



2022 TCFD

Task Force on Climate-Related
Financial Disclosures

Report



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Introduction

Message from our CEO

As the largest independent natural gas exploration and production company in Colombia, Canacol is committed to taking ownership and accountability for understanding the impacts that climate-related risks and opportunities have on the environment, the communities where we operate, and our operations. As highlighted in our 2021 ESG Report, we made the decision to align our climate strategy with the latest Task Force on Climate-Related Financial Disclosures (TCFD) recommendations. We have incorporated climate related risks and opportunities into our governance and risk management processes. Therefore, we are pleased to present our inaugural TCFD Report aimed at enhancing our corporate climate disclosures in line with regulatory requirements and best practices. This report is a significant milestone in our journey towards integrating climate considerations throughout our business.

We have focused our business model to invest for a cleaner energy future and are committed to supporting the Colombian Government's pledge to the 2015 Paris Agreement. As part of this promise we are replacing carbon-intensive operations with low or no emission alternatives. Our ambition is to supply the increasing energy demands of the countries where we operate while simultaneously improving air quality and stimulating economic growth and development.

Last year was a landmark for Canacol in which we created a comprehensive and resilient decarbonization plan considering climate-related risks and opportunities. The plan acknowledges the challenges we face and outlines how we will take a leadership role for the energy sector's adaptation to the energy matrix transition. It also aligns our ESG strategy with our corporate values and business vision. Together these principles frame and direct our actions for the benefit of all our stakeholders.

We have established a Climate Governance Structure to prioritize and implement the decarbonization plan in which Canacol's Board of Directors actively engages with management on climate issues. This emphasizes the prioritization, integration, and coordination of emissions reduction, capture, and mitigation projects within our business strategies and risk-management processes. As a result, all business units now have greenhouse gas (GHG) emissions accountability defined as a Key Performance Indicator (KPI). Alignment with emission reductions has been further strengthened by linking board, executive, and management variable compensation to climate performance targets as we seek to foster a culture of compliance and innovative solutions.

As implementation of our decarbonization plan progresses, we look forward to realizing significant reductions in our direct and value chain GHG emissions as well as to taking a leadership role in the successful energy matrix transition.

Charle Gamba

President, CEO and Director of Canacol Energy Ltd.





TCFD Recommendations Overview

TCFD Section	Recommendations
Governance	<p>Describe Board's oversight of climate-related risks and opportunities.</p> <p>Describe management's role in assessing and managing climate-related risks and opportunities.</p>
Strategy	<p>Describe the climate-related risks and opportunities the company has identified over the short, medium, and long term.</p> <p>Describe the impact of identified climate-related risks and opportunities on the organisation's business, strategy, and financial planning.</p>
Risk Management	<p>Describe Canacol's corporate processes for identifying and assessing climate-related risks.</p> <p>Describe Canacol's processes for managing climate-related risks.</p> <p>Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.</p>
Metrics and Targets	<p>Disclose the metrics used to assess climate-related risks and opportunities in line with Canacol's strategy and risk management process.</p> <p>Disclose Scope 1, 2 and, 3 greenhouse gas (GHG) emissions, and the related risks.</p> <p>Describe the targets used by Canacol to manage climate-related risks and opportunities.</p>



Governance

› Canacol's Climate Governance Structure





Canacol's Climate Governance Structure

The Board of Directors (the Board) recognizes the significance of climate change and has ultimate oversight over all climate-related risks and opportunities. Canacol's ESG (Environmental, Social & Governance) Committee (the "Committee") guarantees that sustainability strategy, the management of climate-related risks, and the corporation's emissions reduction road map are integrated into the business plan, long-term strategic decision making, and financial planning.

Board oversight of climate-related risks and opportunities

Canacol's ESG Committee is its governing body for climate issues. The Committee is responsible for ensuring that climate-related risks, opportunities, and targets are incorporated into the corporate-wide strategy and that the company has in effect adequate policies and procedures to identify and manage the principal climate-related risks. The ESG Committee continually evaluates the evolving landscape of climate-related risks and opportunities, and bi-annually reports findings to the Board for consideration and integration into wider business planning. The progress of these plans is monitored at the Board level to ensure accountability is maintained and that key challenges are addressed. The Committee meets as frequently as required but not less than twice per year. For the calendar year 2022, the Committee met four times to discuss ESG strategy, climate goals and to develop and review the company's Net-Zero commitment and plan.





Management’s role in assessing and managing climate-related risks and opportunities

Climate strategy is integrated throughout Canacol’s organizational structure and processes to ensure the effective management of climate-related risks and opportunities. The Executive team updates and incorporates risks and opportunities into annual strategic and operational objectives and strategies.

One of the four strategic pillars of Canacol’s 2022 Business Plan was “Navigating the Energy Transition” aimed to lead Colombia’s energy transition, supported by 5 corporate objectives:

1. Build a carbon neutrality plan for the short, medium, and long-terms.
2. Identify and include climate-related risks and opportunities of the natural gas business.
3. Foster an ESG culture built on transparency.
4. Leverage strategic partnerships to strengthen best practices and achieve carbon neutrality.
5. Improve ESG performance.

Management’s review of climate-related risks and opportunities includes an assessment of any significant changes that could affect the current risk landscape. This process also identifies new opportunities and resources, evaluates progress toward goals, and advises the ESG and operational teams on climate strategy implementation.



As a Board member, **Canacol’s CEO** is a key link between management and the Board. The CEO keeps the ESG Committee fully informed of the climate strategy progress, achievements, and upcoming plans. The CEO also provides feedback to the executive management team and ensures alignment of annual operational objectives and strategies with climate considerations.



The **General Manager Colombia (GM)** plays an essential role in the implementation and updating of Canacol’s six-year ESG strategy and chairs the company’s Climate Management Committee enabling effective execution of a climate plan.

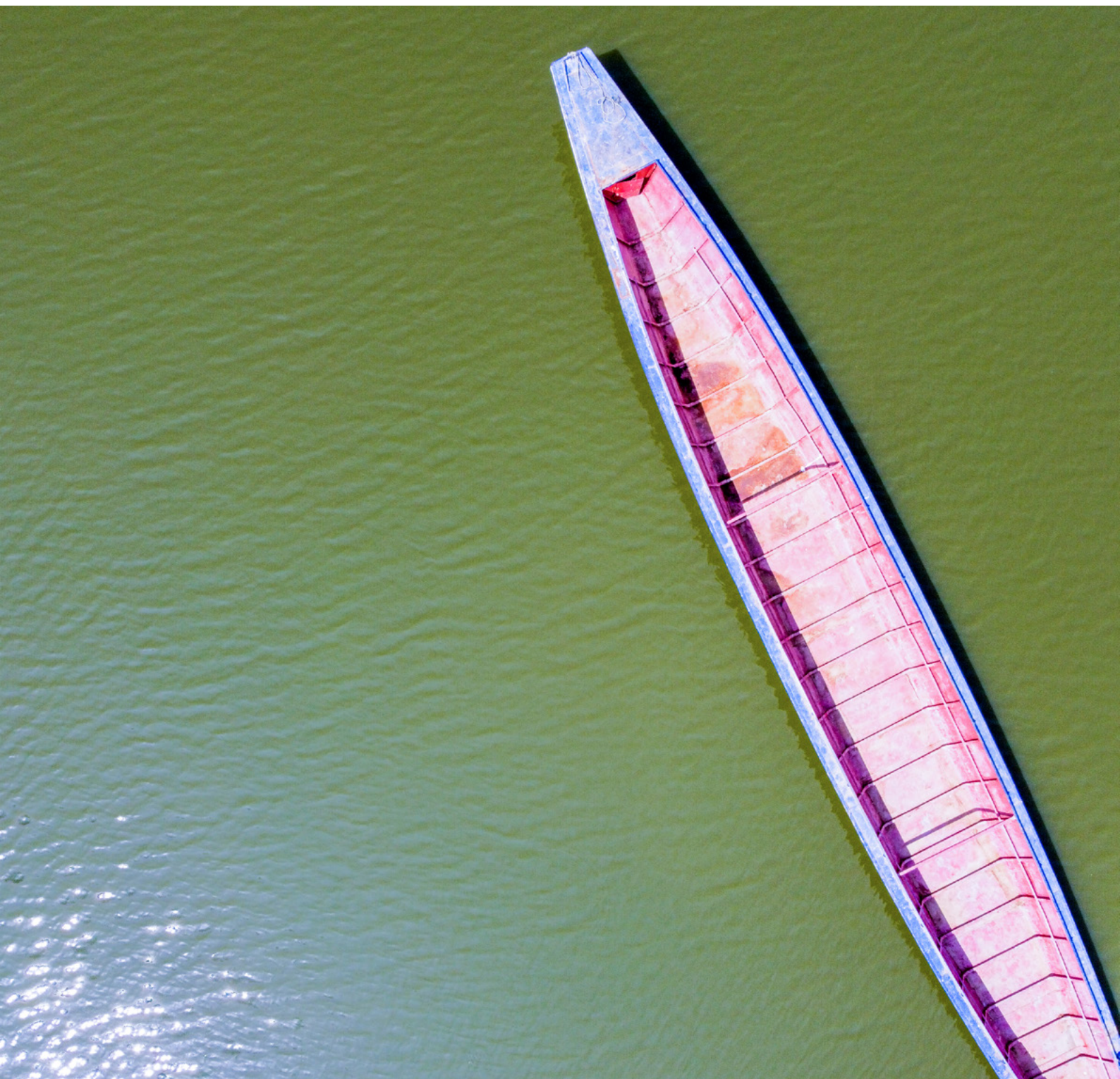


The **Climate Management Committee** was established in 2021 and consists of five executives (General Manager Colombia, Operations Vice President, Finance Vice President, Legal Affairs Vice President, and Sustainability Vice President) and managers that proactively integrate climate matters into all operational activities, corporate processes, and objectives. The Committee meets regularly to follow up on the progress that is subsequently reported to the ESG Committee Board.



Strategy

- Canacol's Climate Strategy
- Spotlight on Physical & Transition Risk Assessment





Canacol's Climate Strategy

We integrate climate risks and opportunities into our overall business strategy and have most notably implemented actions to reduce our direct greenhouse gas (GHG) emissions and impact we have on the environment in all our areas of operation.

Climate-related risks and opportunities the company has identified over the short, medium, and long term

Having an efficient supply of clean energy is crucial for society's development and progress. Our ambition is to improve the quality of life for millions of people through the exploration, production, and supply of conventional natural gas under the highest operational and environmental standards and to lead Colombia's energy matrix transition. Canacol is committed to supporting this transition and considers the impact of climate-related risks both today and in the future.

We firmly believe in the critical role of natural gas in the energy transition, and we fully support global plans to meet the goals of the Paris Agreement. We have focused on 1) strengthening carbon accountability and 2) defining a resilient low carbon strategy that considers climate-related risks and opportunities to respond effectively to energy transition challenges.

We consider each climate-related risk and opportunity by its short, medium, and long-term impacts. In 2022, we actively integrated climate-related risks into the wider risk management strategy to fully understand and to begin quantifying the financial impacts for each time horizon. Through our Corporate Enterprise Risk Matrix, we assess, classify, and prioritize risks and opportunities by using measures of likelihood and impact.

Impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning

We have identified physical and transition climate-related risks through Board and Senior Leadership level discussions and risk management workshops. Decarbonization opportunities are aligned with the organization's businesses, strategy, and financial planning.

Throughout 2022, Canacol built capabilities to utilize scenario analysis to further identify potential climate-related risks and opportunities. We performed qualitative analysis to better understand the energy transition and carbon neutrality opportunities and we plan to continue modelling both transition and physical risk to further advance the organization's strategy.

We aim to leverage both physical scenario analysis and the latest climate science to robustly model the impacts of climate change on our operations, assets, and supply chain. Future physical and transition modelling scenarios will incorporate multiple climate warming pathways.

In the short term, we will look to further enhance resilience across our operations, leveraging ongoing work to quantify the potential climate-related risks and opportunities. This may include mitigation measures that improve the risk exposure to our sites, as well as employee health and safety or measures that reduce the impact we have on the environment and climate.



Spotlight on Physical & Transition Risk Assessment

Canacol has identified and assessed the climate-related physical and transition risks at the group level and below we outline critical mitigating actions to address these. Canacol undertook a group-level exercise involving of Directors and heads of the ESG team and business units to assess the impact and likelihood of both physical and transition risks. This climate-related risk assessment involved leveraging the latest climate science and in the context of Colombia's climate landscape, to review the implications and mitigating actions. Below we present three key physical and transition risks that we have identified as priorities.

Physical risks relate to the more frequent extremes of climate change, such as increased catastrophe risk, extreme rain, severe flooding, and the associated damage of these risks to Canacol's operations and assets.

Risk	Implications	Mitigating actions
Extreme rainfall	Increased intensity of extreme rainfall may impact Canacol's construction of infrastructure works (flow lines, access roads, treatment facilities and civil platforms) and hinder operations and drilling at primary sites.	The level of vulnerability of existing infrastructure to extreme rainfall is periodically reviewed. Canacol continuously monitors climate variables to anticipate periods of extreme rain and has developed contingency plans and budgets to mitigate the impact of a prolonged period of rain.
Abundance of water	Increased annual rainfall leads to more energy supply from major hydroelectric power plants which reduces demand for natural gas over time.	The annual sales forecast includes the decrease in supply due to the rainy season. Additionally, Canacol is diversifying its customer portfolio within the internal Colombian market.
Water scarcity	Long periods of water scarcity limit the amount of water that Canacol can use in its operations. Furthermore, gas demand from the power generation sector increases significantly if rainfall is below normal conditions for hydropower, putting Canacol's supply capacity under stress to meet increased demand.	Control and monitoring of climatic variables will ensure Canacol is able to respond to market fluctuations. Canacol is also diversifying water sources through different contracts and technologies.



Transition risks include policy, legal, financial, and reputational risks that face Canacol amidst the global transition to a low-carbon economy

Risk	Implications	Mitigating actions
Gas supply constraints	Loss of Colombian self-sufficient gas market due to public restrictions on its supply (denial of permits to exploit new fields, limitation in the exploitation of existing fields etc.).	<p>Canacol sales contracts are covered by current E&P contracts with the ANH (Agencia Nacional de Hidrocarburos), which are long term commitments between Canacol and the ANH for exploration and production of Canacol reserves.</p> <p>In the future, Canacol will continue to work for Colombia's energy self-sufficiency by executing its current contracts, participating in new auctions of E&P contracts and by working together with government agencies and communities.</p>
Increased regulations	Increasing restricting regulation of climate, for example increasing taxes or tariffs on carbon intensive products alongside new reporting requirements.	Constant review and updating of processes as new legislation occurs. Canacol has incorporated regulatory adjustment clauses into contracts and proactively anticipates and plans for new regulatory requirements.
Advances in technology	The cost of implementing new low-carbon technologies too early when they are not cost efficient or the loss of competitiveness by implementing too late.	Canacol is exploring innovative ways to reduce carbon emissions. We are continuously evaluating projects to reduce the carbon footprint of our own operations and seeking the latest technological advancements available for implementation.





Risk Management

› Canacol's Risk Management Strategy





Canacol's Risk Management Strategy

As part of Canacol's core risk management processes, we are implementing a more robust methodology for identifying, quantifying, managing, and mitigating climate-related risks across our global operations. This ensures that climate considerations are fully embedded in our organizational culture, decision making, and that responsibilities and accountabilities are assigned for all key climate-related risks and opportunities.

Processes for identifying and assessing climate-related risks

Canacol's ESG Committee and senior management regularly perform climate-related risk assessments that consider the impact of physical and transition risks across all business areas to identify and prioritize mitigating actions. The Corporate Enterprise Risk Management (ERM) framework is regularly updated and is the primary mechanism to assess and prioritize climate-related risks and opportunities by business unit, using a common measure of likelihood and impact, considering financial, regulatory, reputational, environmental and safety impacts. Senior leadership teams regularly perform workshops and group discussions to assess climate-related risks in terms of likelihood and impact to ensure awareness and accountability are maintained. We aim to be able to effectively assess climate-related risks in parallel as our operations grow and evolve.

Senior leadership teams regularly perform workshops and group discussions to assess climate-related risks in terms of likelihood and impact to ensure awareness and accountability is maintained. We aim to be able to effectively assess climate-related risks as operations continue to evolve.

In 2023, we will continue to establish Key Performance Indicators (KPIs) and annually review our climate-related risk management processes, including those for developing and implementing risk maps, controls,

and risk ownership. Our objective is to conduct scenario analysis as part of strategic planning and enterprise risk management, to identify options for increasing business resiliency to plausible climate related risks and opportunities through adjustments to strategic and financial plans.

Processes for managing climate-risks

Climate-related risks are managed through periodic evaluation processes. Canacol has a defined monitoring system to track ESG strategic goals and indicators. This has provided real-time qualitative and quantitative information about ESG key performance, including climate-related risks, allowing better and timelier decision-making for risk management decisions.

Processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management

Currently, climate risks are reported to the Executive Committee and to the Board of Directors' Audit Committee for review and assurance. Canacol will continue to embed this process throughout the wider organization. A 2023 focus will be to establish stronger processes for implementing climate-related risk management into the overall risk management framework.

Canacol's Risk Management Process and implementation guidelines

- 1 Risk Identification
- 2 Risk Analysis (causes, consequences and responsible)
- 3 Risk Evaluation
- 4 Risk Response (Action plan)
- 5 Risk Monitoring



Metrics and Targets

Canacol's Metric and Target Disclosures





Canacol's Metric and Target Disclosures

We have defined metrics and targets that ensure business objectives relating to climate change and the energy transition are realized. Carbon accounting and management are defined as key performance indicators for all our business units. We followed the GHG Protocol's Corporate Standard to calculate and disclose carbon emissions and, through a third-party expert, we quantified 100% of the most recent direct and indirect GHG inventory (FY 2021). We use Wood Mackenzie's Emissions Benchmarking Tool to enhance transparency and provide a more comprehensive assessment of emissions-related risks and opportunities at the corporate level and across our value chain.

Metrics used by Canacol to assess climate-related risks and opportunities as part of its strategy and risk management process

Robust and high-quality data is critical for accurate tracking of operational metrics relating to resources consumption. Canacol continues to identify metrics to establish targets and track progress. We have defined multiple environmental and operational risks metrics involving energy and water consumption, as well as GHG emissions and land use.

- Since 2020 we have been implementing an energy transformation process in our operations to minimize the use of other fossil fuels and to optimize the efficiency of our own-produced natural gas.
- We have increased the use of solar energy in our operations by 140% and 32% in 2020 and 2021 respectively.
- We quantified the company's indirect 2021 GHG emissions, including emissions associated with the use of energy products sold by Canacol. We are in the process of assessing significant data-driven opportunities that will influence our GHG reductions and enhance our climate strategy across our value chain for the upcoming years.

We recognized there is a long road ahead and we are committed to continue improving the implementation of physical and transition risk specific metrics. Our objective is to include metrics on climate in 2023 aligned with responsible management roles.

Canacol's 2021 Scope I, II and III GHG emissions



**Scope 1 + 2 emissions**

Risk	Gas	Crude Oil t CO ₂ e	Total	
Stationary comb. (Compression & Generation)	26,206	10,516	36,722	56.58%
Estimated fugitive emissions	20,132	3,787	23,919	36.86%
Flared gas	3,372	746	4,118	6.35%
Mobile combustion	105	-	105	0.16%
Purchased electricity (Scope 2)	25	-	25	0.04%
HFC from air conditioning and refrigeration use	5	2	7	0.01%
Total	49,845	15,051	64,896	

Scope 3 (indirect emissions)

Categories	t CO ₂ e	
Use of sold products	3,696,489	93.56%
Purchased goods and services	240,930	6.10%
Downstream transportation and distribution	11,840	0.30%
Capital goods	589	0.02%
Employee commuting	476	0.02%
Other fuel-and energy-related activities	176	0.00%
Business travel	170	0.00%
Upstream transportation and distribution	102	0.00%
Waste generated in operations	64	0.00%
Total	3,950,836	

As part of Canacol's decarbonization strategies to progressively reduce greenhouse gas emissions and eliminate fugitive emissions and other air pollutants we have set metrics to ensure targets are achieved.

Our decarbonization roadmap encompasses short, medium, and long-term actions including leak detection and repair to eliminate fugitive emissions, flare efficiency and reduction, and the expansion of renewable energy projects, among others.

At Canacol Energy, we are committed to taking actions for a cleaner energy future and accelerated global transition. To that end, we have taken actions to meet the demand of natural gas in Colombia to enable millions of people to switch to cleaner fuels. We have also created a comprehensive and resilient decarbonization plan, which will be publicly communicated in 2023 with a firm pledge of achieving Net-Zero Scope 1 and 2 GHG emissions before 2050