



(REVIEW ARTICLE)



## Environmental stewardship and corporate social responsibility: A review of case studies from the oil and gas sector

Stella Emeka-Okoli <sup>1</sup>, Tochukwu Chinwuba Nwankwo <sup>2</sup>, Christiana Adanma Otonnah <sup>1</sup> and Ekene Ezinwa Nwankwo <sup>3,\*</sup>

<sup>1</sup> Independent Researcher, Lagos, Nigeria.

<sup>2</sup> National Open University of Abuja, Nigeria.

<sup>3</sup> Anambra State Polytechnic, Mgbakwu, Nigeria.

World Journal of Advanced Research and Reviews, 2024, 21(03), 069–077

Publication history: Received on 17 January 2024; revised on 25 February 2024; accepted on 27 February 2024

Article DOI: <https://doi.org/10.30574/wjarr.2024.21.3.0661>

### Abstract

This review presents a comprehensive review of case studies focusing on environmental stewardship and corporate social responsibility (CSR) within the oil and gas sector. The oil and gas industry plays a pivotal role in global energy production, yet its operations often pose significant environmental and social challenges. In response, companies in this sector are increasingly embracing environmental stewardship and CSR principles to mitigate negative impacts and foster sustainable practices. The review examines a diverse range of case studies from various regions and contexts, highlighting both successful initiatives and notable challenges faced by oil and gas companies in integrating environmental stewardship and CSR into their operations. Key themes explored include environmental conservation efforts, community engagement, stakeholder collaboration, regulatory compliance, and technological innovation. Several case studies demonstrate innovative approaches adopted by oil and gas companies to minimize environmental degradation, such as implementing advanced technologies for emission reduction, investing in renewable energy projects, and restoring ecosystems affected by exploration and extraction activities. Moreover, successful CSR programs are showcased, emphasizing community development initiatives, education, healthcare, and infrastructure improvement projects aimed at enhancing the quality of life for local populations impacted by oil and gas operations. However, challenges persist, including balancing economic interests with environmental and social responsibilities, navigating complex regulatory landscapes, and addressing stakeholder concerns effectively. Despite these challenges, the case studies underscore the importance of proactive engagement, transparent communication, and continuous improvement in fostering environmental stewardship and CSR within the oil and gas sector. The review offers insights into best practices, lessons learned, and future directions for promoting sustainability and responsible business practices in the oil and gas industry, thereby contributing to the broader discourse on corporate environmental responsibility and societal impact mitigation.

**Keywords:** Environment; Stewardship; Corporate Social Responsibility; Oil and Gas; Review

### 1. Introduction

The oil and gas sector stands as a cornerstone of global energy production, supplying vital resources to power economies and societies worldwide (Zohuri, 2023). However, alongside its undeniable significance, this industry also confronts numerous environmental and social challenges stemming from its operations, including greenhouse gas emissions, habitat disruption, and community displacement. In response to mounting concerns over sustainability and societal impacts, the concepts of environmental stewardship and corporate social responsibility (CSR) have gained increasing prominence within the sector (ElAlfy *et al.*, 2020).

\* Corresponding author: Ekene Ezinwa Nwankwo

The oil and gas sector encompasses a vast array of activities, including exploration, extraction, refining, and distribution of fossil fuels (Craig and Quagliaroli, 2020). From offshore drilling platforms to onshore refineries, this industry operates across diverse geographies, often in environmentally sensitive areas. Its operations are central to meeting global energy demands, yet they frequently intersect with ecological habitats, indigenous lands, and communities, leading to complex social, environmental, and ethical considerations. In light of growing concerns surrounding climate change, pollution, and social equity, the imperative for the oil and gas sector to embrace environmental stewardship and CSR has become undeniable (Afolarin, 2022). These principles underscore the industry's responsibility to minimize its ecological footprint, uphold ethical business practices, and contribute positively to the communities in which it operates. By integrating environmental stewardship and CSR into their strategies and operations, oil and gas companies can mitigate adverse impacts, enhance their reputations, and foster long-term sustainability (Agudelo *et al.*, 2020).

This review seeks to analyze a series of case studies that exemplify efforts and challenges in integrating environmental stewardship and CSR within the oil and gas sector. Through a comprehensive examination of these case studies, we aim to elucidate successful initiatives, identify key challenges, and distill valuable insights and best practices for promoting sustainability and responsible business practices within the industry (Jacobsen *et al.*, 2020). By shedding light on both accomplishments and hurdles, this review contributes to the broader discourse on corporate environmental responsibility and societal impact mitigation within the oil and gas sector.

---

## 2. Environmental Stewardship in the Oil and Gas Sector

Environmental stewardship in the oil and gas sector has become increasingly critical in addressing the industry's ecological footprint and mitigating its environmental impact (Okeke, 2021). This section delves into three case studies highlighting various approaches taken by companies to reduce emissions, invest in renewable energy, and undertake ecosystem restoration efforts.

One notable example of environmental stewardship in the oil and gas sector is the implementation of advanced technologies to reduce emissions. The oil and gas industry is a significant contributor to greenhouse gas emissions, primarily through the burning of fossil fuels and methane leaks during extraction and transportation (Lee *et al.*, 2022). To combat this, companies have been investing in innovative technologies to minimize emissions at every stage of the production process. For instance, Shell, a leading multinational oil company, has committed to reducing its carbon footprint by implementing various emission reduction technologies. One such technology is carbon capture and storage (CCS), which involves capturing carbon dioxide emissions from industrial processes and storing them underground. Shell has invested in several CCS projects worldwide, including the Quest project in Canada (Martin-Roberts *et al.*, 2021), where CO<sub>2</sub> is captured from a tar sands facility and stored deep underground. Additionally, companies like ExxonMobil have been investing in methane detection and mitigation technologies to reduce methane emissions, which are potent greenhouse gases with a much higher warming potential than CO<sub>2</sub>. These technologies include advanced sensors, drones, and satellite imaging to detect and repair methane leaks in oil and gas infrastructure. The successful implementation of advanced emission reduction technologies demonstrates the oil and gas industry's commitment to environmental stewardship and its willingness to invest in innovative solutions to mitigate climate change and reduce its environmental impact (Cheng *et al.*, 2023).

Another approach to environmental stewardship in the oil and gas sector is the investment in renewable energy projects (Hartmann *et al.*, 2021). Recognizing the need to transition towards cleaner energy sources, many oil and gas companies have started diversifying their portfolios to include renewable energy assets such as solar, wind, and hydroelectric power (Cherepovitsyn and Rutenko, 2022). One prominent example is BP, which has been actively investing in renewable energy projects as part of its strategy to transition towards a lower-carbon future. BP has made significant investments in solar and wind energy projects globally, including the acquisition of major solar developer Lightsource Renewable Energy and the development of offshore wind farms in the United States and Europe (Oshilalu *et al.*, 2021). Similarly, TotalEnergies, a French multinational oil and gas company, has been expanding its renewable energy portfolio through investments in solar, wind, and biomass projects. TotalEnergies aims to become a leading player in renewable energy and has set ambitious targets to increase its renewable energy capacity in the coming years (Mailhol, 2022). By investing in renewable energy projects, oil and gas companies not only contribute to reducing carbon emissions but also diversify their revenue streams and position themselves for long-term sustainability in a rapidly evolving energy landscape.

Ecosystem restoration initiatives represent another important aspect of environmental stewardship in the oil and gas sector (Haden Chomphosy *et al.*, 2021). Oil and gas operations often result in habitat destruction, deforestation, and biodiversity loss, particularly in sensitive ecosystems such as wetlands, forests, and coastal areas. To mitigate these impacts, companies have been undertaking various initiatives to restore and rehabilitate affected ecosystems. One

example is the Niger Delta region in Nigeria, which has experienced extensive environmental degradation due to decades of oil exploration and production. In response, companies like Shell and Chevron have launched large-scale ecosystem restoration projects aimed at restoring mangrove forests, rehabilitating polluted waterways, and supporting local communities. Similarly, in Canada's oil sands region, companies have implemented reclamation programs to restore land disturbed by mining operations. These programs involve re-vegetation efforts, soil remediation, and wildlife habitat restoration to return the land to a functioning ecosystem. These ecosystem restoration initiatives not only help to mitigate the environmental impacts of oil and gas operations but also contribute to biodiversity conservation, ecosystem services, and the well-being of local communities (Sakai *et al.*, 2022).

The case studies presented above demonstrate the oil and gas industry's commitment to environmental stewardship and its efforts to mitigate its environmental impact through the implementation of advanced technologies, investment in renewable energy projects, and ecosystem restoration initiatives. These successful environmental conservation efforts highlight the industry's recognition of its responsibility to address climate change, protect biodiversity, and promote sustainable development (Fei *et al.*, 2021). Furthermore, these initiatives showcase the potential for collaboration between industry, government, and civil society to achieve common environmental goals and drive positive change. However, despite these efforts, challenges remain, including the need for stronger regulatory frameworks, greater transparency, and continued innovation to accelerate the transition towards a more sustainable energy future.

Overall, environmental stewardship in the oil and gas sector is essential for addressing the industry's environmental footprint and advancing towards a more sustainable and resilient future (Okoye *et al.*, 2024). By embracing environmental responsibility and investing in innovative solutions, oil and gas companies can play a crucial role in mitigating climate change, conserving natural resources, and promoting environmental sustainability for future generations.

---

### 3. Corporate Social Responsibility Initiatives

Corporate Social Responsibility (CSR) initiatives in the oil and gas sector encompass a wide range of activities aimed at promoting social welfare, community development, and stakeholder engagement (Duttagupta *et al.*, 2021). This section examines three case studies highlighting successful CSR programs undertaken by companies in the oil and gas industry. One of the key pillars of CSR in the oil and gas sector is community development, which involves investing in projects and initiatives that contribute to the well-being and economic development of local communities near oil and gas operations. Companies engage in various community development projects, including infrastructure development, job training programs, healthcare initiatives, and education scholarships (Ahmad *et al.*, 2024). For example, Chevron's community engagement initiatives in the Niger Delta region of Nigeria include the construction of schools, healthcare facilities, and roads, as well as the provision of vocational training and entrepreneurship programs for local residents. These initiatives aim to improve living standards, create economic opportunities, and foster social cohesion in communities affected by oil and gas operations (Adekanmbi and Wolf, 2024).

Similarly, ExxonMobil's community development projects in Papua New Guinea focus on education, healthcare, and economic empowerment, with initiatives such as school construction, medical clinics, and small business development programs (Askew, 2022). These projects not only benefit local communities but also help to build trust and goodwill between the company and its stakeholders. Education and healthcare initiatives are another important aspect of CSR in the oil and gas sector, aimed at improving access to quality education and healthcare services for communities near oil and gas operations (Onoyere and Adekanmbi, 2012). Companies invest in building schools, training teachers, providing scholarships, and supporting healthcare facilities to enhance the well-being and human capital development of local populations. For instance, Shell's social investment programs in Nigeria include initiatives such as the Shell Scholarship Scheme, which provides scholarships to thousands of students from host communities to pursue higher education in various fields. Similarly, ExxonMobil's malaria control program in Chad focuses on preventing and treating malaria, a prevalent disease in the region, through the distribution of insecticide-treated bed nets and the training of healthcare workers. These education and healthcare initiatives not only contribute to improving the quality of life and social mobility of local communities but also help to build a skilled workforce and support sustainable development in the long run (Fabian *et al.*, 2023).

Infrastructure improvement programs are another component of CSR in the oil and gas sector, aimed at addressing infrastructure gaps and enhancing access to essential services such as clean water, sanitation, and electricity in communities near oil and gas operations (Borges *et al.*, 2022). Companies invest in building roads, bridges, water supply systems, and electrification projects to improve infrastructure resilience and promote socio-economic development. For example, TotalEnergies' infrastructure improvement projects in Uganda include the construction of roads, bridges,

and water supply systems to support the development of the Tilenga oil project in the Lake Albert region. Similarly, Chevron's electrification program in Angola aims to provide access to electricity for rural communities through the installation of solar mini-grids and the promotion of renewable energy solutions. These infrastructure improvement programs not only enhance the quality of life and economic opportunities for local communities but also contribute to sustainable development and social cohesion in the regions where oil and gas operations are located (Fry and Hilburn, 2020).

The case studies presented above illustrate the importance of CSR initiatives in the oil and gas sector in enhancing the quality of life for local populations and promoting sustainable development in host communities. These programs go beyond compliance with regulations and standards to address the unique social and economic needs of communities affected by oil and gas operations. Effective CSR programs are characterized by meaningful engagement with stakeholders, transparent communication, and a long-term commitment to social responsibility. Companies that prioritize CSR not only contribute to the well-being of local communities but also build trust, enhance their reputation, and create shared value for stakeholders (Nashchekina *et al.*, 2020).

However, challenges remain in implementing CSR programs effectively, including addressing social inequalities, managing stakeholder expectations, and ensuring accountability and transparency in project implementation. Companies must navigate complex social, cultural, and political dynamics to design and implement CSR initiatives that are contextually appropriate and responsive to the needs and aspirations of local communities (Sun *et al.*, 2021).

Furthermore, the success of CSR programs depends on collaboration and partnerships between industry, government, civil society, and local communities to leverage resources, expertise, and local knowledge effectively. By working together, stakeholders can maximize the positive impact of CSR initiatives and address shared challenges more effectively (Okoye *et al.*, 2022).

Overall, CSR initiatives in the oil and gas sector play a crucial role in fostering sustainable development, promoting social inclusion, and building resilient communities. Companies that embrace CSR as an integral part of their business strategy can create lasting value for society while contributing to their long-term success and competitiveness in a rapidly changing global landscape (Siltaloppi *et al.*, 2021).

---

#### 4. Challenges and Solutions

The oil and gas sector faces numerous challenges in balancing economic interests with environmental and social responsibilities, navigating complex regulatory landscapes, and addressing stakeholder concerns and conflicts (Alagoz and Alghawi, 2023). However, there are strategies and solutions available to overcome these challenges and foster sustainability.

One of the primary challenges facing the oil and gas sector is the need to balance economic interests with environmental and social responsibilities. Companies often face pressure to maximize profits and shareholder returns while minimizing costs, which can lead to conflicts with efforts to protect the environment and support local communities (Battilana *et al.*, 2022). One solution to this challenge is adopting a triple bottom line approach, which considers not only financial performance but also social and environmental impacts. By incorporating environmental and social considerations into decision-making processes, companies can identify opportunities to create value for stakeholders while minimizing negative impacts.

Furthermore, implementing sustainable business practices and investing in technologies that reduce environmental impact can help companies achieve their economic goals while fulfilling their environmental and social responsibilities (Ikram *et al.*, 2021). For example, companies can invest in energy-efficient technologies, renewable energy projects, and emission reduction initiatives to mitigate their carbon footprint and contribute to climate change mitigation efforts. The oil and gas industry operates in a highly regulated environment, with regulations governing everything from exploration and production to environmental protection and safety standards. Navigating these complex regulatory landscapes can be challenging for companies, particularly as regulations evolve and become more stringent over time (Porath, 2023). To address this challenge, companies must stay abreast of regulatory changes and ensure compliance with applicable laws and regulations. This may require investing in regulatory compliance programs, conducting regular audits, and engaging with regulatory authorities to understand and address compliance requirements. Additionally, companies can proactively engage with policymakers, regulators, and other stakeholders to advocate for policies that support sustainable development and address environmental and social concerns (Stubbs *et al.*, 2022). By participating in the regulatory process and providing input on proposed regulations, companies can help shape regulatory frameworks that balance economic, environmental, and social objectives.

Stakeholder engagement is essential for the oil and gas sector to build trust, manage risks, and address conflicts effectively (Khalilzadeh *et al.*, 2023). However, companies often face challenges in addressing the diverse interests and concerns of stakeholders, including local communities, indigenous groups, environmental organizations, and government agencies. One approach to addressing stakeholder concerns and conflicts is establishing meaningful dialogue and consultation processes with stakeholders to understand their perspectives and priorities. By engaging in transparent and inclusive communication, companies can build trust, identify areas of common ground, and work collaboratively to address shared challenges (Uchechukwu *et al.*, 2023). Furthermore, companies can implement mechanisms for stakeholder grievance mechanisms, allowing stakeholders to raise concerns and complaints and providing avenues for resolution. By acknowledging and addressing stakeholder grievances in a timely and transparent manner, companies can demonstrate their commitment to responsible business practices and foster positive relationships with stakeholders.

To overcome the challenges facing the oil and gas sector and foster sustainability, companies can adopt several strategies; Companies should integrate environmental and social considerations into their corporate strategy, goals, and performance metrics to ensure alignment with sustainability objectives (Zimon *et al.*, 2020). Companies should invest in research and development to develop innovative technologies that reduce environmental impact, enhance efficiency, and support sustainable operations. Companies should collaborate with stakeholders, including local communities, governments, NGOs, and industry peers, to address shared challenges and develop solutions that benefit all parties.

Companies should be transparent about their environmental and social performance, disclose relevant information to stakeholders, and hold themselves accountable for their actions (Martins *et al.*, 2020). Companies should invest in building the capacity and capability of their workforce to implement sustainable practices, comply with regulations, and engage with stakeholders effectively.

Overall, by adopting these strategies and solutions, the oil and gas sector can overcome challenges and foster sustainability, ensuring the long-term viability of the industry while minimizing its environmental and social impacts.

---

## 5. Lessons Learned and Best Practices

Successful case studies in the oil and gas sector provide valuable insights into effective environmental stewardship and CSR practices. By examining these case studies, companies can identify best practices and lessons learned that can inform their own sustainability initiatives (Heras-Saizarbitoria *et al.*, 2022).

For example, companies can learn from Shell's implementation of carbon capture and storage technology to reduce emissions, BP's investment in renewable energy projects to diversify its energy portfolio, and Chevron's community development projects to support local communities near oil and gas operations. Key factors contributing to effective environmental stewardship and CSR in the oil and gas sector include; Strong leadership commitment is essential for driving sustainability initiatives and embedding environmental and social considerations into corporate culture and strategy. Meaningful engagement with stakeholders, including local communities, governments, NGOs, and industry peers, is critical for building trust, managing risks, and addressing conflicts. Collaboration and partnerships between industry, government, civil society, and local communities can leverage resources, expertise, and local knowledge to address shared challenges and drive positive change. Investing in innovation and technology can help companies develop and implement sustainable solutions that reduce environmental impact, enhance efficiency, and support sustainable operations. Transparency and accountability are essential for building trust, demonstrating commitment to responsible business practices, and holding companies accountable for their environmental and social performance (Adeleke *et al.*, 2019).

Proactive engagement and transparent communication are critical for building trust, managing risks, and addressing stakeholder concerns effectively. Companies should engage with stakeholders early and often, provide timely and accurate information, and listen actively to stakeholder feedback. By communicating openly and transparently about their environmental and social performance, companies can build credibility, enhance their reputation, and foster positive relationships with stakeholders (Ajayi and Mmutle, 2021). Transparent communication also helps to manage expectations, address misconceptions, and demonstrate progress towards sustainability goals.

Continuous improvement and adaptation to changing circumstances are essential for driving sustainability in the oil and gas sector. Companies should regularly review and evaluate their environmental and social performance, identify areas for improvement, and implement corrective actions as needed (Ilugbusi *et al.*, 2020). Furthermore, companies should anticipate and prepare for emerging sustainability trends, regulatory changes, and stakeholder expectations. By

staying ahead of the curve and proactively addressing emerging issues, companies can position themselves as leaders in sustainability and maintain their competitive edge in the market. Overall, by learning from successful case studies, identifying key factors contributing to effective environmental stewardship and CSR, prioritizing proactive engagement and transparent communication, and embracing continuous improvement and adaptation, companies in the oil and gas sector can foster sustainability and create long-term value for stakeholders and society.

---

## 6. Future Directions and Recommendations

As the oil and gas sector continues to evolve, there are several opportunities for further integration of environmental stewardship and corporate social responsibility (CSR) practices. By embracing innovation, collaboration, and proactive engagement with stakeholders, companies in the oil and gas industry can promote sustainability and responsible business practices.

Companies can further integrate environmental stewardship by increasing investments in renewable energy sources such as solar, wind, and hydroelectric power. Transitioning towards cleaner energy sources can help reduce greenhouse gas emissions and promote a more sustainable energy future (Abrahams *et al.*, 2023). Embracing circular economy principles can help minimize waste and maximize resource efficiency in the oil and gas sector. Companies can explore opportunities for recycling, reusing, and repurposing materials and by-products generated from their operations. Companies can strengthen their commitment to biodiversity conservation by implementing habitat restoration and conservation initiatives in areas affected by oil and gas operations. Protecting biodiversity is essential for maintaining ecosystem services and supporting local communities that depend on natural resources. Enhancing community engagement and empowerment programs can help build trust, foster social inclusion, and promote economic development in regions where oil and gas operations are located. Companies can support capacity-building initiatives, job training programs, and small business development to empower local communities and improve their quality of life.

Continued investment in research and development is essential for driving technological innovation in the oil and gas sector. Companies can explore innovative technologies such as carbon capture and storage, methane detection and mitigation, and advanced drilling techniques to minimize environmental impact and enhance operational efficiency (Oruwari, 2023). Collaboration with stakeholders, including governments, NGOs, academia, and local communities, can help identify shared challenges and develop collaborative solutions. By working together, stakeholders can leverage their expertise, resources, and networks to address complex sustainability issues effectively. Improving supply chain transparency and sustainability can help companies mitigate risks and promote responsible sourcing practices. Companies can work with suppliers to enhance environmental and social performance throughout the supply chain, from upstream suppliers to downstream distributors. Leveraging data analytics and reporting tools can help companies track, monitor, and report on their environmental and social performance more effectively. By analyzing data and identifying trends, companies can make informed decisions, set meaningful targets, and demonstrate progress towards sustainability goals.

Governments can play a crucial role in promoting environmental stewardship and CSR in the oil and gas sector by implementing robust regulatory frameworks and standards. Regulations should incentivize companies to adopt sustainable practices, mitigate environmental impacts, and uphold human rights and social responsibilities. Implementing carbon pricing mechanisms such as carbon taxes or cap-and-trade systems can help internalize the external costs of greenhouse gas emissions and encourage companies to transition towards low-carbon technologies and practices. Adopting ecosystem-based management approaches can help ensure the sustainable use of natural resources and protect biodiversity in areas affected by oil and gas operations. Governments can establish protected areas, marine conservation zones, and other regulatory measures to safeguard ecosystems and promote conservation. Governments can promote stakeholder engagement and consultation in decision-making processes related to oil and gas development. By involving diverse stakeholders in policy development and implementation, governments can ensure that the interests and concerns of all parties are taken into account.

---

## 7. Conclusion

In conclusion, the future of the oil and gas sector hinges on its ability to embrace sustainability and responsible business practices. By integrating environmental stewardship and CSR into their operations, companies can enhance their competitiveness, reduce risks, and create long-term value for stakeholders and society. Moving forward, companies in the oil and gas sector should seize opportunities for further integration of environmental stewardship and CSR, invest in innovation and collaboration, engage with stakeholders proactively, and comply with regulatory frameworks and

standards. By doing so, they can contribute to a more sustainable and resilient energy future while addressing the pressing challenges of climate change, biodiversity loss, and social inequality.

---

## Compliance with ethical standards

### *Disclosure of conflict of interest*

No conflict of interest to be disclosed.

---

## References

- [1] Abrahams, T.O., Ewuga, S.K., Kaggwa, S., Uwaoma, P.U., Hassan, A.O. and Dawodu, S.O., 2023. Review of strategic alignment: Accounting and cybersecurity for data confidentiality and financial security.
- [2] Adekanmbi, A.O. and Wolf, D., 2024. Solid Mineral Resources Extraction and Processing Using Innovative Technology in Nigeria. *ATBU Journal of Science, Technology and Education*, 12(1), pp.1-16.
- [3] Adeleke, O.K., Segun, I.B. and Olaoye, A.I.C., 2019. Impact of internal control on fraud prevention in deposit money banks in Nigeria. *Nigerian Studies in Economics and Management Sciences*, 2(1), pp.42-51.
- [4] Afolarin, A.E., 2022. Redefining the Corporate Responsibility of Fossil Fuel Corporations Towards the Attainment of a Clean Economy. Available at SSRN 4202798.
- [5] Agudelo, M.A.L., Johannsdottir, L. and Davidsdottir, B., 2020. Drivers that motivate energy companies to be responsible. A systematic literature review of Corporate Social Responsibility in the energy sector. *Journal of cleaner production*, 247, p.119094.
- [6] Ajayi, O.A. and Mmutle, T., 2021. Corporate reputation through strategic communication of corporate social responsibility. *Corporate Communications: An International Journal*, 26(5), pp.1-15.
- [7] Alagoz, E. and Alghawi, Y., 2023. The Energy Transition: Navigating the Shift Towards Renewables in the Oil and Gas Industry. *Journal of Energy and Natural Resources*, 12(2), pp.21-24.
- [8] Askew, T.J., 2022. Rural Development in Papua New Guinea: Mining, Logging, Agriculture, and Alternatives.
- [9] Okoye, C.C., Ofodile, O.C., Tula, S.T., Nifise A.O.A., Falaiye, T., Ejairu, E., Addy, W.A., 2024. Risk Management In International Supply Chains: A Review With Usa And African Cases. *Magna Scientia Advanced Research and Reviews*, 2024, 10(01), pp.256-264.
- [10] Battilana, J., Obloj, T., Pache, A.C. and Sengul, M., 2022. Beyond shareholder value maximization: Accounting for financial/social trade-offs in dual-purpose companies. *Academy of Management Review*, 47(2), pp.237-258.
- [11] Borges, F.M., Rampasso, I.S., Quelhas, O.L., Leal Filho, W. and Anholon, R., 2022. Addressing the UN SDGs in sustainability reports: An analysis of Latin American oil and gas companies. *Environmental Challenges*, 7, p.100515.
- [12] Cheng, X., Chen, K. and Su, Y., 2023. Green innovation in oil and gas exploration and production for meeting the sustainability goals. *Resources Policy*, 87, p.104315.
- [13] Cherepovitsyn, A. and Rutenko, E., 2022. Strategic Planning of Oil and Gas Companies: The Decarbonization Transition. *Energies*, 15(17), p.6163.
- [14] Craig, J. and Quagliaroli, F., 2020. The oil & gas upstream cycle: Exploration activity. In *EPJ Web of Conferences* (Vol. 246, p. 00008). EDP Sciences.
- [15] Duttagupta, A., Islam, M., Hosseinabad, E.R. and Zaman, M.A.U., 2021. Corporate social responsibility and sustainability: a perspective from the oil and gas industry. *Journal of Nature, Science & Technology*, 2, pp.22-29.
- [16] ElAlfy, A., Palaschuk, N., El-Bassiouny, D., Wilson, J. and Weber, O., 2020. Scoping the evolution of corporate social responsibility (CSR) research in the sustainable development goals (SDGs) era. *Sustainability*, 12(14), p.5544.
- [17] Fabian, A.A., Uchechukwu, E.S., Okoye, C.C. and Okeke, N.M., (2023). Corporate Outsourcing and Organizational Performance in Nigerian Investment Banks. *Sch J Econ Bus Manag*, 2023Apr, 10(3), pp.46-57
- [18] Fei, W., Opoku, A., Agyekum, K., Oppon, J.A., Ahmed, V., Chen, C. and Lok, K.L., 2021. The critical role of the construction industry in achieving the sustainable development goals (SDGs): Delivering projects for the common good. *Sustainability*, 13(16), p.9112.

- [19] Fry, M. and Hilburn, A., 2020. The distributional justice of oil industry social development projects and oil field production activities. *The Extractive Industries and Society*, 7(2), pp.647-659.
- [20] Haden Chomphosy, W., Varriano, S., Lefler, L.H., Nallur, V., McClung, M.R. and Moran, M.D., 2021. Ecosystem services benefits from the restoration of non-producing US oil and gas lands. *Nature Sustainability*, 4(6), pp.547-554.
- [21] Hartmann, J., Inkpen, A.C. and Ramaswamy, K., 2021. Different shades of green: Global oil and gas companies and renewable energy. *Journal of International Business Studies*, 52, pp.879-903.
- [22] Heras-Saizarbitoria, I., Urbietta, L. and Boiral, O., 2022. Organizations' engagement with sustainable development goals: From cherry-picking to SDG-washing?. *Corporate Social Responsibility and Environmental Management*, 29(2), pp.316-328.
- [23] Ikram, M., Ferasso, M., Sroufe, R. and Zhang, Q., 2021. Assessing green technology indicators for cleaner production and sustainable investments in a developing country context. *Journal of Cleaner Production*, 322, p.129090.
- [24] Ilugbusi, S., Akindejoye, J.A., Ajala, R.B. and Ogundele, A., 2020. Financial liberalization and economic growth in Nigeria (1986-2018). *International Journal of Innovative Science and Research Technology*, 5(4), pp.1-9.
- [25] Jacobsen, S.S., Korsgaard, S. and Günzel-Jensen, F., 2020. Towards a typology of sustainability practices: A study of the potentials and challenges of sustainable practices at the firm level. *Sustainability*, 12(12), p.5166.
- [26] Khalilzadeh, M., Kebriyaii, O. and Rezaei, R., 2023. Identification and selection of stakeholder engagement strategies: case study of an Iranian oil and gas construction project. *International Journal of Construction Management*, 23(3), pp.484-494.
- [27] Lee, J., Sorensen, C., Lemery, J., Workman, C.F., Linstadt, H. and Bazilian, M.D., 2022. Managing upstream oil and gas emissions: A public health oriented approach. *Journal of Environmental Management*, 310, p.114766.
- [28] Mailhol, L., 2022. A study of oil and gas companies and their strategies regarding energy transition (Master's thesis, Handelshøyskolen BI).
- [29] Martin-Roberts, E., Scott, V., Flude, S., Johnson, G., Haszeldine, R.S. and Gilfillan, S., 2021. Carbon capture and storage at the end of a lost decade. *One Earth*, 4(11), pp.1569-1584.
- [30] Martins, A., Gomes, D. and Branco, M.C., 2020. Managing corporate social and environmental disclosure: An accountability vs. impression management framework. *Sustainability*, 13(1), p.296.
- [31] Nashchekina, O.M., Nwafor, F.N. and Tymoshenkov, I.V., 2020. Aligning the Interests of Business and Society: Shared Value, Integrated Value, And Corporate Social Responsibility.
- [32] Okeke, A., 2021. Towards sustainability in the global oil and gas industry: Identifying where the emphasis lies. *Environmental and Sustainability Indicators*, 12, p.100145.
- [33] Onoyere, I.O and Adekanmbi A. O. O., 2012. Sustainable Energy Development In a Developing Economy: The Nigerian Experience. *ATBU Journal of Science, Technology and Education*, 1, pp 142 – 150.
- [34] Oruwari, H.O., 2023, July. Green Technological Approach for Sustainable Operations of Oil and Gas Industry. In SPE Nigeria Annual International Conference and Exhibition (p. D021S010R004). SPE.
- [35] Oshilalu, A.Z., Ajiboye, A.R. and Oshilalu, F.O., 2021. Performance Evaluation of Major Oil and Gas Companies Diversifying into Renewable Energy Resources. In AIAA Propulsion and Energy 2021 Forum (p. 3370).
- [36] Okoye, C.C., Ofodile, O.C., Tula, S.T., Nifise, A.O.A., Falaiye, T., Ejairu, E., Addy, W.A., 2024. Strategic Hrm In The Logistics And Shipping Sector: Challenges And Opportunities. *Magna Scientia Advanced Research and Reviews*, 2024, 10(01), pp.294–305.
- [37] Porath, U., 2023. Advancing managerial evolution and resource management in contemporary business landscapes. *Modern Economy*, 14(10), pp.1404-1420.
- [38] Sakai, K., Hassan, M.A., Vairappan, C.S. and Shirai, Y., 2022. Promotion of a green economy with the palm oil industry for biodiversity conservation: A touchstone toward a sustainable bioindustry. *Journal of bioscience and bioengineering*, 133(5), pp.414-424.
- [39] Ahmad, I.A.I., Anyanwu, A.C., Onwusinkwue, S., Dawodu, S.O., Akagha, O.V. and Ejairu, E., 2024. Cybersecurity Challenges In Smart Cities: A Case Review Of African Metropolises. *Computer Science & IT Research Journal*, 5(2), pp.254-269.



- [40] Sitaloppi, J., Rajala, R. and Hietala, H., 2021. Integrating CSR with business strategy: a tension management perspective. *Journal of Business Ethics*, 174, pp.507-527.
- [41] Stubbs, W., Dahlmann, F. and Raven, R., 2022. The purpose ecosystem and the United Nations Sustainable Development Goals: interactions among private sector actors and stakeholders. *Journal of Business Ethics*, 180(4), pp.1097-1112.
- [42] Sun, P., Doh, J.P., Rajwani, T. and Siegel, D., 2021. Navigating cross-border institutional complexity: A review and assessment of multinational nonmarket strategy research. *Journal of International Business Studies*, 52(9), pp.1818-1853.
- [43] Uchechukwu, E.S., Amechi, A.F., Okoye, C.C. and Okeke, N.M., 2023. Youth Unemployment and Security Challenges in Anambra State, Nigeria. *Sch J Arts Humanit Soc Sci*, 4, pp.81-91.
- [44] Zimon, D., Tyan, J. and Sroufe, R., 2020. Drivers of sustainable supply chain management: Practices to alignment with un sustainable development goals. *International Journal for Quality Research*, 14(1).
- [45] Zohuri, B., 2023. Navigating the Global Energy Landscape Balancing Growth, Demand, and Sustainability. *J. Mat. Sci. Apl. Eng*, 2(7).