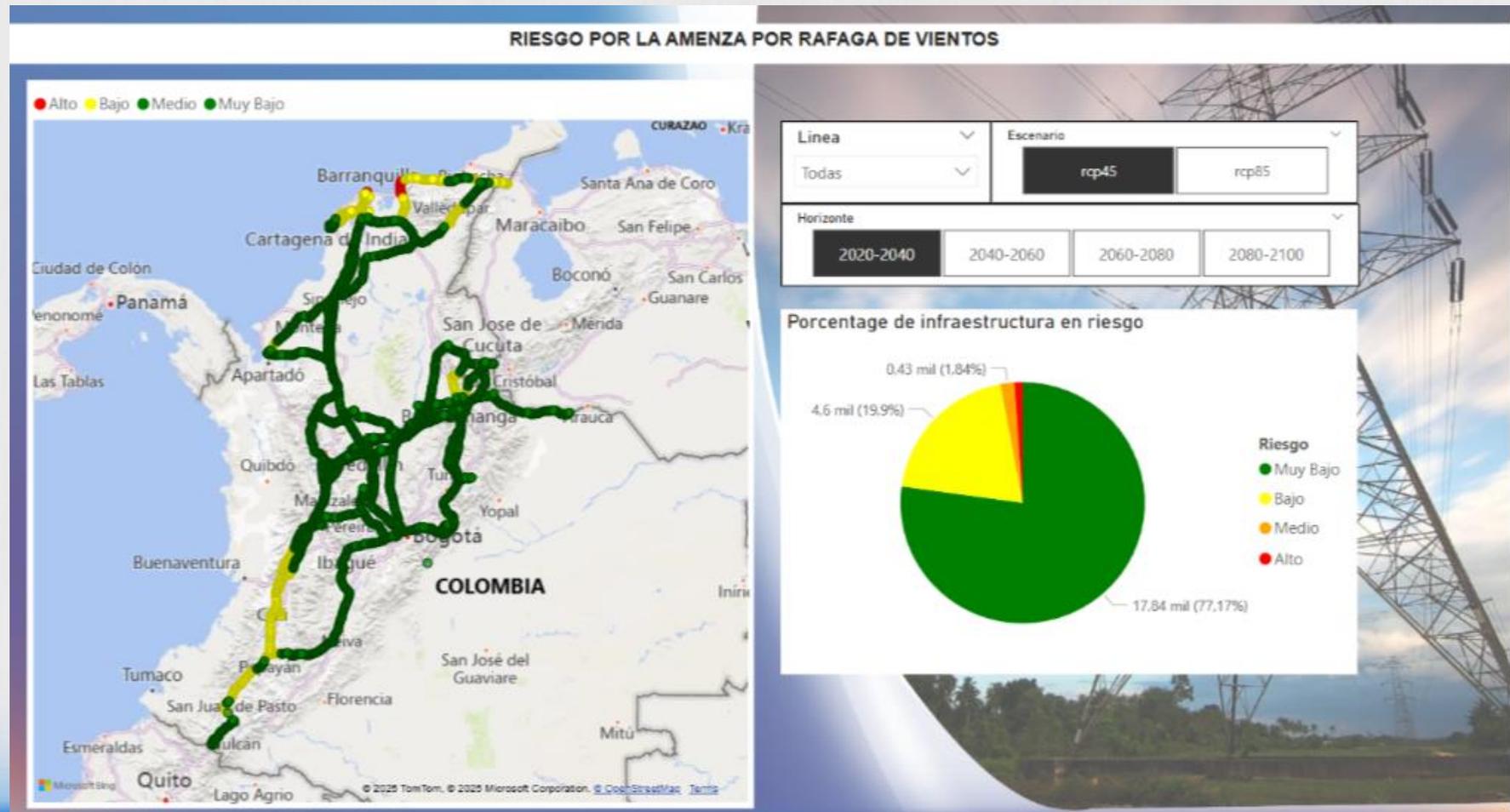
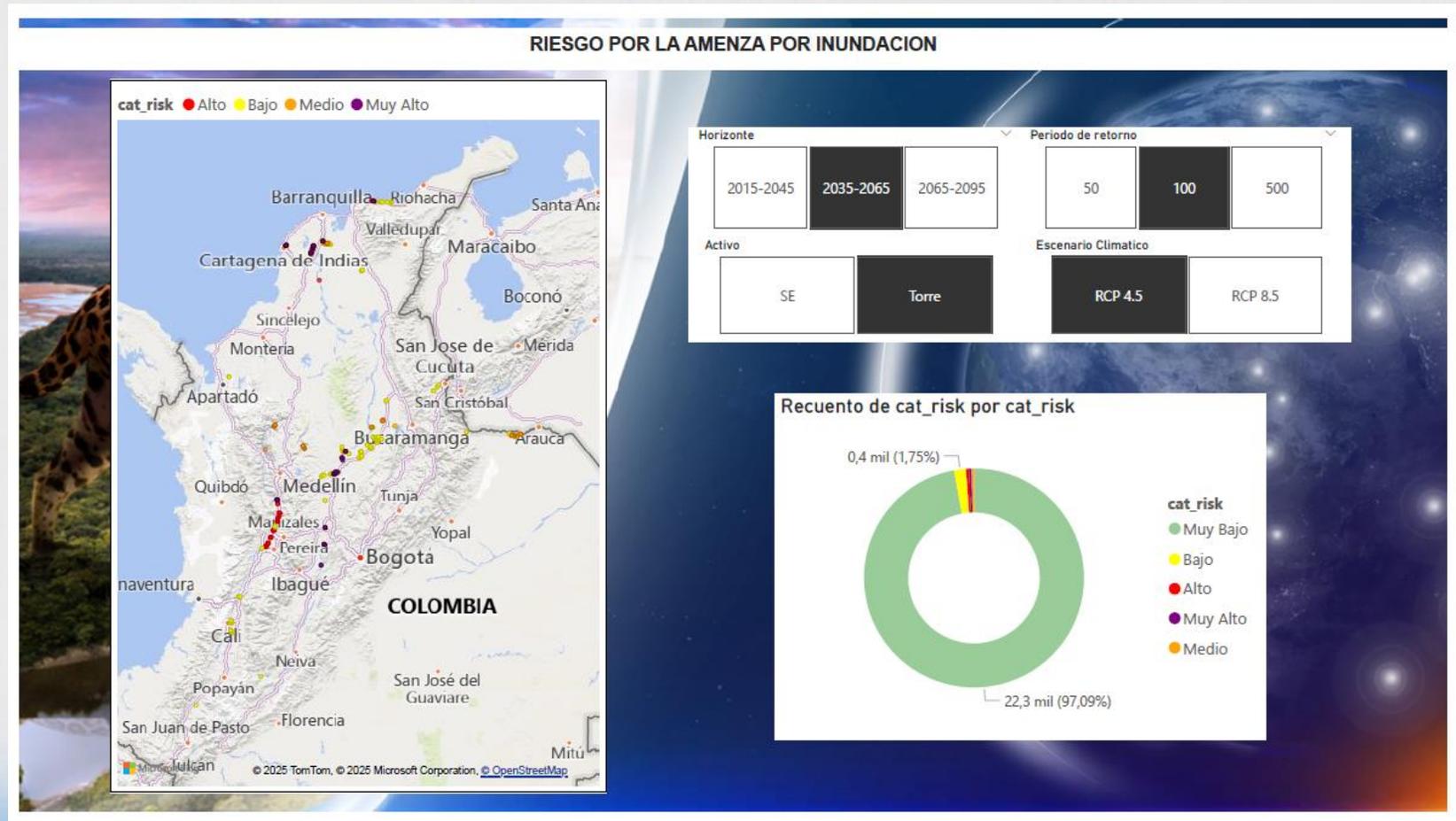


Illustration of circuits and their sections at reliability risk in their structural capacity due to **extreme wind gusts** at some points in the selected period (2020 – 2040) according to the image scenario (RCP 4.5)

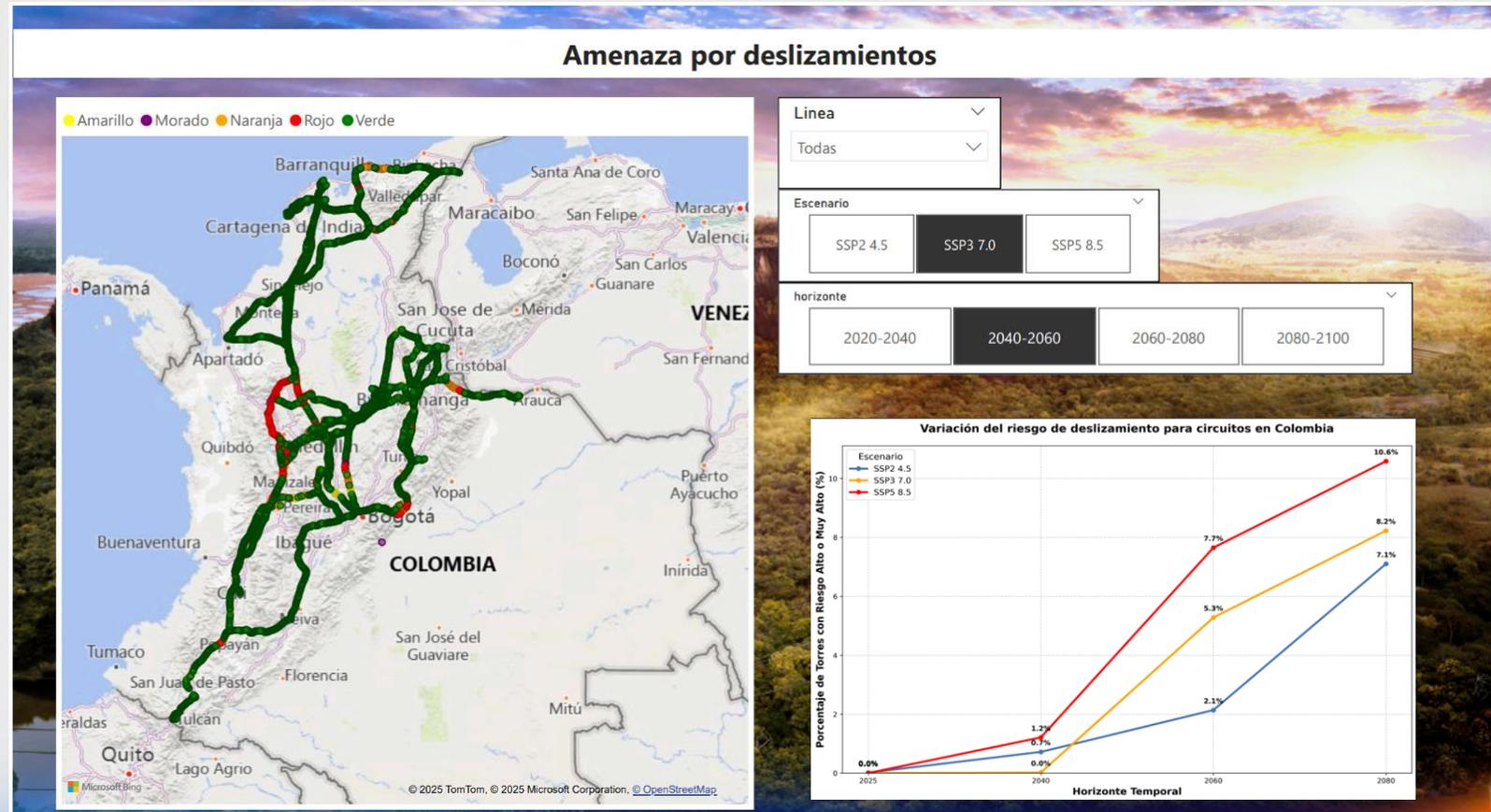
For 2024, ISA Colombia has an impact analysis for physical threats available. The assessment of physical risks is carried out considering the climate scenarios, time horizons, and geographical location of the assets as illustrated in the following images:

Illustration of circuits and their sections at risk of severe flooding that could affect the reliability of the electrical service due to **extreme rains** at some times in the selected period (2035 – 2065) according to the scenario in the image (RCP 4.5)



c) Resilience of the organization's strategy: Physical Scenario Analysis / Colombia / Landslides

For 2025, ISA Colombia has an impact analysis and an analysis of other physical threats, such as landslides, available. The assessment of physical risks is carried out considering the climate scenarios, time horizons, and geographical location of the assets as illustrated in the following images:

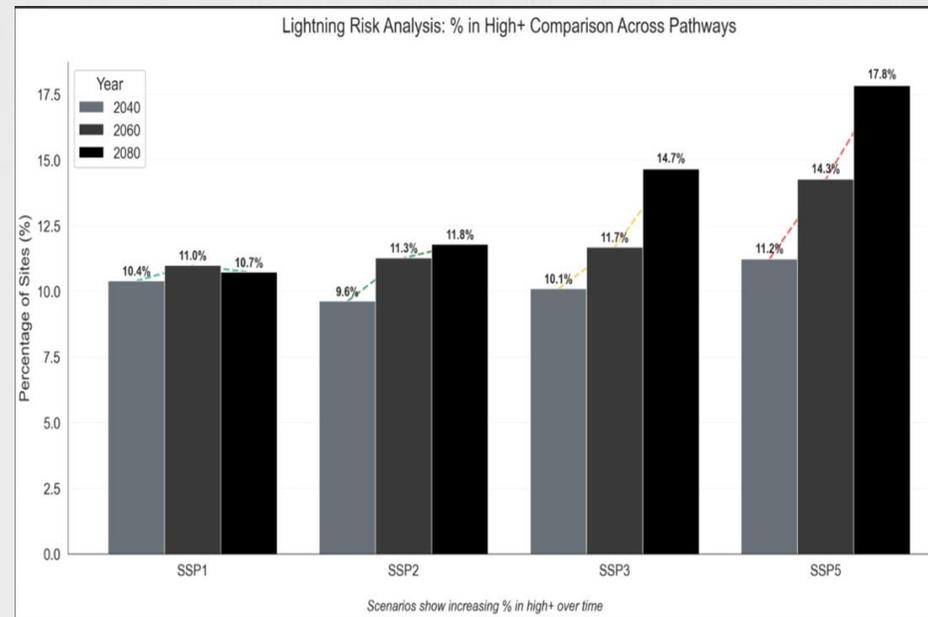


Circuits and their sections at risk of **landslides** that could affect the reliability of the electrical service due to extreme rains at some times of the selected period (2040 – 2060) according to the scenario of the image (SSP 3-7.0)

The projected **increase in atmospheric electric discharges** is illustrated in the areas of Peru where ISA Energía del Perú's electrical infrastructure is located, which could see increases of up to around 18%

In Peru, analyses were made of different threats, such as:

- Atmospheric Electric Discharges (AEDs)
- Fire Weather Threat Index (FWI)
- Extreme Temperatures (high) (ETH)
- Extreme Temperatures (low) (ETL)
- Wind Gusts (WG)
- Rain Flooding (RF)
- Fluvial Flooding (FF)
- Coastal Flooding (CF)
- Mass Movements (MM)
- Debris Flows (DF)



In 2024, ISA Energía Perú designed a methodology for assessing the risk of landslides and fluvial migration resulting from climate change that could affect transmission infrastructure.

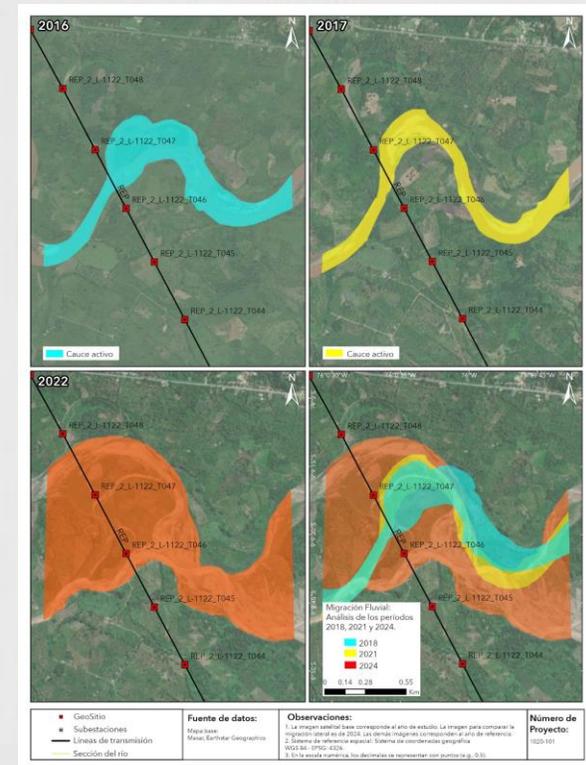
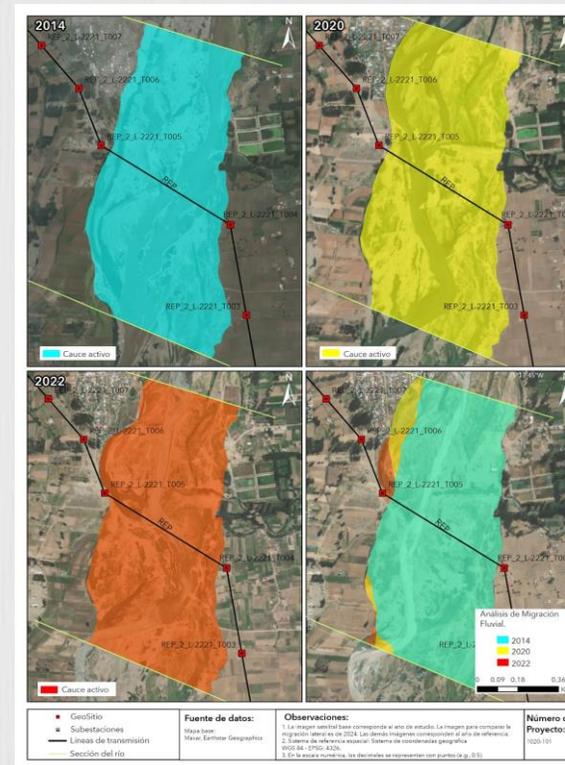
Landslide risk assessment methodology, composed of:

Level 1 uses global and national datasets (e.g., NASA, CENAPRED), high-resolution elevation models, and extreme precipitation data (ERA5) to model susceptibility to fast and slow mass movements. Machine learning techniques (e.g., neural networks, logistic regression, SVM) classify asset risk into five categories and assess how changes in precipitation patterns trigger landslides.

Level 2 refines the analysis using regional/local precipitation thresholds and high-resolution terrain data (e.g., LiDAR) to support early warning systems and asset risk assessment.

Fluvial Migration Risk Assessment Methodology:

This study assesses the risk of fluvial migration and erosion near energy infrastructure. It identifies areas where dynamic river systems can shift laterally or erode banks, which could compromise the stability of assets. The analysis focuses on the behavior of floodplains and the proximity of assets to active river channels.



Strategy



c) Resilience of the organization's strategy: Physical Scenario Analysis / Brazil / Winds

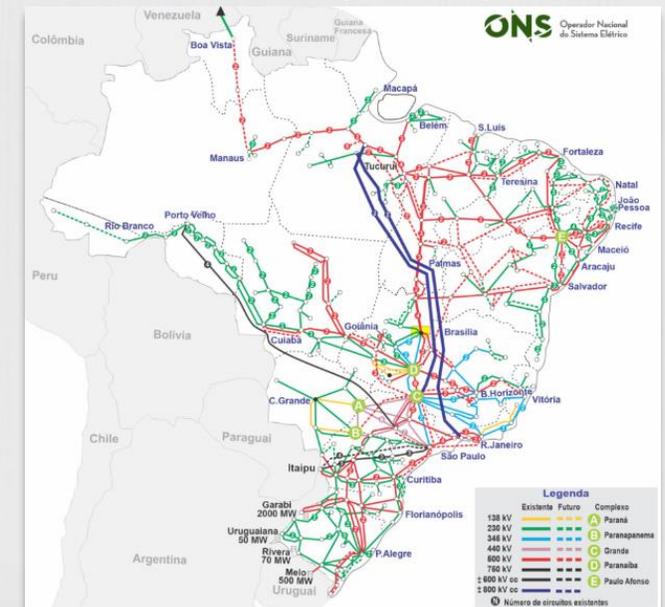
In **2024, Brazil** advanced in the identification of **assets and critical zones** highly vulnerable to **extreme wind gusts** in different time horizons.

The oldest infrastructure is at **high risk of compromise** with 3-sec. burst rates that will exceed 200 km/h.



Circuits at reliability risk in their structural capacity due to **extreme wind gusts** have been identified on several occasions in the selected period (2020 – 2030), depending on the scenario (SSP 3-7.0)

Through the **advances** in the **analysis and assessment of physical risks**, **Brazil's adaptation plans** are calibrated and adjusted



Strategy

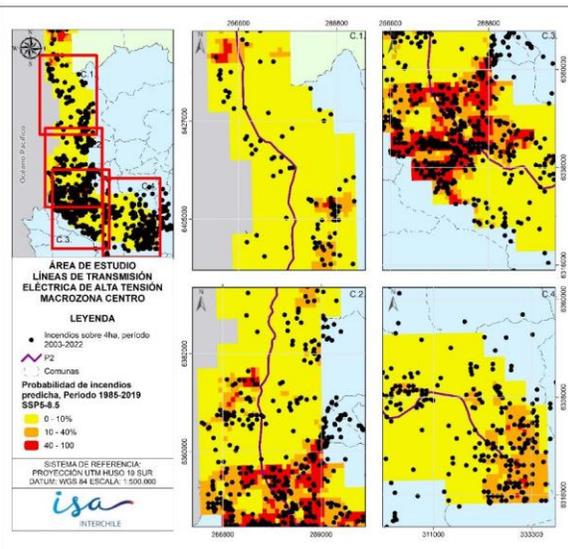


c) Resilience of the organization's strategy: Physical Scenario Analysis / Chile / Fires

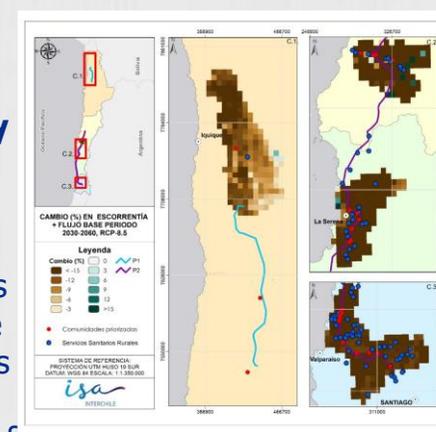
For ISA Chile's infrastructure, the physical variables of temperature, precipitation, and extreme winds were projected for the different types of threats in the different possible scenarios of the selected time ranges. The most critical vulnerability variable was analyzed, and the tolerance threshold was chosen for each hazard analyzed. Analytical and statistical models were created to define the level of threat combined with vulnerability, and to define the assets at risk. For regions of influence, in addition to impacts on assets, impacts on surrounding communities were analyzed.

The level of risk for the assets was qualified and the analysis was summarized in recommendations for adaptation to the most significant risks. The following images illustrate the risks to infrastructure and neighboring communities from fires and temperature increases:

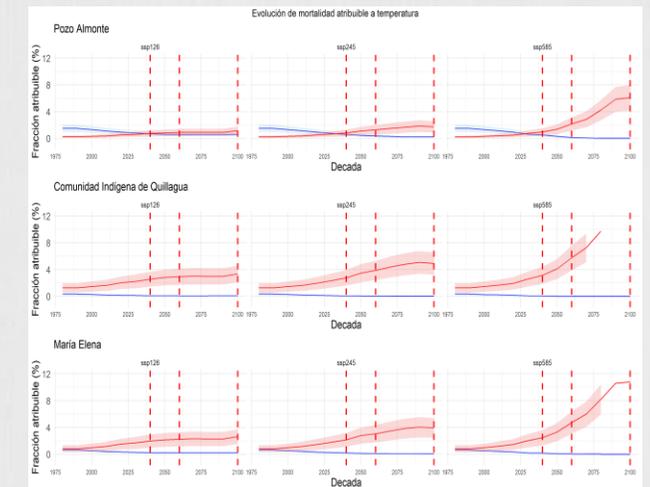
*Risk associated with **fire conditions, inhabitability, and mortality due to extreme heatwaves: Drought and heat-related events, such as wildfires, inhabitability, and heatwaves, have serious consequences for the value chain, operations, assets, and neighboring communities. The increase in temperature and relative humidity poses a serious risk to high-voltage transmission, jeopardizing the energy security of multiple socio-economic sectors in the country. These extreme events influence population mortality associated with the viability of operations.***



Fire probability predicted by the RF model in the Central macrozone in Chile, mean of models, SSP5-8.5, together with fires observed in 2003-2022.



Change in runoff + baseflow at Hydrogeological sectors of common use ("Sectores Hidrogeológicos de Aprovechamiento Común" or SHAC) linked to communities of interest to INTERCHILE and the Rural Sanitation Services.



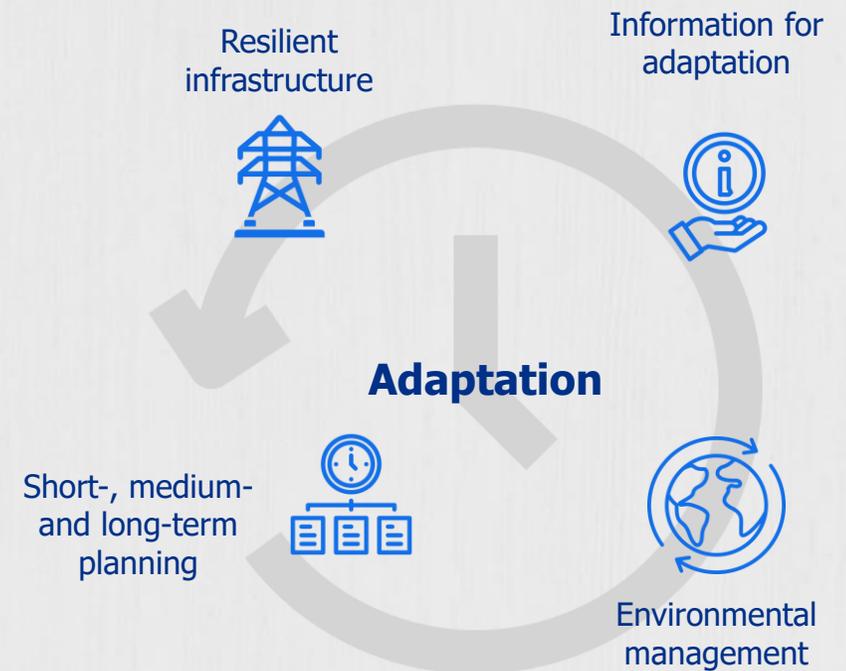
Evolution of excess risk of death in communities in the northern macrozone of Chile.

The results obtained are making it possible to prioritize the areas and assets most vulnerable to climate change and to adjust adaptation plans for critical assets and neighboring communities.

Calibration and adjustment of adaptation plans based on climate change scenario modeling.

ISA has developed a methodology for small-scale analysis of the physical risks associated with climate change. This tool has allowed **to delve into previous studies, facilitating the identification of risks at the level of specific assets.** As a result, it has been possible **to design and calibrate the most accurate adaptation plans,** aligned with different climate scenarios and considering various time frames (short, medium, and long term). Based on the results obtained, adaptation plans are adjusted in the different strategic lines, both for assets in operation and for new projects, including, for example, civil works and the reinforcement of structures.

Adaptation plans include measures to prevent or minimize potential harm, as well as to take advantage of opportunities in the short, medium, and long term. **These plans are reviewed annually, both for the current year and for the next five years,** based on the results of the climate risk assessment obtained from climate scenario modeling.



The climate-related risk assessment and adaptation plan adjustments are a source of information for **financial planning** processes. Adaptation plans represent:



1% of the company's operating revenues for 2024

System adaptation, service restoration, and infrastructure management measures

- Identification of adaptation measures for infrastructure.
- Initiatives for new technologies, products, and services*.
- Roundtable of the Ministry of Mines.
- Strategies for assessing supplier conditions
- Innovation management and continuous improvement systems*.

Adaptability systems

- Business continuity plan.
- Emergency plans.
- Contingency plans.
- Reputation crisis management*.
- Resumption protocols.

Recovery service

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

Infrastructure management

*Measures for transition risks

Climate change scenarios for the assessment of transition risks arising from climate change are assessed under these scenarios:

For transition risks, four scenarios are constructed: more probable, less probable, more favorable, and less favorable. Each of them considers variables such as the optimization of energy resources, decarbonization, adaptation to the market, more active social participation, and digital transformation. With these scenarios, a morphological space is constructed. Also, motor skills and dependencies are estimated and prioritized according to strategic criteria, defining their implications and planning the response.

DDPP and IRENA

Variables or questions	Hypothesis or Response		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

The **transition risk assessment** was updated considering the **new 2040 strategy of ISA and its companies**. It is important to mention that the strategic exercise considered some **key assumptions of the IRENA and DDPP decarbonization scenarios** and were supplemented by the global transmission growth perspectives and projections available at the International Energy Agency (IEA): **Net Zero Emissions Scenario for 2050 (NZE) and the Stated Policy Scenario (STEPS)**

c) Resilience of the organization's strategy

Detail of proposed adaptation measures

Measures have been implemented to mitigate climate risks, including corrective maintenance, emergency communication protocols, access to contingency specialists, and an operational plan supported by substation technicians and engineers. In addition, ISA maintains various insurance policies to transfer these risks and cover potential damages.

Climate variable involved	Consequences for transmission infrastructure	Proposed adaptation measures
<p>Heat waves / high temperatures</p> <ul style="list-style-type: none"> <input type="checkbox"/> Droughts <input type="checkbox"/> Decreased water supply <input type="checkbox"/> Decreased vegetation cover 	<ul style="list-style-type: none"> <input type="checkbox"/> Transmission restrictions and electrical safety risk to persons. <input type="checkbox"/> Increased maintenance such as inspections and washing. <input type="checkbox"/> Accelerated degradation of assets (useful life) due to increased contamination, corrosion. <input type="checkbox"/> Damage to equipment due to increased air pollution caused by loss of vegetation surrounding the substations, which used to be a natural barrier. 	<ul style="list-style-type: none"> <input type="checkbox"/> DLR line redesign and monitoring. <input type="checkbox"/> Increased restocking. <input type="checkbox"/> Change materials in component design (e.g. insulation). <input type="checkbox"/> Increased maintenance (washing, painting, replacing components, etc.). <input type="checkbox"/> Increase inspections. <input type="checkbox"/> Gumming or insulation replacement in substations and transmission lines.
<p>Landslides on steep slopes</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Falling of transmission lines. <input type="checkbox"/> Impact on land belonging to or adjacent to substations. 	<ul style="list-style-type: none"> <input type="checkbox"/> Modification of civil works. <input type="checkbox"/> Construction of complementary protective civil works (erosion). <input type="checkbox"/> Construction of line variants. <input type="checkbox"/> Tower re-cementation. <input type="checkbox"/> Nature-based measures.
<p>Strong winds</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Falling of transmission lines. <input type="checkbox"/> Change of design and operation criteria. <input type="checkbox"/> Shutdowns/triggers. 	<ul style="list-style-type: none"> <input type="checkbox"/> Reinforcement of transmission lines in structures of sections where required according to technical studies. <input type="checkbox"/> Strengthening of contingency plans. <input type="checkbox"/> Additional inspections and monitoring. Increased maintenance. <input type="checkbox"/> Regulatory management (number of outflows per year, wind projections). <input type="checkbox"/> Design according to climate projection.

Detail of proposed adaptation measures

Climate variable involved	Consequences for transmission infrastructure	Proposed adaptation measures
<p>Heavy rains Floods</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Tower flooding: reduction of safety distances, lightning strikes. <input type="checkbox"/> Weakening of foundations due to rivers and streams. <input type="checkbox"/> Substation flooding. <input type="checkbox"/> Need to shut down the substation. 	<ul style="list-style-type: none"> <input type="checkbox"/> Construction of barriers and pumping in the substation. <input type="checkbox"/> Modify installation conditions (e.g., switchboards). <input type="checkbox"/> Modification of civil works. <input type="checkbox"/> Increased inspections and maintenance (frequency, costs, e.g. divers). <input type="checkbox"/> Construction of complementary protective civil works (erosion). <input type="checkbox"/> Construction of line variants. <input type="checkbox"/> Tower re-cementation. <input type="checkbox"/> Strengthening contingency plans.
<p>Forest fires</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Shutdowns/tripping. 	<ul style="list-style-type: none"> <input type="checkbox"/> Construction of firewalls (substations). <input type="checkbox"/> Additional inspections and monitoring. <input type="checkbox"/> Regulatory management (number of outflows per year). <input type="checkbox"/> Strengthening contingency plans.
<p>Increase in number of storms</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Change of design and operation criteria. <input type="checkbox"/> Lines out of service. 	<ul style="list-style-type: none"> <input type="checkbox"/> Change of design and operation criteria Installation of arresters on transmission lines. <input type="checkbox"/> Regulatory management (number of outflows per year). <input type="checkbox"/> More specialized and coordinated scientific-technical studies.

Detail of proposed adaptation measures

Climate variable involved	Consequences for transmission infrastructure	Proposed adaptation measures
Climate change overview	<ul style="list-style-type: none"> ❑ Changes in the energy system planning and operation. ❑ Changes in the maintenance strategy. ❑ Changes in the business model. 	<ul style="list-style-type: none"> ❑ Greater electrical expansion in renewables, interconnections, demand management, batteries. ❑ Incorporation of climate change criteria into expansion plans. ❑ OPERATION: for resupply, improve restoration, inventory management (emergency towers), etc. ❑ Communication campaigns ❑ Estimation of the implementation of management measures to the business model (profitability).
Colombian regulations	<ul style="list-style-type: none"> ❑ A possible replacement of SF6 refrigerant for the power industry is not foreseen in the medium term. ❑ Designs follow (global) standards because a more demanding design has a higher value and can affect competitiveness. 	<ul style="list-style-type: none"> ❑ ISA participates in a committee with the Colombian Ministry of Mines and Energy to prepare the Energy Sector Action Plan. ❑ Gas removal and management has been reinforced in the maintenance process. ❑ It is recommended to link the environmental requirements of biodiversity offsets to the reduction of CO2 emissions. ❑ Communication campaigns. ❑ Estimation of the implementation of management measures to the business model (profitability).

c) Resilience of the organization's strategy

Detail of proposed adaptation measures

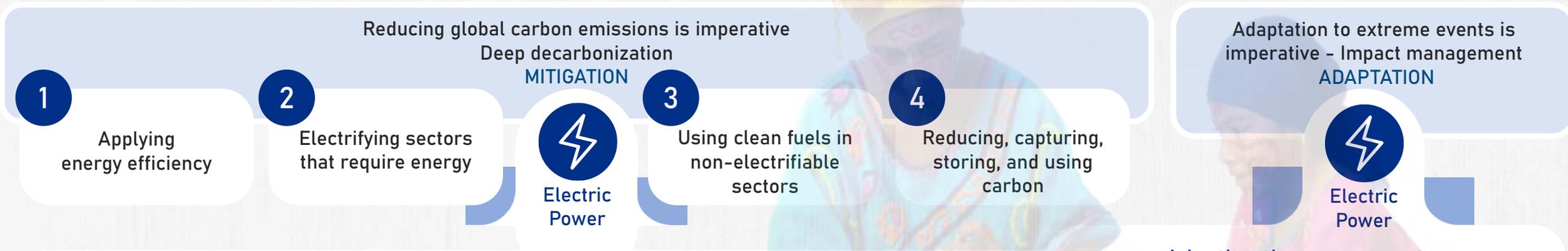
Climate variable involved	Consequences for transmission infrastructure	Proposed adaptation measures
Colombian regulations	<ul style="list-style-type: none"> ❑ Unfavorable regulatory changes. ❑ Affects competitiveness. ❑ Changes in the business model. 	<p>Contribution to the commitment with the Colombian government</p> <ul style="list-style-type: none"> ❑ Increase the country's resilience and preparedness through 10 prioritized sectoral and territorial actions to 2040. ❑ Promote the exchange of knowledge, technology, and funds to accelerate the proposed contributions to adaptation and mitigation of greenhouse gases.
Brazilian regulations	<ul style="list-style-type: none"> ❑ Unfavorable regulatory changes. ❑ Affects competitiveness. ❑ Changes in the business model. 	<p>Contribution to the commitment with the Brazilian government</p> <ul style="list-style-type: none"> ❑ The Brazilian plan seeks to implement knowledge management systems, promote research and technology for adaptation, and develop processes and tools to support government adaptation initiatives. ❑ Adaptation policies will take into account urbanization processes. ❑ Strengthen the implementation of the national water security plan and the forest code. ❑ Actions for the sustainable use of bioenergy, change in land and forest use, and energy supply.

Detail of proposed adaptation measures

Climate variable involved	Consequences for transmission infrastructure	Proposed adaptation measures
Chilean regulations	<ul style="list-style-type: none"> <input type="checkbox"/> Unfavorable regulatory changes. <input type="checkbox"/> Affects competitiveness. <input type="checkbox"/> Changes in the business model. 	<p>Contribution to the commitment with the Chilean government</p> <ul style="list-style-type: none"> <input type="checkbox"/> Recover 100,000 hectares of forest and plant another 100,000 hectares, mainly native, by 2030, subject to the legislative development of the forestry development law. <input type="checkbox"/> Chile has a National Climate Change Adaptation Plan in place, which establishes guidelines for adaptation and provides an operational structure for its coordination and implementation.
Peruvian regulations	<ul style="list-style-type: none"> <input type="checkbox"/> Unfavorable regulatory changes. <input type="checkbox"/> Affects competitiveness. <input type="checkbox"/> Changes in the business model. 	<p>Contribution to the commitment with the Peruvian government</p> <ul style="list-style-type: none"> <input type="checkbox"/> Peru's adaptation commitments are based on the National Climate Change Strategy, regional strategies, and the Climate Change Adaptation and Mitigation Action Plan.

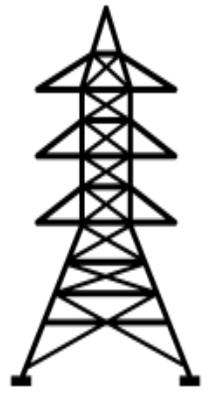
c) Resilience of the organization's strategy

Opportunities: No transmission, no energy transition for limiting the temperature increase to 1.5 °C



Reducing / eliminating emissions in the electric power sector

Adapting the energy sector



Transmission

- **Reliable:**
 - Sufficient
 - Safe
 - Resilient
 - Flexible
- Clean and sustainable
- Accessible and affordable

- A** Transmission: Capacity renovation / modernization / expansion
- B** Regional energy integration
- C** Connection: renewable generation, demand (electrification economy)
- D** Distributed energy resources: Large consumers and communities without access
- A** Other services: storage
- D** GHG management: Reduction, offsetting, and contribution

- G** Adaptation of physical risks
- H** Adaptation of transition risks

- Increased use of existing network
- New networks
- New technologies
- Environment
- Talent and organization

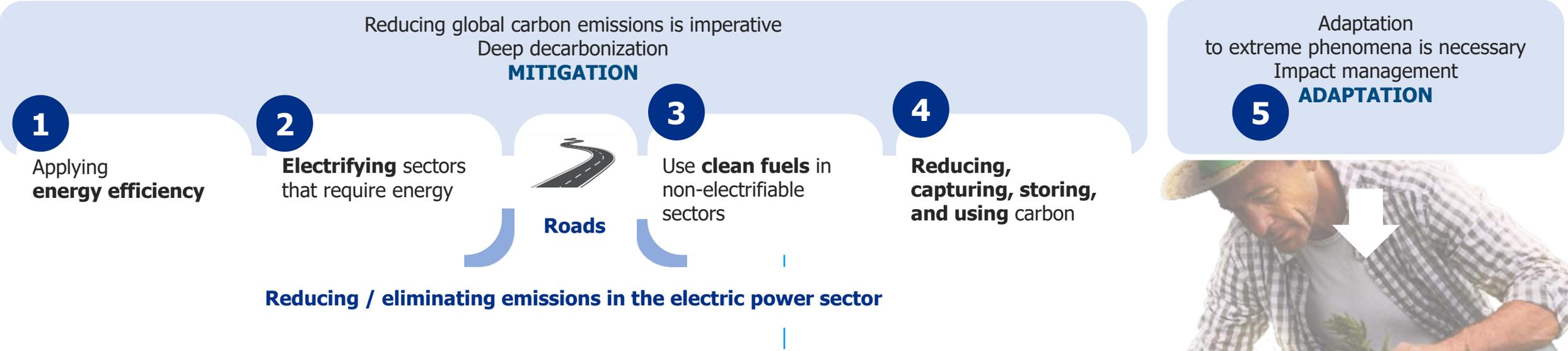


Strategy

c) Resilience of the organization's strategy



Opportunities: The contribution of road infrastructure to the energy transition goes beyond the reduction of its own emissions, as it enables in a relevant way the decarbonization of land transport and the generation



Our priorities and contribution to Roads

Roads

Actions

- A** Innovation and Circular Economy for the development of sustainable, efficient asphalt mixtures and other alternative materials
- B** Energy efficiency, LED lighting, and provisioning from clean energy sources
- C** Promote charging infrastructure for low-emission, self-sufficient vehicles in O&M
- D** Efficient, sustainable road infrastructure to decarbonize road transport
- A** GHG management: Reduction, offsetting, and contribution

F Exploring road infrastructure adaptation alternatives



Opportunities

In the opportunities associated with infrastructure, we identified:

- Development of sustainable energy and transmission line solutions with different materials that reduce the weight and height of the lines.
- Lines with superconductors without modifying the structure. This allows repowering the existing lines, increasing transportation capacity.
- Renewable energies are being used for substation lighting, and rainwater is being used for substations, with zero discharge and moisture condensers.
- Equipment monitoring: ISA tracks fires in Brazil by satellite and intends to implement this practice in other countries. In addition, as an experimental initiative, ISA uses on-line monitoring to analyze insulation contamination, monitor structural tilt, and DLR (Dynamic Line Rating) conductors.



c) Resilience of the organization's strategy

Opportunities: Sustainable and innovative programs

Initiatives that promote conscious consumption of resources and emission reduction among our stakeholders, aligned with sustainability principles.

- ISA2030 Strategy - Sustainable Value, includes among its objectives the venture into new energy businesses to diversify its business portfolio and have a positive impact on the environment through the decarbonization of the energy system.
- In the 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 for the employees that are associated with the development of projects to enable services such as large-scale energy storage and Distributed Energy Resources (DER), which directly contribute to the reduction of CO2 emissions in the energy system.
- As part of its contribution to the Sustainable Development Goals and Nationally Determined Contributions, the ISA Group has developed different types of solutions that will improve confidence in environmental markets. Solutions such as EcoGoX, Ecotrade, and Appimotion will present new opportunities for the development of sustainable projects.
- EcoGox is a platform for certification, registration, monitoring, and tracking of renewable energy certificates. It allows consumers to choose the type and origin of the energy they consume (solar, wind, hydro, etc.), issuing monthly certificates that can be used in carbon footprint audits or to demonstrate commitment to sustainability.



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



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



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

Energy storage solution

<https://acortar.link/VEIzjE>

Carbonlytics

<https://acortar.link/UBsmbe>

Communities

<https://www.isa.co/es/press/el-primer-proyecto-de-energia-renovable-para-la-paz/>

c) Resilience of the organization's strategy

Opportunities: sustainable, innovative programs

Initiatives that encourage the conscious consumption of resources and the reduction of emissions in our stakeholders, aligned with sustainability principles

- EcoTrade: pioneering platform in Latin America for trading carbon certificates. Its objective is to facilitate the trading of these certificates in a simple, secure, and traceable manner, bringing supply and demand closer together in the carbon market. It offers features such as bilateral transaction recording, certificate issuance and withdrawal, and connection to public and private platforms.
- BioRegistry: registration platform for recording and tracking units and biodiversity, seeking to preserve and restore ecosystem services, ensuring transparency in the market.
- EcoREP: develop and implement a registration platform to enable the traceability, security, and availability of information on the flow of waste materials throughout the value chain.
- Carbonlytics: this solution calculates carbon sequestration in agricultural crops and includes several stages, from project diagnosis and feasibility to the trading of carbon credits. Crop information is captured by drones.
- Appimotion: sustainable mobility app that allows employees to record their work trips, calculate avoided CO2 emissions, and accumulate points that can be redeemed for incentives. It supports carpooling, electric bike use, and ride sharing strategies, and has been used to measure emissions reductions in remote work schemes.
- Communities: La Victoria is a vulnerable community with no basic services. A solar-powered solution was installed to provide lighting, cooling, and access to water via photovoltaic pumps, intended for consumption and essential livelihood activities.



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



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



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

Energy storage solution

<https://acortar.link/VEIzjE>

Carbonlytics

<https://acortar.link/UBsmbe>

Communities

<https://www.isa.co/es/press/el-primer-proyecto-de-energia-renovable-para-la-paz/>

Opportunities: sustainable revenues

Among the countries where we operate, only Colombia has a green taxonomy (aligned with the EU taxonomy), which adoption is not mandatory. However, the Energy Transmission business unit is considered environmentally sustainable, as it contributes to meeting the environmental objectives of the countries where we operate.

Through the expansion, renewal, and modernization of transmission grids, we facilitate the growth of electricity demand (driven by a more electrified economy) and the integration of new renewable energy sources, ensuring that the energy produced from these sources reaches end users.

In recent years, the share of non-conventional renewable sources grew in the countries where we operate (Colombia, Peru, Chile, and Brazil), consolidating energy matrices composed mainly of renewables (2024: Brazil ~80%, Colombia and Chile ~70%, Peru ~60%), which means that most of the energy transmitted through our grids comes from renewable sources.

61% (revenues) of transmission projects put into operation in the last five years connected or enabled connection from renewable sources, while 39% focused on grid expansion or reinforcement to improve reliability and supply.

All of our transmission infrastructure complies with the Do No Significant Harm (DNSH) principle in relation to other environmental objectives of the taxonomy, supported by an Environmental Management System that addresses ecosystem and biodiversity conservation, water management, pollution prevention and control, and circular economy. Environmental licenses, Environmental Impact Assessments (EIA), the application of the mitigation hierarchy, and a circular economy model are the tools used by ISA to prevent or reduce negative impacts on ecosystems.

Year	2021	2022	2023	2024
Sustainable revenues	COP 8.7 trillion	COP 10 trillion	COP 10.9 trillion	COP 13.0 trillion
Total revenues	COP 11.2 trillion	COP 13.4 trillion	COP 14.2 trillion	COP 15.8 trillion
Percentage of sustainable revenues	78%	75%	77%	82%



ADOPTING TCFD RECOMMENDATIONS

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

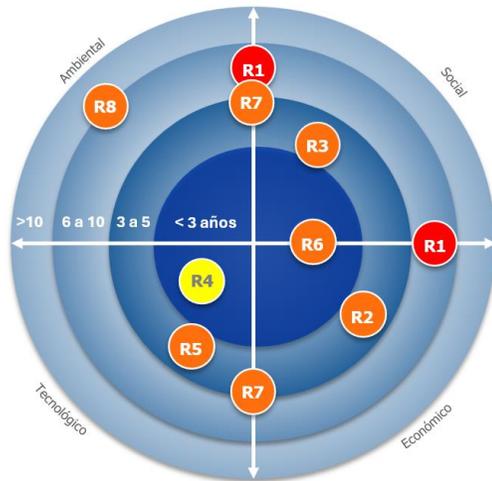
Complementary approaches to comprehensive risk management



a) Processes for identifying and assessing climate-related risks

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

Emerging risks



- 🔄 **R1.** Velocidad en la adaptación y resiliencia frente a eventos climatológicos extremos
- R2.** Transformación de las preferencias del talento humano
- 🔄 **R3.** Fragmentación geoeconómica
- R4.** Adaptación, resiliencia y desarrollo de nuevas tecnologías
- R5.** Aceleración de la inteligencia artificial
- R6.** Inestabilidad política e institucional
- R7.** Adaptación a la Transición Energética
- 🔄 **R8.** Cambio en la dinámica de la sociedad por el colapso de ecosistemas y pérdida de biodiversidad

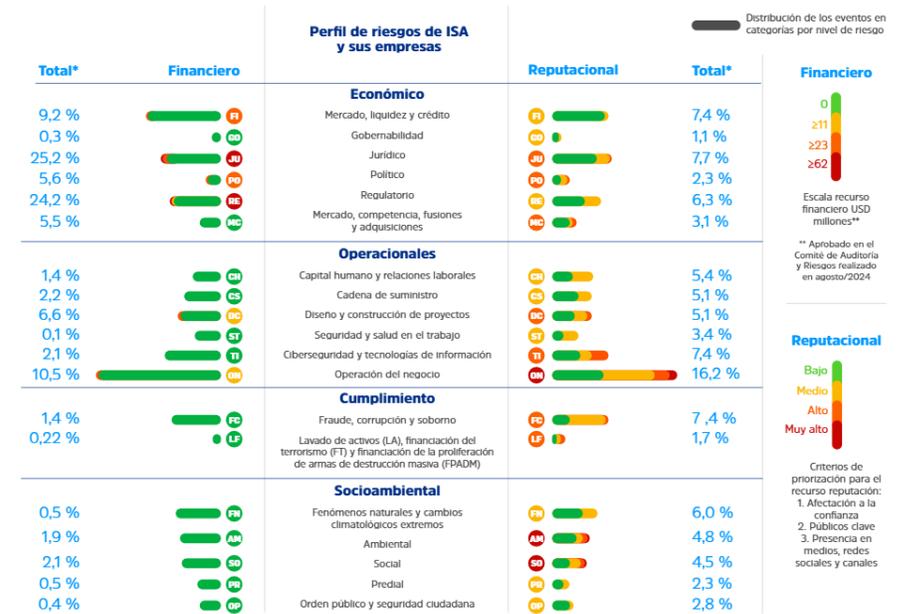
Cambios respecto al 2024: Sale "Ralentización de la recuperación económica"



Impacto: ● Muy alto ● Alto ● Moderado 🔄 Actualización

Environmental signals that may affect our business model, which must be addressed in advance in order to transform them into opportunities - Medium- and long-term horizon

Business risk roadmap of ISA and its companies



*% de participación de las categorías de riesgos en el consolidado de riesgos de ISA y sus empresas.

Events that may affect the achievement of the current strategy - Short- and medium-term horizon

Risk management



- a) Processes for identifying and assessing climate-related risks
- b) Climate-related risk management process

Enterprise risk management process, including climate-related risks

The **assessment of climate risks and opportunities** considers the use of **climate scenarios** that allows a greater **understanding of events** across different **time horizons** considering the particulars of the **businesses** and geographical **locations**



Specifics of climate-related risk and opportunity management in the ISA risk model

Physical risks/opportunities:
Threat – Exposure – Vulnerability

Transition risks/opportunities: causes and consequences

Climate-related scenarios (SSP1 2.6, SSP2 4.5, SSP3 7.0, SSP5 8.5) enable the identification of new risks and the assessment of risks across different time horizons

Climate risks and opportunities are prioritized according to the following criteria

Escala Recurso Financiero USD millones**	Probabilidad			
	Muy alta (50%)	Alta (30%)	Medio (20%)	Baja (10%)
0	8	16	32	64
≥11	6	12	24	48
≥23	4	8	16	32
≥62	2	4	8	16

Impacto: Level 2, Medium 4, Critical 8, Max Critical 16

Considering the prioritization, management must be established. The selection will depend on the cost/benefit analysis

Very high and **High** risks
Mitigate - Transfer - Avoid (new assets)

Medium risks
Mitigate - Transfer - Control

Low risks
Control - Transfer - Accept

Adaptation/Mitigation plans

Follow-up and escalation scheme

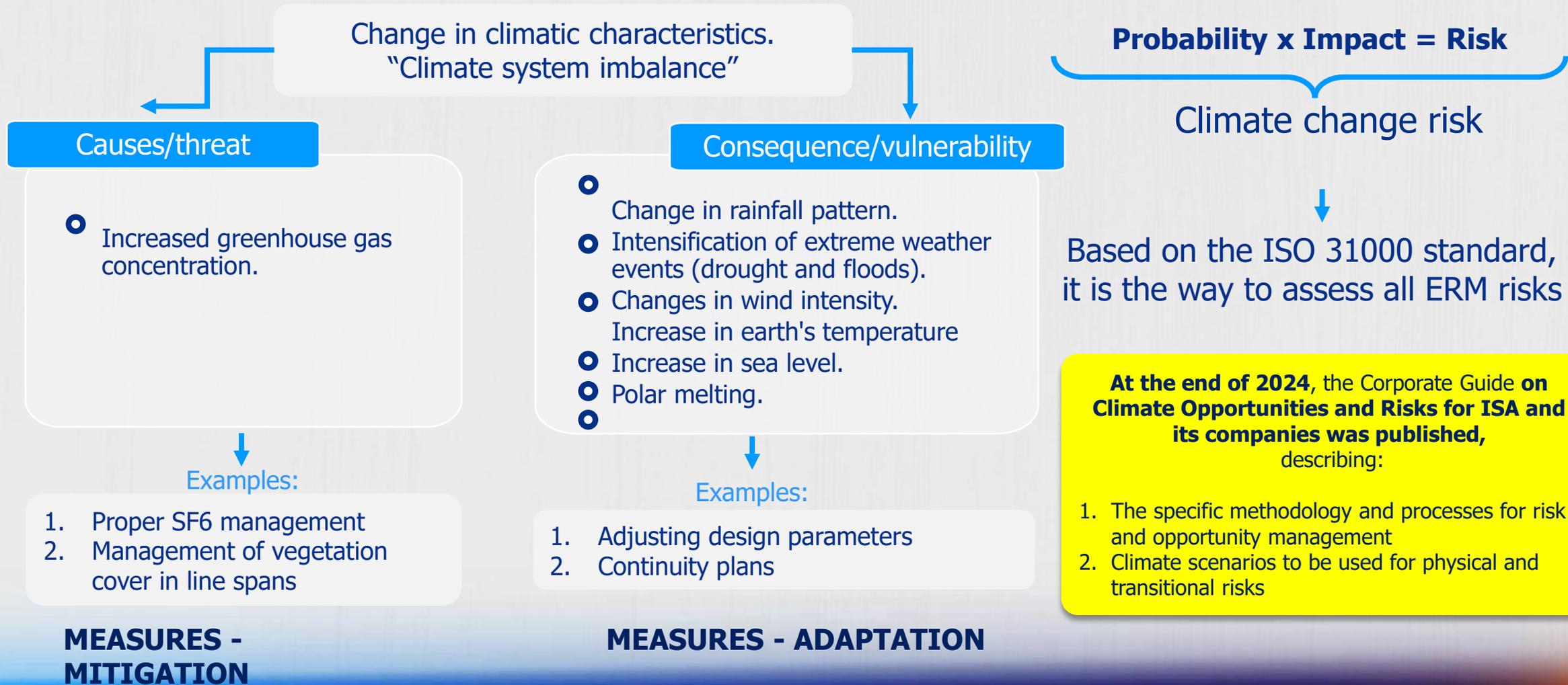
Nivel de riesgo:	Muy alto	Alto	Medio	Bajo
Junta Directiva	Seguimiento y participación en medidas adicionales		Conocimiento y participación en medidas adicionales	
Comité de Precisión	Seguimiento y participación en medidas adicionales			
Dirección / Gerencia	Gestión Integral de Riesgos Participación y seguimiento de medidas adicionales			
Equipos de procesos	Gestión Integral de Riesgos Participación y seguimiento de medidas adicionales			

Risk management



a) Processes for identifying and assessing climate-related risks

Defining the approach and assessment of the climate change risk



Risk management



b) Climate-related risk management process

Scope of climate risk management

Value chain stages ISA and its companies

Previous / upstream activities

The procurement of goods and services takes place in several stages, one of which is the assessment of general risks. This assessment includes, among other aspects, climate-related risks, which are described below:

Centralized purchasing category

A risk assessment is carried out (including risks related to climate, such as physical, regulatory, technological, and market) that could affect procurement processes in the medium and long term.

Services contract

Goods contract

Considering the term of the contract (short or medium term) the risks that could affect the economic balance are identified, including climate-related risks, such as physical, regulatory, normative, and technological risks.

Services contract

Goods contract

Additionally, considering the critical nature of certain contracts, suppliers will be required to have a climate-related risk assessment in place as a prerequisite for participating in procurement processes.

Own operations
isa
and its companies

Subsequent activities and/or customers / downstream activities

Climate-related risk management is addressed from two main approaches:

1. Provision of services to customers (connection contracts): A general risk analysis is conducted, including physical risks that could affect contracts. These risks correlate with the assessment and management of climate risks in our own operations, given that services are provided using both new and existing assets.
2. Relationship with communities located near the infrastructure: Risks associated with climate change are managed and efforts are made to strengthen the capacities of all parties involved to deal with disasters resulting from this phenomenon. In Colombia, territorial risk management plans are coordinated with ISA's disaster plans. In addition, in the analysis of physical risk scenarios, climate change risks in communities are being looked at, especially in Chile.

ISA and its companies actively participate in sectoral exercises related to climate risks to understand the implications of their effects on the transmission system, for example, the Comprehensive Climate Change Management Plan of the Energy Mining Sector, especially in its update with scope to 2050, is considered as a support of the [Energy Transition Law](#)

Risk management



c) Integration of climate-related risks into global risk management

Risk management framework

Dimensions	Categories
Economic	<ul style="list-style-type: none">○ Governance.○ Regulatory.○ Legal.○ Political.○ Market, liquidity, credit.○ Market, competition, mergers, acquisitions.
Operational	<ul style="list-style-type: none">○ Business operations.○ Project design and construction.○ Supply chain.○ Cybersecurity and information technologies.○ Human capital and labor relations.○ OSH.○ Compliance.
Social Environmental	<ul style="list-style-type: none">○ Environmental.○ Natural phenomena and extreme weather changes.○ Property.○ Social.○ Public order and safety.

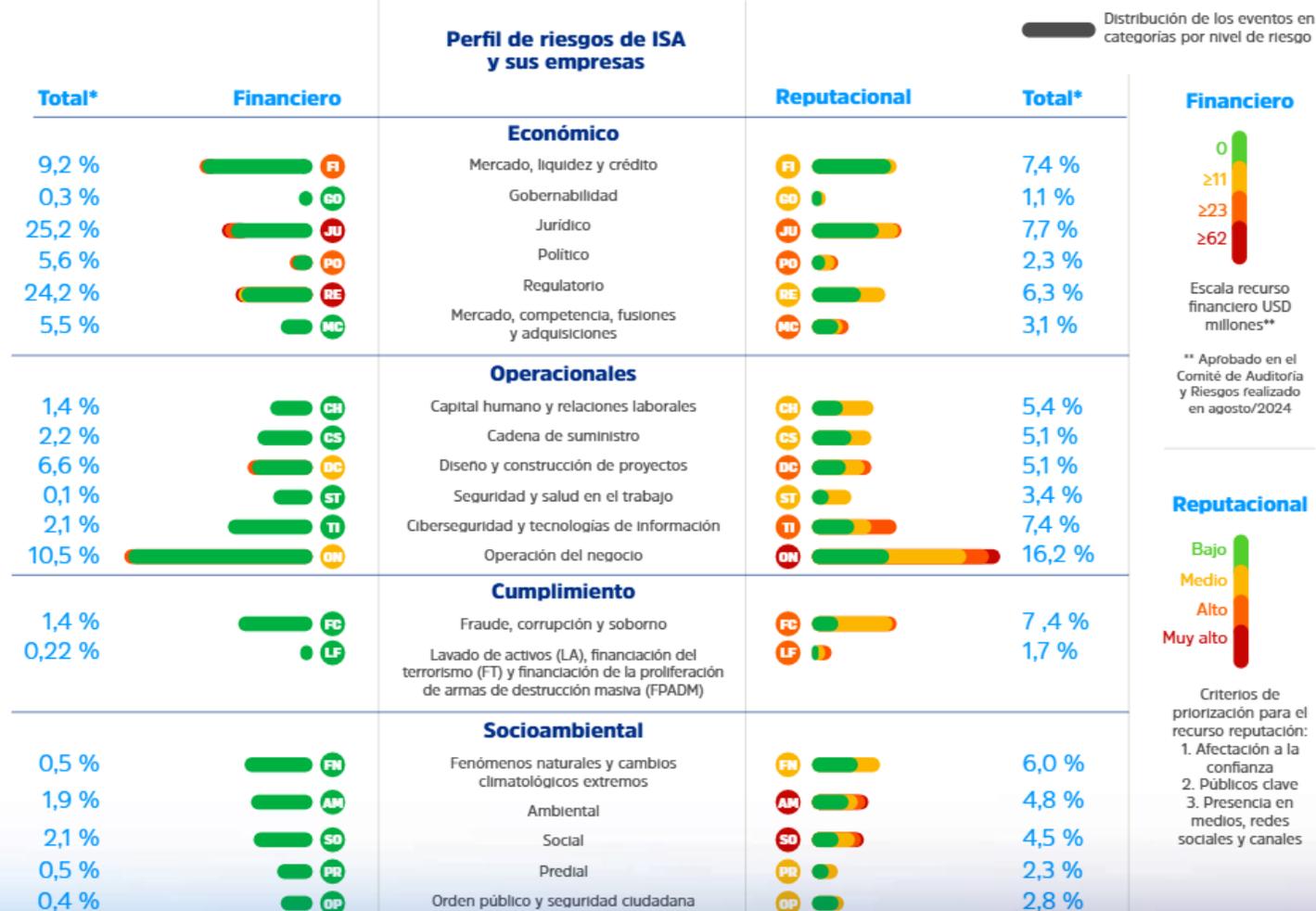
Climate change-related risks are part of the ERM and are mainly classified under the category of natural phenomena and extreme weather changes. They are also related to the Business Operation, Legal, and Environment categories.

Risk management



c) Integration of climate-related risks into global risk management

2024 Integrated Management Report - ISA



* % de participación de las categorías de riesgos en el consolidado de riesgos de ISA y sus empresas.

Risk management

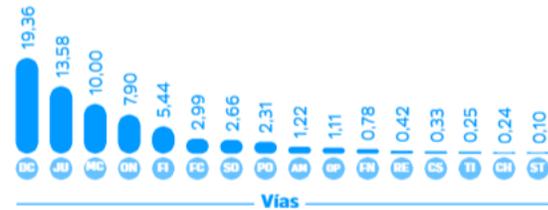
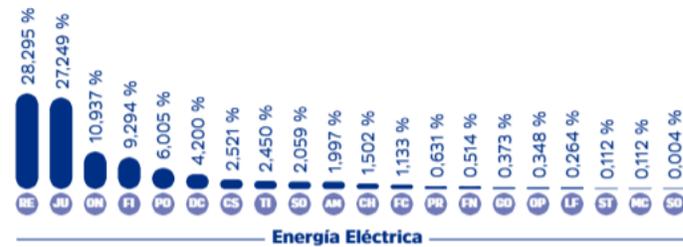


c) Integration of climate-related risks into global risk management

Risk management framework

2024 Integrated Management Report - ISA

Riesgos relevantes para el recurso financiero



Por país

- Panamá (PO, FI)
- Colombia (PO, FI)
- Perú (PO, FI)
- Bolivia (PO, FI)
- Brasil (JU, RE, PO, FI)
- Chile (PO, FI)



Por negocio

- Energía Eléctrica (RE, JU, PO, FI)
- Vías (PO, FI)
- Telecomunicaciones y TIC (PO, FI)

Riesgos

- JU Jurídico
- RE Regulatorio
- FI Mercado, liquidez y crédito
- DC Diseño y construcción de proyectos
- ON Operación del negocio
- CS Cadena de suministro
- PO Político
- AM Ambiental
- TI Ciberseguridad y tecnologías de información
- CH Capital humano y relaciones laborales
- SO Social
- PR Predial
- FN Fenómenos naturales y cambios climatológicos extremos
- FC Fraude, corrupción y soborno
- OP Orden público y seguridad ciudadana
- GO Gobernabilidad
- LF Lavado de activos (LA), financiación del terrorismo (FT) y financiación de la proliferación de armas de destrucción masiva (FPADM)
- EO Errores u omisiones
- ST Seguridad y salud en el trabajo
- MC Mercado, competencia, fusiones y adquisiciones

Risk management



c) Integration of climate-related risks into global risk management

Risk Management Framework

2024 Integrated Management Report - ISA

Risks relevant to the reputational resource

Por país

Panamá **LF** **FC** **DC**

Colombia **PD** **AM** **SO** **ON** **TI** **DC** **MC**

Perú **JU** **TI**

Brasil **LF** **TI** **SO** **ON** **AM**

Chile **ON** **AM**



Reputacional

Bajo
Medio
Alto
Muy alto

Criterios de priorización para el recurso reputación:
 1. Afectación a la confianza
 2. Públicos clave
 3. Presencia en medios, redes sociales y canales

Por negocio

Energía Eléctrica
DC **PD** **TI** **ON** **SO** **AM** **JU** **LF**

Vías
ON **SO** **LF** **FC** **DC**

Telecomunicaciones y TIC
MC **TI**

Riesgos

- JU** Jurídico
- RE** Regulatorio
- FI** Mercado, liquidez y crédito
- DC** Diseño y construcción de proyectos
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- OP** Orden público y seguridad ciudadana
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- EO** Errores u omisiones
- ST** Seguridad y salud en el trabajo
- MC** Mercado, competencia, fusiones y adquisiciones



Adopting TCFD recommendations

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

Metrics and targets



a) Climate-related metrics

Objectives of the ISA 2040 strategy, Energy that brings the transition to life



Management incentives

The Strategic Objective “Positively Contribute to Nature and Achieve 60% of the Net Zero Pathway and its indicator -Reduction of CO2e Emissions-” is included in our monetary incentive system.

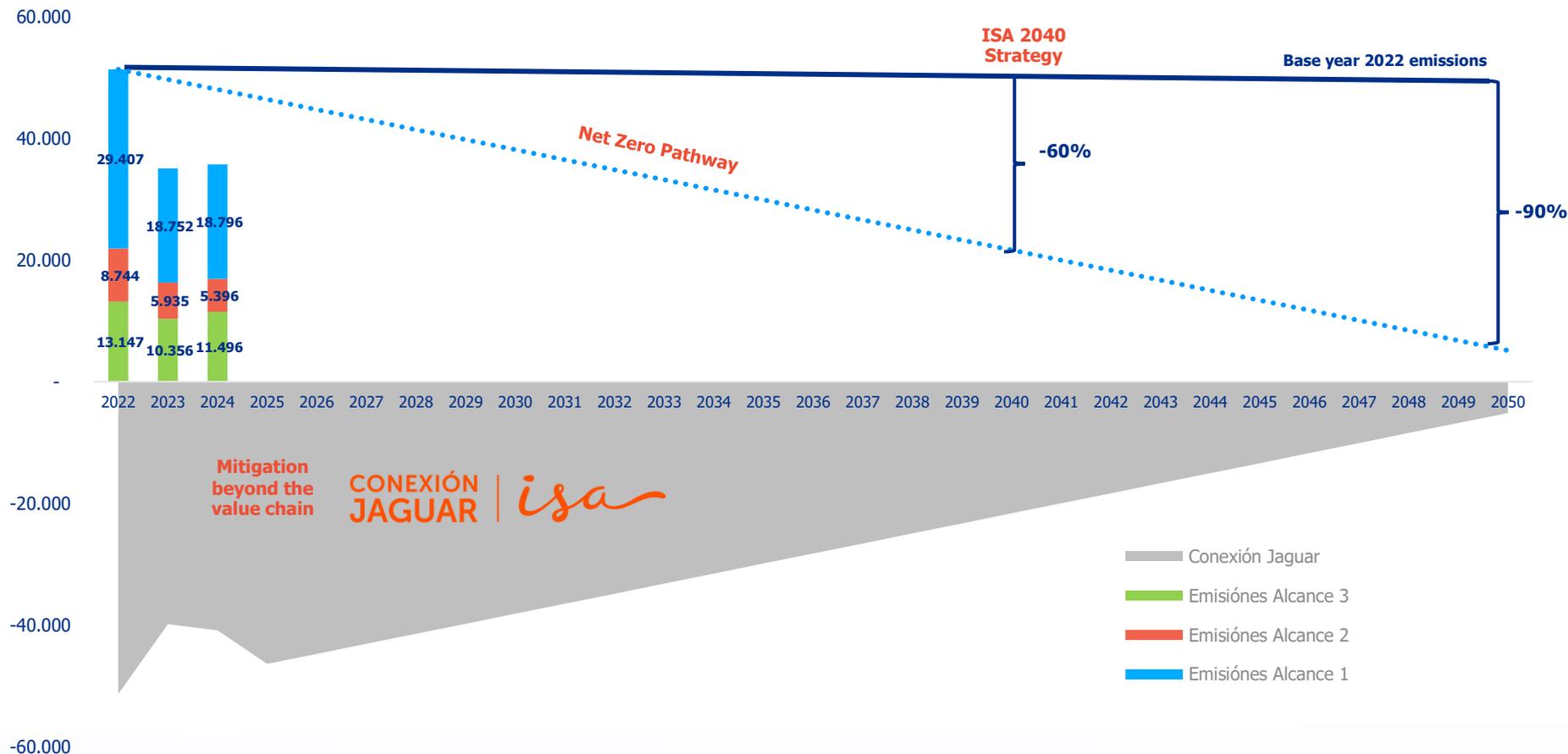
As part of the strategic decarbonization and diversification approach, the company has established a variable salary incentive for the CEO, other executives, and other levels. These targets are approved annually by the ISA Board of Directors as part of the Balanced Management Boards (TBG) approvals.

Metrics and targets



a) Climate-related metrics

Net Zero Commitment 2050



ISA will reduce 90% of its emissions by 2050 with an intermediate target of 60% by 2040

- ISA's climate roadmap addresses both mitigation (emissions reduction) and adaptation of its businesses through the modernization of electrical infrastructure, technological innovation, and the development of new capabilities for a resilient, reliable "Network of the Future."
- This commitment is in addition to the **carbon neutral** certification obtained by the company in 2021, renewed in 2023.
- Through its **Conexión Jaguar program**, the company will offset residual emissions and **mobilize efforts that go beyond the value chain**, contributing to climate adaptation in the countries where ISA operates.
- The strategy establishes incremental targets: **to reduce emissions by 60% by 2040 as part of its 2040 Strategy "Energy that gives life to the transition," and to achieve a 90% reduction by 2050 compared to the base year 2022**, neutralizing remaining emissions. This aligns ISA's path with the global commitments of the Paris Agreement and the goal of limiting global warming to 1.5°C.

Metrics and targets



a) Climate-related metrics

Net Zero Commitment 2050

Target %	Scope	Emission sources	Prioritized companies (% GHG Inventory)	Main initiatives
50%	Scope 1	SF6 emissions (80%) Fuels of own vehicles Fuels of fixed sources Fire extinguishers Refrigerants WWTPs	ISA ENERGÍA BRASIL (58%) ISA ENERGÍA CHILE (11%) INTERCOLOMBIA (8%) TRANSELCA (8%) REP (8%)	<ul style="list-style-type: none"> Projects to replace company vehicle fleets with hybrid/electric vehicles (INTERVIAL) <ul style="list-style-type: none"> SF6 leak containment clamps (ISA ENERGÍA BRASIL) Pilot for capturing leaked SF6 for reuse (INTERCHILE) <ul style="list-style-type: none"> SF6 reuse and drying (INTERCOLOMBIA)
24%	Scope 2	Electricity consumption emissions	INTERVIAL (40%) INTERCOLOMBIA (14%) REP (14%) ISA ENERGÍA BRASIL (11%)	<ul style="list-style-type: none"> I-REC purchase (ISA ENERGÍA BRASIL/INTERVIAL/INTERCOLOMBIA) Solar panel microgrid at substations and headquarters (INTERCOLOMBIA) <ul style="list-style-type: none"> Photovoltaic solar power projects on Roads (INTERVIAL) Change to LED lights (REP/ISA BOLIVIA/INTERCOLOMBIA)
27%	Scope 3	Business travel emissions (37%) Employee commuting emissions (23%) Waste emissions (36%) Water consumption emissions (3%)	ISA ENERGÍA BRASIL (52%) INTERCOLOMBIA (32%) INTERVIAL (6%)	<ul style="list-style-type: none"> Sustainable business mobility programs (INTEIA/ISA/INTERCOLOMBIA) <ul style="list-style-type: none"> Sustainable asphalt mixtures (INTERVIAL/COSTERA) <ul style="list-style-type: none"> Composting (INTERCOLOMBIA) Green Substations Project (INTERCOLOMBIA)

Metrics and targets



b) GHG Scopes 1, 2, and 3

The different scopes of GHG inventory are reported annually.

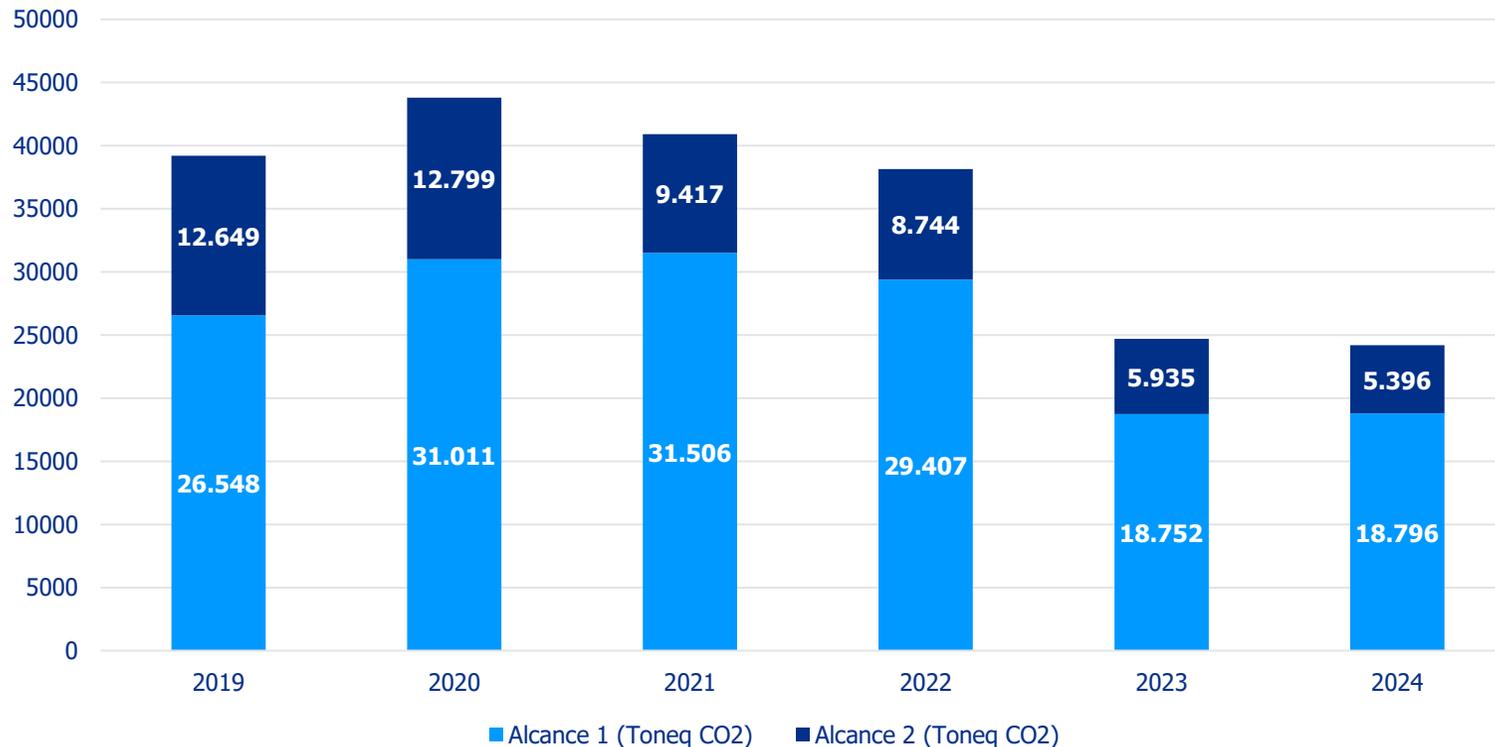
	Performance data	Unit	2019	2020	2021*	2022	2023	2024	GRI indicator
GHG emissions	Scope 1 emissions	tCO ₂ eq	26,548	31,011	31,505	29,407	18,752	18,796	305-1
	Scope 2 emissions (Location)	tCO ₂ eq	12,649	12,799	9,417	8,744	10,691	11,321	305-2
	Scope 2 emissions (Market)	tCO ₂ eq	12,649	12,799	9,417	8,744	5,934	5,396	305-2
	Scope 3 emissions	tCO ₂ eq	36,019	28,422	1,034,183	434,048	348,806	325,395	305-3
	SF ₆ emissions	Ton	1.00	1.08	1.15	1.06	0.53	0.54	305-1

For further details on other indicators and targets related to water, energy, and waste, please refer to the environmental performance indicators: <https://www.isa.co/en/environmental-performance-indicators/>

Metrics and targets



c) Performance of Scope 1 and 2 emissions



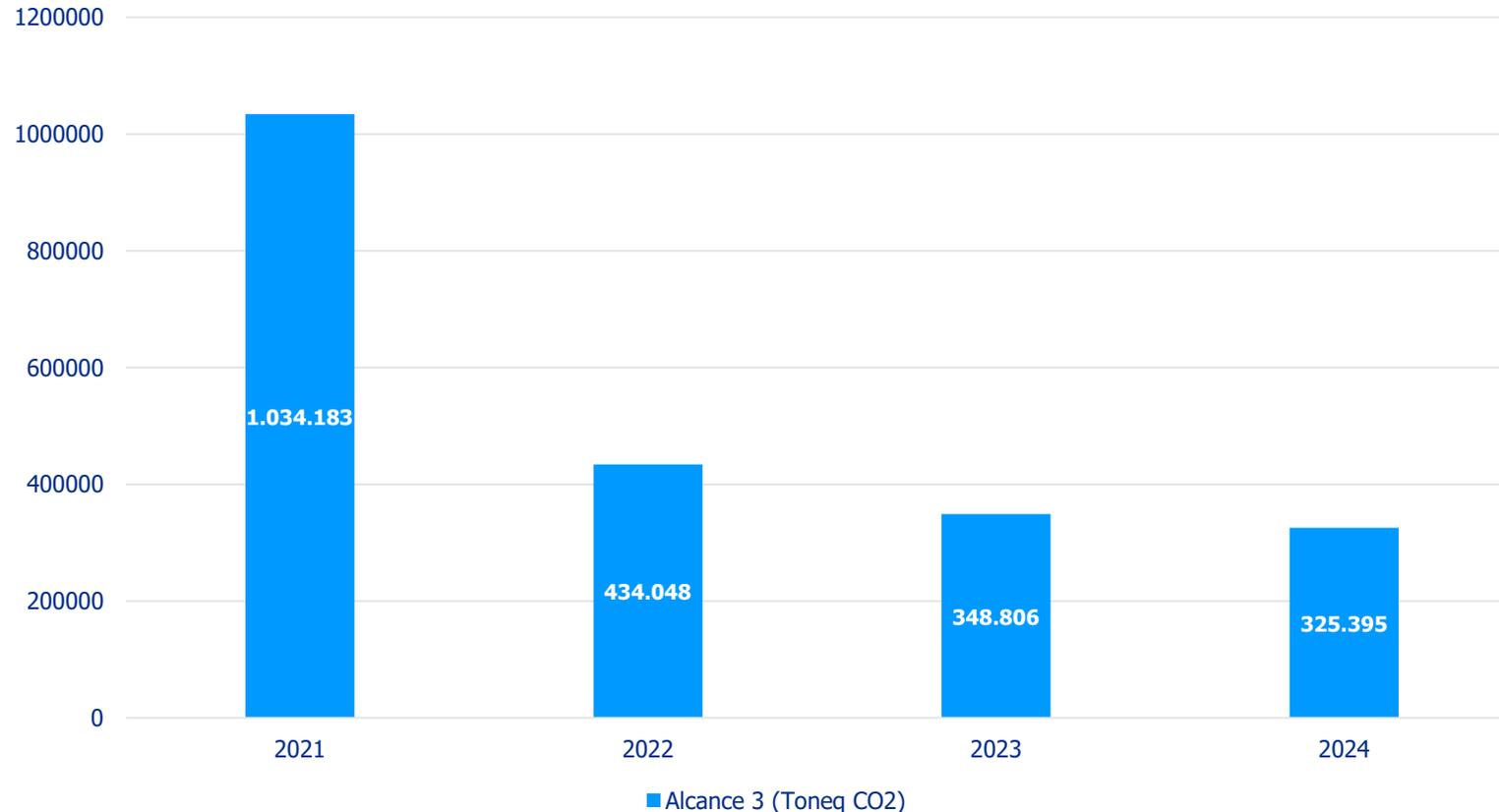
- ISA and its companies' GHG emissions are estimated using the GHG Protocol and, since 2021, have been verified by ICONTEC as part of the Carbon Neutrality certification process.
- Scope 1 emissions mainly correspond to fugitive SF6 emissions and fuel consumption from the organization's fixed and mobile sources, as well as handling of fire extinguishers and refrigerant gases.
- Scope 2 emissions are those associated with purchased electricity.
- In 2019-2024, ISA has achieved a Scope 1+2 emissions reduction of 38%.

For further details on other indicators and targets related to water, energy, and waste, please refer to the environmental performance indicators: <https://www.isa.co/en/environmental-performance-indicators/>

Metrics and targets



c) Scope 3 emissions performance



- ISA and its companies' GHG emissions are estimated using the GHG Protocol and, since 2021, have been verified by ICONTEC as part of the Carbon Neutrality certification process.
- Scope 3 emissions include goods and services purchased, business travel, employee commuting, waste generated, and transportation and distribution activities.
- Emissions associated with energy transmission losses are accounted for in the organization's Scope 3 emissions.

For further details on other indicators and targets related to water, energy, and waste, please refer to the environmental performance indicators: <https://www.isa.co/en/environmental-performance-indicators/>

Metrics and targets



d) Scope 3 emissions detail

The different scopes of the GHG inventory are reported annually.

Scope 3 emissions (2023)	tCO2e	Scope 3 emissions (2024)	tCO2e
C1: Purchased goods and services (upstream)	25,871	C1: Purchased goods and services (upstream)	55,391
C2: Capital goods	5	C2: Capital goods	0
C3: Fuel and energy activities (not included in Scopes 1 and 2)	313,965	C3: Fuel and energy activities (not included in Scopes 1 and 2)	250,112
C4: Waste from operations (composting, incineration)	1,748	C4: Waste from operations (composting, incineration)	3,755
C5: Business trips	3,757	C5: Business trips	4,915
C6: Employee commuting	2,953	C6: Employee commuting	2,762
C7: Upstream transportation and distribution	353	C7: Upstream transportation and distribution	911
C8: Upstream leased assets	153	C8: Upstream leased assets	0
C9: Downstream transportation and distribution	1	C9: Downstream transportation and distribution	7,548
C10: Processing of products sold (downstream)	0	C10: Processing of products sold (downstream)	0
C11: Use of products sold	0	C11: Use of products sold	0
C12: End-of-use treatment of products sold	0	C12: End-of-use treatment of products sold	0
C13: Downstream leased assets	0	C13: Downstream leased assets	0
C14: Franchises	0	C14: Franchises	0
C15: Investments	0	C15: Investments	0
TOTAL	348,806	TOTAL	325,394

- ISA and its companies' GHG emissions are estimated using the GHG Protocol and, since 2021, have been verified by ICONTEC as part of the Carbon Neutrality certification process.
- From 2023 to 2024, there was a 7% reduction in Scope 3, mainly associated with category 3, related to emissions from transmission system losses.

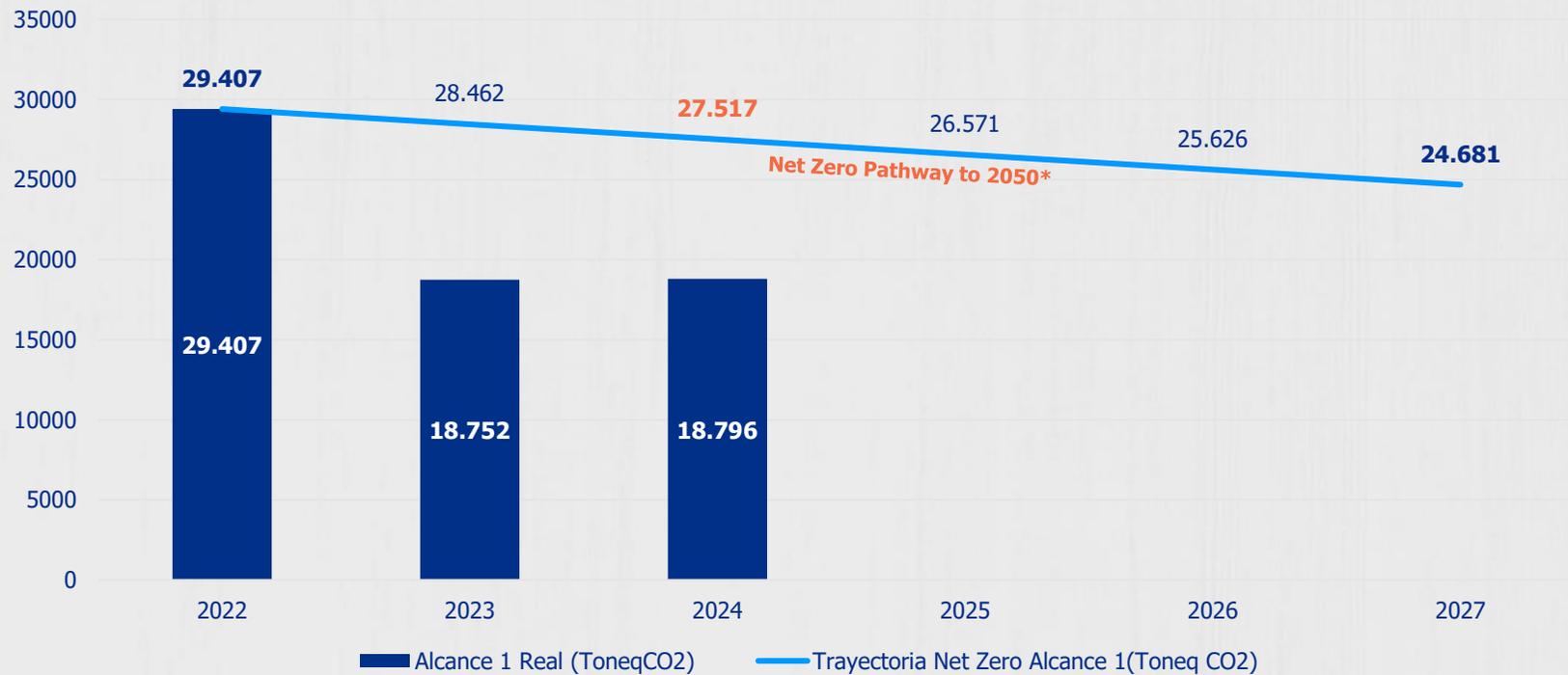
For further details on other indicators and targets related to water, energy, and waste, please refer to the environmental performance indicators: <https://www.isa.co/en/environmental-performance-indicators/>

Metrics and targets



a) Scope 1 emissions reduction target

Our GHG emissions reduction target for 2022-2027:



Scope 1 reduction target criteria	
Base year	2022
Target year	2027
Base year emissions	29,407
Target year emissions	24,681
Target 2024	27,517
Reduction %	-16%
Base year emissions %	100%
Science-based	Yes
Type of target	Absolute

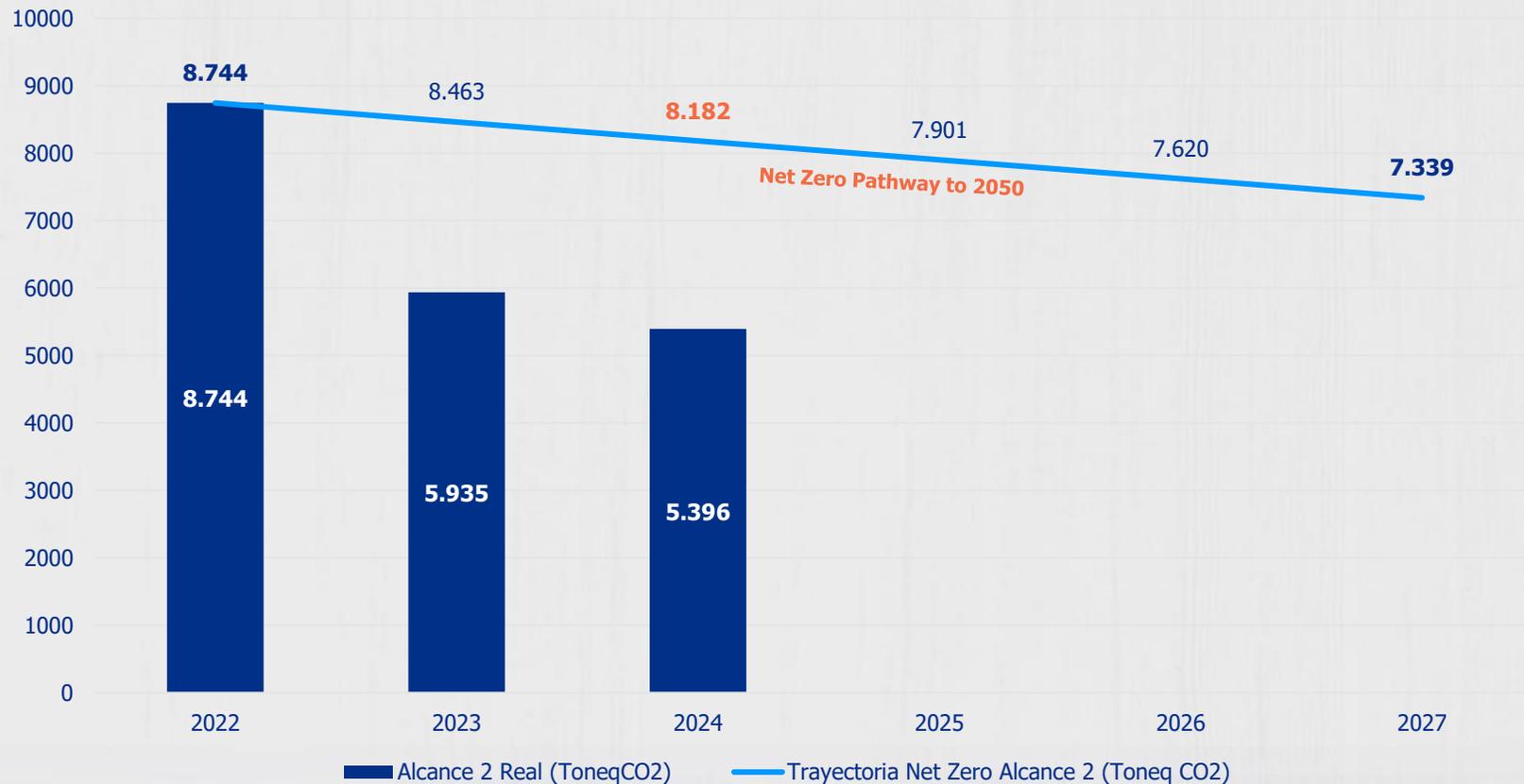
* The target's pathway is part of the Net Zero target 2022-2050

Metrics and targets



a) Scope 2 emissions reduction target

Our GHG emissions reduction target for 2022-2027:



Scope 2 reduction target criteria	
Base year	2022
Target year	2027
Base year emissions	8,744
Target year emissions	7,339
Target 2024	8,182
Reduction %	-16%
Base year emissions %	100%
Science-based	Yes
Type of target	Absolute

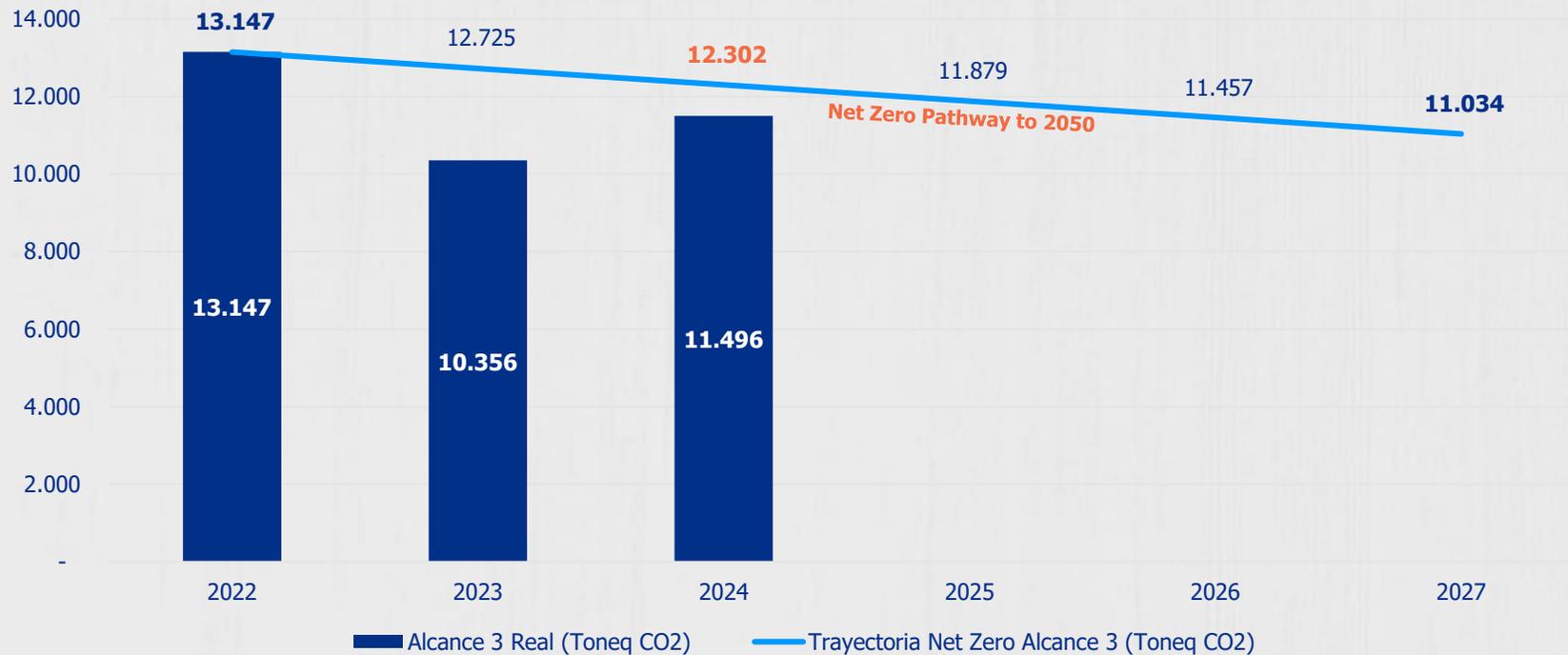
* The target trajectory is part of the Net Zero target 2022-2050

Metrics and targets



a) Scope 3 emissions reduction target

Our GHG emissions reduction target for 2022-2027:



Scope 3 reduction target criteria

Base year	2022
Target year	2027
Base year emissions	13,147
Target year emissions	11,034
Target 2024	12,302
Reduction %	-16%
Base year emissions %	3%*
Science-based	Yes
Type of target	Absolute

* The Scope 3 emissions reduction target currently includes emissions from purchased goods and services (water consumption), business travel, waste generation, and employee commuting.

* Currently, emissions associated with electricity transmission losses are excluded from the target.

Metrics and targets



a) Climate-related metrics

Efficiency actions for GHG emissions reduction:

The main actions implemented by ISA and its companies to reduce GHG emissions in 2024 are described below:

- Implementation of renewable energy solutions (photovoltaic panels) in some substations.
- Initiatives for early detection and reduction of SF6 leaks.
- Replacement of conventional lighting with LED lighting in administrative offices.
- Sustainable Business Mobility Programs through INTEIA's Appimotion solution.
- Implementation of business routes for employees.
- Water collection and recirculation in air conditioning systems.
- Pilot projects for the use of electric vehicle fleets.
- Use of sustainable asphalt mixtures.

Metrics and targets



- a) Climate-related metrics
- c) Climate-related goals

Efficiency actions for GHG – SF6 emissions reduction:

- On the basis of our corporate GHG emissions inventories, we identified that direct emissions from SF6 gas leaks, which have a climate change potential 24,300 x higher than that of CO2, account for more than 80% of the direct CO2 equivalent emissions in the company's operation. That is why ISA and its companies recognize the importance of managing SF6, which is the main greenhouse gas in their operations and is required in some high-voltage equipment.
- To achieve better performance pursuant to international standards for electrical equipment (National Electrical Manufacturers Association -NEMA- and the International Electrotechnical Commission -IEC- Standard), it is established that over the useful life, SF6 emissions from electrical equipment should not exceed 0.5% annual leakage with respect to the installed SF6 inventory.
- In 2018, ISA and its companies reached the overall technical restriction set by IEC 62271 -203 of 0.5% leakage on installed SF6 inventory. In 2020, as part of its 2030 strategy, the company set a more challenging target to reduce this value by 15%, setting a 2030 target of 0.425% of installed inventory.
- ISA established as a consolidated corporate goal for 2023 that leaks of this gas should not exceed 0.37% of the SF6 installed. This is achieved by carrying out activities such as early leak detection and rapid leakage correction systems in energized equipment.
- To reach the objective, ISA has achieved synergies among its energy transmission companies. Together, they have overcome installation problems in GIS substations (INTERCHILE), leakage correction without de-energizing assets (CTEEP), leakage identification and diagnosis systems with advanced analytics (REP and TRANSELCA), and research in fast leakage correction systems (InterColombia). This has resulted in a highly efficient technical ecosystem that will help achieve a consolidated leakage rate of 0.164% of the inventory by 2023.

Metrics and targets

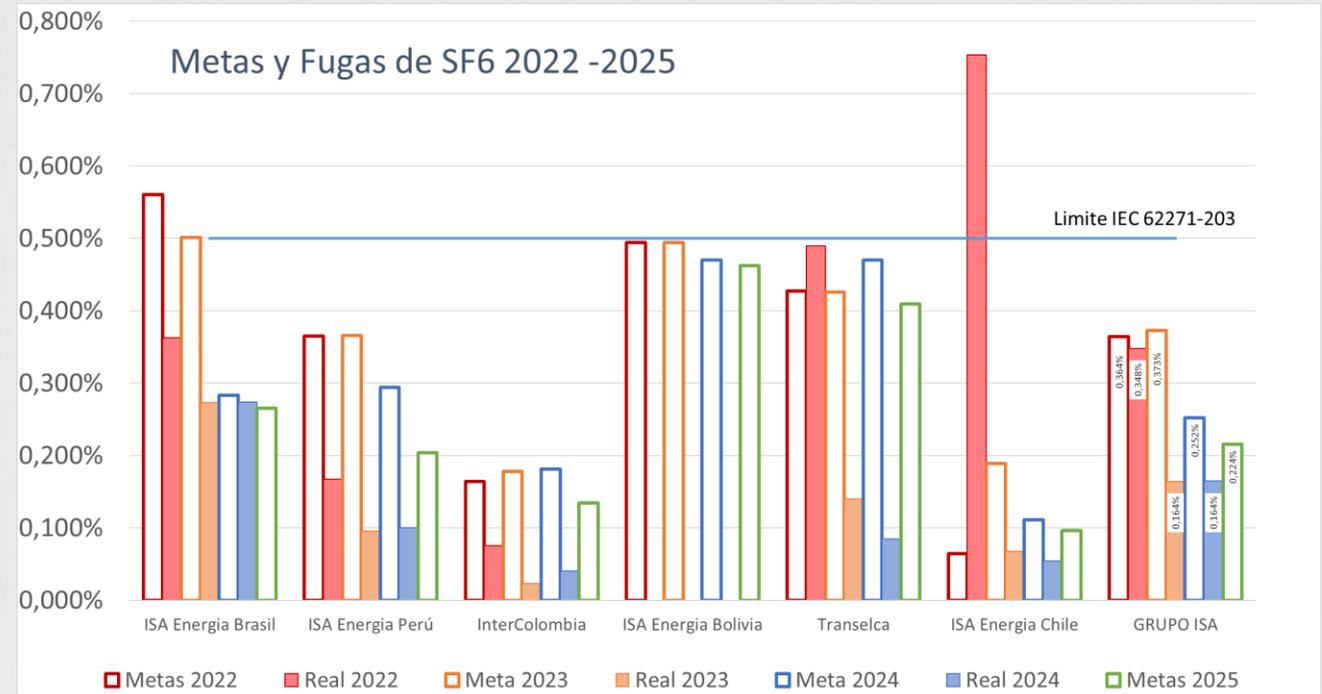


- a) Climate-related metrics
- c) Climate-related goals

Mitigation measures - SF6 management

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

- Replacement of GIS (gas insulated substations) and end-of-life circuit breakers.
- Regular preventive maintenance of GIS and circuit breakers avoiding gas leaks, continuous improvement of the leakage record in the SAP system.
- Infrared cameras for early detection of uncontrolled leaks during equipment operation and for overhaul or major maintenance of circuit breakers.
- We are working on innovative actions to prevent leaks to the atmosphere by capturing and controlling leaked gas in containers.



The highest number of SF6 leaks occurs in ISA Energía Brasil, whose assets have a high percentage of GIS substations, representing a higher inventory of installed SF6. It should be noted that this equipment corresponds to previous versions of the technology, which had higher leakage rates.

Direct emissions have remained free of serious incidents since 2022, as the causes have already been corrected. Strict targets and results have been set, demonstrating the company's commitment to reducing SF6 gas leaks.

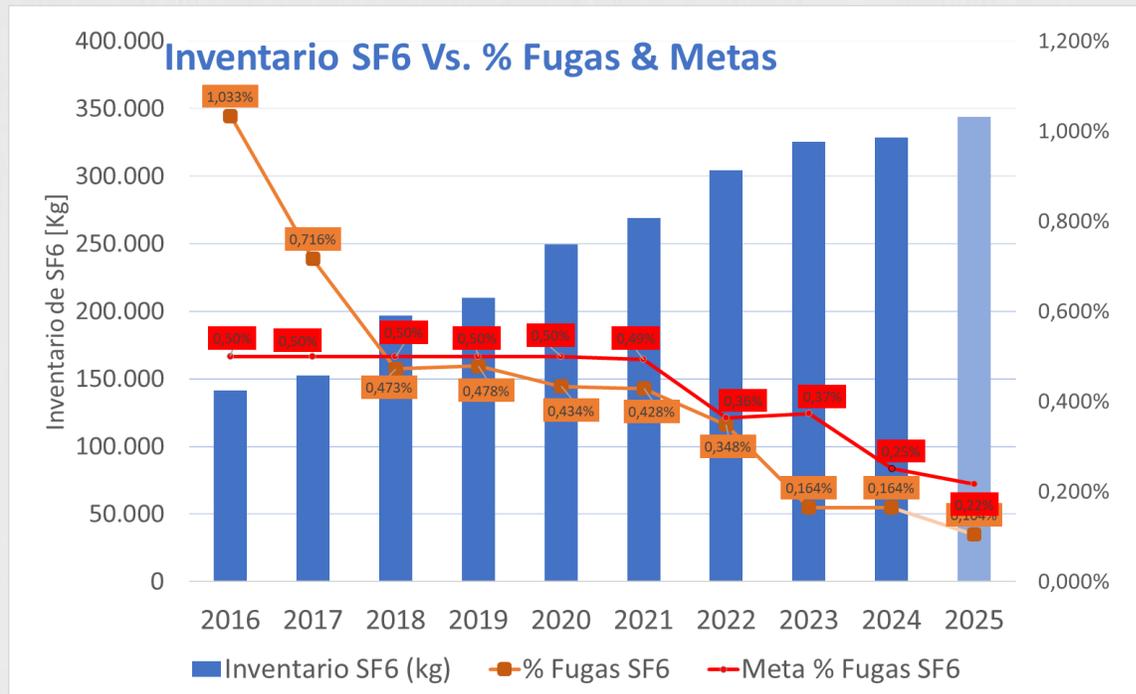
Metrics and targets



- a) Climate-related metrics
- c) Climate-related goals

Mitigation measures - SF6 management

Since 2016, ISA has set annual reduction targets, initially at the regulatory value registered for equipment under the International Electrotechnical Commission (IEC) quality standard, which allows for 0.5% leakage per volume/year in type testing. This value was achieved in 2018 through improvements in inspection routines and the development of leak correction techniques for energized equipment, leading to significant results where we have consistently and sustainably reduced values in 2023 and 2024 to a consolidated leakage rate of 0.164% for both years over the installed volume.



Metrics and targets



- a) Climate-related metrics
- c) Climate-related goals

Mitigation measures - SF6 management

Even though the installed SF6 inventory has increased, the subsidiaries have maintained their good consolidated performance.

ISA companies will continue to comply with the international standard and, striving for continuous improvement, a more demanding target was set, which is a reduction to 10% (reducing 90% of emissions) by 2050 in all the energy transmission subsidiaries.

Amount of SF6 (kg)	Kg SF6 inventory installed, 2024	% SF6 leaked, 2024	Kg SF6 leaked, 2024	SF6 emissions (tCO2), 2024
ISA Energía Brasil	156,548	0.274%	428	10,412
ISA Energía Perú	49,166	0.100%	49	1,195
InterColombia	61,221	0.040%	25	602
ISA Energía Bolivia	809	0.000%	-	-
Transelca	15,664	0.085%	13	322
ISA Energía Chile	45,185	0.55%	25	599
TOTAL	328,593	0.164%	540	13,129

Metrics and targets



- a) Climate-related metrics
- c) Climate-related goals

Climate-related metrics and targets: Financial impacts, cost savings, and domestic carbon pricing

Impacts of the Climate Strategy

ISA calculates annual financial impacts associated with climate change based on the following:

Necessary investments:

- I-REC value.
- Compliance with IEC standard to reach 0.5% leakage among subsidiaries that have not yet achieved it*.
- Operation of the solar panel microgrid installed at the Medellín headquarters.
- In 2020, the investment in the "En la Movida" program was included.
Investments in renovation and maintenance measures were added for TRANSELCA*.

* The annual investment required to meet SF6 leakage reduction targets involves major circuit breaker and GIS maintenance, including replacement of chamber seals and repair of mechanisms and, in some cases, overhaul of devices and equipment.

Cost savings

ISA calculates the total expected cost savings based on the following:

- Savings in the purchase of carbon credits.
- Savings from reduced energy purchases thanks to the microgrid installed at the headquarters.
- Savings from equipment maintenance to prevent SF6 leakage, and estimated costs for annual SF6 replacement.
Avoiding penalties for unavailability of assets.
-

Metrics and targets



- a) Climate-related metrics
- c) Climate-related goals

Domestic carbon price

Domestic carbon price 2024
(COP/tCO_{2e})

COP 49,119

Implementation objectives
Energy efficiency
Low-carbon investments
Identification of low-emission opportunities
Cost-benefit analysis development
Encourage considering climate variables in decision-making
Regulatory analysis
Offsetting budget design
Definition of climate policies and targets

Variables considered
I-RECs 2024 purchase price
Purchase price of carbon credits in Carbon Neutrality 2024
SF6 gas replacement cost
SF6 final disposal cost
Emissions covered: Scope 1/Scope 2/Scope 3
Type of price: Shadow price
Application: Some decision-making processes



isa

CONEXIONES QUE INSPIRAN

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