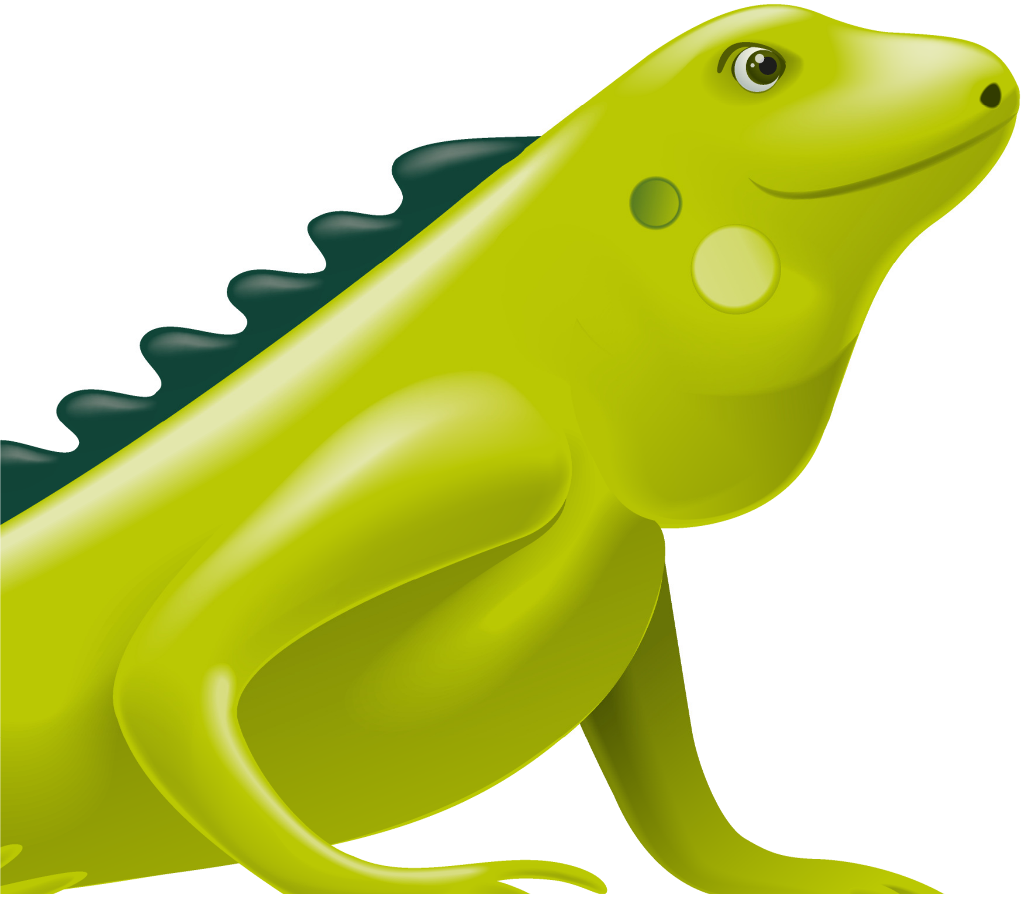
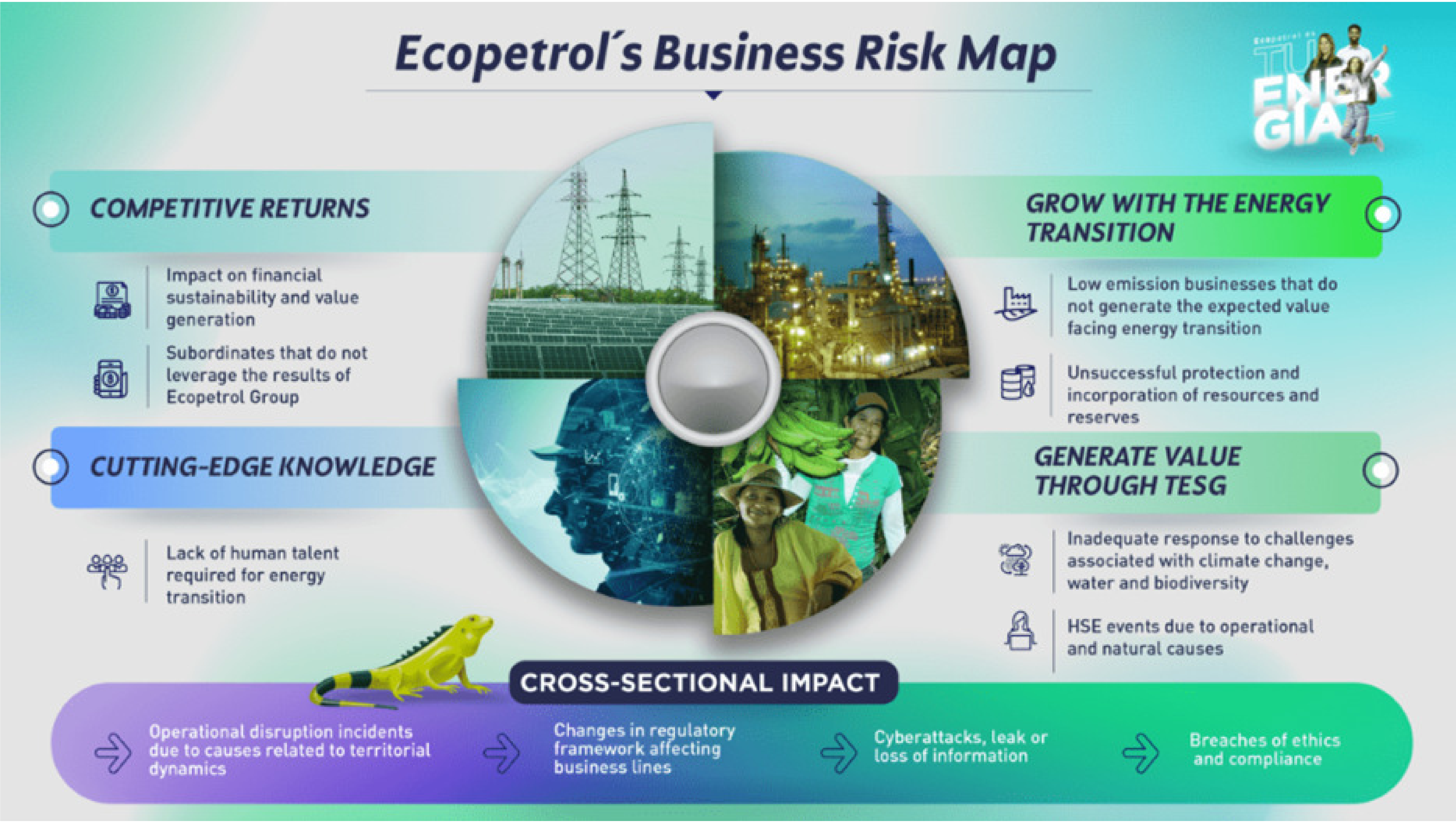


Ecopetrol´s Business Risk Map overview

2023 Update



Ecopetrol´s Business Risk Map
COMPETITIVE RETURNS
Impact on financial sustainability and value generation
Subordinates that do not leverage the results of Ecopetrol Group
CUTTING-EDGE KNOWLEDGE
Lack of human talent required for energy transition
GROW WITH THE ENERGY TRANSITION
Low emission businesses that do not generate the expected value facing energy transition
Unsuccessful protection and incorporation of resources and reserves
GENERATE VALUE THROUGH TESG
Inadequate response to challenges associated with climate change, water and biodiversity
HSE events due to operational and natural causes
CROSS-SECTIONAL IMPACT
Operational disruption incidents due to causes related to territorial dynamics
Changes in regulatory framework affecting business lines
Cyberattacks, leak or loss of information
Breaches of ethics and compliance
ENERGIA

1. Inadequate response to challenges associated with climate change, water and biodiversity

Description

Exposure of the company to negative impacts due to low capacity to provide timely, efficient and effective response to commitments, obligations and expectations related to climate change, water and biodiversity, in: i) short, medium and long term goals included in the business strategy, ii) the value chain to ensure operational continuity, iii) costs associated with energy, iv) stakeholder expectations (government, society, community, workers, investors), v) adaptation to variability and climate change, and to the normal weather condition of the country that affects water availability and security in the regions.

Causes

- Low response capacity for prevention and attention to impacts associated to climate variability phenomena.
- Unfeasibility for incorporating technologies and initiatives.
- Delays in the execution of projects.
- Decrease in energy supply.
- Physical conditions that force the interruption of discharges and catchments, and restriction of river navigability.
- Ability to adopt management and reporting frameworks related to nature/natural capital.
- Changes in methodologies or standards for project formulation related to natural climate solutions or other kind of projects.
- Regulatory changes or new national and international regulations.
- Cost increases, limited resource allocation.

Consequences

- Affectation of the company's image.
- Misalignment with the mining and energy sector Comprehensive Climate Change Management Plan and with the national climate change goals.
- Impact on the continuity of operations and projects.
- Asset stranding.
- Potential financial implications.
- Impact on strategic ecosystems or areas of special importance for biodiversity.
- Downgrading of corporate sustainability reporting or deviation from standards and commitments related to climate change, water and biodiversity.
- Social conflicts, lawsuits and complaints.

2. Low emission businesses do not generate the expected value facing energy transition

Description

Not achieving the value promise established in the business cases and in the energy transition goals for the business lines that are part of low emissions portfolio, in relation to: (i) transmission and toll roads, (ii) low emissions business (including but is not limited to hydrogen, natural climate solutions, Carbon Capture, Use and Storage - CCUS / Carbon Capture and Storage - CCS), (iii) Gas and LPG supply, as well as failure to meet expectations of different stakeholders regarding the energy transition (society, community, workers, contractors, shareholders, customers, among others).

Causes

- Changes in regulations, processes and/or technology for the development of the business lines.
- Weakness in attracting and retaining expert talent, or weaknesses in transfer or acquisition of knowledge.
- Technological gaps, vulnerabilities or obsolescence.
- Insufficient progress in projects.
- Market of low-emission products unknowledge and uncertainty.
- Unavailability or increase in prices of internationally listed critical minerals, raw materials, equipment, among others required for the energy transition.
- Low capacity of communities to participate as partners in projects.
- Inadequate management of social and environmental impacts of projects.
- Gas production lower than required for social gas consolidation.

Consequences

- Economic impact due to returns on investments, decrease in the share price and in the company's credit rating.
- Reputational impact.
- Impact on the commercialization of low-emission products.
- Failure to achieve Ecopetrol' s promise of value related to its social dimension.
- Cost overruns in low-emission projects.

3. Lack of Human Talent required for energy transition

Description

Not covering the knowledge, skills and behavior needs required by the strategy, and aligned with the operating model, processes and cultural statement, to advance on the energy transition route.

Causes

- Difficulties in attracting and retaining human talent.
- Gaps in training actions for the development of skills.
- Limited economic resources for the execution of human talent plans.
- Limited talent in the labor market to develop the energy transition.
- Behavior that do not reflect the cultural statement.

Consequences

- Failure in the implementation of the strategic plan towards energy transition.
- Reduced capacity to generate value for stakeholders.
- Impacts on productivity and organizational efficiency.

4. Impact on financial sustainability and value generation

Description

Impact on financial sustainability, established as not achieving the cash level required to meet Ecopetrol's operational and investment needs, and impact on the generation of value in accordance with the expected returns as defined in the business plan.

Causes

- Accumulation of resources in the FEPC (Fuel Price Stabilization Prices) due to the volatility of crude oil prices.
- Volatility in the price of crude oil, derived products, exchange rate, inflation, recession and other economic variables.
- Changes in the behavior of the demand for crude oil and derived products.
- Adverse conditions that generate restriction of access to financing markets.
- Realization prices that do not cover production costs.
- Geopolitical, national and international environment factors.
- Changes in regulation.

Consequences

- Decrease in the Company's expected revenues and net income, and insufficient cash flow.
- Loss of the Company's investment grade.
- Affectation of the Company's reputation.
- Non-fulfillment of obligations with suppliers and/or associates.
- Non-compliance with debt payment service.
- Affectation to the share price and potential impact on dividends.

5. Subordinates that do not leverage the results of Ecopetrol Group

Description

Non-performance of subordinates that affect the Ecopetrol Group results in financial and operating terms

Causes

- Subordinate with an outdated business plan or financial projections in relation to the conditions of their environment or not in accordance with Ecopetrol's strategy and corporate governance model.
- Deficiencies and/or deviation in the selection, evaluation and approval of investments.
- Inability to make debt service payments that must be covered with loans or capitalizations from the headquarters.
- National and international social and geopolitical environment instability.
- Deficiency in the fulfillment of obligations that generate legal actions against subordinates.
- Low liquidity due to material amount unfavorable last instance verdicts in litigations against the subordinate.
- National and international regulatory changes.

Consequences

- Negative effects on financial and operating results.
- Insufficient cash flow to cover the business plan.
- Lower expected returns on investments made.
- Affectation to Ecopetrol´s and subordinates' reputation.
- Disbursement of resources to subsidiaries for payment of debt and other obligations.

6. Breaches of ethics and compliance

Description

Occurrence of behaviors against the Code of Ethics and Conduct or current regulations which generate a reputational impact that affects the achievement of the company's strategic objectives.

Causes

- Non-compliance with applicable regulations.
- Non-compliance with procedures, guidelines, controls and other company policies.
- Undue business pressures related to performance or personal pressures due to economic needs.
- Weakness of controls or actions to mitigate compliance risks.

Consequences

- Negative impact on the company's reputation and its relationship with stakeholders.
- Effect on the share price.
- Affectation to the financial statements.
- Cessation of transactions on the stock exchange - NYSE/BVC.
- Fines, sanctions (primary or secondary), decisions against Ecopetrol or individuals by national and international control authorities.

7. Changes in regulatory framework affecting business lines

Description

Changes promoted by decisions of ministries, state agencies, special administrative units, technical organizations, Regional Autonomous Corporations, territorial entities, Congress of the Republic and judges, that modify the jurisprudential line, resulting in a material impact for the company, among others, as well as international regulations issued by entities to which Colombia is part generating negative impact on the operation or financial results.

Causes

- Weaknesses in monitoring the regulatory environment that applies to the company's operations.
- Lack of knowledge of all the regulatory entities that could affect the company's interests.
- Lack or scarcity of resources (financial, technical) for the proper management of changes in the regulatory environment.
- Diversity of criteria in the management of regulatory issues.
- Different people responsible for dialogue with the entities

Consequences

- Affectation to the goals of the business lines.
- Loss of market share.
- Delay or unfeasibility of plans and projects execution.
- Affectation of the operation and financial results and stranded assets.
- Loss of business opportunities.
- Reduction in income, increase in costs or unforeseen costs, budget readjustments.

8. Unsuccessful protection and incorporation of resources and reserves

Description

Deviations in the protection and incorporation of crude oil and gas resources and reserves, within the framework of the energy transition, regulatory provisions, project management and new opportunities, which may have an adverse effect on the exploration and production portfolio.

Causes

- Unfeasibility of exploration and production programs in the maturity or execution. phase
- Failure or delays to obtain environmental license.
- Longer times in the development of opportunities or projects that ensure the protection or incorporation of resources and reserves.
- New regulations and market trends associated to energy transition.
- Political instability, conflicts, economic conditions and actions of the main oil producing countries.
- Operational disruption incidents that affect the assets continuity.
- Logistical disruptions.
- Delays in the execution of exploration, production, offshore and energy efficiency projects.

Consequences

- Decrease in the value of the company and its sustainability over time.
- Deterioration in the company's long-term assets value.
- Affectation on the Company's risk rating.
- Affectation on the Company's reputation.
- Impact on the Company's financial sustainability.
- Affectation on the country's energy sovereignty.

9. Operational disruption incidents due to causes related to territorial dynamics

Description

Incidents associated with territorial and public order dynamics that affect the normal development of the company's operations.

Causes

- Social mobilizations, de facto actions against the company.
- Rejection and disagreement with Ecopetrol's activities.
- Opposition from stakeholders that affect the operation.
- Demands, disagreements and claims made by stakeholders in the territory.
- Disconformity of Union Organizations regarding policies and Ecopetrol, Business Group or contractors' decisions.
- Actions of armed groups and organized crime criminal groups (attacks, among others).
- Weaknesses in due diligence regarding human rights management.
- Gaps in the integration of human rights in the company's strategy to leverage the fair energy transition.

Consequences

- Deferred production.
- Suspension of contracts.
- Damage or loss of products or assets.
- Unfeasibility, delays or modifications in the scope, schedule and costs of operations and projects.
- Damage to the company's reputation facing its stakeholders.
- Impact on the integrity of people, the environment and communities.
- Impact on human rights (civil, political, economic, social, collective and environmental).

10. HSE events due to operational and natural causes

Description

Undesired events originating in the operation or natural origin that may impact people, assets and infrastructure, the environment, the company's reputation or commercial commitments.

Causes

- Weaknesses in HSE culture.
- Failures in asset integrity.
- Failures in work control.
- Failures in operational discipline.
- Exogenous threats.

Consequences

- Fatalities, disabling accidents, or injuries to operation personnel and communities.
- Lawsuits, fines and penalties.
- Disruption of operations and not achieving commercial commitments.
- Economic losses.
- Impact on the environment.
- Negative impact on the company's reputation.
- Destruction of natural capital.

11. Cyberattacks, leak or loss of information

Description

Affectation of the Company's operations or critical infrastructure, as well as improper access to digital information and unauthorized extraction or modification of classified or reserved information assets, through information systems, technological devices or insecure cybersecurity behaviors by employees, contractors or actions of third parties.

Causes

- Malicious exploitation of critical vulnerabilities in security devices.
- Deliberate or unintentional unsafe behavior in the use or processing of information by workers or contractors.
- Gaps in the information identification, classification and processing.
- Technological obsolescence of IT/OT cyber assets.
- Processing of personal data without owner or legal authorization.
- Weaknesses in contractual clauses for the protection of personal data.
- Weaknesses in cybersecurity and cyberdefense practices.

Consequences

- Affecting operations or the company's critical infrastructure.
- Fines and penalties for non-compliance with regulations or contractual agreements.
- Reduced revenues or increased costs.
- Impact on people, processes, services or IT/TO infrastructure, customers, economic resources and environment.
- Impacts to the Company's image in the market.

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