



**Kaunas University of Technology**

School of Economic and Business

# **Research on Information Quality in Corporate Social and Environmental Reports**

Master's Final Degree Project

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**Kaunas, 2020**



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Accounting and Auditing (6211LX037)

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**Kaunas, 2020**



**Kaunas University of Technology**

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## **Research on Information Quality in Corporate Social and Environmental Reports**

### Declaration of Academic Integrity

I confirm that the final project of mine, Gabrielė Taparauskaitė, on the topic „Research on Information Quality in Corporate Social and Environmental Reports“ is written completely by myself; all the provided data and research results are correct and have been obtained honestly. None of the parts of this thesis have been plagiarised from any printed, Internet-based or otherwise recorded sources. All direct and indirect quotations from external resources are indicated in the list of references. No monetary funds (unless required by Law) have been paid to anyone for any contribution to this project.

I fully and completely understand that any discovery of any manifestations/case/facts of dishonesty inevitably results in me incurring a penalty according to the procedure(s) effective at Kaunas University of Technology.

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### **Summary**

During the research on information quality in Corporate social and environmental reports the members of the Lithuanian Responsible Business Association and their publicly available social and environmental reports were examined and the report quality index was determined. In addition, the quality of social and environmental information provided on the websites of LAVA members was examined. It has been found that more companies present social and environmental information on websites, but the information provided in the reports provides an overview of more criteria and is set out and analyzed in more detail. During the research, the analysis of LAVA companies determined which companies are required to submit social and environmental reports, and which companies can submit reports on a voluntary basis. The preparation of the report increases the confidence of stakeholders in the company's activities and allows the company to assess its weaknesses and strengths, identify emerging risks, manage them and create a long-term action plan for the company. It was established that all LAVA members who were required to submit reports submitted them. The study, using GRI standards in the social and environmental field and a qualitative research method, where each criterion is assigned a score based on the quality of the information provided, found that mandatory reports have a better quality of information than voluntary reports. This shows that mandatory reporting is more obligatory for companies to provide quality information in the social and environmental field and to review more areas that are relevant to the company.

Analyzing the data for 2017-2019, it was found that the quality of social and environmental information improves over time and companies pay more attention to the provision of quality information. Although the average quality of the reports was still found to be low, this indicator may have been affected by the disregard for the different areas of activity of the companies and the emphasis on criteria relevant to those companies, as all companies' social and environmental reports were assessed according to the same GRI standards. Lithuanian, European and worldwide governmental and non-governmental organizations contribute to the promotion of the social and environmental sphere, the improvement of the situation and take actions to prevent problems in the social and environmental sphere. Positive change is being pursued, both through additional research and through in-company training or legislation to give more control to this area. There is still a lack of information, research, valuable examples that would accelerate the increase in the quality of the information provided, so additional resources in the social and environmental field are needed. Existing changes would not only protect natural resources, reduce the negative impact of companies on the environment, increase the safety and social well-being of employees and stakeholders, but also help the company refine its long-term goals to increase its sustainability.

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## Santrauka

Socialinių ir aplinkosauginių ataskaitų informacijos kokybės tyrimo metu buvo ištirtos Lietuvos Atsakingo Verslo Asociacijos narės bei jų pateiktos viešai prieinamos socialinės ir aplinkosauginės ataskaitos bei nustatytas ataskaitų kokybės indeksas. Papildomai buvo ištirti LAVA narių internetiniuose puslapiuose pateikiamos socialinės ir aplinkosauginės informacijos kokybė. Nustatyta, kad daugiau įmonių socialinę ir aplinkosauginę informaciją pristato internetiniuose puslapiuose, tačiau ataskaitose pateikta informacija apžvelgia daugiau kriterijų bei yra išdėstyta bei išanalizuota detaliau. Tyrimo metu, analizuojant LAVA įmones nustatyta, kurios įmonės privalo teikti socialines ir aplinkosaugines ataskaitas, o kurios ataskaitas gali teikti savanoriškai. Ataskaitos ruošimas didina suinteresuotųjų šalių pasitikėjimą įmonės vykdoma veikla bei leidžia įmonei įsivertinti silpnąsias bei stipriąsias įmonės puses, nusistatyti kylančias rizikas, leidžia jas valdyti bei susikurti ilgalaikį įmonės veiksmų planą. Nustatyta, kad visos LAVA narės, kurios privalėjo pateikti ataskaitas – jas ir pateikė. Tyrimo metu, naudojant GRI standartus socialinėje ir aplinkosauginėje srityje ir kokybinį tyrimo metodą, kai kiekvienam kriterijui priskiriamas balas pagal pateikiamos informacijos kokybę, nustatyta, kad privalomai pateiktos ataskaitos pasižymi geresne informacijos kokybe nei savanoriškai teikiamos ataskaitos. Tai parodo, kad privalomas atskaitomumas labiau įpareigoja įmones pateikti kokybišką informaciją socialinėje ir aplinkosauginėje srityje ir apžvelgti daugiau aktualių įmonei sričių.

Analizuojant 2017-2019 metų duomenis nustatyta, kad socialinės ir aplinkosauginės informacijos kokybė gerėja laikui bėgant ir įmonės skiria daugiau dėmesio kokybiškos informacijos pateikimui. Nors nustatyta, kad vidutiniškai ataskaitų kokybė vis dar yra žema, tačiau šiam rodikliui įtakos galėjo turėti neatsižvelgimas į skirtingas įmonių veiklos sritis bei būtent toms įmonėms aktualių kriterijų išryškėjimas, kadangi visų įmonių socialinės ir aplinkosauginės ataskaitos buvo vertinamos pagal tuos pačius GRI standartus. Lietuvos, Europos ir viso pasaulio vyriausybės ir nevyriausybės organizacijos prisideda prie socialinės bei aplinkosauginės srities garsinimo, padėties gerinimo bei imasi veiksmų siekiant užkirsti kelią problemoms socialinėje ir aplinkosauginėje srityje. Tiek atliekant papildomus tyrimus, tiek vykdant mokymus įmonėse ar leidžiant įstatymus, kuriais būtų galima labiau kontroliuoti šią sritį siekiama teigiamų perversmų. Vis dar yra informacijos, tyrimų, vertingų pavyzdžių trūkumas, kuris spartintų pateikiamos informacijos kokybės didėjimą, todėl yra reikalingi papildomi resursai socialinėje ir aplinkosauginėje srityje. Esančios permainos ir teigiami pokyčiai ne tik saugotų gamtos resursus, mažintų neigiamą įmonių poveikį aplinkai, didintų darbuotojų ir suinteresuotų šalių saugumą ir socialinę gerovę, bet ir padėtų įmonei išsigrąžinti ilgalaikius tikslus, kurių siekiant didėtų įmonės tvarumas.

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## Introduction

With the increase in the number of inhabitants and the number of companies, the problems related to the social and environmental sphere have also increased. By observing changes in the environment and society, people have realized that in order to save the planet from destroying it is necessary to start controlling the activities of companies, as it has the greatest impact on the changes taking place. The public became interested in product quality and environmental protection, which led to the monitoring of environmental activities. Government organizations make laws, set up projects to increase corporate social responsibility and environmental protection. Non-governmental organizations start working by joining companies together to preserve society, environment and set an example for other companies. When all these interests converge, the need for companies to be socially and environmentally responsible begins to grow.

Sviesa Leitonienė and Alfreda Sapkauskienė in article “Information on the quality of corporate social responsibility” says that companies must fulfil their responsibility towards stakeholders, manage public impressions and improve important features of the report, such as relevance, reliability and comparability of information provided.

### Relevance

Companies that provide social and environmental reporting can choose what information to disclose and which not. Therefore, the information provided by companies is not reliable, as only the presentation of selected information distorts the real picture of the company. Social and environmental reports lose their meaning because we cannot trust this information and cannot compare the information with other companies. Reliable information would help to see real companies image in other companies' context and control companies activities by saving and protecting society and environment by improving changes. Responsible company actions by trying to improve qualitative social and environmental information would help to increase better results in non - financial information sector.

Seeking to present not just a big quantity of information in social and environmental report but also to present qualitative information which introduces real companies view with positive and negative aspects can help to monitor companies' performance and changes over time. The observed shortcomings and assessed risks can increase the company's operational capacity and the quality of work performed, and protects the society and environment.

Without specific evaluation criteria, it is difficult to assess the submission of social and environmental reports and to say whether the information provided on a good quality or not. Social and environmental reports submitted by different companies can be evaluated and compared with each other by establishing clear evaluation areas, criteria and evaluation methods.

### Gap

By analyzing this topic and articles about social and environmental accounting and reporting rise the gap that companies social and environmental reporting information can be no reliable and it is difficult to properly set up if presented information introduce real companies image. In the absence of specific

and validated reporting quality assessments, it is difficult to determine whether the information provided is reliable.

### Research problem

From gap in this area follow research problem – how to make social and environmental reporting information reliable and qualified and how to measure the quality of report, how to use the information quality assessment model of the social and environmental report to provide reliable and qualified information.

### Object

The object of the research is the mandatory or voluntary submitted social and environmental information in the reports by a member of the Lithuanian Responsible Business Association.

### Aim

The aim of this work is to determine the criteria and method for assessing the quality of social and environmental reports based on the scientific literature and to evaluate the quality of corporate social and environmental reports.

It is easier to achieve the aim by setting the objectives:

- Based on the analysis of the articles, identify the unresolved and relevant problem in the field of social and environmental reporting quality and determine how the problem could be solved.
- Identify the most appropriate measurements to determine the quality of the social and environmental report by identifying the most appropriate assessment criteria and model and identify aspects (global and Lithuanian) that stimulate companies interest in social and environmental reports and increase the quality of the information provided in the reports.
- To determine the research method by specifying the criteria for assessing the quality of the social and environmental report, the assessment method and the procedure for determining the quality index.
- To study the mandatory and voluntary social and environmental reports submitted by the members of the Lithuanian Responsible Business Association and to determine the quality index of these reports, the differences in the quality of mandatory and voluntary reporting and the change of information quality over the years based.

### Research methods

Review and systematization of scientific literature, qualitative evaluation of information based on GRI standards, analysis and grouping of collected data, mathematical evaluation and visualization of the obtained quality indicators.

## **1. Quality problem in social and environmental reporting**

In order to keep up with new challenges and changes, organizations increasingly have to look for resources not outside, but inside the organization. The socially responsible behavior of a company allows to maintain the proper activities of the company and to improve it in various aspects. The formation of socially responsible behavior is created by selecting values (principles, norms, rules) according to their ability to promote functionality, economic efficiency, business competitiveness and at the same time combining such optimization with human rights, dignity, unconditional value of life, etc. It is a necessity of business ethics, showing that in this way pragmatism and morality, economics and ethics are combined (Simkauskiene, L. and Pauzuoliene, J.,2010).

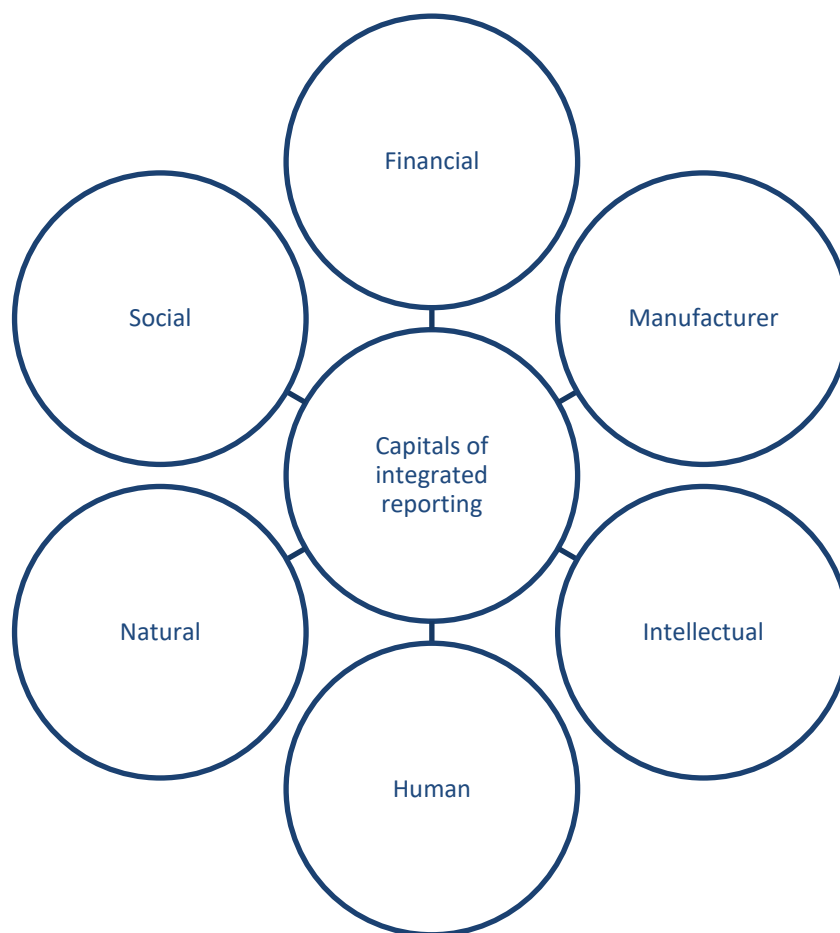
Social accounting is a reporting process that discloses financial and non-financial information about a company's social and environmental impact (Confratto M., 2011). Social accounting is the impact of business activities on society (both local and international), employees and consumers, and other individuals for whom this information would be useful and relevant. It offers an information delivery mechanism that allows management to monitor key social and environmental opportunities and threats faced by the organization. All this information is recorded in a document that includes social and environmental reports. On the one hand, it can be assumed that social and environmental reports must be prepared accurately, following specific rules, in order for the information to be accurate and reliable. On the other hand, social and environmental reports can be broad, wide, wrestling (R. Gray 2008). According to R. Gray, social accounting is all information about employees, society, customers, stakeholders and all results related to these groups of society are presented.

In general, social accounting should be understood as the provision of information on the social and environmental impact of companies on the environment. This practice emerged in Western industrial economies in the 1960s and 1970s in response to the growing negative impact of the role of business (Dagiliene, L., 2014). Mathews M.R. (1997) described twenty-five years of social and environmental accounting research, dividing this period into three parts. The first is 1971-1980, so this period can be the beginning of social and environmental accounting and reporting. 1971 The topic - social and environmental accounting was presented and the main idea was presented. Mata C. & Fialho A. and Eugenio T.(2018) attempt to describe the decade of environmental accounting reporting and note what we know. The interest of companies, academia and accounting regulator has been growing since the mid-1980s. The growing interest in social and environmental issues has led to an increase in academic publications interested in SER (social and environmental reports). Historical news and the promotion of social and environmental accounting and reporting aim at integrated reporting analysis and information on an organization's strategy, governance, performance, and prospects that reflect the commercial, social, and environmental context in which companies operate. In the current period, the government also contributes to the development and implementation of a social and environmental project aimed at the social and environmental response and the proper provision of this information.

Although the effects of social accounting began to be observed as early as the middle of the 20th century, the topic is still relevant today and is not fully solved. Researchers have realized the importance of social and environmental reports and their growing need. Therefore, in addition to the assessment and analysis of financial information, the monitoring of non-financial information and the improvement of disclosure methods also contributed.

## 1.1. Aspects and objectives of the integrated reporting

Social and environmental reports are prepared using the selected areas of social accounting assessment as prestige or company morality assessment and environmental accounting tools: water management, pollution, globalization, electricity generation, transportation and others. It is important to identify measurement methods for evaluating the report, to compile them, and to know how social and environmental aspects could be integrated into the report. The International Council on Integrated Reporting advocates that integrated reporting (IR) should become the global corporate reporting standard to meet the needs of investors (Bernardi C. and Stark A., 2018). According to Dagiliene L. (2017), integrated reporting can be provided by presenting six types of capital (see Figure 1).



**Fig. 1.** Capitals of integrated reporting (designed according to Dagiliene L. (2014))

Financial capital shows financial qualitative and quantitative information about the company's shares, the share capital structure and how dividends are paid. Manufacturer capital shows information (qualitative and quantitative) about the products sold by the main companies, raw materials and how much the company invests in testing new materials, introduction and design of new products. Intellectual Capital delivers information on company patents, copyrights, software, rights and licenses, and more. Human capital presents information about an employee's knowledge, work experience, opportunities, competencies, and motivation, as well as areas for improvement in themselves and the company. Human capital provides information about human abilities and activities performed in a team. Content analysis includes age, gender, education, salary, etc. of employees. Natural capital

describes information about companies' environmental resources (water, air, land, minerals and forests) and activities for the conservation and fair use of these resources. Natural capital analyzes the direct impact of companies on the environment and includes resource savings and pollution prevention. Social (relationship) capital includes information about the relationships between businesses, communities, and society. It is the relationship with customers, suppliers, government, partners and stakeholders.

The purpose of the integrated reports is to discuss the areas in the six capitals and the financial and non-financial activities of the company based on them. Integrated reporting helps an organization think holistically and think about a company's strategy and plans for influencing business. Integrated reports allow to analyze future risks and make better future decisions while trying to take key opportunities. Integrated reporting can help manage resources more efficiently, give investors a better understanding of a company's future prospects, as well as manage emerging risks and set long-term goals for the company to achieve. The social and environmental report has similar objectives to the integrated reports. Social and environmental reporting also aims to identify and manage future risks, present a broader picture of the company and non-financial information about the company, and help manage resources in a social and environmental field that is divided into several areas.

## **1.2. Legitimacy theories of social and environmental reporting**

Legitimacy is how companies adhere to a law position or rules in an attempt to create a positive, valuable attitude towards society and its specific groups. Monitoring environmental performance can help improve the performance of companies, limit costs and improve skilled work, as well as improve the quality of life in society. In trying to control the performance of companies and the social and environmental impact, the legitimacy of the activities of companies needs to be established (Fallan,E.,2016); (Killian S. and O'Regan P.,2016). The author conducts a quantitative study to investigate how different types of reporting regulation affect reporting practices. The risk of legitimacy of accountability regulation and obligations has been found to be higher under low regulation than under standard regulation. The author also finds that public sector companies report more voluntarily than private companies. Larger companies or companies which work in a relatively risky area present more information than those that are small or companies with low risk to the environment. As there are no correct guidelines for the presentation of a company's social and environmental accounting, it is not possible to control the social and environmental activities of companies or to compare the data of one company with another. Therefore, companies that voluntarily provide non-financial information do not emphasize the quality of that information (Tilling, M.V., 2004). Two theories of legitimacy are distinguished. The first is institutional legitimacy, which emphasizes the whole structure of the organization and undertakes the primary presentation of natural and meaningful information that the public must receive. Tilling's M.V.(2004) second theory of legitimacy is organizational legitimacy that seeks the support of groups in society for the issues being analyzed. Organizations strive to identify social values that pursue socially acceptable behavior. According to shareholder theory, all shareholders have rights that cannot be violated, and shareholders also have the right to be informed about the activities of the organization (Burhan A.H.N and Rahmanti W., 2012).

The three spheres of sustainability encompass a wide range of concepts that explain how decisions and actions can affect the overall sustainability of our world (Wanamaker C., 2018). Many of the largest

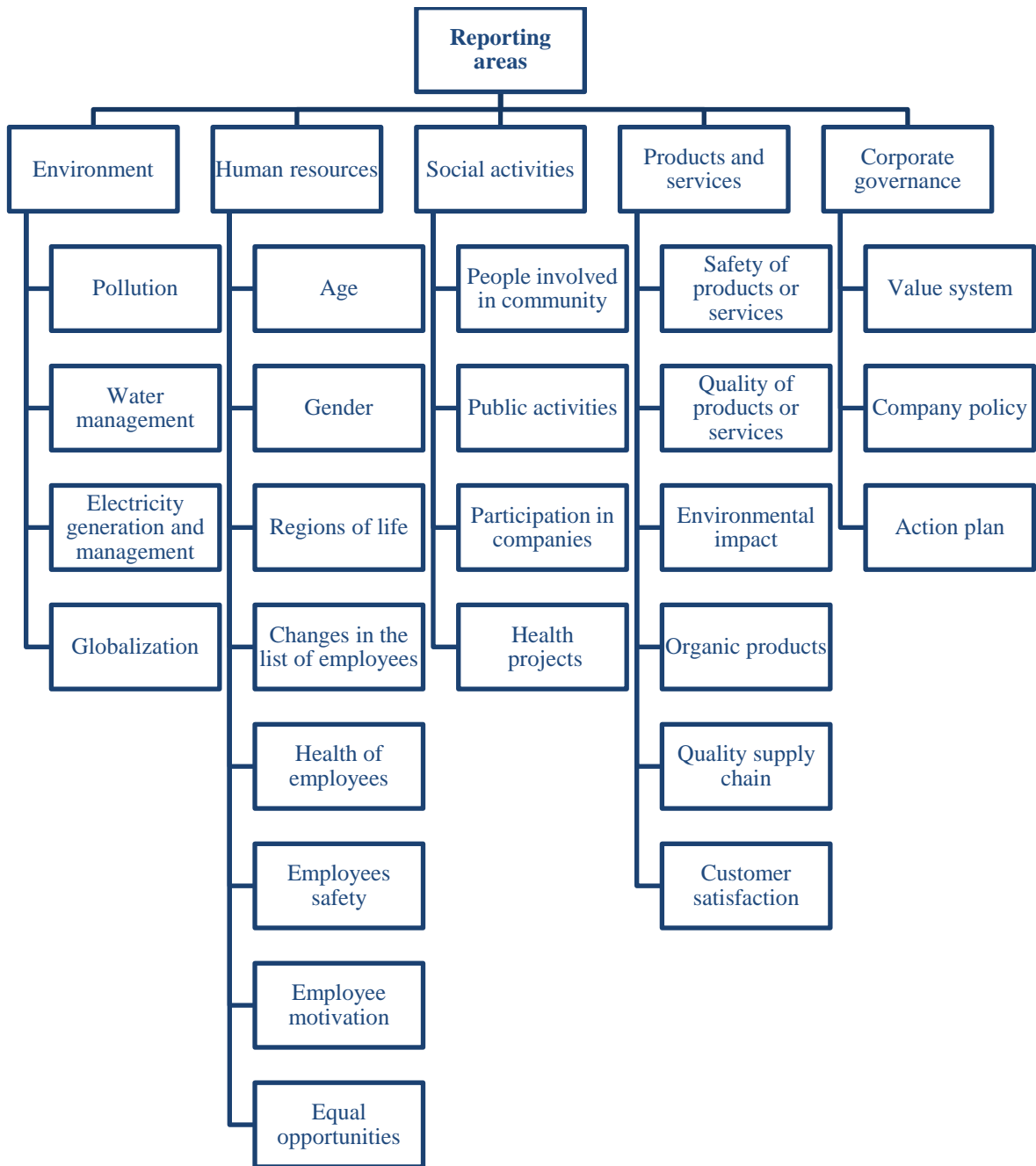
companies produce sustainability reports that provide information and explain the economic, social and environmental impact of companies. This report is particularly important for companies that are sensitive to social and environmental problems, such as suppliers of gas, oil, chemicals and other materials. According to Burhan A.H.N and Rahmanti W. (2012) the purpose of sustainability reporting is to provide qualitative information that evaluates an organization's performance in other business environments and focuses on the community

Although there is no universally accepted theory for explaining corporate social responsibility disclosure practices, researches in the corporate social and environmental literature was primarily based on the theory of legitimacy. The theory of legitimacy has an advantage over other theories in that it presents strategies that organizations can use to justify the existence of their strategy (Guthrie J., 2006). Indeed, it is likely that the theory of legitimacy is the most widely used theory to explain environmental and social information.

### **1.3. Areas of social and environmental reporting**

Social accounting information can be described by dividing this topic into several areas (see Figure 2). The first is environmental accounting and the activities of all companies that have a positive or negative impact on the environment. These can be water management, pollution, electricity generation and management, globalization, and so on. The other part that is included in social accounting is human resources. They show the relationship between companies and its employees, determining the age, gender, regions of life of employees. Changes in the list of employees, the health of employees and their safety are also identified. Employee motivation and equal opportunities for all employees are also very important for human resources. The third part that explains the importance of social accounting is social activities. The impact of companies on society can be assessed and identified through the large number of people involved in community activities to support people, and the participation of companies in social or health projects. Products and services are another part of social accounting; they can be qualitative and quantitative measures that show the influence of companies on the customer. For example: safety of products or services, quality, environmental impact, organic products, quality supply chain, customer satisfaction results, etc. Social accounting can also be presented in determining aspects of corporate governance. It can be a value system, a policy, an action plan declared by a company that can have an impact on society or the environment (Dagiliene L. 2014).

Each field of evaluation with its aspects presents only the evaluation criteria relevant to that field. Each of the discussed areas allows to assess the emerging risks and allows investors to get an idea of the company's activities and planned future goals. Non-financial information can be presented in a variety of ways (broad or narrow, numerical, etc.) but aims to reflect the true image of the company and according to Dagiliene L. (2014) to increase the reliability of non-financial information over time.



**Fig. 2.** Areas of social and environmental reporting (designed according to Dagiliene L. (2014))

Lina Dagiliene singled out five areas of non-financial information assessment, but according to the GRI guidelines and Bonsón, E. and M. Bednárová M. (2015), three main areas of sustainability assessment are distinguished: economic, social and environmental. Social and environmental aspects are the most difficult to assess and calculate and interpret in the report, so the areas are explained and analyzed more broadly.

#### **1.4. Aspects of social reporting**

Stephanie P. and Tweedie D. (2017) analyze the sustainability of society and the consequences that can have a moral impact on the actions of firms and individuals and on the quality of social and environmental reporting. This analysis shows that good and high-quality information alone is not

enough to present the social changes that important areas of social accounting research are pursuing. A moral source is a great way to allow people and businesses to gain confidence in themselves, their actions, and their beliefs. Despite the moral aspect, social accounts can increase companies' knowledge of sustainability issues without changing the direct actions of companies. Also, the moral aspect can make it possible to find out how a moral source can explain the actions of companies and help to look for a new opportunity for improvement.

Social accounts are often presented in a non-financial sense and are likely to be a combination of quantitative non-financial information and descriptive information. Dagilienė L (2014) writes in book "Social Accounting: Theory and Evaluation" about the phenomena of social accounting, which are widely described in the scientific literature, which provides a lot of information about empirical research on this topic. In the absence of theoretical research explaining the reasons and necessity of social and environmental accounting, this topic becomes relevant and necessary. Duff, A. (2016) presents corporate social responsibility reports for professional accounting firms in the UK. The author presents the valuation of goodwill in the largest professional accounting companies - knowledge-intensive organizations. This valuation of goodwill allows them to increase their intellectual capital and charge accordingly, and effectively increase the partner's assets.

Leitonienė S., Sapkauskienė A. and Dagilienė L. (2015) present theoretical issues and practical implications of corporate social accounting and reporting in Lithuania. The article explains the practical meanings, customs, and relationships between social responsibility and prestige. Western countries are more advanced in the social and environmental accounting and reporting sectors than Lithuania. There are not many companies in Lithuania that provide social and environmental reports. The structure of the reports is not validated, so even the information provided by the companies is difficult to compare. Social and environmental reports can be key non-financial information for shareholders, so it is necessary to take reliable information for use. Although the growing importance of social responsibility in business processes is widely studied and discussed in the scientific literature, there is a lack of research and discussion on corporate social responsibility implementation, consolidation and development measures, and especially on employees of organizations as the main corporate social responsibility implementation and consolidation tool (Seiliute, J.,2013).

The non-financial part of the report, which reviews the social aspects of the company, still does not precisely define what qualitative information means and how it should be presented. One of the purposes of disseminating qualitative information is the moral desire to disclose correct and reliable information, but the moral aspect is also difficult to describe. In addition to the difficulties encountered in describing reports, an even bigger problem is the numerical presentation of social information in order to compare information with each other. There is still a lack of information in this area, so the topic needs to be developed and improved.

### **1.5. Aspects of environmental reporting**

According to Gray, R.H (2005) "Environmental reporting refers to preparation and communication of information relating to an organization's interactions with the natural environment". The section on environmental accounting and reporting is explained by dividing this topic into four main sections. Water management is one of the most important parts of environmental accounting. Changes in water management can have a negative impact not only on society but also on businesses and its activities, so



water management must be controlled (Cosgrove W. & J., Loucks D. P., 2015). Water management can help and improve the best economic and environmental accounting results. The Environmental Management Accountant was created in the 1990s for different: economic and environmental, aspect management, and business management (Christ K.L and Burritt R.L. 2017). As the water crisis grew over the years, solutions were needed to save water and implement minimalist uses of water. The biggest challenge was how to control corporate water use and how to improve water management. In order for water resources to be managed efficiently, effectively, adequately and consistently for decision-making, businesses need access to relevant data. Everyone understands that water management accounting can help save water, and responsible and consistent water management in companies can also help. While environmental reports are much more concerned with providing quantitative information on environmental reports than social reports (Gray, R.H, 2005), but in practice, it is difficult to carry out water management accounting, which could be used in practice, so the problem must be solved and aspects of water management must be developed and standardized.

Pollution has a direct impact on society and is therefore also a pressing issue that can be tackled by companies 'environmental reporting and disclosure (Dobler, M., 2015); (Nayyef Y.H. et al., 2019). Most of the problems in the pollution sector are caused by companies, and the public, worried about the future, tries to protect the environment and control the activities of companies in order to minimize the risk of pollution. Businesses need new accounting methods to properly present non-financial information and increase public responsibility in environmental field.

Globalization is the third part of environmental accounting and reporting, as climate change has negative impacts on the environment and society (Wojcik, D., 2015); (Evangelinos K. et al., 2015). There are difficulties in accounting for globalization processes due to the negative impact assessment and proper presentation of information to the public. Information on climate change due to the company's impact is provided on a voluntary basis, as no reliable information is provided on the subject. Companies try to look better in the eyes of the public, so only consider positive comments to assess the facts of globalization and avoid negative presentation of information.

The fourth part of environmental accounting and reporting is electricity generation and transportation. According to (Hampf, B.,2018 and Salvo A.L.A. et al., 2017), recent energy crises have increased energy efficiency and had a negative impact on energy waste. This is directly linked to climate change and pollution, and such changes can be felt, but they are difficult to assess. Attempts are being made to control energy consumption and its negative effects on people and the environment, and green energy is being used, which can help reduce electricity consumption and help control the activities of companies and quantify all energy. These are essential to the measurement of environmental performance and they are all very important for the presentation and control of a company and its economic activities, as the information provided, compared, can provide the necessary information to public interest groups.

The biggest drawback in the environmental field is the complexity of measuring with a measurement indicator. Aspects that are easier to measure are more measurable, and those that are assessed more complex are not reported or presented in a descriptive way without supporting information. Such incomplete reporting does not reflect the real situation of the company and the data is not completely reliable and becomes difficult to compare. Environmental problems are relevant not only to the

company but to the whole society, therefore the environmental field should be controlled and monitored in order to manage the negative effects.

## **1.6. Information reliability and responsibility of social and environmental reporting**

Huang, X.B. and Watson, L.(2015) reviewed research on social responsibility in 13 major accounting journals over the past decade and identified a growing interest in social accounting, but identified the biggest gap in research accountability and data reliability. Villiers, C.D. and Marques, A.(2015) explored the same but different level of social responsibility topic and explored the different levels of corporate social responsibility disclosure in the largest European companies. Research shows that better and more reliable social information is provided by companies that operate in well-developed countries with high levels of democracy and strong government. It can be expected that companies with strict national laws will strive not only to present positive areas of social and environmental information in the company, but also to present negative information in order to improve public confidence in the company's activities and growing good opinions about it. Saeidi SP, Sofian S., Saeidi P., Saeidi SP, Saaeidi SA (2015) state that a good corporate image and good social and environmental reporting information lead to customer satisfaction and reliability, good company reputation.

Leitoniene S. and Sapkauskienė A. (2015) defined the quality of corporate social responsibility information as the policy and practice of social responsibility organizations when a company voluntarily integrates social and environmental issues in its activities, coordinated with economic interests, as well as with all stakeholders, in accordance with respect the individual, society and the environment. The authors analyzed the literature and acknowledged that relevance and reliability are key aspects of qualitative information about firms. Subjectively analyze and present correct and reliable information. To this end, the authors conducted a study analyzing Lithuanian companies and found that social information can be analyzed in two ways: by performing textual analysis and by calculating the disclosure index. Both of these methods are also subjective, but this is the beginning of the regulation of social information.

According to Haček P. (2017) not many quality measurement options have been developed, so qualitative and quantitative ones are most often used. Volume often indicates an amount, but long reports can make up irrelevant information or the use of misleading words, which may result in incomplete or poor quality information, so quantitative method the best present qualitative information of the report. The quality of the reports may be assessed by presenting whether or not certain aspects are discussed in the report, but this method of assessment also does not reflect the quality of the information provided. It should be noted that there is currently no clear methodology for assessing the impact of a single social responsibility on an organization and its stakeholders. The emphasis is usually on the fact of assuming social responsibility itself or the benefits obtained (Seiliūtė J., 2013).

It is difficult to say specifically what a good and reliable social and environmental report should look like and what kind of information is reliable. However, it is clear that true, reliable information (revealing both the positive and negative aspects of a company's activities) increases the confidence of stakeholders in the company's activities and enhances the company's reputation. For this reason, the question of what criteria and ways to assess the quality of the information provided in the social and environmental report remains unanswered.

## 1.7. Quality problem in social and environmental reporting

Quality social and environmental reporting benefits both the company and the stakeholders. However, only high quality information can be used as a tool to draw conclusions about the company's activities and a key indicator in decision-making. According to Haç bek P. (2017) the social and environmental reports were criticized for the lack of relevance and reliability of the information provided. In order to increase the quality of the information, the reports may include a quality analysis, which is related to the determination of the quality index based on the methods developed by the GRI, WBCSD, or the companies themselves. The quality index can be defined as an assessment tool for determining the quality score and for determining the level of information quality (Haç bek P., 2017).

Social accounting tools can be obtained by trying to figure out the prestige and morals of the company and make these observations responsible. Monitoring environmental water management, reducing pollution, reducing globalization, reducing negative impacts, using less electricity or replacing it with eco-electricity, and trying to control transport volumes can lead to environmental accounting and positive results. Once all the measurements (in the social and environmental field) have been received and presented reliably, a social and environmental report can be submitted. This report may be included in integrated reports containing all non-financial information. Research on the articles shows that the social and environmental topic is relevant and more research is needed in this area to better control the information provided. Not only articles but also practical meaningful research is needed.

There are many goals to be achieved in the future and many ways to do so. However, it is up to the company's representative to determine what non-financial information will be presented in the reports. For this reason, there is the problem of information unreliability, which is being addressed in the development of guidelines for the reliability and quality of sustainability reports. According to The Republic of Lithuania Ministry of Social Security and Labor Corporate social responsibility 2016–2020 action plan (2016) at present, there are no clear criteria in Lithuania for comparing corporate responsibility, therefore, in order to ensure the measurement of corporate social responsibility results according to objective indicators and improve the availability of corporate social responsibility data, one of the goals is to create a business sustainability and responsibility index in Lithuania, which can help to measure progress in the field of corporate social responsibility, or a similar system. Developing guidelines to improve the quality of report writing would make it easier to compare company data with other company data and to group data over time, to monitor company changes and improvements.

An analysis of the articles has shown that the topic of social and environmental reporting and evaluation, although evolving for more than a few decades, is not yet fully understood and additional problems rising. Although reporting is becoming more frequent, the quality of the information provided is still difficult to assess (Haç bek P., 2017). Therefore, there is a problem in assessing the quality of the information provided in the social and environmental report and in ensuring that the information provided in the report is true and reliable and conclusions or decisions can be drawn from this information.

## 2. Measurements of the quality of social and environmental reports

### 2.1. Clarification and benefits of the Sustainability Report

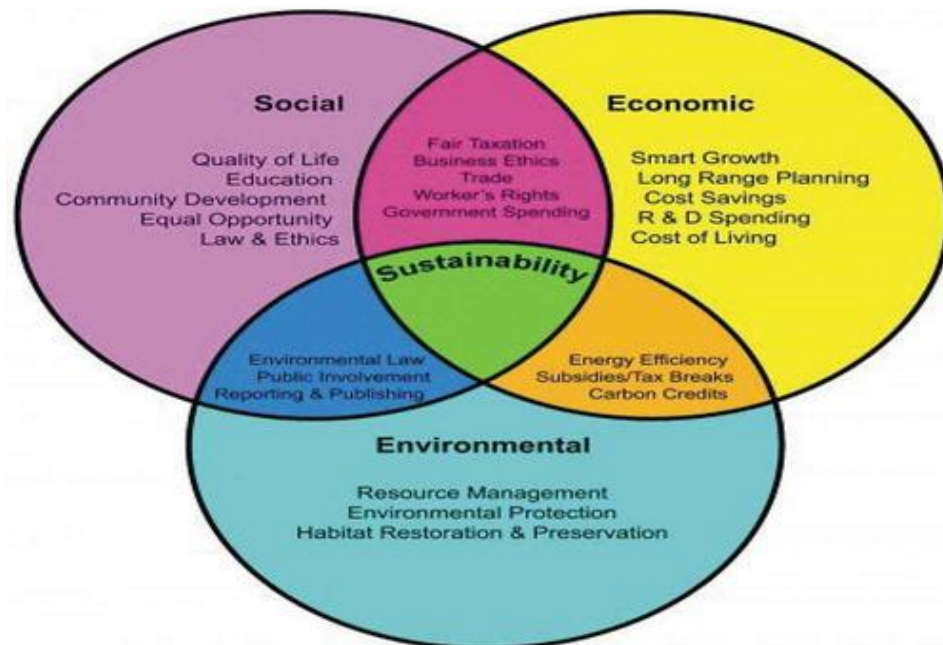
According Prabhjot Kaur “Social reporting is defined as reporting of some meaningful, definable domain of a business enterprise’s activities that have social impact. Put another way, social reporting implies the measurement and reporting, internal or external, of information concerning the impact of a business enterprise and its activities on society“. The purpose of social reporting is to measure the positive and negative results of an enterprise (in monetary and non-monetary units) for both the enterprise and those affected by the enterprise by measuring social costs and benefits. The concept of socially responsible business is an extremely broad-spectrum concept that encompasses the entire product or the creative and production cycle of the service and the related environmental, social, financial and ethical aspects. Basically, the socially responsible business paradigm should be seen as a response to challenges of globalization: climate change, threats to the natural environment, social challenges (uneven birth rates, aging, food surplus / poverty and hunger problems, etc.), declining natural resources, etc. The principles of socially responsible business are and must be applied in four different areas. According to this, the main instruments used in the operation of socially responsible business and in the reports of socially responsible business are divided and presented in Table 1.

**Table 1.** Application of socially responsible business principles in different areas.(Ramelis A. 2015).

PRINCIPLES OF SOCIALLY RESPONSIBLE BUSINESS				
	Economic factors	Social factors		Environmental factors
	The market	Organization	Society	Environmental protection
The main interested groups	<input type="checkbox"/> Users <input type="checkbox"/> Suppliers <input type="checkbox"/> Business partners <input type="checkbox"/> Investors <input type="checkbox"/> Public sector	<input type="checkbox"/> Local community <input type="checkbox"/> Business organizations <input type="checkbox"/> States institutions, etc	<input type="checkbox"/> States institutions <input type="checkbox"/> Environment protection, non-governmental institutions (hospitals, schools, etc.)	<input type="checkbox"/> Environment protection non-governmental organizations citizens / consumers <input type="checkbox"/> States institutions
Main issues raised for reports and sustainable business development	<input type="checkbox"/> Responsible supply chain management <input type="checkbox"/> Quality, innovation <input type="checkbox"/> Fair pricing <input type="checkbox"/> Ethical advertising	<input type="checkbox"/> Equal opportunities <input type="checkbox"/> Health and safety <input type="checkbox"/> Training and improvement courses <input type="checkbox"/> Satisfaction work <input type="checkbox"/> Remuneration and allowances <input type="checkbox"/> Employee rights and etc.	<input type="checkbox"/> Social integration <input type="checkbox"/> Health protection <input type="checkbox"/> Education <input type="checkbox"/> Quality of life <input type="checkbox"/> Economic development, employment, etc.	<input type="checkbox"/> Related to the product / process: raw materials, water, energy <input type="checkbox"/> Waste <input type="checkbox"/> Pollution: air, water, soil
Main instruments used for reporting and sustainable business development	<input type="checkbox"/> Labels <input type="checkbox"/> Customer Rights <input type="checkbox"/> Articles of Association <input type="checkbox"/> Marketing <input type="checkbox"/> Standards, etc.	<input type="checkbox"/> Employee rights knowledge <input type="checkbox"/> Flexibility at work <input type="checkbox"/> Employees participation for making solutions <input type="checkbox"/> Relationship with trade unions	<input type="checkbox"/> Financial support <input type="checkbox"/> Non-financial support <input type="checkbox"/> Free provided services <input type="checkbox"/> Employees engagement and volunteering and etc.	<input type="checkbox"/> Environmental management systems <input type="checkbox"/> Product life cycle evaluation <input type="checkbox"/> Ecological labeling, etc.

In summary, socially responsible business can be understood as all parties involved (state, business, society) to each other and to themselves for their decisions and actions impact on the environment and society in general. The social and environmental report includes many aspects that need to be reviewed, discussed and presented. Some aspects can be presented more broadly, others more narrowly, which in this case increases the problem of information reliability, compliance and the company's responsibility for the information provided. The importance of the quantity and, most importantly, the quality of the information is growing, which is why many guidelines have been developed on how to present the information in a qualified manner and present it properly. Because not all companies or areas of work can rely on the same advice, social and environmental reports written in different ways and with different guidelines are not comparable, and this is one of the main problems in this area. For this reason, some key guidelines for social, environmental and sustainability reporting are provided. Based on these guidelines, it is possible to identify aspects of the presentation of qualified report information and ways to improve the quality of social and environmental report information, identify threats to the company and develop an action plan to improve the company's social and environmental performance.

Respect is the foundation of sustainability and social responsibility. True, trust, business ethics, cooperation, innovation, work efficiency, low employee turnover, the ability to attract the best employees - these are the factors on which the company's activities can be expected to be socially responsible. Social responsibility, environmental protection is a consistent continuation of the value of respect for the environment (Stankūnas, A. 2015). Sustainability reports allow organizations to consider their impact on a variety of sustainability issues. This allows them to have a clearer understanding of the risks and opportunities they face. Sustainability reports are the main platform for transmitting sustainability indicators and impacts. The main form of sustainability report is a report on the economic, environmental and social performance of the organization. The three areas where sustainability is observed are presented in Figure 3.



**Fig. 3.** The link between economic, social and environmental sustainability (Wanamaker C.(2018))

Corporate social responsibility reports are important because they allow companies to assess the environmental, social and economic impact of their activities. Under the Global Accountability Initiative, a corporate social responsibility report can be defined as follows: a sustainability report is “a report published by a company or organization about the economic, environmental and social impacts caused by its everyday activities. A sustainability report also presents the organization’s values and governance model, and demonstrates the link between its strategy and its commitment to a sustainable global economy”. The definition introduces that the sustainability report not only provides specific information on what actions are being taken to work in a company in a sustainable and socially responsible way, but also discusses the company's environmental impact, the organization's values and the goals it seeks to achieve.

Based on the Global Reporting Initiative, five key steps can be identified based on and following the preparation and submission of reports to the benefit of the company (see Figure 4). Sustainability reports provide easy and fast access to reliable and comparable data generate them in different templates to provide different stakeholders with needs, prepare summaries and simple information analyzes. The information provided in a systematic and measured format allows conclusions to be drawn and interpreted and this information automatically generates the content of the report. The generated report remains in the history of the company and allows to compare the data with the data of previous periods, to draw conclusions and improve the company's operations taking into account the shortcomings identified in the report.



**Fig. 4.** Value creation based on the development of a sustainability report

According to in.corp sustainability reports can have four main benefits for any organization:

- this is a necessary risk management tool.
- this can help save money.
- this helps to make better decisions.
- this helps to increase stakeholder confidence.

Risk management and sustainable reporting are not the same thing, as sustainability strategically means implementing business resilience and the opportunity to increase transparency and partnership, while risk assessment helps protect businesses from threats that may arise in the future. To manage emerging risks, investment decisions need to be made to strengthen long-term capacity and develop adaptive strategies, and good sustainability contributes to this goal and action. Sustainability disclosure provides a broader picture of a company's operations than just disclosing the company's financial information, protects against risk factors after they have been assessed, can save money, make better decisions in the eyes of both the company and the social environment, and increase stakeholder confidence. The sustainability report is important and necessary for both the company and the general public.

## 2.2. General principles of sustainability reporting

In order to ensure the quality of the information provided in the sustainability reporting the sustainability reporting guidelines G4 according Global Reporting Initiative (2015) are presented. In G4 sustainability reporting guidelines are presented categories and aspects which have to be presented in sustainability reporting (see Figure 5).

Category	Economic	Environmental			
Aspects <sup>III</sup>	<ul style="list-style-type: none"> <li>• Economic Performance</li> <li>• Market Presence</li> <li>• Indirect Economic Impacts</li> <li>• Procurement Practices</li> </ul>	<ul style="list-style-type: none"> <li>• Materials</li> <li>• Energy</li> <li>• Water</li> <li>• Biodiversity</li> <li>• Emissions</li> <li>• Effluents and Waste</li> <li>• Products and Services</li> <li>• Compliance</li> <li>• Transport</li> <li>• Overall</li> <li>• Supplier Environmental Assessment</li> <li>• Environmental Grievance Mechanisms</li> </ul>			
Category	Social				
Sub-Categories	Labor Practices and Decent Work	Human Rights	Society	Product Responsibility	
Aspects <sup>III</sup>	<ul style="list-style-type: none"> <li>• Employment</li> <li>• Labor/Management Relations</li> <li>• Occupational Health and Safety</li> <li>• Training and Education</li> <li>• Diversity and Equal Opportunity</li> <li>• Equal Remuneration for Women and Men</li> <li>• Supplier Assessment for Labor Practices</li> <li>• Labor Practices Grievance Mechanisms</li> </ul>	<ul style="list-style-type: none"> <li>• Investment</li> <li>• Non-discrimination</li> <li>• Freedom of Association and Collective Bargaining</li> <li>• Child Labor</li> <li>• Forced or Compulsory Labor</li> <li>• Security Practices</li> <li>• Indigenous Rights Assessment</li> <li>• Supplier Human Rights Assessment</li> <li>• Human Rights Grievance Mechanisms</li> </ul>	<ul style="list-style-type: none"> <li>• Local Communities</li> <li>• Anti-corruption</li> <li>• Public Policy</li> <li>• Anti-competitive Behavior</li> <li>• Compliance</li> <li>• Supplier Assessment for Impacts on Society</li> <li>• Grievance Mechanisms for Impacts on Society</li> </ul>	<ul style="list-style-type: none"> <li>• Customer Health and Safety</li> <li>• Product and Service Labeling</li> <li>• Marketing Communications</li> <li>• Customer Privacy</li> <li>• Compliance</li> </ul>	

**Fig. 5.** Categories and guidelines of sustainability reporting (G4 Sustainability reporting guidelines (2015))

The G4 Sustainability Reporting Guidelines divide the reporting principles into two main parts:

- Principles for defining the content of the report
- Principles for defining report quality

The principles for defining the content of a sustainability report describe the process to be followed in determining what content should be presented and covered, taking into account the organization's activities, the impact on the organization and society, and the expectations and interests of stakeholders. The guidelines for the G4 Sustainability Report set out four main aspects of the report's content (principles):

The stakeholder engagement principle introduces the company's shareholders and explains how the company presents its expectations or interests. Stakeholder can be a person who is involved in the company's activities as employees, customers, citizens and others.

The principle of the context of sustainability states that the report should present the work and changes of the organization. The report answers the question of how the company has changed in the light of past times and how the company may change in the light of future time points. Looking at the context of sustainability, one can try to answer the question of what the company will look like in the future and what results it will perform in economic, social and environmental terms. The company should also respond not only to changes in the company's sustainability, but also to broader concepts of sustainability that limit social and environmental resources and impose requirements on the sector, locally, regionally, or globally.

The principle of materiality states that the report should provide a significant economic picture of the organization, specific information and environmental and social impacts. This approach can provide important information to the public and stakeholders in decision-making.

the principle of completeness states that the social and environmental report should include the essential aspects and the scope of their boundaries, be sufficient to reflect the company's real view of economic, social and environmental impacts and allow (using the information provided) to assess the company's performance in a reasonable and properly way.

It is important to review all aspects and content of sustainability reports, but in addition to the amount of information provided, it is essential that the information provided is of good quality and reliable. In that case in G4 model of sustainability reporting guidelines the principles for defining report quality are presented, which are important for transparency of information. The quality of the information provided is necessary to enable stakeholders to make a reasonable assessment of performance and to take appropriate action. According to the G4 Sustainability Reporting Guidelines, there are six principles for defining report quality:

The balance sheet principle states that the report should include the positive and negative social and environmental aspects of the company. The presentation of the whole company should provide an unbiased picture of the company's activities. The social and environmental report should avoid ambiguities or omissions that could unduly or inappropriately affect the reader's opinion and perception of the company's activities.

Information based on the principle of comparability should be presented in an easy-to-read manner and within a certain disclosure period in order to allow for easy comparison and analysis. The principle of comparability is necessary for a proper assessment of the company's performance, and on the basis of this information, stakeholders are able to use the information provided to analyze the information and compare social and environmental information and performance with the company's past performance.

The principle of accuracy determines the sufficient accuracy and completeness of the information in the social and environmental report. Stakeholders should easily understand the information provided and evaluate the company's performance, and all indicators and perspectives should be presented in different ways (from quantitative measurements and calculations to rating from qualitative responses).



The principle of timeliness introduces that the company should produce regular social and environmental reports so that information is provided in a timely manner and stakeholders can easily make informed decisions. The benefits of information are closely linked to stakeholder decisions, as the information provided in the report can influence stakeholder decisions.

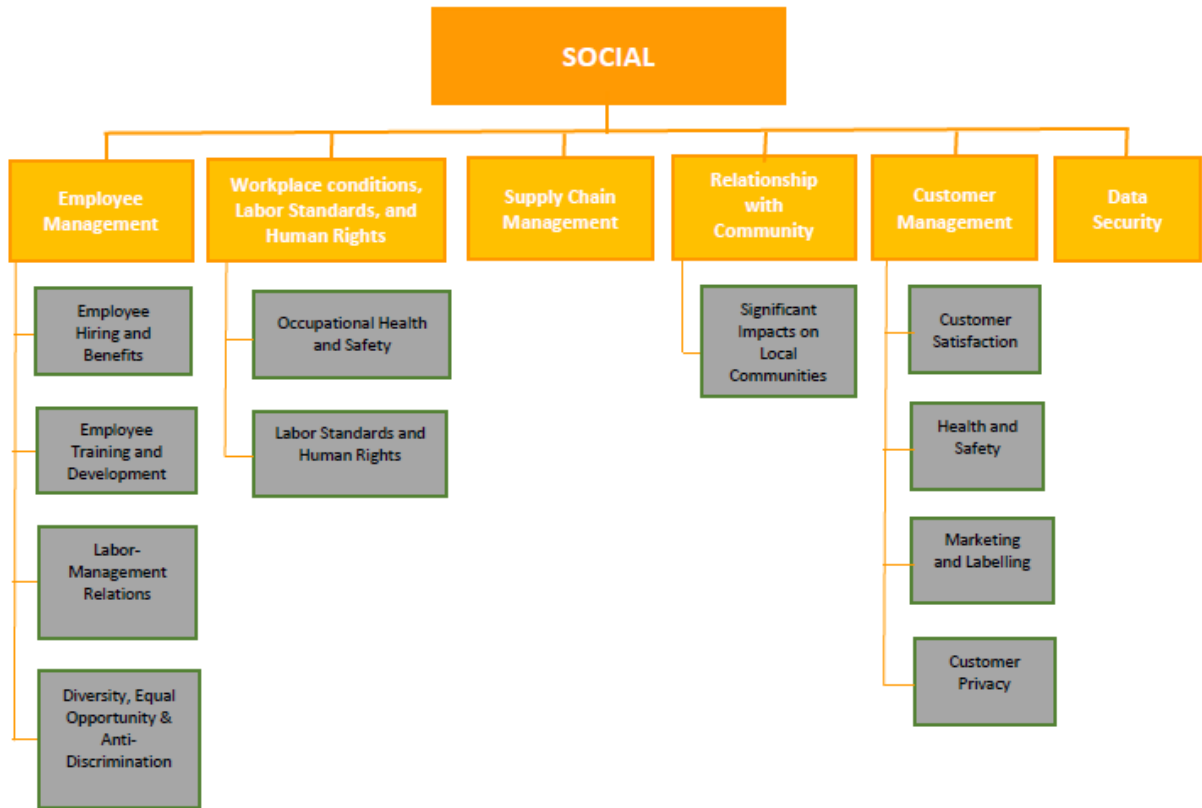
The principle of clarity states that the information in the report should be comprehensible and easy / clear to stakeholders. The information should be presented in a way that is comprehensive to stakeholders who have a good understanding of the company's activities and the circumstances of that company.

The principle of reliability states that the company should analyze, compare, record all information about the company, and compare the obtained data in a broader context. The significance of the report should be presented in clear and easy-to-read language and in easy-to-understand sentences. The report should also provide specific and reliable information, and stakeholders should be confident that the information provided in the report is true, reliable and reflects all accountability principles.

The G4 Sustainability Reporting Guidelines set out principles for the content and quality of reporting, according to which the report should be clear and informative not only from the perspective of one company, but also from a broader perspective and from a local or general perspective. Qualified information is easy to read and written in short sentences with a clear idea. The information should reflect the positive and negative aspects of the company in order to form a realistic picture of the company and its activities. The information provided at specific times each year can help stakeholders compare the company's information and performance and make decisions about the company's changes.

### **2.3. General reporting principals of social reporting**

According Sustainability Reporting guidelines for Public-Listed companies prepared by Securities and Exchange Commission (2019) social reporting defined as “An organization’s internal and external impact/s on the social systems within which it operates”. The social topic related with relationships with different parts such as employees, suppliers, customers and other interests in company’s activities. Social aspects can be divided into six parts: employee management (which is divided into employee hiring and benefits, employee training and development, labor-management relations and diversity, equal opportunities and anti – discrimination), workplace conditions, labor standards, human rights (which consist of occupation health and safety and labor standards and human rights), supply chain management, relationship with community – significant impact on local community, customer management in which consist of customer satisfaction, health and safety, marketing and labeling and customer privacy and data security (see Figure 6).



**Fig. 6.** Social reporting aspects (Sustainability reporting guidelines for publicly – listed companies (2019))

The G4 Sustainability Reporting Guidelines address aspects of sustainability issues related to an organization’s impact on social systems. The social category consists of four subgroups.

The first group, work placements and decent work, includes subgroups on employment, work-management relations, progressive health and safety, training and education, diversity and equal opportunities, equal pay for men and women, explanations of suppliers' workplace practices and workplace harm mechanisms. The report should provide information on employment: recruitment, turnover, age by group, gender and regional distribution. Information should also be provided on full-time and part-time work, benefits for employees: life insurers, health care, disability and invalidity protection, etc. All this information (both positive and negative) should be provided for the reporting period. Any additional information that would be relevant and useful to the disclosure of the entity's activities should be presented and explained. The report shall report and present information on the health and safety of workers, which may be presented in terms of percentage of injuries (IR), percentage of occupational diseases (ODR), number of days lost (LDR), percentage of absences (AR) or percentage for visual comparison with next year’s information and to determine the level of visual performance. All employees must be guaranteed equal opportunities at work, therefore this part of the report must provide the percentage of persons by diversity by gender, age groups, minority groups, other diversity indicators, if it is important and appropriate for the company's activities. The report shall also indicate the ratio of the basic salary to the earnings of women and men according to the work performed, as well as the number or percentage of new suppliers inspected according to the criteria of work practice.

The human rights subgroup covers and describes aspects that present human rights requirements and violations that have occurred during the reporting year, as well as describes changes in the exercise of one's rights. The human rights subgroup includes investment, non-discrimination, freedom of association and collective bargaining, child labor, forced or compulsory labor, security practices, local rights assessment, supplier human rights assessment and explanation of human rights mechanisms. In accordance with the G4 Sustainability Reporting Guidelines, the report should include definitions of significant investment contracts used by the organization, indicating the total number and percentage of significant investment contracts. In order to avoid discrimination within the organization, the total number of discrimination cases during the reporting period and the actions taken to combat discrimination must be reported. The report shall include information on the number of young workers and the risks arising from the work performed by the young workers and the ways in which these risks should be mitigated. All risks associated with cases of forced labor should be recorded by providing the regions and countries and means of the work during the reporting period prior to the occurrence of these incidents, and the report should describe any actions to mitigate these risks. All staff in the company must feel safe and secure, as staff security training must be organized and the number of hours or percentage of time and training devoted to this area must be determined. The total number and percentage of human rights-related operations and ways to avoid this risk also need to be provided.

The society subgroup shows the impact of an organization on society and the work community. These may include presenting the local community, explaining anti-corruption issues, developing public policy, promoting anti-competitive behavior, assessing compliance and the impact of suppliers on society, and grievance mechanisms to influence public presentation. Local communities and the percentage of employees who are members of this community should be indicated, indicating the positive and negative impacts of this community. The fight against corruption can help to reduce corruption-related operations, so the report should include the number and percentage of operations dedicated to reducing and preventing corruption, as well as the identification of increased risks. The company may develop anti-corruption policies and procedures to reduce corruption. These policies and procedures may involve members of government bodies, employees, and business partners, and the report should include the number of such participants. If corruption cases are observed during the reporting year, the number of these events must be indicated, indicating the number of each area arising in the field of anti-corruption (employees, members of the government, suppliers) and the percentage of all corruption cases in the company. The report shall include the number of new suppliers and relationships that may have an impact on the public, as well as the potential adverse effects of those suppliers on the public and an indication of the outcome of the relationship with those suppliers.

Product responsibility sub-category represents the services and products, which directly affect stakeholder's opinion. This subgroup includes: customer health and safety analysis, product and service labeling, marketing communication with a strong focus on the company, customer privacy and compliance. The report shall include the percentage of significant categories of products and services whose health and safety impact is improved and the total number of incidents related to non-compliance with product and service rules in the definition of events leading to fines and penalties. All products must be labeled and manufactured in accordance with all applicable requirements and guidelines. When it comes to products and services, one of the most important aspects is customer satisfaction, which helps to better understand the quality of the product being sold or the service being

provided. If any inconsistencies or non-compliances with customer service are identified, they should be discussed and reported with the number of incidents and risk mitigation actions.

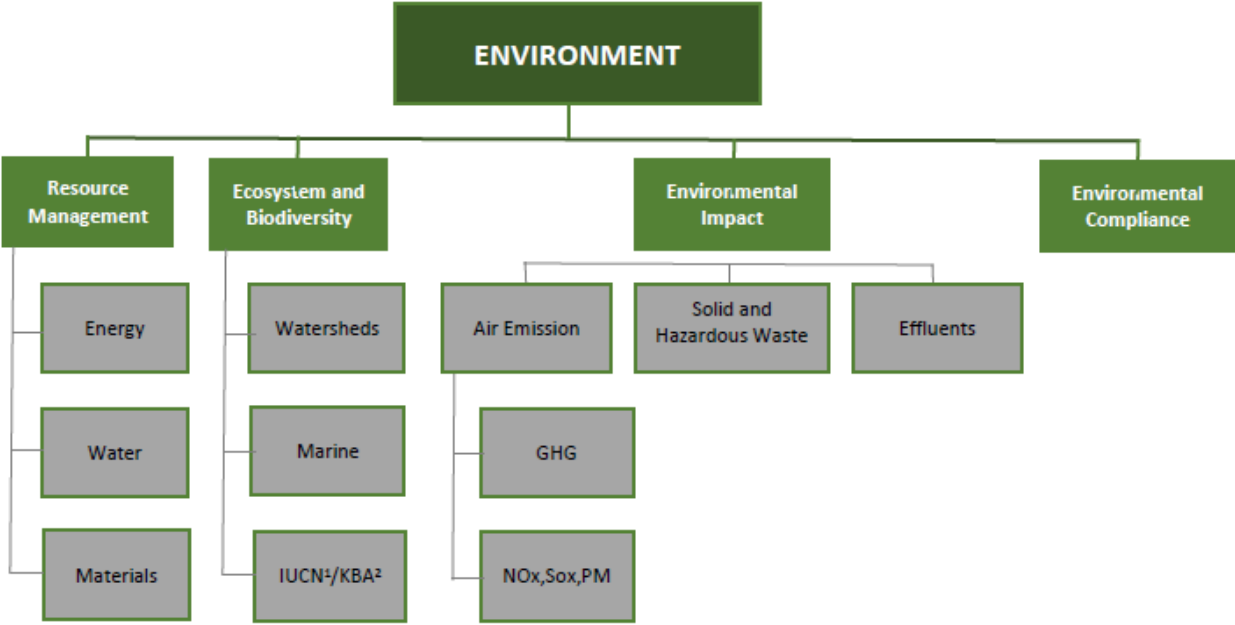
Thus, the social report covers and presents not only the aspects directly related to the company's employees, this group also includes relations with government institutions, suppliers, buyers and other relevant persons. The report must not only present the positive aspects, but also present incidents related to the company's operations and ways in which incidents could be reduced and risks avoided.

**2.4. General reporting principals of environmental reporting**

According Sustainability Reporting guidelines for Public-Listed companies prepared by Securities and Exchange Commission (2019) environmental reporting defined as “an organization’s impact on living and non-living natural systems, including land, air, water and ecosystem”. Disclosure of environmental activities can be presented like a company’s resource management. Company seeks long term success by minimizing negative impact to environment.

Environmental activities and aspects can be divided into fourth main parts: resource management, ecosystem and biodiversity, environmental impact and environmental compliance (see Figure 7).

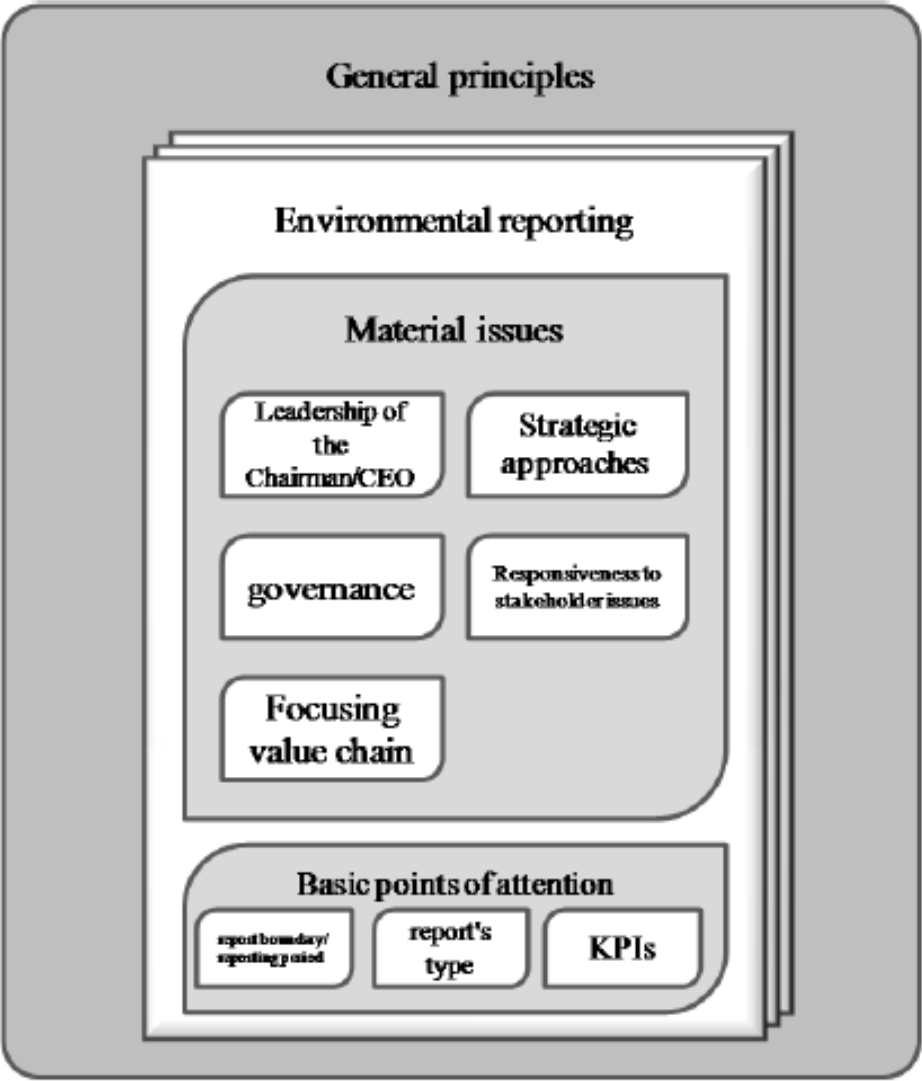
First part – resource management also can be divided in three parts – energy, water, materials. Ecosystem and Biodiversity part represents watersheds, marine and International Union for the Conservation of Nature and Key Biodiversity Areas. Environmental Impact covers Air emission (GHG, Nox, Sox, PM), Solid and Hazardous Waste and Effluents.



**Fig. 7.** Environmental reporting aspects (Sustainability reporting guidelines for publicly – listed companies (2019))

Key Principles for Environmental Reporting under the Environmental Reporting Guidelines of the Ministry of Environment of the Government of Japan (2012) are presented in Figure 8. According Environmental Reporting Guidelines, Environmental reporting has two main and fundamental

functions – internal and external (Ministry of Environment, Government of Japan, 2012). Internal aspects reflect environmental efforts that can have a negative impact on the activities and actions of organizations. The first internal function is to identify and observe environmental policies or programs of the organization. The second internal function is to motivate the employee and promote the employees' environmental activities, the internal aspect of which is informing the public about the company's environmental activities. Firstly, the company must disclose information about the company's activities and social responsibility, secondly, provide important information to stakeholders about the decisions made, and thirdly, promote commitment and review activities and environmental activities between society and the company.



**Fig. 8.** Principles of Environmental Reporting (Ministry of the Environment, Government of Japan (2012))

According to the HM government guidelines for environmental reporting (2019), there are five key steps in characterizing environmental impacts. First of all, the boundaries of the company need to be defined and if the organizational structure is simple and all the assets belong to one person, then everything that belongs to that company and what actions affect it needs to be reported. If the organizational structure is more complex or it has several business owners, then the report must present

a different approach. The second step is to set a period for the collection and submission of information. The reporting period should be 12 months and ideally the reporting period for the report should correspond to the financial year. This similarity in financial performance can visualize information and make it easier to understand a company's results, which make it easier to judge and predict a company's results. The third step is to identify the main environmental impacts of the company and to clearly understand in which area the negative environmental impacts may occur. The main categories of environmental impact can be: green house, water, waste, material and resource efficiency, biodiversity and ecosystem services and release to air, land or water. Not all aspects are relevant to all of the company, it depends on the sector of the company's activity, due to which the relevant aspects must be individually selected and implemented. Depending on the company's activities, it is necessary to determine which categories of environmental impacts are significant and these aspects must be explained by indicating why they are important and how they are defined. The fourth step is to assess the identified impacts, which can be done in several ways by collecting and managing information and recorded data at the enterprise level. "Using a standardised reporting format is recommended to ensure that data received from different business units and operations is comparable" (HM Government Environmental Reporting Guidelines, 2019) and ideally environmental reporting should be integrated into the existing reporting process. The last (fifth) step is to report and present all the information collected and analyzed, as the report must be reliable and written in a balanced and transparent way. The report should be summarized and include information on:

- The reason for collecting the data.
- Assumptions, methodologies and reference data used to understand how the data were collected and processed.
- An explanation of the areas of activity of the organization to which the data relate.

If not all sources of environmental impact are discussed in the report, it must be explained and detailed why the information is not provided. The trend in effects should be clearly understood and information on the environment and its effects should be linked to financial information and performance. Where possible, ways should be provided to improve the performance of businesses: more efficient production processes, recycling facilities, land reclamation / restoration or investment in projects in the local community. It is also necessary to clarify how the effects are managed and who is responsible for them, and to identify the risks and opportunities to avoid the effects of the risks on the environment through changes in the data, location, causes and amounts provided by companies. Also, in order to manage risk, it must be explained how the information provided is used to support companies' decisions. Using case histories to illustrate actions and methods helps to present the work and results of companies.

## **2.5. Sustainable development goals**

According to the Ministry of Environment of the Republic of Lithuania and Lithuanian Responsible Business Association, sustainable development is described as a path of development of a modern and responsible state and its society, which is based on three equal policy areas - environmental protection, economic development and social welfare. There are 17 goals and 169 sub-targets for sustainable development, which cover a wide range of policy areas and are designed to be achieved by 2030 (see Figure 9).



# SUSTAINABLE DEVELOPMENT GOALS



**Fig. 9.** Sustainable development goals (Ministry of Environment of the Republic of Lithuania).

The number first goal is to eradicate all forms of poverty, because everyone deserves to live without poverty and have the opportunity to prosper. Although since 1990 poverty rates have fallen sharply, and the worst forms of poverty remain. The eradication of poverty requires universal social security systems that aim to protect all individuals throughout their life cycle. Targeted measures to reduce vulnerability to disasters are also needed. Until 2030 aims to reduce at least half of all men, women and children of all ages living in poverty, to ensure that all men and women, especially the poor and vulnerable, have equal rights to economic resources, as well as access to basic services, property and land management and other forms of ownership, to build credible political frameworks at national, regional and international levels based on poverty- and gender-sensitive development strategies.

The second objective is to eradicate hunger, ensure food security and better nutrition, and promote sustainable agriculture. The food system is made up of the environment, the people, the institutions and the processes by which agricultural products are produced, processed and presented to consumers. Every aspect of the food system affects the ultimate availability and accessibility - the ability of consumer to choose the right and safe foods and a healthy diet. Addressing malnutrition requires coordinated action and additional interventions in the agri-food system, natural resource management, public health and education and policies. Until 2030 to end hunger and ensure that all people, especially the poor and vulnerable, including babies, can eat safely and healthily throughout the year, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production that help maintain ecosystems; strengthening the capacity to adapt to climate change, extreme weather events, droughts, floods and other disasters and to gradually improve land and soil quality, maintain the genetic diversity of seeds, crops and farmed and domestic animals

and related wild species, increase investment in rural infrastructure, land farm research and development services, technology development and plant and animal gene banks. Every actor in the agricultural supply chain, including farmers, producers, traders, retailers, investors and consumers, has an important role to play in creating sustainable food systems that promote food security, protect the environment and provide economic opportunities.

Another goal of sustainable development is good health and well-being. To achieve this goal, we want to ensure a healthy life and well-being for all ages. People still suffer unnecessarily from preventable and preventable diseases, and too many people die prematurely. Tackling disease and ill health requires a concerted and long-term effort, focusing on populations and regions that are neglected. Until 2030 aims to reduce maternal mortality, prevent neonatal and child deaths, reduce one-third of early non-communicable disease mortality through prevention and treatment, and promote mental health and well-being, strengthen drug abuse prevention and treatment, including drug abuse and harmful alcohol consumption. Until 2020 the aim is to halve the number of road deaths and injuries, ensure public health, significantly reduce the number of deaths and illnesses due to the use of hazardous chemicals, air, water and soil pollution, and more.

Ensuring inclusive, equal and high-quality education and promoting lifelong learning is the fourth goal of sustainable development. Quality education is the basis for sustainable development. In addition to improving the quality of life, access to education can help local people, provide them with the tools they need to develop innovative solutions to the world's biggest problems. Reasons for the lack of quality education: lack of properly trained teachers, poor learning conditions and equity problems related to opportunities for rural children. In order to provide quality education for children from poor families, investment is needed in educational scholarships, teacher training seminars, school building and improving access to water and electricity for schools. The aim is to ensure that by 2030 all girls and boys receive free and high-quality primary and secondary education that ensures relevant and effective learning outcomes, equal access for all women and men to accessible and high-quality technical, vocational and higher education, including university, the elimination of gender gaps in education and equal opportunities; access to quality education for all, ensuring that all young people and a large proportion of adults, both men and women, are literate and able to count.

Progress has been made in the world towards gender equality and women's empowerment, but women and girls still suffer from discrimination and violence in all parts of the world, so another goal of sustainable development is gender equality. Gender equality is not only a fundamental human right, but also a necessary basis for a peaceful, prosperous and sustainable world. Giving women and girls equal access to education, health care, decent work and representation in political and economic decision-making promotes a sustainable economy. In order to eliminate the gender discrimination that prevails in many parts of the world, it is essential to implement new legal frameworks for equality between women in the workplace and to eradicate harmful practices against women. The objectives in order to achieve this goal are to prevent all forms of discrimination against women and girls at all levels, to eliminate all forms of violence against women and girls in the public and private spheres, to ensure full and effective participation and equal leadership at political, economic and economic level in public life.

The sixth objective is clean water and hygiene, which aims to ensure access to water for its sustainable management and hygiene for all. Clean, accessible water is an essential part of the world we want to



live in, and so far there is enough fresh water on the planet to achieve this. However, due to a poor economy or poor infrastructure, millions of people, including children, die every year from diseases related to inadequate water supply, sanitation and hygiene. Water scarcity, poor water quality and inadequate sanitation have a negative impact on food security, livelihoods and educational opportunities for poor families around the world. To improve access to sanitation and drinking water, more investment is needed in the management of freshwater ecosystems and sanitation facilities. The aim is to have access to safe and clean drinking water sources for all in the world by 2030, and to ensure proper, safe, accessible sanitation and hygiene for all. It also aims to significantly increase water efficiency in all sectors by 2030 and to ensure sustainable freshwater supply and demand to address water scarcity and significantly reduce the number of people suffering from water scarcity.

Affordable and clean energy is another goal of sustainable development, which aims to ensure access to affordable, reliable, sustainable and modern energy for all. Energy is probably one of the most important part of every global challenge or opportunity. Be it the labor market, security, climate change, the food industry or rising incomes, access to energy is extremely important for everyone. Working towards this goal is particularly important as it is linked to other sustainable development goals. In order to build more sustainable and inclusive communities and resilience to environmental issues such as climate change, it is essential to focus on universal access to energy, greater energy efficiency and greater use of renewable energy through new economic and employment opportunities. The aim is to ensure universal access to affordable, reliable and modern energy services by 2030, to substantially increase the share of renewable energy in the global energy mix, and to double the global energy efficiency improvement rate. It also aims to strengthen international cooperation by 2030 to facilitate access to clean energy research and technologies, including renewable energy, energy efficiency and advanced and cleaner fossil fuel technologies, and to promote investment in energy infrastructure and clean energy technologies.

Sustainable development aims at decent work and economic growth that promotes sustainable economic growth, productive employment and decent work. Sustainable economic growth requires that society create the conditions for people to have quality jobs that stimulate the economy and do not harm the environment. Job opportunities and decent working conditions are also needed for every working-age population, and greater access to financial services must be provided to manage income, accumulate wealth and make productive investments. The objectives are to promote per capita economic growth, to increase economic productivity through diversification, technological development and innovation, to promote development-oriented policies that support productive activity, decent jobs, entrepreneurship, creativity and innovation, and to encourage the formation and development of developing micro, small and medium-sized enterprises, including access to financial services. The goal is to gradually improve global energy efficiency in services and production by 2030, to achieve full and productive employment and decent working conditions for all women and men, including young people and people with disabilities, and equal pay for work of equal value for all. Also significantly reduce the proportion of young people who are not in employment, education or other activities, protect labor rights and promote a safe and sustainable working environment for all workers.

Another area of change is industry, innovation and infrastructure, which aims to develop resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. Investment in infrastructure - transport, irrigation, energy, and information and communication technologies - is

crucial to achieving sustainable development and empowering communities in many countries. Manufacturing is an important driver of economic development and employment. Technological progress is at the heart of efforts to achieve environmental goals, such as greater resource and energy efficiency. Without technology and innovation, industrialization will not happen and without industrialization, development will not happen. Quality, reliable, sustainable and resilient infrastructure, including regional and cross-border infrastructure, needs to be developed to support economic development and human well-being, promote inclusive and sustainable industrialization and significantly increase the share of industry and GDP by 2030, improve research, improve industry technological capabilities in all countries, especially in developing countries. The aim is to support domestic technological development, research and innovation in developing countries, including by ensuring a favorable policy environment for industrial diversification and the creation of added value for goods.

The tenth goal of sustainable development is to reduce inequalities within and between states. There is a growing consensus that economic growth is not enough to reduce poverty if it is not inclusive and if it is not linked to the three dimensions of sustainable development: economic, social and environmental protection. Fortunately, income inequality has decreased both between and within countries. To reduce inequalities, policies should be broadly comprehensive, addressing the needs of disadvantaged populations. The goal is to gradually achieve and maintain 40 percent salary growth above the national average by 2030, to enable and promote the social, economic and political inclusion of all individuals, regardless of age, gender, disability, race, ethnic origin, religion or economic background. or other status. It also aims to ensure equal opportunities and reduce inequalities by eliminating discriminatory laws, policies and practices, and to promote relevant legislation, policies and actions in this area.

The eleventh goal is to make cities and populated areas safe, resilient and sustainable. Cities are centers of ideas, trade, culture, science, productivity, social development and much more. At best, cities have allowed people to move socially and economically. The number of people living in cities is expected to increase to 5 billion by 2030, and it is important that effective urban planning and management practices are in place to address the challenges of urbanization. There are many challenges to maintaining cities in a way that continues to create jobs and prosper without causing land and resource depletion. Common urban problems include congestion, lack of funding for basic services, lack of adequate housing, declining infrastructure and increasing air pollution. The rapid challenges of urbanization, such as the safe disposal and management of solid waste in cities, can be overcome in a way that allows them to continue to prosper and grow, while improving resource use and reducing pollution and poverty. One such example is the increase in municipal waste collection. There must be a future in which cities provide universal access to basic services, energy, housing, transport and so on. The aim is to ensure access to adequate, safe and affordable housing and basic services for all by 2030 and to modernize buildings, ensure safe, accessible and sustainable transport systems for all, improve road safety, in particular by expanding public transport, and strengthen efforts to protect and preserve world culture and natural heritage. The aim is to reduce the negative impact of cities on the environment by 2030, with a special focus on air quality and municipal and other waste management, to support positive economic, social and environmental links between urban, suburban and rural areas by strengthening national and regional development planning.

Responsible consumption and production means promoting resource and energy efficiency, sustainable infrastructure and access to basic services, green and decent jobs and a better quality of life for all. Its implementation helps to achieve common development plans, reduce future economic, environmental and social costs, strengthen economic competitiveness and reduce poverty. Therefore, another goal of sustainable development is responsible consumption and production, which aims to ensure sustainable consumption and production patterns. As responsible consumption and production aim to produce more and better results, the net welfare benefits of economic activity can increase by reducing resource use, degradation and pollution throughout the life cycle, while improving quality of life. There is also a need to focus on performance in the supply chain, involving all processes from producer to consumer. This includes educating consumers about responsible consumption and lifestyles by providing them with appropriate information through the use of standards and labels, and by including sustainable public procurement. The aim is to achieve sustainable management and efficient use of natural resources by 2030, to halve food waste at retail and consumer level, to reduce food losses in the production and supply chain, including post-harvest losses, in accordance with agreed international agreements, to achieve environmentally sound chemicals, the management of materials and all wastes throughout their life cycle and the significant reduction of their emissions to air, water and soil in order to reduce their negative impact on human health and the environment, the significant reduction of waste through prevention, reduction, recycling and re-use. It also encourages companies, especially large and multinationals, to adopt sustainable practices and integrate sustainability information into their reports, and to promote sustainable public procurement practices in line with national policies and priorities.

Another goal is to mitigate the effects of climate change by combating climate change and mitigating its effects. Climate change is now affecting every country on every continent. It harms local economies, has a major negative impact on life, it costs a lot to communities, countries already now, and it will cost even more tomorrow. The weather is changing, sea levels are rising, more and more extreme weather conditions are occurring, and the amount of greenhouse gases is now at its highest level in our history. The pace of change is accelerating as more and more people are switching to renewable energy sources and taking various measures to reduce emissions, but climate change is a global challenge. This is an issue that needs solutions that need to be coordinated at international level to enable developing countries to make the transition to a low-carbon economy. The aim is to strengthen resilience and adaptive capacity to climate change and natural disasters in all countries, and to integrate climate change measures into national policies, strategies and planning. It also aims to improve education, awareness-raising and human and institutional capacity for climate change mitigation, adaptation and mitigation.

It also aims to save life in water and use Ocean and marine resources for sustainable development. The world's oceans - their temperature, chemistry, currents and fauna - are vital systems that make the Earth fit for human existence. Careful management of water resources is a key feature of a sustainable future. At present, however, coastal waters are constantly suffering from pollution, and ocean acidification is having a negative impact on the functioning of ecosystems and biodiversity. Marine protected areas and resources need to be managed effectively, and regulations need to be adopted to reduce overfishing, marine pollution and ocean acidification. The aim is to prevent all types of pollution of the oceans and seas by 2025, in particular from land-based activities, to reduce the impact of ocean acidification, including by strengthening scientific cooperation at all levels.

The fifteenth goal of sustainable development is to protect, restore and promote the sustainable use of land ecosystems, the sustainable management of forests, the fight against desertification, the cessation of land degradation and the loss of biodiversity. Protecting forests can strengthen the management of natural resources and increase land productivity. Two international agreements are currently being implemented to promote the fair use of resources. Financial investments are also made to support biodiversity. The aim is to ensure the conservation and restoration of terrestrial and inland ecosystems and their services, in particular forests, wetlands, mountains and terrestrial land, by 2020, to promote sustainable forest management, halt deforestation, restore endangered forests and significantly increase afforestation and forest cover recovery worldwide. By 2030, the aim is to combat desertification, restore declining land and soil, and ensure the conservation of mountain ecosystems, including their biodiversity. The mobilization of significant resources from all sources and at all levels is encouraged to finance sustainable forest management and to provide appropriate incentives for developing countries to promote such management, including conservation and reforestation.

Another goal of sustainable development is to promote peaceful societies, ensure access to justice for all and create effective and accountable institutions at all levels. International threats of murder, violence against children, human trafficking and sexual violence are important to mention in order to promote a peaceful and inclusive society for sustainable development. This enables everyone to have access to justice and to build effective, accountable institutions at all levels. To address these challenges and build a peaceful society, more effective and transparent regulations and realistic public budgets are needed. The goal of peace and justice is to drastically reduce all forms of violence and related deaths, to end abuse, exploitation, trafficking in human beings and all forms of violence and torture against children. Also promote the rule of law at national and international level and ensure equal access to justice for all.

The ultimate goal of global sustainability is a partnership for goals that helps strengthen the instruments for implementing the development agenda and revitalize the global partnership for sustainable development. The successful implementation of the sustainable development agenda requires a partnership between governments, the private sector and civil society. These partnerships must be based on common principles and values, a shared vision and common goals, with people and the planet at the center. The aim is to strengthen the mobilization of domestic resources, to mobilize additional financial resources for developing countries from various sources, and to adopt and implement investment promotion arrangements for the least developed countries.

At 2016 February 12 Minister of Social Security and Labor of the Republic of Lithuania approved the Corporate Social Responsibility action plan 2016–2020, the purpose of which is to create a functional social responsibility system that would encourage companies to apply the principles of social responsibility in their activities and the society to be an active participant in this process. The implementation of the corporate social responsibility concept should be driven by the companies themselves, but public authorities can help to ensure that companies act socially responsibly through smart policies and, where necessary, additional regulation that promotes corporate transparency, creates market incentives for responsible corporate behavior and ensures corporate responsibility. State institutions promoting the process of corporate social responsibility are the Ministry of Social Security and Labor of the Republic of Lithuania, the Ministry of Environment of the Republic of Lithuania, the

Ministry of Economy of the Republic of Lithuania and others (Updated 2011-2014 EU strategy on corporate social responsibility , 2011).

In the Republic of Lithuania Ministry of Social Security and Labor presented 2016-2020 action plan allocates over two million Euros to the improvement of social responsibility and education on this topic. Table 2 presents the goals, objectives and measures of the 2016-2020 Corporate Social Responsibility Action Plan by which these goals will be achieved and implemented by 2020.

Eurobarometer 2014 Citizens of 28 EU countries were interviewed in an environmental survey conducted in 2006. The number of Lithuanian respondents is 1,000. The results of the survey showed that 95 percent of the Lithuanian population is very or quite important for the protection of the environment. When asked about the five most worrying environmental issues, citizens identified air pollution (64%), health effects of chemicals (63%), increasing waste (54%), water pollution (53%), urban pollution problems (traffic jams, pollution, lack of green areas) (26%). In order to reduce the negative impact on the environment and encourage companies to act responsibly in the field of environmental protection, the project "Sustainable Lithuania" was created, the aim of which is to ensure proper information about the investments of the European Union funds in the environmental sector. The Investment Activities Program of the European Union Funds for 2014-2023, for which EUR 645,000 has been allocated (for the period 2014–2019), aims to introduce sustainable behavior in the field of environmental protection and to teach how to protect the environment (Ministry of Environment of the Republic of Lithuania, 2014).

Table 3 presents the problems and goals of the project "Sustainable Lithuania", presents the planned changes and indicates the result indicators that are relevant for companies and their activities. The focus is on waste sorting and the ability to convert waste into energy that would be used in the company's operations. The project aims to minimize the use of materials that should be discarded in production, to recycle and reuse as much waste as possible, or to turn unused waste into an energy source that can be used by the company.

**Table 2.** Objectives, tasks and measurements of social responsibility development (adapted from The Republic of Lithuania Ministry of Social Security and Labor, 2016)

Goals	Tasks	Measures
Goal 1 - to ensure the coordination of the development of corporate social responsibility between state institutions and social partners	Establish and ensure the functioning of a platform for the coordination of corporate social responsibility between state institutions and the social partners	Organize an annual National Corporate Social Responsibility Forum to discuss trends and problems in the development of corporate social responsibility and propose solutions
Goal 2 - to create a mechanism for promoting corporate social responsibility motivation and increasing competence	Improving the understanding for companies and society about corporate social responsibility	In order to implement opportunities for the development of social responsibility, to organize practical seminars for company managers, employees, representatives of employers and employees
		Organize international conferences on social responsibility and responsible business
		Carry out an analysis of the prevalence and potential of corporate social responsibility by conducting surveys of company managers and employees (identify good practices, publish analysis data, practices)
		Carry out international cooperation and exchange activities on the topic of social responsibility
		Advise companies on the implementation of social responsibility, train them to increase accountability, prepare reports
		Develop methodological tools for information and education on occupational safety and health that contribute to socially responsible business development
		Update information and education on occupational safety and health methodological tools contributing to the development of socially responsible business
Goal 3 - To ensure the monitoring of the progress and results of corporate social responsibility and to improve evaluation tools and methods at company and country level	Ensure that socially responsible companies are recognized by public authorities	Organize an annual competition for the National Responsible Business Award, pay more attention to the dissemination of good practice
	Ensure the measurement of corporate social responsibility performance against objective indicators and improve the availability of corporate social responsibility data	Revise the methodology for assessing the progress of corporate social responsibility at the national level, taking into account internationally recognized guidelines and standards
		To monitor the progress of the implementation of corporate social responsibility in accordance with the methodology for assessing the progress of corporate social responsibility at the national level
		To create a business sustainability and responsibility index in Lithuania: to prepare a methodology for calculating the business sustainability.

**Table 3.** Factors promoting environmental culture and awareness in the project "Sustainable Lithuania" (adapted from Ministry of Environment of the Republic of Lithuania (2014)).

The problem is solved	Goals for companies	Changes in regulations	Communication objectives	Result indicators
Unsorted waste	Sorting	Realize that wastes in production sector can be a material for energy	Encourage industry to reduce energy intensity and become more energy efficient	Energy consumption intensity in industrial enterprises  Industrial companies that have performed energy audits
Waste is unsorted and uncomposted	Sorts waste (at the point of generation) and returns it to the waste manager	Realize that production processes can also produce energy for business needs		
A large amount of unsorted waste travels to landfills	Recycle waste internally	Sorting and / or waste prevention benefits companies financially in the long run		
Waste is not used for energy production	Use/implement waste using technologies to obtain energy	In doing so, the company is a socially responsible company		
	Prevention	Proper application of technology, implementation of environmental management standards saves resources		
	Use recyclable, small packages	Increasing the pollution charge depends on whether the waste will be sorted or not		
High pollution in production	The focus and intensity of the campaign is on the defined core of the target audience	Promote awareness that waste can be a material for energy production	Encourage companies to implement eco-innovation  Promote the perception that a company that implements environmental standards is a competitive advantage	
Companies use excess packaging	Choose partners who have implemented environmental standards	Promote awareness that waste can be used if it is properly sorted		
Low level of investment in eco-innovation	Use waste in production, implement less waste-leaving processes / technologies	Understand that the implementation of environmental standards is part of a European standard / social responsibility		
Energy and resources are used inefficiently	Design products (packaging) according to the principles of ecological design	Promote awareness that the implementation of environmental standards is an important part of a company's reputation		
Poor implementation of environmental standards	Implement environmental management systems (environmental standards)	Promote awareness that waste prevention is financially beneficial in the long run		
	Encourage eco-innovation	Explain that the waste generated is harmful to the environment and that it is costly to manage		
	Encourage the prevention of pollution, the use of less polluting solutions with lower environmental impact, measures in the company's activities.	Promote awareness that this contributes to climate change mitigation  Being an environmentally friendly company contributes to the formation of a favorable image of the company, gives it an advantage		

All the goals (Lithuanian and global) presented promote social and environmental well-being and positive change. By collecting social and environmental reports, companies contribute to the implementation of these changes and the achievement of goals. The changes of each company have an impact on the achievement of global goals and set a good example for other companies in how to protect the environment, improve social welfare and increase sustainability.

## **2.6. Guidelines on non-financial reporting in Europe**

The European Commission is developing a methodology for reporting non-financial information from European Union institutions, bodies, offices and agencies (EUROPEAN COMMISSION, 2017). According to European Commission „Greater transparency is expected to make organizations more resilient and perform better, both in financial and non-financial terms” (2017). In the long run, this will stimulate the company's growth and increase shareholder interest in the company's activities. Below are six key principles for non-financial disclosure, according to the European Commission:

The essential principle of disclosure states that the presented material allows to notice the main problems of the company's activities, to assess the value of the company and to notice aspects in which the company can achieve better results. This factor is important because the disclosure or non-disclosure of reliable / unreliable information can affect a company's shareholder review. Disclosure of non-financial information is important in presenting both the positive and negative aspects of the valuation of a real enterprise. The company itself can determine what information is relevant and required in the report, which does not correspond to the company's sector of activity and field of work and can be omitted without distorting the fact of information activities. Several aspects can be considered in assessing the adequacy of a company's information: the business model and the key risks of that business, key issues relevant to the industry, stakeholder expectations, operational impact, public policy, and regulatory factors. Relevant information should be disclosed on a regular basis to ensure that the material presented is relevant and reliable at the time of analysis, and should therefore be updated and reviewed fairly frequently to ensure the reliability of the information.

The non-financial statements must present the true position of the company, so the information must be correct, balanced and understandable. All areas of the company's activities, positive and negative, should be presented and information should be provided impartially. Only valuable information should be provided to shareholders in making decisions. The report should present only the facts, without presentations of writers' opinions or subjective interpretations. The accuracy of the information can be found in the report in easy-to-understand and clear language. The report should match the same vocabulary used throughout the report. The company should provide the scope of the information disclosed. Qualitative and quantitative information should be provided in an attempt to present the full picture of the company and an overview of its activities. Quantitative information presented can be used to try to understand some non-financial aspects, and qualitative information provides a context about the company, making non-financial statements more valuable and understandable. Information is most useful when it is presented by mixing qualitative and quantitative information, adding numerical and visual information to make the information easier to understand.

Detailed but concise information makes it easier to understand the content of the non-financial statement. The report presents environmental impact assessments and results such as environmental impact through pollution prevention and control ideas, environmental impact of energy use, direct and



indirect effects of emissions on the environment, safety of water, soil and other biodiversity resources, waste management plans, organic production development plans and service. The report may also include social information on the employee's gender, age, religion, disability, occupations and other aspects of the employee and their environment. This part of the report can cover relations with trade unions, human resources, employment opportunities, occupational safety and health, community relations, socio-economic development of the local community, and more. Information on human rights and their observance must be provided in a complete but concise manner. The best practice of the human rights aspect in a company is to establish and express a commitment to human rights. With this commitment, the human rights expectations of managers, teams, employees and business partners can be clarified. The company must provide information on actions and ways in which human rights are protected or ways in which human rights violations are planned to be prevented. The non-financial report should also provide information on aspects related to bribery and corruption and ways to avoid them. The company should also explain in the report how it assesses the fight against corruption and bribery and whether the company is taking certain actions to reduce the negative impact of these aspects. If there are other significant factors in the entity that may affect the entity's operations, this information should also be included in the non-financial statement. The information presented should provide a comprehensive overview of the company and its activities during the reporting year. The completeness of the information depends on the importance of the information provided. There is not much need to focus on aspects that are not central and that do not attach much importance to the quality of the report. The presentation of standard information and information that creates a minimum value for the report should be avoided. Cross-references or symbols may be used to present essential information in a concise and comprehensible manner.

The non-financial report must present strategic and forward-looking information and its results. The report must present and review the business model, strategy, ways to achieve the future goal, and the short-term, medium-term and long-term impact of the information provided on the company's operations.

The fifth principle for the proper presentation of non-financial information is the targeting of information to stakeholders. The reporting company should pay attention to all stakeholders and prepare information that is relevant to all these groups. Stakeholders can be: investors, employees, customers, suppliers, the local community, local authorities, social partners and the whole population. The organization should provide relevant information about other stakeholders and present them in the report.

Non-financial information should be consistent and coherent, so that users of the report can easily compare the information with the previously provided information and see changes in the company's development results and operating conditions. Based on past and current information, it is possible to provide information about future changes and prospects in the company's operations. In order for the information provided to be understandable and reliable, the same methodology and aspects need to be used in the analysis of the reports. It should not be forgotten that these aspects can be updated in the light of changes in companies in the labor sectors or the lost benefits of the aspects. Changes should also be initiated by improving companies and updating methodologies. The company must present and justify any changes in the reporting methodology or information analysis method, the reasons for and consequences of these changes.

## 2.7. General reporting principles in Lithuania

Sustainable development is a path of development of a modern and responsible state and its society, which is based on three equal policy areas - environmental protection, economic development and social welfare. More than 25 years ago, the first steps were taken to establish sustainable development in the world. The growing number of people, the depletion of natural resources, increasing pollution, and other environmental, economic and social problems that go beyond national borders encourage constant remembrance and the pursuit of more responsible implementation of the principles of sustainable development.

In order to ensure the coherence and integration of economic development, solution of social problems and environmental protection, Lithuania has established an institutional and strategic planning system based on the principles of sustainable development. All public authorities, when preparing strategy papers in the relevant field, is guided by higher-level strategies, in particular the National Sustainable Development Strategy and the State Progress Strategy “Lithuania 2030”. This ensures coherence between different policies and integrated problem-solving (Ministry of Environment of the Republic of Lithuania).

According to the Ministry of Finance of the Republic of Lithuania, large Lithuanian public interest entities with an average annual number of employees exceeding 500 (during the financial year) include a social responsibility report in their annual report or have to create a separate sustainability report.

In the Social Responsibility Report should be included:

- environmental information;
- social information;
- human resources security information;
- anti-corruption information;
- information related with bribery issues.

This information should be provided in an appropriate form to the company, describing its activities, the conditions of the company and the activities of the company as a whole. Businesses that strive to conserve nature, use less electricity or water can defend themselves by using and meeting the ISO 14001 standard. This standard provides guidelines for the management of energy consumption and pollution reduction in an attempt to use energy efficiently and reduce waste. Controlling the work environment and all work processes reduces the risk of incidents in the organization that could contaminate the environment. A company operating in accordance with the requirements of the ISO14001 standard has a greater advantage in participating in public tenders in the Republic of Lithuania. Some of the requirements of the participating companies require companies to be ISO14001 certified, otherwise these companies cannot participate in tenders. Companies with ISO 14001 certification seem more reliable and can attract more customers, making it easier for these companies to obtain other licenses or make contacts. Attention to the environment and its problems and harmonious development give the company a competitive advantage. Companies can also provide information under EMAS (Environmental Management and Audit Scheme), in which participation in this scheme is

voluntary. Companies participating in this scheme are committed to improving, evaluating and managing its environmental performance. EMAS is similar to ISO14001, but the requirements for EMAS are stricter. Companies registered under EMAS are required to demonstrate compliance with environmental legislation and provide published information.

## **2.8. Responsible business organizations in Lithuania**

LAVA is a national association of responsible business, which unites companies and organizations seeking to implement the principles of responsible and ethical activities. It is a place for sharing good business best practices, promoting learning, growth and development of sustainable development in Lithuania, cooperating and creating value for organizations, society and the state. The Lithuanian Responsible Business Association LAVA unites companies and organizations that are based on the principles of responsible activity: respect the human and labor rights of employees, protect the environment, take care of the challenges of climate change, fight corruption and strive for the creation of civil society. LAVA does not represent any other interests. The mission of the Association is to promote the development of responsible activities as a condition for sustainable development in Lithuania.

The association has been formed since 2005. The National Network of Responsible Business Enterprises (Nacionalinio atsakingo verslo įmonių tinklo (NAVIT)) operating in Lithuania. Since 2013 August 30 it is the Lithuanian Responsible Business Association (Lietuvos Atsakingo Verslo Asociacija (LAVA)), which continues the activities of NAVIT. LAVA represents Lithuania in the initiative of the United Nations Global Compact, is a CSR Europe (European Responsible Business Association with about 10,000 members in Europe, EC Business Responsibility Adviser) and participates in the Lithuanian Progress Council.

LAVA members undertake to act in accordance with the principles of fairness, transparency, justice and environmental responsibility, to adhere to the principles of the “Global Compact” and to strive for their enforcement in their operating environment, to provide public reports on responsible activities. The association seeks not only to spread the idea of responsible activity, to show examples to follow in implementing the principles of social responsibility in Lithuanian business, but also to form criteria for responsible activity. To consult, share experience among members, organize seminars, conferences, trainings, other events open to the public, cooperate with organizations pursuing sustainable development goals (including international ones). LAVA submits proposals to state institutions regarding the criteria of responsible activity, assessments, strategies, programs, laws and other legal acts, forms the criteria of responsible activity and strengthens the perception of the value of responsible activity in society.

LAVA goals (Alijosiute, A., 2015):

- to promote the development of the principles of responsible activity, to form the criteria of responsible activity;
- to make proposals to state institutions regarding the criteria of responsible activity, evaluation, strategies, programs, laws, etc;
- to strengthen the perception and evaluation of the value of responsible activities in society, business, and between institutions;

- to share experience, provide methodological material, organize seminars, conferences, etc.
- to organize research, analyze and publish data on corporate social responsibility in Lithuania, examples of good practice;
- cooperate with companies with responsible business objectives, (including international organizations);
- represent the country in the United Nations Global Compact and support the principles of the agreement.

LAVA is an open organization and invites companies and organizations working in various fields and striving for sustainability, which want to create traditions of responsible activity and contribute to the creation of a better quality of life in Lithuania. Companies wishing to become members of the Association must fill in the form “Become a Member” provided on the website of the Association by submitting a signed declaration-letter of application in which they agree with the objectives of the Association. The decision to approve membership is made by the Congress of the Association.

According to LAVA, a sustainable business is called responsible. Sustainable development is an opportunity to achieve universal well-being for present and future generations, combining environmental, economic and social aspects within their permissible limits and for the successful development of business, as business is a vital component of the well-being of society. Business responsibility - the responsibility of a company for its impact on the environment - nature, economy and society, developing activities and relations with stakeholders.

Cooperation between consumers and the public sector is important for business responsibility. Corporate responsibility is one of the EU's strategic goals, contributing to the principles of sustainable development and increasing the competitiveness of companies. Business responsibility is a strategic value not only of the EU but also of Lithuania.

## **2.9. Information quality assessment methods**

Looking at all social and environmental interpretations of accounting, it can be summarized that the purpose of social and environmental reporting is to determine what companies want in response to societal needs and how these implementations can improve public and corporate behavior, as these changes must benefit both companies and society.

The aim is to provide qualitative information in social and environmental reports that can be compared with data from other companies or data from the previous period. It is appropriate to compare and take into account only information that is reliable and true, and therefore criteria are needed to examine the quality of the information provided. The quality of social and environmental reports can be assessed in two ways: in a quantitative way and in a qualitative way (see Figure 10).



**Fig. 10.** Methods to evaluate the quality of information

Szczepankiewicz E.I. and Przemysław Mućko P. (2016) and Dagilienė L. (2014) presents a quantitative research method during which the quality of the information can be evaluated by counting sentences or words in the report or by searching for keywords in the information provided in the report. Dagilienė L. and Mykolaitienė V. (2016) and E Bonsón E., and Bednárová M. (2014) present another research method in which a quality index is calculated by telling whether the required information was included and provided in the report or not. The lack of this study to say what information is published or not, but does not assess the quality of the information provided. Another way of quality research that Pivac S., Vuko T. and Cular M. (2017), Haček P. (2017), Leitoniene S. and Sapkauskiene A. (2015), Skouloudis A. and Evangelinos K.I. (2009) uses evaluates the quality of the information provided by specifying a number of points for each aspect and thus determining the quality index. This method presents the quality of the information presented in the clearest and most accurate way. However, due to the different spheres of activity of the company and the work performed, there is no single common method that would assess the quality of information of all companies. There is not yet one, specific model for all companies to assess the quality of information that can be provided by any company in the report. The evaluation of qualitative information should include the presentation of both positive and negative information. Such an information evaluation model would allow companies to draw conclusions from the data obtained and systematize the collected data both in terms of time and comparison over a wider range than just their own company, which would increase the social and environmental changes

Although the qualitative research method for determining the information quality index seems to be the most reliable, it is necessary to pay attention to the field of activity of the analyzed company and the requirements and relevant areas of work. Properly selected evaluation criteria and rating scale allow to determine the quality of companies' social and environmental information and compare this data. Based on the obtained data, it is possible to monitor areas that need more attention or to monitor the change of the company's information over the years.

## **2.10. Insights in corporate social and environmental reports**

There are many ways and means of determining the quality of social and environmental information, but there is no single common way for all companies to provide a high-quality social and environmental report or to evaluate a report already submitted on the basis of these principles. According to the analyzed articles, the qualitative study in determining the quality index is usually

performed on the basis of GRI standards, as they cover the most analyzed areas and are best suited for the evaluation of companies in various sectors of activity (Skouloudis A. and Evangelinos K.I.,2009). According to the GRI standards, the social and environmental areas are divided into smaller categories, to each of which additional assessment criteria are assigned.

In order to determine the quality of social and environmental information, the most appropriate way is to determine the quality of the index using a qualitative research method. Based on this method of assessment, it is possible not only to say whether the information is provided or not, but also to say what level of information is presented. By assessing each criterion of the GRI standard in a qualitative way, it is possible to identify the weakest areas of companies that need more attention and assess the risks that need to be avoided.

Sustainability reports not only help to present the activities of companies, compare the data obtained over time and assess the risks to companies, but also provide an example to other organizations on how to carry out sustainable activities. Governmental organizations also contribute to the sustainable approach of organizations to the environment and the social environment by developing projects or laws that increase the level of sustainability and create plans for the future. Organizations uniting Lithuania, Europe or the whole world contribute to the achievement of goals, because it is understood that the common goal can be achieved only with all efforts. The associations that are formed help to unite active companies and to present the appropriate actions related to society and the environment with their knowledge.

### 3. Research methodology

To address the scope this paper - information quality research in corporate social and environmental reports – three research questions have been raised:

- what quality information is disclosed in social and environmental reports by LAVA members?
- does the quality of information in social and environmental reports improve over time?
- is there a difference between the quality of mandatory and voluntary social and environmental reporting?

According to S.Leitoniene and A.Sapkauskiene (2015) studies of corporate social responsibility can be based on volume analysis or quality analysis. Volume analysis is done by counting sentences or words in reports or performing linguistic analysis, while quality analysis and the qualitative assessment attempts to determine the quality, relevance and adequacy of the information provided in the reports in order to determine quality index of the report. In addition, after estimating the amount disclosure, it uses an encoding system that can be weighted (1-3 or 1-5) and a (0-1). Encoding system (0-1) can only measure the amount of information disclosed (information is presented or not), but this method do not take into account the quality of the indicator information, while data quality assessment using weighted disclosure method by using scale is more informative.

The aim of empirical research is to investigate the quality of information presented in social and environmental reports by Lithuanian Responsible Business Association (Lietuvos Atsakingo Verslo Asociacija (LAVA)) members according to Global Reporting Initiative (GRI) guidelines. The whole course of the research work point by point is shown in Figure 11.

The best known and widely used framework for sustainability reporting is the Global Reporting Initiative (Szczepankiewicz E.I., Mu'cko P., 2016, International Finance Corporation,2011). GRI is an independent international organization which helps to understand, control and implement impact on economic, social and environmental aspects of organization. Not all LAVA companies' social and environmental reports are publicly available, so the corporate websites of corporate companies are additionally analyzed based on the same GRI guidelines. The requirements for the preparation and publication of the social responsibility report established in the Law on Financial Statements of Enterprises of the Republic of Lithuania apply to the preparation of the 2017 Financial Statements January 1 and the entity's annual reports for subsequent periods, so the study analyzes reports from 2017 onwards. Social and environmental information can be found in the annual report or in a separate report such as the Sustainable Business Report, the Social Responsibility Progress Report, the Sustainable Development Report, and the Social Responsibility Report.

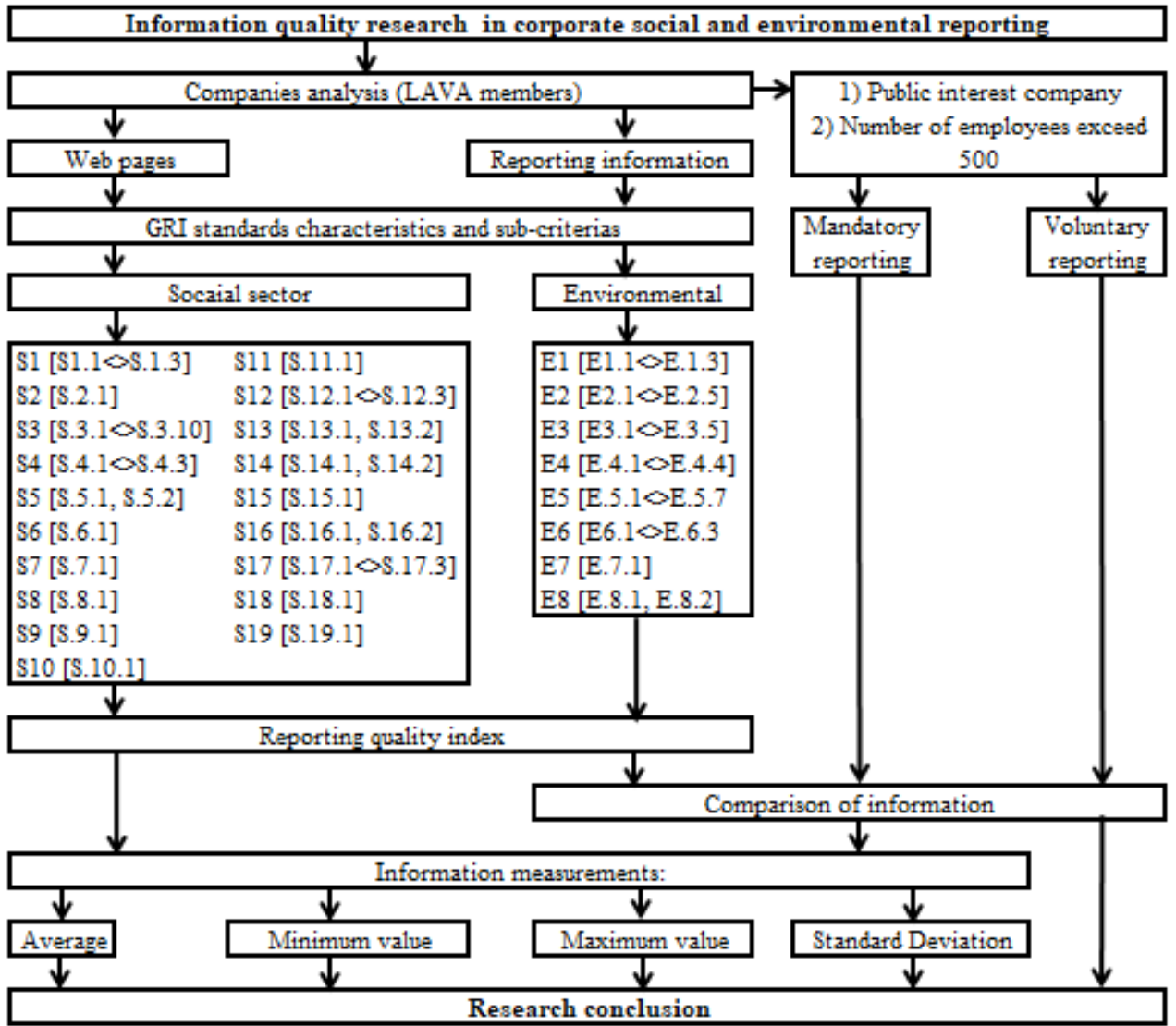


Fig. 11. Stages of the research

Not all companies are required to prepare social and environmental reports, some companies prepare these reports on a voluntary basis. Large public-interest entities with an average annual number of employees during the reporting financial year exceeding 500 are required to prepare a social responsibility report (see Figure 12).

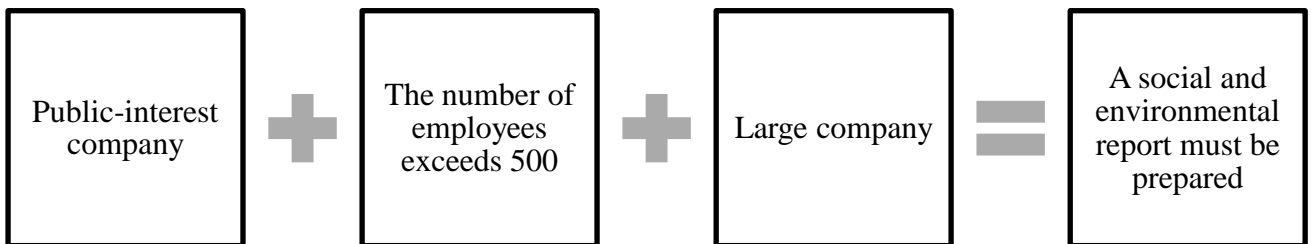


Fig. 12. Criteria for determining the need for a social and environmental report



The quality of social and environmental reports and web pages was assessed by using 70 criteria. It was assumed that quality of social and environmental report is equal to the information quality presented in non-financial report of the company (Dagiliene L., Mykolaitiene V., 2016). To assess the quality of social and environmental reports and web pages, 40 criteria were identified in social area and 30 criteria in environmental area according GRI guidelines. The quality of each criteria was determined in a five point scale (from 0 to 4) (see Table 4) (Hač bek P., 2017).

**Table 4.** Scoring system (Hač bek P., 2017)

0	No mention or insufficient information on individual criteria
1	Some/little/partial mention or coverage
2	Most important aspects covered, average
3	Better than average, the report presents detailed information
4	Best practices and creative approach, innovative disclosure and explanation

The quality of the reports is assessed by identifying information about the companies KPI indicators in the social and environmental field by evaluating the reports and the websites separately, because GRI reports provide only a part of the story on corporate governance and do not contain any specific indicators (Bonsón E., Bednárová M., 2015). The individual sum of points in the social and environmental fields and the total sum of points in the social and environmental fields are expressed as a percentage in determining the percentage of information quality. Based on the percentage obtained, the quality indicator is assigned according in Table 5 presented information quality measures and the quality of the report is determined (Pivac S.et al, 2017).

**Table 5.** Information quality measures (Pivac S.et al, 2017)

Poor quality	0–20 (%)
Low quality	21–40 (%)
Average quality	41–60 (%)
Sufficient quality	61–80 (%)
High quality	81–100 (%)

The data obtained are used to answer questions about the quality of LAVA members' social and environmental reports, the differences between mandatory and voluntary information, and to determine whether the quality of reports changes over the years.

#### 4. Research results

Not all companies in Lithuania are required to submit social and environmental reports. For this reason, the criteria for determining the need for reporting among LAVA members presented in Table 6. Each company evaluated according to three criteria: whether it is a public interest company, whether the company employs more than 500 people and the company is big. If all questions are answered in the affirmative, it means that the company must submit a social and environmental report. If a company is not required to report, it can do so for voluntary purposes.

**Table 6.** The need for social and environmental reporting

	Is it public interest company?	Does the number of employees exceed 500?	Is the company big?	Is the company required to provide a social and environmental report?
PakMarkas	No	No	No	No
ESO	Yes	Yes	Yes	Yes
KONEKESKO	No	No	No	No
EUGESTA	No	No	No	No
spa Vilnius	No	No	No	No
Kauno Energija	Yes	Yes	Yes	Yes
Achema	Yes	Yes	Yes	Yes
Telia	Yes	Yes	Yes	Yes
EKT	No	No	No	No
Jurex	No	No	No	No
Interlux	No	No	No	No
Orkla Care	No	No	No	No
SEB	Yes	Yes	Yes	Yes
Rimi Lietuva	No	Yes	Yes	No
COSMOWAY	No	No	No	No
Litmus LT	No	No	No	No
BIOK Laboratorija	No	No	No	No
Swedbank	Yes	Yes	Yes	Yes
AUGA GROUP	Yes	Yes	Yes	Yes

The analysis of LAVA members showed, that 7 companies (37%) have to provide social and environmental reporting mandatory and 12 companies (63%) can submit social and environmental information on voluntary bases (see Figure 13).

### The need for reporting

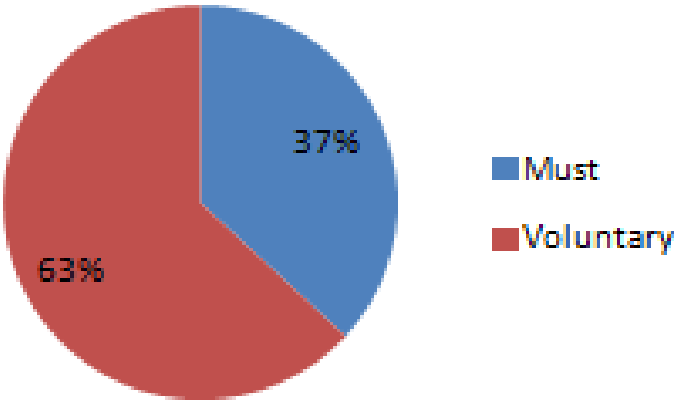
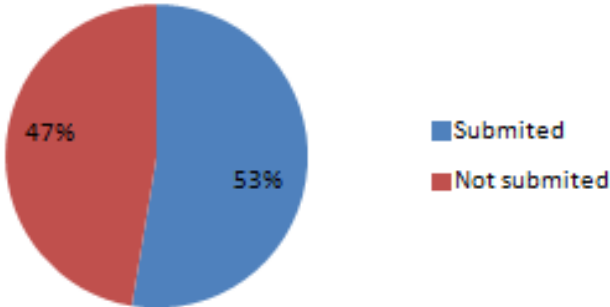


Fig. 13. The part of the companies according the need of report submission

Table 7 shows the sources of information on social and environmental information for LAVA members. All companies that are required to submit social and environmental reports have submitted them. 10 out of 19 companies (53%) submitted social and environmental reports and 9 out of 19 (47%) not submit the report. 14 out of 19 companies (74%) provided social and environmental information on their websites, other part of the companies -5 out of 19 (26%) not submit information in WebPages (see Figure 14). The two companies (COSMOWAY and Litmus LT) that are members of LAVA did not provide social and environmental information either in the form of a report or on the website. These companies are not required to submit social and environmental reports.

### Part of report submission



### Information in web page

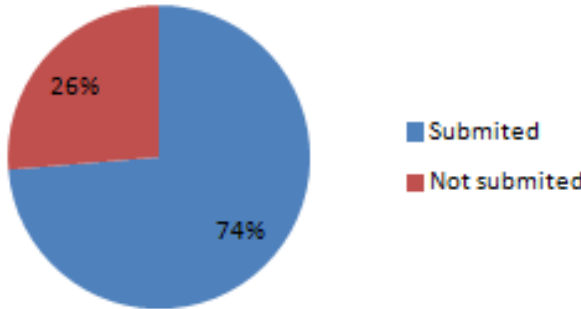


Fig. 14. Part of the companies that provide information in reports and web pages

**Table 7.** Disclosure sources of social and environmental information

	Is the company required to provide a social and environmental report?	Does the company submit a social and environmental report?	Does the company submit social and environmental information in web page?
PakMarkas	No	Yes	Yes
ESO	Yes	Yes	Yes
KONEKESKO	No	No	Yes
EUGESTA	No	No	Yes
spa Vilnius	No	No	Yes
Kauno Energija	Yes	Yes	Yes
Achema	Yes	Yes	Yes
Telia	Yes	Yes	Yes
EKT	No	Yes	No
Jurex	No	No	Yes
Interlux	No	Yes	Yes
Orkla Care	No	No	Yes
SEB	Yes	Yes	No
Rimi Lietuva	No	No	Yes
COSMOWAY	No	No	No
Litmus LT	No	No	No
BIOK Laboratorija	No	No	Yes
Swedbank	Yes	Yes	No
AUGA GROUP	Yes	Yes	Yes

Figure 13 and Figure 14 show that 37% of the members of the LAVA association were required to report and 53% of the members of the association were prepare social and environmental reports. 3 out of 13 companies have submitted voluntary social and environmental reports, which can be explained by the willingness to provide social and environmental information so that consumers and investors pay attention to the company and its activities when choosing what to buy and where to invest (Updated 2011-2014 EU strategy on corporate social responsibility, 2011).

Appendix 1 provide information on the assessment of the quality of publicly available reports by the years. The evaluation criteria are presented in accordance with the GRI standards, where each criterion and sub-criterion is evaluated with a score from 0 to 4, depending on the quality of the information provided in the report in each aspect (0 - minimum number of points, 4 - maximum number of points).

Appendix 2 provides information on the quality of the social and environmental information provided on the websites for each GRI criterion and sub-criterion. The evaluation of the information provided on the web pages is carried out in the same way as the evaluation of the reports, with a score of 0 to 4. Table 8 shows the amount of points obtained for each company in the social and environmental field separately and together from the report.

**Table 8.** Quality index from report information

		Social (points)	Social (%)	Environmental (points)	Environmental (%)	Index (points)	Index (%)
Total quantity of scores		160	100%	120	100%	280	100%
2017	PakMarkas	17	11%	21	18%	38	14%
2017	ESO	33	21%	17	14%	50	18%
2018		33	21%	7	6%	40	14%
2017	Kauno Energija	37	23%	25	21%	62	22%
2018		52	33%	20	17%	72	26%
2017	Achema	12	8%	2	2%	14	5%
2018		12	8%	3	3%	15	5%
2017	Telia	39	24%	7	6%	46	16%
2018		62	39%	20	17%	82	29%
2017	EKT	23	14%	4	3%	27	10%
2018		27	17%	4	3%	31	11%
2017	Interlux	42	26%	8	7%	50	18%
2018		46	29%	11	9%	57	20%
2017	SEB	63	39%	48	40%	111	40%
2018		67	42%	51	43%	118	42%
2019		72	45%	57	48%	129	46%
2017	Swedbank	41	26%	46	38%	87	31%
2018		45	28%	49	41%	94	34%
2019		51	32%	52	43%	103	37%
2017	AUGA GROUP	37	23%	39	33%	76	27%
2018		38	24%	69	58%	107	38%
2019		54	34%	72	60%	126	45%
AVERAGE		41.0	26%	28.7	24%	69.8	25%
MIN		12	8%	2	2%	14	5%
MAX		72	45%	72	60%	129	46%
STDEV		16.83	11%	23.06	19%	35.97	13%

The average score obtained in the social field is 41 out of 160, which means that the average quality of information in the social field is 26%. The minimum value obtained in the social field is 12 points out of 160 (that is, 8%), and the maximum amount of points in the social field is 72 out of 160 (that is, 45%). According to the data received, the highest quality report in the social field was provided by SEB

The average score obtained in the environmental field is 28.7 out of 120, which means that the average quality of information in the environmental field is 24%. The minimum value obtained in the environmental field is 2 points out of 120 (that is 2%), and the maximum amount of the points in the environmental field is 72 out of 120 (that is 60%). According to the data received, the highest quality report in environmental field by AUGA Group.

After calculating the total amount of points for each company and evaluating the quality of both social and environmental information presented in the reports, it was found that the average quality of information is 69.8 points out of 280, which is 25%. The quality index points of all companies were distributed in the range from 14 (minimum number of points) to 129 (maximum number of points), which corresponds to the limits of 5% and 46%.

Table 9 shows the scores for assessing the quality of the social information provided in the reports. The table shows the averages received by all companies at each time from 2017 to 2019 and the social information quality disclosure score of each company.

**Table 9.** Score from the part on social standards in 2017-2019

SCORE FROM SOCIAL STANDARDS PART	2017	2018	2019
PakMarkas	17		
ESO	33	33	
Kauno Energija	37	52	
Achema	12	12	
Telia	39	62	
EKT	23	27	
Interlux	42	46	
SEB	63	67	72
Swedbank	41	45	51
AUGA GROUP	37	38	54

AVERAGE (points)	AVERAGE (%) from total 160 points in social area	QUALITY
17.0	10.6%	Poor
33.0	20.6%	Low
44.5	27.8%	Low
12.0	7.5%	Poor
50.5	31.6%	Low
25.0	15.6%	Poor
44.0	27.5%	Low
67.3	42.1%	Average
45.7	28.5%	Low
43.0	26.9%	Low

<b>AVERAGE</b> (points)	34.4	42.4	59.0
<b>AVERAGE</b> (%) from total 160 points in social area	21.5%	26.5%	36.9%

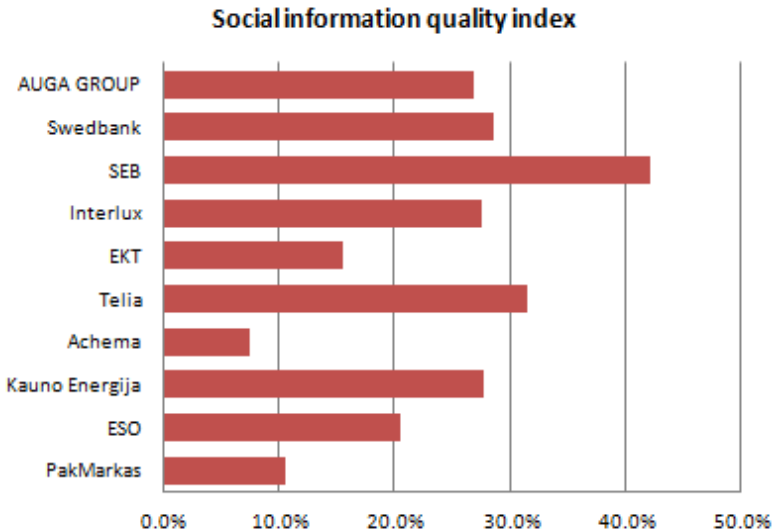
Based on the information provided in Table 9, the quality of social information of ESO and Achema did not change when comparing the data for the two years, while the quality of social information of Telia, EKT, Interlux, SEB, Swedbank and AUGA GROUP improved (see Figure 15). In 2017, the

average quality of social information was recorded at 21.5% (34.4 points out of 160), and in 2019, the average recorded was 36.9% (59 points out of 160). The data show that the quality of social information is improving over time (see Figure 15).



**Fig. 15.** Information quality in the social field by year

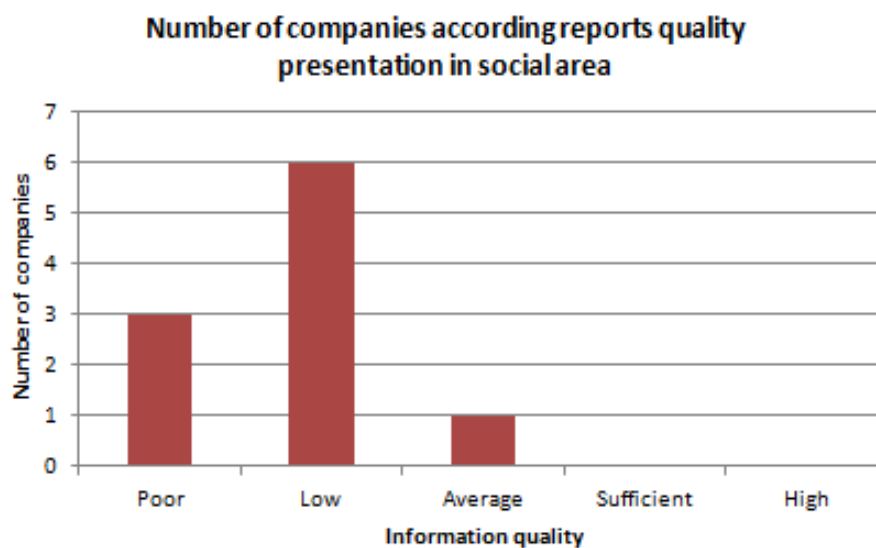
The percentage assessment of the quality of the social information provided in the reports of each evaluated company is shown in Figure 16. The data obtained show that SEB provides the highest quality social information in reports from all companies and the quality index is 42%.



**Fig. 16.** Information quality in the social field

Based on the percentage obtained, the quality indicator is assigned according in Table 5 presented information quality measures and the quality of the report of each company determined and presented in Table 9. The number of companies belonging to a certain group according to the quality of the

provided social information is presented in Figure 17. According to the information quality assessment, 3 companies with poor social information quality, 6 companies with low information quality and 1 company with average social information quality were identified.



**Fig. 17.** Quantity of companies according information quality based social criteria

Table 10 shows the scores for assessing the quality of the environmental information provided in the reports. The maximum number of points that can be collected when assessing the quality of reports in the environmental field is 120 points. Table 10 shows the averages received by all companies at each time from 2017 to 2019 and the environmental information quality disclosure score of each company.

**Table 10.** Score from the part on environmental standards in 2017-2019

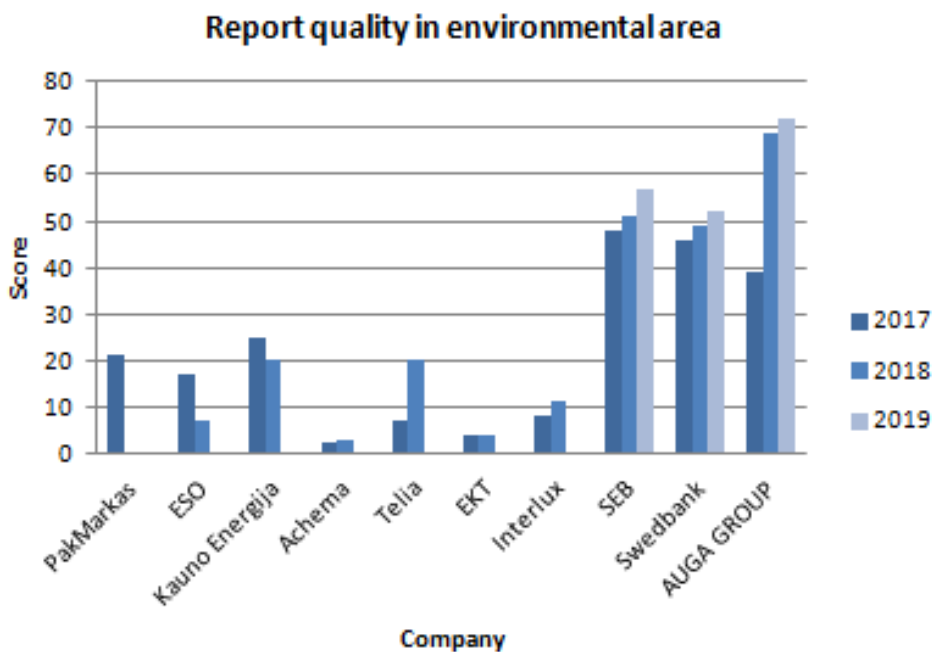
SCORE FROM ENVIRONMENTAL STANDARDS PART	2017	2018	2019
PakMarkas	21		
ESO	17	7	
Kauno Energija	25	20	
Achema	2	3	
Telia	7	20	
EKT	4	4	
Interlux	8	11	
SEB	48	51	57
Swedbank	46	49	52
AUGA GROUP	39	69	72

AVERAGE (points)	AVERAGE (%) from total 120 points in environmental area	QUALITY
21.0	17.5%	Poor
12.0	10.0%	Poor
22.5	18.8%	Poor
2.5	2.1%	Poor
13.5	11.3%	Poor
4.0	3.3%	Poor
9.5	7.9%	Poor
52.0	43.3%	Average
49.0	40.8%	Average
60.0	50.0%	Average

<b>AVERAGE (points)</b>	21.7	26.0	60.3
<b>AVERAGE (%) from total 120 points in environmental area</b>	18.1%	21.7%	50.3%

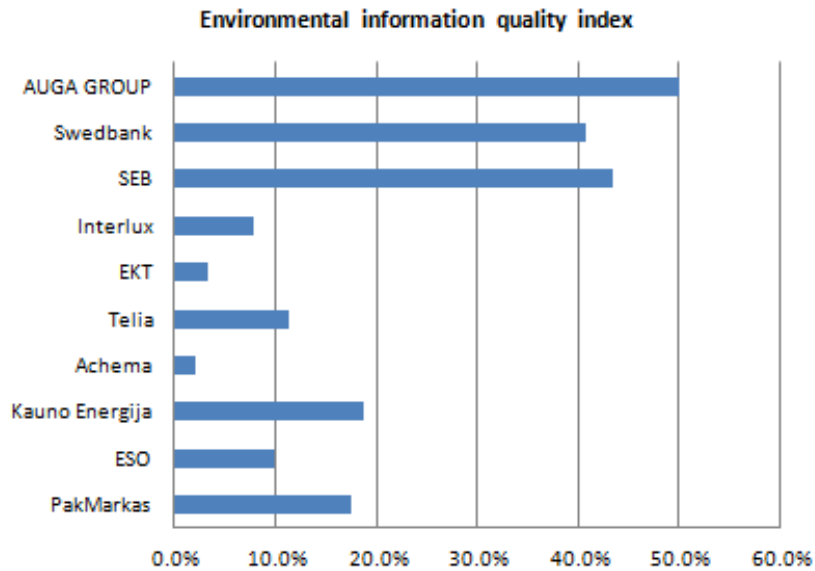


Based on the data presented in Table 10, the quality of ESO's and Kauno Energija environmental reports deteriorated when comparing the information provided in 2017 and 2018. In 2018, fewer aspects were reviewed and they are less detailed. The quality of environmental information of the EKT company in 2017 and 2018 remained constant. Achema, Telia, Interlux, SEB, Swedbank, and AUGA GROUP have improved the quality of their environmental information over the years. No change in the environmental information of the PakMarkas report has been identified, as the company submit only one report. Although the quality of environmental information in some companies' reports deteriorated over the years or remained stable, the overall average quality of environmental information in companies' reports increased over the years. In 2017, the average quality of environmental information was recorded at 18.1 % (21.7 points out of 120), and in 2019, the average recorded was 50.3% (60.3 points out of 120). The data show that overall the quality of environmental information is improving over time (see Figure 18).



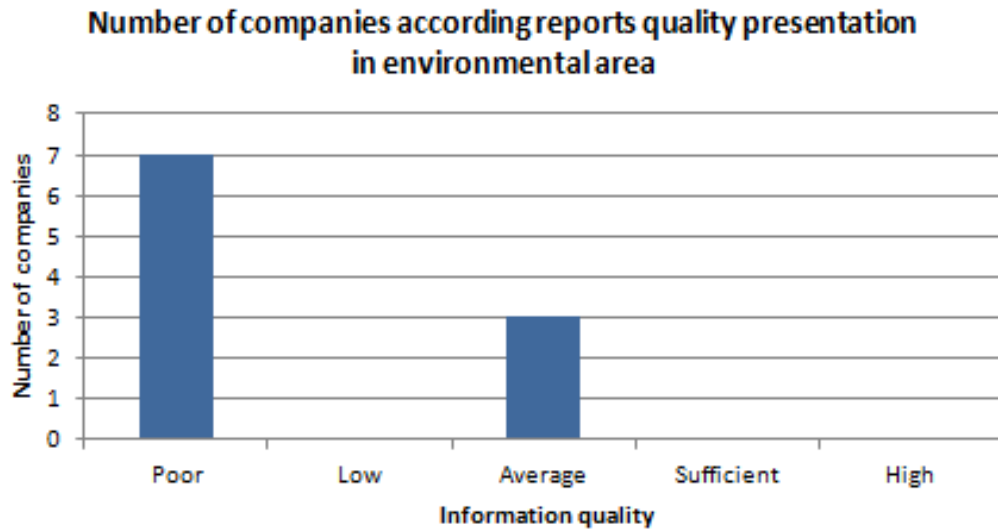
**Fig. 18.** Information quality in the environmental field by year

Based on the data presented in Table 10, the percentage of information quality in the environmental field was calculated and presented in Figure 19. In Figure 19 it is clear that three companies differ in the quality of the environmental information provided in the report, namely AUGA GROUP, Swedbank and SEB.



**Fig. 19.** Information quality in the environmental field

Based on the percentage obtained, the quality indicator in environmental field is assigned according in Table 5 presented information quality measures and the quality of the report in environmental field of each company determined and presented in Table 10. The number of companies belonging to a certain group according to the quality of the provided environmental information is presented in Figure 20. According to the information quality assessment, 7 companies with poor environmental information quality and 3 companies with average social information quality were identified.



**Fig. 20.** Quantity of companies according information quality based environmental criteria

When analyzing the quality of social and environmental information, the amount of points and the percentage expression were determined for each company separately. The average quality of social and environmental information each year was also determined (see Table 11).

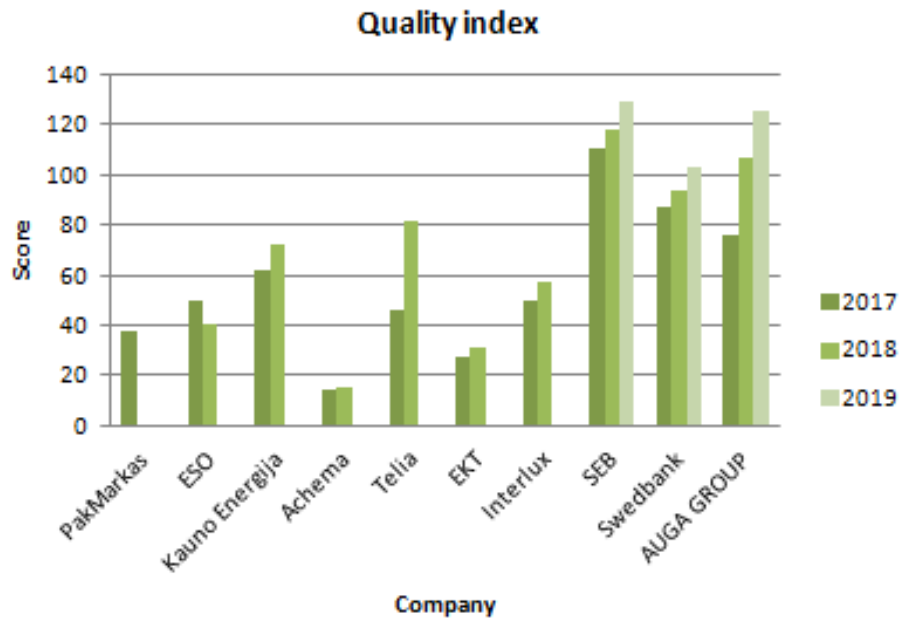
**Table 11. Score quality index in 2017-2019.**

QUALITY INDEX (In social and environmental are)	2017	2018	2019
PakMarkas	38		
ESO	50	40	
Kauno Energija	62	72	
Achema	14	15	
Telia	46	82	
EKT	27	31	
Interlux	50	57	
SEB	111	118	129
Swedbank	87	94	103
AUGA GROUP	76	107	126

AVERAGE (points)	AVERAGE (%) from total 280 points in social and environmental area	QUALITY
38.0	13.6%	Poor
45.0	16.1%	Poor
67	23.9%	Low
14.5	5.2%	Poor
64	22.9%	Low
29.0	10.4%	Poor
53.5	19.1%	Poor
119.3	42.6%	Average
94.7	33.8%	Low
103.0	36.8%	Low

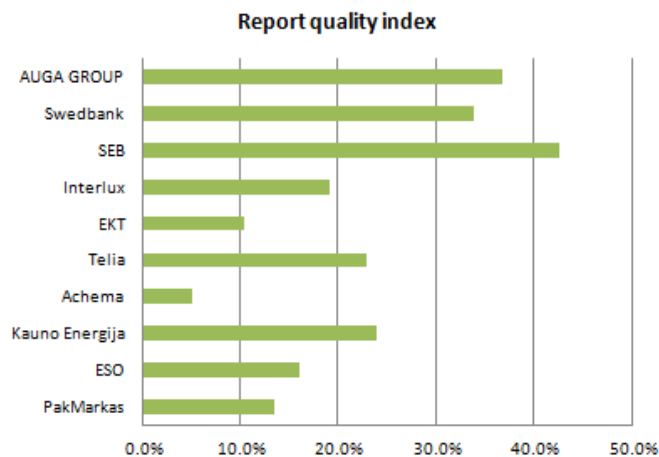
AVERAGE (points)	56.1	68.4	119.3
AVERAGE (%) from total 280 points in social and environmental area	20.0%	24.4%	42.6%

Based on the data presented in Table 11, it was found that only one company (PakMarkas) submitted a report during one reporting period. The quality of social and environmental information provided in one company's (ESO) report declined when comparing data for 2017 and 2018. For all other companies that provide publicly available social and environmental reports, the quality of information has improved over time. The average quality of social and environmental information received in 2017 was 56.1 points out of 280, which is 20%. In 2019, the average quality of social and environmental information was assessed at 119.3 points out of 280, which is 42.6% (see Figure 21). This means that the quality of social and environmental information has more than doubled in two year and report in poor quality has become in average quality based on quality indicators from Table 5.



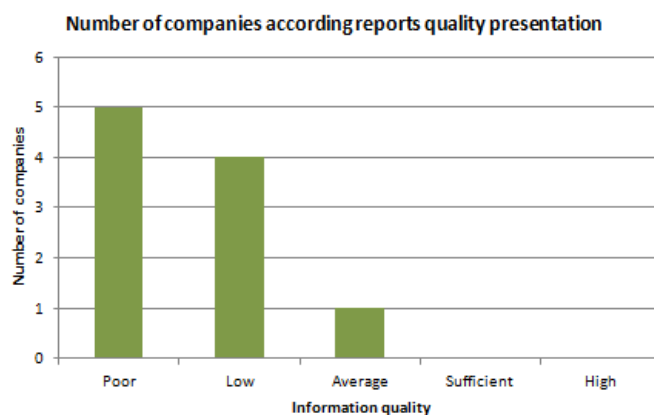
**Fig. 21.** Information quality index by year

Based on the data presented in Table 11, the percentage of information quality in the social and environmental field was calculated and presented in Figure 22. The diagram shows that SEB provides the best quality social and environmental report. Swedbank and AUGA GROUP also differ from the quality of the social and environmental report submitted by other companies.



**Fig. 22.** Reporting quality index

Based on the percentage obtained, the quality indicator in social and environmental field is assigned according in Table 5 presented information quality measures and the quality of the report of each company determined and presented in Table 11. The number of companies belonging to a certain group according to the quality of the provided social and environmental information is presented in Figure 23. According to the information quality assessment, 5 companies with poor social and environmental report information quality and 4 companies with low and 1 company with average social information quality were identified.



**Fig. 23.** Quantity of companies according information quality

The quality of the social and environmental information separately and together presented in Table 12. The table shows that the average assessment of the quality of social information provided on websites is 9% (14 points out of 160), and the average assessment of the quality of environmental information is 6% (7.7 points out of 120). The overall assessment of the quality of social and environmental information on the website is 8% (22 out of 280) (see Table 12).

**Table 12.** Information quality of the web pages

	Social (points)	Social (%)	Environmental (points)	Environmental (%)	Index (points)	Index (%)
Total quantity of scores	160	100%	120	100%	280	100%
PakMarkas	24	15%	5	4%	29	10%
ESO	22	14%	7	6%	29	10%
KONEKESKO	8	5%	3	3%	11	4%
EUGESTA	3	2%	3	3%	6	2%
spa Vilnius	4	3%	0	0%	4	1%
Kauno Energija	5	3%	11	9%	16	6%
Achema	35	22%	15	13%	50	18%
Telia	28	18%	17	14%	45	16%
Jurex	11	7%	0	0%	11	4%
Interlux	7	4%	0	0%	7	3%
Orkla Care	11	7%	14	12%	25	9%
Rimi Lietuva	16	10%	7	6%	23	8%
BIOK Laboratorija	4	3%	7	6%	11	4%
AUGA GROUP	18	11%	19	16%	37	13%
AVERAGE	14	9%	7.7	6%	21.7	8%
MIN	3	2%	0	0%	4	1%
MAX	35	22%	19	16%	50	18%
STDEV	10.1	0.1	6.5	0.1	14.8	0.1

The total number of points and the distribution of the quality of each company's website in the social and environmental fields are shown in Figure 24.

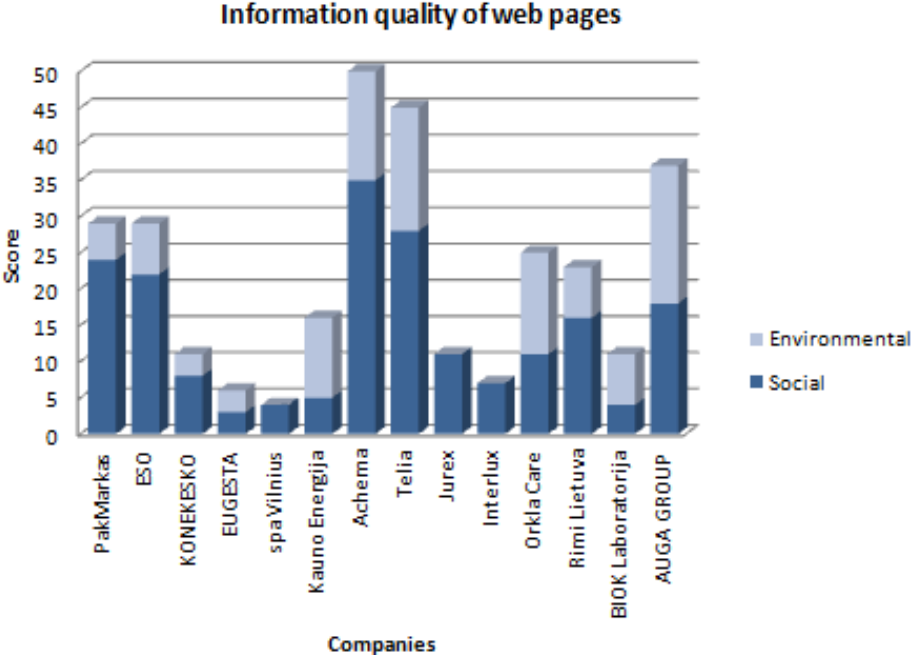


Fig. 24. Information quality of the web pages in social and environmental area

Figure 25 shows the percentage of social and environmental information that is disclosed on companies' websites. It can be seen that Achema, Telia and AUGA GROUP have the best information quality on their websites.

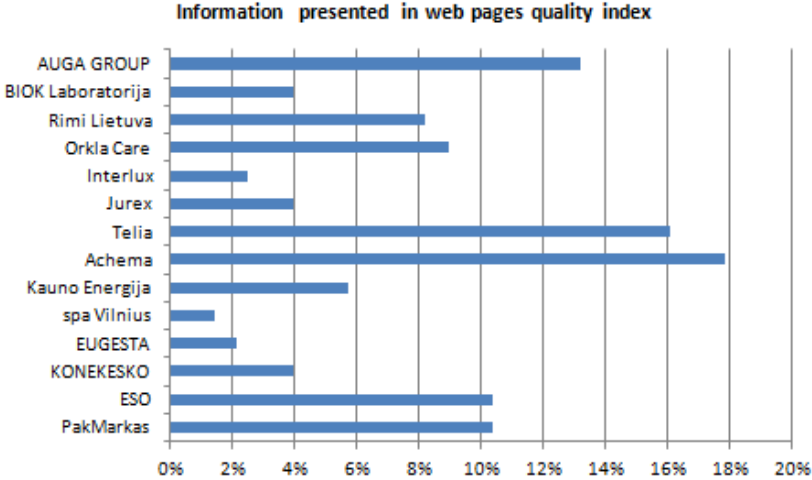
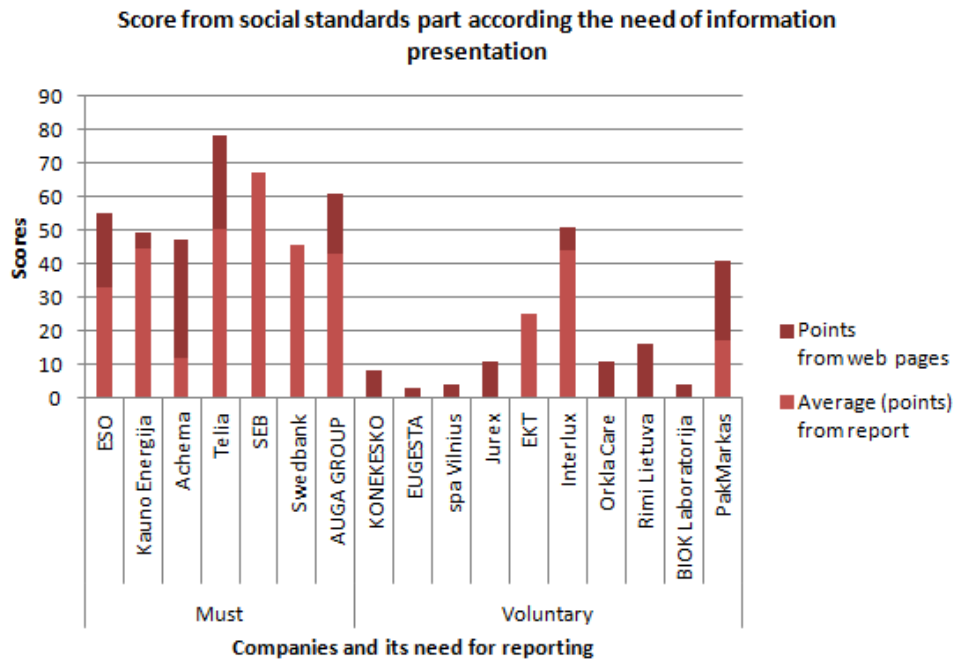


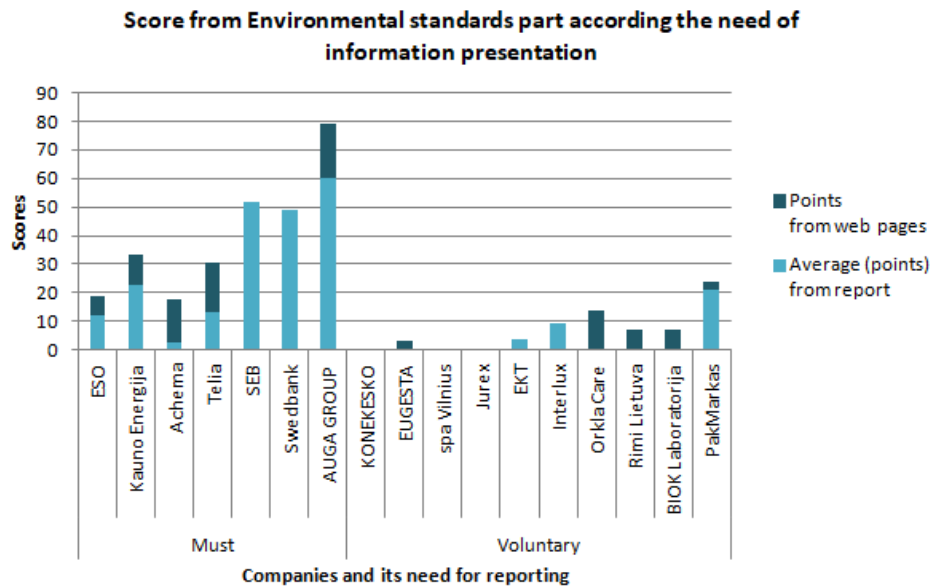
Fig. 25. Reporting quality index of web pages information

As some companies provide more qualitative information in reports, others in websites, so the total number of points for each company is calculated from the social and environmental reports. Companies are divided into two groups: those that are required to provide social and environmental information and those that provide this information on a voluntary basis. The assessment of the quality of social information from both the reports and the website is shown in Figure 26.



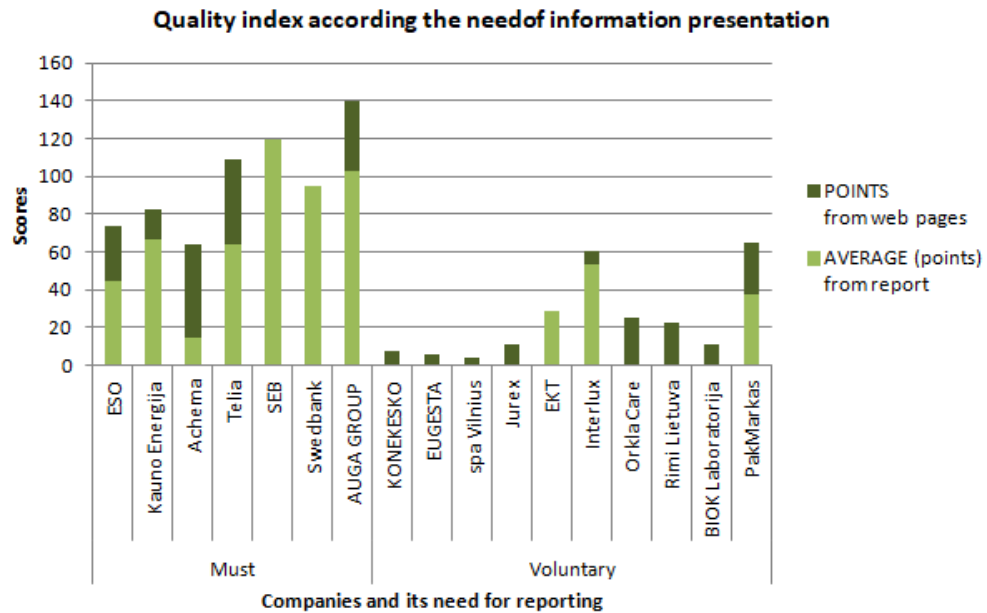
**Fig. 26.** Social information quality according the need of information presentation

The assessment of the quality of environmental information from both the reports and the website is shown in Figure 27.



**Fig. 27.** Environmental information quality according the need of information presentation

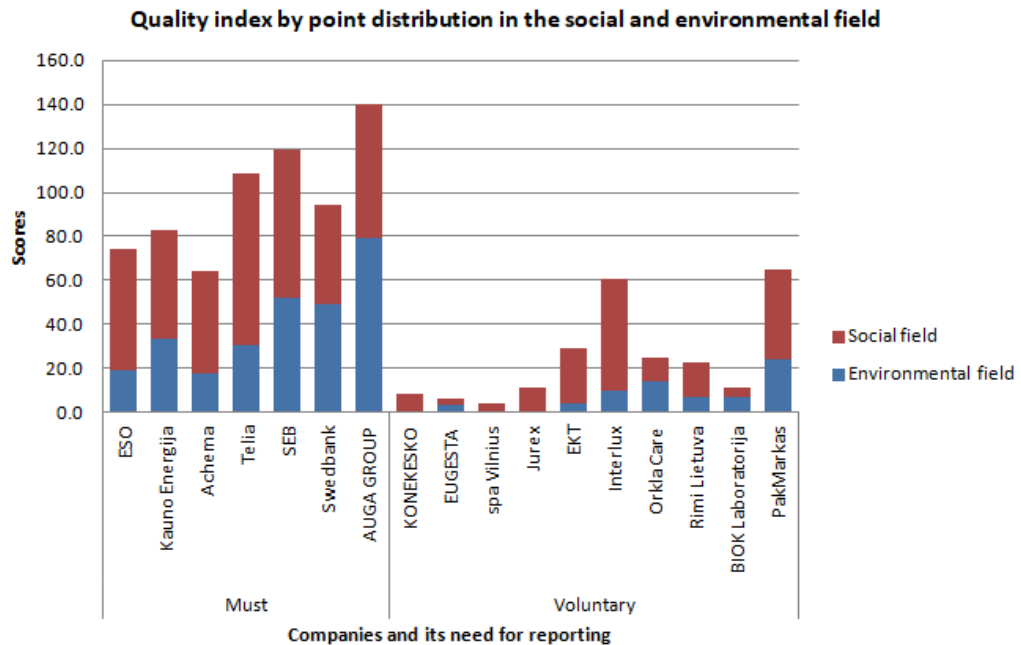
The quality index (by scoring system) of the quality of social and environmental information from both the reports and the website is shown in Figure 28. If a company has provided both a social and environmental report and information on a website, then all except one company (Achema) provided more qualitative information in the report than on the website.



**Fig. 28.** Quality index according the need of information presentation

It has been found that companies that are required to provide social and environmental reporting provide more quality information than those that provide this information on a voluntary basis. 6 out of 7 companies that are required to submit social and environmental reports pay more attention to the information provided in the reports than on their website, but more companies provide information on the websites than in the reports.

Figure 29 provides information on the distribution of the quality index by area (social and environmental) and the overall quality index among companies that are required to report and submit them on a voluntary basis.



**Fig. 29.** Quality index by point distribution in the social and environmental field



In both the social and environmental fields, companies that are required to publish reports provide better quality information than companies that voluntarily report. For all companies that are required to submit social and environmental reports, the quality score obtained in the social field is quite similar and the difference obtained between the lowest and highest values obtained is 32.8 points (minimum score obtained 45.7 points and maximum score 78.5 points). All companies are big and have a large number of employees, so for all companies employees, their health, education, equal rights and well-being at work are important and relevant. A higher distribution of points is seen in the environmental field, as the difference between the minimum and maximum number of points obtained in the environmental field is 61.5 points (the minimum value obtained is 17.5 points and the maximum value obtained is 79 points). The highest number of quality points in the field of environment is observed in the information provided by the AUGA group company, as the company has production and work activities directly related to agriculture, which has an impact on the environment.

The quality of social and environmental information for all companies was assessed in accordance with the same GRI standards and requirements set out in the standards, regardless of the scope of activities of the companies. As the analyzed companies operate in banking, energy, agriculture, telecommunications and other fields, the quantity and quality of information disclosure may be due to different activities.

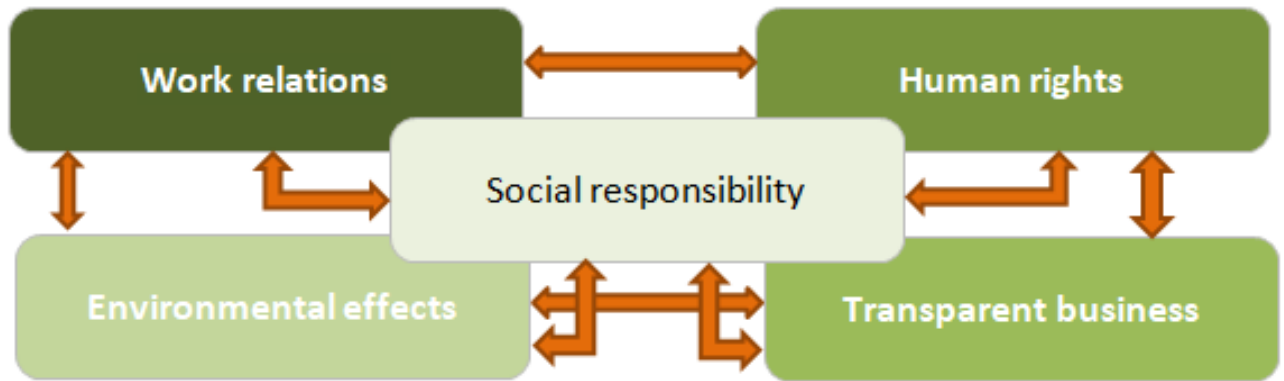
With the help of legal acts, the state has developed a number of measures that could and should encourage the development of socially responsible business and encourage the participants in the process to integrate the principles of socially responsible business into their activities or at least implement separate measures of socially responsible business. These include subsidies for job creation, tax incentives for social enterprises, the possibility to apply ecological, social and other criteria for the selection of suppliers in public procurement, a green procurement program, the possibility for the employee and employer to regulate their relations more flexibly than provided by law and etc. The application of the principles of socially responsible business is also promoted through non-legal and non-financial means, including awards or nominations of socially responsible companies, initiation and support of demonstration projects or dissemination of good practices 2030 Lithuania. (2015).

During 2016-2020, the Republic of Lithuania Ministry of Social Security and Labor has an action plan for increasing corporate social responsibility in order to activate the development of socially responsible business and the responsible attitude of companies in the social and environmental field. The aim of this plan is to create a functional social responsibility system that would encourage companies to apply social responsibility in their activities principles of responsibility and society to be an active participant in this process.

In order to achieve the United Nations goals by 2030, changes are being made in 17 areas. The four key principles (universal, sustainability, leave no one behind and participation) aim to provide a better place to live and to improve the environment for future generations by improving the social situation of the population. Businesses can make a direct contribution to achieving these goals and improving their social and environmental situation.

Good labor relations, human rights, transparent business and environmental impact are directly linked to create a model of socially responsible business (see Figure 30) that can be implemented and developed according the Action Plan for Corporate Social Responsibility 2016–2020 in Lithuania. This

plan presents the objectives, tasks, measures of the action plan, as well as the planned amount to achieve the objectives



**Fig. 30.** Components of social responsible business (Ramelis A. 2015)

The study found that not all companies are required to submit social and environmental reports, and the need depends on whether the company is in the public interest, the number of employees in the company, and the size of the company. An examination of the publicly available social and environmental reports of the corporate social responsible companies (LAVA companies) and the social and environmental information provided on the websites revealed that all companies that were required to submit reports submitted them. Some companies voluntarily submitted social and environmental reports analyzing the company's performance and the social / environmental aspects relevant to a particular company. Companies that are required to report are found to provide better quality information than those that provide social and environmental information on a voluntary basis.

The quality of companies' social and environmental information was assessed separately and jointly by determining the quality index of reports and social and environmental information provided on the websites based on GRI standards. Based on the collected data, it was found that more companies provide information on their websites than prepare reports, more criteria are discussed in the reports and provided information is in better quality. Analyzing the reports submitted in different years, it was found that the quality of the reports improves over the years and from the average value of the reports established in 2017 - 20% increased to 42.6% in 2019. This change may have been influenced by state initiatives and projects in the social and environmental field, which encourage both to pay more attention to employees, their education, health and well-being at work, to protect the environment and reduce the negative impact on the environment through their direct activities.

## Conclusions

1. Based on the analysis of the articles the information quality problem of social and environmental reporting was determined. Although social and environmental reports have been available for several decades, the problem of assessing the quality of the information provided remains unresolved. Only on the basis of qualitative information can a true picture of the company and areas of activity be identified, which should be improved in order to increase social and environmental well-being. In Lithuania, the topic of social and environmental reporting is still new and is being improved, therefore the assessment of the quality of reports helps to identify social and environmental areas for improvement.
2. GRI standards are the most commonly used and most appropriate for assessing the quality of social and environmental report information. They discuss extensively and in detail the economic, social and environmental standards that affect a company's performance. According to the guidelines of this standard, reports can be prepared and evaluated. The quality assessment of social and environmental reports is performed on the basis of GRI standards and using a qualitative assessment method to determine the information quality. The method of assessing the quality of each of the standards described and the quality of the information in the report as a whole, so that the method is comprehensive and gives a true picture of the information provided by the company. Changes in the quality of information are influenced by the activities of governmental and non-governmental organizations and efforts are made to make companies work sustainably. The development of new standards and projects, the increasing activities of organizations and the interest in the social and environmental field are forcing companies to analyze these areas more responsibly.
3. The research methodology is based on the established social and environmental report quality evaluation criteria (GRI standards) and method (qualitative information evaluation method). Also, the methodology part presents the procedure for assessing the quality of social and environmental reports and the way to determine the report quality index.
4. Based on the research, it was established that out of 19 members of the LAVA association, 7 companies are obliged to report. All companies that were required to report present social and environmental reports. 3 out of 13 companies provided voluntary social and environmental reports, which can be explained as a desire to be accountable to the public for their work. More companies provide social and environmental information on their websites than in reports, but the reports analyze more criteria and discuss them more widely. Using the GRI standard evaluation criteria and applying the information quality assessment, the publicly available reports have been analyzed since 2017 and the information quality index has been determined. The results obtained that the level of quality of corporate social and environmental report changed from 20% in 2017 into 42.6% in 2019. This change can be explained by the high attention paid to social and environmental issues by governmental and non-governmental organizations. The study showed that the quality of the social and environmental report is currently low and that further steps should be taken to increase the amount of information on this topic. Companies that provide mandatory social and environmental reporting provide more qualitative information than reporting on a voluntary basis. The research showed that there is still a lack of information in Lithuania on the social and environmental topic and especially in the field of providing qualitative information. However, the first steps towards high-quality social and environmental reporting are already being taken.

## List of references

1. 2030 Lithuania. (2015). *Thematic research report: Socially responsible business: where are we going?* [viewed on 2020-04-12]. Internet access <https://www.lietuva2030.lt/lt/naujienos/1427-konferencijos-socialiai-atsakingas-verslas-2015-kur-link-judame-medziaga>
2. Alijosiute, A. (2015). Responsibility in business: what do we have and what are lacking in Lithuania? [viewed on 2020-05-01]. Internet access <https://www.lietuva2030.lt/lt/naujienos/1427-konferencijos-socialiai-atsakingas-verslas-2015-kur-link-judame-medziaga>
3. Bernardi C. & Stark A. W. (2018). Environmental, social and governance disclosure, integrated reporting, and the accuracy of analyst forecasts. *The British Accounting Review journal*, 50, 16-31.
4. Bonsón, E. and Bednárová, M. (2015). CSR reporting practices of Eurozone companies. *Spanish Accounting Review*, 18 (2), 182-193.
5. Burhan A.H.N. & Rahmani W. (2012). The impact of sustainability reporting on company performance. *Journal of Economics, Business, and Accountancy Ventura*. Volume 15, No. 2, 257-272.
6. Christ K.L. & Burritt R.L. (2017). Water management accounting: A framework for corporate practice. *Journal of cleaner production* 152, 379-386.
7. Communication from the commission to the European Parliament, the council, the European economic and social committee and the committee of the regions. (2011). Updated 2011-2014 EU strategy on corporate social responsibility (52011DC0681). [viewed on 2020-04-19]. Internet Access <https://eur-lex.europa.eu/legal-content/LT/TXT/HTML/?uri=CELEX:52011DC0681&from=EN>
8. Contrafatto M. (2011). Social and environmental accounting and engagement research: Reflections on the state of the art and new research avenues. *Economia Aziendale Online*, 2(3), 273-289.
9. Cosgrove W. & J., Loucks D. P. (2015). Water management: Current and future challenges and research directions. *Water Resour journal*, 51, 4823–4839.
10. Dagiliene L. (2014). Instituciniai socialinės apskaitos reglamentavimo veiksniai Lietuvoje. Socialinė apskaita: teorine, argumentacine ir vertinimo, 150-158.
11. Dagiliene L. (2017). Sustainability Reporting in Lithuania: The Perspective of Integrated Reporting. *Sustainability Reporting in Central and Eastern European Companies*, 87-107. doi:10.1007/978-3-319-52578-5\_6.
12. Dagilienė, L and Mykolaitienė V. (2016). Sustainability reporting in the higher education sector – Case study of Lithuania. *ZögU Zeitschrift für öffentliche und gemeinwirtschaftliche Unternehmen*, 39 (1-2), 163-174.
13. Dobler M., (2015). Corporate environmental sustainability disclosures and environmental risk. *Journal of Accounting & Organizational Change*, 11, 3, 301-332.
14. Duff A. (2016). Corporate social responsibility reporting in Professional accounting firms. *The British Accounting Review journal*, 48, 74 – 86.
15. EUROPEAN COMMISSION. (2017). Guidelines on non-financial reporting (methodology for reporting non-financial information). *Official Journal of the European Union*, C 215, 20. . [viewed on 2019-10-21]. . Access on Internet [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017XC0705\(01\)&from=LT](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017XC0705(01)&from=LT)

16. Evangelinos K., Nikolaou I., Filho W.L. (2015). The Effects of Climate Change Policy on the Business Community: A Corporate Environmental accounting Perspective. *Corporate Social Responsibility and Environmental Management*, 2, 257-270.
17. Fallan E. (2016). Environmental Reporting Regulations and Reporting Practices. *Social and Environmental Accountability Journal*. 36:1, 34-55
18. Global Reporting Initiative. (2015). G4 Sustainability Reporting Guidelines. Reporting Principles and Standard Disclosures. 97.
19. Gray R. (2008). Social and Environmental Accounting and Reporting: From Ridicule to Revolution? From Hope to Hubris? - A Personal Review of the Field. *Issues in Social and Environmental Accounting*, 2(1), 3-18.
20. Gray, R.H. (2005) Environmental reporting. *Dictionary of accounting*. ISBN 4-250-20508-8
21. GRI Empowering Sustainable Decisions. (n.d.). *About sustainability reporting*. [viewed on 2019-10-19]. Internet access <https://www.globalreporting.org/information/sustainability-reporting/Pages/default.aspx>.
22. Guthrie, J. (2006). Legitimacy theory: a story of reporting social and environmental matters within the Australian food and beverage industry. [viewed on 2020-05-09]. Internet access <http://www.csringreece.gr/files/research/CSR-1290000469.pdf>
23. Ha, bek, P. (2017). CSR Reporting Practices in Visegrad Group Countries and the Quality of Disclosure. *Sustainability*, 9 (12), 1-18. doi:10.3390/su9122322
24. Hampf B. (2018). Cost and environmental efficiency of U.S. electricity generation: Accounting for heterogeneous inputs and transportation costs. *Journal Energy*. 163, 932 – 941
25. HM Government. (2019). Environmental Reporting Guidelines: Including streamlined energy and carbon reporting guidance. 152.
26. Huang X.B., and Watson L., (2015). Corporate social responsibility research in accounting. *Journal of Accounting Literature* 34, 1–16.
27. In.corp. (n.d.). *Why Sustainability Reporting is Important for Businesses in Singapore*. (Open Progress Forum "Socially Responsible Business 2015: Where are we moving?") [viewed on 2020-04-29]. Internet access <https://www.incorp.asia/learn/why-sustainability-reporting-is-important-for-businesses-in-singapore/>
28. International Finance Corporation. (2011). Sustainability Reporting Guidelines Mapping & Gap Analyses for Shanghai Stock Exchange. [viewed on 2020-01-16]. Internet access [https://www.ifc.org/wps/wcm/connect/topics\\_ext\\_content/ifc\\_external\\_corporate\\_site/sustainability-at-ifc/publications/publications\\_report\\_sse\\_wci\\_1319577377015](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_report_sse_wci_1319577377015)
29. ISOSTANDARTAI.LT. (2017). *ISO 14001*. . [viewed on 2019-10-17]. Internet access <http://www.isostandartai.lt/iso-14001-aplinkosauga/>
30. Killian S. and O'Regan P. (2016). Social accounting and the co-creation of corporate legitimacy. *Accounting, Organizations and Society* 50, 1-12.
31. Leitoniene S. & Sapkauskiene A., (2015) Quality of Corporate Social Responsibility Information. *Procedia - Social and Behavioral Sciences journal*, 213, 334 – 339.
32. Leitoniene S. & Sapkauskiene A., and Dagiliene L., (2015). Theoretical issues and practical implications of corporate social accounting and reporting in Lithuania. *Procedia Economics and Finance journal*. 32, 1713 – 1723.
33. Lithuanian Responsible Business Association. (n.d.). *Sustainable development goals*. [viewed on 2020-05-01]. Internet access <https://asociacijalava.lt/goals/sumazinti-skurda/>

34. Mata C., & Fialho A., & Eugenio T., (2018). A decade of environmental accounting reporting: What we know? *Journal of Cleaner Production*. 198, 1198 – 1209.
35. Mathews, M.R. (1997). Twenty-five years of social and environmental accounting research: Is there a silver jubilee to celebrate? *Accounting, Auditing & Accountability Journal*, 10(4), 481-531.
36. Ministry of Environment of the Republic of Lithuania (2014). *2014-2020 Detailing the priority direction of the EU investment communication strategy*. [viewed on 2020-04-19]. Internet access <https://esinvesticijos.lt/lt/dokumentai/prioritetiniu-es-investiciju-komunikacijos-krypciu-detalizavimo-lentele-tvari-lietuva>
37. Ministry of Environment of the Republic of Lithuania (n.d.) *Sustainable development and Lithuania*. . [viewed on 2020-05-01]. Internet access <https://am.lrv.lt/lt/veiklos-sritys-1/es-ir-tarptautinis-bendradarbiavimas/darnus-vystymasis/darnus-vystymasis-ir-lietuva>
38. Ministry of Environment of the Republic of Lithuania (n.d.) *United Nations Agenda 2030, Sustainable Development Goals and other international agreements*. [viewed on 2020-05-01]. Internet access <http://am.lrv.lt/lt/veiklos-sritys-1/es-ir-tarptautinis-bendradarbiavimas/darnus-vystymasis/darnus-vystymasis-ir-lietuva/jt-darbotvarke-2030-darnaus-vystymosi-tikslai-ir-kiti-tarptautiniai-susitarimai>
39. Ministry of Environment of the Republic of Lithuania (n.d.). *Report on the implementation of the United Nations Agenda 2030 in Lithuania*. [viewed on 2020-05-01]. Internet access <https://am.lrv.lt/lt/veiklos-sritys-1/es-ir-tarptautinis-bendradarbiavimas/darnus-vystymasis/darnus-vystymasis-ir-lietuva/jt-darbotvarkes-2030-igyvendinimo-lietuvoje-ataskaita>
40. Ministry of Environment of the Republic of Lithuania. (2020). *Project information*. [viewed on 2020-04-20]. Internet access <https://am.lrv.lt/lt/veiklos-sritys-1/finansines-programos/technines-paramos-projektai/informavimas-ir-viesinimas/informacija-apie-projekta>
41. Ministry of Finance of the Republic of Lithuania. (2017). *Social responsibility reporting*. . [viewed on 2019-10-22]. Internet access <https://finmin.lrv.lt/lt/veiklos-sritys/apskaita-ir-atskaitomybe/verslo-subjektu-apskaita-ir-finansine-atskaitomybe/socialines-atsakomybes-ataskaita>
42. Ministry of Finance of the Republic of Lithuania. (2020). *Social responsibility report*. [viewed on 2020-03-15]. Internet access <https://finmin.lrv.lt/lt/veiklos-sritys/apskaita-ir-atskaitomybe/verslo-subjektu-apskaita-ir-finansine-atskaitomybe/socialines-atsakomybes-ataskaita>
43. Ministry of Social Security and Labor of the Republic of Lithuania. (n.d.). *Lithuanian Responsible Business Association*. [viewed on 2020-04-27]. Internet access <https://socmin.lrv.lt/lt/veiklos-sritys/darbo-rinka-uzimtumas/imoniu-socialine-atsakomybe-isa/lietuvos-atsakingo-verslo-asociacija>
44. Ministry of the Environment. Government of Japan. (2012). *Environmental Reporting Guidelines*. 213.
45. Nayyef Y.H, Solnaki A.H. (2019) The Role of Environmental Accounting in Risk Management Resulting from Environmental Pollution and Disclosure. *CLEAR International Journal of Research in Commerce & Management*, 10, 6–10.
46. Perkiss, S. and Tweedie, D. (2017) Social Accounting into Action: Religion as ‘Moral Source’, *Social and Environmental Accountability Journal*, 37:3, 174-189.
47. Pivac, S., Vuko, T., & Cular, M. (2017). Analysis of annual report disclosure quality for listed companies in transition countries. *Economic Research-Ekonomska Istraživanja*, 30 (1), 721-731.
48. Prabhjot, K. (n.d.) Social reporting: Meaning, Uses and Scope. *Your Article :Library*. [viewed on 2019-10-21]. Internet access <http://www.yourarticlelibrary.com/accounting/financial-reporting/social-reporting-meaning-uses-and-scope/57360>.

49. Ramelis, A. (2015). The role of the public sector in the development of socially responsible business (Open Progress Forum "Socially Responsible Business 2015: Where are we moving?"). [viewed on 2020-04-19]. Internet access <https://www.lietuva2030.lt/lt/naujienos/1427-konferencijos-socialiai-atsakingas-verslas-2015-kur-link-judame-medziaga>
50. Saeidi S.P., Sofian S., Saeidi P., Saeidi S.P., Saeidi S.A. (2015) How does corporate social responsibility contribute to firm financial performance? The mediating role of competitive advantage, reputation, and customer satisfaction. *Journal of Business Research*, 68, 341-350.
51. Securities and Exchange Commission. (2019). *Sustainability reporting guidelines for publicly – listed companies*. [viewed on 2020-01-06]. Internet access <http://www.sec.gov/wp-content/uploads/2019/10/2019MCNo04.pdf>
52. Seiliute, J. (2013). Assessing the potential of establishing social responsibility in business organizations.
53. Seimas of the Republic of Lithuania. (2019). Law on Financial Statements of Enterprises of the Republic of Lithuania (No. IX-575 of 06 July 2019). [viewed on 2020-03-15]. Internet access <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.154658/asr>
54. Simanskiene, L. and Pauzuoliene, J. (2010). Corporate social responsibility and organizational research of cultural interactions in Lithuanian organizations. *Management theory and studies for rural business and infrastructure development*. 23 (4), 1-12.
55. Skouloudis A. and Evangelinos K.I. (2009). Sustainability Reporting in Greece: Are We There Yet? *Wiley Inter Science*. DOI 10.1002/tqem. [viewed on 2020-05-09]. Internet access <http://www1.aegean.gr/environment/site/security/phd/Appendix%205.pdf>
56. Stankūnas, A. (2015). Sustainable, socially responsible business: what is the essence and what is the consequence? [viewed on 2020-05-01]. Internet access <https://www.lietuva2030.lt/lt/naujienos/1427-konferencijos-socialiai-atsakingas-verslas-2015-kur-link-judame-medziaga>
57. Szczepankiewicz, E.I. and Mućko, P. (2016). CSR Reporting Practices of Polish Energy and Mining Companies. *Sustainability*, 8 (126), 1-17. doi:10.3390/su8020126
58. The Republic of Lithuania Ministry of Social Security and Labor.(2016). Corporate social responsibility 2016–2020 action plan (No. A1-82 of 12 February 2016). [viewed 2020-04-19]. Internet access <https://socmin.lrv.lt/lt/veiklos-sritys/darbo-rinka-uzimtumas/imoniu-socialine-atsakomybe-isa/apie-imoniu-socialine-atsakomybe>
59. Tilling, M.V.(2004). Some Thoughts on Legitimacy Theory in Social and Environmental Accounting. *Social and Environmental Accountability Journal* 24.2, 3-7.
60. Villers C., and Marques A., (2015). Corporate social responsibility, country-level predispositions, and the consequences of choosing a level of disclosure. *Journal of Accounting and Business Research*, 46:2, 167-195.
61. Wanamaker C. (2018). Soapboxie. The Environmental, Economic, and Social Components of Sustainability. [viewed on 2020-01-25]. Internet access <https://soapboxie.com/social-issues/The-Environmental-Economic-and-Social-Components-of-Sustainability>
62. Wojcik D., (2015). Accounting for globalization: evaluating the potential effectiveness of country-by-country reporting. *Environment and Planning C: Government and Policy*. 33, 1173 – 1189.

# Appendixes

## Appendix 1. Social and environmental reports information disclosure quality

	2017	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2019	2017	2018	2019	2017	2018	2019	
	PaksMarkas	ESO		Kauno Energia		Achema		Telia		EKT		Interlux		SEB			Svebank			AUGA GROUP			
<b>SOCIAL STANDARDS:</b>																							
<b>Employment</b>																							
New employee hires and employee turnover	2	1	1	0	0	0	0	0	2	1	1	1	1	4	4	4	4	4	4	1	3	4	
Benefits provided to full-time employees that are not provided to temporary or part-time employees	3	0	0	0	0	0	0	1	0	2	3	3	3	2	3	3	3	3	3	3	3	2	
Parental leave	3	0	0	0	0	0	0	0	0	0	0	4	4	4	4	4	4	4	4	0	0	0	
<b>Labor/Management Relations</b>																							
Minimum notice periods regarding operational changes	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4	0	3	3	0	0	0	
<b>Occupational Health and safety</b>																							
Occupational health and safety management system	0	3	3	2	3	3	3	4	4	0	0	3	3	4	4	4	2	3	3	3	2	3	
Hazard identification, risk assessment, and incident investigation	0	1	2	1	2	0	0	0	3	0	0	0	0	2	2	2	2	2	2	1	0	2	
Occupational health services	0	0	0	2	3	3	3	3	3	0	0	3	3	2	2	3	0	0	0	1	1	3	
Worker participation, consultation, and communication on occupational health and safety	0	2	2	0	0	0	0	0	1	1	1	3	2	1	1	1	0	0	0	0	0	0	
Worker training on occupational health and safety	1	3	3	2	2	0	0	1	3	1	1	1	2	3	3	3	0	0	0	1	1	3	
Promotion of worker health	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	
Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	1	0	0	0	0	0	0	
Workers covered by an occupational health and safety management system	0	2	2	2	2	3	3	2	4	0	0	3	3	4	4	4	0	0	0	0	0	3	
Work-related injuries	0	0	3	0	2	0	0	3	3	2	2	0	0	0	0	0	0	0	0	3	3	3	
Work-related ill health	0	0	4	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	
<b>Training and education</b>																							
Average hours of training per year per employee	2	3	0	2	4	1	1	2	2	1	1	1	1	4	4	4	4	4	4	0	0	0	
Programs for upgrading employee skills and transition assistance programs	0	3	3	0	2	0	0	2	3	1	1	2	2	3	3	4	3	3	3	1	1	1	
Percentage of employees receiving regular performance and career development reviews	0	0	0	1	2	0	0	1	3	0	0	2	2	3	4	4	3	3	3	0	0	0	
<b>Diversity and equal opportunity</b>																							
Diversity of governance bodies and employees	3	1	1	3	2	0	0	3	0	2	3	4	4	4	4	4	4	4	4	3	3	3	
Ratio of basic salary and remuneration of women to men	0	0	0	4	4	0	0	0	0	3	3	0	0	4	4	4	4	4	4	4	4	4	
<b>Non-discrimination</b>																							
Incidents of discrimination and corrective actions taken	0	3	3	3	3	0	0	3	1	3	3	3	3	0	0	0	3	3	4	0	0	2	
<b>Freedom of Association and Collective Bargaining</b>																							
Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
<b>Child labor</b>																							
Operations and suppliers at significant risk for incidents of child labor	0	0	0	4	4	0	0	0	0	1	1	1	1	0	0	0	0	0	0	1	2	3	
<b>Force of compulsory labor</b>																							
Operations and suppliers at significant risk for incidents of forced or compulsory labor	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	
<b>Security practices</b>																							
Security personnel trained in human rights policies or procedures	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Rights of indigenous peoples</b>																							
Incidents of violations involving rights of indigenous peoples	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Human rights assessment</b>																							
Operations that have been subject to human rights reviews or impact assessments	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	2	2	2	0	1	0	
Employee training on human rights policies or procedures	0	1	1	0	0	0	0	3	4	0	0	0	0	3	3	3	0	0	1	0	0	0	
Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Local Community</b>																							
Operations with local community engagement, impact assessments, and development programs	0	2	2	0	0	2	2	3	3	2	2	1	3	3	3	3	0	0	0	3	3	3	
Operations with significant actual and potential negative impacts on local communities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	
<b>Supplier social assessment</b>																							
New suppliers that were screened using social criteria	0	0	0	0	1	0	0	2	2	0	0	0	1	0	0	0	0	0	0	0	0	1	
Negative social impacts in the supply chain and actions taken	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Public policy</b>																							
Political contributions	0	1	1	4	4	0	0	0	3	0	2	2	2	2	4	4	0	0	0	2	2	0	
<b>Customer health and safety</b>																							
Assessment of the health and safety impacts of product and service categories	0	0	0	0	2	0	0	3	4	0	0	0	0	0	0	0	3	3	3	2	2	2	
Incidents of non-compliance concerning the health and safety impacts of products and services	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Marketing and labeling</b>																							
Requirements for product and service information and labeling	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	3	0	0	
Incidents of non-compliance concerning product and service information and labeling	0	4	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	
Incidents of non-compliance concerning marketing communications	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Customer privacy</b>																							
Substantiated complaints concerning breaches of customer privacy and losses of customer data	0	0	0	0	0	0	0	0	3	0	0	0	0	4	4	4	0	0	0	0	0	0	
<b>Socioeconomic compliance</b>																							
Non-compliance with laws and regulations in the social and economic area	3	0	2	0	0	0	0	3	3	3	3	4	4	0	0	0	0	0	4	4	4	4	
<b>SCORE FROM SOCIAL STANDARDS PART</b>	<b>17</b>	<b>33</b>	<b>33</b>	<b>37</b>	<b>52</b>	<b>12</b>	<b>12</b>	<b>39</b>	<b>62</b>	<b>23</b>	<b>27</b>	<b>42</b>	<b>46</b>	<b>63</b>	<b>67</b>	<b>72</b>	<b>41</b>	<b>45</b>	<b>51</b>	<b>37</b>	<b>38</b>	<b>54</b>	



	2017	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2019	2017	2018	2019	2017	2018	2019
	PakMarkus	ESO		Kauno Energija		Achema		Telia		EKT		Interlux		SEB			Swedbank			AUGA GROUP		
<b>ENVIRONMENTAL STANDARDS:</b>																						
<b>Materials</b>																						
Materials used by weight or volume	3	2	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	1	2	2
Recycles input materials used	3	2	1	0	0	0	0	2	3	1	1	3	3	2	2	2	2	2	2	2	3	3
Reclaimed product and their packaging materials	2	1	0	0	0	0	0	3	4	0	0	1	1	2	2	2	0	0	0	2	3	1
<b>Energy</b>																						
Energy consumption within the organization	3	1	1	4	4	0	0	0	0	0	0	0	0	4	4	4	4	4	4	3	4	4
Energy consumption outside of the organization	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4
Energy intensity	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	4	2	4	4
Reduction of energy consumption	0	3	0	0	0	0	1	0	2	1	1	1	1	4	4	4	4	4	4	4	4	4
Reduction in energy requirements of products and services	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	3	3	4
<b>Water and effluents</b>																						
Interactions with water as a shared resource	0	0	0	2	0	0	0	0	0	0	0	0	0	3	3	3	2	2	4	2	2	3
Management of water discharge-related impacts	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1
Water withdrawal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1
Water discharge	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Water consumption	3	1	0	1	0	0	0	2	1	1	1	1	3	3	3	3	0	0	0	0	0	0
<b>Biodiversity</b>																						
Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
Significant impacts of activities, products, and services on biodiversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	3
Habitats protected or restored	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IUCN Red List species and national conservation list species with habitats in areas affected by operations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Emission</b>																						
Direct (Scope 1) GHG emissions	0	0	0	4	4	0	0	0	0	0	0	0	0	3	3	4	4	4	4	0	3	4
Energy indirect (Scope 2) GHG emissions	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	4	4	4	4	2	3	4
Other indirect (Scope 3) GHG emissions	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	4	4	4	4	0	3	4
GHG emissions intensity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	0	4	4
Reduction of GHG emissions	0	2	0	4	4	0	1	2	4	0	0	1	1	2	2	4	4	4	4	3	4	4
Emissions of ozone-depleting substances (ODS)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1
<b>Effluents and waste</b>																						
Waste by type and disposal method	2	0	0	1	0	0	0	0	0	0	0	0	0	4	4	4	3	3	4	2	4	4
Significant spills	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transport of hazardous waste	0	0	0	0	0	0	0	0	2	1	1	1	1	3	4	4	4	4	4	3	3	4
<b>Environmental compliance</b>																						
Non-compliance with environmental laws and regulations	3	0	3	4	4	0	1	0	3	0	0	0	3	4	4	4	0	0	0	0	4	4
<b>Supplier environmental assessment</b>																						
New suppliers that were screened using environmental criteria	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	4	3	3	3	3	3	3
Negative environmental impacts in the supply chain and actions taken	0	0	0	1	0	0	0	0	0	0	0	0	0	4	4	4	0	0	0	0	0	0
<b>SCORE FROM ENVIRONMENTAL STANDARDS PART</b>	<b>21</b>	<b>17</b>	<b>7</b>	<b>25</b>	<b>20</b>	<b>2</b>	<b>3</b>	<b>7</b>	<b>20</b>	<b>4</b>	<b>4</b>	<b>8</b>	<b>11</b>	<b>48</b>	<b>51</b>	<b>57</b>	<b>46</b>	<b>49</b>	<b>52</b>	<b>39</b>	<b>69</b>	<b>72</b>

<b>FULL NUMBER OF SCORES (FROM SOCIAL AND ENVIRONMENTAL STANDARDS PARTS)</b>	<b>38</b>	<b>50</b>	<b>40</b>	<b>62</b>	<b>72</b>	<b>14</b>	<b>15</b>	<b>46</b>	<b>82</b>	<b>27</b>	<b>31</b>	<b>50</b>	<b>57</b>	<b>111</b>	<b>118</b>	<b>129</b>	<b>87</b>	<b>94</b>	<b>103</b>	<b>76</b>	<b>107</b>	<b>126</b>
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## Appendix 2. Social and environmental information disclosure quality in web pages

	PakMarkas	ESO	KONEKESKO	EUGESTA	spa Vilnius	Kauno Energija	Achema	Telia	Jurex	Interlux	Orkla Care	Rimi Lietuva	BIOK Laboratorija	AUGA GROUP
<b>SOCIAL STANDARDS:</b>														
<b>Employment</b>														
New employee hires and employee turnover	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Benefits provided to full-time employees that are not provided to temporary or part-time employees	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parental leave	1	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Labor/Management Relations</b>														
Minimum notice periods regarding operational changes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Occupational Health and safety</b>														
Occupational health and safety management system	2	1	0	0	0	0	2	3	0	0	0	0	0	1
Hazard identification, risk assessment, and incident investigation	0	0	0	0	0	0	3	1	0	0	0	0	0	2
Occupational health services	0	2	0	0	0	0	4	3	0	0	0	0	0	1
Worker participation, consultation, and communication on occupational health and safety	2	0	0	0	0	0	2	2	0	0	0	0	0	1
Worker training on occupational health and safety	0	0	0	0	0	0	3	2	0	0	0	0	0	1
Promotion of worker health	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	0	0	0	0	0	0	2	2	0	0	0	0	0	0
Workers covered by an occupational health and safety management system	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Work-related injuries	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Work-related ill health	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Training and education</b>														
Average hours of training per year per employee	0	2	0	0	0	0	2	0	2	1	0	0	0	0
Programs for upgrading employee skills and transition assistance programs	0	1	1	0	0	0	2	0	1	0	0	0	0	0
Percentage of employees receiving regular performance and career development reviews	0	0	0	0	0	0	2	0	0	0	0	0	0	0
<b>Diversity and equal opportunity</b>														
Diversity of governance bodies and employees	1	1	0	0	0	3	0	0	2	0	0	0	0	1
Ratio of basic salary and remuneration of women to men	1	1	0	0	0	0	0	0	0	0	0	0	0	1
<b>Non-discrimination</b>														
Incidents of discrimination and corrective actions taken	2	2	0	0	0	0	0	0	0	0	0	0	0	1
<b>Freedom of Association and Collective Bargaining</b>														
Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	3	2	2	1	0	0	0	0	0	0	0	2	0	2
<b>Child labor</b>														
Operations and suppliers at significant risk for incidents of child labor	3	0	0	0	0	0	0	0	0	0	0	0	0	3
<b>Forced or compulsory Labor</b>														
Operations and suppliers at significant risk for incidents of forced or compulsory labor	4	0	0	0	0	0	0	0	0	0	0	0	0	3
<b>Security practices</b>														
Security personnel trained in human rights policies or procedures	0	0	0	0	0	0	1	0	1	0	0	0	0	0
<b>Rights of indigenous peoples</b>														
Incidents of violations involving rights of indigenous peoples	1	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Human rights assessment</b>														
Operations that have been subject to human rights reviews or impact assessments	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Employee training on human rights policies or procedures	0	1	0	0	0	0	0	0	1	1	0	0	0	0
Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Local Community</b>														
Operations with local community engagement, impact assessments, and development programs	1	3	0	0	0	2	3	3	1	1	0	3	0	0
Operations with significant actual and potential negative impacts on local communities	0	0	0	0	0	0	0	0	0	0	0	1	0	0
<b>Supplier social assessment</b>														
New suppliers that were screened using social criteria	0	2	0	1	0	0	0	2	0	0	3	3	0	0
Negative social impacts in the supply chain and actions taken	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Public policy</b>														
Political contributions	3	3	0	0	0	0	0	3	0	0	0	2	0	0
<b>Customer health and safety</b>														
Assessment of the health and safety impacts of product and service categories	0	1	2	1	2	0	2	3	0	2	4	3	2	0
Incidents of non-compliance concerning the health and safety impacts of products and services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Marketing and labeling</b>														
Requirements for product and service information and labeling	0	0	2	0	0	0	2	0	0	0	4	2	2	0
Incidents of non-compliance concerning product and service information and labeling	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Incidents of non-compliance concerning marketing communications	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Customer privacy</b>														
Substantiated complaints concerning breaches of customer privacy and losses of customer data	0	0	1	0	2	0	2	4	3	2	0	0	0	0
<b>Socioeconomic compliance</b>														
Non-compliance with laws and regulations in the social and economic area	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>SCORE FROM SOCIAL STANDARDS PART</b>	<b>24</b>	<b>22</b>	<b>8</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>35</b>	<b>28</b>	<b>11</b>	<b>7</b>	<b>11</b>	<b>16</b>	<b>4</b>	<b>18</b>

	PakMarkas	ESO	KONEKESKO	EUGESTA	spa Vilnius	Kauno Energija	Achema	Telia	Jurex	Interlux	Orkla Care	Rimi Lietuva	BIOK Laboratorija	AUGA GROUP
<b>ENVIRONMENTAL STANDARDS:</b>														
<b>Materials</b>														
Materials used by weight or volume	0	0	0	0	0	0	0	0	0	0	2	0	0	1
Recycles input materials used	0	1	1	1	0	0	0	1	0	0	2	0	2	1
Reclaimed product and their packaging materials	0	0	0	0	0	0	0	0	0	0	1	0	0	1
<b>Energy</b>														
Energy consumption within the organization	0	0	0	0	0	0	0	2	0	0	0	0	0	1
Energy consumption outside of the organization	0	0	0	0	0	0	0	2	0	0	0	0	0	0
Energy intensity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduction of energy consumption	1	1	1	1	0	0	0	3	0	0	1	2	0	1
Reduction in energy requirements of products and services	0	0	0	0	0	0	0	2	0	0	0	0	0	0
<b>Water and effluents</b>														
Interactions with water as a shared resource	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Management of water discharge-related impacts	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Water withdrawal	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Water discharge	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Water consumption	1	1	0	0	0	0	0	0	0	0	0	0	0	1
<b>Biodiversity</b>														
Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Significant impacts of activities, products, and services on biodiversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Habitats protected or restored	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IUCN Red List species and national conservation list species with habitats in areas affected by operations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Emission</b>														
Direct (Scope 1) GHG emissions	0	0	0	0	0	2	3	1	0	0	0	2	0	3
Energy indirect (Scope 2) GHG emissions	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Other indirect (Scope 3) GHG emissions	0	0	0	0	0	3	0	0	0	0	0	0	0	0
GHG emissions intensity	0	0	0	0	0	0	3	0	0	0	0	0	0	2
Reduction of GHG emissions	1	1	0	0	0	0	0	2	0	0	1	2	0	0
Emissions of ozone-depleting substances (ODS)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	0	0	0	0	0	3	4	0	0	0	0	0	0	0
<b>Effluents and waste</b>														
Waste by type and disposal method	0	2	1	0	0	0	0	1	0	0	2	0	3	1
Significant spills	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transport of hazardous waste	0	0	0	0	0	0	0	1	0	0	1	0	0	3
<b>Environmental compliance</b>														
Non-compliance with environmental laws and regulations	2	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>Supplier environmental assessment</b>														
New suppliers that were screened using environmental criteria	0	1	0	1	0	0	0	2	0	0	3	1	2	2
Negative environmental impacts in the supply chain and actions taken	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>SCORE FROM ENVIRONMENTAL STANDARDS PART</b>	<b>5</b>	<b>7</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>11</b>	<b>15</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>7</b>	<b>7</b>	<b>19</b>
<b>FULL NUMBER OF SCORES (FROM SOCIAL AND ENVIRONMENTAL STANDARDS PARTS)</b>	<b>29</b>	<b>29</b>	<b>11</b>	<b>6</b>	<b>4</b>	<b>16</b>	<b>50</b>	<b>45</b>	<b>11</b>	<b>7</b>	<b>25</b>	<b>23</b>	<b>11</b>	<b>37</b>