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Contributions and procrastination to the Sustainable Development Goals by green energy companies in the Pacific Alliance countries

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Abstract

This research characterizes the contributions and postponements of a group of green energy companies in the Pacific Alliance countries to the Sustainable Development Goals (SDGs). For its development, a non-experimental descriptive, theoretical methodology is used based on the organization's information in its sustainability report or report of contributions to the SDGs. It is concluded that these companies have generated strategies to link the energy transition of the different sectors of the economy and promote capacities with micro and small enterprises; even so, future strategies for financial sustainability and the projection of innovations to respond to contingent changes are limited.

Keywords: *Renewable energy, sustainable development goals, pacific alliance, sustainability, corporate social responsibility.*

Introduction

The Sustainable Development Goals (SDGs), from an ethical perspective, constitute a critical reflection on human misery and, from there, emerge a commitment to habits and customs that enable the protection of the planet, the improvement of living conditions, actions to mitigate poverty and assume the culture of recognition of the other/the other in the world. In this understanding, the 2030 agenda, which emerges with the SDGs, considers it a reference to assume responsibilities as a global society and appropriate a renewed vision of justice and solidarity. In this context, this research explores, through theoretical analysis, the contributions that renewable energy companies located in the countries that make up the Pacific Alliance have been developing around SDG7 affordable and clean energy, SDG9 industry, innovation and infrastructure, SDG11 sustainable cities and communities, SDG12 responsible production and consumption, and SDG13 climate action. Following the multiple case study method, one company is chosen for each country of the alliance -Colombia, Chile, Mexico and Peru and their

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main contributions and reflections are described in the SDG contribution reports, which, in some cases, are integrated into the sustainability report. The descriptive analysis shows that State policies in the countries studied have allowed green energy companies to have mechanisms to identify and quantify the resources with which they contribute to the achievement of the SDGs; likewise, these companies have been able to generate strategies to link the energy transit of the different sectors of the economy and generate capacities with micro and small enterprises, which increases and makes sustainable the strategies implemented within the framework of the SDG agenda. However, despite the above, future financial sustainability strategies and the projection of innovations to respond to contingent changes are limited.

State of the art

The existing literature on SDGs evidences a tradition of these with the energy industry, as can be seen in the work of Falcone et al. (2021) and those of Alkhalidi et al. (2022) on long-term energy storage. In addition, in the evaluation of energy alternatives for the sustainable development of the energy sector (Olabi et al., 2022); even, there is literature planning how the 2030 agenda, which frames the SDGs, have promoted a new generation of social responsibility practices and management as evidenced by Fallah Shayan et al. (2022) and Cezarino et al. (2022). In contrast, the literature on companies that have emerged to generate solutions related to green energy is scarce. However, in the literature review, works are referring to the emergence of new energies to meet the SDG goals in terms of low-carbon transition (Duarah et al., 2022); the roles of renewable energies and economic globalization (Said et al., 2022; Kurramovich et al., 2022); and even, there is research that characterizes the possible contributions to the SDGs that the use of some renewable energies would generate (Obaideen et al., 2022), as analyzed by Awan (2022) the emerging green industry or on the role of artificial intelligence in the use of green energies (Vinuesa, 2020). The analysis of companies that generate solutions for energy transit or green energy sustainability is of great importance since changing all the devices used in daily life designed to operate with fossil fuels is necessary. Therefore, while for Sachs et al. (2018), this industry is required to achieve the transformations that make it possible to achieve the SDGs, these new companies in the energy industry need to be studied and analyzed, taking into account the culture of transparency, corporate practices and the ability to quickly transform their processes in response to the changing dynamics of the environment.

Methodology

This research is based on social representations theory (Moscovici, 1979; Jodelet, 2000), which plans that these representations are an organized body of knowledge and dream activities that make physical and social reality intelligible, promoting the integration of groups and daily exchange relationships.

Therefore, the research assumes that the concept of green energy, based on the SDGs, leads to a

functionalist model that leads companies to promote green energy and align themselves with certain sustainability practices. In this context, the work favored green energy companies, or at least those that declare themselves as such, one for each of the countries that make up the Pacific Alliance, bearing in mind that this alliance brings together the greatest economic strength in Latin America.

In addition, the countries of this alliance are expected to double the demand for energy services by 2040, face considerable inequality in access to these services and face financial and economic challenges given the elimination of subsections to traditional or fossil mineral energies.

The second criterion favored were the SDGs aligned with green energy: contributions to SDG7 (affordable and clean energy), SDG9 industry, innovation and infrastructure, SDG11 sustainable cities and communities, SDG12 responsible production and consumption, and SDG13 climate action. Finally, it was added as a criterion that the companies disclose their contributions to the SDGs on their web pages; therefore, this was the primary information of the research. Under the above, the companies selected were:

Table 1: List of companies studied

| Company | Country | Justification for selection | Source of primary information |
|------------|----------|--|---|
| ECO-ENERGY | Colombia | For having QCERT certification and its instruments validated by ONAC within the framework of the good laboratory practices of the Organization for Economic Cooperation and Development (OECD). | http://www.ecoenergia.com.co/ |
| CYBERNIA | Chile | In order to generate solutions aimed at improving the connectivity and safety of the mining industry's work for the use and integration of tools. | https://www.cibernia.cl/ |
| IBERDROLA | Mexico | Ranked third in the ranking of the most ethical companies. | https://www.iberdrolamexico.com/ |
| COSOLPO | Peru | For its contributions to green MSEs through support to improve their competitive capacities in the market and the generation of synergies to manage common obstacles and take advantage of new market opportunities. | https://economiaverde.pe/pymes/cosolpo/ |

Source: own construction.

Having achieved this characterization and, following Stake (2013), when the case study is multiple and involves qualitative research strategies, it was considered relevant to develop a theoretical matrix (De Salas, 2013).

Where the appropriation of the discourse on SDGs in each of the countries where the companies studied are located is established, as follows:

Table 2: Narrative associated with the SDGs by benchmark country

| Country | Justification for selection |
|-----------------|---|
| Mexico | <p>The Mexican government implemented the 2030 agenda and articulated it to a series of basic factors, such as the principle of social and economic inclusion, universality, sustainability and equality as the foundation of all human rights. Among the actions undertaken are:</p> <p>The presentation of progress at the High Level Political Forum on Sustainable Development.</p> <p>The creation of the Specialized Technical Committee on Sustainable Development - with presidential rank-</p> <p>The Working Group on the 2030 Agenda, with legislative rank.</p> <p>Guidelines for the implementation of the SDGs.</p> <p>The National Council of the 2030 Agenda for Sustainable Development (Agencia EFE, 2017) was established as the body responsible for the follow-up, monitoring and evaluating the efficiency of the actions undertaken.</p> |
| Colombia | <p>According to the United Nations Development Programme (UNDP, 2018), Colombia was part of the pioneer countries that promoted the creation of the SDG Agenda and acquired commitments since the Rio Conference (2012).</p> <p>Colombia has developed planning instruments to contribute to the SDGs within which the following stand out:</p> <ol style="list-style-type: none"> 1) their inclusion in the development plans. 2) the incorporation of the SDGs in the establishment of the National Council for Economic and Social Policy (CONPES, 2018) where it sets out the strategy for the implementation of the SDGs and, 3) the Program Document for Colombia (2021-2024), the United Nations (UN, 2020a), embodies the country's commitment to the fulfillment of the SDGs. |
| Chile | <p>In 2015, the country adopted the agenda for the fulfillment of the SDGs, creating the National Council for the Implementation of the 2030 Agenda (Supreme Decree No. 49 of 2016). By 2018, according to information from ECLAC (2020), the institutional framework of the Council is reissued, and in 2019 it issues Supreme Decree 67, which incorporates decisive elements to achieve the SDGs, including the incorporation of the Ministry General Secretariat of the Presidency (SEGPRES), the creation of the Intersectoral Group, composed of representatives of all the secretariats of the nation which comes to offer a comprehensive development to the Council.</p> |
| Peru | <p>According to the United Nations in Peru (UN, 2020b), the country has been one of the main protagonists and activists in the development of the SDG 2030 Agenda, a process that starts with the consultation on what kind of world we want after 2015, a question that allowed us to outline the changes that must be undertaken as a country.</p> <p>In order to achieve the SDGs, the Ministry of Environment (MINAM. 2016) updated the National Environmental Action Plan to 2021, establishing new priorities based on the commitments made in the 2030 Agenda. It should be noted that the country voluntarily submitted to the evaluation of the Organization for Economic Cooperation and Development (OECD), which issued recommendations based on the Environmental Performance Assessment unit.</p> |

Source: own construction.

In order to achieve greater reliability of the results, a congruence matrix is used to establish the analysis variables, as detailed below:

Table 3: Data congruence matrix

| | | |
|---|---|--|
| Research question: | | |
| Does the scope achieved by the measures and actions carried out by companies dedicated to alternative energy, as representatives of the Pacific Alliance member countries, generate contributions to the Sustainable Development Goals? | | |
| Hypothesis: | | |
| The Sustainable Development Goals become unattainable as some actors, such as emerging renewable energy companies, are excluded from the measures to achieve them. | | |
| Overall objective | Specific objectives | Variables studied |
| | Identify the manifestations of the commitments of the countries of the Pacific Alliance to ensure the achievement of the commitments of the 2030 agenda on SDGs. | V1. Regulations for each country. V2. Public policies for each country. |
| Provide a critical analysis of the contributions of Iberdrola Mexico (Mexico), Eco Energía (Colombia), Cosolpo (Peru) and Cibernia (Chile) to the achievement of the Sustainable Development Goals and their scope. | The sustainability management paradigm of Iberdrola Mexico (Mexico), Eco Energía (Colombia), Cosolpo (Peru) and Cibernia (Chile) is conditioned by contributions to the SDGs. | V3. Sustainability reports. V4. Corporate governance report V5. Document on corporate contributions to the SDGs. |
| | To substantiate the critical analysis of the SDG contributions of alternative energy solution companies in the Pacific Alliance countries. | V6. Management reports |

Source: own construction.

Results of the inquiry

Results of the inquiry indicate a strong adherence to the chosen methodological route. The verification of the variables has been meticulously conducted, and the outcomes are now presented in the comprehensive integrality matrix. This matrix provides a clear overview of the relationships and interactions among the variables, offering valuable insights into the study's findings.

The detailed analysis of these results will be discussed in the subsequent sections, allowing for a

deeper understanding of the implications and potential implications of the research.

Table 4: Results of the data congruence matrix

| Variable analysis | of | Eco (Colombia) | | Energía (Chile) | | Iberdrola (Mexico) | | Cosolpo (Peru) | |
|--|----|----------------|----|-----------------|----|--------------------|----|----------------|----|
| | | Yes | No | Yes | No | Yes | No | Yes | No |
| V1. Regulations for each country. | | X | | X | | 1 | | X | |
| V2. Public policies for each country. | | X | | X | | 1 | | X | |
| V3. Sustainability reports or equivalent. | | X | | | X | X | | | X |
| V4. Corporate governance report | | | X | | X | X | | | X |
| V5. Document on corporate contributions to the SDGs. | | X | | | | X | | X | |
| V6. Management reports | | X | | X | | X | | X | |

Source: own construction based on data from the web pages of the companies studied.

The information analyzed shows, for each specific objective established in the congruence matrix, that all the countries of the Pacific Alliance have regulations and public policies that enable them to respond to their commitments to the 2030 agenda on SDGs.

Regarding the sustainability management paradigm of Eco Energía (Colombia), CIBERNIA (Chile), Iberdrola (Mexico) and COSOLPO (Peru), there is a positive relationship since by assuming the commitments of the 2030 agenda to generate contributions to the SDGs, important changes are produced, among which the following stand out:

Eco Energía – Colombia

Provide information on the management of the SDGs (2021), in compliance with the 2030 Agenda, highlighting a detail of its developments to respond to the Comprehensive Climate Change Management Plan for the mining-energy sector with scope to 2050 (PIGCCme2050), contributions to carbon neutrality, innovations that contribute to strengthening the competitiveness and sustainability of the sector.

CIBERNIA – Chile

Although they lack a sustainability report, they have reports detailing their actions to contribute to the fulfillment of the SDGs through the development of specific projects, whose impact is perceived in Chile and nearby regions. It is worth mentioning that since 2020 they have managed

to consolidate a photovoltaic solar energy system through which clean and renewable energy is generated, complying with SDG7, related to affordable and non-polluting energy.

Iberdrola – Mexico

Declared its commitment to the SDGs in 2015, which led them to articulate its management model with these commitments in 2018, as enshrined in their sustainability report (Iberdrola, 2021, p. 41); this document also provides information on SDG07, "affordable and clean energy" (7.1, universal access to energy, 7.2, renewable energy and 7.3, measures to improve energy efficiency). In addition, contributions are made to SDG 04, the right to education; SDG 5, gender equality; SDG 9, innovative tools; SDG 10, reducing inequalities, SDG 13, combating climate change and SDG 15, protecting biodiversity.

COSOLPO – Peru

It is considered within the conglomerate of Green Economy SMEs in Peru, which frames from its mission aspects the contribution to the SDGs. The strategic commitments of the organization are aligned with the actions undertaken by this organization, without generating a detail in this regard, are directed to SDG7, "affordable and clean energy," SDG9 "industry, innovation and infrastructure," SDG11 "sustainable cities and communities," SDG12 "responsible production and consumption" and SDG13 "climate action." Regarding the critical analysis of the SDG contributions of alternative energy solution companies in the Pacific Alliance countries, it is necessary to move forward to the generation of reports with common criteria and articulated to the countries' policies in terms of SDG contributions. In addition to the above, green energy companies generating developments and providing services for the energy transition to clean energy show opportunities for improvement in corporate management, especially in control bodies and in the evaluation of key aspects related to financial operations, strategic sustainability and communication with stakeholders.

Conclusions and discussions

Companies dedicated to generating green energy that contributes to the energy transit bets show emerging responses to generate social welfare and adapt to climate change. In this understanding, the companies studied have been generating contributions to the social and environmental reputation of organizations in different economic and community sectors, resulting in changes in the approach to management systems based on the culture of sustainable development and continuous improvement of the environment for the conservation of human and non-human life forms. Green energy-generating companies must expand their strategies to maintain a continuous social awareness that is manifested in the corporate value they declare and the social responsibility management practices they adopt. In line with the above, it is a great challenge for these companies to determine the materiality of social and environmental issues where the mission development of the business is involved. Appropriating a narrative on the SDGs, from

each organization is a challenge since it is this that will allow them to holistically analyze the specific goals to be met and, therefore, provide clear and transparent information on effective contributions and postponements to the SDGs of green energy companies in the countries of the Pacific Alliance. For future research, it is necessary to expand the samples analyzed to generate a greater contrast of data. Similarly, there is little knowledge generated on concrete and tangible results of the projects developed by the companies aligned with some of the SDG targets and that can be evidenced in their financial information, consistent with the provisions of SDG12 in its target #6.



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