Evaluation of Maturity in Environmental, Social, and Governance (ESG) Risks Mitigation and Safety Climate in the Oil and Gas Company, Bojonegoro

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ABSTRACT

Environmental, Social, and Governance (ESG) has become a rapidly growing instrument worldwide, driven by commitments to enhance environmentally sustainable economic growth as outlined in the 2015 Paris Agreement. Companies in Indonesia are increasingly emphasizing the importance of ESG in their business activities due to the potential impact on the environment and society, including the oil and gas companies. Environmental and social risks can affect the sustainability of a company, while safety climate plays a role in the safety and well-being of workers. The study used a descriptive qualitative approach. It also used NOSACQ-50 questionnaires to assess the safety climate and identify environmental and social management system (ESMS) elements using the toolkit from the International Finance Corporation (IFC) at the Bojonegoro oil and gas company. The result of the ESMS IFC matrix concludes that the maturity of Bojonegoro’s oil and gas company in mitigating ESG risks needs to be more prepared to mitigate ESG risks as preparation progresses towards optimal operations, whilst the safety climate has an average score of 3.40, which means that the safety climate can be maintained and developed.

Keywords: ESG, maturity, risk, safety climate.

1. Introduction

ESG, short for Environmental, Social, and Governance, has emerged as a rapidly growing instrument worldwide, driven by the commitment to enhance environmentally sustainable economic growth outlined in the 2015 Paris Agreement. According to a report from PwC, the global ESG trend is projected to increase by 84% by 2026 (Alexander & Yazdani, 2022). This highlights the current significance of ESG for companies, as their activities hold the potential to create environmental risks, particularly for ecosystems, water, air, and human health. The integration of ESG principles has become integral for companies, recognizing their role in fostering sustainable practices and minimizing adverse impacts on the environment and human health (IFC, 2021).

The awareness has triggered so many companies worldwide, including Indonesia. Thus, numerous companies in Indonesia have committed to achieving net zero emissions, aiming to contribute to environmental conservation and mitigate the risks associated with climate change, including oil and gas companies in Indonesia. The implementation of ESG at one of the biggest oil and gas companies in Indonesia has been considered successful, and it is committed to implementing the ESG principles in each of its subsidiaries. Based on Sibarani (2023), the implementation of environmental, social, and governance aspects at the North Field Oil and Gas company has also strengthened the company’s business and responsibility to take care of the environment and surrounding communities.

One of its new subsidiaries is considered one of the strategic projects in Indonesia, has not implemented sustainability principles and incorporated a management system that supports sustainability issues, including Environmental, Social, and Governance (ESG) aspects due to its construction that
has just finished recently, and based on the flash weekly report data in November 2023 at Oil and Gas Company–Bojonegoro regarding safety, several unsafe actions/conditions were still identified. Examples include not using Personal Protective Equipment (PPE) while working with hand tools, instances of workers being unfocused, contact with electrical currents, working contrary to procedures, and the use of unsafe equipment or materials. Moreover, the better the safety climate, the fewer unsafe behaviors and accidents occur. Therefore, a positive safety climate is known to enhance safety behaviors among workers when operating in environments with potential hazards.

Consequently, this study aims to assess the safety climate and the maturity of Environmental, Social, and Governance (ESG) mitigation that will be incorporated at Bojonegoro’s oil and gas company.

2. Literature Review

2.1. Environmental, Social, and Governance (ESG)

The research institutions of the United States, Canada, and other European countries lead the field of ESG research. On the other hand, institutions from the Asia-Pacific region have recently begun to show interest. Thus, the significant increase in the number of publications over time made us consider the concept of ESG, which will impact the economic, social, and environmental sectors. With more relevant cases related to ESG, it is expected that there will be more contributions from corporate stakeholders towards mitigating environmental issues, such as carbon emissions and toxins, loss of biodiversity, global climate change, and social issues, such as healthy employee relationships, gender equality, human rights, and more (Senadheera et al., 2022).

Based on research by Koroleva et al. (2020) ESG is a new concept emerging in the twenty-first century. It relates to three pillars: environmental, social, and governance. de Souza Barbosa et al. (2023) state that it is important to establish standards and parameters that enable companies to understand and evaluate ESG criteria. In this regard, the International Organization for Standardization (ISO) can create general standardization regarding ESG that can define parameters, guidelines, and criteria with quality indicators, which align with the globally recognized ISO 9001 standard, as integrating ESG criteria can positively impact a company’s sustainability performance, providing better investment optimization and business planning.

2.2. ESG Management System (ESMS)

Integrate environmental, social, and governance opportunities and risks as part of companies’ strategic objectives, daily activities, and risk management. In order to achieve this, an environmental and social management system (ESMS) will be used. ESG Management System or ESMS is a management system or a set of processes and practices that help to consistently implement a company’s policies to meet business objectives (IFC, 2021). An Environmental and Social Management System (ESMS) is an approach to manage a company’s impacts on the surrounding environment, workers, and other stakeholders. The main purpose of ESMS is to create an integrated management system rather than separate quality management, health and safety management, and environmental protection systems (Alexander & Yazdani, 2022).

There are nine elements to help the implementation of Environmental, Social, and Governance at the oil and gas company using the environmental, social, and governance management system to develop and implement a management system to address the common environment, health, and safety of the employees (OHS), labor, and community risks and impacts that companies will face due to the production:

- Policy
- Risk and impact identification
- Management programs
- Company capacity and competence
- Emergency response
- Stakeholder engagement
- Complaints mechanisms
- Reporting to communities impacted by risks
- Monitoring and review.

2.3. Safety Climate

Hosny et al. (2017) stated that occupational health and safety (OHS) are crucial aspects of national development and are relevant to all parts of the industry. Safety culture and climate are concepts that currently attract attention in the industry to promote and enhance occupational safety
performance within companies. Safety culture refers to the commitment to safety at all levels of the organization, from staff to management. Part of safety culture is safety climate, which refers to employees’ perceptions of the implementation of safety management in the workplace and its effectiveness.

According to Bergh et al. (2013), a good safety culture and climate are the most important factors in achieving a safe workplace and meeting the business targets of the company. Misnan et al. (2008) argue that safety culture, which is intangible, maybe more important than safety procedures or standards. Safety climate can be considered as a surface feature or indicator of safety culture that arises from the attitudes and perceptions of the workforce (Cox & Flin, 1998).

3. Research Methodology

This research is a qualitative study with a descriptive approach. The aim of descriptive research is to describe a condition and its characteristics. ‘What’ is the main thing that needs to be discovered rather than searching for the how or why a circumstance has happened. Therefore, observation and survey tools are often used to gather data to complete the research (Nassaji, 2015).

In this research, two data sources are utilized: primary data collection and secondary data. Primary data is obtained through observations and interviews with 16 key informants. Thus, the selection of the key informants in this study was decided through focus group discussion with the management to dig up the ESMS maturity deeper, with the help of secondary data gathered from the company (see Fig. 1).

After assessing the matrix of maturity for improving the Environmental and Social Management System (ESMS), which helps the company understand the meaning of each level from 0 to 5 in each ESMS element (Table I), recommendations and improvement tips will also be provided. These recommendations and improvement tips aim to assist the company in enhancing its capabilities to address and mitigate environmental and social risks.

To assess the safety climate at the JTB site, questionnaires will be distributed to 68 workers in the field. This sample is considered representative of the safety climate in the site’s work area, providing valid information to the management to support the implementation of ESG at Bojonegoro’s oil and gas company. The questionnaire used is The Nordic Occupational Safety Climate Questionnaire (NOSACQ-50). NOSACQ-50 consists of 7 sections of questions, each representing elements of the work climate:

- Management’s safety priority,
- Development of safety from management,
- Fairness regarding safety from management,
- Employees’ commitment to safety,
- Employees’ safety priority and the attitude of not taking safety risks,
- Communication and safety training, including trust in the safety competence of colleagues,
- Employees’ trust in the safety system.

Fig. 1. Application of environmental and social management system.
4. Results and Discussion

The results from the ESMS using the IFC metrics are provided in Table II. These results conclude that the current maturity of Bojonegoro’s oil and gas company in mitigating environmental, social, and governance (ESG) risks has a score of 4, which indicates that the company needs to be more prepared to mitigate ESG risks during its progress towards optimal operations. Overall, the company has already prepared well.

Every existing management can be further developed and implemented internally with periodic improvements or updates to enhance the performance of environmental and social management.

4.1. Policy

Environmental, security, and occupational health and safety policies at Bojonegoro’s oil and gas company already exist and are integrated into the HSSE (Health, Safety, Security, and Environment) policy documents. Policies related to employment and working conditions are in line with the company’s code of conduct or ethics towards workers. Bojonegoro’s oil and gas company treats workers equally and fairly, without discrimination based on ethnicity, religion, or race in all aspects, recognizing the crucial role and position of workers in achieving the company’s goals.

Bojonegoro’s oil and gas company revises and reviews environmental and social policies if there are changes in regulations and requirements based on customer or lender standards, as well as company performance reviews.

4.2. Impact and Risk Identification

The environmental risk assessment at Bojonegoro’s oil and gas company will be periodically reviewed by the on-site environmental division to ensure its alignment with the actual risks and impacts occurring during operations. The health and safety-related risk assessment is documented in the HSSE Risk Register at Bojonegoro’s oil and gas company, considering the processes or activities carried out during operations and the location of work activities.

4.3. Management Programs

Bojonegoro’s oil and gas company risks to the environment and society, and these risks may increase over time. In response to this, Bojonegoro’s oil and gas company has established an Environmental and Social Action Plan (ESAP), and its implementation is continually monitored.

Bojonegoro’s oil and gas company understands that lenders must implement ESAP to comply with both national and international regulations (see Fig. 2). Bojonegoro’s oil and gas company has documentation outlining the steps or actions to be taken to avoid, reduce, or eliminate negative impacts related to the environment and society. The procedures or steps to be taken are detailed in the Environmental Management Plan and Environmental Monitoring Plan.

### Table I: IFC ESMS Score Interpretation

<table>
<thead>
<tr>
<th>Level</th>
<th>Interpretation</th>
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<tbody>
<tr>
<td>Level 5</td>
<td>A mature system implemented internally and with key supply chain partners-continuous improvement embedded in operations.</td>
</tr>
<tr>
<td>Level 4</td>
<td>A well-developed system implemented internally-routine improvement projects.</td>
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<tr>
<td>Level 3</td>
<td>A systemic approach adopted, but development and implementation are inconsistent-sporadic improvements.</td>
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<tr>
<td>Level 2</td>
<td>Limited system development with sporadic implementation-tends to be reactive.</td>
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<tr>
<td>Level 1</td>
<td>Low awareness of environmental and social risks.</td>
</tr>
<tr>
<td>Level 0</td>
<td>No awareness of environmental and social risks.</td>
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### Table II: Bojonegoro Oil and Gas Company ESMS Score

<table>
<thead>
<tr>
<th>Elements</th>
<th>Score</th>
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<tbody>
<tr>
<td>Policy</td>
<td>3</td>
</tr>
<tr>
<td>Identification of risks and impacts</td>
<td>4</td>
</tr>
<tr>
<td>Management programs</td>
<td>5</td>
</tr>
<tr>
<td>Organizational capacity and competency</td>
<td>4</td>
</tr>
<tr>
<td>Emergency preparedness and response</td>
<td>5</td>
</tr>
<tr>
<td>Stakeholder engagement</td>
<td>5</td>
</tr>
<tr>
<td>External communication and grievances</td>
<td>4</td>
</tr>
<tr>
<td>Reporting back to affected communities</td>
<td>5</td>
</tr>
<tr>
<td>Monitoring and review</td>
<td>5</td>
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</tbody>
</table>
4.4. Organization Competency and Capacity

In the management of social and environmental issues, Bojonegoro’s oil and gas company can develop and modify policies or ratify policies from the parent company according to the needs of the company. This process also includes revising and implementing work instructions or procedures.

4.5. Emergency Response

The Emergency Preparedness and Response Plan (EPRP) at Bojonegoro’s oil and gas company (Fig. 3) involves all workers across all shifts, including contract workers, in identifying and planning the management of emergency conditions.

The Site Emergency Response Team (SERT) and/or Incident Management Team (IMT) at the Bojonegoro’s oil and gas company (Fig. 4), equipped with operational resources, facilities, infrastructure, and on-site personnel, are formed as the team responsible in case of an emergency.

Each personnel member has designated roles and responsibilities that must be known and executed to address the emergency.

4.6. Stakeholder Engagement

Bojonegoro’s oil and gas company has implemented CSR (Corporate Social Responsibility) programs through the coordination and involvement of four main parties, such as Non-Governmental...
Organizations (NGOs), the government, the media, and the community that may be affected by the operations of Bojonegoro's oil and gas company.

4.7. Grievance Mechanism

All steps of identification, collection, summarization, processing, analysis, and interpretation of information have been completed. A conclusion will be drawn regarding the direction and planning of environmental and social risk management at Bojonegoro’s oil and gas company (Fig. 5).

To ensure that the operation of Bojonegoro’s oil and gas company continues to run smoothly and adheres to parameters or indicators that must be managed and monitored to minimize negative environmental and social impacts, Bojonegoro’s oil and gas company collaborates with the government.

4.8. Ongoing Reporting to Affected Communities

Issues, complaints, and concerns raised by the community or external groups will be directly received by Bojonegoro’s oil and gas company through various communication channels. This can be done through direct communication (face-to-face) with Bojonegoro’s oil and gas company personnel or through phone calls, text messages, and, if possible, formal letters that can be sent to the company. If it is not feasible to report directly to the company, the reporter can file a complaint through the village government or visit the sub-district or government office.

4.9. Monitoring and Review

Bojonegoro’s oil and gas company ensures and monitors compliance with environmental regulations and other requirements related to the operation by evaluating the company’s compliance. Bojonegoro’s oil and gas company also does environmental and social performance monitoring, including the monitoring of air quality, to ensure that it will remain below standard.

Bojonegoro’s oil and gas company reviews documents and records of ambient air quality monitoring, odor, noise, and transportation of hazardous waste and adjusts them according to monitoring parameters referencing specific regulations. Senior management holds annual meetings with other management to discuss the performance of environmental and social monitoring and to review how to enhance performance in the future.

4.10. Safety Climate Assessment

From the distribution of NOSACQ-50 questionnaires, it was found that the safety climate in the operations division is in the range of more than 3.30, which categorizes the safety climate as good. This means that the company’s safety climate can be maintained and developed at Bojonegoro’s oil and gas company (see Table III).

<table>
<thead>
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<th>TABLE III: NOSACQ-50 Dimensions Results</th>
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<tr>
<td>Dimensions</td>
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<tr>
<td>Management safety priority, commitment, and competence</td>
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<tr>
<td>Management safety empowerment</td>
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<tr>
<td>Management safety justice</td>
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<tr>
<td>Workers’ safety commitment</td>
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<tr>
<td>Workers’ safety priority and risk non-acceptance</td>
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<tr>
<td>Safety communication, learning, and trust in coworkers</td>
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<tr>
<td>Trust in the efficacy of safety systems</td>
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</table>
With scores from the first dimension, management safety priority, commitment, and competence, at 3.42; the second dimension, management safety empowerment, at 3.33; the third dimension, management safety justice, at 3.27; the fourth dimension, worker's safety commitment, at 3.60; the fifth dimension, workers' safety priority, and risk non-acceptance with a score of 3.17; and the fifth and sixth dimensions, safety communication, learning, and trust in coworkers' safety competence and trust in the efficacy of safety systems, both having the same score of 3.49, the overall safety climate score at Bojonegoro’s oil and gas company is 3.40.

5. Conclusion

Bojonegoro’s oil and gas company’s maturity to mitigate the environmental, social, and governance (ESG) risks can be categorized as good, which means that it has already given more efforts to mobilize resources, find innovative solutions, and participate in reducing risks and identifying new opportunities to address global challenges that will be encountered throughout its operation. The safety climate at Bojonegoro’s oil and gas company has an average score of 3.40; the safety climate can be categorized as good, and it can be sustained and developed within the company.

A company that deepens its effort for the maturity and relevant SDG target with the IFC guide will eventually lower ESG risks that will be a problem to the company, people surrounding it, and more aspects that might be affected. Besides, it also creates benefits for the planet and society by enhancing the report based on the IFC Guideline, which also becomes disclosure practices for the companies to bridge between ESG risk management and SDG report (IFC, 2023).

Conflict of Interest

The authors declare that they do not have any conflict of interest.

References


