

SCIENTIFIC HORIZONS

Journal homepage: <https://sciencehorizon.com.ua>

Scientific Horizons, 27(7), 118-126



UDC 330.35.01

DOI: 10.48077/scihor7.2024.118

Implementation of ESG criteria: Integration of environmental, social and governance criteria of companies in water management

Yusif Huseynov

PhD in Political Sciences, Lecturer
Academy of Public Administration under the President of the Republic of Azerbaijan
AZ1001, 74 Lermontov Str., Baku, Azerbaijan
<https://orcid.org/0000-0003-4846-8975>

Javid Huseynli

Graduate Student, Lecturer
Academy of Public Administration under the President of the Republic of Azerbaijan
AZ1001, 74 Lermontov Str., Baku, Azerbaijan
<https://orcid.org/0009-0006-0400-9071>

Nurzat Totubaeva

PhD in Biological Sciences, Associate Professor
Kyrgyz-Turkish Manas University
720044, 56 Ch. Aitmatov Ave., Bishkek, Kyrgyz Republic
<https://orcid.org/0000-0002-5919-9363>

Mushfig Guliyev*

Doctor of Economics, Professor
Azerbaijan State University of Economics
AZ1001, 6 Istiqlaliyyat Str., Baku, Azerbaijan
<https://orcid.org/0000-0002-1104-5402>

Shovkat Mustafazada

Graduate Student, Leading Specialist
Academy of Public Administration under the President of the Republic of Azerbaijan
AZ1001, 74 Lermontov Str., Baku, Azerbaijan
<https://orcid.org/0009-0007-2421-394X>

Article's History:

Received: 19.01.2024

Revised: 05.06.2024

Accepted: 24.06.2024

Abstract. In today's environment, achieving sustainable development goals is an important component for any state. In this regard, finding new opportunities to improve the situation in the context of this situation remains relevant. The purpose of this study was to find an opportunity to use Environmental, Social, Governance (ESG) criteria in companies where water management is an important part of their operations. The main methods used were formal legal and forecasting. The paper describes in some

Suggested Citation:

Huseynov, Yu., Huseynli, J., Totubaeva, N., Guliyev, M., & Mustafazada, Sh. (2024). Implementation of ESG criteria: Integration of environmental, social and governance criteria of companies in water management. *Scientific Horizons*, 27(7), 118-126. doi: 10.48077/scihor7.2024.118.



Copyright © The Author(s). This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (<https://creativecommons.org/licenses/by/4.0/>)

*Corresponding author

detail the role of ESG criteria in achieving various development goals of the country, namely economic, social and environmental ones. The use of this approach also helps to attract more investments for enterprises and, therefore, ensure its more rapid development. In addition, the study emphasized the high role of water management in Azerbaijan, which is why the implementation of ESG criteria is particularly important in the country. The study also showed that there is a global trend towards the formation of a legislative framework in countries aimed at mandatory use of ESG criteria for reporting by enterprises. However, this kind of governance is not actively developed in Azerbaijan. In this regard, the paper describes some recommendations on the formation and implementation of this kind of state policy. In addition, the paper formulates recommendations on how companies should use the implemented ESG criteria and how they should be formed on the basis of international standards. The results obtained in the study form an idea of the implementation of ESG criteria both in general and in the context of water management

Keywords: sustainable development; water resources management; public policy; macroeconomics; use of ESG criteria in the regulatory framework

INTRODUCTION

Sustainable development plays an extremely important role in today's environment. At its core, it is a concept and approach to development that seeks to meet the current needs of the population without compromising the ability of future generations to meet their own needs. Thus, development according to this concept should ensure both economic development and sustainability, as well as the maintenance of a clean environment and a high standard of living. Many countries have set the achievement of sustainable development goals as their priority in the long term, and research on this topic remains extremely important. One of the components of achieving sustainable development goals is water management, i.e. more efficient use of water at various enterprises. There are many reasons for this: improving economic efficiency, increasing productivity at the enterprise, reducing risks. In this regard, it is important to develop more effective approaches to managing this component. Since the use of Environmental, Social, Governance (ESG) criteria can help in this context, it is relevant to conduct a study on the possibilities of their implementation. In this paper, the assessment is based on data from Azerbaijan.

Within the modern economic literature of Azerbaijan, there is not a large enough number of works that would describe the specifics of ESG in the country. Nevertheless, some studies of this kind have been conducted. Quite little time was devoted to the description of the ESG concept and its approaches to improving the level of environmental friendliness of business. The problems of implementing European quality assurance standards (ESG) in Azerbaijani universities were described by I. Juknytė-Petrekienė *et al.* (2019). The researchers described the difficulties that exist in this area and formed approaches to improving the situation based on the experience of academic and administrative staff of Azerbaijani universities. The role of human resources in the context of achieving the sustainable development goals was mentioned in the work of U. Alakbarov *et al.* (2020). As can be seen from the above

analysis, ESG criteria are paid rather little attention in the Azerbaijani scientific literature, which makes this study even more relevant. The purpose of this study was to assess the possibilities of implementing ESG criteria in Azerbaijan for water management at enterprises.

The study analysed a number of legal acts. This included information from the Implementing and Delegated Acts on Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector (Text with EEA relevance) (2021), aimed at increasing transparency regarding the impact of financial activities on sustainable development. Information on the UK Corporate Governance Code (2024) was also used, and the approaches described in the United Nations (UN) Principles for Responsible Investment were assessed. In addition, parts of the legislative framework of the Republic of Azerbaijan were analysed, which, although not directly related to ESG criteria, is relevant to ensuring sustainable development in the country: information from the Law of the Republic of Azerbaijan No. 80 "On Nature Protection and Nature Management" (1992); Law of the Republic of Azerbaijan No. 1175-VQ "On Environmental Impact Assessment" (2018) was assessed. For a better understanding of what constitutes ESG criteria, various sources of information were evaluated, but the basis for this was the EU Taxonomy Navigator (2024) text, which, among other things, describes what constitutes ESG criteria. The study also proposed to use the Global Reporting Initiative (GRI) methodology to formulate ESG criteria for Azerbaijani companies. In particular, information was used from the Sustainable Development Report 2022 – GRI Content Index (2024), which is primarily related to the regulation of water resources disclosure.

All the previously described assessments of the regulatory framework study were conducted using the formal legal method. The study also compared the approaches to the use of ESG criteria in the world, with the peculiarities that are specific to Azerbaijan. Estimates of

the country's future development based on current data were formed using the forecasting method.

THEORETICAL BASIS FOR STUDYING ESG CRITERIA

ESG criteria is an assessment system used by investors and companies to measure the sustainability and social responsibility of a business. Accordingly, environmental criteria for business impact on the environment include energy use, air emissions, waste management, efficient use of resources and other environmentally related aspects. This includes assessing energy efficiency, the use of renewable energy sources, reducing the consumption of resources (e.g. water, forests, minerals) and increasing the efficiency of their use; it also assesses the level of pollution, air emissions, discharges to water and soil resources, and the availability and use of treatment and emission reduction systems (Park & Jang, 2021; Salerno, 2021). Approaches and technologies aimed at reducing the negative impact on the environment are also assessed, i.e. how the company develops and implements environmentally friendly technologies, products, and services; how the company approaches climate risk mitigation and adaptation to climate change (Chen *et al.*, 2021; Vannoni & Ciotti, 2020). As for assessments related to the financial side, it consists of an analysis of financial management, i.e., an assessment of debt levels, working capital management efficiency, financial performance and risk analysis. In addition, the level of transparency of reporting, including the quality of financial statements, compliance with international reporting standards, long-term financial plans and strategies, as well as the level of openness and accessibility of information to investors and stakeholders, plays an important role in this context.

Assessment of a company's level of innovation and investment, including research and development, investment in new technologies, sustainable practices and strategies to drive innovation and growth, also remains important, along with the existence of a working business model, its competitiveness, diversification of products and services, adaptation to changing market conditions and ability to sustain financial growth (Stanislavsky & Zamlynskyi, 2023). As for governance criteria, they include several aspects that help investors and stakeholders assess the level of transparency, ethics, and effectiveness of governance in a company. With regard to governance criteria, they include a number of aspects that help investors and stakeholders to assess the level of transparency, ethics, and governance effectiveness in the company. This is how the governance structure is assessed, namely the composition and role of the board of directors, the structure and functioning of board committees (e.g. audit committee, remuneration committee), and the distribution of powers between executive and independent directors (Maiti, 2021). In addition, the level of ethical standards

and corporate culture in the company is assessed, including the existence and compliance with the code of conduct, mechanisms for monitoring ethical violations, and adherence to the principles of honesty, openness, and trust. The level of ethical standards and corporate culture in the company is also assessed, including the existence and observance of a code of conduct, mechanisms for controlling ethical violations, and adherence to the principles of honesty, openness, and trust. Thus, the ESG approach is quite diverse, although not unified.

The interaction between ESG factors and sustainable development is important and mutually reinforcing. ESG factors and sustainability are linked by the common goals of ensuring long-term economic growth, social well-being and environmental sustainability (Chen & Li, 2024). By their very nature, these ratings can be used by a wide range of people, from government officials to investors, and therefore can be used for different purposes. These may encompass the need to assess the negative impact of a particular company on the environment, to form an understanding of the social risks of a particular company, to assess the investment attractiveness of a company. Thus, these ratings should be able to address a much wider range of issues than is expected from conventional financial statements. Water management itself is a rather complex topic, it is multifaceted (Yasin *et al.*, 2021). As part of it, industrial and agricultural companies should use water more efficiently, including by introducing modern irrigation technologies, ensuring reverse sedimentation for wastewater treatment, and using heat and water exchange systems. Active attention should also be paid to the development and implementation of programmes to reduce water leakage in urban infrastructure. States, in turn, should create special natural areas that are not directly affected by external stimuli, which would help preserve water resources (Adamkulova & Aitbaev, 2024). In fact, there are quite a few such "obligations" on the part of the country's economic entities.

Water management plays a critical role in the sustainable development of Azerbaijan, as the country's water resources, including rivers, lakes and groundwater, are vital for various sectors of the economy, including agriculture, industry, and the energy sector. Azerbaijan faces challenges related to limited water resources and their uneven distribution across the country, making the introduction of modern technologies and water conservation strategies, as well as international cooperation for transboundary water management, particularly important. In addition, infrastructure needs to be developed to prevent water pollution and improve water quality. The ESG concept can partially help with this: since these indicators allow assessing the level of measures taken in the context of the approach to achieving sustainable development goals, it will also allow considering approaches to water management. Companies with the best ESG performance, including

in the context of water management, will have more opportunities to attract investment and thus be more competitive in the market.

DEVELOPMENT OF APPROACHES TO THE ASSESSMENT OF ESG CRITERIA

The assessment of water management is indeed used in the evaluation of ESG criteria. The environmental component of ESG criteria includes a wide range of issues related to a company's environmental impact, and water management is an important part of this assessment. The most commonly used assessments include water consumption (the amount of water consumed by the company and the efficiency of water use) and water quality (measures to treat wastewater and minimize pollution of water bodies). Various rating agencies conduct such assessments. Among them are MSCI, Sustainalytics, FTSE Russell and others. These organizations use a variety of methodologies and data sources

to assess companies' ESG performance. They collect information from public reports, questionnaires, company data and other sources to provide investors and other stakeholders with a comprehensive understanding of the sustainability and responsibility of companies. However, there are no unified standards for this type of assessment: they are formed on the basis of various international practices (for example, the GRI; Sustainability Accounting Standards Board (SASB) standards and others), or they develop their own criteria that they believe best describe the current situation. The approaches used by the rating agencies to analyse the data are not publicly available, and only the final scores of the companies analysed are made available.

In the framework of this study, it is worth considering one of the approaches to water accounting at the enterprise. Thus, the choice was made to conduct an assessment for GRI standards. The advantages and disadvantages of this approach are shown in Table 1.

Table 1. Advantages and disadvantages of GRI standards

| Advantages | Disadvantages |
|--|---|
| GRI standards are widely recognized and used around the world | GRI standards can be complex and extensive, requiring significant resources and time to implement and comply with |
| GRI covers all three components of ESG: environmental, social and governance aspects | Despite their flexibility, GRI standards can be too general and universal, which can make it difficult to apply them to specific industries or regions |
| GRI emphasizes the importance of transparency and stakeholder engagement | Unlike the SASB standards, which emphasize the financially relevant aspects of ESG for various industries, the GRI does not always take this aspect into account sufficiently |
| The GRI standards are aligned with other international initiatives such as the United Nations Global Compact, the Principles for Responsible Investment and others | Despite the existence of clear guidelines, there is an element of subjectivity in the application of GRI standards: different companies may interpret and apply the standards in different ways, which can make it difficult to compare their reports |

Source: compiled by the authors

As can be seen from Table 1, the GRI principles are quite universal in their application; moreover, they are more focused on measuring indicators related to the achievement of sustainability goals. They are also aligned with international initiatives, which means that the use of approaches based on them will be more authoritative in the international context.

According to GRI standards, water management is disclosed in five disclosures: interaction with water as a common resource; management of impacts related to water discharges; water withdrawals; water discharges; and water consumption. It is worth briefly considering the specifics of each of the notes. For example, in the first disclosure, organizations should report on how they interact with water, describing in detail where and how water is abstracted, consumed and discharged. It should also describe the approach used to identify water-related impacts, including the scope, timeframe, and tools or methodologies employed. It should also explain how water-related impacts are managed, including stakeholder engagement and collaboration

with suppliers or customers with significant impacts; describe water management goals and objectives and how they align with public policy and local water contexts. In the second disclosure (management of water discharge impacts), which should describe the minimum quality standards for wastewater discharges and how they were determined, including standards for facilities without local discharge requirements, internally developed water quality standards or guidelines, industry standards, and consideration of the profile of the receiving water body. Thus, the first two disclosures should contain quite a bit of information, but it is textual: the standards do not provide clear guidance on what water management indicators should be, but rather encourage companies to describe them and prove that they are indeed appropriate.

The next disclosure (water intake) contains the requirements for disclosure of information on water intake: surface water, groundwater, seawater, produced water and water to third parties. The disclosure must include a breakdown of fresh water (≤ 1000 mg/l of

total dissolved solids) and other water (≤ 1000 mg/l of total dissolved solids), as well as any other relevant variables. Disclosures on water discharge and consumption have a similar structure (Barbosa *et al.*, 2023; Rau & Yu, 2024). Thus, Azerbaijani companies can use these approaches in their own reporting. However, it is important that each individual enterprise (especially from different sectors) first develops its own performance targets in the context of water management and adheres to them. Auditors, in turn, should check whether they are adequate. Such an approach will allow achieving much more efficient water management at enterprises, as well as will make it possible to improve the country's performance in the context of achieving sustainable development goals.

It is worth noting that many countries are introducing the use of ESG criteria into their regulatory frameworks, requiring their companies to interact with them in one way or another to display information related to sustainable development in their reporting. For example, Implementing and Delegated Acts on Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector (Text with EEA relevance) (2021) requires financial institutions to disclose how they integrate ESG factors into their investment policies and decision-making. In the UK, the UK Corporate Governance Code (2024) was the legislative act responsible for this: it described the provisions relating to ESG risk management, which were periodically updated depending on the situation in the country. It is worth noting, however, that in January 2024, all references to ESG were removed from this act. Thus, after the changes come into force in 2025, ESG criteria will no longer be taken into account by companies when managing their businesses in the UK. There is also an initiative from the United Nations called the UN Principles for Responsible Investment, which provides guidance to investors on how to incorporate ESG factors into their investment decisions and, in general, promotes them by suggesting their implementation in different countries.

There are no legislative acts in Azerbaijan that would describe the specifics of using ESG criteria or force companies to do so. Nevertheless, there are some regulations that describe the principles of achieving sustainable development goals. These include Law of the Republic of Azerbaijan No. 80 "On Nature Protection and Nature Management" (1992), Law of the Republic of Azerbaijan No. 1175-VQ "On Environmental Impact Assessment" (2018); laws related to increasing the efficiency of public administration; as well as a set of laws to support vulnerable groups of the population, for example, Law of the Republic of Azerbaijan No. 360-IQ "On the Protection of Public Health" (1997). Nevertheless, these legislative acts are not related to the formation of the principles of reporting according to ESG criteria.

As can be seen from the above analysis, not all countries are actively implementing mandatory implementation of ESG criteria in their countries, despite the fact that many create their own alternatives to them. Nevertheless, Azerbaijan currently does not have any principles for this type of reporting in general: in this regard, it is worth considering the possibility of implementation.

The implementation of ESG approaches can be approached through several integrated steps aimed at ensuring effective and sustainable water management. A good place to start is by developing a comprehensive water management plan, which should include an assessment of current water use, setting measurable goals and creating supportive policies. It is important to conduct a thorough analysis of current water use within the organization to identify areas of high consumption and potential inefficiencies. Clear and achievable targets for reducing water use, improving efficiency and minimizing waste should also be set: these should be specific, measurable, achievable, relevant and time-bound. Company policies should support sustainable water use practices: they should include water conservation guidelines, equipment maintenance protocols, and procedures for quickly fixing leaks and other problems (Khumarova & Mahats, 2023).

An important component of the process of implementing such criteria is the training of high-quality personnel: the training process should be multifaceted, and in cooperation with other organizations to share experience and obtain better results at the end of the training process. At the same time, it is worth pursuing a policy whereby any actions of the company's employees aimed at improving the quality of water management will be encouraged in every possible way. Stakeholders should be regularly informed about the progress of water management initiatives through reports, meetings and internal communications. A separate component in this process is the use of the latest technologies. By using smart sensors to obtain real-time data, it is possible to achieve much better results in managing the main processes at one's enterprise. In addition, the data obtained can help identify patterns, detect leaks and optimize water use. It is also worth investing in technologies that recycle and reuse water within the organization to reduce the need for fresh water, and thus reduce its consumption in general. Old and inefficient equipment should be replaced with modern water-saving alternatives, such as low-flow faucets and irrigation systems (Shuka *et al.*, 2011). Other sources of water can also be used, such as treated rainwater.

In terms of regulations, it is worth ensuring that the company not only meets but exceeds regulatory standards by implementing best practices and conducting regular audits and reviews, and adopting industry best practices for water management, which may include advanced treatment processes, pollution prevention measures and sustainable landscaping. It is also worth

conducting regular audits and reviews of water management practices to ensure compliance and identify opportunities for improvement. Publishing regular sustainability reports detailing water management efforts, achievements and future plans can build trust among stakeholders, and it is also effective to consider hiring third-party auditors to review water management practices and provide an objective assessment of the company's performance.

Thus, in today's environment, the use of reporting related not only to the financial results of companies, but also to their success in achieving sustainable development goals remains even more important. This is due to all the benefits it can bring to companies, society, and the state. The study paid special attention to the use of ESG criteria for water management, as this is a very important part of achieving sustainable development goals in Azerbaijan. However, it is worth noting that at the moment, although steps are being taken in the country to introduce the use of such criteria, it has not yet been widely applied. In this regard, the state authorities should facilitate this by either forming an appropriate regulatory framework or by any other means.

EVALUATION OF THE RESULTS OBTAINED VIA GLOBAL APPROACHES

The impact of ESG practices on corporate finance was studied by S. Kim and Z.F. Li (2021). They wrote that the impact of ESG factors was generally positive, despite the difficulties encountered in the assessment process. For example, higher overall ESG scores are associated with higher profitability, especially for companies with larger total assets. With regard to credit risk, it turned out that all ESG factors have an impact on a company's credit ratings. However, this impact can vary significantly depending on certain company indicators, such as its size, industry. The effectiveness of ESG was confirmed in the study by N. Engelhardt *et al.* (2021). The researchers showed that during the COVID-19 pandemic, companies with higher ESG ratings demonstrated better stock performance, higher abnormal returns, and lower idiosyncratic volatility. In this regard, they concluded that for companies, investing in corporate social responsibility pays off in terms of share price performance, making them more resilient in times of market uncertainty. From an investor's perspective, the quality of corporate social responsibility is crucial, especially in countries with low levels of trust or in countries with weaker security regulations and disclosure standards. However, given the short evaluation period, more research in this area is worthwhile in the future. The current study also concluded that the use of ESG criteria in a country can lead to significant positive development results for both the economy as a whole and the economy as a whole. In addition, it has a positive effect due to the fact that it allows achieving better results in the social sphere, as well as in the context of environmental protection.

In this regard, the use of such criteria remains important for ensuring more rapid economic development.

The modern role of ESG ratings was considered in the study by S. Abhayawansa and S. Tyagi (2021). The researchers noted that the role of these ratings in the context of financial analysis is expected to increase in the future. This growth may be accompanied by regulation of ESG disclosure, as well as their more active use in investment processes. Nevertheless, according to scientists, this will not resolve the difficulties that are currently observed in the context of the use of these ratings. M.H. Shakily (2021) examined how ESG affects a company's financial risks. Based on quantitative data from 2010 to 2018, the researcher described that the use of indicators can reduce financial risks for oil and gas companies in the long term. In this regard, it can be concluded that investors in general should pay attention to the results of ESG assessments when making their own investment decisions. The current study did not conduct such an assessment; however, it also concluded that investors should pay attention to ESG assessments prepared by certain companies. There are several reasons for this: such companies are generally more responsible in their approach to business and therefore more likely to succeed in the long term. In addition, government authorities often have a better attitude towards them due to their focus on sustainability: this also contributes to their financial stability. In this regard, investors should indeed pay attention to ESG criteria when selecting investment targets.

M.O. Yebenes (2024) also assessed the peculiarities of ESG assessment in his study. The scientist noted that their emergence is generally associated with the evolution of financial accounting, aimed at standardizing the assessment of companies' activities in different countries. The long regulatory process has increased the transparency and consistency of financial reporting, but this is not currently the case in sustainability reporting. Although ESG remains a generally effective form of reporting at the moment, it is not ideal or uniform. Nevertheless, the researcher believes that this approach is quite effective, and, therefore, he recommends that investors use it when making their investment decisions. The current study also noted that one of the important components of ESG criteria is the possibility of their reuse by stakeholders, including investors. They may be interested in investing only in those companies that are committed to achieving sustainable development goals, trying to have as little negative impact on the environment and society as possible. In this regard, the application of ESG criteria remains relevant in Azerbaijan as well: their implementation could help attract foreign investors and thus create new conditions for the development of companies and entire industries. Thus, the formation of a unified legislative framework that would create conditions for the application of this concept may also be relevant.

The need to use ESG approaches for small and medium-sized enterprises (SMEs) was described by M. Evangelos *et al.* (2023). Based on their research, the authors proposed to develop a decision support system specifically designed for SMEs to guide them in prioritizing ESG requirements, formulating strategies and aligning operations with ESG criteria. The researchers believe that this system, with the necessary improvements, can serve as a valuable tool for SMEs to effectively report on ESG results. The current study did not pay much attention to the use of these criteria by SMEs. Nevertheless, it is worth noting that this can be effective both in the context of achieving sustainable development goals and the functioning of such companies. However, it should be borne in mind that this can be problematic for SMEs, as the application and use of ESG criteria are costly for companies, and therefore not all SMEs can afford it.

CONCLUSIONS

Thus, the study has shown that the integration of ESG criteria into business practices represents an important shift towards achieving long-term sustainability and social responsibility. The use of this approach helps to improve the efficiency of enterprises in various areas, allowing them to achieve sustainable development goals more efficiently. While financial transparency and ethical governance are equally important components of ESG criteria (ensuring that companies are not only financially sound, but also operate with integrity and responsibility, building the trust of investors, stakeholders and the wider community), their implementation often has other objectives.

Water management, a critical element of sustainable development, is especially important for countries in the Caucasus-Caspian and Central Asian regions that

are affected by climate change and disruptions to regional water cycles, such as Azerbaijan, which can benefit significantly from the application of ESG principles. Efficient water use, modern irrigation technologies, wastewater recycling and reduction of leaks in urban infrastructure are all areas where ESG criteria can lead to significant improvements. The study concluded that companies that excel in these areas are likely to attract more investment, thereby increasing their competitiveness in the marketplace and contributing to broader sustainability goals. The study also described an approach to implementing ESG criteria at Azerbaijani enterprises based on international approaches, as well as opportunities to improve the quality of water management.

This paper has shown that some countries around the world have adopted ESG at the national level, primarily EU member states. Nevertheless, the fact that the UK refuses to further use these approaches may indicate that there are alternative options, probably better than ESG, which is why some countries are ready to use them or develop their own. Azerbaijan does not currently have a regulatory framework for the use of these criteria, but its formation should be an important part of the country's future development, maintaining the ecological balance, and protecting water and soil. It is promising for further research to formulate proposals and approaches to the use of ESG approaches for the management of other components of resources that affect environmental sustainability, in addition to water.

ACKNOWLEDGEMENTS

None.

CONFLICT OF INTEREST

None.

REFERENCES

- [1] Abhayawansa, S., & Tyagi, S. (2021). Sustainable investing: The black box of environmental, social and governance (ESG) ratings. *Journal of Wealth Management*. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3777674.
- [2] Adamkulova, C., & Aitbaev, Z. (2024). Ensuring climate resilience in Central Asia through the establishment of a water management education program. *Journal of Water and Climate Change*, 15(4), 1551-1564. doi: 10.2166/wcc.2023.560.
- [3] Alakbarov, U., Habibova, Z., & Rahimli, R. (2020). The role of human resources in comprehensive regional sustainable development: The case of Azerbaijan. *International Journal of Economics and Financial Issues*, 10(3), 79-82. doi: 10.32479/ijefi.9303.
- [4] Barbosa, A.D., Silva, M.C., Silva, L.B., Morioka, S.N., & Souza, V.F. (2023). Integration of Environmental, Social, and Governance (ESG) criteria: Their impacts on corporate sustainability performance. *Humanities and Social Sciences Communications*, 10, article number 410. doi: 10.1057/s41599-023-01919-0.
- [5] Chen, L., Zhang, L., Huang, J., Xiao, H., & Zhou, Z. (2021). Social responsibility portfolio optimization incorporating ESG criteria. *Journal of Management Science and Engineering*, 6(1), 75-85. doi: 10.1016/j.jmse.2021.02.005.
- [6] Chen, Y., & Li, Y. (2024). Institutional investors' distraction and audit fees: The mediating effect of ESG rating disagreement. *Scientific Bulletin of Mukachevo State University. Series "Economics"*, 11(2), 102-115. doi: 10.52566/msu-econ2.2024.102.
- [7] Engelhardt, N., Ekkenga, J., & Posch, P. (2021). ESG ratings and stock performance during the COVID-19 crisis. *Sustainability*, 13(3), article number 7133. doi: 10.3390/su13137133.

- [8] EU Taxonomy Navigator. (2024). Retrieved from <https://ec.europa.eu/sustainable-finance-taxonomy/>.
- [9] Evangelos, M., Haseena, A.K., & Hamdan, A.Q. (2023). A decision support system architecture for the development and implementation of ESG strategies at SMEs. *Intelligent Human Systems Integration*, 69, 905-915. doi: 10.54941/ahfe1002916.
- [10] FTSE ESG Index Series. (2024). Retrieved from <https://www.lseg.com/en/ftse-russell/indices/esg>.
- [11] Implementing and Delegated Acts on Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector (Text with EEA relevance). (2021). Retrieved from https://finance.ec.europa.eu/document/download/1cd7f834-cae1-4245-aff0-7fe6d9740563_en?filename=sfdr-level-2-measures-full_en.pdf.
- [12] Juknytė-Petreikienė, I., Dafoulas, G., & Bayramova, G. (2019). *Challenges to implement European quality assurance standards (ESG) in Azerbaijan universities*. In *International scientific – practical conference dedicated to the 96th birthday anniversary of Nationwide Leader Heydar Aliyev* (pp. 69-76). Baku: Baku Biznes University Press.
- [13] Khumarova, N., & Mahats, N. (2023). Implementation of the conceptual principles of business social responsibility in ensuring rational water use. *Economic Forum*, 13(1), 8-17. doi: 10.36910/6775-2308-8559-2023-1-2.
- [14] Kim, S., & Li, Z.F. (2021). Understanding the impact of ESG practices in corporate finance. *Sustainability*, 13(7), article number 3746. doi: 10.3390/su13073746.
- [15] Law of the Republic of Azerbaijan No. 1175-VQ “On Environmental Impact Assessment”. (2018, June). Retrieved from https://online.zakon.az/Document/?doc_id=32705380&show_di=1.
- [16] Law of the Republic of Azerbaijan No. 360-IQ “On the Protection of Public Health”. (1997, June). https://base.spinform.ru/show_doc.fwx?rgn=5809.
- [17] Law of the Republic of Azerbaijan No. 80 “On Nature Protection and Nature Management”. (1992, February). Retrieved from <https://faolex.fao.org/docs/pdf/aze32661R.pdf>.
- [18] Maiti, M. (2021). Is ESG the succeeding risk factor? *Journal of Sustainable Finance & Investment*, 11(3), 199-213. doi: 10.1080/20430795.2020.1723380.
- [19] Park, S.R., & Jang, J.Y. (2021). The impact of ESG management on investment decision: Institutional investors’ perceptions of country-specific ESG criteria. *International Journal of Financial Studies*, 9(3), article number 48. doi: 10.3390/ijfs9030048.
- [20] Rau, P.R., & Yu, T. (2024). A survey on ESG: Investors, institutions and firms. *China Finance Review International*, 14(1), 3-33. doi: 10.1108/CFRI-12-2022-0260.
- [21] Salerno, D. (2021). ESG criteria in alternative investments. In *The evolution of sustainable investments and finance* (pp. 59-99). Cham: Palgrave Macmillan. doi: 10.1007/978-3-030-70350-9_2.
- [22] Shakily, M.H. (2021). Environmental, social and governance performance and financial risk: Moderating role of ESG controversies and board gender diversity. *Resources Policy*, 72, article number 102144. doi: 10.1016/j.resourpol.2021.102144.
- [23] Shuka, L., Çullaj, A., Shumka, S., Miho, A., Duka, S., & Bachofen, R. (2011). The spatial and temporal variability of limnological properties of Bovilla reservoir (Albania). *Water Resources Management*, 25, 3027-3039. doi: 10.1007/s11269-011-9788-z.
- [24] Stanislavsky, O., & Zamlynskyi, V. (2023). Sustainability of business development in strategic management. *Innovation and Sustainability*, 3(1), 230-238. doi: 10.31649/ins.2023.1.230.238.
- [25] Sustainable Development Report 2022 – GRI Content Index. (2024). Retrieved from <https://www.msc.com/ru/sustainability/gri-content-index>.
- [26] UK Corporate Governance Code. (2024). Retrieved from <https://www.frc.org.uk/library/standards-codes-policy/corporate-governance/uk-corporate-governance-code/>.
- [27] Vannoni, V., & Ciotti, E. (2020). Esg or not Esg? A benchmarking analysis. *International Journal of Business and Management*, 15(8), 152-161. doi: 10.5539/ijbm.v15n8p152.
- [28] Yasin, H.M., Zeebaree, S.R., Sadeeq, M.A., Ameen, S.Y., Ibrahim, I.M., Zebari, R.R., Ibrahim, R.K., & Sallow, A.B. (2021). IoT and ICT based smart water management, monitoring and controlling system: A review. *Asian Journal of Research in Computer Science*, 8(2), 42-56. doi: 10.9734/ajrcos/2021/v8i230198.
- [29] Yebenes, M.O. (2024). Climate change, ESG criteria and recent regulation: Challenges and opportunities. *Eurasian Economic Review*, 14, 87-120. doi: 10.1007/s40822-023-00251-x.

Впровадження ESG-критеріїв: інтеграція екологічних, соціальних та управлінських критеріїв компаній в управлінні водних ресурсів

Юсіф Гусейнов

Кандидат політичних наук, викладач
Академія державного управління при президенті Азербайджанської Республіки
AZ1001, вул. Лермонтова, 74, м. Баку, Азербайджан
<https://orcid.org/0000-0003-4846-8975>

Джавід Гусейнлі

Аспірант, викладач
Академія державного управління при президенті Азербайджанської Республіки
AZ1001, вул. Лермонтова, 74, м. Баку, Азербайджан
<https://orcid.org/0009-0006-0400-9071>

Нурзат Тотубаєва

Кандидат біологічних наук, доцент
Киргизько-Турецький університет "Манас"
720044, просп. Ч. Айтманова, 56, м. Бішкек, Киргизька Республіка
<https://orcid.org/0000-0002-5919-9363>

Мушфіг Гулієв

Доктор економічних наук, професор
Азербайджанський державний економічний університет
AZ1001, вул. Істіглаліят, 6, м. Баку, Азербайджан
<https://orcid.org/0000-0002-1104-5402>

Шовкат Мустафазада

Аспірант, провідний спеціаліст
Академія державного управління при президенті Азербайджанської Республіки
AZ1001, вул. Лермонтова, 74, м. Баку, Азербайджан
<https://orcid.org/0009-0007-2421-394X>

Анотація. У сучасних умовах досягнення цілей сталого розвитку є важливою складовою для будь-якої держави. У зв'язку з цим, знаходження нових можливостей для поліпшення ситуації в контексті даної ситуації залишається актуальним. Метою цього дослідження стало знайти можливість використовувати Environmental, Social, Governance (ESG) критерії в компаніях, у яких важливою частиною функціонування є управління водними ресурсами. Основними методами в роботі стали формально-юридичний та прогнозування. У роботі досить детально було описано роль критеріїв ESG для досягнення різного роду цілей розвитку країни, а саме економічних, соціальних та екологічних. Використання цього підходу також дає змогу залучати більше інвестицій для підприємств, а отже, і забезпечувати більш стрімкий її розвиток. Крім того, в рамках дослідження було зроблено акцент на високій ролі управління водними ресурсами в Азербайджані, у зв'язку з чим у країні особливо важливим є впровадження ESG-критеріїв. У роботі також було показано, що у світі наразі існує тенденція, пов'язана з формуванням законодавчої бази в країнах, спрямованої на обов'язкове використання ESG-критеріїв для формування звітності підприємствами. Проте, подібне на правління не має активного розвитку в Азербайджані. У зв'язку з цим, у роботі описано деякі рекомендації з приводу формування впровадження такого роду державної політики. Крім того, у роботі було сформовано рекомендації щодо того, яким чином компанії мають використовувати впроваджені ESG-критерії та як їх варто формувати на основі міжнародних стандартів. Результати, отримані в рамках дослідження, формують уявлення про впровадження ESG-критеріїв як загалом, так і в контексті управління водними ресурсами

Ключові слова: сталий розвиток; управління водними ресурсами; державна політика; макроекономіка; використання критеріїв ESG у нормативно-правову базу
