https://doi.org/10.22306/al.v12i2.646 Received: 05 Nov. 2024; Revised: 30 Apr. 2025; Accepted: 05 June 2025

ESG reporting in the automotive industry

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Keywords: automotive industry, carbon footprint, energy transformation, ESG, non-financial reporting.
Abstract: The aim of the article is to discuss the reporting of environmental information regarding sustainable development and ESG regulations in automotive companies listed on the Warsaw Stock Exchange. The article presents the results of own research on the scope of disclosure of information on ESG reporting in the field of environmental information among 5 companies from the automotive sector listed on the Warsaw Stock Exchange in 2022-2023. The methodology was based on a review of the literature on the subject, legal acts and own research, in which non-financial reports of listed companies in the automotive sector concerning environmental information and indicators were used. The research problem addressed by the authors was to investigate whether automotive sector companies disclosed environmental information in the period prior to mandatory regulations in this area. The results of the research confirmed the authors' assumptions that these companies published such information. At the same time, the scope of information disclosed varied significantly between companies. According to the authors, the article adds value to the literature on the subject, especially in terms of the collection, presentation and discussion of source material. The information collected in the empirical chapter can be used, among other things, to compare the scope of environmental information disclosed by companies from Poland with companies from other countries in the automotive sector. The subject of the article can provide a basis for further detailed empirical research in this area.

1 Introduction

The term ESG (Environmental, Social, Governance) refers to issues related to the environment, social responsibility and corporate governance. It should be noted that these are key areas of information for a company's stakeholders and therefore often not possible to capture within a traditional financial report. On the one hand, the company's activities in these areas can generate significant risks, but on the other hand, they can generate significant benefits. In practice, ESG/sustainability reporting means that companies provide stakeholders with information on environmental, social, employee and corporate governance issues through so-called ESG reports. This type of reporting is an expression of contemporary changes related to the growing importance of the concept of sustainable development, but also the growing importance of ESG factors in investment decisions (sustainable finance).

The ESG concept and methodology defines the scope of non-financial reporting to which a growing group of European companies is committed, estimated at around 50,000 companies from 2026 onwards. ESG defines specific areas and risk groups that should be included in a non-financial report. The main EU legal acts that form the regulatory context for the ESG concept include:

- Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088 (EU L 198).
- 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 (Official Journal of the EU L 317).
- Directive (EU) 2022/2464 of the European Parliament and of the Council of 14 December 2022 amending Regulation (EU) No 537/2014, Directive 2004/109/EC, Directive 2006/43/EC and Directive 2013/34/EU as regards company sustainability reporting (Official Journal of the EU L 322).
- European sustainability reporting standards.

In addition, it should also be noted that the EU taxonomy emphasises six environmental objectives, the achievement of which allows for the assessment of economic activity as sustainable [1]):

- Mitigation of climate change (reduction of greenhouse gas emissions),
- Adaptation to climate change (offsetting the harmful effects of climate change on people and nature),
- Protection of water and marine resources,
- Transition to a circular economy,
- Pollution prevention,
- Protection of ecosystems and biodiversity.

The main objectives of the article include an introduction to the concept of sustainable development and ESG reporting, including in particular the issue of environmental reporting by companies from the automotive sector listed on the Warsaw Stock Exchange. The research methodology was based on a review of the literature on the subject, legal acts and the authors' own research, which used non-financial reports of listed companies in the automotive sector containing environmental information and key indicators. The main research problem addressed by the authors was to examine whether automotive companies disclosed environmental information in the period prior to mandatory regulations in this area, and therefore the study was conducted to determine whether these companies reported environmental information before 1 January 2024 and what the scope of these disclosures was (satisfactory or unsatisfactory).

2 Literature review

The environment plays a key role in the functioning and development of companies. It can be said that companies consciously taking co-responsibility for the state of the environment has become a key issue in today's world. Companies should strive to significantly reduce their direct negative impact on the environment by optimising the social and environmental benefits of using modern and environmentally friendly technical and technological solutions. Companies that operate in this way are perceived as socially responsible [2]. According to data from a report by the auditing firm KPMG [3], nearly 76% of the G250 companies surveyed included environmental information in their ESG reports, despite, among other things, the lack of mandatory regulations in this area before 2024. According to Shimshack, disclosures must be very carefully designed to take into account the psychological and behavioural realities of how users react to information. Disclosures must also be evaluated and adjusted ex-post to maximise their effectiveness and social efficiency. Environmental disclosure policies aimed at consumers and public regulators may have a better chance of achieving socially desirable outcomes than those aimed at company managers, investors and employees [4]. The truthfulness and reliability of the environmental information provided by companies, as well as information on the products manufactured or services provided, is also becoming a key issue. Therefore, it is important to audit this information, for example, in terms of greenwashing, i.e. dishonest practices used by companies to present themselves as implementing sustainable development principles by creating a false impression or providing misleading information about a product or service.

There are also very specific programmes in the European Union aimed at ensuring an even smoother transition to a greener economy. One of the most well-known initiatives in recent years is the adoption of the European Green Deal programme. Many proposed and existing programmes, but also EU policies, aim to achieve these environmental goals, even if they are not explicitly formulated in terms of the Sustainable Development Goals [5].

Sustainability reporting is becoming part of management reporting, which means increased responsibility for the company's management bodies in this reporting area. Sustainability reporting is the process of measuring, disclosing and being accountable to internal and external stakeholders for an organisation's sustainability performance [6]. As F. Rosati and L.G. Faria [7] voluntary disclosure of sustainability information in accordance with recognized standards, such as GRI, among others, may indicate that companies already have the skills and mindset necessary to include sustainability goals in their reports. On the other hand, it is also worth noting that many companies do not see sustainability policies as an important part of their financial and operational priorities [8].

The ESG report is the source of information about the company's activities in the field of sustainable development. The information contained in the report is addressed primarily to key stakeholders, such as investors, financial institutions, as well as customers. The ESG reporting obligation applies to:

- from 2024 - large public entities and companies with more than 500 employees and meeting 1 of 2 financial criteria: balance sheet total above 20 million euros and/or revenues above 40 million euros;
- in 2025 - all large companies (including private companies) meeting 2 of 3 criteria: employment of more than 250 employees in a given tax year; balance sheet total above 25 million euros and/or annual revenue above 50 million euros;
- in 2026 - small and medium-sized enterprises (SMEs), with the possibility of postponing data collection and reporting until 2028 and 2029 respectively, meeting 2 of the 3 criteria: Average number of employees in the fiscal year is more than 10; balance sheet total is more than 350.000 EUR and/or revenue is more than 700.000 EUR.

ESG regulations can contribute to better energy management and reduce fuel and electricity consumption within a company. For many industries, the area of environmental reporting seems to be key among ESG indicators. In this area, the most important issue is the entity's impact on the environment and the potential challenges that environmental issues may pose to the company. The scope of reporting in this area mainly concerns: greenhouse gas emissions, greenhouse gas emission intensity, energy consumption and sources, environmental policies. Climate change reporting is suggested as a mechanism to mitigate the impact of companies on climate change, in particular carbon dioxide emissions [9].

Figure 1 shows the evolution of ESG reporting in Poland from 2009 to 2023.

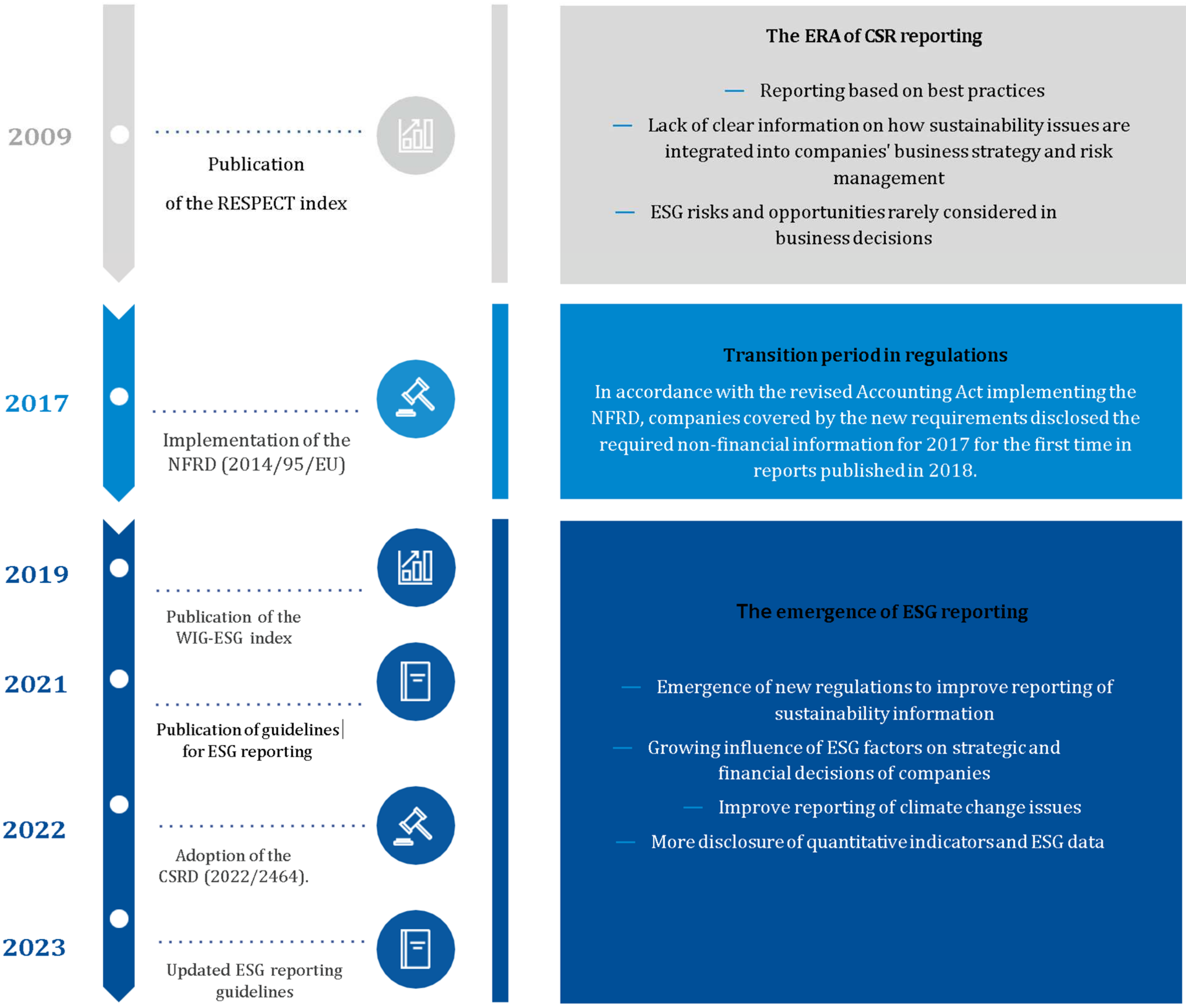

Figure 1 Evolution of ESG reporting in Poland 2009-2023

Modern companies must include ESG factors in their strategies to drive sustainable production processes [10]. This emphasises the need for a sustainability approach that is compliant with regulations and can take into account the changing values of consumers and stakeholders [11]. Studies conducted in the USA indicate a growing number of companies from various sectors, including the automotive sector, in terms of increasing company spending on improving their ESG aspects and activities and making these efforts public through ESG reporting, e.g. More than 90% of the companies in the S&P 500 index publish ESG reports in some forms, as do around 70% of the companies in the Russell index [12]. Research results are also available, which indicate the quality of ESG reporting in public companies in the EU (via the ESG index) and its impact on the market capitalisation of these companies. The authors of the study found that 50% of companies listed on stock exchanges in old EU member states and only 5% of companies in new EU member states reported ESG indices in any year of the study period [13].

The usefulness of non-financial information for the recipients of information generated by the business sector, but also by the public sector, remains an important and current issue. On the one hand, more and more attention is being paid to the fact of 'information overload', while on the other hand, it is pointed out that the information is still insufficient for a proper assessment of the entity's performance [14].

ESG reporting is also influenced by problems related to environmental quality and the formulation of problems from the perspective of various stakeholders [15]:

- industry stakeholders, whose primary objective is usually economic optimization within environmental regulation standards;
- communities, which seek to balance socioeconomic welfare through access to jobs while reducing associated environmental contaminants;
- more affluent communities, which would rather have polluting industries re-moved or distanced

from their communities to optimize environmental quality and public health;
- government agencies, whose primary objective is to administer regulations at the nexus of these competing demands.

The key aspect is also the identification of risks, conducting an audit and implementing standardised regulations for reporting ESG information, which can be presented as follows [16]:

1) reporting companies:

- increasing stakeholder engagement to improve risk recognition,
- improvement of risk management and risk reporting, including the presentation of uncertainties at different levels (economic policy uncertainty, business uncertainty, accounting uncertainty, audit uncertainty, ESG performance uncertainty and ESG certainty),
- improvement of results-based reporting, avoidance of standardised disclosures and jargon,
- increasing stakeholder trust through internal and external audit mechanisms,
- improving ethical approaches by prohibiting fraud and greenwashing;

2) controllers (regulators, auditors and creditors):

- increasing monitoring activities to improve the quality of reports in terms of disclosing the impact of uncertainty at different levels of its impact on responsibility,
- ensuring the effectiveness of audit mechanisms;

3) regulators:

- building risk-specific strategies into reporting standards in uncertain times, ensuring that measurement uncertainty issues are properly identified, resolved and verified (by taking into account the impact of uncertainty at different levels of its impact on responsibility).

What is also important is that, according to stakeholder theory, companies should priorities the priorities of each stakeholder involved in the company, not just the priorities of the owners or investors [17].

3 Key environmental indicators of ESG reporting

Regulatory changes have contributed to the growing demand from stakeholders for information and indicators that allow them to assess how companies manage climate-related issues, but also the impact of the company on the environment. As indicated in the literature on the subject, the most common framework for measuring companies' sustainability performance to date is the environmental, social and governance (ESG) perspective [18].

ESG criteria have become key indicators of management competence, risk management and non-financial performance. Furthermore, in contrast to the concepts of Corporate Social Performance (CSP) or Corporate Social Responsibility (CSR), ESG explicitly covers a wide range of issues relating to the environment (e.g. climate change), social responsibility (e.g. employee welfare) and governance (e.g. independence of the board of directors) [19].

Table 1 shows the environmental indicators of ESG reporting in terms of their compliance with EU regulations and other reporting frameworks. The following list of indicators includes the environmental indicators proposed by the Warsaw Stock Exchange in the publication ‘Guidelines for ESG Reporting. A Guide for Companies’ (European Bank for Reconstruction and Development & GWP in Warsaw, 2023), which are used by automotive companies that are the subject of the empirical chapter on environmental reporting when initiating communication on ESG issues with the market environment. The recommended indicators have been prepared based on relevant regulations such as CSRD and ESRS, as well as the Best Practices of WSE Listed Companies (DPNS2021). In addition, to meet the growing data needs of investors, they have also been aligned with the mandatory PAI indicators for investments in companies required by SFDR. It should be emphasised that the Guidelines do not contain an exhaustive list of indicators and topics. Rather, they aim to provide companies with a basic set of selected indicators to help them prepare for the upcoming CSRD and ESRS requirements and better meet investors' ESG data needs.

Table 1 Relevant environmental indicators of ESG reporting

Indicator	Type of indicator (expressed in units of measurement or descriptive)	Alignment with EU regulations		Alignment with other reporting framework
		European Sustainability Reporting Standards	Sustainable Finance Disclosure Regulation	Global Reporting Initiative
Environmental indicators directly linked to climate change:				
E-P1 Managing climate change issues	Descriptive	YES	NO	YES
E-P2 Greenhouse gas emissions	Tons of CO_2 eq.	YES	YES	YES

E-P3 Intensity of greenhouse gas emissions greenhouse gases	CO2 eq. tons/revenue	YES	YES	YES
E-P4 Energy consumption and its sources	MWh	YES	YES	YES
Environmental indicators on environmental issues other than climate change:				
E-P5 Environmental policy	Policy description	YES	NO	YES
E-D1 Water consumption	m^3	YES	NO	YES
E-D2 Water resources management	Descriptive	YES	NO	YES
E-D3 Impact on biodiversity	Descriptive	YES	YES	YES
E-D5 Waste management	Descriptive	YES	-	YES

Source: author's work based on International Foundation for Valuing Impacts [20].

Table 2 presents the Environmental Indicators related to climate change, in terms of ESG reporting, and synthesizes the definition of each indicator and the minima of information disclosure.

Table 2 Synthesizes the key disclosures for the indicators presented

Environmental indicators directly linked to climate change:		
Indicator	**Definition**	**The minimum disclosure applies to:**
E-P1 Managing climate change issues	In preparing climate-related disclosures, companies should make use of materials such as TCFD recommendations, ESRS standard E1 Climate Change and/or IFRS S2	Climate-related disclosures that provide detailed explanations for aspects such as governance, strategy, risk management, and targets and indicators.
E-P2 Greenhouse gas emissions	Greenhouse gas emissions represent the total sum of direct and indirect greenhouse gas emissions. They can be divided into Scope 1, Scope 2 and Scope 3 emissions.	• Methods and assumptions used in calculating emissions • Scope 1, 2, and 3 emissions (if relevant) for the last 3 years to allow evaluation of the trend over time • A relevant explanation if there has been a significant change in the value of the issue (both increase and decrease). • It is recommended that companies use international standards for calculating and disclosing greenhouse gas emissions, such as the GHG Protocol or the ISO 14064-1:2018 standard.
E-P3 Intensity of greenhouse gas emissions greenhouse gases	Greenhouse gas intensity is the amount of greenhouse gas emissions per unit of economic activity.	• Methods and assumptions used in the calculations. • The ratio of greenhouse gas emissions intensity to revenue.
E-P4 Energy consumption and its sources	Energy consumption is the total amount of energy used in an organization. It includes both energy purchased from suppliers and generated internally.	• Methods and assumptions used in calculating energy consumption. • Total energy consumption in the organization (in MWh).

		• Percentage (%) of energy consumed by energy type (i.e., renewable and non-renewable sources, energy).
Environmental indicators directly linked to climate change:		
Indicator	**Definition**	**The minimum disclosure applies to:**
E-P5 Environmental policy	An environmental policy is a formal document that sets out a company's commitments and approach to managing environmental aspects	• Has the company adopted an environmental policy • Compliance with relevant environmental laws and regulations • Commitment to manage and mitigate adverse environmental impacts • Implementation of a management system for environmental issues • Monitoring of results • The company's expectations of suppliers and business partners in managing environmental issues.
E-D1 Water consumption	Water consumption means the total amount (in m3) of water used in the enterprise.	• The total amount of water used in the enterprise (in m^3). • Percentage of water recycled and reused in relation to total water withdrawal
E-D2 Water resources management	Water stewardship refers to the process a company has implemented to optimize water consumption and thereby minimize its environmental impact. It includes measures to reduce water consumption, increase water circulation (through reuse and recycling) and conserve water resources.	• Whether the company has adopted and implemented a water management program and what activities comprise it • Companies operating in water-scarce areas should also disclose how they are identifying and mitigating the associated risks.
E-D3 Impact on biodiversity	Biodiversity, according to the United Nations Convention on Biological Diversity, is defined as “a term for the diversity of life forms on Earth in their natural shape and form.” It includes species, genetic and ecosystem diversity.	• Does the company's operations negatively impact biodiversity (directly or indirectly through the supply chain) and what are the main reasons for this. • Has the company implemented a policy to protect and restore biodiversity and counter deforestation, and does it extend to suppliers.
E-D5 Waste management	Waste management refers to a range of activities to monitor, manage and reduce waste (including reuse or recycling) generated within a company.	• Amount of hazardous waste and other waste produced (in tons). • Percentage of waste (%) by disposal method (e.g., recycled, landfilled). • A description of the measures taken to manage waste and comply with relevant regulations.

Source: author’s work based on International Foundation for Valuing Impacts [20].

Companies that disclose ESG information currently use various reporting standards and frameworks, which usually include both qualitative and quantitative information. Ongoing qualitative disclosures focus on sustainability, core values and net zero goals and commitments to show how these factors create value for both shareholders and stakeholders. The quantitative information disclosed on an ongoing basis includes the indicators used for reporting and measurement, progress towards the objectives set out in the qualitative information, safety data, energy used in production, water management data, and data on air quality and greenhouse gases and energy, including scope 1, 2 and 3 greenhouse gas emissions.

4 Results and discussion

In the empirical chapter, the authors analysed 5 automotive companies listed on the Warsaw Stock

Exchange to determine whether and to what extent they disclosed ESG information in 2022-2023. In their reports, company managers emphasise their awareness of the environmental impact of their activities. The main measures taken by companies to reduce greenhouse gas emissions include the development of a climate policy, the creation of a green product range to attract customers, and the strengthening of the transparency of ESG policies.

Table 3 presents the basic financial data describing the economic and financial potential of the analysed companies, which is important due to the impact of these entities on the environment in the scope of their operations.

Table 3 Important financial data characterising the analysed companies for 2022-2023

Company	Year's	Sales revenues (in thousands of PLN)	EBITDA (in thousands of PLN)	Balance sheet total (in thousands of PLN)
Auto Partner SA	2022	2 834 701	314 218	1 570 282
	2023	3 653 384	346 228	1 793 923
Inter Cars SA	2022	15 285 101	1 197 208	8 034 046
	2023	18 030 309	1 217 522	9 271 136
Tire Company Dębica SA	2022	3 277 965	175 181	2 214 744
	2023	2 992 411	419 830	2 430 966
Sanok Rubber Company SA	2022	1 445 601	150 348	1 029 794
	2023	1 446 378	138 930	1 204 752
Wielton SA	2022	3 433 366	203 040	2 104 817
	2023	3 225 223	206 580	2 002 354

Source: author's work based on the financial statements of the analysed companies, data available on their websites [21-25].

Table 4 presents, in summary, the results of the authors' research on the reporting by the companies in the research sample of the value of environmental indicators directly related to climate change (E-P1 - E-P4).

Table 4 Values of environmental indicators directly related to climate change reported by companies in the survey sample

Company	Year's	E-P1 Managing climate change issues	E-P2 Greenhouse gas emissions CO_2 eq. tons / revenue	E-P3 Intensity of greenhouse gas emissions greenhouse gases	E-P4 Energy consumption and its sources MWh or GJ or BTU
Auto Partner SA	2022	YES	-	-	-
	2023	YES	-	-	-
Inter Cars SA	2022	YES	1 524 017	8,869	80 098 (GJ)
	2023	YES	1 696 548	8,611	70 247 (GJ)
Tire Company Dębica SA	2022	YES	37 000	-	5 769 (BTU)
	2023	YES	33 000	-	6 118 (BTU)
Sanok Rubber Company SA	2022	YES	39 715 235	-	487 515 (GJ)
	2023	YES	38 426 333	-	471 138 (GJ)
Wielton SA	2022	YES	374 463	16,2	215 737 (GJ)
	2023	YES	411 685	19,8	181 033 (GJ)

Source: author's work based on the ESG report of the analysed companies, data available on their websites [26-30].

In terms of disclosures regarding the management of climate change issues (E-P1), each of the companies indicated that the company's management boards take such actions internally. From the information available on websites and in the ESG reports of the companies analysed, it is possible to find statements from the management boards that managers are aware of the impact of the companies' activities on the climate, as well as the impact of climate change risks themselves on the companies' activities. Managers emphasise that they have a good understanding of stakeholders' expectations regarding the reporting of the company's environmental impact. Managers consider climate risk management to be a key element of strategic management. Company management indicates that climate-related risks are analysed in terms of both the impact of climate change on operations (business as usual) and the impact of business on climate change. Company management indicates that they are intensifying their efforts to meet regulatory requirements, including the EU Taxonomy.

In terms of greenhouse gas emissions disclosure (E-P2), only 4 out of 5 companies analysed made full disclosures for the years 2022-2023. In the case of Inter Cars SA and Wielton SA, an increase in emissions was noticeable. From the available information provided by the management boards of the companies, a number of activities that the companies undertook to reduce CO_2 emissions should be pointed out. The main activities include, among others, reducing energy and water consumption and new energy-saving investments. The reports provide information that Inter Cars SA, Tire Company Dębica SA, Sanok Rubber Company SA and Wielton SA have actively and consciously taken steps to implement the carbon footprint calculation standard.

When it comes to reporting information on greenhouse gas emission intensity (E-P3), only two companies (Inter Cars SA and Wielton SA) have disclosed full data for 2022-2023. The companies have also indicated that they will increase the share of renewable energy sources in the future. It is worrying that the other companies do not have emission data in this regard. Nevertheless, it should be noted that they were not obliged to do so during the period for which the analysis was carried out.

Regarding the scope of disclosures related to energy consumption information (E-P4), only 4 companies disclosed full information in the analysed period. In most cases, there was a decrease in energy consumption in the analysed period. This should be considered a positive aspect of the energy consumption reduction strategies implemented in these companies, among other things. With regard to Autopartner SA, although the management boards of these companies indicate that they are trying to reduce energy consumption, there is a lack of hard figures confirming this fact.

Table 5 shows, in summary, the authors' findings on the reporting of environmental information on other environmental issues by the companies in the research sample (E-P5, E-D1, E-D2, E-D3, E-D5).

Table 5 Values of environmental indicators regarding other environmental issues

Company	**Year's**	**E-P5** Environmental policy	**E-D1** Water consumption	**E-D2** Water resources management	**E-D3** Impact on biodiversity	**E-D5** Waste management
Auto Partner SA	2022	✓	-	✓	✓	✓
	2023	✓	-	✓	✓	✓
Inter Cars SA	2022	✓	62 152	✓	✓	✓
	2023	✓	65 654	✓	✓	✓
Tire Company Dębica SA	2022	✓	-	✓	✓	✓
	2023	✓	-	✓	✓	✓
Sanok Rubber Company SA	2022	✓	336 160	✓	✓	✓
	2023	✓	325 822	✓	✓	✓
Wielton SA	2022	✓	53 938	✓	✓	✓
	2023	✓	103 081	✓	✓	✓

Source: author's work based on the ESG report of the analysed companies, data available on their websites [26-30].

With regard to the disclosure of environmental policy management (E-P5), the management of each company indicated that it had implemented such a policy. The management boards indicate that it is implemented primarily in order to meet the requirements related to environmental aspects, including legal regulations. The companies plan their development based on modern and environmentally friendly technologies. The management boards indicate that they minimise the negative impact on the environment, among others, through appropriate management in the areas of water and sewage management and air pollutant emissions, limiting the amount of waste generated. It should also be noted that criterion E-P5 is a descriptive criterion, and therefore it must be stated that the effects of the implemented strategies will only start to bring measurable benefits in a period longer than the scope of the analysed reports. Thus, the actual, measurable benefits should become apparent in the future. This information seems to be important, but it is difficult to verify at present.

Disclosures regarding water consumption (E-D1) are also important cognitive information. In the analysed sample, only 3 companies (Inter Cars SA, Sanok Rubber Company SA and Wielton SA) provided an estimate of their water consumption. In the case of the remaining companies, despite the fact that their ESG reports indicate that they follow the principle of conservation and that they monitor and optimise the consumption of water used for technological purposes on an ongoing basis, it is difficult to say unequivocally whether the described measures have actually translated into lower water consumption due to the lack of figures.

In terms of disclosures concerning water management (E-D2), each company indicated that it takes action in this area. The scope of activities described was at a general rather than a detailed level. For example, the management boards indicated that, following the principle of efficient resource management, they monitor and optimise the consumption of water used for technological purposes on an ongoing basis.

In terms of impact on biodiversity (E-D3), companies indicated that they are taking action in this area. Most companies in the research sample indicate in their ESG reports that they are actively working to preserve and develop biodiversity. Companies indicate that they are taking action to protect environmental resources. They implement a range of partnerships and their own projects to monitor, protect and develop ecosystems. The companies co-sponsor and cooperate with partners involved in nature conservation and ecology.

In the area of waste management (E-D5), company management indicated that it is taking action in this area.

Compliance with legal regulations regarding ESG reporting is also a key issue [31-33].

5 Conclusions

Reporting environmental information plays a key role for stakeholders today. A company's responsibility for the environment has become a key issue in today's world. As companies grow and expand, their impact on the environment becomes more and more significant.

The study conducted by the authors had a practical aspect of reporting environmental information by companies from the automotive sector listed on the Warsaw Stock Exchange. The study was conducted for the years 2022-2023 to determine whether automotive companies, despite the lack of mandatory regulations in the analysed period, nevertheless reported such data and whether or not the scope of disclosures was satisfactory for stakeholders. The companies in the research sample carried out ESG reporting in the analysed period.

It should be noted that the results of the research conducted in the empirical chapter indicate that the companies from the analysed research sample despite the lack of mandatory requirements for reporting environmental information and ESG indicators in 2022-2023, the vast majority of them presented such data in their non-financial reports, which should be considered a positive aspect. However, the scope of information, environmental indicators and the detail of descriptions varied.

In the case of the analysed reports, it should be noted that the scope of disclosures is at a satisfactory level. Often, in these companies' reports, despite indicating that the companies are, for example, reducing their energy and water consumption or greenhouse gas emissions, there was a lack of hard figures confirming these activities. Whether or not a company can be said to have a management approach depends on hard facts - often having environmental objectives in the adopted business strategy, developing a sustainable development strategy, assigning responsibility for sustainable development to the management board or holding management accountable.

The results of the analysis can be used by the reader to summarise the scope of disclosures in the reporting of environmental information by companies to the environment at a time when such disclosures were not mandatory. The results presented can also be used to compare the level of detail of these disclosures by companies from Poland with companies from the automotive sector from other countries.

Acknowledgement
This research has been financed by the subsidy granted by the University of Economics in Cracow (Program Potencjał nr 078/EFP/2022/POT).

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Review process

Single-blind peer review process.