



environmental
investigation
agency

CRUDE LIES

Colombia's Oil Industry Hidden
Impacts on People, Biodiversity,
and Climate

March 2025

With the support of



EARTHWORKS

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ABOUT EIA

The Environmental Investigation Agency (EIA) is an award-winning nonprofit, internationally renowned for its use of pioneering innovative investigative techniques. For over three decades, EIA has exposed environmental crimes around the world, amplified frontline voices, and made the emergence of more equitable and sustainable management of the world's natural resources possible. Our organization has confronted the world's most pressing environmental problems, instigated systematic changes in global markets, supported communities' resistances, and promoted precautionary policies that protect the natural world from oppressive, neo-colonialist, and unfair exploitation.

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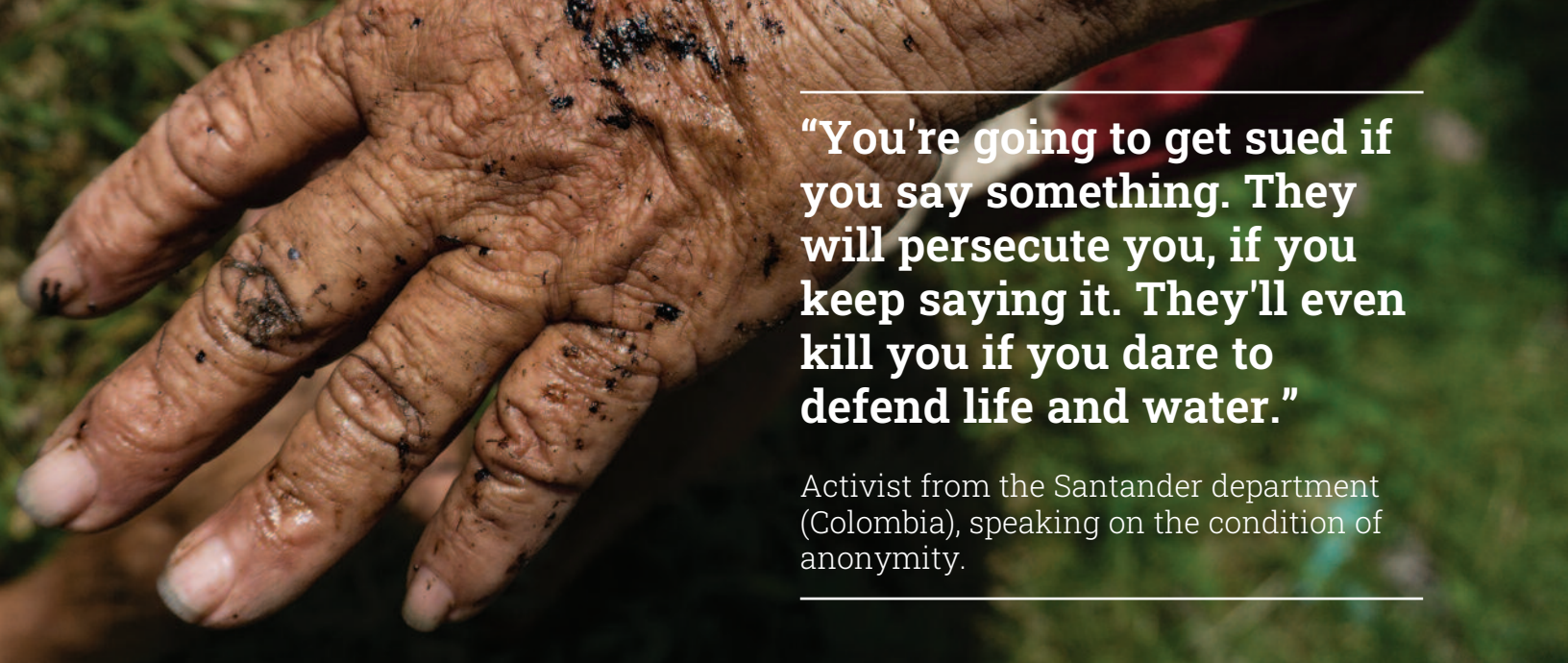
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Unless otherwise noted, the source for the report are EIA US's internal investigative reports, photos, audio and video evidence collected during the investigation.



“You're going to get sued if you say something. They will persecute you, if you keep saying it. They'll even kill you if you dare to defend life and water.”

Activist from the Santander department (Colombia), speaking on the condition of anonymity.

EXECUTIVE SUMMARY

Crude Lies is the result of over two years of investigation by the Environmental Investigation Agency (EIA) into Ecopetrol, the Colombian state-owned oil company.

The findings and the internal database associated with them, hereafter referred to as the *Iguana Papers* (cf. dedicated webportal), offer a rare look into “business as usual” for the largest corporation in Colombia, at a time when Juan Carlos Echeverry Garzón and Felipe Bayón Pardo were Chief Executive Officers (CEOs) and Eduardo Uribe Botero was Vice President of Sustainable and Environmental Development. EIA collected and analyzed an unprecedented level of evidence, documenting and exposing what voices inside and outside of Colombia have denounced for years as some of the oil industry’s worst practices. These practices include weaponized secrecy; frequent apparent violations of environmental laws; the seeming cover-up of environmental damages; the targeted alleged surveillance of socio-environmental leaders; reported alliance with armed groups; apparent obstruction and undue influence over regulators; and the use of national security forces to achieve corporate priorities - all while possibly misleading shareholders and the broader public about the company’s environmental and social track record.

The Iguana Papers

Ecopetrol is a publicly listed company, whose majority shareholder is the Colombian State, which holds 88.49% of the company’s shares. The company is one of the ten largest National Oil Companies (NOCs) in the world by reserves, and ranks 12th by total assets. It is the largest company in Colombia - responsible for 6% of the national gross domestic product (GDP) - and one of the top three oil and gas companies in Latin America.

The *Iguana Papers* include a variety of documents, such as emails, presentations, internal briefs, third party reports, and databases. These documents stem from files that Andrés Olarte Peña had access to, from January 2017 to January 2019, during the time he worked at Ecopetrol. Many of the files were only available to the highest level executives, in particular Ecopetrol former CEOs Juan Carlos Echeverry Garzón and Felipe Bayón Pardo, as well as the former Vice President of Sustainable and Environmental Development, Eduardo Uribe Botero.

Certain documents are critical when it comes to understanding the information Ecopetrol’s decision makers had access to and what they decided to do with it. A confidential database contained in the *Iguana Papers* collated over 300,000 entries of apparent non-compliance cases, including seeming breaches of socio-environmental regulations across Colombia. These were precisely documented by the company, and involved more than 30 Colombian governmental institutions. Another internal Ecopetrol database kept track of the 800+ cases of major environmental damages caused by Ecopetrol operations, revealing how Ecopetrol may have hidden 170 of these cases (~20% of the total) from authorities, seemingly in violation of Colombian law. The *Iguana Papers* also expose the sophisticated system of surveillance that Ecopetrol apparently developed to monitor, influence and coerce individuals and organizations identified as a threat to the company’s operations, including environmental activists, union representatives, and community and religious leaders. The documents included in the *Iguana Papers* database



also contain illustrative quantitative figures that shed light on what “business as usual” meant for the company, including the tens of millions of dollars the company paid year on year - USD 22 million in 2018 alone - to the national security forces to protect its operations.

Hiding Methane Emissions

For more than a decade, fossil fuel companies in Colombia have been prohibited from releasing greenhouse gases (GHG) into the atmosphere without approval. In August 2019, Colombian activists accompanied by the U.S.-based civil society organization Earthworks used an infrared camera to publicly expose hydrocarbon emissions including methane from Ecopetrol’s infrastructure and facilities. Regulations 40066/2002 of February 2022 and 40317/2023 of April 2023 have unambiguously made routine venting and inefficient flaring illegal. EIA investigators joined by Earthworks experts returned to Ecopetrol sites in March-April 2023, equipped with an infrared camera. They found that what could include illegal methane emissions continued in dozens of instances, including multiple cases of venting and flaring near habitations, local markets, and schools, which pose a severe health risk to people in these communities.

An undercover audio recording included in the *Iguana Papers* seems to show that Ecopetrol was under-reporting its GHG emissions to the national authorities in 2018. According to the audio, Ecopetrol employees were well aware that the company’s venting practices were not allowed and that the data reported about their GHG emissions was “not real.” As an employee explained, this systematic misreporting means the company “looks great” in public even though the real data paints a very different picture. This long-term scheme to seemingly misreport GHG emissions - by the state-owned company responsible for oil extraction and processing in Colombia - discredits the company’s public commitments under the United Nations (UN)-led Oil and Gas Methane Partnership and its endorsement of the World Bank’s Zero Routine Flaring by 2030 initiative. It also threatens Colombia’s emergence as a global methane champion, and President Gustavo Petro’s unique climate leadership. In his answer to EIA, primarily focused on the methane emissions issues, Bayon stated “I categorically reject the claims about the company’s behavior during the period when I served as COO and CEO, as these claims lack all the necessary technical rigor and do not consider the official information available within the company.”



Hidden Water Contamination

Colombia is a megadiverse country, and some of its most emblematic and threatened species depend for their survival on the integrity of the Middle Magdalena's water and wetlands ecosystems, which belong to the Tumbe–Chocó–Magdalena biodiversity hotspot. The Antillean manatee (*Trichechus manatus manatus*), the Central American jaguar (*Panthera onca centralis*), and the red-footed tortoise (*Chelonia carbonaria*) are among the region's most emblematic and at risk species. Yet the Santander department, in the Middle Magdalena region, is also the historic epicenter of the Colombian oil and gas industry, where the country's largest oil and gas refinery - owned and operated by Ecopetrol - is located, near the city of Barrancabermeja.

EIA's investigation documented the contamination of the wetlands located around the Barrancabermeja refinery. An independent toxicology analysis performed by a nationally recognized research unit from the Faculty of Pharmaceutical Sciences at the University of Cartagena shows that the Middle Magdalena wetland ecosystems are contaminated by highly toxic elements, including

polycyclic aromatic hydrocarbons (PAHs) and heavy metals (HMs). The concentration found by the experts indicates a high likelihood that this contamination is severely harming aquatic ecosystems and the organisms that depend on them. The documented contamination poses direct risks to the livelihood and health of hundreds of thousands of people who depend on the water for their daily drinking and cooking, bathing, fishing, and farming. According to the research, the water management practices, incidents, and leaks associated with the production, transport, and refining of fossil fuel carried out in the Barrancabermeja area are likely some of the reasons for the water contamination.

Documents from the *Iguana Papers* appear to show that Ecopetrol's operation contaminated Middle Magdalena wetlands. Olarte, who conducted an in-depth study into Ecopetrol's water usage as one of his first tasks, allegedly presented results showing mass contamination to former CEO Juan Carlos Echeverry Garzón, who according to Olarte asked the research to be dropped. EIA reached out to Carlos Echeverry Garzón and he did not respond to inquiries. According to an internal and confidential database included in the *Iguana Papers*, Ecopetrol seems to have hidden a significant number of the company's major environmental damages - approximately 20% - from competent authorities and deemed their remediation a low priority. Information about environmental incidents that Ecopetrol made available to the public and shareholders was far removed from the reality known to corporate executives - up to 89% of the company's alleged environmental damages have not been reported. Information shared with the U.S. Securities and Exchange Commission (SEC) and shareholders also failed to reflect what was known by the company, in terms of the risks and possible harmful impacts of Ecopetrol's operations. This critical gap may have misled minority shareholders, such as Blackrock Inc., Vanguard Group Inc., and JP Morgan Chase & Company, regarding the actual financial risk associated with their investment in Ecopetrol.

Beyond Hiding: Mapping, Influencing, and Threats

Organized citizens and communities have stood up, time and again, to the harmful impacts of Ecopetrol's operations on the environment, in particular to the wetlands and water bodies of the Middle Magdalena region. According to the *Iguana Papers*, the company viewed this activism as one of the major threats to its business and profitability. To counter this threat, Ecopetrol developed a sophisticated, technology-based surveillance system that the company used to map 1,200 individuals from the areas where the company operates. Leaders' social media accounts and online reporting were followed scrupulously. The company was also closely monitoring its efforts to influence the regional environmental regulatory authorities (Autonomous Regional Corporations - Corporación Autónoma Regional, or CARs), in order to make projects happen. According to EIA's findings, CARs are highly vulnerable to undue

influence. They face immense challenges when it comes to monitoring and controlling entities like Ecopetrol, which benefit from far greater resources in terms of expertise, finance, and equipment. This level of vulnerability is compounded by the fact that no central authority regulates the decisions made by CARs, which are legally structured to protect them from top-down political pressure. This is particularly problematic when these entities have the dual responsibilities of issuing licenses for economic and infrastructure projects while also protecting the environment.

EIA investigators also spoke to numerous community leaders, human rights and environmental activists, and affected citizens who, one after another, described the same chain of events, including threats, displacement, and deaths, that they clearly relate, sometimes to the date, to their public criticism of Ecopetrol. The systematic targeting of human rights and environmental activists who have dared to speak out against Ecopetrol by the Gulf Clan - the largest and most powerful drug cartel in Colombia and reportedly the largest cocaine producer in the world - is reminiscent of the alleged historic alliance established in the 1990s between the company, right wing death squads, and Colombian security forces.

The USD 22 million spent by Ecopetrol on the Colombian security forces and over 2,500 security personnel contracted in 2018 attest to the existence of financing mechanisms that used to be a core component of the reported triangular alliance, and led to dozens of murders and disappearances in the Santander region.

Although the information collected by EIA in the framework of this investigation may provide indications of possible violations of Colombian law, neither Bayón, Echeverry, Uribe or Ecopetrol have been investigated, sanctioned, or charged with any crimes for the alleged events described in this report. Any determination regarding their possible responsibility is the power of the Colombian authorities. EIA reached out to Bayón, Echeverry, Uribe and Ecopetrol. Bayón and Uribe's answers have been included as annexes to the report. Echeverry did not answer to EIA's questions. Ecopetrol responded with a 16-page document, which is available in its entirety at <https://eia.org/report/crude-lies/>. In their answer to EIA, Ecopetrol denied any wrongdoing related to GHG emissions, water contamination, influence over competent authorities, monitoring of activists, relationship with paramilitaries, and misreporting to the SEC.

Conclusion

EIA's investigation, based on the information from the *Iguana Papers*, independent field research, and interviews with front line activists indicate that Ecopetrol, the largest company in Colombia, has allegedly committed environmental offenses under Colombian laws. The company may have used sophisticated and well-established corporate protocols to systematically cover-up multiple alleged illegalities. It seems to have hidden critical information about possibly illegal behaviors from authorities and may have misled shareholders and the public with campaigns of disinformation. The implications of EIA's findings are deep and wide. The government's failure to curb emissions from Ecopetrol's operations threaten Colombia's emergence as a global climate leader. The mass pollution of the country's most critical ecosystems undermines national efforts to protect biodiversity and support community livelihoods. Accusations of human rights violations against Ecopetrol are also widely shared by activists who have suffered from cycles of what they claim are intimidation and persecution. The status of Ecopetrol, majority owned by the State of Colombia but privately run in practice, represents a unique opportunity for the country to chart a path to a future where accountability, transparency, and responsibility are central tenets of the national energy strategy and policy framework. With this in mind, EIA recommends:

Government of Colombia

- Investigate Ecopetrol executives and managers who were allegedly involved in environmental and human rights violations;
- Offer protection to Olarte's family and any individual willing to collaborate and support the official investigation;
- Develop and implement a comprehensive plan for broad and systemic reforms in Ecopetrol guaranteeing transparency, accountability, and reparations to the alleged victims of their operations;
- Suspend any new exploration or exploitation by Ecopetrol until transparency, accountability, and reparation mechanisms have been established;
- Establish an independent monitoring mechanism of the oil and gas industry in Colombia, via an office under the Presidency and the establishment of a civil society-led initiative, as done in multiple countries' forest sector;
- Collaborate with frontline communities, grassroots organizations, and academics to address the biodiversity crisis in the Middle Magdalena's wetlands.

Government of the U.S.

- Investigate Ecopetrol's alleged violations of securities law, via the U.S. Securities and Exchange Commission (SEC);

Ecopetrol minority shareholders such as Blackrock Inc., Vanguard Group Inc., and JP Morgan Chase & Company

- Divest from Ecopetrol and support a just energy transition in Colombia.



1. THE IGUANA PAPERS

1.1 Too Big to Fail...

It is difficult to overstate the role of Ecopetrol in Colombia and its importance to the Colombian economy. As the largest company in the country, with annual revenues surpassing USD 20 billion,¹ it accounts for roughly 10% of the government's income.^{2,3} The company is responsible for approximately 30% of the country's exports (in value) and provides a vital source of foreign currency earnings in an economy affected by repeated fiscal deficits.⁴ Around 100,000 jobs reportedly depend on Ecopetrol, as the company is responsible for more than 6% of Colombia's gross domestic product (GDP).⁵ It is the only Colombian company that is in the Forbes Global 500 (ranked 397).⁶

Ecopetrol, whose logo is an iguana (Figure 1),⁷ is by far the largest player in the Colombian oil and gas industry and the centerpiece of the sector. It operates over 60% of

the country's oil and gas production. It also owns and operates close to 100% of the refining capacity in the country.⁸ Ecopetrol participates in every link of the hydrocarbon supply chain in Colombia: exploration, production, transportation, refining, and commercialization.⁹ Ecopetrol also operates regionally, in particular in Brazil and Mexico. Asia is also a growing region for the company's strategic development, with a marketing and trading unit opened in Singapore in September 2022.¹⁰ Ecopetrol is also consolidating its position in the U.S., where it opened a marketing and trading subsidiary in October 2023.¹¹

The company is one of the ten largest National Oil Companies (NOCs) in the world by reserves,¹² and ranks 12th by total assets.¹³ Ecopetrol's important refining capacity, which relies on the Barrancabermeja (Santander department) and Cartagena (Bolívar department) refineries, has allowed Colombia to become one of the few Latin American countries capable of



Figure 1
Ecopetrol's logo: the iguana.

meeting domestic demand while also exporting refined products like fuel oil.¹⁴ In 2019, Ecopetrol exported 43% of its total refining volume, mainly to the U.S., Central America, and the Caribbean islands.¹⁵ The U.S. is the most important destination for Ecopetrol's products, being the largest importer of crude from the company (40% of the export) and the largest importer of refined fuel (17% of the export).¹⁶ Asia, including China, India, and South Korea, is a growing market for the company. Europe absorbs a smaller portion of Ecopetrol's products, although certain countries in the region, such as Spain and Germany, have recently increased their imports as a substitute for embargoed Russian oil.¹⁷

Before 2000, Ecopetrol was formally and functionally an "industrial and commercial state-owned company."¹⁸ Under the neoliberal economic reforms promoted by Álvaro Uribe Vélez's government in the 2000s, the company quickly evolved to become a public shareholding company "Ecopetrol S.A,"¹⁹ whose majority shareholder is the Colombian State. Today, the state holds 88.49% of the company's shares.²⁰ This change in structure released the company from its responsibilities as administrator of the national oil resources, which is now performed by the National Hydrocarbons Agency (Agencia Nacional de Hidrocarburos - ANH). The change also allowed the company to be technically managed autonomously from the government.²¹ In the words of Ecopetrol former

Chief Executive Officer (CEO), Felipe Bayón Pardo, "Independence needs to be respected and it [Ecopetrol] needs to be run like a business."²² The same aspirations are made clear in the company's governance documents, particularly when it relates to the Board of Directors, which is described as "its highest management body and defines the strategic direction for the Ecopetrol Group, acting in the best interest of society, considering the rights of shareholders, and based on the sustainability and growth of the Company."²³ Critics say the national entity has become a "de facto privatized" company administered by private individuals "according to their own criteria and interests."²⁴

Ecopetrol trades on the New York Stock Exchange through sponsored American depository receipts (NYSE: EC), a security that allows investors in the U.S. to invest in foreign companies. This allows foreign companies like Ecopetrol easier access to U.S. capital. The list of Ecopetrol's minority shareholders include several major investment groups, including Blackrock Inc., Vanguard Group Inc., and JP Morgan Chase & Company, which also hold shares in several of the largest publicly listed oil and gas companies in the U.S.²⁵ They have themselves been the targets of numerous public campaigns for financing the current expansion of fossil fuels to levels that would irremediably bring the world above the 2°C climate threshold.²⁶

Headquartered in Bogotá, Ecopetrol has located its industrial nerve center near the city of Barrancabermeja in the northeastern department of Santander. This is where the largest refinery in Colombia is located (Figure 2). With a maximum processing capacity of 250,000 barrels of oil per day, the Barrancabermeja refinery carries out crude oil refining and petrochemical refining activities.²⁷ The outputs of the industrial system are many and diverse, including different grades of fuels, asphalt, paraffin, lubricating oil, solvents, and polyethylene.²⁸ The colossal industrial complex spans an area equivalent in size to 600 soccer fields, with 49 processing plants and 290 storage tanks.²⁹ Almost 5,000 workers operate there. In 2022, Ecopetrol's refinery in Barrancabermeja was selected as the best in Latin America by the World Refining Association. The award acknowledged "the refinery's leadership in energy efficiency and transition, profitability and the implementation of new technologies."³⁰

1.2 ...Until Someone Blows the Whistle

EIA's investigation was triggered by an email received from Andrés Olarte Peña in September 2021 (Box 1). The email included the link to a series of folders and files that had, according to Olarte, previously been shared with more than 100 Colombian entities. The *Iguana Papers* were developed from this material. Most of these files were created or updated between January 2017 and January 2019, during the time Olarte worked at Ecopetrol, based in the Bogotá corporate headquarters. The

paragraphs below offer some important contextual information about Olarte's decision to blow the whistle against the most powerful company in his home country, opening the door for a "too big to fail" company to be caught failing.

Olarte joined Ecopetrol in January 2017, as the finalist of a highly selective and competitive recruitment process that allowed the company to identify and hire recently graduated talent from around the world. Graduated from School of Petroleum Engineering at the Industrial University of Santander, holding an environmental sciences masters degree from Cambridge University (United Kingdom) and with professional experience in the Autonomous Regional Corporation (CAR) of the Santander department, Olarte was assigned to an analyst position in support of the company's top executives. For his first six months at Ecopetrol, the young recruit worked directly under the former CEO, Juan Carlos Echeverry, and quickly learned the strategic inner workings of the company's operations, including the sophisticated and confidential monitoring system that the company used to keep track of its non compliant activities and their damages. Upon his request, Olarte was then moved to the sustainability division that he believed gave him the best chance to end what he understood to be the company's harmful activities. For the rest of his time at Ecopetrol, Olarte worked under the company's Vice President of Sustainability, Eduardo Uribe Botero. Here again, the young professional gained access to information about the company's routine operations and their detrimental impacts on ecosystems and people.



Figure 2
Ecopetrol's refinery near Barrancabermeja city (Santander department).

WHISTLEBLOWER PROTECTION IN COLOMBIA

In Colombia, the constitutional protection of “whistleblowers,” i.e. people who provide information to the media, is based mainly on the right to freedom of expression. This right is guaranteed by Article 20 of the Political Constitution of 1991, which ensures the freedom to inform and to receive information. Although the Colombian legal system does not include a specific provision that covers the protection of informants, the confidentiality of journalistic sources is supported by international principles and instruments, including several decisions from the Inter-American Court of Human Rights. This is important because the Colombian Constitutional Court uses a legal concept called the “constitutionality block” to incorporate international human rights provisions to the national legal system. Through this concept, if national law is in conflict with an international human rights instrument, it can be declared unconstitutional. A relevant example is the ruling in the case of *Viteri Ungaretti and Others vs. Ecuador*, which establishes that the need to protect a whistleblower’s freedom of expression is justified by the public interest in obtaining the information and by the inherent vulnerability of the whistleblower. In 2022 the Constitutional Court of Colombia adopted a similar position in its ruling T-203. This ruling found that, although officials sign confidentiality clauses, the need to uphold these agreements must be balanced with the public interest in information that strengthens democratic societies.

As Olarte told EIA investigators, the day he joined Ecopetrol felt like one of the “proudest moments of his life.” Working for Ecopetrol meant the world to someone who was born and raised in the department of Santander, where the company’s gigantic refining complex is located and revered as the most attractive employer (Figure 3). Santander department is also the birthplace of the Colombian oil industry and in particular Ecopetrol. Today, the oil industry is deeply ingrained in the department’s identity and what being a “Santandereano” means. But three tipping points gradually turned Olarte from a proud recruit into a courageous whistleblower who exposed the extent to which senior executives apparently knew about and participated in the deliberate cover-up of what he perceived to be Ecopetrol’s harmful practices. The first tipping point took place a few weeks after he started his job. During his first six months at Ecopetrol, in 2017, Olarte worked on a thorough analysis of Ecopetrol’s overall water usage. The conclusions of the research, supported by several colleagues who had attempted to raise the issue internally for years, were consequential: the company was mass contaminating

water streams across the country by discharging pollutants at concentrations well above legal limits (see section about the Middle Magdalena water contamination for details). According to Olarte, he presented the main results to Echeverry, CEO of Ecopetrol, whose reaction was first to challenge the accuracy of the analysis and then - once the results were cross-referenced and confirmed - to demand that Olarte abandon the research. Olarte obeyed the CEO and abandoned the research. EIA has contacted Echeverry, and he has not responded to inquiries about Olarte’s allegations.

The second watershed moment took place when Olarte witnessed what he understood as Ecopetrol executives’ routine and casual requests to silence opponents. As Olarte explained, “From early on, I had a feeling the company was hiding water contamination. It was tough to come to terms with, but I thought I could manage. I was trying to make a difference from within. [...] But when I saw the direct impact on people’s lives, it became too much. These could have been people I grew up with, or people from my birthplace—people just like me. Meeting those affected made me realize they could easily have been my friends and family. The weight of complicity became unbearable. I couldn’t face myself in the mirror.”

The last straw came in late 2018 early 2019, as Olarte was about to transition to a long term position within Ecopetrol’s sustainability department. The transition to an indefinite-term contract was the standard and agreed upon next step for all young talent who started, like Olarte, in January 2017. What was supposed to be a pure formality - Olarte had already reviewed and agreed on the job description and contract - became a new personal and professional challenge. The problem he claimed began when two officials from the company’s human resources department started to blackmail him. They asked Olarte to file a complaint against his direct supervisor, the Vice-President of Sustainability, Eduardo Uribe Botero. As Olarte explained to EIA investigators, the newly appointed CEO, Felipe Bayón Pardo, was apparently at the origin of the alleged blackmail. Bayón was determined to oust Uribe despite the latter’s high level personal and family connections with Ecopetrol board members - Uribe’s sister, Beatriz, served twice as a minister. It took weeks for Olarte to digest what he was being asked to do. EIA reached out to the company, Bayón, and Uribe for comment on blackmail allegations. Bayón did not answer the question. Ecopetrol denied any wrongdoing. Uribe explained that “Although the key indicators to evaluate my performance and the achievement of objectives were very positive, and I was recognized by my peers as an effective and efficient worker, I was ousted by Mr. Bayon without any explanation, and with very offensive words. Yes, I know of a case where a worker was blackmailed by the human resources department.”

Frustrated by the delay, the two human resources employees hinted that the company was aware that Olarte had made copies of the company’s internal



Source: Olarte

Figure 3

Olarte, an accomplished young professional at Ecopetrol. (Left) Olarte and two other young talents recruited with him in 2017; (Top right) Olarte in the field, sporting an Ecopetrol's shirt. (Bottom right) Olarte and Uribe in discussion with community members.

database and documents. The tone of the conversations changed. Comments were made about the risk to Olarte's professional future and personal safety if he were to be left outside of the company with the knowledge and information that he held about the company's activities and internal culture. Despite this pressure, Olarte resisted to file the complaint. His time at Ecopetrol was suddenly over.

Within months, a series of events began that led to Olarte and his family receiving several phone and written death threat messages, including the written message dropped at the family house that read: "Olarte family don't get yourselves killed. Andrés says something and you know what will happen." Scared for his life, Olarte moved to Europe in early 2019, shortly after leaving Ecopetrol. From there he started to file complaints with Colombian authorities.

As all his close family members were under threat, the family felt the imperative to move to Europe, as soon as their finances allowed it - first Olarte's sister (2020), then his parents (2021).

With all his close family in a safe haven, Olarte redoubled his efforts to alert authorities, including the Prosecutor's Office, the Ministry of Labor, and the Ombudsman's Office of Colombia. In September 2021, Olarte filed a labor lawsuit against Ecopetrol. In November 2021, Echeverry filed a defamation lawsuit against Olarte, which has not been settled yet. According to the whistleblower, he also petitioned 114 Colombian authorities to investigate alleged environmental crimes and persecution of social leaders: 26 Regional Autonomous Corporations (Corporación Autónoma Regional, or CARs), 20 governorships, and 68 mayor's offices. None of these petitions or complaints led to any tangible result, according to Olarte.

In 2022, Olarte's parents moved back to Colombia to restart their lives despite the constant fear of retaliation from Ecopetrol. Olarte remains in Europe because he believes returning to Colombia would put his life in danger. He has not returned to his home country since he left in 2019.

2. EMITTING METHANE AND COVERING IT UP

As described in the following paragraphs, Ecopetrol has reiterated its public commitments, particularly under World Bank- and United Nations (UN)-led initiatives, to decarbonize its operations and address methane venting, flaring, and fugitive emissions. The company has widely publicized and celebrated its alleged climate achievements. As the linchpin of oil production in the country, Ecopetrol's greenhouse gas (GHG) emissions performance and reporting to authorities is central to Colombia's international commitments and its national reporting under the United Nations Framework Convention on Climate Change (UNFCCC). EIA's findings show that, despite the company's claim to have access to the best available technology for GHG emissions detection, Ecopetrol has vented GHG in what appears to be a breach of the Colombian laws. The investigation also indicates that the company was hiding the true amount of vented gas from regulators, jeopardizing the country's climate leadership and credibility. This corporate secret was apparently well-known within the company, including by GHG reporting experts and managers.

2.1 The Art of Climate Commitment and Communication

Methane is a climate super-pollutant. The concentration of methane in the atmosphere today is higher than at any time in at least 800,000 years.³¹ The gas is responsible for approximately 30% of the global warming we are experiencing today.³² Globally, the energy sector emitted an estimated 135 million tonnes of methane into the atmosphere in 2021, which accounted for about 40% of total methane emissions from human activities (second only to agriculture).³³ Of this 135 million tonnes, more than 40 million tonnes were linked specifically to oil-related emissions. Because methane traps heat 80 times more effectively than carbon dioxide over a 20-year period and has a relatively short atmospheric lifetime, its reduction has emerged as a short term priority in the effort to rapidly curb global warming.³⁴ Ecopetrol has publicly committed on multiple occasions to reduce its GHG emissions, in particular methane. It has repeatedly celebrated its "successes" in reducing methane emissions (Figure 4).



Figure 4
Ecopetrol at UNFCCC CoP28 highlighting the company "success in reducing methane flares and in identifying and recovering methane emissions".³⁵

In February 2019, the company joined the Oil and Gas Methane Partnership (OGMP).³⁶ The UN-led voluntary public-private-non governmental organization (NGO) initiative, created by the Climate and Clean Air Coalition, which aims to “help companies reduce methane emissions in the oil and gas sector.”³⁷ Companies that join the partnership “commit to the only comprehensive measurement-based reporting framework, which improves the accuracy and transparency of methane emissions data from the oil and gas sector.”³⁸ In January 2020, Ecopetrol endorsed the World Bank’s Zero Routine Flaring by 2030 initiative.³⁹ The company became the first company in the oil and gas industry in Latin America to establish such progressive goals. In March 2021, Ecopetrol said publicly that it would reduce its CO₂ equivalent (CO₂e) emissions by 25% in 2030 compared to 2019 levels.⁴⁰ In March 2023, Ecopetrol committed to reducing its methane emissions by 45% by 2025 and 55% by 2030 with respect to the 2019 baseline through the detection, measurement and mitigation of fugitive emissions and the reduction of venting in tanks and wells.⁴¹ In December 2023, Ecopetrol announced it had become a signatory to Aiming for Zero, an initiative launched by the Oil and Gas Climate Initiative (OGCI) to encourage the oil and gas industry to cut methane emissions to near zero.⁴² Ecopetrol joined around 100 companies “that have pledged to do everything possible to achieve near zero methane emissions from operated oil and gas assets by 2030.”⁴³

To achieve these goals, Ecopetrol has defined a decarbonization roadmap that would allow the company to meet its climate ambition and the country to meet its international commitments.⁴⁴ The roadmap notably includes the reduction of fugitive emissions and emissions from venting and gas flaring, as well as a strong emphasis on the permanent update of the greenhouse gas emissions inventory. According to the company: “The implementation of this plan has already yielded positive results. Ecopetrol achieved a cumulative reduction of 8.4 million tons of CO₂e in the 2010 - 2020 period, of which 1.7 million have been verified by a third party.”⁴⁵ The company moreover states that: “The result of the last decade was achieved through programs to reduce fugitive emissions and venting, decrease gas flaring [...].”⁴⁶

2.2 Ground Truthing Methane Venting and Flaring

To the naked eye, there is nothing wrong with Ecopetrol’s giant refining complex located in Barrancabermeja (Santander department). Families who live nearby and workers who spend their days near Ecopetrol’s equipment and infrastructure explained to EIA investigators that Ecopetrol is a “first class” and “responsible” company, a company that should be “trusted” for doing its best for its employees and for Colombia. Several of them openly mentioned their “pride” at working for a leading Colombian corporation. The use of a highly specialized camera allowed EIA investigators to capture evidence that tells a different story, a story that started several years ago.

In August 2019, Earthworks and the Center for Human Rights and Environment (CHRE), used thermal optical imaging technology to document concerning emissions coming from Ecopetrol’s processing facilities.⁴⁷ The evidence brought by the two non-profit organizations “surprised” Colombian officials at the Ministry of Environment (Ministerio de Medio Ambiente - MMA)⁴⁸ and the Ministry of Mines and Energy (Ministerio de Minas y Energía - MME). Environmental groups called on Ecopetrol and other companies to immediately address these emissions, some of which were adjacent to schools and homes where they posed a significant public health risk.⁴⁹

At the time, the shocking findings were primarily interpreted by civil society experts as the result of technical negligence, lack of accountability, and a lack of awareness from Ecopetrol’s senior management. The possibility of a deliberate corporate strategy of wrongdoing, well-calibrated and greenlighted by the company’s executives, seemed far-fetched. As Daniel Taillant from CHRE explained, “Ecopetrol doesn’t really know what’s happening on site – they’re basing their calculations on unverified emissions presumptions. We have shown that their machinery is outdated and emitting far more.”⁵⁰ Rafael Espinosa Roza, Ecopetrol’s Vice President of Development and Production (Central Region), quickly dismissed the civil society’s alert and questioned the validity of the findings:

“These devices are also used by Ecopetrol and their purpose is to show where gases are present. Additionally, in our analysis, we also use flow meters to identify the amount that is being emitted. In turn, with chromatography technology we can determine the type of gas, so, based on that, what we can say categorically is that we do not know how rigorous the analysis they made was.”⁵¹

The corporate response from September 2019, which highlighted the superior technical capacity apparently deployed routinely by Ecopetrol, is echoed in a more recent (February 2023) public-facing publication on GHG mitigation that refers to the use of “cutting-edge technologies such as infrared cameras and flow meters” (Figure 5). In the same document the company claims that 95% of their operations are being monitored by a mix of bottom-up and top-down cutting edge technologies.⁵² However, as EIA’s investigators have learned, having access to the best available technology for detecting GHG venting, flaring, and fugitive emissions is one thing; stopping what could include illegal practices is another.

In March-April 2023, Earthworks and EIA returned to the same sites that were exposed in August 2019, equipped once again with thermal optical imaging technology that makes it possible to see hydrocarbons including invisible GHG emissions (Box 2). They found that many of the installations exposed in 2019 were still, four years later and despite the alert from civil society, releasing concerning emissions, in possible breach of a national - groundbreaking - regulation passed in 2022 (Box 3).

Investigators identified a total of 23 sources of hydrocarbon emissions including GHGs in 2023 associated with Ecopetrol. The investigation also turned up

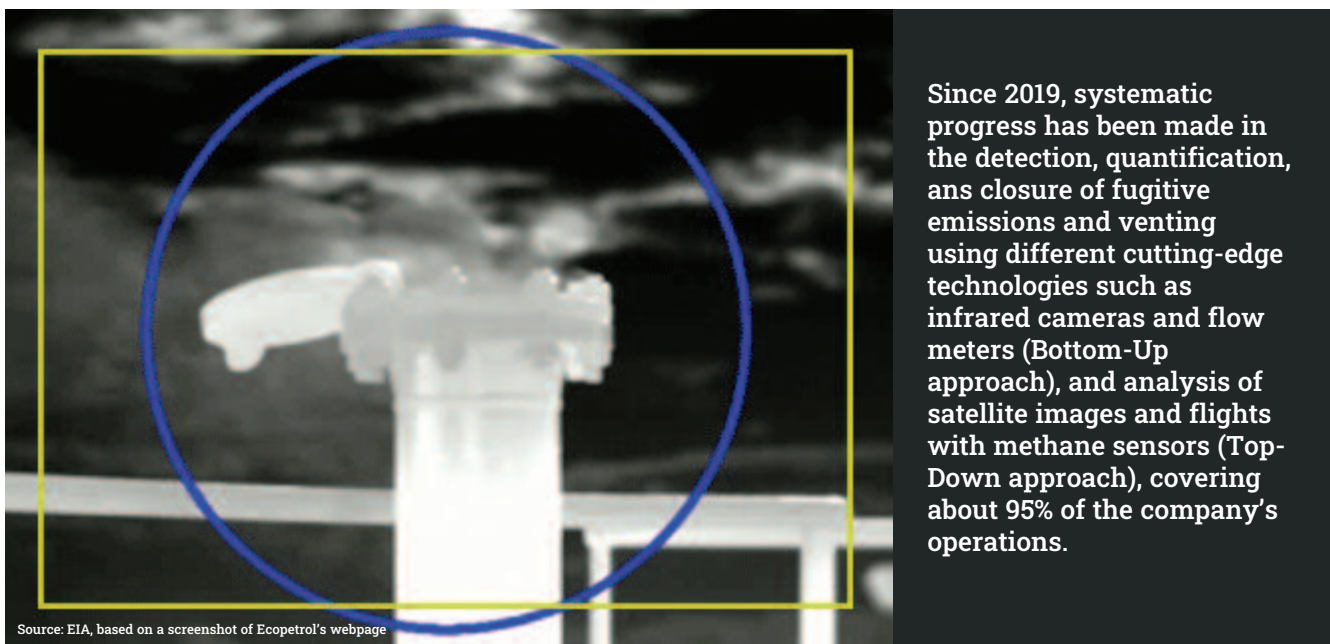


Figure 5
Ecopetrol's claim to have access to the best available technology.⁵³

observations of emissions from 5 sources belonging to Mansarovar in Puerto Boyaca, including 3 instances of possible routine venting. Regarding Ecopetrol, they found emissions that may indicate fugitive emissions and potential illegal flaring and venting. Seven of the sites had already been exposed in 2019 as sources of emissions (Figure 7), highlighting Ecopetrol's failure to stop the leaks despite knowing about them. In many instances, Earthworks and EIA observed workers or community members standing or working a few meters from the source of the emissions, posing a significant risk to their health.

Earthworks and EIA recorded potential unintended or fugitive emissions related to Ecopetrol's infrastructure in five locations. These included leaks from faulty equipment such as pipes, pumps, and tanks. Figure 8 presents one of these pieces of equipment – a disused well, marked with a sign "Down for Repairs," located near a community and market where dozens of people frequently gather. The image taken from an OGI camera shows emissions from the release valve, which confirms the fact that a leak is present.

In seven locations, Earthworks and EIA witnessed emissions from devices that are supposed to safely burn off methane and other gases, a practice commonly called flaring, preventing its release in the atmosphere.⁶⁰ Figure 9 shows a flare that is lit at irregular intervals. The OGI image reveals hydrocarbons being released into the air as a result of inefficient combustion. If the flare was effectively combusting gases, then these residual plumes would not be visible. At multiple sites, investigators also witnessed emissions from defective flares that continuously spew methane and other gases into the atmosphere. Videos captured by investigators show that the combustion of methane is so poor that it may violate the regulation set by the Ministry of Mines and Energy.⁶¹

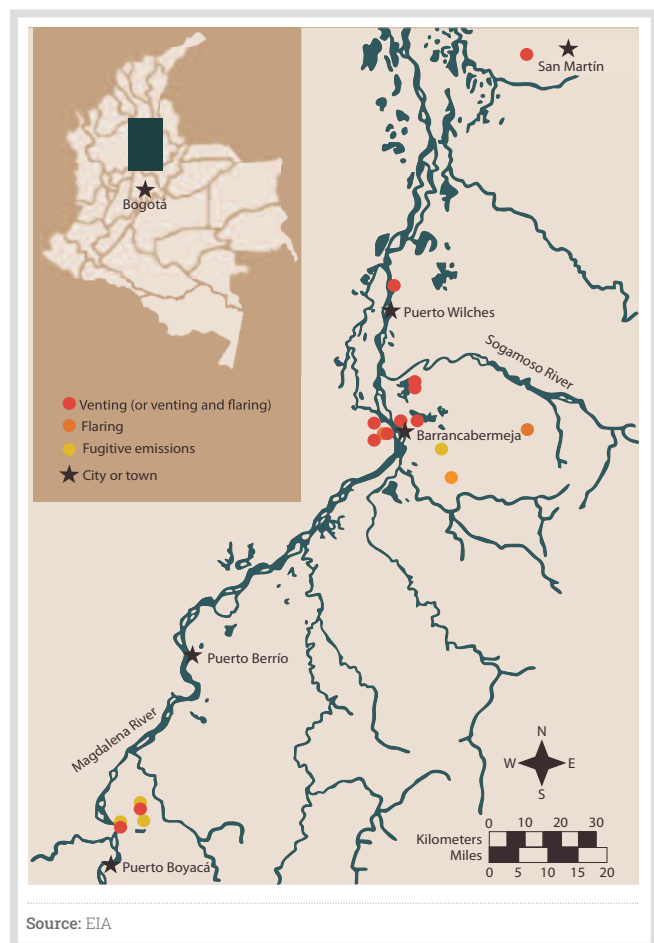


Figure 7
Ecopetrol's locations surveyed by investigators.

BOX 2.

MAKING THE INVISIBLE VISIBLE

Hydrocarbons are invisible pollutants released during oil and gas operations. They are often hazardous to health, carcinogenic, and devastating for our climate. To look for these invisible pollutants at Ecopetrol sites, Earthworks-trained experts, accompanied by EIA investigators, used a Forward Looking Infrared (FLIR) optical gas imaging camera, a state-of-the-art, independently verified technology capable of detecting volatile organic compounds (VOCs), including known carcinogens, and GHGs.⁵⁴ FLIR videos reveal potential air quality problems, with images that capture methane as well as many of the other gases that are released and are harmful to public health and the environment (Figure 6).

Many gas compounds absorb some infrared energy, but only within a certain range of wavelengths. An OGI camera uses a unique spectral filter mounted in front of the detector that restricts the wavelengths of radiation allowed to pass through the filter to a very narrow range. Within this very narrow range, targeted to a specific gas, OGI cameras can visualize where a gas plume exists. Most hydrocarbons, including benzene, butane, and methane, absorb

radiation near the wavelength of 3.3 micrometers.⁵⁵ The camera sees several types of gases, including methane and ethane - both greenhouse gases - as well as other pollutants called volatile organic compounds. Any emissions are likely to contain a mixture of these gases.

While the camera cannot identify which gas in the hydrocarbon family is being detected, it is now widely acknowledged that methane is one of the main gases detected by the camera when used at oil and gas production facilities, like those operated by Ecopetrol. In effect, OGI is the industry standard in identifying methane emissions and leaks.⁵⁶ The U.S. Environmental Protection Agency has proposed monitoring regulations that would require the use of OGI technologies to identify and repair methane leaks.⁵⁷ An array of academic papers have demonstrated the accuracy of this technology in detecting methane emissions.⁵⁸ Despite the fact that the images produced by the camera do not allow an exact quantification of the emissions, award-winning journalists have also used OGI cameras to expose clandestine methane emissions in multiple cases, related to multiple companies.⁵⁹



Source: EIA

Figure 6
FLIR camera used to detect clandestine gas emissions.



Source: EIA, based on images by Earthworks (2023)

Figure 8

Fugitive emissions from Ecopetrol's infrastructure. Photography without the filter that reveals hydrocarbon gas (left hand), photography with filter revealing hydrocarbon gas (right hand) near the valve in the center of the image. For greater clarity, please consult OGI videos [available here](#).

In 3 instances, Earthworks and EIA identified routine venting by Ecopetrol associated with production. Colombia banned routine venting in 2017 (Box 3).^{62,63} Figure 10 shows a few cases that illustrate the diversity of the sources of venting that investigators identified. The OGI image presented in Figure 10a shows a large and steady flow of hydrocarbons including methane and VOCs being released from a pressure release valve located directly to the left of a wellhead on a production facility, a possible indication of routine venting. Figure 10b and 10c present critical examples of emissions. The digital photograph shows an unlit flare; the OGI image reveals a small but steady amount of venting of methane and VOCs directly into the air, with no combustion at all. This site is a short distance from a community and its school, posing a possible health threat to residents and schoolchildren. Investigators also witnessed a large plume of hydrocarbons coming from a tank - the origin of the emissions was likely a valve hidden at the right end of the tank (Figure 10c). Investigators also observed emissions from other activities on Ecopetrol facilities associated with distribution and processing. Figure 10d shows a tall compressor stack that is emitting hydrocarbons, specifically methane and VOCs, which cannot be captured by the normal digital camera. Finally, potentially illegal venting was also identified at the Barrancabermeja refinery. On some occasions, multiple pieces of equipment and infrastructure located on the same site were releasing hydrocarbon emissions. In Figure 10e, Earthworks and EIA observed that three of the four vertical compressors and a valve on the left were emitting hydrocarbons. In Figure 10f, the digital image shows a green separator and stacks (on the left hand side). The OGI image presents uncombusted hydrocarbon gasses being released from taller stacks - the shorter

stacks are releasing steam - as well as emissions from a source that could indicate intentional venting, immediately to the right of the green separator structure.

Oil companies like Ecopetrol release methane through practices like deficient flaring and intentional venting primarily because of economic interest.⁶⁴ While companies are allowed to flare and vent to relieve dangerous pressure build-ups or perform equipment maintenance, continuous venting and inefficient flaring at the production stage are commonly motivated by cost saving. Natural gas is less profitable than oil, and it is cheaper for companies to illegally dump the gas from their operations into the atmosphere than to capture it, process it for sale, or destroy it via effective combustion.⁶⁵

In his answer to EIA, Bayón explained that "During the time I served at Ecopetrol, we approached our operations in a safe, ethical and transparent manner." On the particular issue of methane emissions, he recounted that "I personally shared the videos of the GHG sources at some of Ecopetrol's tank farms in the middle Magdalena region (reported by independent observers, civil society and media in 2019) to my management committee. It was a turning point in the conversation about fugitive emissions. The videos helped us make the emissions visible and I remember describing it as a gift. As one of my direct reports said at the meeting, 'Felipe, I had never physically seen the emissions in my career'. Technology had helped us make emissions visible. I shared this experience at COP26 in a conversation, available on YouTube, with the Environmental Defense Fund. I truly believe we seized the opportunity to strengthen our approach to dealing with fugitive emissions."



Source: EIA, based on images by Earthworks (2023)

Figure 9

Emissions from deficient flaring at Ecopetrol's infrastructure. Photography without the filter that reveals hydrocarbon gas (left hand), photography with filter revealing hydrocarbon gas (right hand). For greater clarity, please consult OGI videos [available here](#).

BOX 3.

RELEASE OF GHG IN THE ATMOSPHERE:

An Enduring National Prohibition That the Offender Must Be Billed For

"Flaring, waste or emission of gas into the atmosphere is prohibited. Under all circumstances, facilities must be provided for its utilization [...] Any gas that is flared, wasted or emitted into the atmosphere without taking into account the conditions or exceptions determined in this article, shall be subject to the payment of royalties."⁶⁶ Regulation 18-1495 from the Ministry of Mines and Energy, promulgated in February 2009, establishes clear standards for oil exploration and exploitation in Colombia. Exceptions to the general prohibition of GHG release can only be granted for "safety reasons" or when recovery is technically impossible or uneconomical, in which case it must be declared, technically justified, and previously approved by the Ministry of Mines and Energy. Any other form of GHG release is a violation of the regulation and is subject to financial penalties.

With the Regulation 40066/2022, promulgated in February 2022 by the Ministry of Mines and Energy, updated regulation 18-1495, Colombia became one of the first countries in the world to adopt a specific

regulation covering the control and reduction of fugitive methane emissions, in addition to flaring and venting. According to the official text, venting is banned in both exploration and production, and exceptions can only be granted during an emergency or for maintenance. Regarding flaring, operators - in accordance with the provisions of the competent environmental authority within the framework of an environmental license - are allowed to flare the gas recovered on the surface as a result of well control operations and initial production tests during the development of exploratory drilling.

Additional rules also cover fugitive methane emissions by establishing requirements for leak detection, measurement and repair, technical inspections, and monitoring.⁶⁷ Regulation 40317/2023, promulgated in April 2023 by the Ministry of Mines and Energy, updated the precedent text with specific adjustments, particularly on the necessary reporting requirements and technical standards.⁶⁸

a. Well pressure release valve



b. Flare



c. Tank



Source: EIA, based on images by Earthworks (2023)

Figure 10

Examples of emissions at Ecopetrol's facilities, organized in pairs of pictures taken from digital camera (left) and OGI camera (right). (Left side) photography without the filter that reveals hydrocarbon gas; (Right side) photography with filter revealing hydrocarbon gas. (From top to bottom) emissions from a well pressure release valve, emissions from an inefficient flare, emissions from a tank, and emissions from the Barrancabermeja refinery. For greater clarity, please consult OGI videos [available here](#).

d. Vertical compressor



e. Horizontal compressor



f. Refinery



In its answer to EIA (available in its entirety at <https://eia.org/report/crude-lies/>), Ecopetrol denied any wrongdoing. The company stated: "In relation with the reporting of GHG emissions to the Colombian authorities, there were no legal requirements on the matter until 2022 [...] as a result of our better understanding of the current methane emissions of the company, Ecopetrol is on track in meeting its publicly available methane reduction targets."

As shown in the following section, the emissions of hydrocarbons including methane that EIA and Earthworks identified were well known within Ecopetrol and apparently hidden from authorities.

2.3 Ecopetrol's GHG Inventory: "This data is not real"

The international standard ISO 14064-1 governs the quantification and reporting of greenhouse gas emissions and the verification of this information. Ecopetrol claims that its annual corporate GHG emissions inventory follows this standard and that a third party auditor verifies this information periodically.⁶⁹ The first step in this process requires the identification of specific sources of GHG emissions within the company's boundaries. The omission of certain sources at this stage undermines the overall exercise and its results. For instance, when it comes to ISO 14064 Part 1:

"The first steps of this process are identification of specific emission sources within the operational boundaries as well as selection of an emissions quantification methodology applicable for the sources identified. The next steps are the collection of data required by the methodology for the source and the identification of established emission factors for the data collected. Finally, the data and the emission factors, applied consistently with the quantification methodology, are used to quantify emissions from individual emission sources. The emissions quantified for each source are then consolidated[...]"⁷⁰

As official inventory reports from Ecopetrol demonstrate, the company does report some of its venting and methane emissions. However, according to an audio recording from the *Iguana Papers*, as of 2018 Ecopetrol failed to report a significant proportion of the venting sources and related volumes of methane because it was known within the company that these practices violated Colombian law. Ecopetrol experts and senior management were apparently fully aware that the company concealed these methane emissions. In an undercover audio recording, the expert in charge of Ecopetrol's emissions inventory explained that the values Ecopetrol reported to the Colombian authorities are "not real" because certain venting volumes are deliberately not reported and are kept confidential. This practice allows the company, when it comes to methane reporting and GHG emissions reductions, to "look great" in the public's eyes:

Olarte: The volume of gas vented is in cubic meters, right?

Ecopetrol expert: It is an input, it is not a report of emissions.[...]

Olarte: So in terms of volume of gas vented, do you have this data?

Ecopetrol expert: Yes, but this data is not real... [The real data] is not information that...

Olarte: This is not information...

Ecopetrol expert: This is not information that Ecopetrol officially gives so easily.

Olarte: Ok.

Ecopetrol expert: It's information that they [Ecopetrol's departments in charge of production] do not report anywhere... by ministerial norms, Ministry of Mines, they do not have to report it either... but it is something that we know is done.

Olarte: Ok, ah.

Ecopetrol expert: So for the many sources that are called "well venting:" "zero."

Olarte: So how do you calculate it?

Ecopetrol expert: That's what I am telling you, we calculate it from what they report to us... But I cannot give you the guarantee that the information is real. Because we know that it is underestimated. Because the input data, which is the variable,⁷¹ they don't report it, they report "zero."

Olarte: Better said, if we look at what is reported for vented gas...

Ecopetrol expert: Well, we look great because according to it "we do not vent"... but we know that it is not real. There is other venting [...] from the refinery. And this is the reality.

Olarte: What are the other emissions?

Ecopetrol expert: Sources?

Olarte: Yes.

Ecopetrol expert: Combustion, which is 61%. Flaring, which is more or less 15%. Venting, which is more or less 16%, but this is venting associated with catalytic cracking process, hydrogen production. Fugitive [emissions], it is 2% more or less.

Olarte: So what we are saying is that if we were to report the real venting data...

Ecopetrol expert: It would be much more, yes."

In a subsequent discussion, the same Ecopetrol employee explained, regarding venting during production processes: "There is a rule that says venting is prohibited. [...] If they were to ask to report it, it is as if it could be done. In production, you can't vent. So why would I ask for a report if it shouldn't be done?" EIA's use of thermal imaging shows that potentially illegal venting has persisted many years after the Ecopetrol expert admitted it.

2.4 Corporate Lies versus Colombian Leadership

The Colombian government's pledge to reduce the country's GHG emissions relies in part on Ecopetrol because the majority state-owned company is the

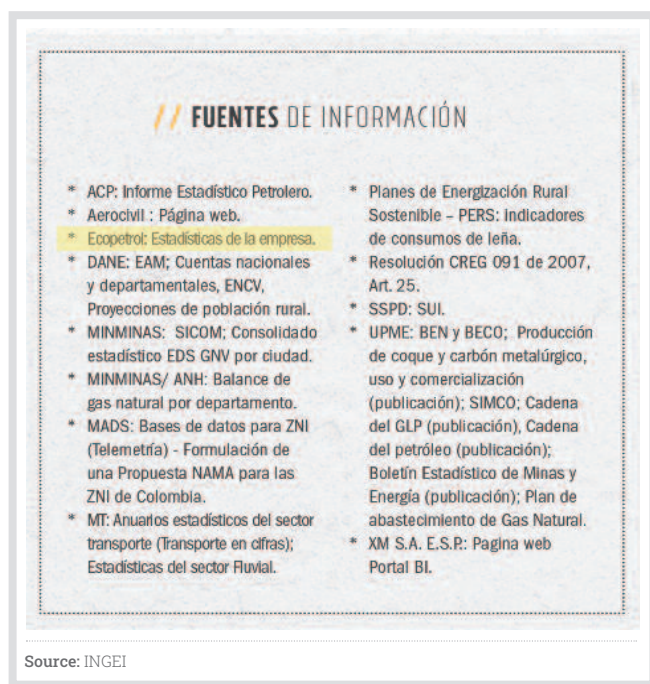


Figure 11
Ecopetrol's self-reporting data as a source of the national inventory.⁷⁸

centerpiece of the country's oil and gas sector. The company operates more than 60% of the country's total oil and gas production, and owns and operates 100% of its refineries.⁷²

Ecopetrol's emissions inventory is one of the key inputs that the Colombian government uses to estimate the country's annual national GHG inventory.⁷³ This information is reported at the international level under the UNFCCC.⁷⁴ The dependence of the national GHG assessment on Ecopetrol's self-reported data is explicitly stated in multiple official documents (Figure 11). The national GHG inventory mentions "the company's statistics" as a primary source of information for the mining and energy sector,⁷⁵ and repeatedly lists Ecopetrol as a "source of information" or "information directly shared by Ecopetrol," and refers to the importance of "the corporate GHG inventory conducted by Ecopetrol" for the national assessment.⁷⁶ It is made clear that while the data is processed and aggregated by the Ministry of Mines and Energy, the "primary source of the information" remains Ecopetrol.⁷⁷

A report to the UNFCCC explains: "It should be noted that Ecopetrol conducts specific air quality studies and also conducts an annual corporate GHG inventory with a high level of detail, which can provide information and support new studies for the development of Tier 2 or Tier 3 emission factors." The report goes on to note: "To date, Ecopetrol is the company that has evaluated the most of its emissions, including fugitive emissions."^{79,80} The necessity to improve the transparency and availability of the data shared by Ecopetrol also surfaces in the national GHG reporting: "Partial information on fuel consumption by refineries is available at the BECO [Colombian Energy Balance] and Ecopetrol has complete information which

however is not publicly available. Timely and permanent access to the information could help to improve transparency and accuracy of activity data and estimations of emissions."⁸¹

In its response to EIA (available in its entirety at <https://eia.org/report/crude-lies/>), Ecopetrol denied any wrongdoing and explained: "Since 2009, Ecopetrol prepares on an annual basis its greenhouse gas emissions [...] The GHG inventory is voluntary verified by a third party every two years to ensure the quality of the data. Within the inventory, all the GHG emissions generated by each asset and facility are calculated."

Ecopetrol's apparent concealment of routine methane emissions from authorities, and the opacity of the emission data's sources and methodology represent a direct challenge to Colombia's rapid emergence as a global methane leader. In February 2022, Colombia became the first South American country to regulate methane emissions from its oil and gas sector.⁸² Building on pre-existing prohibitions on GHG release in the atmosphere (see Box 2), the Colombian ministry of Mines and Energy also adopted new regulations that ban venting, and aim at reducing fugitive and flaring emissions from upstream oil and gas activities.⁸³

In August 2022, a new Colombian administration, led by President Gustavo Petro, stated that climate change policy will continue to be among Colombia's top priorities.⁸⁴ The newly elected president vowed to go much further than any of his predecessors, envisioning a multifaceted "vision for change" for the country that includes transitioning Colombia to a green economy and phasing out oil and gas exploration.⁸⁵ President Petro took Colombia's climate leadership to a new level when he urged fellow progressive decision-makers in Latin America "to stop thinking that a future of social justice and wealth redistribution could be built on a foundation of high oil, coal, and gas prices."⁸⁶ At the 28th Conference of the Parties on Climate Change (COP28) in Dubai, Colombia became the first major economy and first Latin American country to join the bloc of nation-states spearheading the push for a Fossil Fuel Non-Proliferation Treaty.⁸⁷ In his announcement speech, Petro candidly laid out the power struggle against the fossil fuel industry:

"There is no other way, the rest are illusions. There is a very powerful economic power around oil, coal and gas. And they act to prevent changes, to maintain, in a suicidal way, their possibilities for more years of profit in the short term. Today we face an immense confrontation between fossil capital and human life. And we must choose a side."⁸⁸

President Petro's words are an appropriate description of the arguably deceptive strategies Ecopetrol used to hide its GHG emissions. As shown in the following sections, the majority-state-owned company has allegedly relied on similar institutionalized and routine practices of possibly hiding information when it comes to its impact on water ecosystems.



3. CONTAMINATING WATER AND CONCEALING IT

For Yuvelis Morales, a member and spokesperson of the non-profit coalition Colombia Free of Fracking Alliance (Alianza Colombia Libre de Fracking), the contamination of the Middle Magdalena water ecosystems has deep implications: "Because of the oil industry and the leaks everywhere, people's cultural perception of water has radically changed. We used to live around and from water. Now, people don't want to eat fish anymore, because they think they are poisoned."

3.1 Middle Magdalena Water Ecosystems Are Contaminated

Colombia faces frequent oil spills and environmental contamination.⁸⁹ According to official data, there were more than 2,000 oil spills between January 2015 and June 2022.⁹⁰ Most of them were due to leaks and other maintenance issues relating to the operation of oil wells, pipelines, and other infrastructure. While a large share of the spills go unreported, news articles have exposed the worst spills and the resulting contamination of water ecosystems. EIA's analysis of online news articles from January 2018 to December 2023 indicates that on average 13 articles were published each quarter linking hydrocarbon leaks and water contamination (Figure 12 and 13).

More than 65% of the 2,000+ oil spills reportedly took place in the Middle Magdalena region.⁹¹ The majority of the news media articles have also focused on this particular area (Figure 13), which administratively belongs mainly to the Antioquia, Bolívar, Boyacá, Cesar

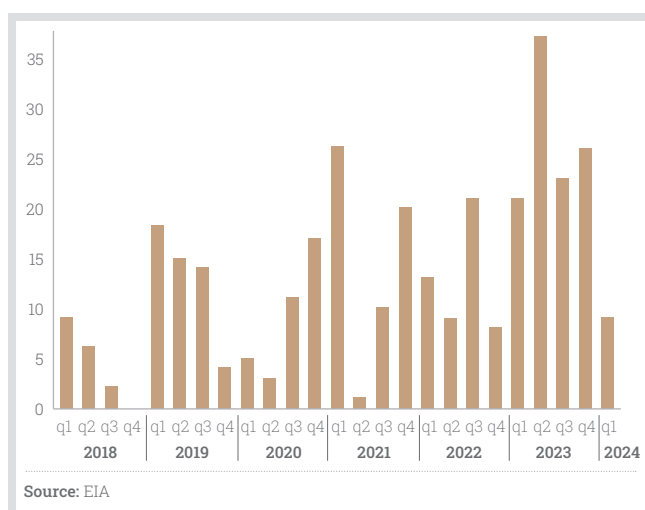


Figure 12
Number of online news articles about incidents of water contamination related to oil exploitation, per quarter, from January 2018 to March 2024, in Colombia.

and Santander departments. The region hosts the middle course of the Magdalena River, one of the world's largest tropical rivers that stretches from the Andes to the Caribbean.⁹² Ecopetrol is reportedly the company responsible for a large portion of the oil spills in this region, with a reported 67% of the 2,000+ officially acknowledged spills⁹³ and 70% of the media reports about oil spills (Figure 14).



Figure 13
Example of a chronic oil spill incident in the Middle Magdalena region.

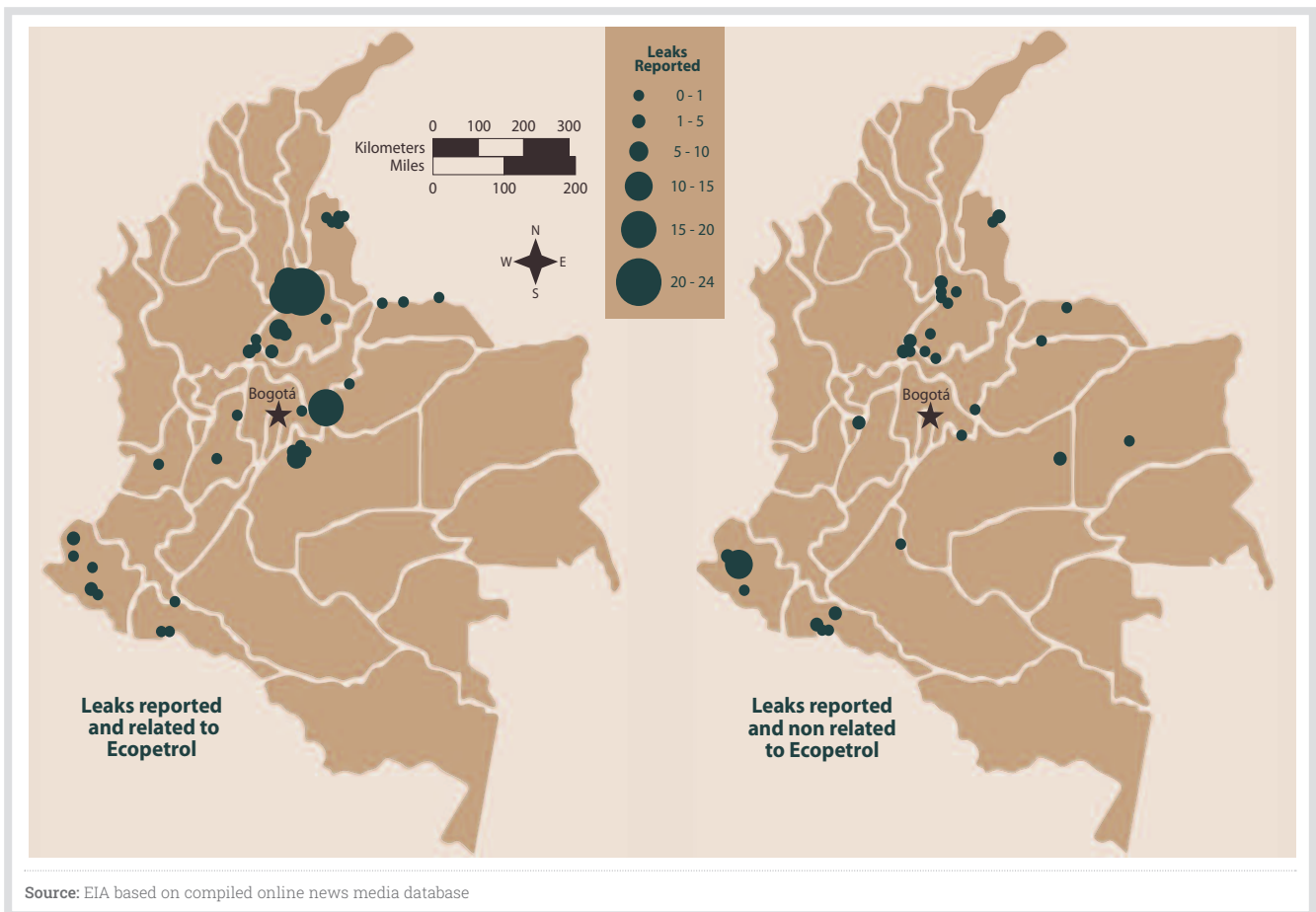


Figure 14
Location referred to in the online news articles about spills and incidents of water contamination by oil and gas industry, from January 2018 to December 2023.

The Middle Magdalena region belongs to the Tumbes–Chocó–Magdalena biodiversity hotspot⁹⁴ and is known for its ecological significance. Wild flora and fauna are represented in 150+ mammal species, 630+ bird species, 120+ reptile species, and 120+ fish species.⁹⁵ More than 4,000 vascular plant species call this region home. Many of those animals and plants are endemic to the region. Several are also threatened, including the Colombian tapir (*Tapirus terrestris columbianus*), the Central American jaguar (*Panthera onca centralis*), the Antillean manatee (*Trichechus manatus manatus*), the white-footed tamarin (*Saguinus leucopus*), the Magdalena spider monkey (*Ateles hybridus*), the grey-handed night monkey (*Aotus griseimembra*), the harpy eagle (*Harpia harpyja*), the Magdalena river turtle (*Podocnemis lewyana*), the red-footed tortoise (*Chelonioides carbonaria*), the Lozano's salamander (*Bolitoglossa lozanoi*), the pataló fish (*Ichthyoelephas longirostris*), and the Magdalena catfish (*Pseudoplatystoma magdaleniatum*) (Figure 15).⁹⁶

The water ecosystems of the Middle Magdalena region are also at the center of the daily life and livelihood of hundreds of thousands of people who use it as their main source of drinking water, for bathing, or farming

(agriculture and cattle raising). Fishermen and their families are entirely dependent on the water and its quality for their livelihood. Local, regional or national consumers of the fish they sell are also directly linked to the water ecosystems and direct victims of their possible contamination (Figure 16).

In order to evaluate the water quality and the possible historic contamination of the Middle Magdalena region by the oil industry, and in particular Ecopetrol, EIA brought in independent experts from the Environmental and Computational Chemistry Group (Grupo de Química Ambiental y Computacional - GQAC). GQAC, which belongs to the Faculty of Pharmaceutical Sciences of the University of Cartagena. This group supports the Doctoral Program in Environmental Toxicology, and new approved Doctoral Program in Environment and Sustainable Development, making it a nationally recognized research unit with a high level of expertise in environmental toxicology.⁹⁷ Experts from GQAC undertook a thorough analysis of some of the water bodies of the Middle Magdalena region (Figure 17 and 18).⁹⁸ Several substances were used as indicators of possible contamination by the oil industry, among them Polycyclic Aromatic Hydrocarbons (PAHs).



Source: Mark Bolnik (jaguar), Julián Alberto Ríos-Soto (Lozano's salamander), and Sylvere Corre (tapir)

Figure 15
Threatened Fauna of the Middle Magdalena Region.



Source: EIA

Figure 16
Water and its uses in Middle Magdalena region.



Figure 17
Location of the samples analyzed by GQAC.

PAHs are among the most toxic components of petroleum. They are a class of chemicals that occur naturally in coal, crude oil, and gasoline, but also from smoking, fires and many other sources.⁹⁹ Many PAHs, as well as their cellular metabolites, called epoxides, are highly toxic and mutagenic to biota, with reported carcinogenic properties to larger living organisms, including humans.¹⁰⁰ In the aquatic environment, oil spills directly cause PAH pollution and harm aquatic species.¹⁰¹ As a form of persistent pollutants, PAHs accumulate over time and the disintegration occurs slowly. Traditional clean-up methods rarely work. In the aquatic environment, PAHs can deposit on the surface of sediments or suspended particles.¹⁰² The presence of PAHs in aquatic ecosystems means the chemical is likely to enter the body of aquatic organisms, such as fish, through feeding and via the gills. This contamination can lead to bioaccumulation and trophic biomagnification, which can pose serious health risks to humans who consume fish.¹⁰³ Due to hydrophobicity and stability, PAHs can also be adsorbed by soil organic matter, causing toxicity to soil microorganisms and plants, and further damaging soil health.¹⁰⁴

As shown in Figure 19, naphthalene was the PAH with the highest documented presence across the samples, followed by pyrene and benzo(a)pyrene, with maximum concentrations of 4.56, 5.15, and 4.96 parts per million for



Figure 18
In situ sampling, processing, and analysis of water and sediments by GQAC.

the samples #13, 7 and 9, respectively. Other PAHs with high concentrations in the samples were phenanthrene, with 3.02 parts per million for sample #8, and anthracene with 2.06 parts per million for sample #19. The concentration of PAHs was then compared with a recognized international standard in order to establish if the levels identified in the samples should be classified as rarely, occasionally, or frequently associated with adverse biological effects.¹⁰⁵ The result of the comparison indicates that the vast majority of the samples present concentrations of naphthalene (samples #1, 3, 4, 5, 6, 7, 8, 10, 11, 13, 15, 16), anthracene (sample #13, 16, 17, 19), pyrene (sample # 6, 7, 8, 9, 12), and benzo(a)pyrene (sample #8, 9, 16, 18) that are highly likely to have adverse effects on plants, animals, and humans.¹⁰⁶ Other sources for these chemicals cannot be totally ruled out.

The presence of Cadmium (Cd), Chromium (Cr), Lead (Pb), and Mercury (Hg) was also studied, since these "heavy metals" (HMs) are highly toxic and are one of several byproducts generated during the extraction and oil refining process.¹⁰⁷ Environmental pollution with HMs can result in contamination of water, waterways, and sewage, and can accumulate in plants, crops, seafood, and meat. They can then affect humans who consume them. Symptoms and signs of HM toxicity vary depending on the type, acuteness of exposure and the length of exposure.¹⁰⁸ The results of the analysis

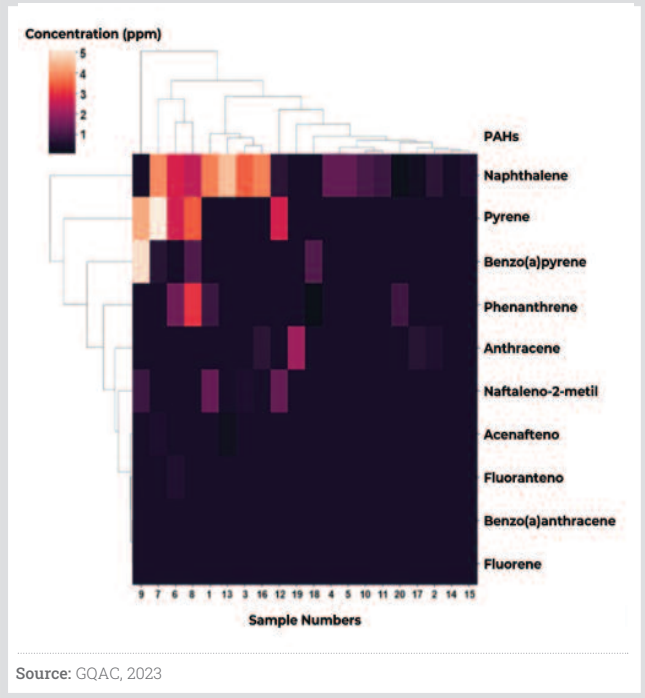


Figure 19
Heat map of PAH concentrations obtained in sediments collected from each sampling point, grouped by similarity.

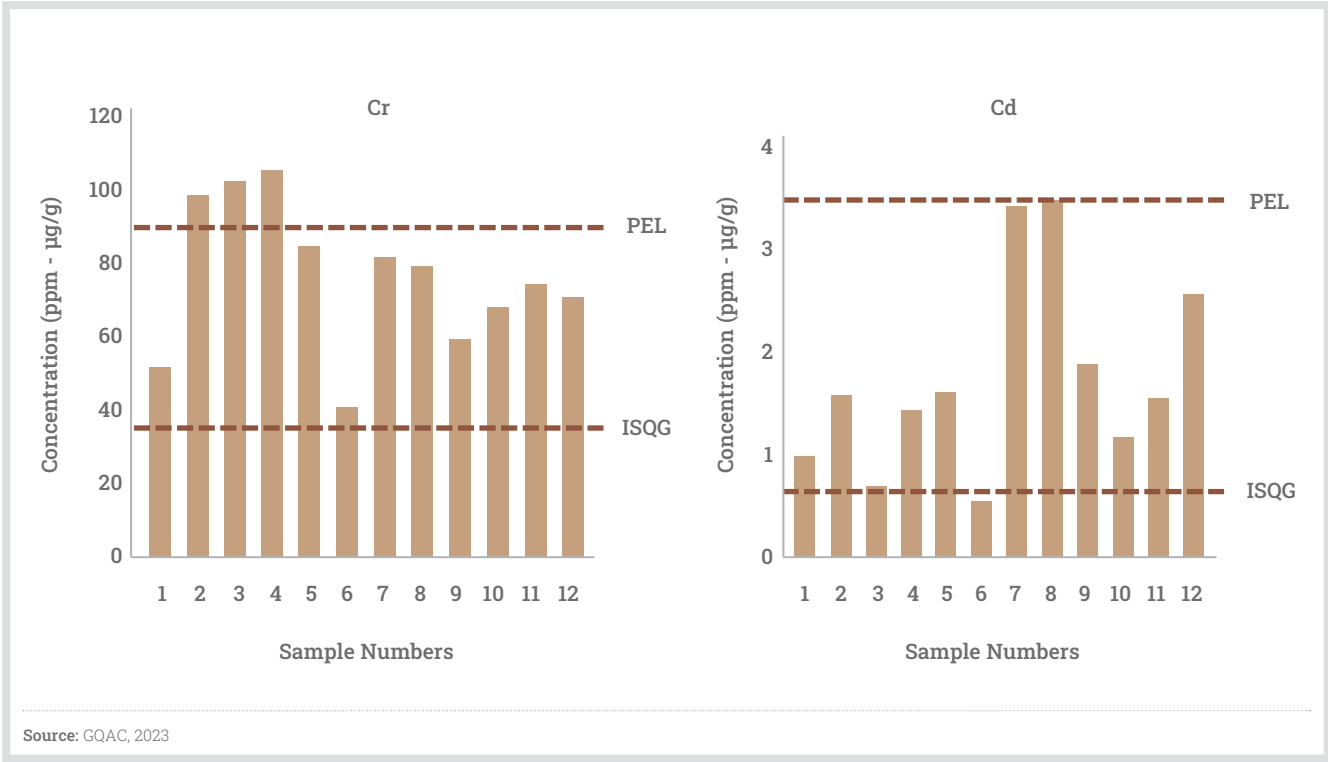


Figure 20
Concentration of Chromium and Cadmium in samples collected, compared with international standards. N.B. Concentrations under Interim Sediment Quality Guidelines (ISQGs) value are rarely associated with adverse biological effects. Concentrations between ISQG and Probable Effect Level (PEL) are occasionally associated with adverse biological effects, and concentrations over the PEL value are frequently associated with adverse biological effects.

LAST LINE OF DEFENSE: FISHERMEN BECOME WATER MONITORS



Source: EIA

Figure 21
Fisherman in the Medium Magdalena region.

FEDEPESAN's community monitoring aims at identifying, documenting, and reporting water contamination. It also acts as a rapid warning system that warns fishermen (Figure 21) to avoid contaminated areas. The monitoring takes place in multiple bodies of water of the Magdalena Medio region, including the San Silvestre wetland, Palatal wetland, Llanito wetland, San Silvestre sewer, and Rosario sewer. A group of 15 people have performed weekly monitoring, divided into day and night shifts, since 2019.

Community fishermen from FEDEPESAN collects and analyzes water samples with a kit that they learned to use in training with the Humboldt Institute, a Colombian entity linked to the Ministry of Environment that researches biodiversity and the relationship between biodiversity and human well-being. The sample collection and analysis allow immediate identification of the presence of certain heavy metals, pollutants, and other contaminants. The training by the Humboldt Institute was financed by Ecopetrol.

performed by GQAC indicate that most of the samples were above the concentration at which adverse biological effects are occasionally observed and in several cases above the threshold for which adverse biological effects are highly likely to occur (see Figure 20 for the case of Cr and Cd).

The conclusion of the independent study carried out by GQAC, even as a preliminary research, is that the presence of PAHs and some HMs in sediments appear at levels that may represent risks for biota of the Middle Magdalena region. According to the research, the incidents and leaks associated with the production, transport, and refining of fossil fuels carried out in the Barrancabermeja area are likely some of the reasons for the water contamination. This pollution may be reaching humans, as it has been known in Puerto Wilches, where chemicals derived from petroleum have been found in water for human consumption and their metabolites detected in urine samples. Thus, the current level of water and ecosystem contamination is very likely to pose a direct threat to the wellbeing of the biological organisms that inhabit these water bodies as well as to humans who rely on the contaminated bodies of water for their livelihood, including fishing, farming, or as a source of drinking water.

The serious public health risks associated with water contamination led the Federation of Santander Artisanal Fishers for Tourism and Environment (Federación de Pescadores Artesanales, Ambientalistas y Turísticos del Departamento de Santander, FEDEPESAN) to develop and implement a community-based water monitoring system (Box 4). Yuli Andrea Velásquez Briceño, environmental engineer and president of the FEDEPESAN, has for years denounced the recurrent contamination of the water ecosystems of the Medium Magdalena region. She has repeatedly warned of the risks posed to the more than 300,000 people who depend on these waters for bathing, drinking, and farming.¹⁰⁹

3.2 What Ecopetrol Seemed to Know

Fishermen have detected, via the community-based monitoring protocols, the pollution of the wetlands ecosystems due to contaminants like heavy metals that are present in wastewater.¹¹⁰ The presence of heavy metals in fishing areas, intended for both domestic consumption and sale, has been repeatedly documented.¹¹¹ As Yuli Andrea Velásquez Briceño (FEDEPESAN) explained to EIA investigators, the lack of publicly available information has made the community-based

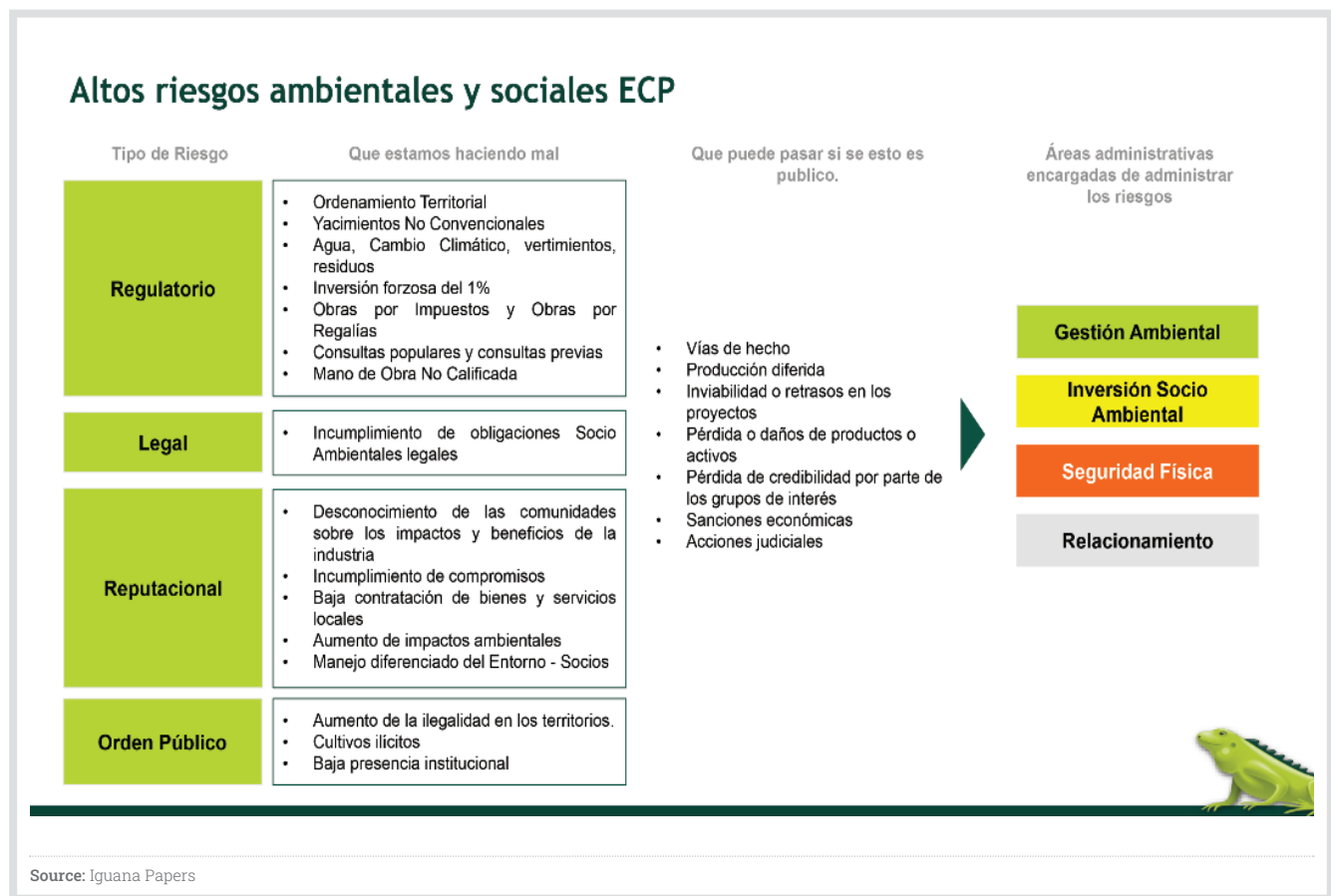


Figure 22
"What we are doing wrong" Analysis by Ecopetrol.

monitoring system the only way to find out about water quality and the possible risk to local people who depends on the water for drinking, bathing, or farming. The lack of publicly available information about water contamination and oil spills contrasts with what Ecopetrol experts and high level executives seemed to have known about it, as shown in the next section.

Mass Water Contamination

The slide "ECP Environmental and Social High Risks" (Figure 22) from the *The Iguana Papers* also reveal that top executives, exemplifies the level of knowledge Ecopetrol seemed to have of a wide array of negative impacts associated with its operations. This internal document presents a long list of "What We Are Doing Wrong" items, which includes "increasing environmental impacts," "water," "discharge," "climate change," "non-compliance with socio-environmental legal obligations." The document also shows that these apparent wrongdoings were systematically kept secret from the public and authorities, as the header to the third column "What Could Happen If It Was Public" clearly shows. The column lists a series of hard hitting consequences for the company should the information ever be made public, including "legal actions," "economic sanctions," "loss of credibility," "project inviability or delay," and "slowdown of production."

The *Iguana Papers* also reveal that top executives seemed to have direct knowledge of Ecopetrol's mass contamination of waterways.

Managing the supply and discharge of water is a key component of Ecopetrol's daily activities because the exploitation, production, transport and refining of oil depend on it (Figure 23).

According to whistleblower Olarte, experts within Ecopetrol were keenly aware and concerned by the company's wastewater management. They had tried on multiple occasion to raise the issue, pointing to the company's possible role in contaminating water bodies across the country. In 2017, Olarte conducted an internal analysis of the company's water discharge management. He allegedly presented this analysis to Echeverry, Ecopetrol's then CEO. The analysis showed that the company was discharging water into waterways that contained several highly toxic contaminants at concentrations well above the Colombian legal limits (Figure 24). This was the case for phenols, which are classified as environmental pollutants, and are found in the wastewaters of the petroleum industry. High concentrations of this substance are harmful to human health and can cause disastrous cardiac and neurological effects.¹¹² Biological oxygen demand (BOD in English, DBO in Spanish for *Demanda Bioquímica de Oxígeno*) and

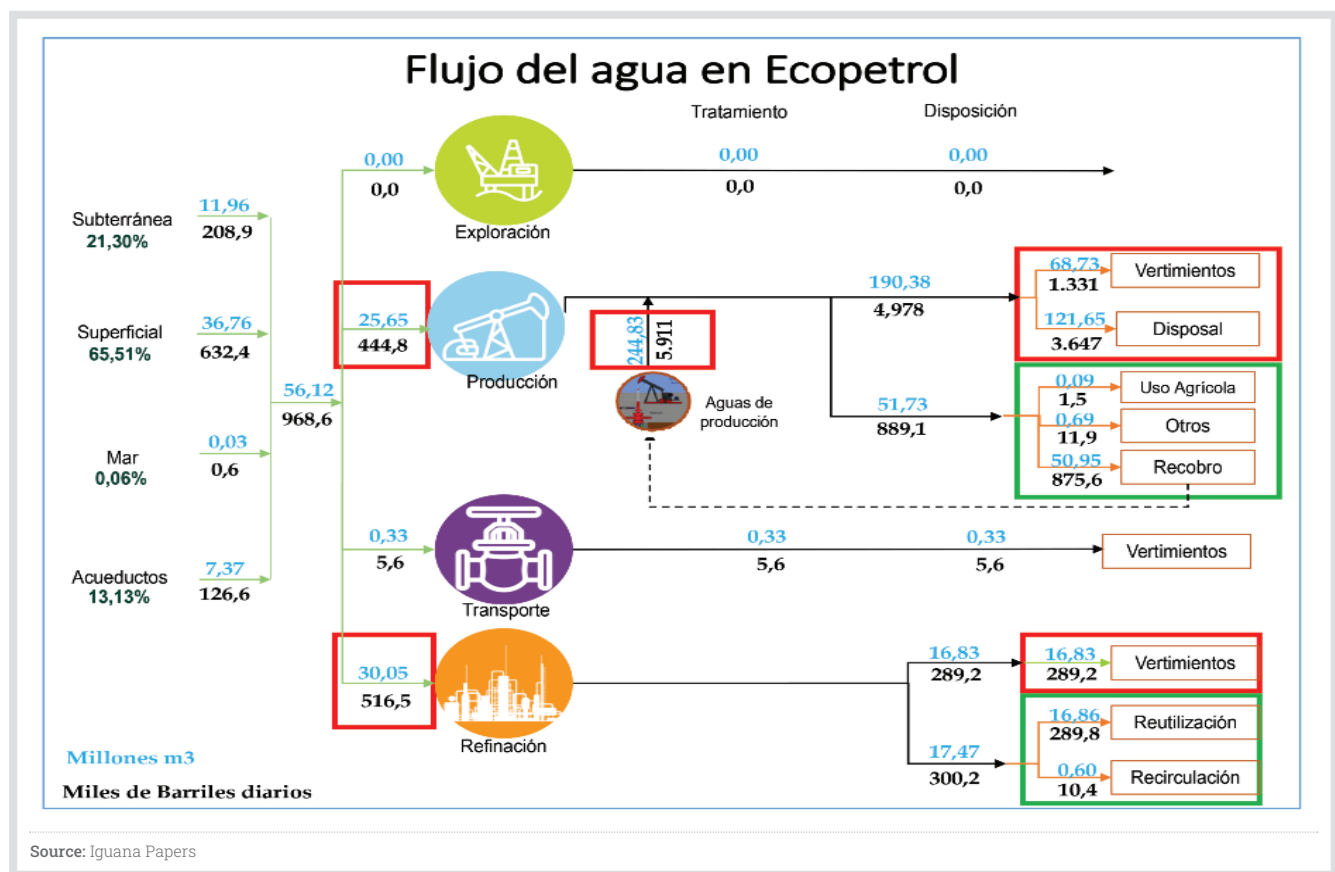


Figure 23
The central role of water management in Ecopetrol's activities.

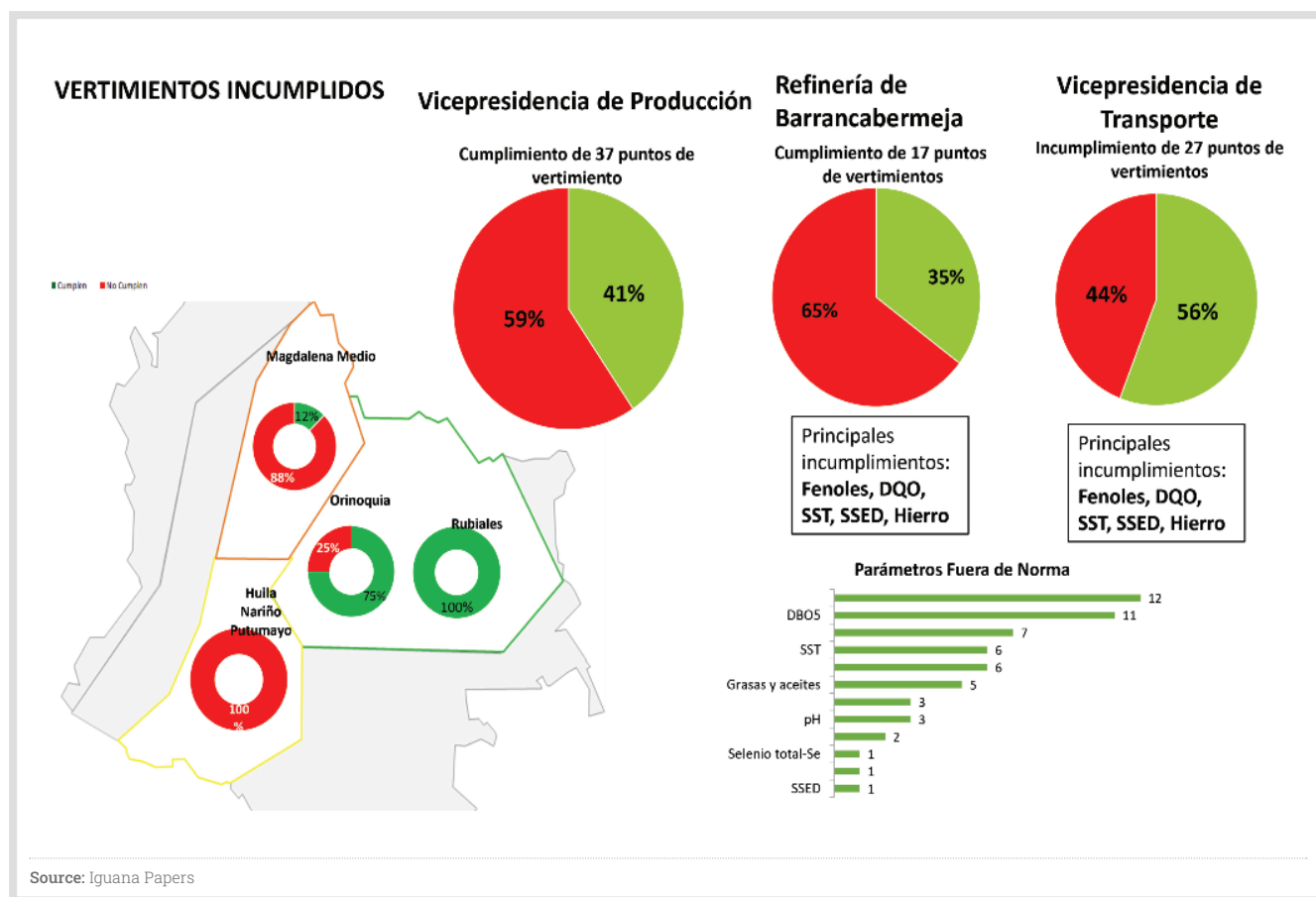


Figure 24
Mass contamination of Colombian waters by Ecopetrol.

chemical oxygen demand (COD in English, DQO in Spanish for *Demanda Química de Oxígeno*) above safe limits were also highlighted in the study that Olarte shared with Ecopetrol's CEO. These two parameters are commonly used as indicators of the pollutant load within wastewater from the production of hydrocarbons.¹¹³ BOD and COD above safe limits are frequently linked to multiple water contaminants, notably PAHs and HMs.

As presented in the previous section, independent researchers found that Middle Magdalena water ecosystems are contaminated by PAHs and HMs at concentrations at which adverse biological effects are highly likely to occur.

According to the analysis presented to Echeverry in 2018, the company may have been violating regulations Colombian water discharge regulations across its operations and departments, in particular in its production, refining, and transportation sectors (Figure 24). These apparent violations resulted in a national mass contamination that affected the country from North to South (Figure 24).

In its response to EIA (available in its entirety at <https://eia.org/report/crude-lies/>), Ecopetrol denied any

wrongdoing and stated: "In conclusion, we reject this allegation as it is not correct to state that Ecopetrol *"was releasing wastewater with concentrations of toxic contaminants at higher concentrations than authorized by the Colombian regulation"* between April 2015 to September 2017, given that Ecopetrol was already in the transition period for compliance with the new quality standards for surface discharges (Resolution 631 of 2015), in accordance with the law."

300,000+ Environmental Noncompliances Records

According to EIA's investigation, the nationwide contamination of water was likely known by experts and managers at Ecopetrol. They apparently had access to detailed information about almost 90,000 entries of non compliance related to water management. These were documented by the company in precise detail.

The *Iguana Papers* contain internal Ecopetrol files from 2016-2018. The company's apparent noncompliance with environmental laws, regulations, and licensing requirements was documented in detail.¹¹⁴ According to Olarte, the information was apparently collected by different divisions at Ecopetrol and then collated monthly.¹¹⁵ Few individuals had access to the compiled monthly information because the files were only saved

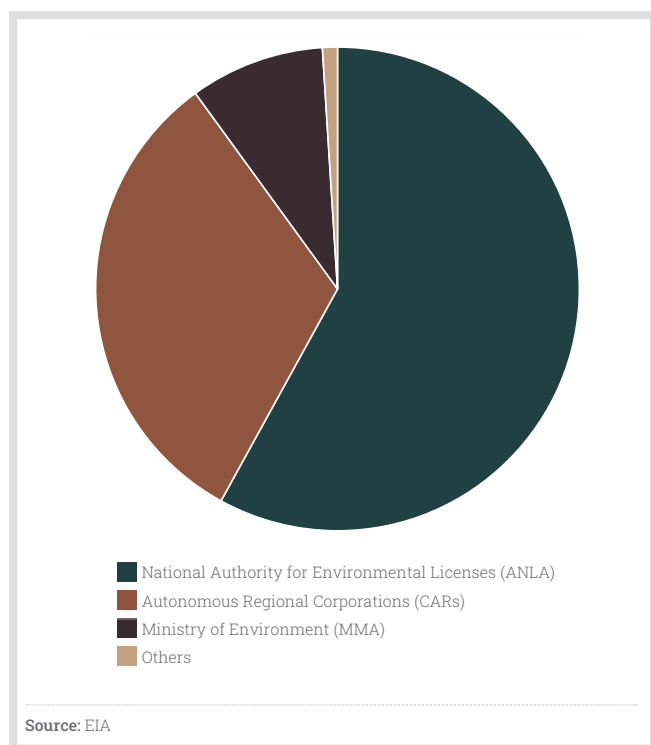


Figure 25
Instances and percentage of non-compliance recorded by Ecopetrol aggregated by relevant institution, from 2016 to 2018.

on computer hard drives, rather than on Ecopetrol's shared cloud-based storage system, which is commonly used by staff. The monthly spreadsheets were saved in separate locations. This compartmentalization of the information made accessing the overall data set very challenging for any unauthorized person.

According to this dataset, between 2016 and 2018, Ecopetrol documented 328,779 records of apparent noncompliance (many of them being recorded over multiple months) with environmental laws, regulations, licensing requirements, permits or authorizations issued by Colombian authorities (some of the apparent violations took place prior to the 2016-2018 timeframe). A significant proportion – about 27% of the total (equivalent to 89,524 non-compliance records) – were related to water management. Overall, the apparent noncompliance relates to the mandate of more than 30 Colombian authorities, including Congress, the Ministry of Environment (Ministerio del Medio Ambiente - MMA),¹¹⁶ the Ministry of Mines and Energy (Ministerio de Minas y Energía - MME), the National Environmental Licensing Agency (Autoridad Nacional de Licencias Ambientales - ANLA), and 26 of the 33 Colombian Autonomous Regional Corporations (Corporaciones Autónomas Regionales - CARs). Figure 25 presents the ratio of instances of noncompliance per institution.

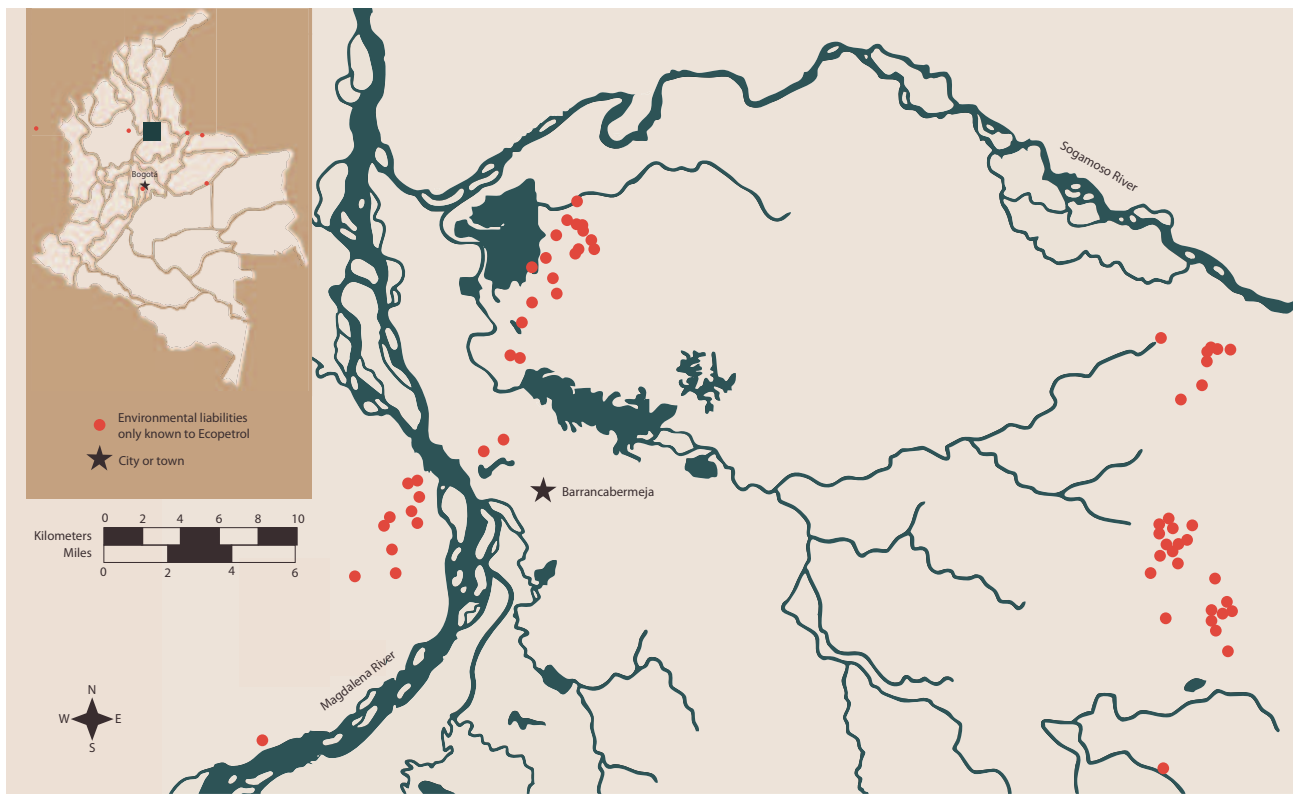
Authorities raised dozens of very critical irregularities in terms of water management, and in particular discharges: "Warn the company ECOPETROL S.A., that in accordance with Article 25 of Decree 3930 of 2010, the

company is not allowed to dilute the discharge prior to the control point by the use of water resources, rainwater, water from public or private aqueducts, cooling, air conditioning systems, condensation and/or from chemical synthesis.", "Require the company ECOPETROL S.A. to inform the CAS of the resumption of water collection activities on the El Llanito wetlands and Caño San Silvestre in accordance with DGL Resolution No. 0158 of March 8, 2013, ten (10) days in advance.", "Article three : Require the company ECOPETROL S.A. to carry out semi-annual physicochemical monitoring of the industrial waters generated at the entrance and exit of the treatment system used, with a twenty-four (24) hour routine system.", "The Company ECOPETROL S.A must carry out semi-annually the characterization of the receiving water source before and after the impact zone."¹¹⁷

According to the database, many cases of non-compliance are due to Ecopetrol's apparent failure to fulfill its obligation to share information about its activities or the impacts of its activities with authorities. As an example, Ecopetrol seemed to fail to comply with ANLA's request and its legal obligation: "ECOPETROL S.A. is respectfully requested that once 100% of the cleaning activities required for each of the spills has been completed, the final notification report should be sent to this Authority (...) where it should be specified: -Amount of hydrocarbon spilled. -Date and time of end of the emergency. -Cause of contingencies. -Scope of impact on natural resources (water, soil, flora and fauna)."¹¹⁸

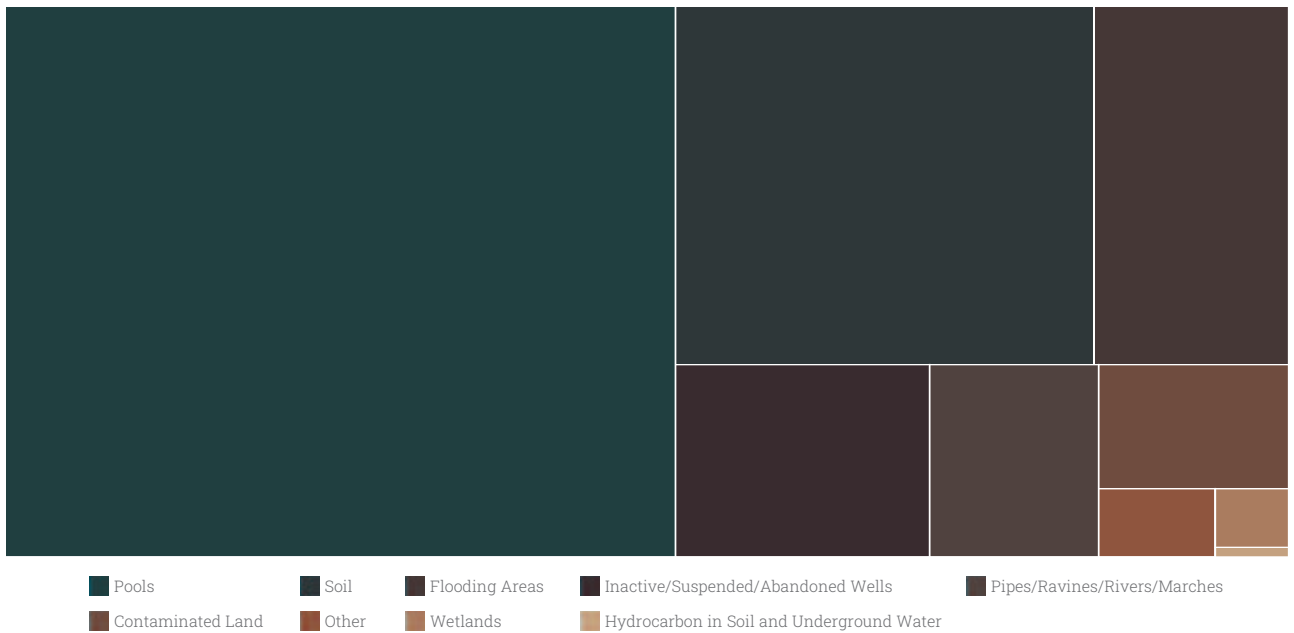
Not sharing timely updates with authorities is also a recurring theme in the database. An example is the following entry: "Every six months, ECOPETROL S.A. must present to the Corporation a detailed report on the activities carried out at the pumping stations, which will be verified in the field by the Corporation." or "Require the company ECOPETROL S.A. to first carry out and present annually to the CAS the sampling of the physical, chemical and bacteriological characterization of the discharge at the entrance and exit of the wastewater treatment system, before realizing any discharge." The system must comply with the removal percentages established in decree 1594 of 1984."¹¹⁹

The database also indicates that Ecopetrol's apparent resistance to collaborating with authorities or sharing information was seen by authorities as an obstruction to their mandate. Ecopetrol was for instance not allowing the supervision of its water monitoring by the authorities: "Require the company Ecopetrol S. A. to promptly inform the environmental management sub directorate of the date of execution of the monitoring of industrial and domestic wastewater in order to carry out the respective accompaniment and verification by the CAS." The Regional Autonomous Corporation of the Northeastern Border (Corporación Autónoma Regional de la Frontera Nororiental - CORPONOR) formally denounced obstructing behaviors: "The concessionaire is subject to compliance with the obligation and prohibitions: PROHIBITIONS: 5. Obstruct or prevent the surveillance or inspection of the Corporation's



Source: EIA

Figure 26
Location of the environmental damages.



Source: EIA

Figure 27
Typology of the environmental damages.

BOX 5.

THE OBLIGATION TO REPORT

Ecopetrol's alleged failure to report the environmental impact of its activities could represent a direct breach of the Colombian environmental code (article 2.2.2.3.9.3. of Decree 1076 of 2015 Environmental Sector and Sustainable Development), according to which entities have an obligation to report within 24 hours to the competent authorities any environmental incident or contingency that takes place in a project, regardless of whether the project is subject to environmental licensing.¹²³ Under the current national regulations, an environmental infringement takes place whenever a person or entity engages in actions or omissions that violate Colombian environmental regulations.¹²⁴

competent officials or refuse to provide the information that is required.¹²⁰ Ecopetrol's resistance to sharing information with the authorities that supervise the company's activities is reflected in its practice of hide environmental responsibilities from these authorities, as described in the next section.

In its reponse to EIA (available in its integrality at <https://eia.org/report/crude-lies/>), Ecopetrol denied any wrongdoing and explained: "Ecopetrol is subject to Law 1712 of 2014, known as Law of Transparency, which requires it to make publicly available information related to the execution and compliance with environmental permits and licences granted by the authorities to operate. Information related to project operations is stored in an information system that is managed by the authority and can be consulted by anyone."

3.3 What Ecopetrol Seemed to Hide

Environmental Damages Hidden From Authorities

The *Iguana Papers* contain another crucial database from Ecopetrol, one that kept track of all the instances of environmental damage known by the company.¹²¹ According to Olarte, like the environmental noncompliance database, the environmental damage database was a highly confidential piece of information that was kept in several physical hard drives and not on Ecopetrol's shared cloud-based storage system. The database was, according to Olarte, known to the highest corporate executives, including the president and vice-presidents of the company.¹²² Access to the environmental liabilities database was only granted to a few select employees.

The environmental damage database is much more than a list of environmental disasters. EIA's findings indicate that the database was created and maintained for the purpose of mitigating corporate risk. Executives at Ecopetrol used it to determine how to respond to court cases and public reporting, and how to manage its relationships with authorities. The course of action Ecopetrol chose was based on a risk evaluation matrix that the company developed. The database contains 839 entries of major cases of environmental damage across the country and connected to a broad spectrum of issues (Figure 26 and 27). According to the database, the company seemed to be aware of a total of 2.8 million square meters (280 hectares) of territory directly impacted by its activities.

According to the database, the company's risk evaluation was translated into a final score from zero to 30. This scoring was based on the aggregation of three distinct and quantified risk factors, evaluated on a scale from zero to 10. The first risk factor represented the magnitude of the environmental impact, and was scored according to the extent and severity of the damage. The second risk factor was associated with the consequences of the environmental damage, and was scored according to the environmental sensitivity of the area impacted and its social relevance. Finally, a legal/administrative risk factor was included in the evaluation, and scored according to the authorities' level of knowledge of the

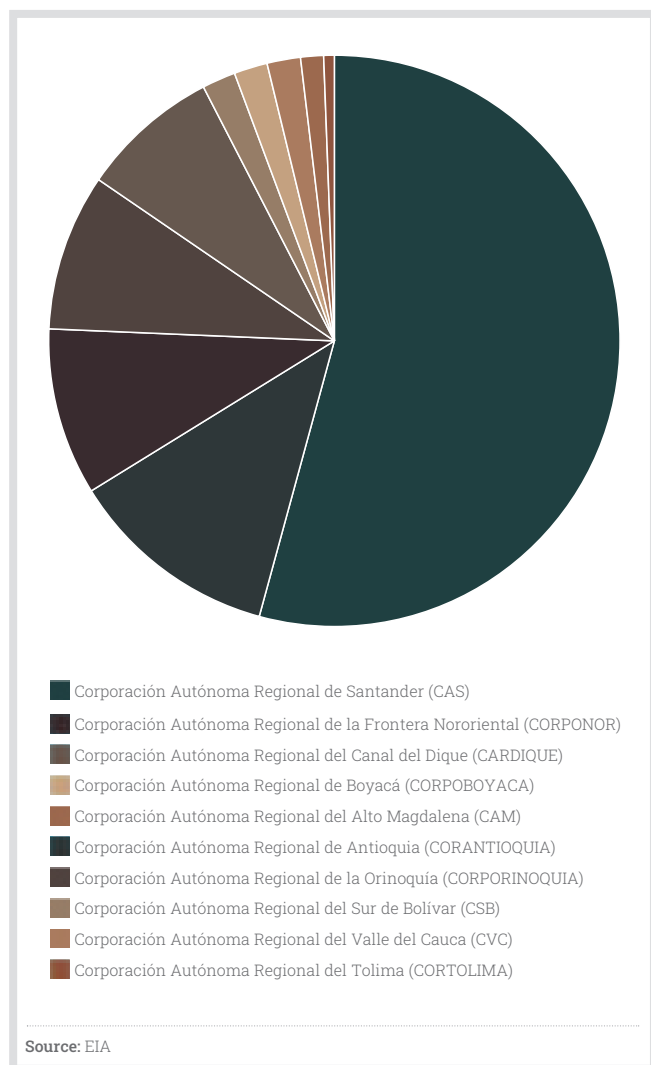


Figure 28
Breakdown of environmental liability instances hidden from authorities per CAR.

Table 1

Comparison of the number of consequential environmental incidents publicly reported by the Ecopetrol versus known by the company.

	2016	2017	Total for the 2016-2017 period
Environmental incidents reported in the Integrated Sustainable Management Report	8	14	22
Environmental incidents reported in the report (Form 20-F) filled with SEC	8	14	22
Environmental incidents reported in the internal database	75	133	208

Source: EIA, based on Ecopetrol Integrated Sustainable Management report (for year 2016 and 2017), Form 20-F (for the year 2017 and 2018), and Environmental Liabilities Database from the Iguana Papers.

damage and the timeline available for the company to take remediative action.

Two conclusions emerge from the analysis of the environmental damage database. Firstly, Ecopetrol seems to have known about environmental liabilities that it allegedly failed to report to authorities, possibly in violation of Colombian law (Box 5). The proportion of environmental liabilities cases possibly hidden from authorities may have been significant – 20% (171 entries) fell into this category. Secondly, overall risk evaluation was highly influenced by the degree to which authorities were aware of the liability. Damages only known by Ecopetrol ended up with a lower risk factor. Many environmental damage cases that scored high on environmental and social impact ended up with a low overall risk score because the damage was exclusively known by Ecopetrol. For example, a total of 82 instances of crude oil retention pools described as “inoperative” had a high environmental impact risk factor score but were scored as low risk overall for the company because only Ecopetrol knew about them. This suggests that Ecopetrol may have been far more concerned with its public reputation than addressing the severe social and environmental harm of its operations.

The *Iguana Papers* also reveal that Ecopetrol seems to have primarily hidden environmental damages from CARS, which are partly responsible for regulating the company. Figure 28 illustrates the breakdown per CARS and shows that most cases were hidden from the Santander Autonomous Corporation (Corporación Autónoma Regional de Santander - CAS). The damages in Santander directly relate to Ecopetrol's oil production and refining activities, which have historically been concentrated in the Santander department.

In its response to EIA (available in its entirety at <https://eia.org/report/crude-lies/>), Ecopetrol denied any wrongdoing and stated “Ecopetrol S.A., in compliance with Colombian environmental regulations, reports all the impacts that may occur in the framework of its projects, operations or activities, licensed by the competent environmental authorities.”

Misinforming the Public and Shareholders

It appears that Ecopetrol was also hiding information from its shareholders and the general public. A comparative analysis of the company's Integrated Sustainable Management Reports, Annual Reports (Form 20-F) filed with the Securities and Exchange Commission (SEC) of the U.S., and the confidential environmental damage database for the year 2016 and 2017, indicate major discrepancies between how it presented environmental risks to its shareholders and the company's documented knowledge of environmental risks. As shown in Table 1, in 2016 and 2017, Ecopetrol arguably underreported to the public and its shareholders the environmental damages caused by its activities. Over this period, the company may have failed to report publicly or to its shareholders an average of 89% of the environmental damages they were aware of.

The analysis of Ecopetrol's public communication regarding environmental damage also shows how the company misinformed the public. In its Integrated Sustainable Management Report from 2017, the company states that basic information about the environmental harm it causes is not available: “Information not available. The location, material and impacts of spills are not reported” (p.463).¹²⁵ This contradicts the information contained in the environmental liability database, where the location (geographic coordinates), qualification, and quantification of the impacts are recorded.

Hiding critical information appears to be only one of the approaches Ecopetrol followed to manage perceived threats to its business. As shown in the sections below, once hiding was no longer an option, it appears that Ecopetrol resorted to other strategies.

In its response to EIA (available in its integrality at <https://eia.org/report/crude-lies/>), Ecopetrol denied any wrongdoing and stated “the data reported in the reports to the US Securities and Exchange Commission on form 20-F, for the aforementioned periods 2017 - 2018, correspond to the number of incidents of operational origin with an impact on the environment with a volume greater than 1 barrel.”

4. BEYOND HIDING: MAPPING, INFLUENCING, AND THREATS

The publicization of environmental harms has been a central tenet of the socio-environmental movement in Colombia (Figure 29).¹²⁶ However, Ecopetrol viewed public concerns raised by front line communities and grassroots organizations' about its operations as a critical threat.

4.1 Map When You May

The internal document containing the presentation "Regional Environment Strategies," dated from May 2018 and included in the *Iguana Papers*, presents a region-by-region breakdown of the main socio-political threats that Ecopetrol identified.¹²⁷ It is no surprise to see "Impacts on Integrity," which covers armed groups' and criminal organizations' attacks against the integrity of the company's staff, infrastructure, and assets, as a recurrent threat across regions (Orinoquia, Oriente, Central, Arauca-Catatumbo, and Caribe). It is a threat that the corporation has acknowledged in its public reporting and has openly tried to mitigate.¹²⁸ Other perceived cross-regional threats, which have rarely been described as such by Ecopetrol's in its public communication - include "Land Use Planning," "Rejection of the Industry," "Environmental Authorizations," and "Prior Consultations" (Figure 30).

Ecopetrol's presentation, apparently given by Vice President of Sustainable and Environmental Development, Eduardo Uribe Botero, underscores how the company viewed environmental activism as a major threat to the company's operations, equivalent to armed groups' violent attacks. According to the slide deck, "Social protest from environmental movements, social organizations, and other pressure groups against the oil industry" as well as "Popular consultations, activities against the industry, and illegal behaviors, particularly the ones related to unconventional oil fields" were identified as major risks.¹²⁹ In his answer to EIA (cf. annexes), Uribe acknowledged that social movements and environmental demonstrations were considered as high risk factors for Ecopetrol's operations and profitability.

In order to address these risks, the company developed and implemented a sophisticated, technology-based, surveillance system. In 2017 and 2018, the system was apparently under the responsibility of Ecopetrol's Vice President of Sustainable and Environmental Development, Eduardo Uribe Botero. In his response to EIA, Uribe acknowledged that Ecopetrol used a surveillance system to influence key stakeholders. He explained (cf. Annex 2): "The company has a security



Figure 29
Colombian movements have risen up against the expansion of fossil fuel and fracking.



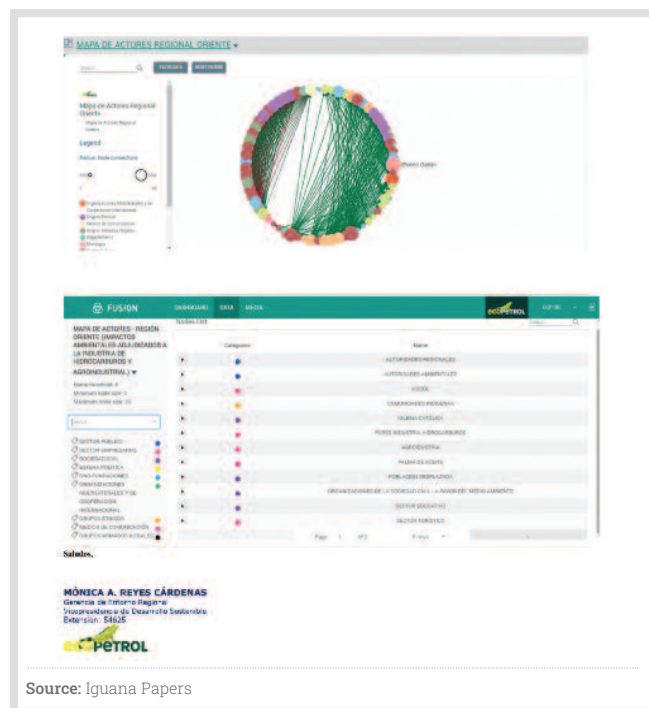
Source: Iguana Papers

Figure 30
Some of the regional environmental threats identified by Ecopetrol.

area that monitors the activities of key local stakeholders, either to seek their support, or to manage their negative influence for the development of the projects and operations.” The effort deployed by Ecopetrol to monitor the areas where the company operated is described in an email sent on August 2018 by Isabel Cristina Ampudia Rendon - at that time Manager of Regional Operations before she became Vice President of Sustainable Development - to Ecopetrol's former Vice President of Sustainable and Environmental Development, Eduardo Uribe Botero. Rendon reported:

“Permanent monitoring, via the National Monitoring Process Team (Central and Regional), of the areas and social dynamics that may have an impact on the operations. Development of the Environment Intelligence System based on the incorporation of technologies used for managing information about these areas and social dynamics (MAPA, NETWORKS, MEDIA, SALESFORCE). Currently there are 63 active users [of the Environment Intelligence System] who have been trained during two sessions who took place in each of the regional Vice Presidencies. Consolidation of daily and weekly reports in order to keep the Organization informed in a timely manner of situations in its environment that may affect the viability of the operations. [emphasis added]”¹³⁰

According to the same email, the integrated monitoring system allowed the “Mapping of 1,200 key stakeholders in the regions where operations are carried out for early intervention, and the definition of seven relationship and communication plans for stakeholder management.”¹³¹





Source: Iguana Papers

Figure 32
Social media mapping used by Ecopetrol.

Figure 31 presents the interface used by Ecopetrol for stakeholder mapping in the Oriente region. Ecopetrol mapped a wide variety of actors categorized as “indigenous communities,” “organization of the civil society - in favor of the environment,” “catholic church,” “educative sector,” or “touristic sector. It also mapped the relationships between these actors. As part of the monitoring system, Ecopetrol followed, in real time, media reports and social media trends related to certain issues, geographies, or individuals (Figure 32). This constant collection of granular information allowed Ecopetrol to react rapidly to any perceived risks, as explained in the email from Rendon.

In its response to EIA (available in its entirety at <https://eia.org/report/crude-lies/>), Ecopetrol denied any wrongdoing and stated: The aforementioned [Strategy of integral management of the territory] has no relation with a monitoring system in terms of influencing stakeholders; on the contrary, its purpose is deeply related to activities that seek to strengthen permanent, participatory, and respectful dialogue with the different stakeholders.”

4.2 Influence When You Need

The “disinformation” threat, which the company describes as “Disinformation and manipulation of information by third parties directed to community leaders, authorities, media, and public opinion in general,” is also identified by Ecopetrol as a major risk factor across regions (Figure 28).¹³² In order to address this threat, Ecopetrol identified several responses,

including “Actively participate in social networks to disseminate the social and environmental benefits generated by the company,” “Increase local awareness and appreciation of the benefits generated by the company’s presence,” and “Transform the company’s employees and contractors into spokespersons for the company’s social and environmental benefits.” Ecopetrol’s reaction to the widely reported death of two manatees in January-February 2024 near Barrancabermeja refinery exemplifies the company’s tactics to mitigate reputational risks.

Influencing Public Opinion

In February 2024, fishermen in the San Silvestre wetland found the dead body of a young Antillean manatee, an emblematic subspecies classified as endangered by the International Union for Conservation of Nature (IUCN).^{133,134} This death followed the discovery of another dead manatee in the same area a few weeks earlier.¹³⁵ The double death of the emblematic water mammals¹³⁶ made national print, radio, and TV news in Colombia in January and February 2024 (Figure 33).¹³⁷

Following an autopsy, authorities stated publicly that the “possible causes” of death included higher than usual water temperature because of El Niño, the low level of water in the wetlands, and the water contamination caused by ranching, urban discharge, and “industries” - the oil industry is not explicitly mentioned.¹³⁹ Fishermen and environmental defenders, while acknowledging the impact of the severe drought in the region, raised the issue of water contamination as a preponderant underlying cause (Figure 34).¹⁴⁰



Source: Screenshot from Noticias Caracol

Figure 33
Death of manatee in San Silvestre wetlands breaks on national news in January 2024.¹³⁸

In the hours that followed the second manatee death and in light of the growing media coverage, Ecopetrol launched a public advertising campaign centered on water quality and best water management practices. It kicked off with the visit of Ecopetrol president to Barrancabermeja the day after the discovery of the young manatee carcass (February 19), with the announcement that the company was delivering “a new water treatment plant that will boost the protection of the Magdalena River.” (Figure 35). A week later (February 26), Ecopetrol promoted on X its impeccable record of water management: “We are working to protect water resources, contribute to the well-being of communities, and become water neutral by 2045.” (Figure 35). The same day, Ecopetrol issued a press release announcing that “Ecopetrol was recognized as one of the best oil companies in the world for water management and care” (Figure 36).¹⁴¹ This was followed, 10 days later (March 6) by several messages on social media stating that “We obtained the Leadership rating (A-) in the @CDP water safety performance evaluation, after measuring more than 3 thousand companies globally, being the best rated oil and gas company in Latin America” and “The @CDP organization aims to: [...] Encourage organizations and governments to reduce emissions and protect water resources.” Then came another message on X on March 11, stating that “we are



Figure 34
Yuli Velásquez, president of FEDEPESAN, shows the body of the dead young manatee in February 2024.



Source: Screenshot from Ecopetrol's X account

Figure 35
Ecopetrol's well-orchestrated public campaign related to water management.



Source: Screenshot from Ecopetrol's webpage

Figure 36
Ecopetrol's press release praising its efforts for protecting the water.¹⁴²

working towards 'Water Neutrality'. 79% of the water in our operations comes from reuse. This represents 153 million cubic meters reused." The public campaign developed and quickly implemented by Ecopetrol is a clear example of the mitigation measures the company uses to counter what it calls "disinformation", namely "Actively participate in social networks to disseminate the social and environmental benefits generated by the company" (Figure 35).

Several activists from Santander and Boyaca departments described to EIA investigators how their public alerts and warnings have been repeatedly and swiftly buried under Ecopetrol's hyper reactive and extensive media campaigns. They also explained how the company has been able to influence the government and its administration.

Influencing Public Administration

Many citizens and organizations have called on Colombian authorities to prevent, mitigate, or redress the allegedly damaging impacts of Ecopetrol's activities. But these authorities frequently fail to act. Often, as EIA's

investigation reveals, this is because of the vast financial, human and legal resources that Ecopetrol mobilizes to influence public agencies that are responsible for regulating the company.

The five-year long contamination of the Palagua wetlands, which are part of the Medium Magdalena region, tells the all too common story that unfolds when citizens and civil society try to stop Ecopetrol's allegedly harmful operations.

Wilson Valencia is a rancher who owns land that surrounds the Palagua wetlands near Puerto Boyacá (Boyacá department). More than 140 wells are located on Valencia's ranch where exploration, exploitation, and remediation operations have taken place for years (Figure 37). While Ecopetrol owns the subterranean oil field, Valencia owns the land from which it is extracted. In the past, Ecopetrol exploited the field itself, but since 2001 it has subcontracted the exploitation to a third party, the Unión Temporal Ismocol Joshi Parko. For more than 10 years, Valencia has alerted authorities about irregular and potentially illegal activities associated with



Source: EIA

Figure 37
Oil fields, soil contamination, and remediation operations in Wilson Valencia's ranch on the banks of the Palagua marsh.



Figure 38
Examples of complaints to authorities regarding the contamination of the Palagua march.

oil extraction, as well as the dire impacts on the Palagua wetlands. His family has filed over 40 complaints with Corpoboyacá, ANLA, the Ministry of Environment, the Ministry of Health, the National Agency of Hydrocarbon (Agencia Nacional de Hidrocarburos - ANH), the Colombian Prosecutor's Office, the Transparency Secretariat of the Office of the President, and the Ombudsman of Colombia, amongst others. A letter was also sent to President Duque in February 2022 and President Petro in February 2023 (Figure 38).

In an interview with EIA, Wilson Valencia recounts how his allegation of contamination occurred over many years and how the Colombian authorities failed to act:

“Wilson Valencia: In 2010, approximately, we as locals in the region began to realize that ... there began to be a lot of ruptures in the pipes that carry hydrocarbons throughout the oil field.[...] We began to make the necessary calls and recommendations to the operator of the oil field, Ismocol, but we never received a response from them. That is, the pipes kept breaking, there were still oil spills in the area.[...] Our property, the property “El Desquite,” is really the natural drain that connects the waters of all this territory to the Palagua wetland. Then every time there were ruptures of pipes, all these hydrocarbons that were being spilled from these pipes that were in a terrible condition, were always carried through the waters, the rains, and the streams to the Palagua wetlands.[...] I complained. We complained. My mother also complained a lot to Corpoboyacá [Corporación Autónoma Regional de Boyacá]. We complained to the National Authority of Environmental Licenses... And we realized that Corpoboyacá sent over some official documents recommending that ANLA requires Ecopetrol to replace the pipelines. [...] For about 4 or 5 years Corpoboyacá made recommendations to change the pipes, but the pipes haven't ever been changed. Those

4 or 5 years of continuous oil spills affected and caused damage to the natural resources and to the Palagua wetlands. This is such a serious problem! [...] Now it has become a vicious circle of contamination, remediation and, even worse, when they do the remediation, they increase the contamination!”

The case of Valencia is far from isolated. Citizens and civil society have launched countless legal proceedings to redress Ecopetrol's allegedly harmful activities, but in the vast majority of the cases, local and regional authorities interfere with the processes or do not enforce the decision from the court.¹⁴³ An environmental activist from the region, who spoke on the condition of anonymity, told EIA investigators:

“Activist: It is always the same: the legal processes don't move forward. Well, I mean, we bring them up, we defend them, we win tutelas¹⁴⁴ for all the demands we have... And then authorities do not enforce anything, the company [Ecopetrol] doesn't do anything that they are supposed to do to remedy things here in the community. In the end, nothing is done.”

In 2017, the Colombian Attorney General's Office made public the results of an investigation into the chronic failure by Colombian authorities to address the complaints about the environmental damages caused by Ecopetrol. The investigation focused on public servants from CAS, the Mayor's Office of Barrancabermeja, and the Secretary of the Environment for their alleged failure to adopt or enforce measures that would have protected the San Silvestre wetlands against toxic substances, ignoring the principles of precaution and prevention that protect the environment.¹⁴⁵ The conclusions of the Attorney General Office's investigation identified a clear lack of preventive and corrective measures by local and regional authorities.¹⁴⁶ According to the public report: “Nor does there seem to be any learning from the experiences of

those contingencies that year after year occur at the Barrancabermeja Refinery.¹⁴⁷ The findings describe the weak enforcement of Colombian laws by CAS and other authorities when it comes to Ecopetrol's operations, even when they take place in breach of national regulations and standards.

Ecopetrol's strategic efforts to influence authorities and weaken the enforcement of laws appear on multiple documents from the *Iguana Papers*. One example relates to an "exemption" that allowed the company to continue discharging wastewater in the water streams and wetlands that surround the Barrancabermeja refinery in apparent breach of regulations. Figure 39 presents an email written in 2018 by Jurgen Loeber, Ecopetrol's Vice President of Project Management, addressed to Eduardo Uribe, Ecopetrol's Vice President of Sustainable and Environmental Development, and Miguel Bernal, who operated as advisor to Ecopetrol's CEO - under Juan Carlos Echeverry and Felipe Bayon. The email states that the company was failing to comply with the water discharge regulations for the Barrancabermeja refinery, but that a request to the CAS was underway in order to obtain an "exception" to the limits.

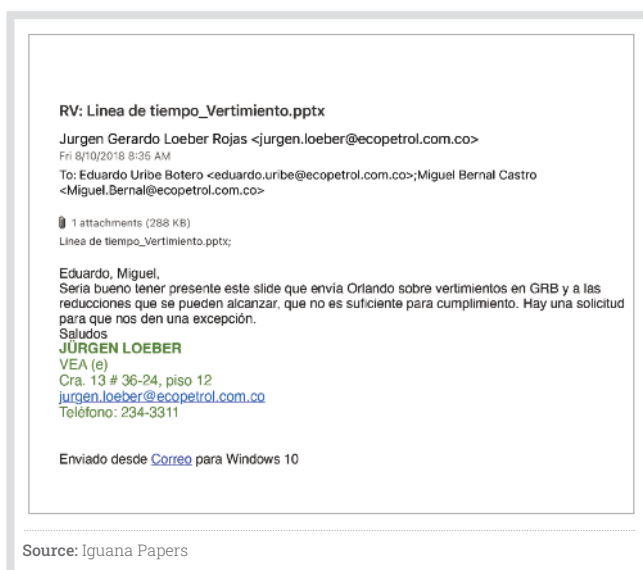


Figure 39
Email about Ecopetrol's water discharge above limits and exception.

BOX 6.

SAN SILVESTRE WETLANDS: A "SUBJECT OF RIGHTS" TO BE PROTECTED

The "San Silvestre Wetland Integrated Management Regional District" protected area was created in November 2013,¹⁴⁹ covering approximately 70,000 hectares of water and marshes that constitute an essential reservoir for the neighboring city of Barrancabermeja and its 300,000 habitants.¹⁵⁰ The wetland (Figure 40) has also been identified as one of the priority conservation areas for the integrity of the Jaguar Corridor, an ambitious conservation strategy that aims to preserve the physical and genetic

connectivity of jaguars (*Panthera onca*) - the largest cat in the Americas and the third-largest in the world after lions and tigers - throughout their six million square kilometer range, from Mexico to Argentina.¹⁵¹ Due to the San Silvester wetland's unparalleled importance and the level of threat it is under, several environmental groups have campaigned for the wetlands to be granted full legal rights with the same protection given to individuals and corporations.¹⁵²

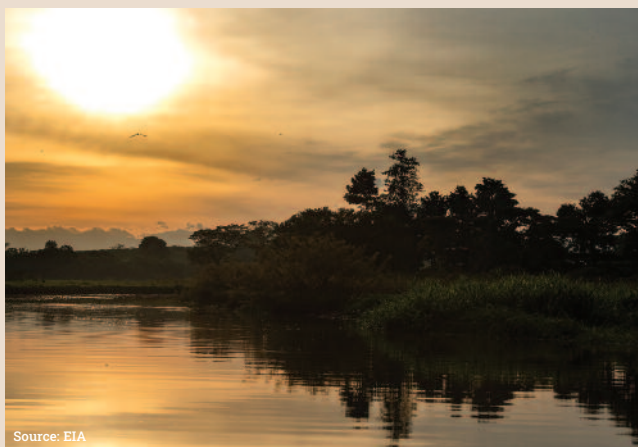


Figure 40
San Silvestre wetlands in the Medium Magdalena region.



Memoranda of Understandings (MoUs) between Ecopetrol and competent authorities are practical ways for Ecopetrol, leveraging its unique state-owned status, to directly channel large amounts of money to public administrations in order to grease the wheels for the execution of critical projects. An activist from Santander, who wishes to remain anonymous for fear of retaliation, explains:

“Activist: In almost all the sectors where Ecopetrol is present you will find agreements between Ecopetrol and the environmental authority. They frequently use very lyrical names, very environmentally correct. But they end up being activities that fundamentally undermine the independence of the environmental authority.”

Leonardo Granados, Director of the non-profit Fundación San Silvestre Green (Fundación San Silvestre Green), have denounced the apparent conflict of interest that arose from Ecopetrol's intervention on a critical land use planning process affecting the San Silvestre Wetlands (Box 6). He points to several agreements signed between the company and CAS, from 2013 to 2021, which allowed Ecopetrol to transfer more than USD 2 million to the regional authority. The funds were dedicated to several activities, including studies that were used by the authorities to decide how different sectors can use land, how land is repartitioned and where boundaries lie. The fact that Ecopetrol financed the decision making process that ended up regulating its activities, in areas considered strategic by the company for its economic development is, for Granados, highly problematic.

He and others documented multiple instances of Ecopetrol's alleged undue influence during the official process.¹⁴⁸ He explains:

“Leonardo Granados: How is it that Ecopetrol, with mining-energy interests, hands over money and sends its officials to direct the zoning of protected areas? That is perverse, that is corruption, that is a conflict of interest. And this is conduct that breaks the law.”

An activist, who wishes do remain anonymous for fear of retaliation, share similar concerns:

“Activist: We denounced it because it seemed to us to be a conflict of interest because Ecopetrol not only has wells near the wetland but also takes water from the wetland. So they [Ecopetrol] are paying for the studies to decide how to manage the territory they are in, which makes no sense. They are just another stakeholder. The authorities should pay for these studies.”

In its response to EIA (available in its integrity <https://eia.org/report/crude-lies/>), Ecopetrol denied any wrongdoing and stated: "Ecopetrol is not aware of any formal accusations regarding undue influence on the planning of the DRMI San Silvestre Wetland and acknowledges the autonomy and competence of the Environmental Authority."

Ecopetrol's alleged capacity to influence authorities via formal cooperation agreements and the associated transfer of funds reflects a deeper disparity between the

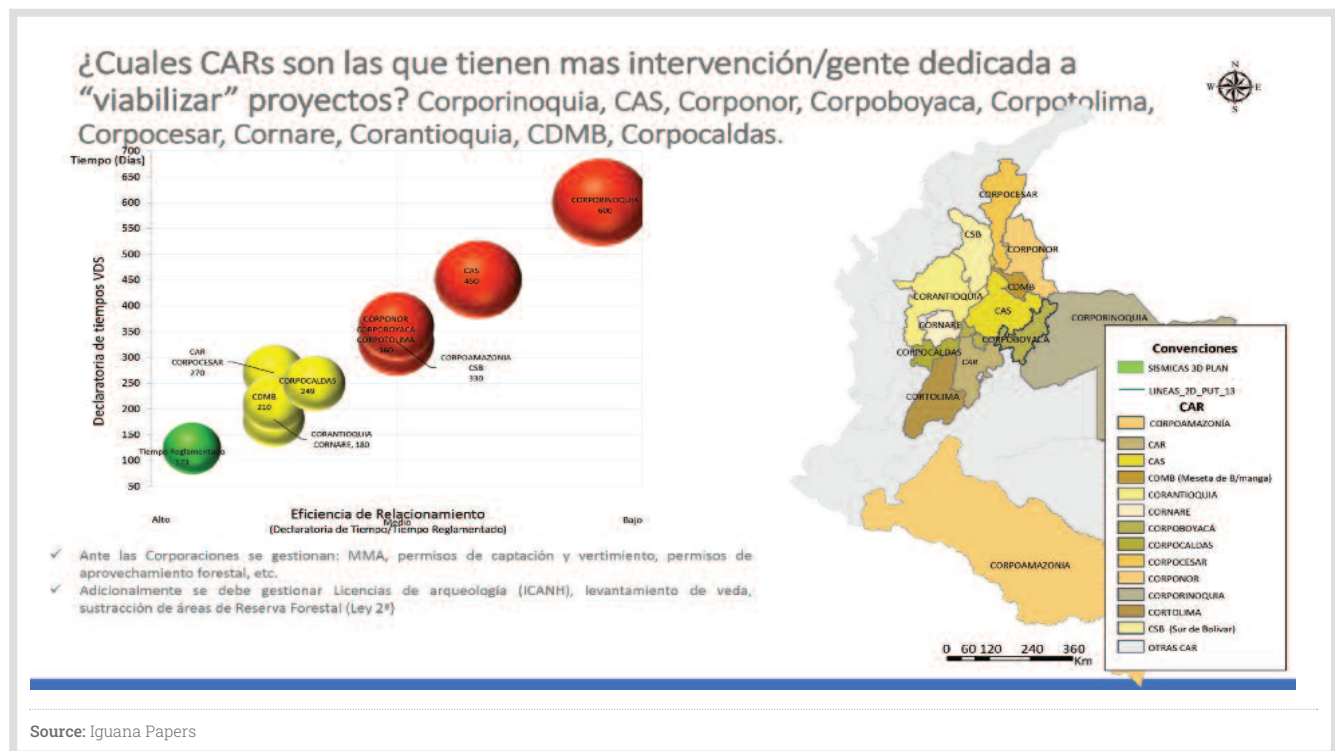


Figure 41
Chart representing the quantified resources Ecopetrol dedicated to CARs and the assessed effectiveness of these efforts.

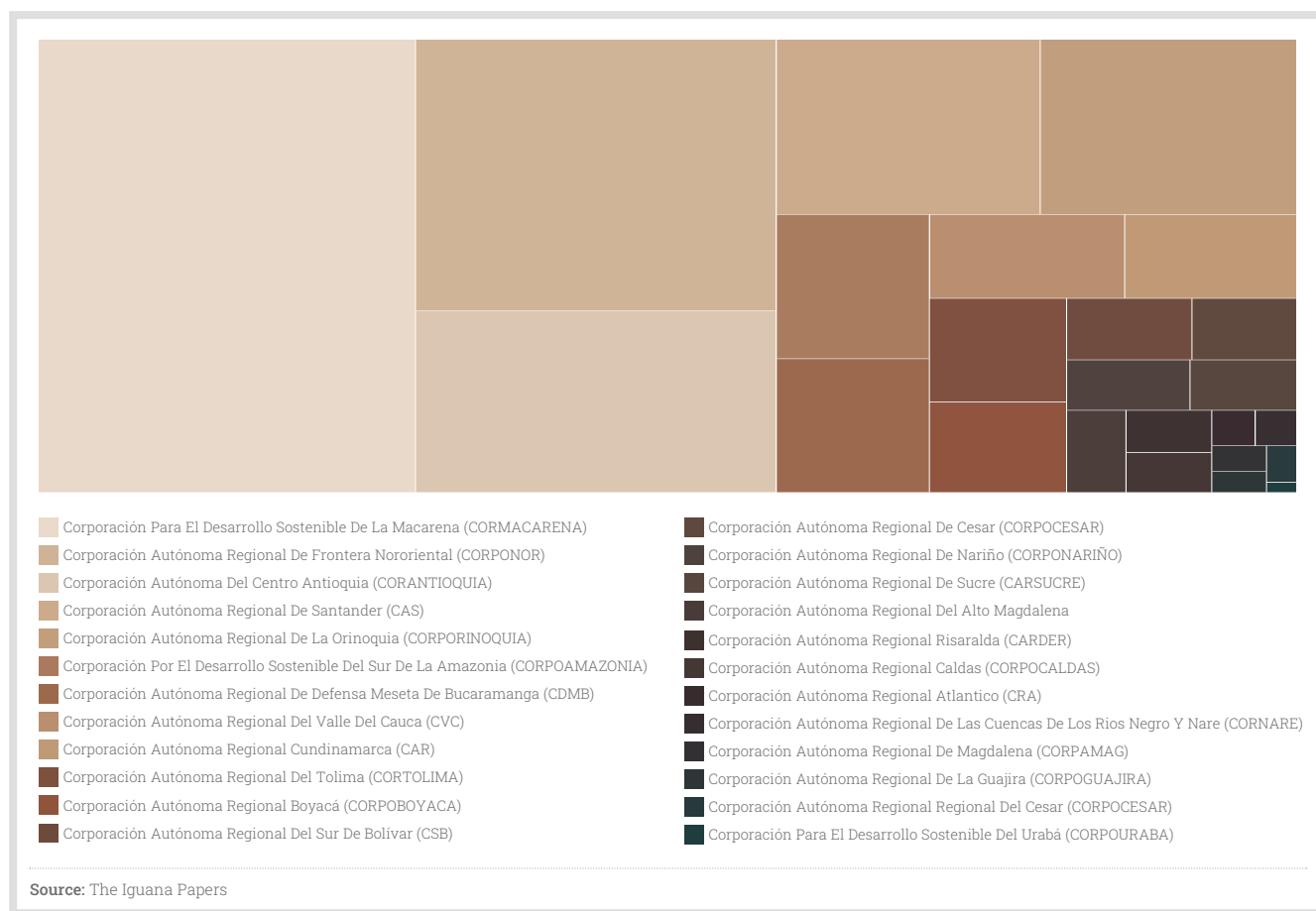


Figure 42
Ratio of noncompliance instances per CAR.

corporate giant and the under-resourced agencies in charge of regulating it. As a well-placed source within the Colombian environmental authorities explained, ANLA and CARs are highly “vulnerable” to external undue influence. Monitoring and controlling companies like Ecopetrol, which benefit from far greater resources in terms of expertise, finance, and equipment, is challenging for these authorities. In the case of CARs, this vulnerability to external influence is heightened by the fact that no central Colombian authority oversees their decisions. This is particularly problematic when CARs have the dual and sometimes contradictory responsibility of issuing licenses for economic and infrastructure projects, like oil and gas operations, while also protecting the environment.¹⁵³

According to EIA’s research, Ecopetrol has taken advantage of this highly decentralized and vulnerable administrative system to achieve its strategic goals. Figure 41, from the *Iguana Papers*, shows how Ecopetrol controlled and monitored the allocation of its human resources to different CARs to make sure projects happened. As shown in the figure, a large number of these interventions targeted four particular regional bodies: Corporinoquia, CAS, Corponor, and Corporación Autónoma Regional de Boyacá (Coboboyaca). As shown

in the previous section (Figure 28), these CARs are the same authorities overseeing the regions where the majority of the environmental damages occurred, in particular those hidden from authorities. These four CARs were also the ones related to most of the company’s noncompliance cases took place (Figure 42).

In its response to EIA (available in its entirety at <https://eia.org/report/crude-lies/>), Ecopetrol denied any wrongdoing and stated: “Ecopetrol promotes a corporate culture of respect and promotion of Human Rights (HHRR), which extends to its workers, suppliers, partners, contractors, and other stakeholders.”

EIA’s findings indicate that Ecopetrol has used its resources, in particular its staffing, expertise, state-owned status, and funds, to apparently influence the public agencies that are responsible for regulating the company. Activists have also described to investigators deeper concerns, some of them related to their own life.

4.3 Threaten When You Must

Intimidation Cycle

After only a few weeks of field research in the Santander department, EIA investigators were the targets of three



Figure 43
Ecopetrol's subcontractor who threatened investigators and was later seen collecting signatures from community members.

acts of intimidation. First, someone holding a phone took pictures of the investigation team from a passing pick-up. Then, as the team traveled from one site to another - using a very lightly transited road, armed policemen on motorbikes tailed the car for half an hour before overtaking it while silently staring at the team. Finally, a direct threat came from a man wearing a workers uniform who was identified by community members as working for an Ecopetrol subcontractor. While investigators were assessing the environmental damage caused by a recent oil spill in the San Silvestre wetlands, the worker shouted, "They kill people like you for getting involved in these things!" before disappearing. The same man was seen a few minutes later without his uniform and accompanied by a hooded private security guard. He was going door to door, trying to convince community members to sign a document that stated they would receive financial compensation if they agreed to leave their homes (Figure 43). The community had been the victim of multiple gas leaks that led to repeated explosions and the contamination of drinking water. These experiences echo those of activists. One in particular, who spoke on condition of anonymity, explained:

"Activist: We have received insults, threats, and accusations for denouncing [Ecopetrol's activities]. Not even for denouncing, but for simply expressing that we are not satisfied or happy with what is happening in our community."

Individuals who have spoken out against Ecopetrol, particularly in the Santander department, say they have frequently suffered dramatic consequences. Activists in Santander allege a "pattern" of intimidation that is triggered as soon as they raise their voice publicly against Ecopetrol. Yuvelis Morales, a member and spokesperson of the non-profit coalition Colombia Free

of Fracking Alliance (Alianza Colombia Libre de Fracking), remembers the threat she received a few days after her public testimony against a fracking pilot project supported by Ecopetrol that was due to take place in her community. Meeting EIA investigators in the safe house where she is now forced to hide, she said:

"Yuvelis Morales: They said, 'You are very pretty. Stop fucking around with that fracking thing, we are going to kill you.' And while that was happening they grabbed my hair.[...] We believe that something is really going on, you know. Because it is a constant back and forth, an escalation really, between the truths we bring forward and the lies they use to respond. And as this is going on, there is a cycle that seems to never end, and it goes like this: you oppose the company and they threaten you, you keep opposing and they displace you, you keep opposing and they kill you."

Juan Camilo Delgado from the non-profit Regional Corporation for the Defence of Human Rights (Corporación Regional Para La Defensa De Los Derechos Humanos - CREDHOS) shared the same observation about the escalation of persecution:

"Juan Camilo Delgado: There is a pattern regarding communities, leaders who in their different municipalities start some kind of fight against Ecopetrol's impacts. And they regularly become the victims of persecution, including attempts to prosecute them, threats, and in the worst cases, physical attacks. So, yes, we do consider that there is a systematic situation here."

Jhoset Molina, a leader from the Workers Union (Guardia Obrera), believes Ecopetrol executives are connected to the violence he has suffered for standing up to Ecopetrol:

"Jhoset Molina: We believe that there are forces behind all the ways in which we have been persecuted in the territory for defending this [the region's natural resources], and of course we accuse Ecopetrol and all the managers that Ecopetrol has here."

The Pattern: Public Critique of Ecopetrol Followed by Retaliation from the Gulf Clan

Some threats to human rights and environmental activists came from unknown individuals but many had clear origins. One of the groups behind the threats is the paramilitary group Gaitanist Self-Defense Forces of Colombia (Autodefensas Gaitanistas de Colombia - AGC). AGC, also known as the Gulf Clan (Clan del Golfo), has been described as Colombia's largest and most powerful drug cartel.¹⁵⁴ It is reportedly the single largest distributor of cocaine in the world through its partnership with Mexican drug cartels and European crime syndicates.¹⁵⁵

A concerned citizen involved in the planning process of the San Silvester wetlands informed - who wishes to remain anonymous for fear of retaliation - informed EIA

investigators that they received death threats from AGC, for the first time, immediately after they spoke up and publicly raised concerns about Ecopetrol's alleged influence over the management of the San Silvestre wetlands protected area (cf. above):

"Concerned citizen: About a week and a half or two weeks after the public debate we had, all those who publicly complained in that debate appeared in a pamphlet from the AGC. They told us that we had 24 hours to leave the city.[...] The worst of all is that after that threat, because that was a serious threat, we had to lower our exposure and our work. And it made it possible for them [Ecopetrol] to obtain a decision that organizes the landscape and that wetlands, as Ecopetrol wanted.[...] The threat served to cancel us.[...] At this moment, for example, with the environmental work we do, going to El Llanito is prohibited. It's completely prohibited because the presence of the AGC there is currently total. They have made several incursions. They have signed pamphlets. They are asking about us."

In February 2024, AGC released another public statement (Figure 44). It identifies as "military targets" key human rights and environmental activists, and groups that have openly complained about Ecopetrol, including Leonardo Granados, and representatives from CREDHOS and FEDEPESAN.



Figure 44
Environmental and human rights defenders who have raised their voices against Ecopetrol named as "military targets" by AGC.



Figure 45
Yuli Velasquez's house after a violent attack by armed group in March 2024.

BOX 7.

ECOPETROL'S BLOODY HANDS ACCUSATIONS

José Eduardo González Sánchez was a member of the Colombian army before he became the second in command of the security division at Ecopetrol in Barrancabermeja. After leaving Ecopetrol, he reportedly took an active part in the Central Bolívar Bloc (Bloque Central Bolívar - BCB), which was part of the paramilitary group, the United Self Defense Forces of Colombia (AUC). González shared detailed information with the Special Jurisdiction for Peace (JEP) about Ecopetrol's alleged collaboration with the right wing death squad.¹⁶¹

According to the information shared by González, several members of the oil company's board of directors forged a triangular alliance with the Colombian armed forces and the paramilitaries in the mid to late 1990s.¹⁶² Under this confidential agreement, Ecopetrol was allegedly inflating the number of people from the army that the company paid to protect employees and infrastructure. This apparently allowed Ecopetrol to confidentially allocate resources to support the AUC. González further claimed that Ecopetrol hired a military-style helicopter to transport weapons and other logistics for the paramilitary death squads operating in and around Barrancabermeja.¹⁶³

González recounted how the alliance between the military, paramilitaries, and Ecopetrol was instrumental in the paramilitary's takeover of Barrancabermeja and the surrounding region. Six massacres were perpetrated by the paramilitaries between 1998 and 1999, leading to the murder and disappearance of dozens of citizens.¹⁶⁴

In March 2024, Yuli Velasquez, the President of the fishermen federation FEDEPESAN, was the victim of another attack. Her house was tagged with the message "GET OUT" and apparently signed by the Gulf Clan. Gunmen then fired bullets at her home for more than 10 minutes (Figure 45).

As Velasquez explained to EIA investigators, she started receiving threats after she filed a public complaint against CAS and Ecopetrol in May 2021. The complaint was over what she described to investigators as a typical case of the misappropriation of public funds intended for the restoration of the San Silvestre wetlands. Velasquez alleged a biased selection process, the falsification of community consultation, the cover up statement by CAS, and the failure to carry out any meaningful restoration activities. Velasquez also viewed the threats as retaliation for the water quality monitoring system developed by FEDEPESAN:

"Yuli Velasquez: In the territory there are several armed groups and illegal groups. And in the areas where we carry out the monitoring, there are incidents. When we carry out monitoring or make public complaints, they threaten us, they attack us... and even more so when we talk about the industry and the effects of the water discharges from the big company that we have here in Barrancabermeja, Ecopetrol."

As a community leader who spoke on the condition of anonymity summarized:

"Community leader: Clearly the actions of these armed groups favor Ecopetrol's interests."

The alleged alliance between Ecopetrol and paramilitary groups has been widely reported. Ecopetrol was reportedly one of the primary sponsors of the United Self Defense Forces of Colombia (Autodefensas Unidas de Colombia - AUC) paramilitary group, according to former AUC chief Salvatore Mancuso.¹⁵⁶ The AUC was a paramilitary organization that operated from 1997 to 2006 and was formed by vigilante anti-guerrilla groups and defectors of drug kingpin Pablo Escobar's Medellín cartel, with an estimated 30,000 fighters.¹⁵⁷ The possible nexus between Ecopetrol and paramilitary groups has also been the focus of the Special Jurisdiction for Peace (Jurisdicción Especial para la Paz, JEP).^{158,159} The alleged association between paramilitaries, Ecopetrol, and national security forces led to the murder of many individuals in Barrancabermeja (Box 7). Since 1998, the José Alvear Restrepo Lawyers' Collective Corporation (El Colectivo de Abogados "José Alvear Restrepo" - CCAJAR) has reportedly represented 21 of the victims and has so far succeeded in obtaining convictions or advanced legal process confirmed by the Office of the Attorney General of Colombia for approximately 20 paramilitaries, six members of the security forces (army, police and Colombian security service agency [Department of Security Departamento Administrativo de Seguridad - DAS]), and the former assistant head of security at

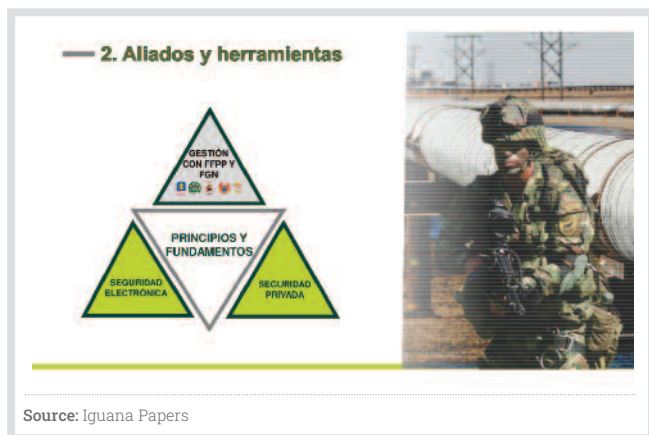


Figure 46
The Three Pillars of Ecopetrol's Security Strategy.

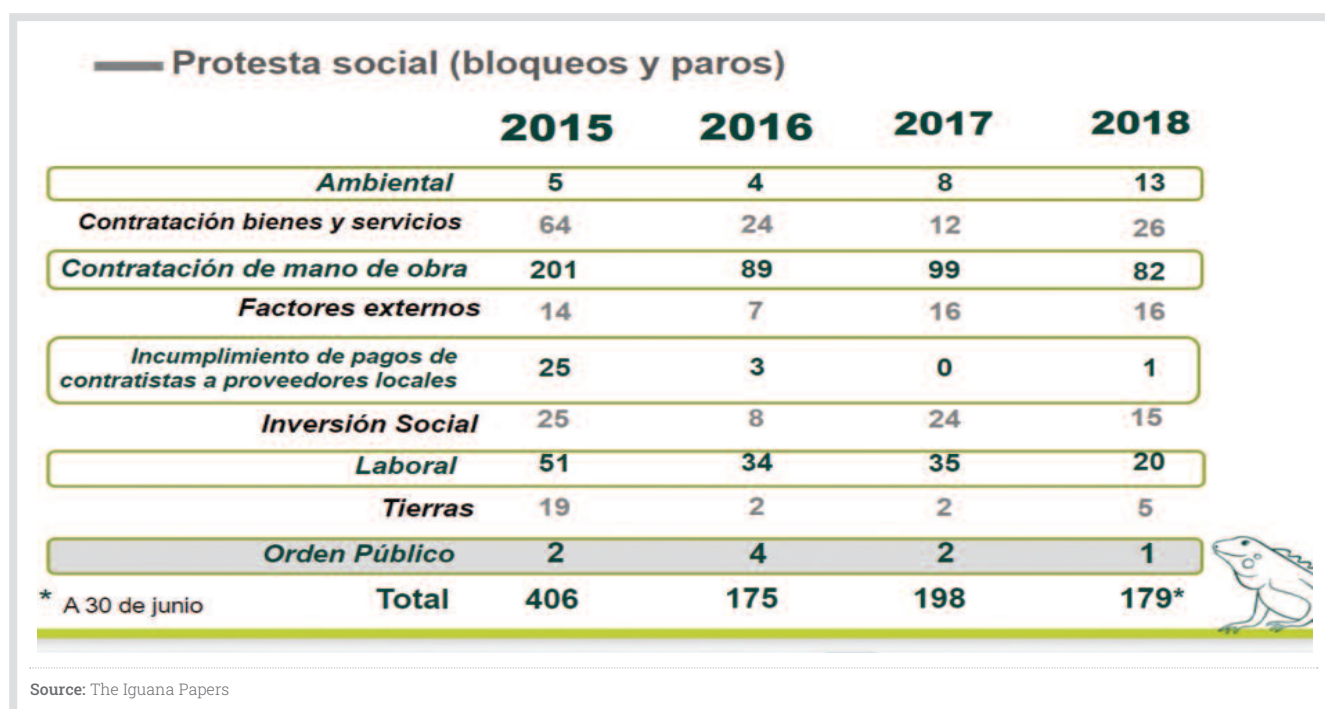


Figure 47
The Reduction of "Social protests" as A Corporate Goal.

Ecopetrol.¹⁶⁰ Evidence gathered in the prosecutions reportedly demonstrated the existence of a complex criminal association involving members of the national security forces, paramilitaries, and Ecopetrol employees.

In its response to EIA (available in its entirety at <https://eia.org/report/crude-lies/>), Ecopetrol stated: "During its more than 70 years of operation, Ecopetrol has had no relationship whatsoever with illegal groups, particularly illegal paramilitary groups. To date, there are no judicial or administrative proceedings against Ecopetrol S.A. in which the company has been a party, found responsible, or been sanctioned, nor have any of its employees, for alleged payments to fund illegal activities."

Ecopetrol-Military-Paramilitary Nexus

Multiple activists and local community leaders believe that the alleged nexus between Ecopetrol, the national security forces, and paramilitaries (Box 7) may still exist. Jhoset Molina and an activist who wishes to remain anonymous for fear of retaliation raised the issue and spoke about how it appears to be at play today:

"Jhoset Molina: There are confessions today by former paramilitary commanders who worked hand in hand with Ecopetrol, who were paid salaries to k... to remove social forces or the communities' efforts to ask Ecopetrol for justice. So of course it scares us and of course we feel threatened by third parties that Ecopetrol has already had business with and who may reoffend."

"Activist: Today we believe that there is a more disguised relationship here in the region ... specifically

Subject: Temas Empalme
Date: Monday, August 27, 2018 at 2:12:14 PM Colombia Standard Time
From: Sergio Mantilla Sanmiguel
To: Eduardo Uribe Botero
CC: Luz Helena Chavez Vesga, Luz Myriam Florez Triviño

Eduardo,

Las siguientes consideraciones para el empalme:

- Incremento de resultados de la Empresa
 - Continuidad de la operación
 - Servicios de vigilancia, coordinadores de seguridad, seguridad electrónica, control de apoderamiento, escoltas para funcionarios y sindicatos, contratos vigencia 2018: \$195,2 millones, para un total de 2.823 contratistas.
 - Convenios con Ministerio de Defensa (EJC,ARC,FAC), Policía Nacional y Fiscalía General de Nación por 87,2 millones en el año 2018.
 - Monitoreo constante de la situación Nacional.
 - Manejo de Crisis y Continuidad para Ecopetrol.
 - Gestión de Riesgos a través de protocolos.

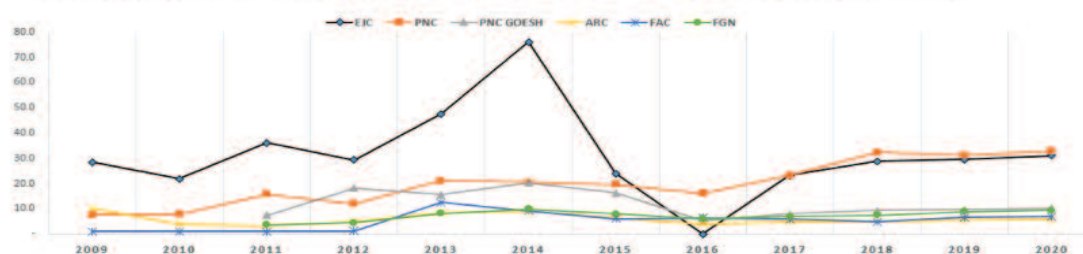
Source: Iguana Papers

Figure 48
Email by Ecopetrol Physical Security Manager, Sergio Mantilla Sanmiguel, to former Ecopetrol Vice President of Sustainable and Environmental Development, Eduardo Uribe Botero, about the financing of private and national security by the company.

between paramilitarism and the big oil companies, and it is through these contractors, through these people who are part of paramilitary structures but who are also contractors in the service of the hydrocarbon industry, especially Ecopetrol."

Information from the *Iguana Papers* confirm that these concerns are well founded. The document "Strategy for Physical Security 2020+," elaborated by the department of Physical Security Management, under the vice presidency

Convenios GSF Línea Base ECP – CENIT (millardos)



ALIADO/AÑO	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EJC	28,4	21,8	36,1	29,3	47,6	76,0	24,0	-	23,3	28,8	29,5	31,0
ARC	10,1	4,0	3,2	4,8	8,4	9,0	6,2	4,0	5,0	4,8	5,6	5,9
FAC	1,0	1,0	1,0	1,2	12,5	9,1	6,0	6,4	5,9	4,8	6,6	6,9
PNC	7,7	7,7	15,8	11,9	21,1	20,4	19,7	16,2	23,3	32,2	31,2	32,7
PNC GOESH			7,5	18,2	15,6	20,2	16,2	5,2	8,0	9,3	9,8	10,3
FGN			3,6	4,4	8,1	9,9	8,0	6,1	7,0	7,4	8,9	9,3
TOTAL	47,2	34,5	67,1	69,9	113,3	144,6	80,1	37,8	72,4	87,2	+91,5	+96,1
Participación ECP/CENIT (%)	100	100	100	100	100	71 / 29	51 / 49	50 / 50	41 / 59	48 / 52	45 / 55	45 / 55

*Proyección años 2019 y 2020 con inflación 3,5%

Source: Iguana Papers

Figure 49
Financing of national controlling, policing, and prosecutorial institutions by Ecopetrol.

of Sustainable and Environmental Development, indicates the three pillars of the strategy: “electronic security” (cf. above), “private security,” and “collaboration with security forces” (“Gestión con FFPP and FGN”) (Figure 46). According to the same document, reducing the number of “social protests” organized each year was one of the key performance indicators for the department, a goal that was achieved via the three pillars (Figure 47).

Moreover, in an email sent on August 2018 to the Ecopetrol Vice President of Sustainable and Environmental Development, Eduardo Uribe Botero, the Physical Security Manager, Sergio Mantilla Sanmiguel, reports that Ecopetrol dedicated about USD 22 million in 2018 to security forces from the Ministry of Defense (army, navy, air force), the national police, and the office of the attorney general of Colombia (Figure 48).¹⁶⁵ The same email also refers to more than USD 50 million allocated in 2018 by Ecopetrol via multiple contracts for surveillance services, electronic security, and bodyguards, involving a total of 2,823 contractors. It also includes the mention of “Prioritizing Prosecution and Support to Institutions” through direct financial support to the national police. This echoes observations from Wilson Valencia:

“Wilson Valencia: They throw the police at us, misinforming the police, telling lies to the police, in order to always have a dominant position over the villagers and over the farmers.”

A chart attached to the email (Figure 49) reveals that the level of financing Ecopetrol planned for national security

forces in 2018 was in fact a recurring annual payment, at least between 2009 and 2020. The projected amounts for 2019 and 2020 are actually bigger than 2018, with more than USD 23.4 million and 24.6 million allocated per year, respectively. In the table accompanying the chart, the term “ally” refers to the different institutions with which Ecopetrol had financial agreements, including the army, navy, air force, national police, and General Prosecutorial Office of the Nation. This underlines the close relationship between the oil company and the national security forces.

Ecopetrol’s use of national forces to allegedly intimidate, coerce, and ultimately silence its critics has been described by many, such as an activist who spoke with EIA investigators and wishes to remain anonymous for fear of retaliation:

“Activist: I don’t know if you remember but there was an investigation that some organizations did that revealed the way Ecopetrol, in some areas, finances the national security forces through some inter institutional agreements. This was supposedly to pay the security forces for the protection of the infrastructures and such. But it ends up being kind of a payment for private surveillance. You know like: ‘I finance the brigade and the brigade provides security for the fields.’ So Ecopetrol is an agent that has the capacity to control the areas where it operates, without being identified. It is like the puppetmaster, we all know that they are the one who pulls the strings, but they put someone else in front.”



CONCLUSION

EIA's investigation, based on the information from the *Iguana Papers*, independent field research, and interviews with front line activists indicate that Ecopetrol, the largest company in Colombia, has allegedly committed environmental offenses under Colombian laws.

The company may have used sophisticated and well-established corporate protocols to systematically cover-up multiple alleged illegalities. It hid critical information about possibly illegal behaviors from authorities and may have misled shareholders and the public with campaigns of disinformation. The implications of EIA's findings are deep and wide. The government's failure to curb emissions from Ecopetrol's operations threaten Colombia's emergence as a global climate leader. The mass pollution of the country's most critical ecosystems undermines national efforts to protect biodiversity and support community livelihoods. Accusations of human rights violations against Ecopetrol are also widely shared by activists who have suffered from cycles of what they claim are intimidation and persecution. The unique status of Ecopetrol, majority owned by the State of Colombia but privately run in practice, represents a unique opportunity for the country to chart a path to a future where accountability, transparency, and responsibility are central tenets of the national energy strategy and policy framework. With this in mind, EIA recommends:

Government of Colombia

- Investigate Ecopetrol executives and managers who were allegedly involved in environmental and human rights violations;
- Offer protection to Olarte's family and any individual willing to collaborate and support the official investigation;
- Develop and implement a comprehensive plan for broad and systemic reforms in Ecopetrol guaranteeing transparency, accountability, and reparations to the victims of their operations;
- Suspend any new exploration or exploitation by Ecopetrol until transparency, accountability, and reparation mechanisms have been established;
- Establish an independent monitoring mechanism of the oil and gas industry in Colombia, via an office under the Presidency and the establishment of a civil society-led initiative, as done in multiple countries' forest sector;
- Collaborate with frontline communities, grassroot organizations, and academics to address the biodiversity crisis in the Middle Magdalena's wetlands.

Government of the U.S.

- Investigate Ecopetrol's alleged violations of securities law, via the U.S. Securities and Exchange Commission (SEC);
- Suspend imports of oil and oil derivatives from Colombia until major reforms of Ecopetrol have been achieved, in particular regarding transparency, accountability, and reparations to victims.

Ecopetrol minority shareholders such as Blackrock Inc., Vanguard Group Inc., and JP Morgan Chase & Company

- Divest from Ecopetrol and support a just energy transition in Colombia.

ANNEX 1: Response from Felipe Bayon

Dear Mr. von Bismark,

Thank you for the opportunity to provide my views and position on this important matter.

As you may be aware, I stepped down as CEO of Ecopetrol at the end of March 2023, having joined the company as COO in February 2016. As such, the views I express here are related to the period in which I was part of Ecopetrol. I must assume that you have already contacted the company directly to ensure that you have access to all the detailed information that's required and so they can address the questions that are specifically for them.

If that's not the case, I invite you to do so.

I categorically reject the claims about the company's behavior during the period when I served as COO and CEO, as these claims lack all the necessary technical rigor and do not consider the official information available within the company.

Ecopetrol has been preparing on an annual basis its scope 1 and 2 GHG inventory and has voluntarily brought third party verification (Aenor and Ruby Canyon Environmental). The information, part of the emissions management system, is disclosed annually under GRI as part of the Sustainability Reports, the DJSI –Dow Jones Sustainability Index and the CDP –Carbon Disclosure Project.

Ecopetrol advanced in direct measurements of emissions, both bottom-up and top-down methodologies. In 2019, we conducted the first dedicated bottom-up upstream campaign to detect and measure fugitive emissions. In 2021, Ecopetrol received technical support from the Canadian government to help methane bottom-up measurements in tank farms. Also in 2021, we carried out the first emissions measurement campaign that covered circa 95% off the assets in Colombia using airplanes.

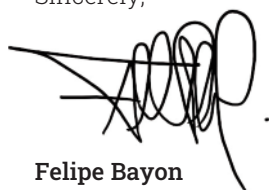
I personally shared the videos of the GHG sources at some of Ecopetrol's tank farms in the middle Magdalena region (reported by independent observers, civil society and media in 2019) to my management committee. It was a turning point in the conversation about fugitive emissions. The videos helped us make the emissions visible and I remember describing it as a gift. As one of my direct reports said at the meeting, "Felipe, I had never physically seen the emissions in my career". Technology had helped us make emissions visible. I shared this experience at COP26 in a conversation, available on YouTube, with the Environmental Defense Fund. I truly believe we seized the opportunity to strengthen our approach to dealing with fugitive emissions.

The company joined the Climate and Clean Air Coalition (CCAC) in 2018, the United Nations Environmental Programme led initiative, Methane Initiative Framework (Oil and Gas Methane Partnership, OGMP 2.0) in 2020, and in 2021, rolled out a Fugitive Emissions and Venting Management Strategy that further helped us advance in our goal to reduce emissions. It included things like incorporating design criteria for new facilities and equipment, an aggressive LDAR program (that helped us close hundreds of leaks) and a constant update of the inventories.

In March 2023, as I was leaving the company, Ecopetrol committed to a 45% reduction of its methane emissions by 2025 and 55% by 2030, compared to the 2019 baseline. That same year, Ecopetrol was given the Gold Standard recognition for the 2023 OGMP 2.0. report, granted to oil & gas companies that have a detailed plan for measurement and reporting of methane emissions and that have achieved a credible level of direct measurements in their journey. Ecopetrol is listed both in Bolsa de Valores de Colombia and in the NYSE. We reported periodically to both local authorities as well as international ones, such as the SEC.

During the time I served at Ecopetrol, we approached our operations in a safe, ethical and transparent manner.

Sincerely,



Felipe Bayon

ANNEX 2: Response from Eduardo Uribe

Alexander,

Here are the answers to your questions:

Q1. Has Ecopetrol released greenhouse gas (GHG) in breach of Colombian laws and has Ecopetrol failed to report these emissions to the Colombian government and competent agencies? If it is the case, is the refinery in Barrancabermeja one of the emitting sites?

A. the government of Colombia does not have laws or regulations that limit the emission of Green House Gases. However, the company reports periodically its GHG emissions. I am not aware if those reports are audited by an independent party.

Q2. Was Ecopetrol keeping in 2017 and 2018 a confidential database compiling all the environmental non compliance instances known by the company? Were some of the non compliance qualified as obstruction by the authorities?

A. During those years (2017- 2018) the company kept a database with all non-compliance instances known by the company. I am not aware of any non-compliance that could be qualified as obstruction by the authorities.

Q3. Was Ecopetrol keeping in 2017 and 2018 a confidential database with all the environmental damages known by the company? Were some of them kept hidden from authorities?

A. During those years all the complains related to environmental damages were kept by the company. None of them were kept hidden from authorities.

Q4. Has Ecopetrol allegedly reported a number of environmental incidents to the U.S. Securities and Exchange Commission (SEC) largely inferior to the number of incidents the company was aware of in 2017 and 2018, or at any other time?

A. I would not know the answer to this question. I did not participate in the writing of reports to the SEC.

Q5. Has Ecopetrol used a surveillance system in order to map, monitor and when needed influence key stakeholders from the areas where the company operates?

A. Yes. The company has a security area that monitors the activities of key local stakeholders, either to seek their support, or to manage their negative influence for the development of the projects and operations.

Q6. Does Ecopetrol consider social movements and environmental demonstrations as high risk factors for its operations and profitability?

A. Yes.

Q7. Has Felipe Bayón Pardo used his power as former CEO of Ecopetrol to oust you from the company? Was blackmail used against at least one employee by employees from the human resources department?

A. Yes. Although the key indicators to evaluate my performance and the achievement of objectives were very positive, and I was recognized by my peers as an effective and efficient worker, I was ousted by Mr. Bayon without any explanation, and with very offensive words. Yes, I know of a case where a worker was blackmailed by the human resources department.

Q8. Has Ecopetrol attempted to coerce, directly or indirectly, individuals or organizations that have publicly criticized the company's operations?

A. I was told once by a local community leader that the company offered jobs or contracts in exchange of silence. I have no prove of this.

Q9. Was it common practice from high Ecopetrol's executives to request the company's former Physical Security Manager to coerce opponents?

A. I am not aware that something like that happened during the period that I was there (2015-2018)

I hope this information is useful,

Best,

Eduardo

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