

**COMPARATIVE ANALYSIS OF CORPORATE SOCIAL RESPONSIBILITY
POLICIES IN THE OIL SECTOR OF LATIN AMERICA**
**ANÁLISIS COMPARATIVO DE POLÍTICAS DE RESPONSABILIDAD SOCIAL EMPRESARIAL
EN EL SECTOR PETROLERO DE AMÉRICA LATINA**

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ABSTRACT

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This article presents a comparative analysis of the actions and results shown by three Latin American oil companies (Ecopetrol, Pemex and Petrobras) in their annual corporate social responsibility reports. Before doing the analysis, a review of the concept of corporate social responsibility and its evolution throughout history is exposed, as well as an overview of the oil industry in Latin America and its relationship with the key issue of environmental sustainability. Then the methodology of the study is explained, which basically, it is a mix diagnostic-descriptive investigation, with a socio-critical approach. Thirdly, the most important data related to the three dimensions of sustainability, economic, environmental and social, are presented. This data is gathered based on the annual sustainability reports of the three companies. Some news related to social and environmental aspects involving the three companies are also reviewed. Finally, the corresponding analysis of the exposed data is carried out; as a result, it is concluded that, although the three Latin American oil companies prepare their reports based on the

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three dimensions of sustainability, the optimal levels of social and environmental investment required for achieving the sustainable development goals outlined by the 2030 Agenda are not yet reached.

RESUMEN

Palabras clave:

responsabilidad social empresarial, sostenibilidad ambiental, petróleo, gases efecto invernadero.

En el presente artículo se expone un análisis comparativo sobre las acciones y los resultados que muestran tres empresas petroleras de América Latina (Ecopetrol, Pemex y Petrobras) en sus informes anuales de responsabilidad social empresarial. Previo al análisis se expone una revisión del concepto de responsabilidad social empresarial y su evolución a lo largo de la historia, así como un panorama general de la industria petrolera en América Latina y su relación con el tema de la sostenibilidad ambiental. Luego se explica la metodología del estudio, que en este caso es, fundamentalmente, una investigación mixta diagnóstica-descriptiva, con enfoque socio-crítico. En tercer lugar, se presentan los datos más importantes relacionados con las tres dimensiones de la sostenibilidad, esto es, la económica, la ambiental y la social, tomando como base los informes anuales de sostenibilidad de las tres empresas. También se revisan algunas noticias relacionadas con aspectos sociales y ambientales que involucran a las tres empresas. Por último, se procede al análisis correspondiente de los datos expuestos y se concluye que si bien las tres petroleras latinoamericanas elaboran sus informes con base en las tres dimensiones de la sostenibilidad, aún no se alcanzan los niveles óptimos de inversión social y ambiental que se requiere para lograr cumplir con los objetivos de desarrollo sostenible trazados por la Agenda 2030.

Introduction

The concept of Corporate Social Responsibility (CSR) or Corporate Social Responsibility (CSR) has been gaining increasing relevance, both in academia and in the business world itself, especially among large companies such as those in the oil sector. The concept of CSR has evolved throughout history, as will be explained below. Currently, large companies present Corporate Social Responsibility reports that usually contain three essential aspects: economic (or financial), social and environmental (Goloshchapova et al., 2019), focused on highlighting the company's commitment to the society of which it is a part, both within it (work environment-decent work), and outside it (social impact) and, of course, with the care of the environment, which includes measures against climate change and strategies to care for or restore the ecosystems in which it operates. Each company can follow a particular model to present its achievements and challenges. However, more and more companies are governed, for the preparation of these reports, by the parameters established by the *Global Reporting Initiative* organization, which seeks to promote the preparation of reports focused on the sustainability (economic, social and environmental) of organizations (Benites-Lazaroa, Gremaudb, & Benitesc, 2018; Junco Trujillo & Martínez Acuña, 2021).

Growing concern about the adverse effects of gas emissions and industrial waste on the environment has prompted many companies to take action to help minimize, at least to some extent, the damage that their processes inflict on the ecosystems in which they operate. For the time being, most companies develop these actions more for economic interests and corporate image than out of their own will and awareness of the problem.

The concept of CSR has its origins in the early 20th century, but it was only in the 1950s and 1960s that it became established as an important aspect of management theories (Crespo Razeg, 2010), but not yet as relevant as it is today. Already in the 1990s, new currents emerged that promoted the strengthening and development of this concept, reconfiguring it into what it is today (Pache Durán, 2017).

In its beginnings, this term was understood only as the responsibility, on the part of the company's management, to direct the efforts of the administration to maximize profits (Marcó, Loguzzo & Fedi, 2016). Now, in the 21st century, CSR is much more than that; it implies taking into account, in the decisions made and actions undertaken, ethical, social, economic and environmental aspects (Pache Durán, 2017; Tinoco Cantillo, Arango Buelvas & Benavides, 2012).

It should be noted here that there is no single definition of the concept of Corporate Social Responsibility, as argued by several authors (Crespo Razeq, 2009; Tinoco, Arango & Benavides, 2012; Nave & Ferreira, 2019; Bom-Camargo, 2021); moreover, there are multiple ways of understanding and explaining it, although common elements can be identified in almost all definitions or at least in many of them. It is possible that this is one of the reasons why some companies, small, medium and even large, do not have clear CSR policies and therefore do not carry out well-defined and effective actions to respond to the social, environmental and economic demands of their context.

However, although there is no consensus on what CSR is, they all point to the importance of promoting "good business practices", which implies that the company assumes responsibility for "the impacts generated by the productive activity to which it is dedicated" (Nuñez, 2003, p. 11). In the words of Kotler (2005, cited in Marietza & Ilhami, 2023),

Corporate Social Responsibility can be defined as "a company's commitment to improve the welfare of society through discrete business practices and through the contribution of (its) corporate resources" (p. 44).

Bathrinath et al. (2021), in a study on sustainability management within the oil industry, state that a sustainable company focuses on offering products and following economically viable processes that cause minimal adverse environmental impact, seeking to conserve natural resources and taking responsible care of employees and the environment. In addition, they emphasize the importance of companies assuming real responsibility for social justice issues, defining this characteristic as "the ability of a company to take action and be responsible for social and environmental impacts" (Bathrinath et al., 2021, p. 1); it should be noted that reference is made to the direct and indirect impacts of their activities both in the specific context where they operate, as well as on a medium and large scale.

In the context of the climate crisis that humanity is experiencing and the prospect of an unsustainable planet, the priority can no longer be mere economic gain (neither individual nor collective); it is now necessary to change the paradigm and work together (companies, governments and citizens) to promote true sustainable development; this implies, mainly, making a rational use of natural resources (Haimés, 1992; Shah, 2022); seeking an equitable distribution of wealth; and working towards the restoration of ecosystems that can still be restored, as pointed out by several authors (Tepper, 2022; Martins et al., 2022).

According to various reports and academic articles, there is sufficient evidence to affirm that one of the industries that has the greatest impact on the problem of climate change, due to its contribution to the emission of greenhouse gases and the increase in the global ecological footprint, is the oil industry (Castro, 2015; Delgado Ramos, 2011; Gudynas, 2011; Wilches, 2012; Çakmak & Acar, 2022). With this in mind, the following question then arises: how are oil companies in Latin America assuming and managing their social responsibility to promote sustainable development and thus contribute to reducing their impact on environmental degradation?

To answer this question, it is first necessary to define more precisely what is meant by environmental CSR and what elements are essential to determine whether or not companies engaged in the extraction, exploitation and production of hydrocarbons are managing their projects and operations from an environmental perspective, that is, giving priority to the truly responsible care of the ecosystems in which they operate.

In addition to the above definitions, CSR, with an environmental focus, clearly refers to the set of principles, policies and actions that a company undertakes in order to contribute effectively to the three pillars of sustainability (economy, environment and society), especially with regard to the care and protection of biodiversity and concrete actions against climate change, which are normally measured in terms of a company's contribution - positive or negative - to the emission of greenhouse gases.

At this moment in history, individuals, large, medium or small organizations, and a considerable number of NGOs are increasingly attentive to companies demonstrating that they are managing, in an honest, purposeful and responsible manner, "the consequences of their operations on the community and the environment" (George et al., 2016, p. 197). In this sense, CSR, with an environmental approach, is understood as the set of policies and actions that a company implements in the interest of contributing to the sustainable development of the planet (complying with the SDGs), which translates into seeking, by all possible means,

"the balance between economic advancement, social welfare, [and a] good use of [the] natural resources and [the] environment" (García Lozano, 2018, p. 54).

It should be noted that the issue of "environment" as an important element of Corporate Social Responsibility policies is not new. In fact, it is an aspect on which several authors have already spoken about, for a little more than fifty years, as pointed out by Pache Durán (2017). However, the results are not the best so far. This is corroborated by constant reports of droughts, torrential rains, melting of the poles, burning of forests and other natural disasters. It seems that companies do not see (or do not want to see) the urgency of the issue, nor the benefits, including economic ones, that can be derived from taking environmentally responsible actions.

In the case of Latin America, and in particular of oil companies, it is necessary to point out that, for several years now, these have been characterized by the fact that their administrative management is led by the State (Lertzman, Garcia & Vredenburg, 2013), either because it is the sole shareholder, or because it is the majority shareholder, with a minority participation of some private companies (national and/or foreign), as is the case of Ecopetrol, in Colombia, a "mixed economy company (...) the largest in Colombia, top seven in Latin America" (Murillo Vargas, Garcia Solarte & Azuero Rodriguez, 2022, p. 178). This particular characteristic has a direct impact on Corporate Social Responsibility policies, since companies, being state-owned, do not have it as a real priority (Vives, 2008; García-Rodríguez et al., 2013; Lertzman et al., 2013; Bathrinath et al., 2021) and therefore, they do not put it into practice as those affected expect (Giraldo González, 2017); in several cases they limit themselves to supporting the social programs of the government of the day or, simply to transfer the monies required by law.

Both the almost daily evidence of different natural phenomena that cause death and destruction, as well as the countless academic and journalistic articles that call for action to stop the 1.5° rise in global temperature, confirm that the measures taken so far have not been enough to stop a possible disaster of colossal dimensions. Companies, governments and a high percentage of ordinary citizens act as if the problem does not concern them or will wait. In the meantime, the same lifestyle continues; behavioral changes are minimal or even non-existent.

In the particular case of the oil industry, despite knowing that it is the sector that contributes most to the emission of greenhouse gases and the deterioration of the ecosystems where it operates, it continues in the same direction, extracting, exploiting and producing oil in ever greater quantities and with environmentally unfriendly technologies. There is evidence that the oil industry has not given greater importance to the urgency of working for the environmental and social sustainability of its environment and the planet in general (Bathrinath et al, 2021). Moreover, there is no research related to the implementation of CSR programs or effective strategies focused on achieving true sustainable development by oil companies (Angulo Muñoz, 2010; Lertzman et al, 2013). In attention to this approach, the main question sought to be answered is: how are oil companies in Latin America assuming and managing their Corporate Social Responsibility with a view to achieving true sustainable development?

Method

Documentary research, from a socio-critical approach. First, we start with the sustainability reports of three major oil companies in Latin America, namely: Petrobras, Pemex and Ecopetrol. In addition, some news websites have been consulted that record facts related to these companies and their socio-environmental actions, whether positive or negative. The Business and Human Rights Information Center website was consulted as a secondary source.

Of the companies currently operating, we have chosen to analyze three cases in particular, as follows: ECOPETROL, PEMEX and PETROBRAS. The first because it is the one with the most information and the other two because they are part of the largest oil companies in Latin America. The possibility of analyzing PDVSA was also considered; however, we did not find sufficient information on this company, at least not of the same quality and precision as the three companies mentioned above, in their annual corporate social responsibility reports, with emphasis on economic, social and environmental sustainability.

Analysis Based on CSR Reports

The Corporate Social Responsibility reports of the three companies chosen for this study are analyzed taking as a starting point the three dimensions of sustainability, i.e. economic, social and environmental. In economic terms, we simply identify the company's profits or losses during the last four years, as well as the main investments made during 2020 and 2021. In the social area, the amount allocated to this aspect and the most outstanding actions that each company carries out in the country where it operates will be identified. Finally, in the environmental dimension, we will identify the evolution of the amount of greenhouse gases they have reported over the last four years, as well as key actions or programs they have to mitigate the negative environmental impact of their operations, especially those related to the extraction and exploitation of crude oil.

First, the profits or losses of ECOPETROL, PEMEX AND PETROBRAS, between 2018 and 2021, have been identified and are shown in Table 1. In the case of Ecopetrol, 2018 and 2019 profits were above US\$2.4 billion, but in 2020 (the year of the COVID-19 pandemic) the company's profits reached only US\$362 million, 87% less than in 2019, and 85% less than in 2018. However, in 2021 the company achieved a significant recovery, reaching a record US\$3.6 billion (ECOPETROL, 2021, 2022). This performance shows the company's financial strength, even in the midst of a world economic situation characterized by uncertainty and fluctuations in oil prices.

Table 1

Net income / Loss (in millions of US dollars)

COMPANY	2018	2019	2020	2021
ECOPETROL	2.490	2.854	362	3.600
PEMEX	(10.090)	(15.400)	(28.490)	(16.500)
PETROBRAS	11.063,4	14.606,0	23.562,2	33.710,6

The company also had the capacity to invest, in 2021, just over 41 billion dollars in R&D&I projects, almost double what it invested in 2020, and 24% above what it invested in this item in 2019. Similarly, in that year, ECOPETROL earmarked US\$267 million for environmental management projects, 25% more than the amount invested in 2020. These figures show that 2021 was a very positive year for the company (ECOPETROL, 2022).

Secondly, PEMEX has been showing losses in excess of US\$10 billion per year, with a peak of US\$28.49 billion in 2020. According to annual reports and several newspaper articles, the Mexican oil company has been showing this behavior for approximately ten years. One of the reported causes is the high taxes paid by the company to the government. However, despite the losses in the financial statements, in 2021, this company allocated around US\$19.4 billion in investments of different kinds, such as: infrastructure and industrial transformation, logistics and the fertilizer line, among others. According to the 2021 sustainability report, there are no direct investments in environmental projects, although a good part of the US\$3.9 billion invested in infrastructure has been earmarked for improving operating and production systems to reduce greenhouse gas (GHG) emissions.

In third place, PETROBRAS, the largest of the three companies analyzed here and the second largest in Latin America after PDVSA, has presented an undoubtedly positive financial performance. Moreover, as can be deduced from the data presented in Table 1, by 2021 the Brazilian oil company managed to triple its net profits with respect to fiscal year 2018 and contrary to what happened with ECOPETROL in 2020, PETROBRAS managed to increase its profits by 61% with respect to 2019. In 2021, the Brazilian state-owned company invested a total of US\$1,757.29 billion, the largest amount of the three Latin American oil companies. Of this amount, PETROBRAS invested 1,428,849 million in infrastructure. On the other hand, according to the 2021 report, the company allocated US\$11.7 million to wind and solar energy projects, as well as US\$7.23 million in the biofuels segment. Although it is a minimal percentage of the investment budget, these are significant figures, and this shows that PETROBRAS, like ECOPETROL, appears to be committed to its responsibility to care for the environment. However, it should be analyzed whether these investments are really sufficient to meet the goals set by the 2030 Agenda or whether they only represent a minimal effort that does not respond to the current needs of the planet - which is more likely - and are made only as a strategic measure to protect the company's image and maintain its reputation.

Table 2
Social investment (Millions of dollars)

COMPANY	2018	2019	2020	2021
ECOPETROL	11,2 (0,45%)	49,2 (1,72%)	48,5 (13,4%)	42,7 (1,2%)
PEMEX	117,5	129,7	98,6	83,6
PETROBRAS	44,2 (0,40%)	47,3 (0,32%)	24 (0,10%)	27,5 (0,08%)
Total	172,9	226,2	171,1	153,8

As previously stated, a fundamental axis of Corporate Social Responsibility is its social actions, which should not be understood as mere philanthropy but as an effective

contribution to social justice, more specifically as a response to Sustainable Development Goals 1 (end of poverty), 2 (zero hunger) and 10 (reduction of inequalities). From a broader perspective, the actions of large companies aimed at achieving true social justice must also include strategies that comply with SDGs 3 (health and well-being), 4 (quality education), 5 (gender equality) and 8 (decent work and economic growth).

Table 2 shows a comparative table of the amounts and percentages (of social investment with respect to net profits) allocated to social investment by the companies in this study. In the case of PEMEX, the percentage has not been calculated since the company has reported losses in the four consecutive years. However, it is worth noting that PEMEX is the company with the highest amount of social investment in millions of dollars of the three companies.

It should be noted that each of these companies has well-defined policies regarding the type of projects on which it focuses its social dimension investments. Thus, in the case of ECOPETROL, the company has five strategic lines of social investment, namely: i) Education, sports and health; ii) Inclusive rural development; iii) Entrepreneurship and business development (in the territories); iv) Public and community infrastructure; and v) Public services (ECOPETROL, 2020, 2021). Each year the company evaluates ongoing projects and generates new initiatives aimed at benefiting the communities in which it operates.

According to current CSR policies, "projects and initiatives are prioritized" after prior consultation with "stakeholders (national, departmental and local governments, society and the community)" and based on this "they are formulated and structured in a rigorous manner as an integral part of the Company's environmental plans to make operations viable" (ECOPETROL, 2021, p. 341). In other words, there is a clearly established procedure for defining the Colombian oil company's social investment projects.

Pemex has four social investment strategies, namely: a) donations; b) community and environmental support program (PACMA); c) integrated exploration and production contracts (CIEP); and d) mutual benefit works (OBM) (PEMEX, 2021, 2020). The following is a brief description of these strategic lines of action.

Within PACMA, the company "promotes actions in the areas of infrastructure, health, public safety and civil protection, productive projects, environmental protection, education and sports" (PEMEX, 2021, p. 141). On the other hand, the so-called integrated exploration and production contracts "are service contracts that include a sustainable development clause in which Pemex's contractors are obliged to execute" certain works "in the area where the project is being developed". According to the CSR policies of this company, the purpose of these actions "is to mitigate the impacts that the oil industry could cause in the community and the environment" (PEMEX, 2020, p. 110). And the works of mutual benefit (OBM), "are actions of construction, improvement or rehabilitation of road infrastructure for the service of the communities, as well as to cover the needs for the operation of the company" (PEMEX, 2020, p. 110). According to the four reports consulted, from 2018 to 2021, the highest percentage of social investment is always destined to the donations axis, which refers to products (for example, gasoline or other oil derivatives) that the company donates, through contracts, to different localities or regions of the country, according to the needs of the moment.

Finally, PETROBRAS, the company with the highest profits of the three, is the one that allocates the lowest percentage of its profits to social investment. The oil company's strategic

lines are: i) social and environmental incentives; ii) cultural and sports sponsorships; and iii) business, science and technology sponsorships. The latter focuses both on promoting small companies and sponsoring innovation projects in science and technology. This company has three strategic pillars: safety, environment and health, and works on each of them, seeking both internal and societal benefits.

We will now analyze the commitment of companies to the issue of climate change and environmental sustainability. For this purpose, the tons of greenhouse gases that each company discharges annually have been identified. Thanks to the pressure exerted by international organizations, oil companies must report, within their sustainability report, the tons of CO₂ produced in their operations. Emissions from the last four years have been taken into account for this study, as shown in the following table.

Table 3
CO₂e emissions MMt

COMPANY	2018	2019	2020	2021
ECOPETROL	11.19	11.14	10.24	10.3
PEMEX	46.3	48.0	65.8	71.1
PETROBRAS	61.4	58.8	55.5	61.4
Total	118.89	118.08	131.54	142.8

According to the data collected, it can be deduced that the company that has achieved the greatest effectiveness in reducing greenhouse gas emissions is ECOPETROL. PEMEX and PETROBRAS, on the other hand, instead of decreasing, have increased the tons of CO₂ they emit (directly) in all their operations. When making an overall balance, adding the emissions of the three oil companies, the outlook is discouraging, going from 118.89 million tons in 2018 to 142.8 million tons in 2021. This may be due to increased oil extraction and production, or to technological deficiencies in the control systems, or negligence on the part of the companies.

However, in addition to greenhouse gas emissions, another factor to analyze is the willingness of companies to invest in renewable energies or in projects directly related to environmental protection. In this regard, ECOPETROL has signed cooperation agreements with international entities, such as Water Mandate, Water Action Hub and with national organizations such as Coalición Agua para Colombia. Additionally, this company has a specific division of Biodiversity and eco-systemic services, through which it manages projects related to conservation areas and planted trees or actions aimed at avoiding deforestation, among others (ECOPETROL, 2021).

On the other hand, in 2021, "161 voluntary conservation agreements were managed for the fulfillment of environmental obligations (...). With other actions, these agreements led to the conservation of another 111 ha in 2021 and to the Company having conserved or restored 5,549 ha" (ECOPETROL, 2021, p. 211). In the same year, the company, through one of its subsidiaries (Cenit), inaugurated the San Fernando Solar Ecopark, "in the department of Meta (Colombia), with an installed capacity of 61 MWp". In this park, "more than 113,000 panels with bifacial technology to capture energy on both sides" (ECOPETROL, 2021, p. 232) have been put into operation.

PETROBRAS also has several projects related to climate change and biodiversity protection. In fact, in its Corporate Social Responsibility policies, within the framework of environmental sustainability and actions against climate change, the company has defined three strategies: i) Carbon quantification and transparency; ii) Value and resilience of the fossil fuel position in the transition to low carbon emissions; iii) Strengthening skills to create low carbon value. In addition, the oil company is an active member of the *Oil and Gas Climate Initiative* (OGCI). In the same vein, the company expresses its interest in seeking options to operate within a low-carbon energy matrix. In 2021, for example, specific actions were carried out that contributed to the recovery and conservation of more than 175,000 hectares of forests and natural areas in several areas of the country (PETROBRAS, 2022).

Thirdly, according to its CSR reports, PEMEX shows less interest in environmental issues than the other two oil companies analyzed here. In its 2021 sustainability report, it states that the company "is a decentralized organization whose priority function is to carry out exploration, exploitation and other activities required for the operation and strategic management of the oil industry", and additionally emphasizes that "activities related to renewable or alternative energies represent a minor segment within the line of business". (PEMEX, 2022, p. 43)

However, PEMEX has contributed for several years to the government program called Areas Voluntarily Designated for Conservation (ADVC), which are "a mechanism for voluntary certification of properties, focused on the preservation of their ecosystems by private individuals, ejidos and communities" (PEMEX, 2022, p. 48). A similar program also exists in Colombia. In 2002, the Mexican oil company "certified the first property (...) corresponding to the "Parque Ecológico Jaguarundi", located in Coatzacoalcos, Veracruz". In addition, since that year, the company "periodically evaluates the park's biodiversity to monitor its conservation status through field sampling [conducted] by specialists" (PEMEX, 2022 p. 48).

Evidence from Digital Newspapers

As noted above, in order to avoid possible false or unsubstantiated news, we mainly consulted the website of the Business and Human Rights Information Center (www.business-humanrights.org/es/).

In this search, which is admittedly not exhaustive, news about the three companies were found, although mainly about ECOPETROL and PEMEX. The following is a brief description of the main news related to human rights (social sustainability) and environmental impacts involving these companies.

In relation to the Colombian oil company, the most relevant news were the following:

- a) The Casanare court determined that Ecopetrol must compensate the environmental damages caused in this department, especially to the community affected by the Cupiagua project. This news item is dated April 4, 2023. Very recent.
- b) In January 2023, the public is informed that the indigenous communities are opposed to 32 oil contracts that the government is apparently seeking to reactivate.

- c) According to the consulting firm Mongabay Latam, between January 2015 and June 2022, there have been 2133 environmental incidents caused by oil spills in Colombia, 67% of which correspond to Ecopetrol.

With respect to PEMEX, the following news items were found to be the most relevant:

- a) On November 4, 2022 it is published that fishermen from Salina Cruz, in La Ventosa Bay, denounce that in 40 days there have been 4 oil spills in the area.
- b) On April 25, 2022, a digital newspaper reported that several PEMEX workers denounced that the company has been violating their labor rights, since the agreements reached in previous years have not been complied with.

As for PETROBRAS, no news related to the issues in question were found. The only news reported on the website has to do with an alliance between the oil company and two other companies (Total and Total Eren) to analyze the possibility of jointly developing projects related to solar and wind energy in Brazil.

Discussion

From the point of view of economic sustainability, ECOPETROL and PETROBRAS show a positive and rising net profit performance, especially the Brazilian oil company. Ecopetrol went from generating earnings of \$2.49 billion in 2018 to \$3.6 billion in 2021, an increase of 44%, although with a significant blip in 2020, the year of the COVID-19 pandemic. Petrobras, on the other hand, in 2018 earned a net profit of over US\$11 billion and in 2021, the profit was above US\$33.7 billion, which translates into an increase of 204%. Pemex, for its part, went from having a loss of US\$10.09 billion in 2018 to a loss of US\$16.5 billion in 2021, which is equivalent to a negative difference of 63.5%. PEMEX's financial performance is surprising because it is a company that has been showing negative results for ten years in a row, yet it continues to operate. This cannot be positive for the company, nor for the country, nor even for the oil industry. This is a situation that needs to be investigated further.

In summary, ECOPETROL and PETROBRAS present healthy financial statements that, in principle, guarantee their economic sustainability in the short and medium term. The same cannot be said of PEMEX. However, the fact that oil is a non-renewable natural resource and that world reserves are dwindling should not be overlooked. In this scenario, if these companies do not seek other business alternatives, they may perish in the long term. Ecopetrol and Petrobras seem to have it clear.

In terms of social sustainability, the three companies show a clear interest in the subject with projects and actions that have a positive impact on the communities where they work and even with others outside their territory. One aspect on which the three companies agree is the support they give to educational projects, especially in terms of equipment for students and infrastructure for educational centers. At least from what they report in their sustainability reports, they do not seek to impact educational quality as such. In a comparative analysis, of the three companies, Ecopetrol is the one that offers the clearest and most detailed structuring of its social investment plans and projects.

Thirdly, in terms of environmental sustainability, the results shown by Latin American oil companies are still far from what is expected and necessary to meet the goals of the 2030 Agenda. Of the three companies analyzed, Ecopetrol is the one that has made the greatest progress in reducing greenhouse gas emissions. Pemex and Petrobras, on the other hand,

have continued to increase the tons of CO₂ emitted directly into the atmosphere. It is clear that these companies must redouble their efforts in order to make an effective and significant contribution to the fight against climate change.

However, it should be noted that all three companies develop actions aimed at mitigating the impact of their operations on the environment. However, in this sense, Pemex also presents a less proactive scheme than the other two oil companies. Both Ecopetrol and Petrobras, in addition to working to restore some ecosystems and protect biodiversity, have a clearly defined division within their companies that is basically dedicated to designing and executing environmental sustainability projects. In the case of Pemex, at least from what we read in its sustainability reports, it is not so clear.

As for the news consulted, it is evident that at least ECOPETROL and PEMEX have presented important incidents in the last few years related to environmental damage, especially the Colombian oil company. PETROBRAS has apparently been more careful in this regard. Given that the issue of environmental care is becoming increasingly important and arouses greater sensitivity, it is natural that large companies, such as oil companies, want to show a positive image of environmental responsibility to society, which is evident in the reports consulted, but not so much in the news found. For this reason, a more rigorous search for news in national newspapers involving any of the three oil companies is suggested.

On the other hand, it is worth noting that, in the preliminary search carried out in the development of this research, no news about internal problems, that is, with workers, were found, which confirms the generalized idea that oil companies usually offer fair and even above-average salaries, and also treat their employees well. Nevertheless, this is a subject that is worth exploring in depth and carrying out another comparative study, within the framework of CSR, but focused on this particular aspect.

Conclusions and Recommendations

The challenges currently facing humanity in meeting the objectives of sustainable development and, in particular, in the fight against climate change, are enormous. As determined in this article and as pointed out by numerous authors, oil companies have a large share of responsibility in this task (Grasso, 2019). Unfortunately, based on the results obtained so far, at least in the case of Latin American oil companies, the outlook is not very encouraging. The evidence (see Table 3 and the reported news) shows that much remains to be done on this issue to reverse the negative effects of fossil fuel exploitation and production on climate change.

Based on the Corporate Social Responsibility reports analyzed, Ecopetrol, Petrobras and Pemex are clear about the importance of the three dimensions of sustainability, and proof of this is that these reports are structured based on the three lines of action established by the Global Reporting Initiative, i.e. economic, social and environmental. However, the latter still deserves more attention from the three Latin American oil companies.

Based on the financial results consulted, Ecopetrol and Petrobras can be qualified as economically sustainable companies in the medium term, while Pemex has been showing substantial losses for several years. In terms of social sustainability, although companies invest a very small percentage of their profits (or losses, in the case of Pemex), it is clearly an important topic in their annual sustainability reports, as evidenced by the fact that each

company has well-defined action plans to contribute to achieving greater social justice and equity in the countries where they operate.

As for the most relevant news, according to the web portal of the Business and Human Rights Information Center, both ECOPETROL and PEMEX have had situations that have put at risk some of the ecosystems where they operate, and therefore the environment, in some of the areas where they develop their oil exploration and extraction operations. However, for future research, a more in-depth analysis of the news related to the positive and negative actions of oil companies in Latin America is recommended. Likewise, it is suggested to investigate in more depth, using quantitative and/or qualitative methods, about the environmental projects developed by each company and their impact on the ecosystems where they develop their activities of exploitation, extraction and production of crude oil.

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