



# REPORT

Knowledge of environmental issues,  
versus the need for  
competence development



GREEN  
INDUSTRY  
FOUNDATION

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# 1. Context of the organisation's functioning

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In practice, when one writes about the external context, various factors have to be taken into account legal, technological, market, social and cultural. In our report, we will pay attention to issues related to conducting business in line with the directions set by contemporary trends concerning social responsibility and sustainable development. We will make specific reference to environmental and pro-social issues. Recently published reports show that the assessment of social goals and corporate governance is difficult - subjective. In contrast, the assessment of environmental objectives can be fully objectivised (The Economist, Report: ESG investing, p.3-41 ). For many years, organisations have been undertaking a range of pro-environmental measures with a view to minimising the organisation's negative impact on the environment. They adopt different technological solutions (e.g. eco-installations, green building solutions, infrastructure), normative (e.g. ISO 14001), or social (e.g. Corporate Social Responsibility). Principles such as green supply chain, green human resources, green investment are more commonly used. Researchers are also increasingly referring to the concept of the circular economy. Pro-environmental initiatives are numerous, but in practice it is very common for organisations of various types to turn to normative systems of environmental management based on ISO 14001. Perhaps we will return to using holistic Total Quality Environment Management (TQEM) type concept.

The implementation of various green programmes can be one element of corporate social responsibility. The same was and is the case with environmental management systems.

Interest in CSR issues can be attributed to several factors:

- a desire to create a public image
- concern for reputation and compliance with environmental legislation
- responsibility for the natural and social environment
- the desire to build positive relationships with stakeholders, including customers, owners and local communities,
- the need to comply with legal and administrative regulations
- meeting market requirements (the problem of reporting CSR indicators also in a B2B relationship)
- knowledge of the personal beliefs of the owners
- economic calculation (e.g. the desire to obtain external sources of financing, better ratings, profits)
- pressure from business partners

It can be seen that the reasons for interest in CSR can be fully ethical, pro-social, as well as ethically questionable (e.g. seeking only higher profits). There is no doubt that in many cases the application of CSR is cost-effective (e.g. Nguyen et al., 2022). Actions taken by organisations applying CSR (labelling, transparency, audits) can increase consumer confidence (Pivato et al., 2008).

Organisations applying Corporate Social Responsibility must keep in mind the fair treating of employees, operating ethically taking into account different needs, interests, respecting fundamental social rights, maintaining good relations with the environment and that the natural environment must serve future generations. However, there are many objections to organisations using CSR. It is believed, that their activities are just another PR gimmick (e.g. Jahdi, Acikdilli 2009). The use of CSR can be considered as one of the strategic elements of the reputation game. There are two reasons for this assessment of organisations using CSR. The first reason is the motives of implementing CSR. Internal and external customers must express trust in the organisation and its products. Often, however, organisations using CSR as a dominant operating strategy expose themselves to accusations of dishonesty. Sometimes they become involved in the implementation of CSR when their brand is damaged. The implementation of CSR must be characterised by congruence between declarations and deeds, between external and internal activities. It is not possible to be socially responsible only towards one selected group, for example, only customers. Achieving this congruence can be difficult (Bugdol 2010).

This is why it is so important that actions are not implemented for show, but are authentic, not necessarily publicised. It is unethical to use CSR for the sole purpose of making a profit.

### **Of course, the scale of CSR programmes is different for large companies and for small and medium-sized companies.**

Medium and small companies are socially responsible if they:

- treat employees fairly (provide decent working conditions,
- do not take advantage of the difficult life situation of stakeholders, support employees financially),
- are fair to customers (do not overcharge, provide quality-oriented services),
- take care of the environment (in every process, from the purchase of materials, machines, equipment and the composition of the manufactured product),
- are active in pro-environmental social activities,
- are honest to the state and its authorities, actively strive for regulations that have the welfare of future and present generations in mind.

Implementing Corporate Social Responsibility (CSR) for small entrepreneurs (SMEs), in addition to fulfilling the social contract, is also an attempt to increase legitimacy. The results of various studies show that the design of CSR programmes needs to take into account the actual circumstances and needs of SMEs in order to be effective in solving problems by SMEs. There is a need for regulations that can systemically encourage companies to implement CSR (Hadi I Udin, 2021).

For SMEs, it is not just about marking their foreignness, encouraging customers to use their products. Small and medium-sized companies with implemented CSR are less vulnerable to bankruptcy in the event of adverse economic developments (Metzker, et al., 2021).

However, familiarity with the concept of CSR is not the best despite the fact that there is a belief that a manager should consider the ethical and moral implications of their decisions (Metzker and Streimikis, 2020). One of the most interesting studies was aimed at establishing differences in the application of selected CSR principles by managers and owners of micro, small and medium-sized enterprises in the V4 countries. The results showed that CSR strategies are most frequently used by entrepreneurs and managers in Hungary, Poland and Slovakia. They are least frequently used in the Czech Republic. A sectoral comparison within the V4 countries revealed interesting findings. Differences were found in the perception of the CSR concept and its use in business. The CSR concept was most frequently used in tourism and agriculture, to a lesser extent in construction, retail, manufacturing and services. Managers and entrepreneurs understand the link between CSR, gaining reputation and business opportunities, and that CSR helps to build competitive advantage (Gavurova et al., 2022).

The problem is that despite the ability of small and medium-sized enterprises (SMEs) to contribute to achieving sustainable economic growth, reducing unemployment, SMEs' ability to create value through CSR remains poorly researched (Bhattacharyya and Kumar, 2022).

Linked to corporate social responsibility is the concept of sustainability development.

### **The concept of sustainable development is linked to corporate social responsibility**

The genesis of the concept of sustainable development was a critique of traditional theories and economic models, and the prevailing trends in production and consumption processes, leading to excessive depletion of natural resources and increasing anthropopression on the natural environment. It has become necessary to try to define new relations between man and the natural environment and to expand the development perspective to its non-economic areas (Bugdol, Puciato, 2022). Consequently, an alternative theory of sustainable development has been formulated, which according

to the legal definition, is “social and economic development in which there is a process of integrating political, economic and social activities, while maintaining natural balance and sustainability of basic natural processes, in order to guarantee the possibility of satisfying the basic needs of particular communities or citizens of both present and future generations” (Environmental Protection Law (Dz.U. 2001 No. 62, item 627)). The overarching goal of sustainable development is to improve the quality of life of society, in both objective and subjective terms (Borys, 2002). Building a sustainable organisation has a permanent character, which means that it is a kind of path, a goal, towards which the organisation should strive. The level of sustainability of a company depends on external factors such as the economic situation, environmental policy, intensity and sources of subsidising of sustainable activities, scientific and technological progress, level and sources of competitiveness of the national economy and enterprises, environmental awareness and pro-environmental behaviours of the society and from many internal factors (Bugdol, Puciato, 2022). Interest in sustainable development issues and green people management is not only related to climate change (lack of knowledge, lack of awareness), but also- which should be kept in mind - to economic processes, i.e. the pursuit of profit. A growing body of literature points out that many of the ecological crises and environmental problems, which since the 1990s, have had a negative impact on societal well-being have resulted in an increased awareness and environmental concerns. As a result, companies have been requested to treat the concept of ‘environmental sustainability’ as a strategic element (Arslan, 2019). In some countries there are observable trends based on strengthening the corporate image in national and international domains which encourages these companies to develop and implement green competencies (Arslan, 2019). In addition, there has recently been an increased interest in various investment funds - in the pool of banking products, so-called ‘green loans’ are becoming increasingly popular (Luo et al., 2021); hence the strong interest of companies in green programmes. Individual industries are taking an interest in environmental issues due to increasingly rigorous environmental regulations and the awareness of consumers regarding environmental protection (Fang and LePage, 2022).

Studies of sustainability strategies in large corporations have shown that carefully planned strategies can take environmental and social issues into account. C. Luederitz rightly points out that we still lack clarity in the way small companies create sustainability strategies. The assumption that small companies can - or should - carefully plan their strategies is incorrect, given that such organisations often lack the necessary resources, foresight and formalised decision-making structures. For small businesses, it is important to have interpersonal relationships and to shape the quality of these relationships (Luederitz, et al., 2021). Small businesses need such relationships with the community to survive, whereas large companies do not necessarily. SMEs therefore take advantage of their strong stakeholder relationships, which are built on trust, reputation and legitimacy (cf. Crossley, et.al., 2021). It is often emphasised that SMEs need to find solutions to many complex problems, as the transformation of businesses towards sustainability

requires significant changes to all business processes, from product development to operational implementation, logistics and marketing, not excluding their management. In order to implement sustainable development, SMEs need to identify and quantify the risks that may affect their path to sustainability (Bestvinova et.al., 2022).

The sustainable development pursued by SMEs can be significantly influenced by innovations of all kinds. The research results showed that product innovations, as well as service innovations have a significant positive impact on the sustainable business development. Additionally, it has been confirmed that process innovation is crucial for achieving sustainable business development (Hanaysha, et.al., 2022).

Taking into account the principles of CSR and sustainable development, questions need to be asked:

What do organisations need?

Taking into consideration the assumptions of systems theory, it can be stated that:

In a social system, organisations need informed leaders and employees - so people with knowledge of their company's impact on the environment and who are well aware of the needs and expectations of all stakeholders. In this way, a list of requirements can be created to improve the processes in place. A very important element of the social system is the green skills of employees, which "are the resultant of their knowledge and skills in the application of pro-environmental solutions in the company. Due to the complexity of the competence concept itself competence itself, a clear distinction must be made between behavioural competencies and functional competencies. The first define 'soft' skills and refer to the way in which employees must behave in order to properly perform their jobs. Among the green behavioural competences that may be desired by employers, one should mention creative thinking and ethical conduct of an environmental nature, or the ability to manage people under conditions of environmental risk. Functional competences, on the other hand, define 'hard' skills and refer to what employees need to know in order to do their jobs well (Kozar, 2017, pp.60-61). A person with such defined competences can undertake various pro-environmental behaviours. Such relationships are also indicated by a small number of studies (cf., e.g. Subramanian, et al., 2016).

Green skills can also be included in the broader concept of cultural competence (cf., e.g. Simpson and Mueller, 2019). The research conducted to date indicates, that investment in the development of green core competencies has been beneficial to companies in the process of implementing green innovation and shaping a green image (Chen, 2008).

The literature review undertaken shows that the development of key green skills plays a strategic role in achieving 'environmentally-sensitive' production, which, day by day becomes an important area in the sustainable competitive advantage of companies (Egin et al., 2018). These competences can have a positive impact on green competitive



advantage (although the impact of eco-innovation on green competitive advantage alone is not always significant) (Kuo et al., 2022). Researchers claim that the capabilities generated by the green economy can contribute to social prosperity, economic progress and sustainable development of the country (Alpopi et al., 2014) hence the need to develop green skills. Companies must strive not only to develop green competencies, but to develop various modern technologies, organizational solutions. There is a need to return to more holistic solutions, for example, to the concept of TQEM.

Green infrastructure is needed in the technical system. It is recognized that management factors are very important, but in many cases positive results can be achieved through the use of appropriate technical infrastructure (cf., e.g. Asyera, et al., 2020). The organizational system needs appropriate procedures (established courses of action) for implementing sustainable development programs. What is needed is knowledge of how to improve processes to make them friendly to the widely understood environment. The economic system needs appropriate mechanisms for financing the implemented pro-environmental and pro-social tasks. To this end, it is necessary to carry out assessments of needs and opportunities at management reviews, sketch financing scenarios taking into account both opportunities and risks.

Small and medium-sized companies themselves are not always able to implement such mechanisms which allow the implementation of sustainable development principles. Assistance is needed from the state and other market players.

## 2. Description of the method

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In the first stage of the research, a survey method was used. Based on the results of the literature review, a set of basic problems and related specific questions were prepared.

In a typical survey, the researcher selects a sample of respondents and distributes them standardized questionnaires (Babbie, 2004).

The survey questionnaire is divided into two parts. The first diagnoses the general knowledge of the respondents. Almost all of the issues included in the questionnaire can be found in widely available publications. The questions formulated dealt with: sustainable development, the circular economy, goals of the Paris agreement, climate change and state institutions.

The second part is definitely more difficult. It examines employees' knowledge of the processes of management. Examines the level of knowledge of legal regulations and functioning environmental management systems. Questions concerned: knowledge of the operation of environmental and energy management systems, tasks performed by companies, identification of environmental aspects, improvement activities undertaken, goals of the ESG, stock market indexes, unethical activities undertaken by organizations (e.g., greenwashing, carbon leakage), communication responsibilities.



A total of 123 respondents participated in the survey (the largest number of respondents were in managerial functions middle or lower level, only 28% had executive functions).

Respondents represented small and medium-sized companies. As a result - 22.8% of respondents were employed in medium-sized organizations (up to 51-250 employees); 26.8% of respondents were employed in companies with up to 10 employees; 50.4% in companies with 11-50 employees.

The surveys were followed by interviews. It was considered that they provide opportunities to learn about each other, to better understand a particular issue. They include reflection and discovery of new issues (Easterby-Smith et al, 2015, 133-134)

An individual interview scenario was developed. The questions included in the scenario were in the form of open-ended questions, in order to give those participating in the research the greatest possible freedom of expression. It was ensured that all data collected was confidential and properly protected.

The questions were divided into two parts. The first part included questions on general knowledge about the environment, climate change. Examples:

1. The concept of sustainable development encompasses the various goals that individual countries intend to achieve. Please give examples of social goals to be realized by 2030.
2. Have you encountered the term Anthropocene? What does this name mean?
3. What are the main principles of the circular economy that you can describe? What are these principles?
4. What are the main greenhouse gases you can name?

The second group were questions related to management processes. Examples:

1. The environmental management system determines the competence of personnel. How do you think such an assessment should look like? Whose competencies should be examined? Why?
2. Who in our country maintains a database of impact assessments on the environment, which includes information on strategic impact assessments on the environment?
3. What tasks does the management have to perform in terms of the environmental management system?
4. What, in your opinion, is the practical implementation of the idea of green management of people?

Below is an excerpt from the instructions.

If we measure economic growth we often include an indicator such as GDP. Despite the fact that more and more people believe that economic growth cannot take place at any cost and increasingly appreciate the balance of gains and losses resulting from it, including the negative impact on the environment and climate change, their attitudes toward growth still vary widely, from ambivalent attitudes to attitudes of concern (Tomaselli et al., 2019). What matters is not just economic growth, but what purpose its fruits are used for, and what are the social and environmental costs. This is what the classical formula for measuring economic growth does not take into account based on GDP (and GDP per capita). For many years, it has been pointed out that it is necessary to move away from such a measurement of growth in favor of indicators that do not suffer from the drawbacks of this measure. A good example of such a measure is Daly and Cobb's index of ecological natural wealth, also known as the Index of Sustainable Economic Welfare (ISEW), which is a non-monetary measure of social well-being. It takes into account - unlike GDP - both the management of mineral resources as well as intergenerational social and environmental justice. In its determining it takes into account: also average consumption, distribution of wealth and the scale of environmental degradation (Wozniak, 2004).

Ask them if they are familiar with the concept of sustainable development, to what extent they think it is real, are they familiar with the pillars of sustainable development?

Interviewers were also given short formal answers, after reading which there was an opportunity to formulate more specific questions.

In addition, in order to obtain subjective data and give voice to representatives of different economic and scientific communities, a focus group was conducted.

The focus group was led by an experienced moderator. The meeting was recorded, and session participants also took notes during the session. The study authors intended to take into account the dynamics that focus groups can engender, with room for a wide range of reflections, including preliminary and conflicting views (Kitzinger, 1995).

# 3. Results of surveys

## General knowledge about climate issues

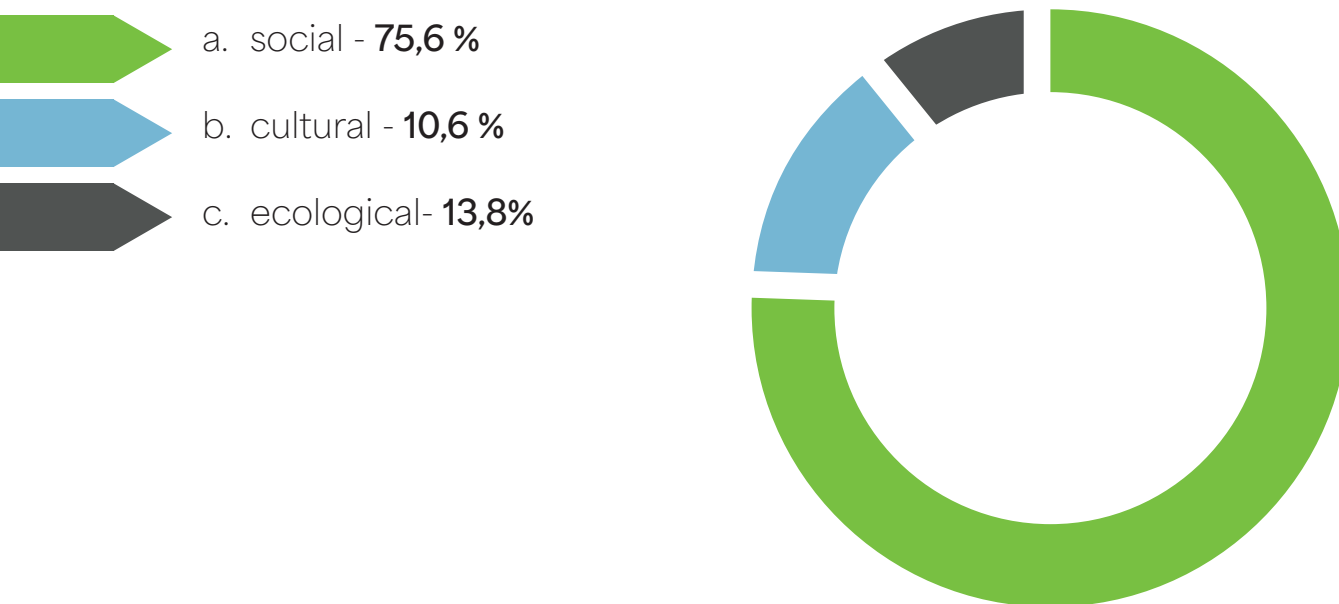
The research assumes that those aware of the ongoing changes in the organization's environment have general knowledge of sustainable development, circular economy, goals of the Paris agreement, climate change, and state institutions.

The survey shows that most of the people questioned know what sustainable development is and correctly identifies its dimensions. However, for ¼ of the people surveyed, the concept of sustainable development refers only to the ecological and cultural dimensions.

Graph 01

Sustainable development - a concept with three dimensions also known as the pillars environmental, economic and..

123 answers



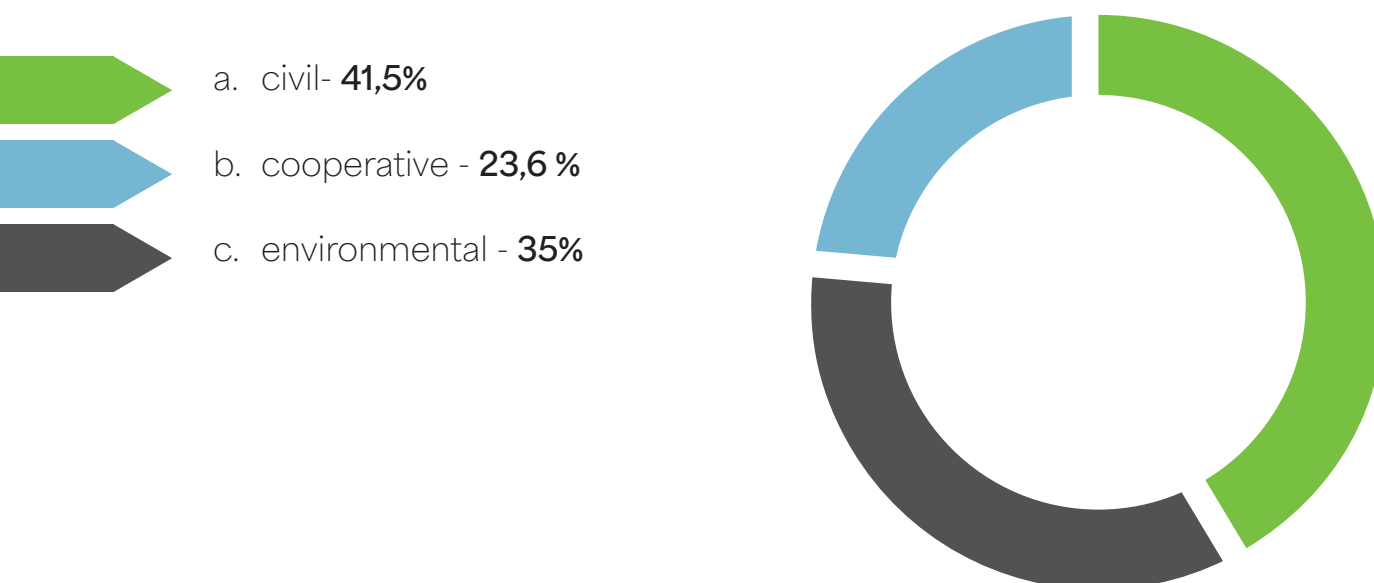
Such survey results are not surprising, as previous conversations have made us realize that sustainability is mainly associated with the environmental dimension. If, therefore, we do not consider all of its dimensions, the achievement of ESG goals will be unlikely.

Knowledge of pro-environmental behaviours is very low (see the chart below). They are confused with other behaviours. The responses show that pro-environmental behaviours, including “minimizing the consumption of natural resources, as well as harmful and toxic substances, reducing waste generation and energy consumption” are associated with civic and cooperative behaviours. Respondents are unable to state, what civic behaviours are. This does not indicate a very low level of knowledge of behavioural issues, but that staff knowledge is not being updated. Citizenship behaviours do not derive from job descriptions or formally assigned responsibilities and powers. They manifest themselves in taking on additional roles and tasks and responsibility for the organisation as a whole (Bateman, Organ, 1983). Citizenship behaviours differ from other similar behaviours in that they are voluntarily undertaken and stem from purely pro-social motives. Only 35% of respondents correctly categorise behaviours that aim to minimise negative impacts on the environment.

## Graph 02

**Behaviours “involving the minimisation of the use of natural resources and harmful and toxic substances, the reduction of waste production and energy consumption” are behaviours:**

**123 answers**



About half of the respondents can intuitively identify what the phenomenon known as ‘secret sustainability’ is. At the same time, it is a new term and, like as in the case of citizenship behaviours, it should be familiar to those who update their knowledge of sustainability and customer behaviours. Some companies have significantly reduced their energy consumption - including car manufacturers. There are also clothing companies using as little as 1 litre of water to produce jeans trousers- while other well-known manufacturers use 347 litres of water for production. Do we know which companies these are? No - we do not know and that is what this phenomenon is. What does it stem from? There are two possible scenarios here: Companies are afraid that customers would not want to pay more for eco-products, but they may also be afraid of revealing areas of the business where no improvements have been made.

### Graph 03

The problem of “secret sustainability” may arise because:

123 answers

- a. Companies are afraid to reveal other areas/processes of production that are not safe for the environment - **50,4%**
- b. Companies do not want to use their successes in marketing activities, claiming that caring for the environment is their responsibility - **32,5%**
- c. Companies do not have the ability to calculate environmental effects - **17,1%**



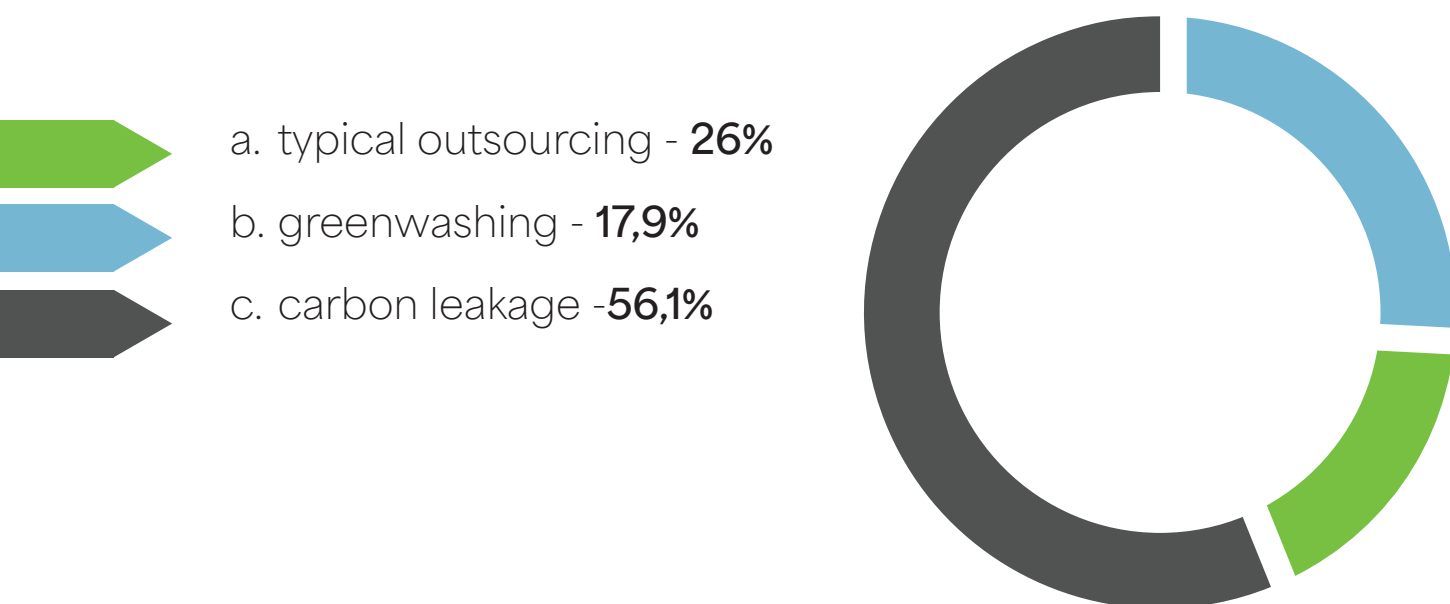
A similar number of respondents (56%) know what outsourcing aimed at reducing emissions only in their own country is (carbon leakage). And 52.8% of respondents can answer the question what greenwashing is. It is worth noting that this concept is confused with environmental lobbying (see graphs 04, 05).

Small companies very rarely use carbon leakage, but they have the same opportunities to use greenwashing as do large companies. Greenwashing, less commonly referred to as greenwash or green eyewash, or green lie, is the phenomenon of inducing customers who are looking for ecologically and environmentally produced goods the impression that the product or the company producing it is acting in harmony with the environment. The term refers to misleading communications that aim to shape overly positive beliefs among stakeholders about a company's environmental practices (Torell et al. 2020).

Carbon leakage is the phenomenon of the transfer of carbon emissions from one country to another. Carbon leakage occurs when, as a result of the introduction of a restrictive climate policy limiting CO<sub>2</sub> emissions, carbon-intensive production is relocated outside one's own country or the European Union to countries where such restrictions do not exist or are less costly. As a result, global CO<sub>2</sub> emissions do not fall, and may even increase if the new location uses production methods that emit more CO<sub>2</sub> per tonne of a given product (cf. Gaska et al., 2019). In contrast, unethical lobbying, i.e. activities aimed at delaying the introduction of regulations or the achievement of set environmental goals (cf. e.g. (Kim, 2019)).

#### Graph 04

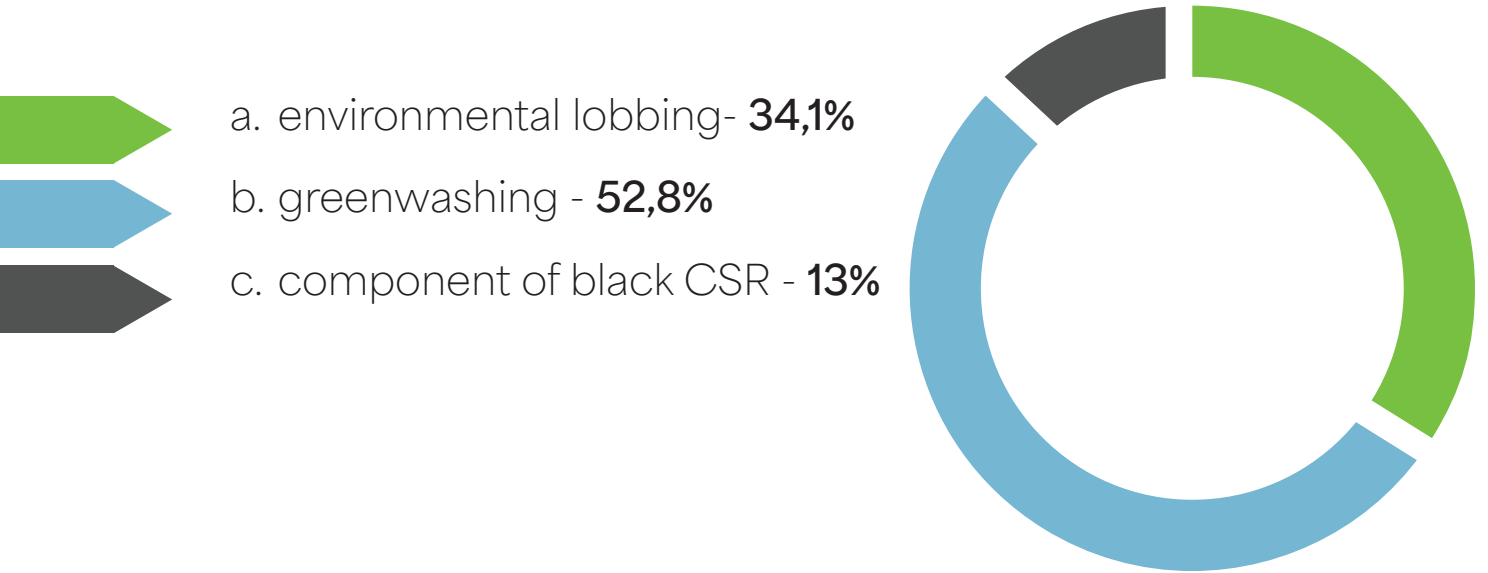
Transferring high-carbon production outside one's own country, European Union is:  
**123 answers**



### Graph 05

Communicating information, messages to shape overly positive stakeholder beliefs about the company's environmental practices is:

123 answers

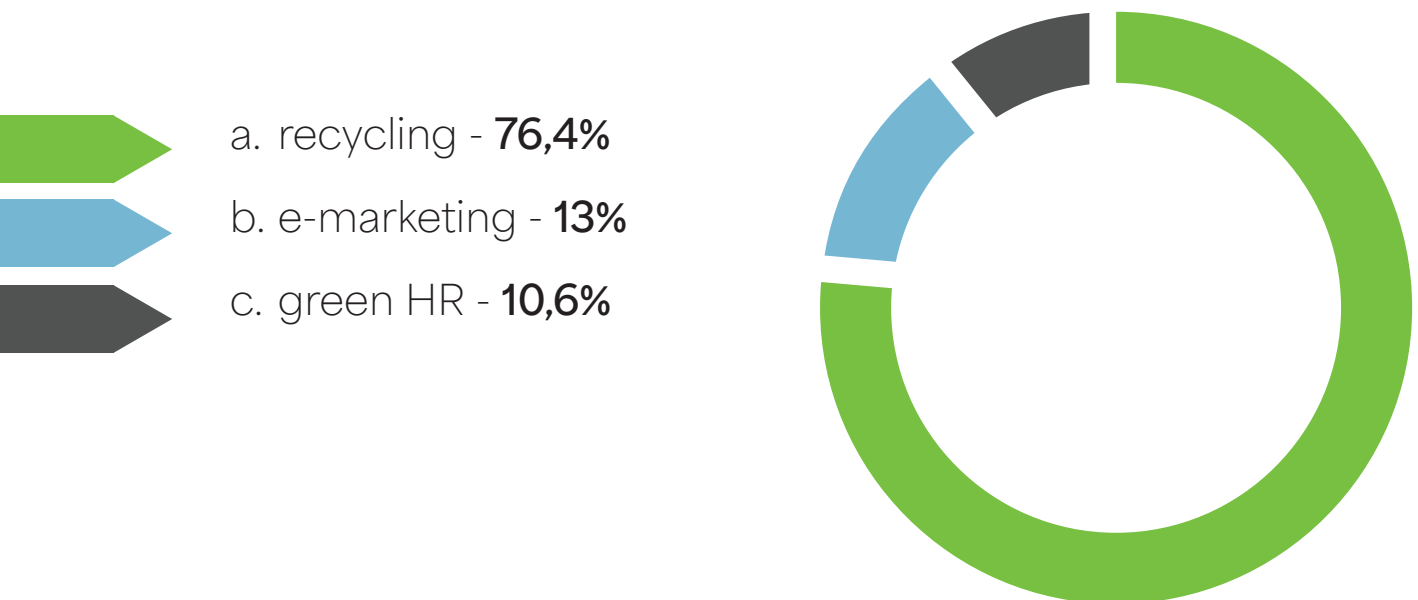


Among respondents, there is better knowledge of recycling as one of the elements of the circular economy. However, in this case, the correct answer may have been indicated by a list of two other pillars of such an economy (cf. Graph 06). The term has been widely known and used for many years.

### Graph 06

The three main activities that make up the 3Rs circular economy are: reduction , re-use and..

123 answers





Basic knowledge of the Paris Agreement - its findings - was also explored. Almost every person knows about the emissions reduction targets, but we also have two other targets. Target 1 is “to keep the increase in global average temperature well below 2°C above pre-industrial levels and to continue efforts to limit the temperature increase to 1.5°C above pre-industrial levels”.

Objective 2 is to “increase the capacity to adapt to the adverse effects of climate change and promote resilience to climate change and the development of low greenhouse gas emissions in a manner that does not jeopardise food production”.

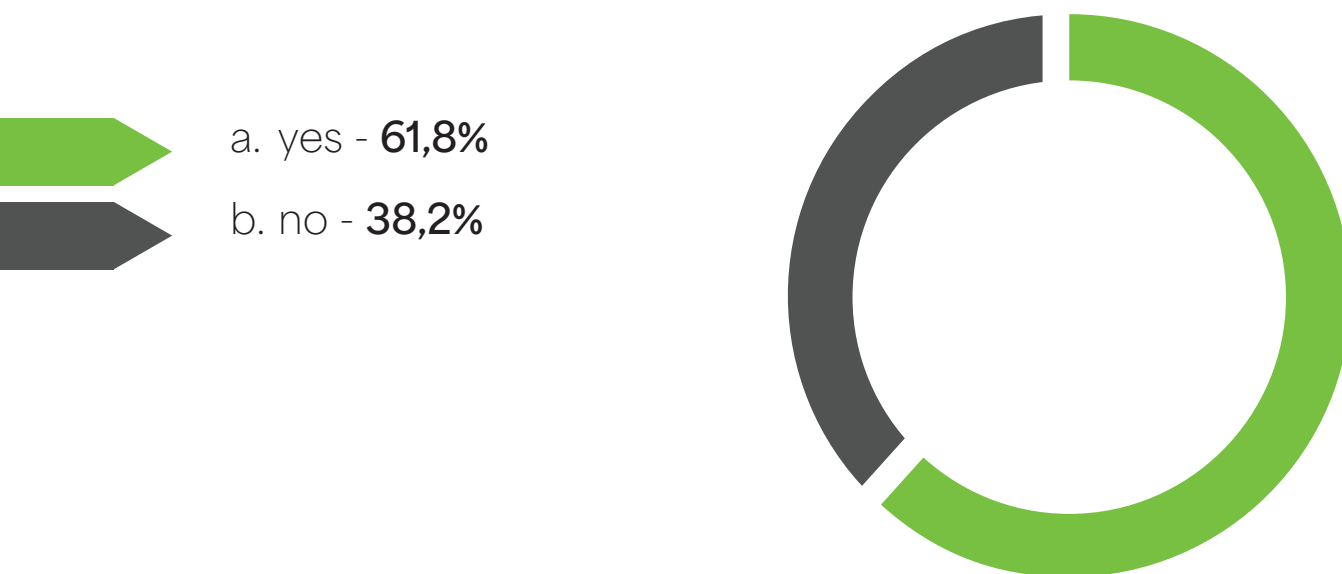
Goal 3 is to “unify financial flows with a pathway to low emission greenhouse gases and climate-resilient development” (Bugdol et al., 2022).

The question on the unification of financial flows may have caused difficulties. Probably for this reason, 61.8% of respondents answered correctly.

### Graph 07

Is “ unification of financial flows” one of the objectives of the of the Paris Agreement?

123 answers



The restricted number of responses (yes/no) also influenced the results.

54.5% of respondents are able to correctly identify the abbreviations but also the objectives related to the Paris Agreement. At numerous climate meetings, national governments declare their own elaborate commitment to improving climate (implementation of targets). NDC (Nationally Determined Contributions) means a plan of action for climate to reduce emissions and adapt to climate impacts, as put forward by each party of the Paris Agreement. These types of issues should be familiar to all those who keep up to date with information on the subsequent climate summits. For almost half of the surveyed, the individual contribution of each party to the agreement, is associated with the overall reduction of emissions and the threats to civilisation (cf. chart below).

## Graph 08

NDC stands for:

**123 answers**

- a. a climate action plan to reduce emissions and adapt to the impact of the climate as presented by each party of the Paris Agreement - **54,5%**
- b. generally accepted abbreviation for Negligence Determining Civilization - **20,3%**
- c. Action Plan for the EU to reduce emissions and adapt to climate impacts - **25,2%**



Knowledge of economic regulation is slightly better. 61% of people answered correctly to the question - what is a carbon tax. The people surveyed have a general knowledge of carbon leakage and are aware that the behaviour of organisations depends on the taxes paid in the home country. The purpose of this tax is to include in the price of fuel the hidden social cost of the externalities of air pollution and not (perhaps only indirectly) to raise funds to reduce climate injustice and targeting renewable energy sources. Carbon leakage has become a major issue for emissions trading schemes in recent years. Studies carried out on behalf of the European Commission following the end of Phase II of the EU ETS did not reveal any noticeable carbon leakage from countries covered by the scheme. However, there are also data indicating of serious leakage of CO<sub>2</sub> emissions from developed countries to developing countries (Zhang, Fang, 2019). The transfer of greenhouse gases, especially CO<sub>2</sub>, due to international trade is a related phenomenon to classical CO<sub>2</sub> carbon leakage. It is referred to as the export of embodied emissions.

## Graph 09

**Climate change is prompting economists to look for various methods to reduce greenhouse gas emissions. So-called carbon taxes are also taken into consideration. The purpose of this tax is:**

**123 answers**

- a. including the hidden social cost of externalities in the price of fuel: air pollution - **61%**
- b. fundraising to reduce climate injustice- **15,4%**
- c. raising investment funds focused on renewable energy sources - **23,6%**

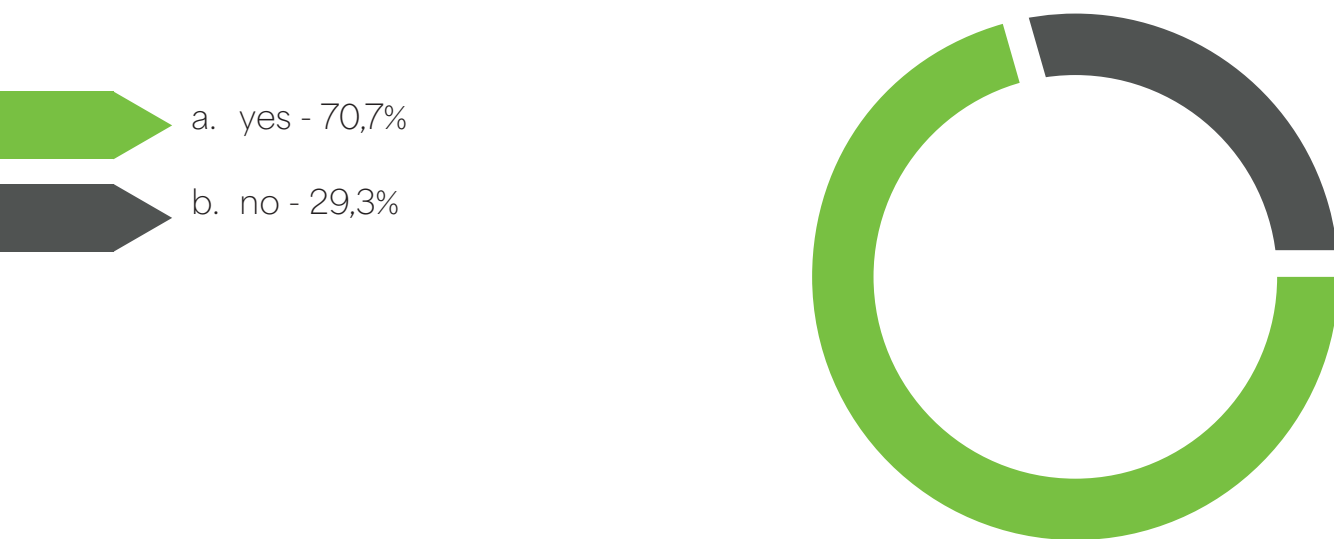


Most respondents are aware of the important role of taxes. They recognise that carbon leakage also depends on what the tax system is like.

### Graph 10

The propensity for carbon leakage depends not only on the price of emissions, but also on the tax system:

123 answers



## Znajomość zadań (elementów systemów zarządzania) podejmowanych w organizacjach

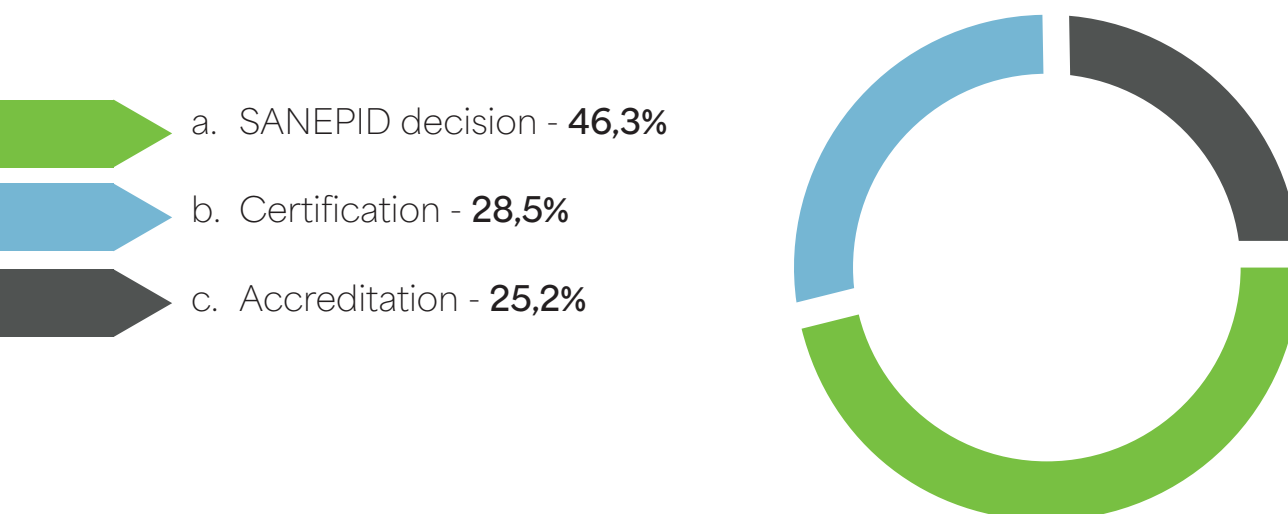
The next part of the research questionnaire covered issues concerning tasks that can be undertaken in an organisation to reduce the impact on the environment. Knowing the general principles, tasks and objectives is something very important from the point of view of implementing sustainable development programmes. The respondents were representatives of small and medium-sized companies, where environmental management systems are not often used. Only 25% of respondents are aware that tests that can be recognised by companies are performed by laboratories that have been accredited (detailed procedure para.15 point 2). Ordinance of the Minister of Health of 2 February 2011 on tests and measurements of factors harmful for health at work (Journal of laws from 2011 no. 33 item 166) "defines, inter alia, the procedure, methods, type and frequency of testing and measurements of factors harmful for health occurring in the work environment; cases in which it is necessary to conduct continuous measurements; requirements to be fulfilled by laboratories carrying out tests and measurements; the manner of recording and storage of test and measurement results".

The problem of accreditation is not only relevant for environmental testing, it also occurs in the case of employing management system certification companies, which should also be accredited. It is, in a sense, a guarantee of high quality of service.

### Graph 11

Testing and measurement of factors harmful to health in the working environment are carried out by laboratories that have obtained:

123 answers

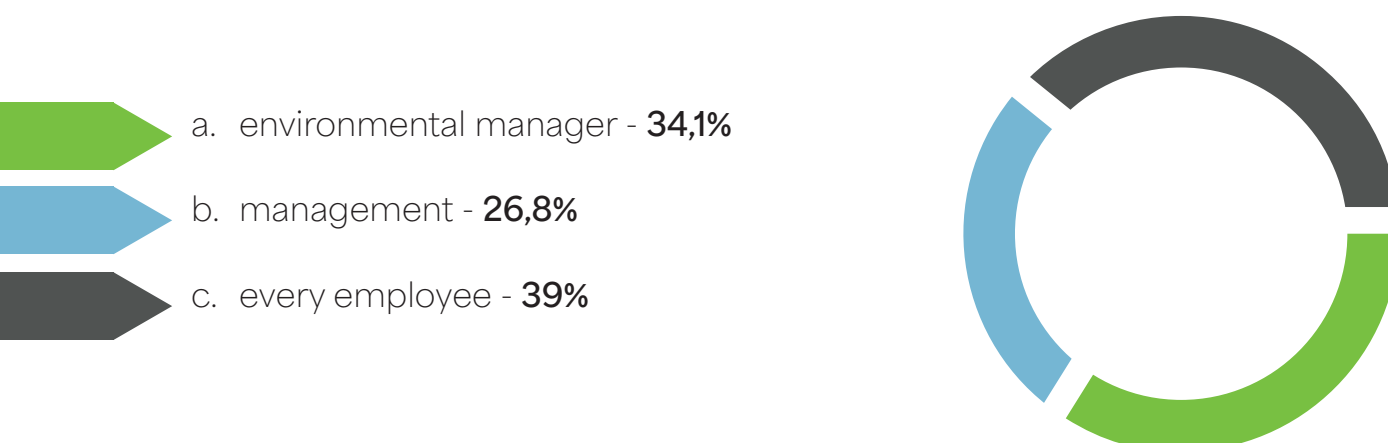


The survey shows that 26.8 % of the respondents have knowledge of the criteria of the environmental management system. The communication effectiveness, that was asked about, is the responsibility of top management, not employees. Effectiveness is the ability to achieve objectives. So if environmental targets (if they exist) are achieved, management should communicate this to employees - which can act as a motivator, encouraging further commitment. However, it is difficult to say to what extent representatives of small and medium-sized companies are familiar with environmental management systems (although they are one of the subjects of their study programmes), how familiar they are with concepts such as effectiveness or efficiency. In the case of a larger research sample it would be possible to establish the difference in familiarity with the systems between the management and other respondents.

## Graph 12

Communicating the importance of effective environmental management and compliance with the system requirements, is the task:

123 answers



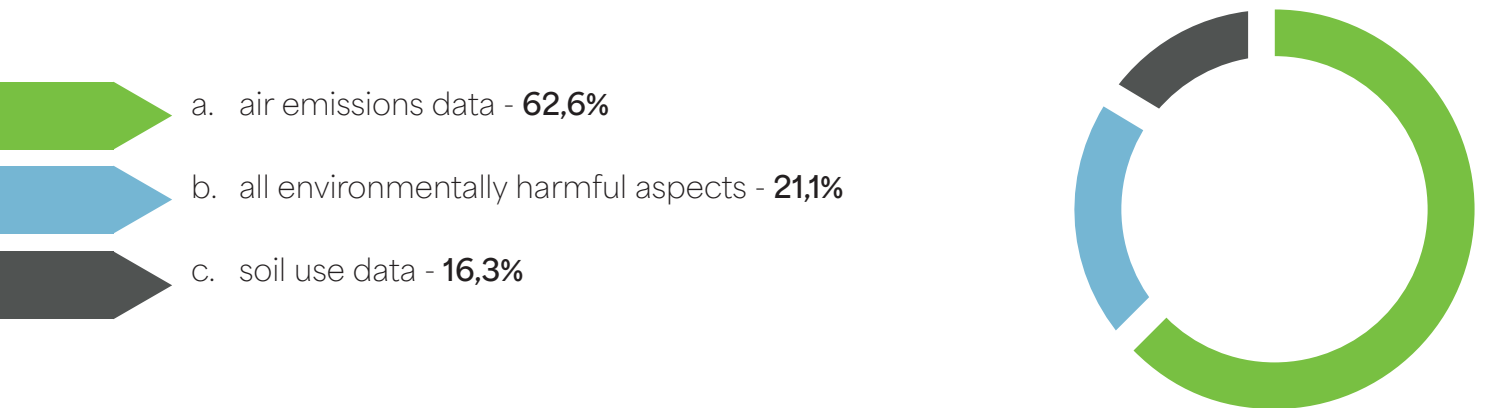
The National Balancing and Emissions Management Centre performs the tasks resulting from two basic acts (the Act of 17 July 2009 on the system for managing emissions of emissions of greenhouse gases and other substances and the Act of 12 June 2015 on the greenhouse gas emission allowance trading scheme). It was established to fulfil obligations arising, inter alia, from EU directives and participation in the in the greenhouse gas emissions trading scheme (cf. About us - KOBiZE, reading 09.01.2023).

The problem of emissions mainly affects large manufacturing companies and therefore knowledge of the tasks carried out by the national centre may have been low. 62, 6% of respondents correctly answered the question concerning the tasks carried out by the KOBiZE.

### Graph 13

KOBiZE reports include:

123 answers



A further question concerned knowledge of management reviews and how they could be integrated. Reviews are meetings of top management where important matters concerning the functioning of individual systems and decisions are made to improve a particular area (e.g. environmental, health and safety management). They are usually conducted before an external audit is scheduled. Such an audit may take place if a review has been carried out and internal audits have been carried out.

Prior to their implementation, the person responsible for the environmental management system gathers and organises the input for the review (e.g. any results of previous reviews, information on important changes in the external and internal context, degree of achievement of objectives). There may have been little knowledge of reviews, however surprisingly, respondents did not see the possibility of systems integration. Unfortunately in many companies there is a plethora of regulations, policies, procedures, functions that are not integrated. Such answers clearly indicate the need to educate employees on the functioning of environmental management systems.

### Graph 14

Environmental reviews may not be combined with quality reviews

123 answers



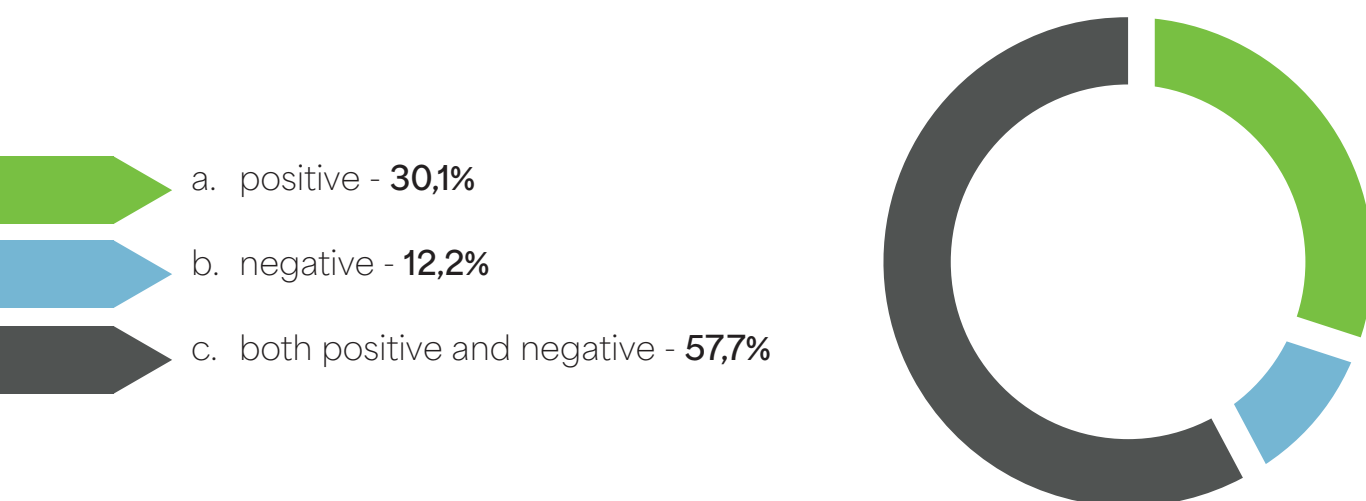


The next question should not cause any difficulties, as it concerned knowledge of the basic term which is environmental aspects. It is customary, when implementing any environmental improvement programme, an analysis is made of the processes being implemented in terms of the existence of environmental aspects, which can be key, direct, indirect. Examples of aspects include: emissions to air, releases to water, releases to soil, consumption of raw materials and natural resources, energy consumption, emitted energy (e.g. heat, radiation), vibrations, waste and by-products. 40.7% of respondents know how environmental aspects can be defined – as element of an organisation’s activities or its products or services that can interact with the environment. When talking about environmental impact, any change is taken into account - positive or negative, and the organisation should document, record and manage its environmental aspects, which is related to risk reduction (including the risk of occupational diseases). Positive and negative environmental aspects are indicated by 57.7% of respondents (see chart below).

### Graph 15

The organisation should document all environmental aspects:

123 answers



This means that either their companies do not have such systems or their knowledge of environmental management systems is at a low level.

Another question concerned ESG targets. The earliest, as from 2017, reporting obligations was for public interest entities (e.g. banks). From 2023, the obligation applies to listed companies. In EU countries, there is the Corporate Sustainability Reporting Directive. It is assumed that this obligation will apply to all public companies as well as private companies (e.g. from 2026). However, the new regulations will be introduced gradually in order, among other things, to develop the best possible methodologies for reporting ESG objectives.

35% of respondents gave the correct answer to the question on, who must report on ESG targets. 30% recognise that ESG targets will be mandatory after 2030, and the remainder believe that these targets are the basis for the remuneration of CEOs of commercial companies.

## Graph 16

Various stock indexes with environmental components (e.g. Sustainability Index) provide data for decision-making by investors based on ESG criteria (Environmental, Social and Corporate Governance):

### 123 answers

- a. form the basis for the remuneration of the CEOs of commercial companies - **35%**
- b. will be obligatory in Poland after 2030 - **30%**
- c. must already be reported by some companies - **35%**



One of the questions concerned the EMAS scheme. The Eco-Management and Audit Scheme (EMAS) is a voluntary environmental management system (EMS). The legal basis for EMAS is regulated by Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS). Since 2001 EMAS has been using the requirements set out in the ISO 14001 standard. In spite of many campaigns to promote this scheme, only 43.1% of respondents are aware that EMAS is a voluntary scheme. EMAS is a voluntary scheme. It is difficult to ascertain how many people know about the existence of such a system.

## Graph 17

The EMAS Eco-Management and Audit Scheme is a system of:

**123 answers**

-  a. voluntary in Europe - **43,1%**
-  b. compulsory in Europe - **32,5%**
-  c. national voluntary scheme - **24,4%**



One of the most popular management systems is the energy management system.

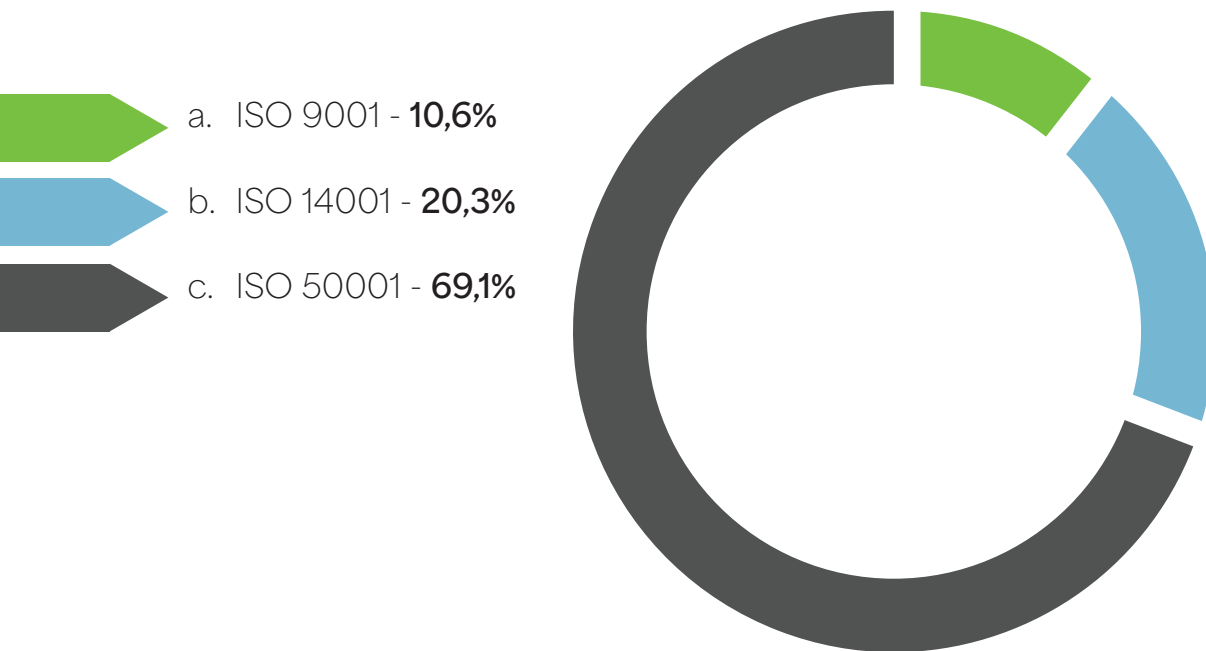
Implementing an effective energy management system - in line with ISO 50001 - helps an organisation to meet legal requirements for energy compliance, reduces costs - by managing energy more efficiently, reduces its carbon footprint, and increases its energy security (Field, 2019). The benefits that accrue to an organisation, that has implemented an energy management system include: savings, increased productivity and operational improvements. The main barrier, however, is the lack of an appropriate culture of energy management (Fuchs, et.al, 2020).

Small and medium-sized companies are encouraged to implement this system, e.g. as part of regional programmes (e.g. Green Silesia). Almost 70% of respondents have heard of energy management systems - they have very general knowledge of what ISO 50001 is.

## Graph 18

Which of the following management standards relates to energy?

123 answers



Environmental management systems are even more popular than energy management systems. An environmental management system - if implemented correctly contributes to reducing waste and thus costs.




It is implemented due to personal beliefs of stakeholders, concern for the environment, the desire to reduce operating costs (mainly environmental charges). However, tangible financial benefits are only obtained by companies in the long term (Lee, et al. 2017).

There is no doubt that proper implementation and maintenance of this system can improve an organisation's environmental performance/effects. Only 31.7% of respondents know that standardised environmental management systems are voluntary systems subject to certification.

## Graph 19

Environmental management system is:

**123 answers**

-  a. voluntary - 29,3%
-  b. mandatory with the EU - 39%
-  c. voluntary national scheme - 31,7%





The final question concerned improvement activities. The research shows that respondents confuse terms such as corrective and correcting actions.

## Graph 20

Corrective actions include mandatory analysis of the causes of non-compliance

**123 answers**

-  a. yes - **74%**
-  b. no - **26%**



## 4. Results of qualitative research

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### A. General knowledge

#### Social objectives

All respondents to the question on social objectives were able to list them correctly. One person stated:

“In terms of social goals, we plan for, among other things: zero hunger in the world, good quality education clean water and sanitation, economic growth and decent work, responsible consumption and production, climate action, partnership as a key to the development of the organisations and the region, equality, diversity, openness, professional development and safety of employees (k.w,51-200, p)”.

From the content analyses undertaken, it appears that the social objectives are well known (or at least interviewees knew how to find them quickly on the open Internet).

Another open question was about the circular economy model. “The circular economy model, is based on three principles (World Economic Forum, 2016): (1) protecting and improving natural capital by controlling scarce resources and balancing the flow of renewable resources (e.g. substitution of fossil fuel energy with renewable energy or the use of maximum sustainable yield methods to conserve fish stocks), (2) optimising resource efficiency through products, components and materials that always operate at the highest usefulness, both in technical and biological cycles (e.g. extending the product life cycles), (3) promoting system efficiency by identifying and internalisation of external costs, i.e. water, air and soil pollution, noise, climate change and related public health damage (e.g. environmental monitoring, ‘green’ taxation policies, development of markets for environmental entitlements for the use of the environment”) (quoted in D. Puciato. *Zachowania prośrodowiskowe, a systemy zarządzania środowiskowego w branży hotelowej*, Kraków, 2022, doctoral thesis under the supervision of M. Bugdola, 2022, p.20).

Out of 10 people participating in the survey, as many as 8 gave a fully correct answer. The 2 others limited their response to durability of materials, interchangeability of components and recyclability. Below is one representative response:

“The GOZ concept seeks to ensure that products, materials and raw materials remain in use as long as possible and that the generation of waste is reduced as much as possible. The current concept treats waste as already used and unnecessary materials. According to GOZ concept, waste is treated as a raw material that can become a product again. This system assumes that each stage of a product’s life, from design, production and consumption, to waste disposal will be carefully considered (k. w.,51-200, p).”

To the question - which funds in Poland support various pro-environmental initiatives/ programmes? -all persons were able to name at least two funds, some people pointed to European funds, others were able to name specific programmes (e.g. Clean Air Fund, Thermomodernisation Fund). The knowledge of the funds that are carried out at the different levels of local government is slightly worse.

## Knowledge of greenhouse gases and carbon footprint

Typical gases include: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), freons (CFCs), nitrous oxide (N<sub>2</sub>O), halon. Four people were able to name two types of gas: methane and CO<sub>2</sub>, one person could only name CO<sub>2</sub>, the others were able to name most greenhouse gases.

A carbon footprint is the total amount of emissions caused by a person, product, organisation but also by an event (takes into account life cycle, indirect and direct impacts). The correct answer was given by 8 people, the other 2 referred to the concept of greenhouse gases. Below is one of the answers:

“The carbon footprint quantifies the total amount of carbon dioxide as well as other greenhouse gases emitted during all types of direct and indirect activities (e.g. businesses).

One of the questions was very specific and concerned knowledge of institutions dealing with environmental protection (Who in our country maintains a database on environmental impact assessments, including information on strategic environmental impact assessments?).

Eight people were able to give the correct answer - the General Director of Environmental Protection, 2 persons pointed to specific institutions of a regional character (with - one person pointed to a website where the necessary information can be found).

## RES and the environment

Knowledge of renewable energy sources - what they are - is shared by all respondents. Two statements were very specific (with one person indicating to the use of online sources, which is an interview error).

Most of those providing information can say what the environment is, how they understand the term. They know that it is both flora and fauna and note that the different elements of the environment influence each other. One person gives a definition directly from the ISO 14001 standard. According to ISO14001 - “the environment is the surroundings in which an organisation operates (3.16), including air, water, land, natural resources, flora, fauna, people and their interdependencies”. So we are talking about interdependencies and the fact that we as humans are part of the environment.



## The Anthropocene

Despite much scientific disagreement, the Anthropocene is considered to be the epoch in which dominant human influence on the planet, the natural environment, the ecosystem is noticeable.

Two persons were unable to say what the Anthropocene is, the others correctly pointed to a fragment of our history, a geological epoch, a period dominated by human activity. From the statements, it appears that some people know the names of representatives of this line of research.

## Eco design and emission pricing

The interview instructions state that “eco-design is a mainstay of the circular economy”, a strategy that aims to give products an unlimited life in a closed, waste-free cycle. Designing with sustainable materials means that goods in a circular economy reach the end of their useful life in a suitable condition so that they can be used for new applications, as opposed to a ‘buy-throw away’ economy (Eco Design: What it is, Advantages and Examples - Iberdrola, read 6.07.2022). Carbon Pricing, on the other hand, is - carbon charges; it is a policy tool to reduce emissions of carbon dioxide (CO<sub>2</sub>) and other greenhouse gases. Emissions are produced when fossil fuels are burned for the generation of electricity, fuels for vehicles, the manufacture of materials and products, and heating and cooling homes (Carbon Pricing | MIT Climate Portal, reading 5.07.2022).

The topic of eco design caused difficulties - some people did not fully know what designing with sustainable materials is.

“I don’t quite understand whether the question is about a design trend or an EU directive... If it’s about the former, I think it’s particularly relevant in designing solutions for cities, the FMCG market, or the fashion market. As for the directive - I don’t know. I have heard something about it, but I haven’t analysed it” (k, w, from 51-250, u)

Two persons stated that it was a boiler directive. A further two stated that it was ‘requirements for solid fuel boilers’. On the internet, this term is indeed attributed to an EU directive and this is most likely why interviewees referred to the limited definition of eco design. The others correctly defined the term.

Carbon pricing is, according to the people interviewed: carbon charges, paying for a carbon footprint, emission charges, an element of emissions policy, an instrument for pricing emissions.

One person interviewed claimed: “It is an attempt to influence the most polluting entities to modernise or completely change the way they produce and the way the products/services they provide function” (m,w,51-250,u).

## B. Knowledge of management

### Tasks of top management

Only half of the people surveyed gave the correct answer to the question of what are the tasks of top management. The tasks of top management can include: setting environmental policy, providing resources, communicating the importance of effective environmental management and compliance with the requirements of the system, ensuring that the environmental management system achieves its intended results, directing those who influence the effectiveness of the environmental management system, promoting continuous improvement.

One person had extensive knowledge of various systems, including an energy management system.

“According to the ISO 9001, ISO 14001 and ISO 50001 standards, top management should provide evidence of its commitment to the establishment and implementation of the Integrated Management System and to continuously improve its effectiveness by: communicating within the organisation the importance of meeting the requirements of ISO 9001, ISO 14001 and ISO 50001, customer as well as regulatory and other requirements; Defining, establishing, implementing and maintaining the Policies: quality, environmental and energy.

- Ensure that adequate resources are available to establish, implement maintain and improve the system - this includes, in particular, human resources and specialist skills, infrastructure, technology, finance
- Identify the scope and boundaries of the Integrated Management System
- Appointment of a top management representative
- Approve the establishment of an Integrated Management System leadership team Management
- Ensure that there are established goals and qualitative tasks, environmental and energetic
- Ensuring that the performance of the business is measured and reported at specified intervals
- Ensuring that the indicators monitoring the activity are appropriate for the company
- Considering the performance of the business in long-term planning
- Conducting reviews of the Integrated Management System.”(m, w, 51-200, u).

It should be noted that this one person is employed in a medium-sized organisation, where an environmental management system according to ISO 14001 is in place.

## Competence assessment

The organisation should define the necessary competences for the person(s) carrying out the work under its supervision affecting its environmental performance. Therefore, the form of employment does not matter. Education, experience and training are assessed.

Five respondents showed a reasonably correct knowledge of competence assessment methods, one person advocated an external evaluation method.

Only one interviewee shows a good knowledge of how the system of environmental management functions (he was able to list the tasks that top management has to perform), 2 people gave very general answers (e.g. “we are supposed to create pro-environmental attitudes”).

Below is one of the answers:

“Competency assessment should be carried out from the very beginning and at all levels, particularly at those key positions that take responsibility for environmental management. I believe that such competencies should be tested with specially developed tools for this purpose - I am not sure if such tools currently exist. The survey is important because a leader can be identified who will ensure that the system is implemented correctly, moreover, by testing we can detect”

## The idea of green people management

Only 6 people had general knowledge of green people management practices. One person was not familiar with the term and the others referred to certification and costs.

Below is one of the statements:

“It is an idea involving the management of employees and the promotion of environmentally friendly attitudes among them. In the process of implementing sustainable development in a company green management of employees is crucial. This concept involves ingraining in employees a pro-environmental attitude, which could then permeate into private life. Employee education takes place through training and various types of meetings on environmental issues involving employees in joint actions to protect the planet. Green management of employees is of great importance in achieving the goals of saving money, improving social responsibility practices and building a good employer brand.” (m, w ,11-50, p).

## Pro-environmental behaviour

Pro-environmental behaviour has been talked about for many years now. This include “minimising the consumption of natural resources, as well as harmful and toxic sub-

stances, reducing waste generation and energy consumption. These are conscious actions aimed at reducing the negative impact of humans on the environment” (Kollmuss, Agyeman, 2002). Pro-environmental behaviour has various manifestations. In the case of employees such manifestations can be: saving all resources (energy, water, raw materials) used in production, the implementation of organisational solutions (including system solutions) aimed at reducing the negative impact on the environment, participation in various programmes aimed at improving processes and systems of environmental management systems, training of others, influencing other stakeholders to improve the state of the environment, making purchases that take into account environmental criteria, improving the supply chain, improving the environmental performance of the company, educating customers, implementing various green programmes, etc.

Seven respondents were able to name at least one manifestation of such behaviour (e.g. limiting the printing of documents, providing public transport, rational use of air conditioner). However, these responses do not indicate detailed knowledge, but typically intuitive. Below is one such statement:

“We need to start by promoting behaviours, not attitudes, which is why I think the simplest messages are the best - reducing energy consumption (simple switching off lights, radios, not keeping chargers plugged in, not turning up radiators with ventilating at the same time)” (m, w, to 10,u).

Three people were not familiar with the term and said it was corporate social responsibility or energy distribution.

**An additional method used in the research was a focus interview. The focus session can be divided into several thematic groups.**

## Knowledge of climate change

Participants in the research highlighted that people's short-term thinking indicates the need to develop motivational mechanisms that would serve to shaping pro-environmental behaviour. According to Anita Engels, people often lack knowledge about what to do to achieve environmental goals (Grant me green, 2021), despite the widespread availability of a vast body of knowledge about climate change - its causes, the state of the climate and the increasingly visible effects of these changes with global as well as local dimensions.

In the discussion, reference was made to current ways of creating pro-environmental awareness. Research confirms that a significant increase in this awareness depends on various climatic disasters.

One focus participant said: "Most hotels only awakened after Hurricane Katrina, after SARS 1, after the pandemic, only then was this awareness greater. Knowledge is needed, but also this kind of harder impact is needed."

Such views are consistent with current research findings. The literature emphasises that natural catastrophes have an important influence on the formation of risk awareness, because they make climate risks more real. For example, a painful mark on the Germany's public consciousness was imprinted by a flood that claimed more than 200 human lives in 2021 (Heated debates, 2021). When the Rhine ran out of water, especially in 2018 and 2020, then people saw further real evidence that global warming is occurring. Then transport by water became impossible and producers, began to wonder what was happening to the environment and to the climate.

The research also shows that those who are more aware of climate risks are those who interact with nature on a daily basis (e.g. farmers). This finding is fully in line with numerous studies indicating the importance of a relationship with nature in demonstrating pro-environmental behaviour.

A noticeable problem - overlapping with current research - is the conviction that only the largest emitters (countries, organisations with the highest CO<sub>2</sub> emissions) should be fought against.

## Climate change awareness in public discourse

Research shows that people are talking about climate change. Below is one of the statements:

"People see it, but are not aware of the causes. However, they are not always able to see the real causes of climate change and the emergence of environmental aspects.

The fact that they are affected by the heat, or the low water level or the blackout in Poland a few years ago, which was a big problem for power plants. However, using the simple example of Orlen and the fact that most of the public is aware of that the cause

of climate change is greenhouse gas emissions. And looking at the concern in the sector of oil, gas, which theoretically has a big responsibility for its impact on the climate. The fact that 100 percent of Orlen's carbon footprint, from extraction to the burning of the fuel in customers' engines 80 per cent is on the customer's side. So it is also some kind of consumer decision and a choice, that everyone has some influence on how they contribute to this global warming".

There is a belief, however, that not only tragic events, disasters, but also an oral discussion, numerous trainings, etc. can contribute to increasing awareness.

Beneficial for increasing public awareness of climate change and the need for action to minimise these changes and their effects, is the increase observed, especially in recent years, in the level of environmental awareness and an increase in the value of the state of the environment for people's quality of life (Bugdol et al., 2022).

### Motivation for pro-environmental behaviour

Research shows that financial resources can be a strong motivator (but this factor only works where there are ways of objectively calculating the benefits of the pro-environmental measures). A huge role can be played by the national culture and the system of sanctions.

Thus, a change in pro-environmental behaviour should take into account the different business models and different cultural characteristics. There is a consensus that different incentives (e.g. the idea of paying for rubbish that can be used for further processes). It is the state that should support the circular economy.

The research also points to the need for increased employee participation, in the setting and implementation of environmental objectives. Below one of the statements:

"I will say this from the perspective of a concern where sustainability is managed strategically. I am also responsible for this strategy and have been developing it. We encourage employees from the highest level by incorporating green targets, or possibly KPIs in the ESG area into the MBO system rewarding managers who report directly to the board and who cascade these targets down to the next level of employees".

Difficulties are related to the processes for managing environmental objectives - in particular their degree of progress. To date, this problem has already been the subject of research and several research hypotheses have been formulated. Below are three sample hypotheses:

H.1. If we reward the achievement of environmental objectives and the system is not progressive, then there is a growing tendency to reduce their level.

This assumption is supported by publications by Griffin (2001), Slattery and Ganster (2002), Bakó and Kálec Simon (2017).

H.2. If difficult goals are not met, subsequent goals are set at a lower level, because fail-



ures are accompanied by negative emotions.

Such an assumption is justified by the theories described in the work of: Tosi et al. (1976), Slattery and Ganster (2002), Smiley et al. (2016).

H.3. If difficult environmental targets are imposed by owners, depending on their value systems and level of control, managers attempt to implement them or mask them.

This assumption is supported by the results of studies published by Freimann and Walther (2001), Heras Saizarbitoria, Molina Azorin, Dick (2011).

In management practice, it is therefore important to bear in mind the complexity of objectives and their motivational and economic dimensions. The research also shows that the implementation of sustainable development programmes can be determined by the size of the enterprise and the nature of its business. Below is one of the intervening contributions:

“...I tend to deal with small and medium-sized businesses on a daily basis. And it is well known, That these are companies that generally struggle to survive. They struggle when it comes to the customer, profit and so on. Where is this space and, where can you talk to them about this greenness. About this sustainability.”

### **Small and medium-sized enterprises and sustainable development**

While large players, e.g. from 2025 onwards, will be obliged to report on sustainable development, the motivation of small and medium-sized companies is an issue. Of course much depends here on the personal convictions of the entrepreneurs, the technological possibilities and the business models used.

According to the focus, a significant barrier to the implementation of green practices is confusing legislation and the inability to their proper identification by start-ups.

An important role in implementing sustainability solutions is to be played by principals. Particularly if they are large organisations where appropriate legal and normative regulations have been in place for many years. Such a tool for harmonising the measures taken is the second party audit.

The impact of the pandemic on the development of innovative products - which are in line with the ideas of the circular economy. Such activities are being undertaken by small and medium-sized entrepreneurs (the example of a bread manufacturer emerged in the discussion).

Such innovative solutions are verified through research conducted at universities.



## Economic growth and the idea of sustainable development

Currently, it is very difficult to achieve consistency between the objectives, which is why experts talk about the objectification of targets (currently only environmental targets are well measured). Limiting the extraction of certain raw materials is not able to reduce economic growth, but where there is a monopoly there is an increase in prices. And this is why a social theme emerged in the statements - people must be given the opportunity to improve their skills. There is also a need to return to tried and tested practices of shaping the social sphere of organisations (Poland has its own interesting historically grounded solutions in this area)<sup>1</sup>.

Experts draw attention to funding mechanisms for sustainable development:

“Today, regulations mean that if a company wants to raise finance for its development strategies, that is, for that growth, then if it manages sustainability, if it discloses how it manages ESG factors - then it can seek more favourable green or sustainable financing and there are a lot of instruments that are available. And at this point we can say that in the European Union it just simply pays off.”

Another pressing problem is the introduction of uniform regulations, especially in the area of CO<sub>2</sub> emissions trading. The lack of uniform regulations and other barriers to achieving climate goals result in many unethical acts and unethical behaviour, e.g. greenwashing, carbon leakage, offshoring - which aims to take advantage of differences in legal provisions concerning environmental legislation, lobbying - aimed at delaying the introduction of legitimate regulations, temporarily delaying the achievement of set environmental goals.

The lack of uniform regulations is the source of much unethical behaviour that harms the environment. Such behaviour is only exacerbated by the lack of a single market for trading emission prices. CO<sub>2</sub> emissions comprise only one-fifth of all gas emissions. Only a global, complete introduction of the same regulations will contribute to achieving the environmental goals (The great disrupter, 2020).

Attention was also drawn to the problem of other greenhouse gases - mainly the problem of emissions of methane emissions.

Economic growth should take place with the help of modern middle technologies (which is a big problem), for example, such as technologies for capturing and use of CO<sub>2</sub>. It is therefore necessary to invest in development research - which is carried out by universities, but of large economic players.<sup>1</sup>

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<sup>1</sup>The example of Łukasiewicz was given

## 5. Limitations of the study

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A number of limitations of our research should be pointed out.

These include:

Weaknesses arising from the research methods adopted. By means of a survey questionnaire only knowledge was investigated and not, for example, the views or actual behaviour of employees.

Secondly, the very content of the questions and their selection may have influenced the results obtained. Yes, as already written, some of the content was chosen to find out to some extent what knowledge the employees would need.

Thirdly, we mainly studied environmental knowledge.

Fourthly, environmental or energy management systems are mainly used in large companies (although they are taught in most universities). Perhaps for this reason, respondents were unable to correctly answer questions about the functioning of environmental management systems (including indicating the tasks carried out by management).

## 6. Conclusions of the study

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According to various sources, the number of people working in small and medium-sized companies can account for almost 70% of the total number of employees, but almost 1/3 of companies fail in the first year of operation (Problemy w firmie z sektora MŚP – jak sobie z nimi poradzić? - Blog Commplace.pl, odczyt 6.01.2022).

Of course, bankruptcy is due to various reasons. However, certainly - as the studies cited above, small and medium-sized companies with CSR in place are less likely to go bankrupt in the event of adverse economic developments (Metzker, et al., 2021). If we know what the latest trends in the market are, how our customers react, how they evaluate the activities we undertake, then the risk of bankruptcy can be lower. Hence the importance of knowledge of both the internal and external context of the organisation.

The report as intended - should regulate standards and rules of conduct, including good practices within the framework of its activities, in particular within the framework of cooperation with customers and partners. Research indicates that there are serious problems related to the knowledge of management tools that can serve sustainability.

This is particularly true in two important areas:

- the operation of pro-environmental management systems,
- behavioural aspects (the importance of pro-environmental behaviour).

Respondents have a low level of knowledge regarding pro-environmental behaviour. This raises therefore the question of whether they are able to shape these behaviours

in an appropriate way, which may be beneficial to themselves (also in economic terms).

There are also no continuous, effective processes for improving knowledge (new concepts such as secret sustainability are little known).

Concepts such as greenwashing, lobbying and emissions outsourcing are confused.

These concepts are often - it is to be assumed - encountered by managers of large firms. However, the familiarity of SME entrepreneurs and employees with these issues is equally important. If we are to form correct relationships with clients and other partners we should know how to protect ourselves against accusations of, for example, misrepresenting about their sustainability efforts.

Research has shown that there is little knowledge of how to practically apply equal system solutions (environmental, energy management systems). Focus confirmed much of the current research on factors shaping environmental awareness and climate change (in terms of relationships with nature, increased awareness after disasters, short-sightedness). There is a lack of knowledge on how key environmental aspects arise- and therefore training is needed on the process approach and operation of environmental management systems.

There is a need for incentive mechanisms developed on an individual basis taking into account the realities of each organisation. In addition to training, consideration should be given to participation of employees in the profits gained by the organisation from the implementation of environmental programmes. Greater employee participation in the process of management of environmental objectives is necessary.

## 7. Final conclusion

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Based on the feedback received, it can be concluded that knowledge of general environmental issues is at an average level (There is mainly a lack of knowledge of the processes of formation of hazardous environmental aspects). The specialised knowledge that people in managerial positions should have is at a low level (conclusion of the quantitative survey).

Based on the results of the research, the following competence development programmes are proposed:

Environmental and energy management systems in organisations.

Entrepreneurs must have a basic understanding of how the state of the environment can be improved through the various criteria in international standards. These basic systems can be supplemented at a later stage with a solution that uses sustainability standards.

Shaping pro-environmental behaviour.

By shaping such behaviour, small savings can be achieved. Of course, greater effects are achieved through green infrastructure. However, this is where ethical standards, appropriate behavioural patterns, quality of human interaction, etc., can play a role.

Pro-environmental people management.

Entrepreneurs should know how to improve core HR processes (hiring, adaptation, training, motivation, competence development) using green practices.

Environmental Corporate Social Responsibility

Entrepreneurs should know how to implement various environmental programmes so that they become part of a widely understood corporate social responsibility strategy.

It is important that they are able to integrate different business processes (e.g. that environmental management systems are part of CSR).

The circular economy

A good solution recommended for small and medium-sized companies is training, workshops on implementing lean green concepts. Knowledge on how to apply lean tools can be useful in reducing the use of natural resources.

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The report was prepared by Prof. dr hab. Marek Bugdol  
within the framework of the international project  
„Good practices in the field of education for sustainable development”.

This project has been funded with support from the European Union.  
This publication reflects solely the views of the author and the European Union is not  
responsible for any use of the information contained therein.

