SUSTAINABILITY ACCOUNTING STANDARDS BOARD (SASB) METRICS REPORT







Metrics Report

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● Message from the CEO of Ecopetrol S.A.

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SASB¹ METRICS REPORT 2020

About this report

Ecopetrol Group (EG) presents its first report based on the parameters defined by the Sustainability Accounting Standards Board (SASB). Thus, EG continues to make its measurement processes more robust while managing risks and opportunities in relation to sustainability from a Group perspective. In addition, EG hereby reveals to its investors and other stakeholders, the degree of understanding and integration that its administrative, financial, operational, and support teams have achieved in making sustainability central to its business.

Ecopetrol Group's current corporate strategy is based on the pillars of Growth in Reserves and Production, Capital Discipline and Cash Protection and Cost Efficiency. Ecopetrol recognizes the important challenges posed by the new business environment, including the energy transition, climate change, changes in the oil and gas sector, and the need to create shared value for society. In response to these challenges – and acknowledging the role, Ecopetrol has established four industry's fundamental pillars as its roadmap in the energy transition: (i) Increasing competitiveness and resilience in the traditional business, (ii) Diversification of the portfolio without losing focus on Oil & Gas, (iii) Accelerating decarbonization, and (iv) TESG (achieving sustainability by incorporating Technology as an enabler, innovator and accelerator of Environmental. Social and Governance (ESG) issues). Based on these new definitions, Ecopetrol is carrying out a new strategic update in 2021.

We submit a report on the company's sustainable management approach – supported by the contents of Ecopetrol S.A.'s Integrated Sustainable Management Report and the sustainability reports of *Hocol S.A., Cenit Transporte y Logística de Hidrocarburos S.A.S., Oleoducto de Colombia S.A., Oleoducto de los Llanos Orientales S.A., Oleoducto Bicentenario de Colombia S.A.S., Oleoducto Central S.A., Refinería de Cartagena and Esenttia S.A., in addition to other mechanisms available to Ecopetrol.*

This report has been prepared with the support of KPMG for the implementation of the standard. We report on metrics available to each of the mentioned companies for the 2020 period. The results present EG's material issues with a coverage greater than 80% of the SASB metrics, for the Extractives & Minerals Processing sector including the standards for Oil & Gas Exploration & Production, Oil & Gas Midstream applicable to the Transportation and Logistics segment, and Oil & Gas Refining & Marketing applicable to the Refining segment, and the Resource Transformation sector including the Chemicals standard. Ecopetrol Group will continue to work to provide information that was not available for this report in upcoming editions.

Ecopetrol Group upholds its commitment to sustainability and transparency through the most efficient, suitable, and relevant mechanisms, while complying with the highest global standards. This report shows this commitment. We report material sustainability issues while reflecting the alignment of the corporate strategy with these challenges – including the way EG responsibly faces the energy transition.

Felipe Bayón

Chief Executive Officer



Scope of this report by SASB sector and standard

1 To access the Integrated Sustainable Management Report for Ecopetrol S.A., follow the link: https://www.ecopetrol.com.co/wps/ portal/Home/es/Inversionistas/ informeanual/

2 The metrics reported for Ecopetrol SA include information of the Barrancabermeja refinery

EXTRACTIVES & MINERALS PROCESSING SECTOR

1. OIL AND GAS MINERALS PROCESSING SECTOR

Activity Metrics

Code	Accounting Metric	Unit of measure	ecopetrol	ho col
EM-EP- 000.A	Production of: (1) oil, (2) natural gas, (3) synthetic oil, and (4) synthetic gas	(1) Thousand barrels per day (Mbbl/day); (kbped) ³	(1) 516,0 (2) 121,8 (3) 0 (4) 0	(1) 20,2 (2) 15,4 (3) 0 (4) 0
EM-EP- 000.B	Number of offshore sites	Number ⁴	6 Exploratory blocks 2 Productive fields	2 Productive fields
EM-EP- 000.C	Number of terrestrial sites	Number	21 Exploratory blocks 204 Productive fields	19 Exploratory blocks 39 Productive fields

Environmental Performance

Greenhouse Gas Emissions (GHG)

Code	Accounting Metric	Unit of measure	ecopetrol	ho col
EM-EP- 110a.1	 (1) Gross global Scope 1 emissions,⁵, (2) Percentage methane⁵, (3) percentage covered under emissions-limiting regulations⁵ 	Metric tons CO ₂ -e Percentage (%)	 (1) 10.181.937 tonCO₂-e (2) 4% (3) A percentage covered does not apply under the GHG regulatory emission limit because there is no regulation associated with such emissions (released methane) in Colombia. 	Information not available for 2020.
EM-EP- 110a.2	Amount of gross global Sco- pe 1 emissions from: (1) flared hydrocarbons ⁶ , (2) other combustion ⁶ , (3) process emissions ⁶ , (4) other vented emissions6 and (5) fugitive emissions ⁶	Metric tons CO ₂ -e	(1) 908.468 (2) 7.791.613 (3) 1.275.217 (4) 0 (5) 206.639	Information not available for 2020.

 3 For 2020, the figures are reported in thousand barrels oil equivalent as it is the most widely used unit of measurement for the oil and gas sector.
 4 The productive fields correspond to Chuchupa and Ballena where Ecopetrol S.A. has 57% stake while Hocol S.A. holds 43%.
 5 - 6 For Ecopetrol S.A. this metric is generated under the ISO 14064-1 methodology and the GHG Protocol, and the organizational inventory limit is set as operational control. Through this approach the company measures 100% of the GHG attributable to the operations of which it has control, including the assets operated by Refineria de Cartagena and Cenit. Additionally, the inventory at year-end was updated for this report. Thus, this data varies with respect to what was reported in Economic for the second Ecopetrol's Integrated Sustainable Management Report 2020.

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Code	Accounting Metric	Unit of measure	ecopetrol	ho col
EM-EP- 110a.3	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction tar- gets, and an analysis of performance against those targets	Discussion and Analysis	face the energy transition: (i) Continue reinforcing busing & gas market: The group ant its portfolio, which will conti to meet the peak of the Oil d the commitment to new bus- energy transition. (ii) Lower Carbon footprint as diversification: The group is e opportunities in the electricit transmission. Moreover, new hydrogen, carbon capture, ar solutions, among others, aim growth criteria, cash protecti (iii) Meet decarbonization ob tion of carbon emissions in t and align these with establis seeks to reduce its CO2e emi 2) compared to a 2019 baseli sions by 2050 for scopes 1 ar seeks to reduce 50% of its to 1, 2 and 3). To meet these goa four (4) main drivers: a) Perm by a third party of the GHG e lio overhaul considering carb carbon price for project valu- tion of carbon emission tech in operations, gas flaring, fug reductions, use of renewable hydrogen and carbon captur Natural Climate Solutions (Nu nism to compensate residua iv) Achieve sustainability thro Environment, Social and Gov ted by Ecopetrol, which puts sustainable management of governance issues. This appr on climate change, water ma development. This concept	nue to be the focus, in order lemand. Furthermore, increase sinesses that arise from the a result of portfolio exploring new commercial y value chain on the energy businesses such as green and the use of natural climate at complying with the Group's on, and capital discipline. jectives: Focus on the reduc- he operation and value chain, shed goals . Ecopetrol Group issions by 25% (scopes 1 and ne and having net zero emis- nd 2. In addition, Ecopetrol tal emissions by 2050 (scopes als, the company will focus on missions inventory, b) Portfo- bon intensities and an internal ations, c) Gradual incorpora- nologies (energy efficiency gitive emission and venting e energies, fuel substitution, e, usage and storage), and d) CS) as a cost-efficient mecha- l emissions ⁷ . Dugh TESG (Technology, remance), a concept adop- technology at the heart of the environmental, social and roach is particularly focused anagement, and regional also addresses other themes economy, HSE (Health, Safety
Air quality				
Code	Accounting Metric	Unit of measure	ecopetrol	ho col
EM-EP- 120a.1	EAir emissions of the following pollutants: (1) NOx (excluding N ₂ O) ⁸ , (2) Sox8, (3) volatile organic compounds (VOCs) ⁸ , and (4) particulate matter (PM10) ⁸	Metric tons (t)	(1) 31.470 tonNOx (2) 22.548 tonSOx (3) 114.423 tonVOCs (4) 4.043 tonPM10 (Factor emission is for PM total)	Information about air emissions by mobile sources and stationary sources is not available for this period. It is important to clarify that the existing boilers on fields are not operating since November 2019 and electric generators do not require isokinetic studies because their capacity is under 1 MW.

7 For more details on the roadmap proposed by the Company to achieve its medium and long term goals, visit: https://www.ecopetrol.com.co/wps/ portal/Home/ es/?page=detalleNoticias&urile=wcm:path%3A%2FEcopetrol_WCM_Library%2FAS_en%2FNeus%2FNoticias-2021%2Femissions-reduction 8 For Ecopetrol, this metric is generated under the ISO 14064-1 methodology and the GHG Protocol, and the organizational inventory limit is set as operational control, within this approach the company counts 100% of its GHG emissions attributable to the operations of which it has control, including the assets operated by the Refineria de Cartagena and Cenit. Additionally, the inventory at year-end was updated for this report and it varies with respect to what was reported in Ecopetrol's Integrated Sustainable Management Report 2020.

Water management

Code	Accounting Metric	Unit of measure	ecopetrol	ho col
EM-EP- 140a.1	(1) Total fresh water withdrawn, (2) total fresh water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Thousand cubic meters (m³) Percentage (%)	(1) 43.698 m ³ (2) 10.757 m ³ (3) 7,57% (4) 28%	(1) 189,1 m³ (2) 189,1 m³ (3) 0% (4) 0%
EM-EP- 140a.2	EVolume of produced water and flowback generated; percentage (1) discharged, (2) injected, y (3)recycled; hydrocarbon content in discharged water ⁹	Thousand cubic meters (m ³) Percentage (%) Milligrams per Liter (mg/L) Metric tons	403.441 m ³ (1) 17.75% (2) 60.49% (3) 21.76% 5.73 mg/L	18.515 m ³ (1) 2,4% (2) 94,4% (3) Information not available for 2020. 2,57 metric tons
EM-EP- 140a.3	Percentage of hydraulically fractured wells for which there is public disclosure of all fracturing fluid chemicals used ¹⁰	Percentage (%)	0%	0%
EM-EP- 140a.4	Percentage of hydraulic fracturing sites where ground or surface water quality deteriorated compared to a baseline ¹⁰	Percentage (%)	0%	0%



9 This metric is reported according to the unit of measure available for each company. 10 To date, the companies have not carried out multi-stage hydraulic fracturing of horizontal wells activities for non- conventional reservoirs.

Biodiversity impacts

Code	Accounting Metric	Unit of measure	ecopetrol	bocol
EM-EP- 160a.1	Description of environmental management policies and practices for active sites	Discussion and analysis	The Environmental Management Plan (EMP) in Ecopetrol and Ecopetrol Group seeks to prevent, control, mitigate and compensate any residual environmental impacts due to operations and projects. This, while also contributing to improving environmental quality and the sustainable development of all areas where the Company operates, in compliance with the corresponding permits and regulations. Ecopetrol develops initiatives and environmental investment projects, both mandatory and voluntary, to manage potential risks and opportunities, and to have a positive impact on the natural resources of the regions were it operates. Based on the following: • Water management • Climate change • Biodiversity: The biodiversity strategy is based on four (4) axes: i) prevention and mitigation of impacts and compensation of residual impacts applying the mitigation hierarchy, ii) implementation of nature-based solutions that contribute to face challenges associated with climate change, biodiversity. • Circular economy: The main objective of the circular economy model is to incorporate this concept into management processes to promote economic growth, improve competitiveness and mitigate environmental risks. This is based on five (5) components: i) Improvement of efficiencies on resources, emissions and wate, ii) Redesign of products, processes and services, iii) Definition of circular metrics, iv) Circularity in the regions, and v) Consolidation of the company's culture on Circular economy. Environmental Policies and practices are certified under ISO 14001. Its scope includes oil & gas production, exploration and exploitation, refined petrochemicals production, commercialization of hydrocarbons, hydrocarbons transportation services and administrative and support services to the business.	The company has an environmental policy and a sustainability strategy, which guide the Environmental Management System (EMS), certified by ISO 14001, and implemented throughout the life of the asset for the exploratory cycle (new opportunities, prospects, new discoveries developments, and withdrawals). The EMS allows the development of the environmental component of the company's strategy which establishes mechanisms to manage impacts of the operation and projects of Hocol. • Environmental Management System implemented and certified under ISO 14001 (aligned with the International Finance Corporation - IFC- standard 3). • Strategic guidelines to identify and manage environmental impacts. • Occupational health and safety management system established under Colombian law Decree 1072 of 2015. • Biodiversity environmental management impact mechanisms. • Ecosystem and vulnerable species protection guidelines and programs.

Code	Accounting Metric	Unit of measure	ecopetrol	ho col
EM-EP -160a.2	(1.1) Number and (1.2) aggregate volume of hydrocarbon spills, (2) volume in Arctic, (3) volume impacting shorelines with ESI rankings 8-10, and (4) volume recovered	Number (#) Barrels (bbls)	 (1.1) 4 (1.2) 125 bbls (2) Not apply (3) 0 (4) 12,5 bbls 	 (1.1) 4 (1.2) 23 bbls (2) Not apply (3) 0 (4) 22,7 bbls
EM-EP -160a.3	Percentage of (1) proved and (2) probable reserves in or near sites with protected conservation status or endangered species habitat	Number (#) Barrels (bbls)	do they plan to intervene wi refining activities in areas of according to the Internation	a. declare that they do not have – nor ith – any exploration, production or great biodiversity value classified al Union for Conservation of Nature nor in World Heritage sites declared

Social Performance

Security, Human Rights & Rights of Indigenous Peoples

Code	Accounting Metric	Unit of measure	ecopetrol	ho col
EM-EP- 210a.1	Percentage of (1) proved and (2) probable reserves in or near areas of conflict ¹¹	%	(1) 2,24% of proven reserves near areas of conflict (2) 1,58% of provable reserves near areas of conflict ¹⁰	 (1) 0% of proven reserves near areas of conflict (2) 0% of provable reserves near areas of conflict¹⁰
EM-EP- 210a.2	Percentage of (1) proved and (2) probable reserves in or near indigenous land ¹²	%	(1) 17,57% of proven reserves near indigenous land (2) 14,51% of probable reserves near indigenous land	(1) 62,41% of proven reserves near indigenous land (2) 0,00% of probable reserves near indigenous land



11 The calculation was made based on the 2019-armed conflict information (last available) reported on the UPSALA page (https://www.pcr.uu.se/) and the locations where the company has reserves. 12 Reserves in indigenous lands were determined as the proportion of the area overlaid with indigenous territories versus the total area of the field.

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Community relations

Code	Accounting Metric	Unit of measure	ecopetrol	ho col
EM-EP- 210b.1	Discussion of process to manage risks and opportunities associated with community rights and interests	Discussion and analysis	Ecopetrol performs annual exercises to identify and evaluate risks and impacts on Human Rights: • Impact analysis in the areas of operation. • Involvement of actors with a differential approach such as gender, age, belonging to social organizations (leaders and members of labor unions), belonging to ethnic communities, and victims of conflict.	 Hocol seeks to be a legitimate ally in the regions where it operates with the purpose of creating favorable conditions in the operational environments, building long-term relationships of trust. Social Management Processes: Coordination and Social Strategy, Social, Economic and Cultural Impacts, Prior Consultations, Monitoring of the Operation, QRC's (query, request, complaint), Social Investment, and Social Incidents. Themes and programmatic lines: Social Capital, Economic Development, Environmental Sustainability, Infrastructure, and Community Equipment. QRC Procedure: Optimal Management Mechanism of the QRC (query, request, complaint).
EM-EP- 210b.2	(1) Number and (2)duration of non- technical delays	Number (#); Days	Information not available for 2020	(1) 2 non-technical delays (2) 3 days

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Work	force	Health	ו & Saf	ety
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Code	Accounting Metric	Unit of measure	ecopetrol	ho col
			(a) Full-time employees (1) 0.13 (2) 0.01 (3) 0.21 (4) 7,66 h	(a) Full-time employees (1) 0,00 (2) 0,00 (3) 0,00 (4) Information not available for 2020
 (1) Total recordable incident rate (TRIR)¹³, (2) fatality rate, (3) near miss frequency rate (NMFR)¹⁴, and EM-EP- (4) average hours of health, 320a.1 safety, and emergency response training for (a) full-time employees, (b) contract employees, and (c) short-service employees 		(b) Contract employees (1) 0.06 (2) 0.00 (3) 0.01 (4) 32,45 h	 (b) Contract employees (1) 0,12 (2) 0,00 (3) 0,00 (4) Information not available for 2020 	
	(3) near miss frequency rate (NMFR) ¹⁴ , and (4) average hours of health, safety, and emergency response training for	Rate / Hours	(c) Employees with less than six months in the company: Information not available for 2020	(c) Employees with less than six months in the company: Information not available for 2020
	(b) contract employees, and (c) short-service		(1) Total: 0,07 (2) Total: 0,00 (3) Total: 0,05 (4) Total: 26,91 h	(1) Total: 0,09 (2) Total: 0,00 (3) Total: 0,00 (4) Total: Information is available for 2020
			Ecopetrol and Hocol's accide recordable injuries frequenc the number of injuries origin of full-time and contract em apprentices. Fatalities, disab treatments that occurred pe are included	y rate that corresponds to nated caused by or at work nployees, subcontractor and

are included.

13 TRIR or TRIF was calculated by weighting the accident rate and the hours worked for employees and contractors. TRIR calculated according SASB metric. 14 NMFR was calculated by weighting the accident rate and the hours worked for employees and contractors.

Code	Accounting Metric	Unit of measure	ecopetrol	ho col
EM-EP- 320a.2	Discussion of management systems used to integrate a culture of safety throughout the exploration and production lifecycle	Discussion and analysis	The company continuously works to: Integrate the Integral Health areas, Occupational Health, Safety Processes, Industrial Security and Environment. HSE Strategy Risk assessment matrix (RAM) Occupational Epidemiological Monitoring Preventive and occupational medicine Industrial hygiene Ergonomics Occupational Health Committees	 The company continuously works to: Strengthen operational leadership related to having clean and safe operations. Implement the Health and Safety Management System in compliance with the strategic objectives of the company, aligned with the corporate strategy. Monitor the health conditions of workers and work environments. Collect information to determine if preventive measures and hazard and risk controls are being applied and are effective. Analyze the results of indicators and the previous Health and Safety Management System audits. Maintain a Health and Safety Management System that satisfies the Company's global needs related to this subject matter.

Economic Performance

Reserves Valuation & Capital Expenditures

Code	Accounting Metric	Unit of measure	ecopetrol	ho col
EM-EP- 420a.1	Sensitivity of hydrocarbon reserve levels to future price projection scenarios that account for a price on carbon emissions	Million barrels (MMbbls), Million standard cubic feet (MMscf)		siders scenarios and sensitivity : will be reported in the next
EM-EP- 420a.2	Estimated carbon dioxide emissions embedded in proved hydrocarbon reserves	(Giga) Tons Metrics CO ₂ -eq	0,727 GigatonCO ₂ -e	Information not available for 2020
EM-EP- 420a.3	Amount invested in renewable energy, revenue generated by renewable energy sales	Reporting currency	Renewable energy investments: COP \$6,749 million Renewable energy sales revenue: 0	Renewable energy investments: COP \$656 millions Renewable energy sales revenue: 0



Code	Accounting Metric	Unit of measure	ecopetrol	ho col
EM-EP- 530a.1	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	Discussion and analysis	 Ecopetrol articulates its climate change strategy to the Colombian Government's policy, and contributes to the construction of technical and regulatory guidelines to strengthen the country's institutional capacity in terms of climate change. Additionally, regulatory climate risks are monitored and managed, in case regulations may impact the company's climate change priorities and strategy. Ecopetrol has an active agenda with the Ministry of Environment to support climate ambition to reduce 51% of greenhouse gases by 2030. Soon after, Ecopetrol Group announced its commitment to reduce 25% of its CO2e emissions (scopes 1 and 2) by 2030, compared to a 2019 baseline, and having net zero emissions by 2050 for scopes 1 and 2). In addition, Ecopetrol seeks to reduce 50% of its total emissions by 2050 (scopes 1, 2 and 3). 	In 2020 the Board of Directors approved the Strategy for Sustainable Development. Its purpose is to contribute with clean energy to industries, transport, and households, to create social, environmental, and economic value, and contribute to the growth of stakeholders and territorial actors. The key action elements are the Principles for Responsible Investment, to incorporate environmental, social and governance factors (ESG) in the investment decisions, managing stakeholder needs and expectations comprehensively, while guaranteeing respect for Human Rights.

Management of the Legal & Regulatory Environment



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Code	Accounting Metric	Unit of measure	ecopetrol	hocol
EM-EP- 540a.1	Process Safety Event (PSE) rates for Loss of Primary Containment (LOPC) of greater consequence (Tier 1)	Rate	0,01	0,23
EM-EP- 540a.2	Description of management systems used to identify and mitigate catastrophic and tail-end risks	Discussion and analysis	Ecopetrol's integrated risks management system framework establishes guidelines on risk management in which catastrophic risks are considered along with assessment, prevention, and mitigation mechanisms, including residual risks. Ecopetrol has a Physical Security Management team that addresses related considerations. Trainings are also carried out at different levels within the organization.	Hocol has a corporate guide to risk management which is complemented with the security risk processes guide, in which risks in the life cycle of the asset are addressed systematically and the definitions of risk, major risk, and disaster are stated.

2. OIL & GAS MIDSTREAM

Activity Metrics

Code	Metric	Unit of measure	OCENSA	cenit	Oleodutto de los Llanos Orientales S.A.	Oleoducto de Colombia	bicentenario
EM-MD- 000.A	Total metric ton-kilometers of: (1) natural gas, (2) crude oil, and (3) refined petroleum products transported, by mode of transport ¹⁵	Thousands of barrels per day	(1) 0 (2) Pipelines Segment 2: 561 (3) 0	(1) 0 (2 Pipelines:268 (3) Refined petroleum product pipeline: 231	(1) 0 (2) Pipelines Segment 3: 210 (3) 0	(1) 0 (2) Pipelines: 189 (3) 0	(1) 0 (2) Pipelines: 11 (3) 0

15 For 2020, the figures are reported in barrels transported daily as it is the most used unit of measure in the oil and gas industry.

Environmental Performance

GHG Emissions

Code	Accounting Metric	Unit of measure	OCENSA	cenit	Ocolución de los Llinos Orientales S.A.	Oleoducto de Colombia	bicentenario
EM-MD- 110a.1	Gross global Scope 1 emissions, percentage methane, percentage covered under emissions- limiting regulations.	Metric tons CO ₂ -e	332.332	105.04216	89.542 ¹⁷	41.193	1.380
EM-MD- 110a.1	Gross global Scope 1 emissions, percentage methane , percentage covered under emissions- limiting regulations	Percentage (%)	1,79%	11,11%	3%	0,09%	100%
EM-MD- 110a.1	Gross global Scope 1 emissions, percentage methane, percentage covered under emissions- limiting regulations	Percentage (%)			egulatory GHG emis h emissions (or met		
EM-MD- 110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Discussion and analysis	Global goal to reduce emissions associated with Scopes 1 and 2. Power Generation Project through the hydraulics of the crude passing via a turbine in the Vasconia station that for 2021 will mitigate 400 tCO ₂ e (tons of CO ₂ equivalent), and in 2022 will mitigate 800 tCO ₂ e.	Operational reduction projects and promotion of development • Short-term – 2021. Obtain the Carbon Neutral Certification. • Long-term – 2030. Contribute with Colombia's goal to reduce 51% of its GHG emissions by 2030, as a member of the Paris Agreement.	Goals Carbon neutral in 2021 Reduction of 25% of GHG emissions by 2030. Initiatives to mitigate emissions related to: Energy efficiency: Optimization and reduction of energy consumption in pumping systems. Use of energy (pressure or temperature) from previous processes. Renewable energy: Implementation of solar panels for the operation in pipeline valve booths. 	Goal: Carbon neutral in 2025 The emission inventory will be updated during 2021 to then be verified and certified. • Engine repla- cement in the Caucasia station, from combustion to electrical engines. • Lighting repla- cement in the stations. • Tree planting	Coals • Carbon neutral in 2021 • Reduction of 25% of GHG emissions by 2030

16 The metric EM-EP-110a.1 reported for Ecopetrol S.A. includes Cenit and Refinería de Cartagena's operated assets, in accordance with ISO 14064-1 methodology and the GHG Protocol, which establishes the organizational limit of the inventory as operational control. 17 ODL has three power generation plants, one that is rented, and adds to the emissions inventory due to Financial Control, contributing to 96.9% of Scope 1 emissions.

Code	Metric	Unit of measure	OCENSA		Cievoluto de los Llanos Orientales SA.	Oleoducto de Colombia	bicentenario petróles por Colombia
EM-MD- 120a.1	Air emissions of the following pollutants: (1) NOx (excluding N2O), (2) SOx, (3) volatile organic compounds (VOCs), and (4) particulate matter (PM ₁₀)	Metric tons (t) ¹⁸	(1) 66 μg/m ³ (2) 24 μg/m ³ (3) 0 μg/m ³ (1) 44 μg/m ³	(1) 1.179 ton NOx (2) 102 ton SOx (3) 1.496 ton VOCs (4) 28 ton PM ₁₀	(1) ¹⁹ 1.578 ton NOx (2) ¹⁹ 470 ton SOx (3) ¹⁹ 698 ton VOCs (4) ¹⁹ 49 ton PM ₁₀	(1) 549 ton NOx (2) 501 ton SOx (3) 90 ton VOCs (4) 17 ton PM ₁₀	(1) 0,761 ton NOx (2) 0,014 ton SOx (3) 26 ton VOCs (4) 0,053 ton PM ₁₀

Ecological Impacts

Air Ouality

Code	Metric	Unit of measure	OCENSA	cenit	Ofeoducto de los Llanos Orientales S.A.	Oleoducto de Colombia	bicentenario
EM-MD- 160a.1	Description of environmental management policies and practices for active operations	Discussion and analysis	 ISO 14001:2015 ICONTEC -NTC ISO 14064- 3:2006. Environmental Management Plan (environmental management guides, these establish a series of actions to follow in relation to environmental and social components). 	Implementation of five (5) strategic environmental lines: (i) lintegrated Water management, (ii) Biodiversity, (iii) Climate change, (iv) Circular economy and (v) Environmental authorizations. • Biotic Environment Compensation Manual.	 Declared higher purpose "What matters to us" ('Lo que nos importa"). Health and Safety management system policy. Environment, Preparation and Response to Emergencies System Environmental Management Plan (PMA) Follow-up and monitoring plan (PSM) 	 Pipeline integral management policy Risk and disaster management plan. Environmental Management Plan. 	 Declared higher purpose named "What matters to us" ("Lo que nos importa"). Health and Safety management system policy. Environment, Preparation and Response to Emergencies System Environmental Management Plan (PMA) Follow-up and monitoring plan (PSM)
EM-MD- 160a.2	Percentage of land owned, leased, and/or operated within areas of protected conservation status or endangered species habitat.	Percentage (%)	1,9%	8,5%	3,9%	0	0

18 Metric is reported according to the unit of measure available for each company.
 19 ODL has three power generation plants, one of which is rented, and adds to the emissions inventory due to financial Control, contributing significantly to atmospheric emission.

Code	Metric	Unit of measure	OCENSA		Cleoducto de los Llanos Orientales S.A.	Oleoducto de Colombia	bicentenario
EM-MD- 160a.3	Terrestrial acreage disturbed, percentage of impacted area restored.	Hectares (ha)	0	(1) ²⁰ 0,01	0	0,91	0
EM-MD- 160a.3	Terrestrial acreage disturbed, percentage of impacted area restored.	Percentage (%)	(2) Not applicable	(2) ²¹ 100%	(2) Not applicable	(2) 63%	(2) Not applicable
	(1) Number and (2) aggregate		(1) O	(1)22 126	(1) O	(1) O	(1) O
	volume of hydrocarbon		(2) 0	(2) 5.176	(2) 0	(2) 0	(2) 0
EM-MD-	spills, (3) volu- me in Arctic.	Number (#)	(3 y 4) No operations in	(3 y 4) No	(3 y 4) No operations in	(3 y 4) No operations in	(3 y 4) No operations in
160a.4	(4) volume in Unusually Sensitive Areas (USAs), and	Barrels (bbls)	the Arctic or in Unusually Sensitive Areas	operations in the Arctic or in Usually Sensitive Areas	the Arctic or in Unusually Sensitive Areas	the Arctic or in Unusually Sensitive Areas	the Arctic or in Unusually Sensitive Areas
	(5) volume recovered		(5) Not applicable	(5)23 3.108	(5) Not applicable	(5) Not applicable	(5) Not applicable

Economic and Social Performance

Competitive behavior

Code	Metric	Unit of measure	OCENSA		Dieoducto de los Lianos Orientales S.A.	Oleoducto de Colombia	bicentenario
EM-MD- 520a.1		Reporting currency	0	0	0	0	0
5200.1	ciated with federal pipeli- ne and storage regulations	currency			ons. We have no k with federal pipeli		ses in 2020 due to egulations.

²⁰ The figure only includes affectations to the environment from operational events. It corresponds to information officially reported to the Environmental Authority through the initial reports of environmental incidents, this could change based on the closure of the recovery efforts. For the following report we will provide detailson the areas impacted by third parties external to the operation.
21 It does not include environmental compensations made due to impacts different from operational spills.
22 From the 126 spills. 100 were originated by third parties.
23 The figure can change based on the closing events and the cleaning and mitigation activities, which corresponds to information reported officially on the National Licensing Environmental Authority (ANLA) through the final reports of environment incidents.

Operational Sa	fety, Emergency	Preparedness	& Response
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Code	Accounting Metric	Unit of measure	OCENSA	cenit	Dieoducto de los Llanos Orientales S.A.	Oleoducto de Colombia	bicentenario petróleo por Colombia
EM-MD- 540a.1	Number of reportable pipeline incidents, percentage significant	Number (#)	5	1	0	0	0
EM-MD- 540a.1	Number of reportable pipeline incidents, percentage significant	Percentage (%)	100%	100%	No reportable pipeline incidents for 2020	No reportable pipeline incidents for 2020	No reportable pipeline incidents for 2020
EM-MD- 540a.2	Percentage of (1) natural gas and (2) hazardous liquid pipelines inspected	Percentage (%)	(1) Not applicable (2) 100%	(1) Not applicable (2) 32%	(1) Not applicable (2) 100%	(1) Not applicable (2) 100%	(1) Not applicable (2) 100%
EM-MD- 540a.3	Number of (1) accident releases and (2) non-accident releases (NARs) from rail transportation 8	Number (#)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
EM-MD- 540a.4	Discussion of management systems used to integrate a culture of safety and emergency preparedness throughout the value chain and throughout project lifecycles	Discussion and analysis	 Standardized management systems ISO 22301:2019, NFPA 1600, NFPA 101, ISO22320:2013, BAS 11200. Workshops for supervisors and leaders aligned with ISO 45001:2018, and safety management certifications were held in 2020. 	 Safety procedure management system. API1 754, guidelines of CCP52 and OSHA 29 CFR 1910.1193 Guidelines for the Prevention of Major Accidents program from the Organization for Economic Co- operation and Development (OECD). Strategy for preparation and response to operational emergencies. 	Crisis and Business Continuity Management System. Disaster Risk Management Plan. Emergency and Contingency Plan. Crisis	 Training programs. Integration of workers and directors through socializations of the Emergency and Contingency Plan. Work control program compliance. Mutual aid plans with the goal to support commercial partners with physical and technical resources. 	 Emergency, Crisis, and Business Continuity management system. Documents guiding the system: Disaster Risk Management Plan. Emergency and Contingency Plan. Crisis Management Plan. Business Continuity Plan. Internal Management entities: Crisis Management entities: Crisis Management Committee, Business Continuity Committee, Incident Management Team, and Tactical Response Team.

3. OIL & GAS REFINING²⁴

Activity Metrics

Code	Accounting Metric	Unit of measure	Refineria de Cartagena S.A.S
EM-RM- 000.A	Refining throughput of crude oil and other feedstocks	Barrels of oil equivalent (BOE)	51.416.090
EM-RM- 000.B	Refining operating capacity	(MBPD)	0,160

Environmental Performance

Greenhouse Gas Emissions

Code	Accounting Metric	Unit of measure	Refineria de Cartagena SAS
EM-RM- 110a.1	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations. ²¹	Metric tons CO ₂ -e (t)	2.279.268
EM-RM- 110a.1	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations.	Percentage (%)	A percentage covered under the regulatory GHG emissions limit does not apply because there is no regulation associated to such emitted emissions (or methane) in Colombia.
EM-RM- 110a.2	Discussion of long-term and short- term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Discussion and analysis	Cartagena Refinery joins the Colombian Low Carbon Development Strategy led by the Ministry of Environment and Sustainable Development (MADS) and to the GHG reduction goals through a portfolio of decarbonization initiatives with a reduction goal of 20% GHG by 2030. This portfolio consists of five (5) big groups: • Energy efficiency. • Fugitive emissions and reduction of burning in flare stacks. • Renewable energies (photovoltaic solar energy and green hydrogen). • Recovery and capture of CO ₂ . • Natural ecosystems as alternatives to CO ₂ fixation. 33.092 tCO2e/year were reduced in 2020, which meant compliance with 292% of the established goal (11.324,0 tCO2e/year) with the following measures: • Operational control of energy variables in five (5) units of the process • Substitution of diesel for natural gas during 24,000 hours of Gas U130 compressors maintenance • Improves the performance of the set of co-generation GTG_HRSG (electrical-steam) The Company has the goal of reaching zero net emissions by 2050 (scope 1 and 2)

24 The metrics reported by Ecopetrol S.A. include the information of the Barrancabermega refinery. 25 The metric EM-EP-110a.1 reported for Ecopetrol S.A. includes the operated assets of Cenit and Refinería de Cartagena in accordance to ISO 14064–1 methodology and the GHG Protocol, that stablishes the organizational limit of the inventory as operational control.

Air Quality

Code	Accounting Metric	Unit of measure	Refineria de Cartagena SAS
EM-RM- 120a.1	Air emissions of the following pollutants: (1) NOx (excluding N ₂ O), (2) SOx, (3) particulate matter (PM ₁₀), (4) H2S, and (5) volatile organic compounds (VOCs)	Metrics tons (t)	(1) 2.190 (2) 8.706 (3) 1.367 (4) 0 (5) 4.832
EM-RM- 120a.2	Number of refineries in or near areas of dense population	Number (#)	0

Water Management

Code	Accounting Metric	Unit of measure	Refineria de Cartagena S.A.S
EM-RM- 140a.1	(1) Total fresh water withdrawn ²⁶ , (2) percentage recycled, (3) percentage in regions with High or Extremely High Baseline Water Stress	Thousand cubic meters (m³), Percentage (%)	(1) 7.190 (2) 57% (3) O
EM-RM- 140a.2	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	Number (#)	0

Hazardous Materials Management

Code	Accounting Metric	Unit of measure	Refineria de Cartagena S.A.S
EM-RM- 150a.1	Amount of hazardous waste generated, percentage recycled	Metric tons (t)	4.686
EM-RM- 150a.1	Amount of hazardous waste generated, percentage recycled.	Percentage (%)	4,77%
EM-RM- 150a.2	(1) Number of underground storage tanks (USTs), (2) number of UST releases requiring cleanup, and (3) percentage in states with UST financial assurance funds	Number (#) Percentage (%)	(1) O (2) O (3) O%

Economic and Social Performance

Workforce Health & Safety

Code	Accounting Metric	Unit of measure	Refineria de Cartagena SA.S
EM-RM- 320a.1	(1) Total recordable incident rate (TRIR), (2) fatality rate, and (3) near miss frequency rate (NMFR) for (a) full-time employees and (b) contract employees	Rate	(1) TRIF: 0,19 (2) O Fatality rate (3) 0,04
EM-RM- 320a.2	Discussion of management systems used to integrate a culture of safety.	Discussion and analysis	In the Cartagena Refinery, Safety management is integrated into the organization's HSE Culture. Culture index results: 123 % compliance ²⁷ (25478 thoughts and/or conversations)

Product Specifications & Clean Fuel Blends

Code	Accounting Metric	Unit of measure	Refineria de Cartagena S.A.S
EM-RM- 410a.1	Percentage of Renewable Volume Obligation (RVO) met through: (1) production of renewable fuels, (2) purchase of "separated" renewable identification numbers (RIN).	Percentage (%)	(1) O (2) O
EM-RM- 410a.2	Total addressable market and share of market for advanced biofuels and associated infrastructure	Reporting currency, Percentage (%)	Information not available for 2020

Code	Accounting Metric	Unit of measure	Refineria de Cartagena SA.S
EM-RM- 520a.1	Total amount of monetary losses as a result of legal proceedings associated with price fixing or price manipulation	Reporting currency	0

27 The percentage is the average of three (3) components of the Refinery HSE program: (i) thoughts, (ii)actions -research, revisions, etc. and (iii) research.

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Code	Accounting Metric	Unit of measure	Refineria de Cartagena S.A.S
EM-RM- 530a.1	Discussion of corporate positions related to government regulations and/ or policy proposals that address environmental and social factors affecting the industry	Discussion and analysis	Cartagena Refinery's risk management system complies with and monitors governmental regulations and policies. Regarding legislative procedures, Cartagena Refinery and Ecopetrol hold a permanent dialogue and consultation with stakeholders. Regarding climate change management and air quality, Cartagena Refinery joined the Colombian Low Carbon Development Strategy (CLCDS) led by the Ministry of Environment and Sustainable Development and to the GHG reduction goals through a portfolio of decarbonization initiatives. Management of water resources and bio- diversity are aligned with the government's guidelines and the "Efficient use and water saving" program issued by law 373 of 1997 of the Ministry of Environment and Sustainable Development. The organization's Management System establishes the process for identifying hazards and assessing and evaluating risks; it allows to mitigate the inherent risk in processes, areas or activities, formalizing actions to prevent negative events from occurring, which ultimately may lead to company losses. Likewise, the Environmental License defines the mechanisms to manage risks and opportunities associated with every legal and regulatory aspect.

Management of the Legal & Regulatory Environment

Critical Incident Risk Management

Code	Accounting Metric	Unit of measure	Refineria de Cartagena S.A.S
EM-RM- 540a.1	Process Safety Event (PSE) rates for Loss of Primary Containment (LOPC) of greater consequence (Tier 1) and lesser consequence (Tier 2)	Rate	Tier 1 – 0 Tier 2 –0,19 Number of events: 103
EM-RM- 540a.2	Challenges to Safety Systems indicator rate (Tier 3)	Rate	4,25
EM-RM- 540a.3	Discussion of measurement of Operating Discipline and Management System Performance through Tier 4 Indicators	Discussion and analysis	Risk Management System and Critical Incidents are reviewed in the Cartagena Refinery's HSE Committee.

RESOURCE TRANSFORMATION SECTOR

4. CHEMICALS

Activity Metrics

Code	Accounting Metric	Unit of measure	esenttia
RT-CH- 000.A	Production by reportable segment	Metric tons	487.403
Environm	ental Performance		
Greenhous	e Gas Emissions		
Code	Accounting Metric	Unit of measure	esenttia by Presito
RT-CH- 110a.1	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	Metric tons CO ₂ -e	62.297,3
RT-CH- 110a.1	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	Percentage (%)	A percentage covered under the regulatory GHG emissions limit does not apply because there is no regulation associated to such emitted emissions (or methane) in Colombia.
RT-CH- 110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Discussion and analysis	Mitigation initiatives: Solar panels installed in the self-supporting warehouse: To install a solar electric power generation system in the self-supporting warehouse to gain economic and environmental benefits aligned with the organization's policies. Construction of a new Steam Turbine: To reduce electricity consumption by more than 16.5 million KW/year and reduce 6.166 ton of CO2e/year, by using available thermal energy in the flue gases of the Esenttia's co-generation system to generate 2.4 MW of power without increasing natural gas consumption.

Air Quality

Code	Accounting Metric	Unit of measure	esenttia
EM-MD- 120a.1	Air emissions of the following pollutants: (1) NOX (excluding N2O), (2) SOX, (3) volatile organic compounds (VOCs), and (4) hazardous air pollutants (HAPs).	Micrograms per cubic meter (μg/m³)	(1) 686,37 (2) 0 (3) 0 (4) 0

Energy Management

Code	Accounting Metric	Unit of measure	esenttia _{by Propilo}
RT-CH- 130a.1	 (1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable, (4) total self-generated energy 	Gigajoules (GJ), Percentage (%)	 (1) 1.479.042 (2) 59.7% (3) 0.1% (4) 596.054

Water Management

Code	Accounting Metric	Unit of measure	esenttia
RT-CH- 140a.1	(1) Total water withdrawn	Thousand cubic meters (m³)	0
RT-CH- 140a.1	(1) total water consumed, (2) percentage of each in regions with High or Extremely High Baseline Water Stress	Thousand cubic meters (m³), Percentage (%)	(1) 1.030 (2) 0
RT-CH- 140a.2	Number of incidents of non- compliance associated with water quality permits, standards, and regulations.	Number (#)	0
RT-CH- 140a.3	Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and analysis	 Risks description: The approach used to identify the impacts is the efficient use of water resources, identifying daily water consumption and relating it to production per family, establishing a baseline for this consumption indicator, identifying causes of increase in water consumption and actions to mitigate these increases through immediate or medium-term actions. For projects, the Company identifies the impact for increased water consumption and the measures that can be taken for water conservation, as was the case of the centrifuge implemented in the project of the new water treatment plant, launched in 2020. The second approach is the prevention of discharging contaminated water, carrying out monitoring, daily adjustments, and improvements in equipment operation. Risk mitigation strategies: Positive and negative impacts: For positive impacts, the Company seeks to secure best practices that allow it to save water and, when a consumption target is reached the goal is to achieve this target in the following period. When negative impacts occur, the improvements that can be implemented are analyzed to mitigate the impact and capitalize it as an opportunity, as was the case of the increase in the recovery of purge water from towers from 33% to 66%, through automation carried out in purge valves and as it was also due to water quality assurance.

Hazardous Waste Management

Code	Accounting Metric	Unit of measure	esenttia Marine
RT-CH- 150a.1	Amount of hazardous waste generated, percentage recycled	Metric tons;	146
RT-CH- 150a.1	Amount of hazardous waste generated, percentage recycled	Percentage (%)	39%

Economic and Social Performance

Community Relations

Code	Metric	Unit of measure	esenttia _{by Applico}
RT-CH- 210a.1	Discussion of engagement processes to manage risks and opportunities associated with community interests	Discussion and analysis	Periodic consultations with stakeholders, including communities, have influenced the development of the sustainability strategy and the definition of Materiality. Due to the pandemic, in 2020 virtual workshops were carried out with communities to analyze and identify risks and opportunities and lessons learned during normal operation and in a contingency situation. One of the basic principles of the relationship with communities is the respect for Human Rights. "Respect the rights of stakeholders according ESENTTIA's guidelines in the matter".

Workforce Health and Safety

Code	Accounting Metric	Unit of measure	esenttia or Propins
RT-CH- 320a.1	(1) Total recordable incident rate (TRIR) and (2) fatality rate for (a) direct employees and (b) contract employees.	Rate	(1) Employees: 0 Contractors: 0 (2) Employees: 0 Contractors: 0
RT-CH- 320a.2	Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks	Discussion and analysis	Compliance with the Globally Harmonized System (GHS) in each of its phases. The Occupational Health Program measures and characterizes sanitary agents based on documentation of threshold limit values for physical and chemical agents and Biological Exposure Indices.

Product Design for Use-phase Efficiency

Code	Accounting Metric	Unit of measure	esenttia
RT-CH- 410a.1	Revenue from products designed for use phase resource efficiency	Reporting currency	COP \$10.201 million

Code	Accounting Metric	Unit of measure	esenttia or Madeo
RT-CH- 410b.1	(1) Percentage of products that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances, (2) percentage of such products that have undergone a hazard assessment	Percentage (%) by revenue, Percentage (%)	Information not available for 2020. Esenttia products have not undergone a hazard assessment. Those are products recommended by Novolen or Unipol technologies. The hazard of chemical products is defined and classified by the Globally Harmonized System (GHS), thus the health risk derived from exposure is assessed based on the methodology recommended by the French National Research and Safety Institution for the Prevention of Occupational Accidents and Diseases (INRS).
RT-CH- 410b.2	Discussion of strategy to (1) manage chemicals of concern and (2) develop alternatives with reduced human and/or environmental impact	Discussion and analysis	All references of Esenttia's polypropylene are not considered hazardous under GHS. During the production process, the hazardous substances (chemicals) involved have been assessed according to GHS criteria. Chemical hazards are initially identified through GHS, then the risks to human health from exposure are assessed according to INRS methodology. According to the Law Decree 0312 of 2019, control must be exerted on substances that represent an acute toxicity hazard on category 1 and 2 according to GHS, and for environmental hazards on categories 1 and 2. During the last few years and with the purpose of mitigating the impact on health and environment, hazardous substances (chemicals) have been substituted by others that have the same purpose but lower risk.

Safety & Environmental Stewardship of Chemicals

Genetically Modified Organisms (GMOs)

Code	Accounting Metric	Unit of measure	esenttia
RT-CH- 410c.1	Percentage of products by revenue that contain genetically modified organisms (GMOs)	Percentage (%) by revenue	These metrics are not applicable (not material) to Esenttia as the Company does not use genetically modified organisms.

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Management of the Legal & Regulatory Environment

Code	Accounting Metric	Unit of measure	esenttia
RT-CH- 530a.1	Discussion of corporate positions related to government regulations and/ or policy proposals that address environmental and social factors affecting the industry	Discussion and analysis	Business and reputational impact by regulations in the plastic industry. Causes: • Restrictive regulations on plastic use • Actions by active environmental groups Consequences: • Image and reputation deterioration • Economic losses Strategy to manage it: • Creation of the circular economy area. • Alliances to minimize and manage impacts of the plastics industry (Pacific Alliance, Alliance to End Plastic Waste). • Business case evaluations: Recirculation (Recircular), plastic wood.

Operational Safety, Emergency Preparedness & Response

Code	Accounting Metric	Unit of measure	esenttia whote	
RT-CH- 540a.1	Process Safety Incidents Count (PSIC), Process Safety Total Incident Rate (PSTIR), and Process Safety Incident Severity Rate (PSISR	Number, Rate	(1) O (2) O (3) O	
RT-CH- 540a.2	Number of transport incidents	Number	0	

