

**REPORT ON RESEARCH ON COMPETENCES
OF MANAGEMENT STAFF IN THE SCOPE OF:
SUSTAINABLE DEVELOPMENT MANAGEMENT
IN A COMPANY IN
POLAND, IRELAND AND HUNGARY**



**Project: Academy of sustainable development - ESG management
KA220-VET – Cooperation partnerships in vocational education and training**

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CLIMATE CHANGE AND THE "GREEN" COMPETENCES OF EMPLOYEES

Climate change and the "green" competences of employees

In the 19th century, the discovery of the ice ages led scientists to the conclusion that climate could change on a global scale. Joseph Fourier, concluded that the atmosphere keeps our planet warmer than if it were exposed directly to space. In 1860, John Tyndall, a physicist, discovered that the key to understanding this phenomenon lay in the proportion of gases in the atmosphere, including carbon dioxide (What goes up ...,2019).

Svante Arrhenius, a chemist who was far ahead of his time in formulating various theories, pondered how human activity contributes to climate change. In the same century it became clear that carbon dioxide is a greenhouse gas - in 1850 Eunice Foote showed that the rate at which a sealed jar of air heats up in sunlight depends on the level of carbon dioxide in that air. Since then, various scientists have begun to wonder about the harmful effects of CO₂ on our environment (Computing climate change ...,2020).

The industrial revolution made the use of coal commonplace. In 1900, coal burning provided 2 billion tons of CO₂, in 1950 this number tripled and in 2019 it was 20 times higher. However, until the middle of the 20th century, politicians were not convinced that we were facing climate

catastrophe. Moreover, it was thought that all the carbon dioxide could be absorbed by the oceans. And it wasn't until 1950 that Roger Revelle, an American oceanographer, showed that this was not the case. It was he who convinced politicians to measure changes in the atmosphere every year. In 1965, after the publication of a report prepared by America's Presidential Science Advisory has made it clear that CO₂ levels are increasing every year (What goes up ..., 2019; Revelle and Suess, 1957).

However, much controversy and discussion was caused by Eigil's theory Friis-Christensen and Knud Lassen. Scientists tried to show that they came to a surprising conclusion - they believe that there is a correlation between the lengths of solar cycles and the temperature level in the northern hemisphere (Friis-Christensen and Lassen, 1991).

Później jednak okazało się, że wysoka korelacja między długością cyklu plam słonecznych a globalną temperaturą oraz hipoteza, że może to wyjaśniać obecne globalne ocieplenie, okazały się nie do utrzymania (Laut i Gundermann, 1998).

Various warnings formulated by scientists are becoming a fact. In 2018, two hurricanes appeared almost simultaneously - Hurricane Florence in America and Typhoon Manghut in East Asia. Scientists have linked these phenomena to rising greenhouse gas emissions, ocean warming

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and climate change. A measurement taken at a depth of 2,000 meters showed that ocean temperatures are rising, and various climate models indicate that this will cause perpetual storms (Thirsty planet..., 2029).

When writing about climate change, it should be emphasized that so far no so-called climate goals, and according to the latest report by the UN organization, temperatures have already increased by 1 ° C as a result of human activity, and the planet may exceed this threshold of 1.5 ° C as early as 2030. J. Worland , J. and J. Kluger stated that to maintain the target temperature, renewable energy will have to supply at least 70% of the world's electricity in 2050, while coal consumption will have to essentially disappear (Worland and Kluger, 2018). A new report, published in Seoul, shows that we are far from this goal and that even the commitments made in 2015 by some 190 countries to reduce greenhouse gas emissions will allow a temperature increase of about 3 ° C by 2100. What's more, a significant number of countries, cities and companies claim that they will change something only in 2050. However, the introduction of the so-called clean technologies will not occur until 2070 (Worland and Kluger, 2018).

According to various estimates, in a decade the number of people affected by hunger will exceed 840 million, or 9.8 percent. population. And this is just the beginning. Twenty-five million more children will

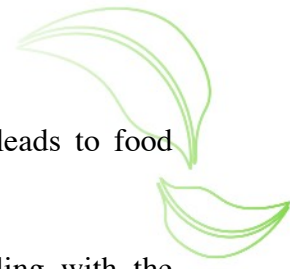
starve by the middle of this century as climate change leads to food shortages (Flack et al., 2021).

The climate change debate is complicated. We are dealing with the involvement and interests of companies that control the supply of fossil energy.

Climate change is expected to adversely affect agricultural yields and make it difficult for people to feed themselves. Climate change makes farming, including food production, more and more difficult. Many studies indicate that climate change contributes to malnutrition and even starvation.

It is reassuring that the prices of environmentally friendly technologies are falling. For example, solar panels now cost about 89% less than in 2010. In 2015, 24 countries (including China and Germany) pledged to double spending on research and development related to new pro-environmental technologies. Not only governments invest, but also companies themselves (e.g. IKEA, Microsoft , Unilever, as well as oil companies, e.g. ExxonMobil) (Sustainable investing ..., 2020).

Climate change prompts economists to look for different methods of reducing greenhouse gas emissions. Both the so-called carbon prices (ang. carbon price), as well as various taxes (ang. carbon taxes) (cf. The contentious and correct ...2020).



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However, pro-environmental projects are ethically questionable. Consider cobalt, which is used to make electric batteries. About 60% of the cobalt deposits are located in the Congo. In 2020, despite the closed mines, approx. people sought to mine cobalt despite having to share the profit with corrupt guards. It is not only greed or the desire to get a quick return on investment that drives the economy and causes social inequality. Investments in green projects may also be related to moral or ethical assessments. As you know, 70% of cobalt is mined in Congo, a country with a rich history of corruption. This sector exploits the poor population (Caneiro Olivier, et al., 2020).



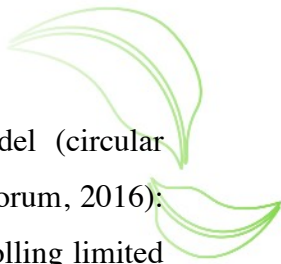
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Green deal

In 2019, the European Commission presented a new program called the European Green Deal. According to the main goal, by 2050 at the latest, the European Union should achieve climate neutrality, understood as reducing greenhouse gas emissions to net zero. Thereafter, the European Union will strive to achieve negative greenhouse gas emissions. According to the 2030 interim climate targets, the European Union and Member States will reduce greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels.

The main challenge is to develop effective tools for decarbonizing the economy of both EU Member States and its economic partners. According to A. Samborski, the goal of the adopted package is to reduce and then eliminate net greenhouse gas emissions. The following regulations and economic initiatives are of particular importance for the operation of energy companies: European Climate Law; European Industrial Strategy; Roadmap for a Circular Economy; Clean, Inexpensive and Safe Energy (Samborski, 2022).

One of the huge challenges is the introduction of circular economy principles.



According to D. Puciato - "The circular economy model (circular economy) is based on three principles (World Economic Forum, 2016): (1) protection and improvement of natural capital by controlling limited resources and balancing the flow of renewable resources (e.g. substitution energy from fossil fuels with renewable energy or using the maximum sustainable yield method to conserve fish stocks), (2) optimizing resource efficiency through products, components and materials that always work at the highest level of utility, both in the technical and biological cycle (e.g. extending product life cycles), (3) promoting the effectiveness of the system by identifying and internalizing external costs, i.e. water, air and soil pollution, noise, climate change and the related health damage to society" (Puciato, 2022, p. 20).

Poland has adopted various programs that are to serve, on the one hand, the implementation of the green deal and, on the other hand, to foster the creation of new jobs. In official documents published in the Ministry of Climate and Environment, he can read that the draft of Poland's Energy Policy until 2040 assumes that 300,000 jobs will be created in the coming decades. "jobs in areas related to RES, offshore wind energy, electromobility and others."¹ And further : "Achieving climate neutrality

¹ "Polish recipe for a new green deal" - Ministry of Climate and Environment - Gov.pl website (www.gov.pl) , read 27.07.2022

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requires, among others, large-scale introduction of hydrogen technology. According to Poland's hydrogen strategy (PWS) until 2030 with a perspective until 2040, hydrogen will become one of the key energy carriers. Its use in energy, heating, transport and industry will increase. It is also planned to so that by 2030 there will be 800-1000 domestically produced hydrogen buses on Polish roads,"² says the Green Hydrogen Report.

Achieving environmental goals is difficult, as recent history shows. In the previous period, not a single target regarding water quality (EU's 2000), air quality (2008 directive) or zero-emission buildings (Green targets) was achieved.

Scientific evidence argues that decarbonisation cannot be achieved by single instruments, such as carbon pricing alone. Extensive actions are needed to reduce the barriers associated with the implementation of the Green Deal assumptions.

T. Borys, M. Bugdol and D. Puciato identified as many as ten main barriers to achieving climate goals. These are:

- ➔ lack of a uniform policy of achieving goals by the largest issuers;

- ➔ low social awareness of threats;
- ➔ the dominance of a short-term perspective and the desire to obtain quick returns on investment;
- ➔ unethical conditions of investing in green ventures;
- ➔ economic volatility;
- ➔ anti-environmental measurement of economic growth;
- ➔ issues of inequality and climate justice;
- ➔ resource and technological constraints;
- ➔ political and institutional constraints;
- ➔ lack of uniform legal regulations and market conditions (Borys, Bugdol, Puciato, 2022).

In order to understand how difficult it is to achieve the assumptions of the green deal, it is enough to quote some information about one selected barrier. For example, let's look at the CO2 emissions trading market. This emission covers only 1/5 of the emission of all gases. Only the introduction of the same legal regulations will contribute to the achievement of environmental objectives. Emission prices (price for carbon) are growing at a tremendous pace, but this market does not cover all areas of our lives. For example, maritime transport is to be

² Report "Green hydrogen from RES in Poland" - Ministry of Climate and Environment - Gov.pl website (www.gov.pl) , read 27.07.2022

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included in the program in a few years. Road transport and emissions from buildings may be covered by a separate scheme (The great disrupter ...,2020).

The current CO2 emissions trading system is attractive to speculators, to large market players. The trading system for these permits may favor those who are the largest, with the most financial resources. In February 2021, the emissions trading market was launched in China. However, it did not cover all industries. Companies only have to pay 20% if their emissions exceed the set standards. The maximum fines are about 4.5 thousand. dollars (Cleaning up ...,2021).

According to experts, we currently face four problems:

- ➔ adapting infrastructure and supply chains to changing weather conditions.
- ➔ increasing environmental fees, mainly for greenhouse gas emissions.
- ➔ increasing risk of litigation.
- ➔ the need to introduce technologies, machines that do not harm the environment (green machines) (Bugdol, Puciato, 2022; Special report..., 2020).



DEFINITIONS OF COMPETENCIES

Definitions of competencies

Before describing the Green employee competencies It is worth answering the question of what competencies are. Of course, in practice they are differently understood, defined and studied. Competences - according to the International Organization for Standardization, it is "the ability to apply knowledge and skills in order to achieve the intended results" (PN-EN ISO 9001:2015, Quality management systems - Requirements, PKN, Warsaw 2016, pnk 7.2).

The most popular standard ISO 9001 lists the following elements of competence: education, training, experience, skills. She recommends:

- ➔ determining the competences of personnel affecting quality (i.e. all entities affecting quality),
- ➔ assessing the effectiveness of the activities carried out (e.g. whether the definition of competences is in line with the needs, development plans, or is it used to achieve goals),
- ➔ maintaining records (including defining competencies),
- ➔ providing training or other activities aimed at ensuring appropriate competences (these other activities are, for example, rotation, self-education, internship in another company, etc.) (cf. PN-EN ISO 9001:2015, Quality

management systems - Requirements, PKN, Warsaw 2016, item 7.1.2).

Of course, in various publications we will find many different classifications of competences and components. Competencies have many categories. For example, T. Oleksyn (2006) lists: experience, skills, creativity, innovation, responsibility, entrepreneurship, professionalism, availability, ability to cooperate, communication competences, assertiveness, effectiveness and efficiency.

It is important to remember about the correct assessment of competencies. Not always the competencies that are useful in the current position will be useful in higher positions - as a rule, not every good salesman will be a good sales manager. "Excellent sales results increase the probability of an employee's promotion, but they are associated with declines in sales among the new manager's subordinates" (Fitzgerald, 2018, p. 4).

Another problem is the extent to which people employed in managerial positions are willing to share knowledge. Already F and L. Gilbreht proposed a three-level system of promotions - everyone does their job, prepares for promotion by one level and trains his successor.

It is recommended that competencies be determined at several stages: during the hiring process, at the end of the adaptation phase, after a

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prolonged absence, and periodically while on the job. Even a comprehensive competency development program can be drawn up.

Determining competencies applies not only to employees (people working on the basis of an employment contract), but also to service providers (people employed on the basis of civil contracts or providing services as part of a sole proprietorship). When there is an environmental emergency, it doesn't matter who our employee is. Everyone needs to know what to do in this situation.

In various studies, the term "green" competences is used more and more often. According to Ł. Kozar , such competences are related to how in practice employees use their knowledge and skills in the application of pro -environmental solutions in the company. He lists green behavioral competences - "soft" (e.g. creative thinking and ethical behavior of an environmental nature) and functional - "hard" (e.g. economical use of raw materials, waste segregation, the ability to drive energy-efficiently) (Kozar , 2017).



SELECTED EXAMPLES OF GREEN COMPETITION

Selected examples of green competition

Based on the cited research on climate change, it can be concluded that modern organizations increasingly need to take into account various types of risk (including climate change-related risk). Therefore, specialists are needed who will have competence in risk management, but they must also be equipped with knowledge of technology, the basics of environmental protection, physics and chemistry.

Mathematicians with skills in creating various models and scenarios will be useful - in a special way.

The change in the profile of education should concern specialists in plant production. There is no doubt that new cultivation technologies are needed (e.g. to an even greater extent the cultivation of crops resistant to drought and high temperatures). Here, knowledge of quality chains and process engineering is needed.

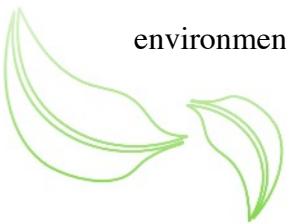
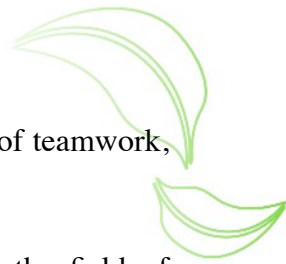
Educating specialists in management must be oriented towards interdisciplinarity. Economic and managerial knowledge alone is absolutely insufficient. A good specialist in quality or process management must have extensive technical knowledge. Without knowledge of technological processes, process improvement is unlikely - especially when we think about reducing the negative impact on the environment.

Soft skills will still be important - because the importance of teamwork, grouping specialists from various fields, is growing.

There is no doubt that the competence of specialists in the field of people management cannot be limited to the knowledge of recruitment processes, motivation, training and evaluation (if it is justified). Such people must have knowledge in the field of psychology, sociology, and especially knowledge of ecological behavior . They need to know how to diagnose and shape these behaviors.

Based on the data published in the Climate Report (The Economist), it can be assumed that managerial competences are needed regarding:

- ➔ environmental risk assessment,
- ➔ legal requirements regarding the environment and the functioning of companies,
- ➔ assessing how customer preferences change,
- ➔ green supply chain management.



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Risk assessment has always been an important element of competence, not only in the circular economy. In this case, however, the point is for managers to be aware of climate threats. As it is well known, changing climatic conditions are the cause of floods, heatwaves and forest fires.

In 1997, no one took into account what happened in southern Poland. Significant listed companies followed the water. For example, in Zakłady Elektrod Węglowe SA large graphitization furnaces exploded at that time. The water flooded the machine park, destroyed the collected raw materials (including precious anthracite) and the entire production. The losses were enormous. They included technological and social potential. Only in fixed assets losses were estimated at PLN 24.5 million (Bugdol, 2010).

Climate disasters disrupt production, supply chains, make it impossible to ensure what we hype call business continuity. Therefore, when we talk about risk management, we mean the process of making decisions aimed at limiting it, which is based on the competencies of the management staff. It can be based on data analysis as well as on your own intuition. Values and response to risk are important in this process (Radu and Lungu , 2017).

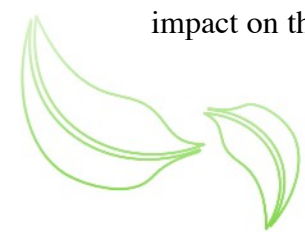
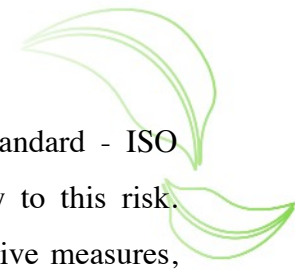
Until the 1960s, many organizations did not care about the negative impact on the environment. There was no mention of environmental risk

at that time. Even in the environmental management standard - ISO 14001 of 2004, there was no criterion referring directly to this risk. However, the standard indicated the need to take preventive measures, and organizations - through operational control and emergency preparedness and response procedures - significantly reduced environmental risk (Del Brio et al., 2001).

The very concept of environmental risk is very broad and should be viewed from a broader perspective, i.e. causes and consequences. This risk is strongly related to: financial risk (lack of appropriate security measures leads to increased penalties and costs), image risk (an organization perceived as a polluter), personal risk (lack of appropriate measures leads to loss of life or health, and dangerous, anti-environmental behavior is source of many other dangers).

The second important task is the identification of legal requirements. It is important for managers to be aware that their activities and development plans must comply with all environmental regulations (and there are more and more of them).

Therefore, it is necessary to ensure that future managers have the competence to identify and interpret legal requirements and that they are able to quickly implement them.



SELECTED EXAMPLES OF GREEN COMPETITION

There is no business without customers, but while companies try to research the level of customer satisfaction, they do not always care to know their needs (it happens that these needs are created in a very unethical way). The importance of both ecological products is increasing. Customers want not only to buy what is safe for the environment, but also want to be convinced that these products have been produced in an ethical way that does not have a negative impact on the environment. Our environmental awareness is growing and consumer behavior is changing (cf. Suki, 2013).

At the same time, information appears in various periodicals that in many countries there is shame before buying or consuming products that are unnecessary.

That is why competences related to marketing research methods and techniques (especially with regard to "green marketing") are so important (cf. Haq et al., 2021).

In practice, there are many ways to obtain data. Their source may be the results of market research (conducted by the organization itself or other entities), records from acquisition trips and trips to international fairs, customer satisfaction assessment reports (especially if they were carried out directly at the customer - user of various products), research reports carried out by economic and trade intelligence agencies, scientific

articles, etc. Today, the problem is the excess of knowledge, unverified information - hence the need to educate specialists dealing with data analysis and processing.

One of the competencies that is very much needed today is the ability to manage the green supply chain. Various publications emphasize that companies are increasingly paying attention to recycling, reuse and reproduction, changing their production and distribution strategies in order to use the natural resources they obtain from the environment more efficiently. As a result of growing concerns about environmental issues in recent years, there has been a significant increase in interest in environmental social responsibility and green supply chain management practices. This management plays a key role in helping companies gain a competitive advantage and improve their environmental image. Effective practices can help organizations reduce cash flow time, minimize risk, increase profits, and ensure revenue predictability (cf. e.g. Yangınlar, et al., 2022).

Behavior will play a very important role pro-environmental .

Environmental behavior "includes minimizing the use of natural resources as well as harmful and toxic substances, reducing waste generation and energy consumption. These are conscious actions aimed

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at reducing the negative impact of people on the natural environment” (Kollmuss and Agyeman, 2002, p.240).

Environmental behavior has various manifestations. For example, when it comes to residents, these manifestations may be: recycling, saving water in the household, not littering, support for environmental associations.

As far as employees are concerned, such behavior is manifested by: care for saving water and electricity, proposing new technical solutions that are environmentally friendly, educating other employees

In the case of the managerial staff, a very important task is to set an example for others with their own behavior.

“A new director has been hired in one of the companies belonging to the chemical industry. Contrary to expectations, there were no major changes in the management processes in the organization. The new director was a calm, composed person, he did not shout, he did not punish, he collected cigarette butts and plastic bottles himself, he himself threw garbage into the dumpster and segregated various types of waste. When employees saw how their new director was behaving, they began to feel ashamed. Gradually, they began to change their habits. After a few weeks, there was no garbage left in their organization” (Bugdol, Puciato 2022, p.20)

There are many factors influencing pro-environmental behavior. The following factors are important: values, personal and group norms and awareness of consequences, internal motivation, beliefs of individuals, faith, religion, personal relationship with nature, health awareness, sense of guilt, way of thinking and acting characterized by inconsistency of applied moral principles, knowledge, public opinion, organizational climate in the workplace (cf. Bugdol, Szklarczyk, 2022).

Some companies use quite controversial methods of shaping behavior pro-environmental. For example, clothing company Esprit de Corp. from San Francisco used surveillance records showing how recyclable materials end up in bins under the cover of night. The broadcast of a film showing inappropriate behavior of employees causes them embarrassment, anger and guilt (One way to spread ..., 2008).

However, it is better to teach people, support them, show positive examples of environmentally friendly behavior, make people realize that they are part of what we call the environment.

Another important competence is the efficient management of various pro-environmental systems and concepts.

Companies can apply for certification of environmental or energy management systems, but they can also significantly expand their own environmental requirements by adopting more holistic solutions such as

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Total Quality Environmental Management (TQEM). This concept requires leaders to consider environmental aspects in every process and in every area of the company's operations. They must have clear goals, a road map and a clear model for achieving excellence in environmental management (Jayathirtha , 2001).

The main objective of TQEM is to reduce the negative impact of the organization (its activities) on the environment. This goal is achieved by:

- ➔ reduction of waste with simultaneous continuous improvement of the organization in this area, which leads to cost reduction,
- ➔ reducing the demand for resources,
- ➔ elimination of impurities,
- ➔ designing products that have a minimal impact on the environment at every stage of their existence,
- ➔ control of the environmental impact of new products,
- ➔ behavior promotion pro-environmental initiatives among employees and society (Bugdol, Puciato, 2021).

A modern manager must have knowledge of sociology, psychology, economics, but also technology. It is very important to look at the organization holistically, to think systemically - that is, to know how

changes in one system (e.g. in the organizational structure) affect other systems (e.g. people's behavior). It is important to think in processes, not functions. Without such knowledge and skills, it is impossible to improve various technological and management processes.

As far as environmental management systems are concerned, they typically require employees, but especially managers, to have the following competencies:

- ➔ formulating environmental policy,
- ➔ managing environmental goals (combining these goals with the strategy),
- ➔ integrating the requirements of the environmental management system with other management systems
- ➔ social communication (it is important to inform employees about the level of achievement of objectives),
- ➔ analyzing processes in terms of risk, opportunities for improvement, identifying environmental aspects,
- ➔ supporting employees who have an impact on the effectiveness of the environmental management system,
- ➔ promoting and supporting continuous improvement (e.g. implementing employee suggestion schemes) (cf. PN-EN ISO

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14001: 2015. Environmental management systems. Requirements and application guidelines, pnk.5).

Every employee, regardless of their function, must:

- ➔ know the environmental aspects and the sources of their formation,
- ➔ know the rules of conduct in the event of accidents and environmental disasters,
- ➔ be able to interpret data on environmental effects and process records,
- ➔ know the environmental goals and the factors that affect their implementation,
- ➔ have assigned responsibilities, but also powers,
- ➔ know what may be the consequences of departing from the accepted environmental standards,
- ➔ be familiar with existing technologies to the extent that it is possible to report corrective and preventive actions.

In achieving goals and setting them, as well as changing them, the capabilities and competences of employees should be taken into account. Of course, the ideal would be for these goals to be set on a participatory basis, so that they would be fully accepted. In

management, employee participation in goal setting is assumed to lead to a higher level of effectiveness (Slattery & Ganster , 2002).

Whether we are dealing with environmental management systems or energy management systems, an important skill that managers must have is to support others. Speaking of support, I mean not only appropriate organizational forms, i.e., for example, procedures specifying how ideas are submitted and considered, but support consisting in the transfer of relevant knowledge (cf. e.g. Afshar Jahanshahi et al., 2022).

Therefore, we should constantly have to deal with the need to employ specialists in the field of continuing education.

Management is not about supervising, but about respecting other people, supporting them in performing various tasks and social roles.

All competencies related to human resource management will be important (Bugdol and Stańczyk, 2021).

Green HRM refers to a set of practices that organizations adopt to improve environmental performance (e.g. improving environmental aspects, improving awareness and behavior pro-environmental). It has become a key business strategy for many organizations as HR practitioners can play a key role in improving the environment (Hameed , et al. 2022).

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It is generally accepted that this green management should help employees meet their environmental goals.

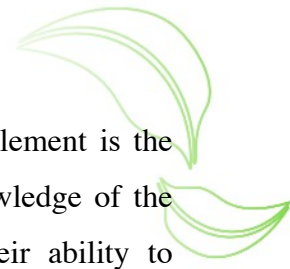
Green management can, under certain conditions:

- ➔ play an important role in the process of building awareness among employees,
- ➔ foster civic behavior in the workplace (i.e. voluntary, above-normative),
- ➔ ensure a competitive advantage on the labor market,
- ➔ shape a positive image of the company,
- ➔ contribute to the increase in economic and ecological efficiency (Bugdol and Stańczyk, 2021).

Within the management practice, the following are most often mentioned: green recruitment and selection, green motivation, adaptation, green training and development, green management and performance evaluation, green remuneration and motivation.

Therefore, the management staff should have competencies related to people management, which are conducive to the implementation of environmental goals, ensure less consumption of resources, and guarantee the delivery of safe and ecological products to the market.

Already at the stage of hiring employees, an important element is the assessment of their competences (for example, their knowledge of the functioning of environmental management systems), their ability to analyze processes, improve operations, conduct management reviews or environmental audits.



SELECTED EXAMPLES OF GREEN COMPETITION

During the adaptation, the employee should:

- ➔ have the opportunity to get to know the entire organization, undergo training on environmental management,
- ➔ familiarize yourself with environmental standards and requirements,
- ➔ participate - as an observer - in at least one environmental audit,
- ➔ become acquainted with all environmental aspects and with those places of processes where they occur,
- ➔ familiarize yourself with procedures for dealing with emergencies and environmentally hazardous situations.


As for the training - it should be remembered that their result does not always translate into practical actions. Trainings are not able to change our certain fixed behaviors, but they are one of the elements of shaping pro-environmental awareness (cf. eg Taylor et al., 2005).

Motivation is not only respect and a congratulatory letter, but also ensuring employees' participation in setting goals, and guaranteeing them a share in the generated financial benefits (for example, due to the reduction of the number of raw materials, smaller fines or environmental fees).

A very controversial idea is to reward employees, especially managers, for achieving environmental goals. Remuneration for the implementation of environmental goals may be the reason for limiting the process of minimizing the negative impact on the environment (especially if this system is not progressive and the remuneration applies only to representatives of the top management) (Bugdol and Wontorczyk, 2021).

Examples of suggested areas of competence are included in the table below.

SELECTED EXAMPLES OF GREEN COMPETITION



Professionals	Managers	Employees - everyone
Environmental risk management	Identification and interpretation of legal requirements	Knowledge of policy, environmental goals, environmental aspects and their sources
Implementation of various green technologies, programs (including infrastructure, marketing and others)	Knowledge of energy, environment, EMAS, TQEM management systems	Knowledge of the consequences of departing from the accepted environmental standards and requirements

METHODOLOGICAL ASSUMPTIONS

Methodological assumptions

As part of the project, empirical research was conducted, in which representatives of micro, small and medium-sized enterprises (MSME) from Poland, Hungary and Ireland were invited to participate. They concerned the implementation of sustainable development assumptions and elements included in the European strategy known as the European Green Deal.

The empirical research included in this report was conducted on the basis of an Internet survey questionnaire carried out using the CAWI (Computer-Assisted Web Interview) technique. The research sample included 100 people in Poland, 102 people in Hungary and 102 people in Ireland. The research was supplemented and detailed by a series of individual in-depth interviews (IDI) with representatives of MSME management. They covered 10 people in Poland, 13 people in Hungary and 9 people in Ireland.

Data on CAWI survey participants is presented below.

Poland	Sex	Women	53
		Men	47
	Age	18 – 30 years	29
		31 – 50 years	52
		Over 50 years old	19
Hungary	Sex	Women	43,1
		Men	56,9
	Age	18 – 30 years	12,7
		31 – 50 years	58,8
		Over 50 years old	28,4
Ireland	Sex	Women	51
		Men	49
	Age	18 – 30 years	32,4
		31 – 50 years	50
		Over 50 years old	17,6

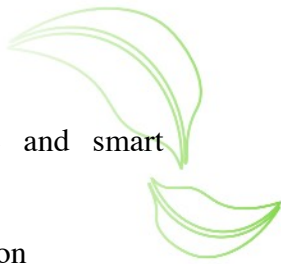
METHODOLOGICAL ASSUMPTIONS

The survey questionnaire and IDI are presented below.

CAWI survey questionnaire

1. Please rate your level of knowledge about sustainable development, its goals and principles on a scale of 1 to 5, where 1 means no information and 5 means full knowledge
2. Please rate the truth of the following sentences (the rating should be on a scale of 1 to 5, where 1 means I completely disagree and 5 means I completely agree)
 - a. Sustainable development is only a scientific concept, impossible to implement in practice
 - b. Sustainable development is an idea that can only be implemented in the future
 - c. Sustainable development is important only in activities related to environmental protection
 - d. Sustainable development is an element that must now be taken into account when planning all human activities
 - e. The implementation of the principles of sustainable development is associated with costs
 - f. The costs of implementing the principles of sustainable development in business are necessary to bear
 - g. The costs of implementing the principles of sustainable development in business are in fact an investment that will bring multi-faceted profits (economic, social, environmental) in the long run.
3. Please rate on a scale of 1 to 5, where 1 means I completely disagree and 5 means I completely agree, to what extent are the following ideas taken into account in the management practice of your organization/company?
 - a. Sustainable management of resources (e.g. energy, fuels, water, etc.)
 - b. Using renewable energy sources
 - c. Reducing your carbon footprint
 - d. Reducing the water footprint
 - e. Shortening the supply chain
 - f. The idea of fair trade
 - g. Reducing the use of fossil fuels
 - h. Use of raw materials/recycled products
 - i. Reducing paper consumption (e.g. electronic document circulation)
 - j. Running a circular economy
 - k. Gender equality
 - l. Innovation

METHODOLOGICAL ASSUMPTIONS

- 
- m. Constantly gaining knowledge and competences
 - n. Protection of nature and the environment
 - o. Cooperation between organizations/business partners for sustainable development
16. Please choose five of the above elements - the most important in your opinion - and then arrange them in the order of importance / urgency for their implementation in your organization / company.
17. Please rate on a scale of 1 to 5, where 1 means I completely disagree and 5 means I completely agree, how important are the following areas of the European Green Deal in your opinion.
- a. More ambitious EU climate targets for 2030 and 2050
 - b. Providing clean, affordable and secure energy
 - c. Mobilizing the industry sector for a clean and circular economy
 - d. Building and renovating in an energy- and resource-saving way
 - e. Zero pollution for a non-toxic environment
 - f. Protection and restoration of ecosystems and biodiversity
 - g. From farm to fork: a fair, healthy and environmentally friendly food system
 - h. Accelerating the transition to sustainable and smart mobility
 - i. Supporting research and stimulating innovation
 - j. Empowering citizens to move towards a climate-neutral and sustainable Europe
 - k. International cooperation
12. Please assess to what extent the existing structure of your organization/company reflects taking action within the areas included in the European Green Deal. Please use a scale from 1 to 5, where 1 means no at all and 5 means full consideration of the EML assumptions.
13. Please assess to what extent the current competencies of the staff of your organization/company correspond to the areas in which actions are taken regarding the areas included in the European Green Deal.
14. Please assign a rank to individual competencies depending on their importance in implementing the principles of sustainable development in your organization/company
- a. Work ethics
 - b. Interpersonal communication
 - c. Availability

METHODOLOGICAL ASSUMPTIONS

- d. Dealing with conflict situations
- e. Motivating yourself and others
- f. Emotional bond with the organization
- g. Professional integration
- h. Ability to cooperate with the environment
- i. Ability to adapt to changing conditions
- j. Raising qualifications
- k. Creativity
- l. Analytical skills
- m. Flexibility, adaptability to the prevailing conditions, the ability to set priorities
- n. Interpersonal skills

Open questions - for individual interviews (IDI)

1. In 2015, the UN General Assembly adopted the 2030 Agenda for Sustainable Development, containing 17 Sustainable Development Goals. Belong to them:
 - a. End poverty in all its forms in the world
 - b. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture
 - c. Ensure healthy lives and promote prosperity for all people of all ages
 - d. Ensure quality education for all and promote lifelong learning
 - e. Achieve gender equality and empower women and girls
 - f. Ensure access to water and sanitation for all through the sustainable management of water resources
 - g. Provide all people with access to sources of stable, sustainable and modern energy at an affordable price
 - h. Promote stable, sustainable and inclusive economic growth, full and productive employment and work for all
 - i. Build sustainable infrastructure, promote sustainable industrialization and foster innovation
 - j. Reduce inequalities within and between countries

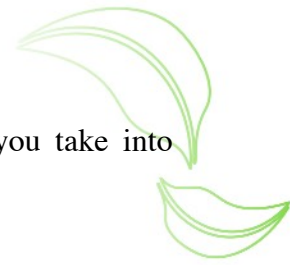
METHODOLOGICAL ASSUMPTIONS

- k. Make cities and human settlements safe, stable, sustainable and inclusive
- l. Ensure patterns of sustainable consumption and production
- m. Take urgent action to combat climate change and its effects
- n. Protect oceans, seas and marine resources and use them sustainably
- o. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainable management of forests, combat desertification, halt and reverse land degradation and halt biodiversity loss
- p. Promote peaceful and inclusive societies, ensure access to justice for all and build effective, accountable and inclusive institutions at all levels
- q. Strengthen the means of implementation and reinvigorate the global partnership for sustainable development.

Please assign each of these objectives a rank in terms of its importance on a global scale, on a scale of 1 to 5, where 1 means the highest importance of a given issue.

18. Which of the above goals do you consider important from the perspective of your organization/company?

19. Do any of them - and if so, which ones - do you take into account when:
 - a. creating an organization/company strategy
 - b. ongoing action planning
 - c. current cost planning
 - d. staffing decisions
 - e. making decisions in the scope of improving own competences
 - f. making decisions regarding the improvement of staff qualifications
4. The current development strategy of the European Union until 2050 is the European Green Deal. Its task is to transform the European Union into a climate-neutral area. This strategy covers the following areas:
 - a. More ambitious EU climate targets for 2030 and 2050
 - b. Providing clean, affordable and secure energy
 - c. Mobilizing the industry sector for a clean and circular economy
 - d. Building and renovating in an energy- and resource-saving way
 - e. Zero pollution for a non-toxic environment
 - f. Protection and restoration of ecosystems and biodiversity



METHODOLOGICAL ASSUMPTIONS

- g. From farm to fork: a fair, healthy and environmentally friendly food system
 - h. Accelerating the transition to sustainable and smart mobility
 - i. Supporting research and stimulating innovation
 - j. Empowering citizens to move towards a climate-neutral and sustainable Europe
 - k. International cooperation
5. Which of the above areas do you consider to be the most important from the perspective of your organization/company?
 6. In the above areas, the European Union will act systemically. Which of them can have the greatest impact on the functioning of your organization/company? Will it be a positive or negative impact and why?
 7. Please assess to what extent the existing structure of your organization/company reflects taking action within the areas included in the European Green Deal. Please use a scale from 1 to 5, where 1 means no at all and 5 means full consideration of the EML assumptions.
 8. In your opinion, what is the level of awareness of the employees of your organization/company regarding the

existence of the Sustainable Development Goals and the areas of the European Green Deal?

9. Please assess in a narrative form to what extent the current competences of the staff of your organization/company correspond to the areas in which activities are undertaken regarding the areas included in the European Green Deal. Please list the three key competencies present in employees and the three most important ones that are missing so far.

ANALYSIS OF THE ANSWERS PROVIDED

Analysis of the answers provided

The first question addressed to the respondents concerned their assessment of the beliefs about sustainable development that are common in the social consciousness. These sentences are included below along with an analysis of the answers given by the respondents.

1. Sustainable development is only a scientific concept, impossible to implement in practice

41% of the respondents stated that they did not agree with such a thesis, including 27% strongly negating such a thesis. 32% consider sustainable development to be an impossible scientific thesis, with only 12% completely agreeing with the sentence proposed in the question. It is puzzling, however, that nearly 1/3 of the people participating in the research were not able to clearly indicate their attitude to the thesis put forward. On the one hand, this suggests a low level of knowledge about sustainable development, and on the other hand, it indicates that sustainable development is not an issue that would engage the respondents mentally.

Hungarian respondents showed a similar approach. As many as 62% of the respondents disagreed with the thesis put forward in the question, only every tenth of the respondents considered this thesis to be true.

In the case of respondents from Ireland, the situation is clear: as many as 94% of respondents disagreed with the assumption included in the question.

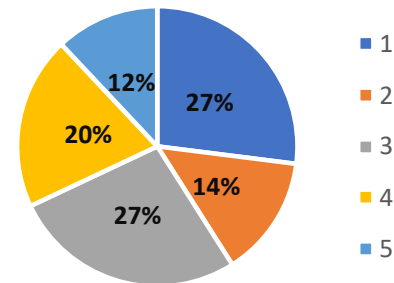


Fig. 1

Answers given by respondents in Poland

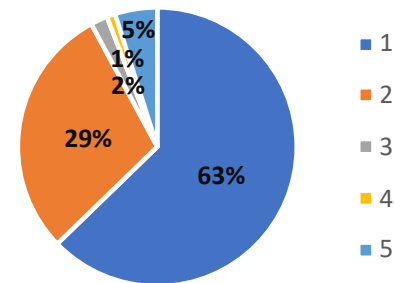


Fig. 2

Answers given by respondents in Ireland

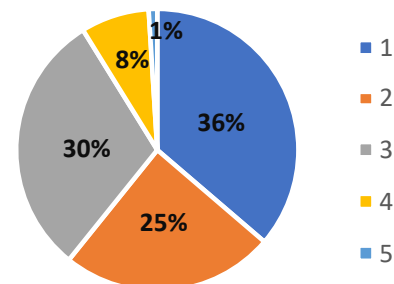


Fig. 3

Answers given by respondents in Hungary

ANALYSIS OF THE ANSWERS PROVIDED

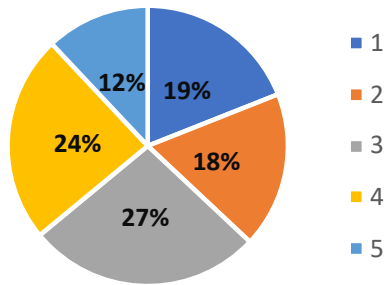


Fig. 4
Answers given
by respondents in Poland

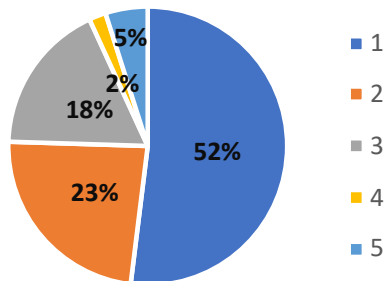


Fig. 5
Answers given by
respondents in Ireland

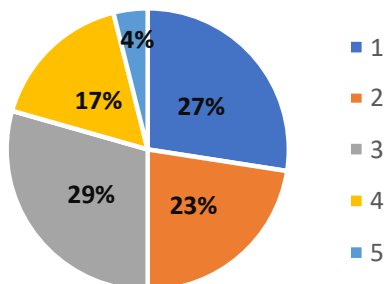


Fig. 6
Answers given by
respondents in Hungary

2. Sustainable development is an idea that can only be implemented in the future.

When asked about the time perspective for the implementation of the idea of sustainable development, the respondents were divided almost in half: 38% said that they disagree with the assumption that the idea of sustainable development can be implemented only in the future, while 36% are of the opinion that its implementation is a matter of today. Again, as in the case of the first thesis, the percentage of undecided respondents reached 27%, which seems to confirm the conclusion formulated above.

Most of the Hungarian respondents disagree with the postponement of the implementation of the idea of sustainable development. 51% of them did not agree with the assumption included in the question.

77% of Irish respondents opposed the assumption that the idea of sustainable development is possible only in the future. The thesis stated in the question was approved by only 7% of the respondents.

ANALYSIS OF THE ANSWERS PROVIDED

3. Sustainable development is important only in activities related to environmental protection

A significant range of answers is also visible when asked about the link between sustainable development and environmental protection. 38% of respondents do not agree with the statement that sustainable development is important only in activities related to environmental protection, while nearly 1/3 of respondents clearly see the relationship posed in the thesis. 30% are undecided.

According to the Hungarian participants of the study, sustainable development is important in a wide range of activities, not only in relation to environmental protection. 81% of respondents were against its narrow classification included in the question.

Linking sustainable development only to environmental protection is not the right approach in the eyes of Irish respondents. This approach was opposed by 66% of respondents, moreover, 51% strongly opposed it. What is noteworthy, however, is the higher percentage of people with an unspecified view on this topic than in the case of other questions - such an answer was given by every fifth respondent.

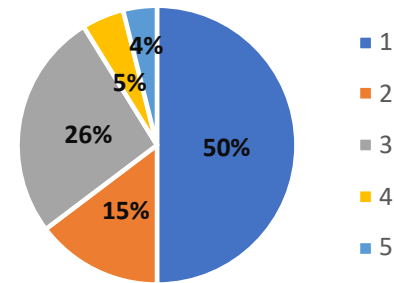


Fig. 7

Answers given by respondents in Poland

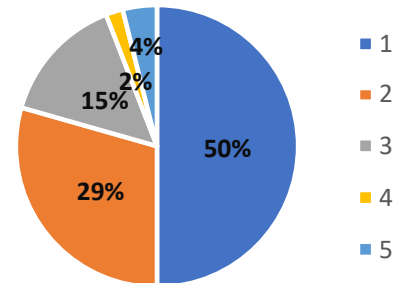


Fig. 8

Answers given by respondents in Ireland

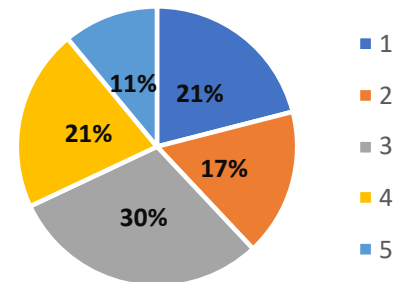


Fig. 9

Answers given by respondents in Hungary



ANALYSIS OF THE ANSWERS PROVIDED

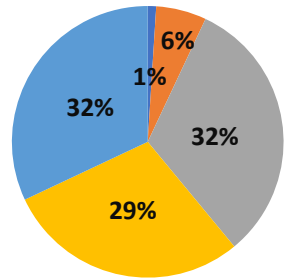


Fig. 10
Answers given
by respondents in Poland

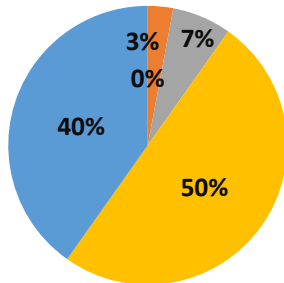


Fig. 11
Answers given by
respondents in Ireland

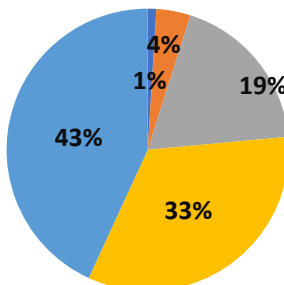


Fig. 12
Answers given by
respondents in Hungary

4. Sustainable development is an element that must now be taken into account when planning all human activities

The voices of the respondents asked to assess the assumption that sustainable development is an element that must already be taken into account when planning all human activities are clearly different. Over 60% of the survey participants agree with this thesis. Only 7% hold the opposite opinion, which clearly indicates the widespread belief that taking into account the principles of sustainable development in the planning process has now become a necessity. It should be noted, however, that again the attitude of nearly 1/3 of the respondents does not show commitment to the analysed issue.

In the case of Hungarian respondents, 78% of respondents agreed with the thesis. The percentage of undecided answers was definitely lower – it amounted to only 19%.

In the Irish part of the study, the result obtained was even more unambiguous - 92% of respondents agreed with the assumption presented in the question.

ANALYSIS OF THE ANSWERS PROVIDED

5. The implementation of the principles of sustainable development is associated with costs

Respondents were definitely more explicit in terms of the economic result of implementing the principles of sustainable development. The vast majority of respondents were of the opinion that this process is related to costs - this was the opinion of over 60% of respondents, with most of them strongly agreeing with the thesis posed in the question. Just like in the case of the other questions, about 30% of the respondents did not have a precise opinion on this issue.

Again, a similar distribution of answers was revealed in the Hungarian studies. Here, too, 60% of the respondents believed that this process is related to costs, with the share of answers "I agree" and "I strongly agree" being different - in contrast to the Polish respondents, the share of answers definitely in favor of the thesis was lower (22 to 38%).

A small difference between the answers "agree" and "strongly agree" appeared in the Irish surveys - it was 6% in favor of a stronger answer. However, the total percentage of such answers was again much higher than in Poland and Hungary and reached the value of 90.

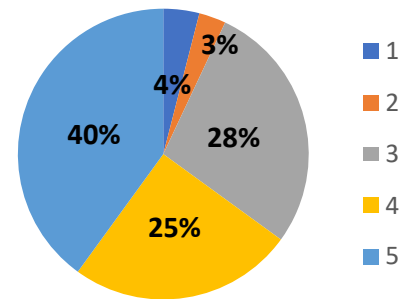


Fig. 13

Answers given
by respondents in Poland

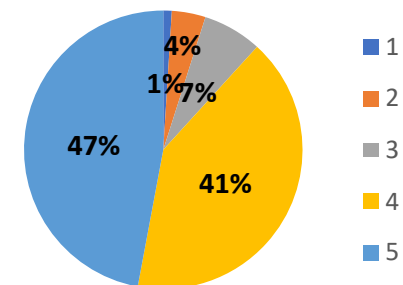


Fig. 14

Answers given by
respondents in Ireland

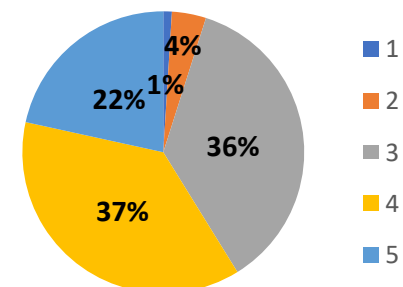


Fig. 15

Answers given by
respondents in Hungary



ANALYSIS OF THE ANSWERS PROVIDED

6. The costs of implementing the principles of sustainable development in business are necessary to bear

Awareness of the fact that the implementation of the principles of sustainable development is associated with incurring costs does not affect the negative assessment of this process. In the next question, the vast majority of respondents considered that these costs are necessary to incur. Such an opinion was shared by about 60% of the respondents, but this time they were not so fundamental in their judgments - a slight advantage was on the side of those who agreed with the thesis posed in the question, at the expense of those who strongly agreed with this thesis. It is not difficult to guess the significance of this result: although the need to bear the costs of sustainable development in business is obvious, however - which should be considered a completely normal reaction - most entrepreneurs prefer to approach this issue with some caution.

The need to incur the costs of implementing the principles of sustainable development is also visible among Hungarian respondents - over 50% of respondents answered this question. In this case, however, the share of undecided people was also significant - 41%.

90% of Irish respondents agreed with the thesis included in the question. The number of negative answers did not exceed the statistical error in this case.

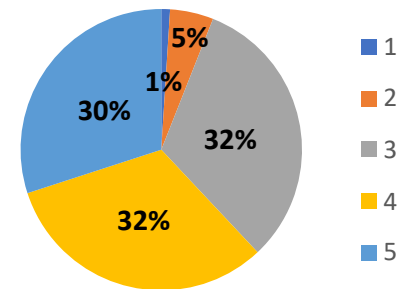


Fig. 16

Answers given by respondents in Poland

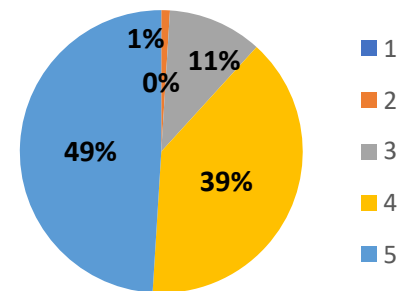


Fig. 17

Answers given by respondents in Ireland

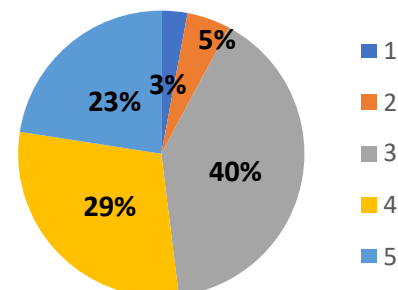


Fig. 18

Answers given by respondents in Hungary

ANALYSIS OF THE ANSWERS PROVIDED

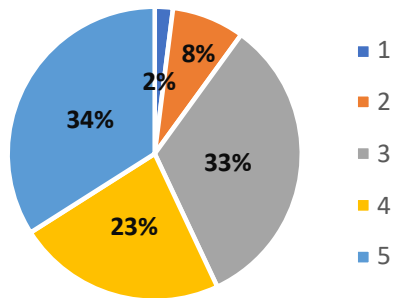


Fig. 19
Answers given
by respondents in Poland

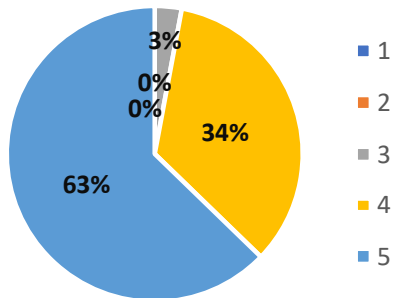


Fig. 20
Answers given by
respondents in Ireland

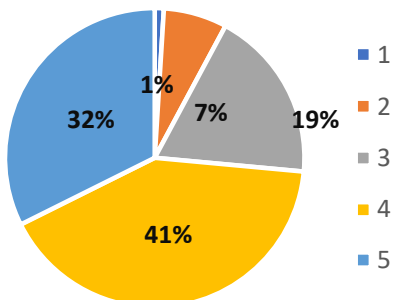


Fig. 21
Answers given by
respondents in Hungary

7. The costs of implementing the principles of sustainable development in business are in fact an investment that in the long run will bring multi-faceted profit (economic, social, environmental)

The above data indicate that the respondents are aware of the existence of the costs of implementing the principles of sustainable development in business, as well as the need to bear them. It is encouraging that, according to the majority of respondents (56%), these costs are in fact an investment that should bring specific benefits in the long term (both in economic, social and environmental terms). Only every tenth respondent is of the opposite opinion, while again about 1/3 of the respondents do not have a firm opinion on this subject.

Nearly 3/4 of Hungarian respondents agree with the thesis posed in the question. The share of undecided people is also low, which did not exceed 20% of the respondents.

In the case of Irish respondents, the result of the survey was unequivocal - over 95% of respondents agreed with the assumption included in the question.

ANALYSIS OF THE ANSWERS PROVIDED

The second question required the respondents to assess to what extent the ideas proposed in the questionnaire are taken into account in the management practice of the company/organization represented by the respondent. Below is a summary of the answers in a graphical form along with the conclusions drawn on their basis.

At the outset, it should be noted that the total percentage of negative answers ("strongly disagree" and "disagree") in the context of any of the theses did not exceed 21%, which suggests that the level of acceptance for including the principles of sustainable development in the management practice of companies/ organizations represented by respondents is high. It is also worth noting that if the acceptance of the presented ideas was lower, it was usually accompanied by a high percentage of undecided answers. This is clearly seen in the evaluation of the following ideas:

- the use of renewable energy sources (17% of negative answers, 35% of respondents who did not have a clearly defined view);
- reduction of the carbon footprint (19% of negative answers, 39% of respondents who had no definite opinion);

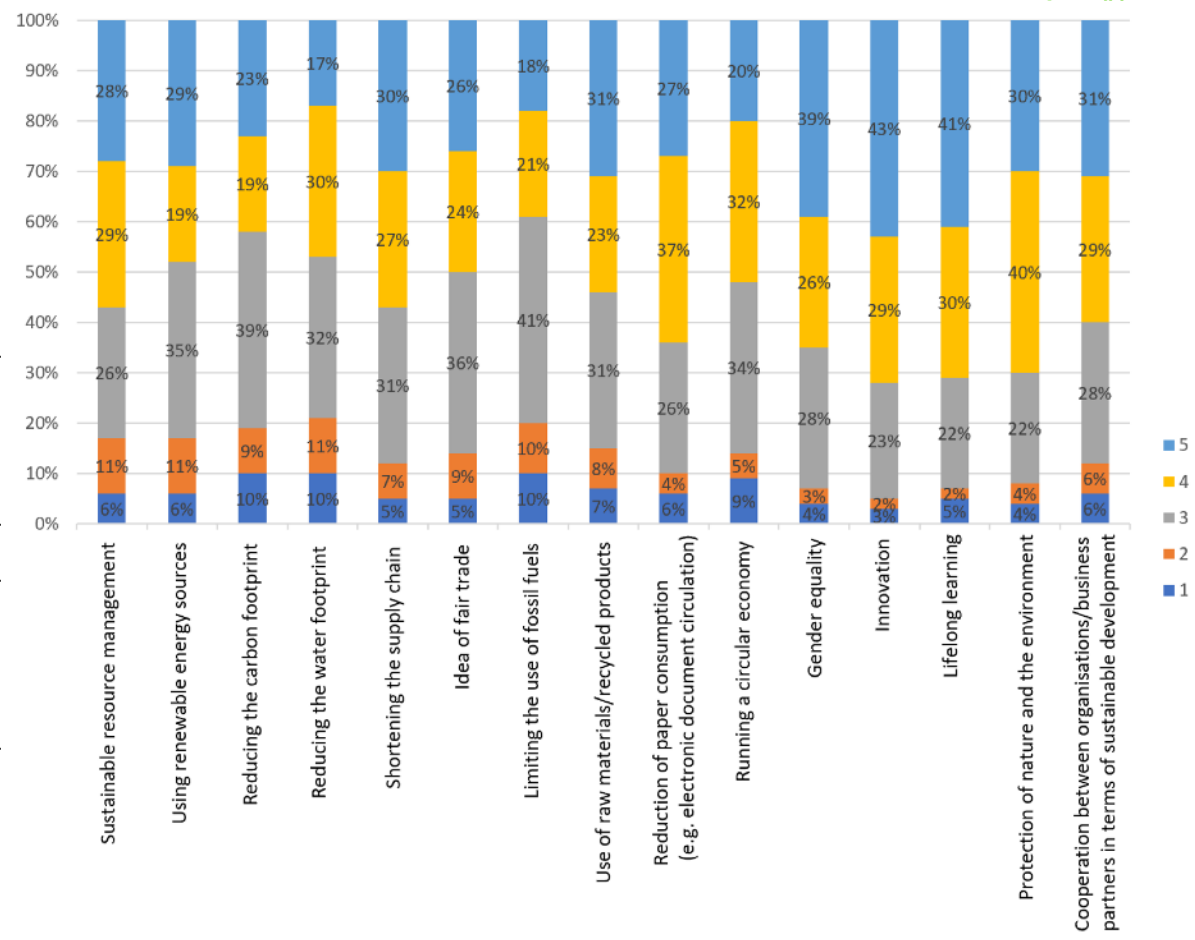


Fig. 22 Ideas considered in management practices in Poland

- - reducing the water footprint (21% of negative answers, 32% of neutral answers);
- - reducing the use of fossil fuels (20% and 41% respectively);

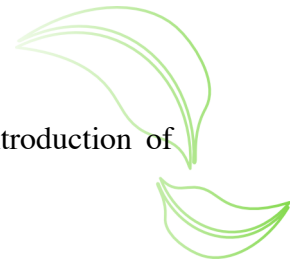
ANALYSIS OF THE ANSWERS PROVIDED

In the above cases, the level of acceptance for the application of the presented ideas in management practice was below 50%. It should be noted that the above theses are the most difficult to apply in economic terms - they are associated with the need for radical changes in the technologies used or in the means of transport used. Their cost-intensiveness may be the reason for the lowest level of acceptance, although it is worth repeating that in none of the cases listed above did the level of negative assessments exceed 21%.

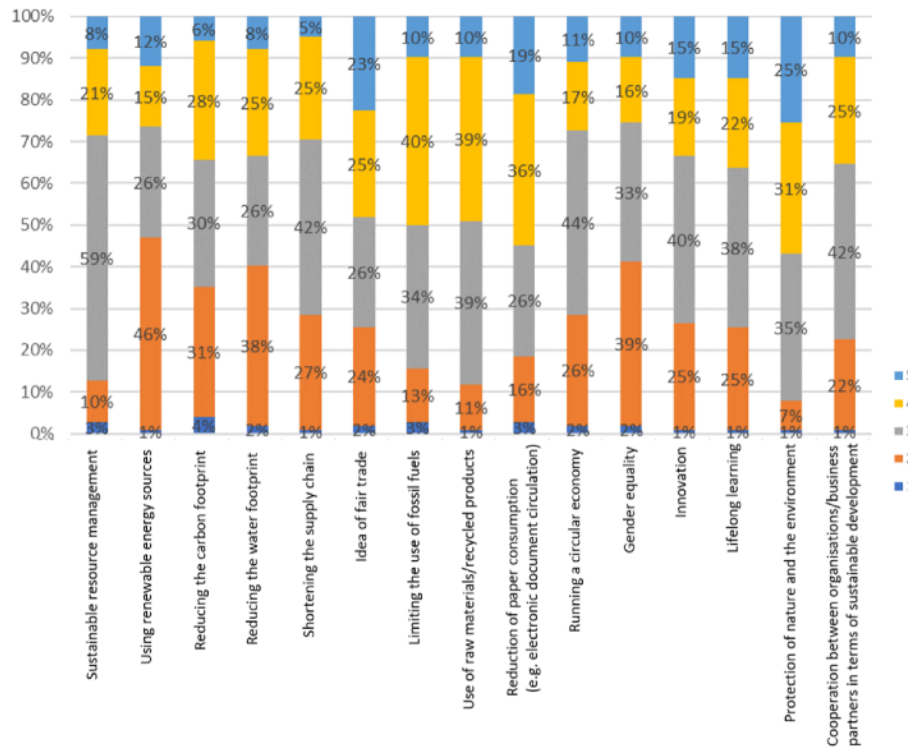
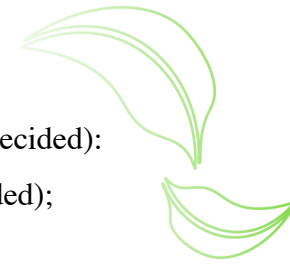
Among the others, the lowest total percentage of answers indicating that the discussed principles of sustainable development in business were taken into account (at the level of exactly 50%) occurred in the case of the question about the idea of fair trade. The answers to the remaining questions indicate that the theses put forward are taken into account in the management practice of the companies/organizations represented by the respondents. The greatest support, exceeding 70% of positive answers, concerns the issue of innovation and continuous improvement of competences. Such a result should not be surprising, as these are the most obvious and necessary elements of the functioning of a modern growing company or organization, although they are often not perceived as elements affecting the assessment of a sustainable approach to management. A high percentage of respondents (over 60%) also indicated that in management they take into account such elements as:

- reduction of paper consumption (e.g. due to the introduction of electronic document circulation);
- gender equality;
- cooperation between organizations/business partners for sustainable development.

A slightly lower total score - at a level exceeding 50% of positive answers - concerned logistics issues: sustainable resource management, shortening the supply chain, using raw materials/recycled products and running a circular economy. This indicates that the awareness of the impact of the above-mentioned elements on the proper functioning of the business is still insufficient. It should be presumed that this situation will soon change significantly, as the progressing energy crisis will force companies to look for savings, and thus reduce the cost of delivery or a wider use of recycling.



ANALYSIS OF THE ANSWERS PROVIDED



- use of renewable energy sources (47% with 26% undecided);
- reducing the water footprint (40% with 26% undecided);
- gender equality (41% against 33% undecided);
- innovation (26% with 40% undecided).

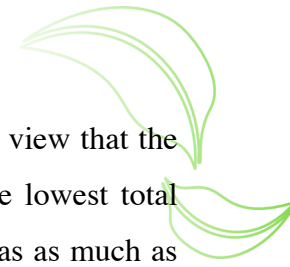
Respondents spoke positively about taking into account in management practice in relation to:

- the idea of fair trade (48% with 26% undecided);
- reducing the use of fossil fuels (50% with 34% undecided);
- using raw materials/recycled products (49% vs. 39% undecided);
- reducing the use of paper (55% with 26% undecided);
- protection of nature and the environment (56% with 35% undecided).

Fig. 23 Ideas considered in management practice in Hungary

Hungarian respondents showed a completely different approach to the analyzed issue. This is clearly visible in the case of the share of negative answers, which in many cases is definitely higher than in the Polish study. According to the respondents, the following ideas are not taken into account in management practice:





ANALYSIS OF THE ANSWERS PROVIDED

The approach of respondents from Ireland to the analysed topic is completely different. The vast majority of respondents expressed the view that the ideas of sustainable development are taken into account in the management practice of the company/organization they represent. The lowest total percentage of positive responses was in the case of implementing the idea of fair trade and limiting the use of fossil fuels, but still it was as much as 75%.

	Choice 1	Choice 2	Choice 3	Choice 4	Choice 5
Sustainable management of resources (e.g. energy, fuels, water, etc.)	30	14	11	3	6
Using renewable energy sources	11	17	8	8	5
Reducing your carbon footprint	4	5	7	1	1
Reducing the water footprint	0	1	4	4	0
Shortening the supply chain	8	7	6	5	6
The idea of fair trade	0	5	3	8	1
Reducing the use of fossil fuels	4	2	4	5	2
Use of raw materials/recycled products	2	8	10	5	5
Reducing paper consumption (e.g. electronic document circulation)	2	3	4	10	5
Running a circular economy	1	1	7	6	3
Gender equality	2	4	3	6	7
Innovation	18	12	7	12	13
Constantly gaining knowledge and competences	7	11	13	7	15
Protection of nature and the environment	8	5	5	13	16
Cooperation between organizations/business partners for sustainable development	3	5	8	7	15



ANALYSIS OF THE ANSWERS PROVIDED

In the next question of the survey, they were asked to choose the five most important elements from the above-mentioned ones, and then to arrange them in the order of importance/urgency of their implementation in the company or organization they represent. It is surprising that as many as 30% of respondents indicated that the most urgent task is to regulate the issue of sustainable management of resources, such as energy, fuels or water. This is all the more surprising because this issue - although taken into account in management practice - has not been treated by the respondents as the most important so far.

An important element from the point of view of those responding to this survey was also the issue of innovation, which was indicated by 18% of the respondents as their first choice. This, in turn, coincides with the answers given earlier as to the importance of a given element of sustainable development in current management practice. Again, it should be noted that this is part of the current trend of supporting innovation in the economy and perceiving it as one of the most important indicators of business development.

Every tenth respondent considered the use of renewable energy sources as an important and urgent issue to be implemented in the first place. It should be presumed that if this survey had been carried out later, in the era of the current energy crisis, which radically changed the perception of fossil fuels as the primary source of energy, this result would have

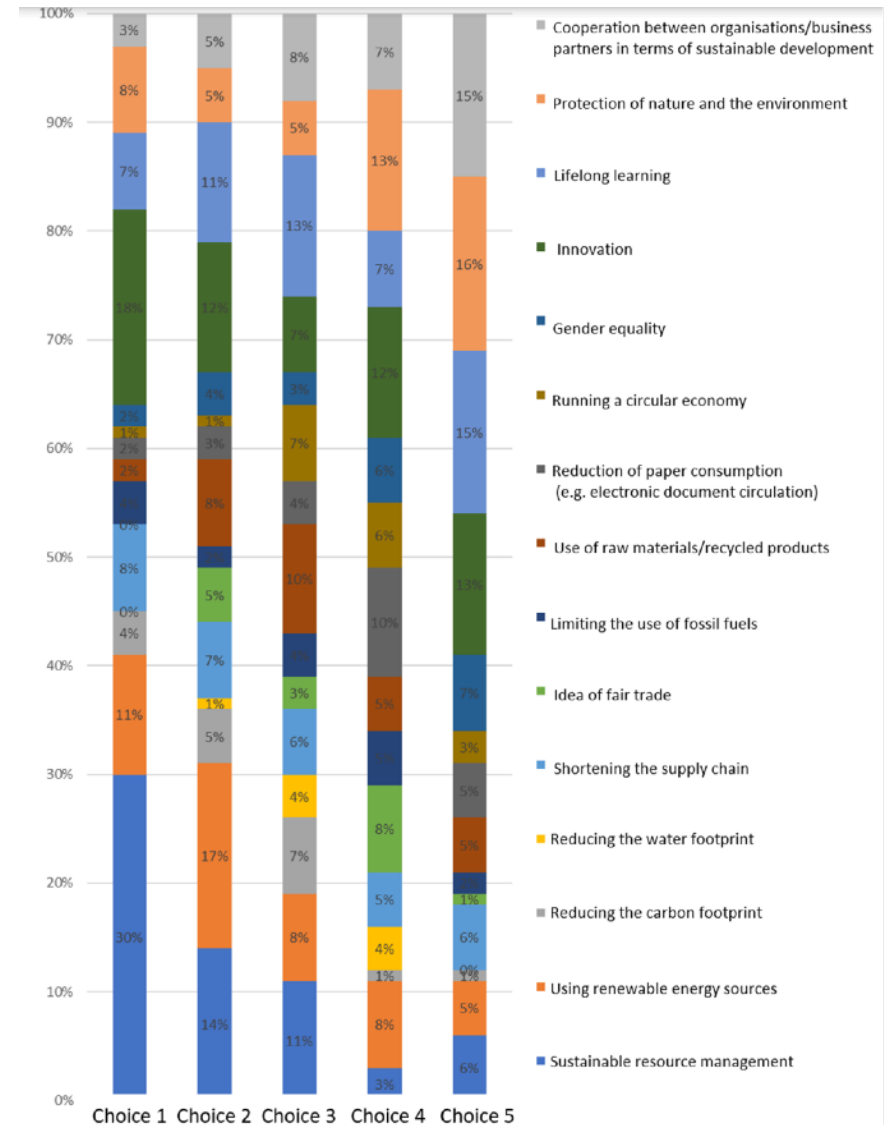


Fig. 24 Assessment of the importance of sustainable management ideas in Poland

ANALYSIS OF THE ANSWERS PROVIDED

looked completely different. This suggests the need to continue research on sustainable development in business in the light of new circumstances.

Participants of the survey representing the Hungarian side indicated sustainable management of resources such as energy, fuels or water as the most important and urgent element to be implemented - this opinion was shared by 34% of respondents. The protection of nature and the environment was also indicated as important and urgent (19%). Roughly one in ten respondents also considered innovation and continuous acquisition of knowledge and competence as urgent and important.

In the case of Irish respondents, two of the elements listed in the question were indicated as important and most urgent to be implemented in the context of implementing the principles of sustainable development. We are talking about cooperation between organizations/business partners for sustainable development and gender equality. Both of these options were indicated as the most important by 18% of respondents. A slightly lower result - at the level of 15% - was obtained by sustainable management of resources, such as energy, fuels, water, etc., while nearly 12% of respondents indicated that innovation is the most important and most urgent to implement. Interestingly, among a number of elements, often very technical and substantive, the respondents from Ireland focused on social and management issues, thus

indicating that the implementation of sustainable development assumptions has ceased to be only an environmental or technological issue, and has become a social issue.

In 2019, the European Council adopted a new strategic agenda for the European Union, which includes issues related to the pursuit of a climate-neutral, ecological, fair and social Europe. The result of the work based on the adopted strategy was the formulation of the assumptions of the European Green Deal, which is a package of political initiatives aimed at ultimately leading to climate neutrality in Europe in 2050, while strengthening the modernity and competitiveness of the European economy and transforming the Union into a society equitably distributing access to goods. As part of the analyzed research, respondents were asked about their attitude to the areas of the European Green Deal.

ANALYSIS OF THE ANSWERS PROVIDED

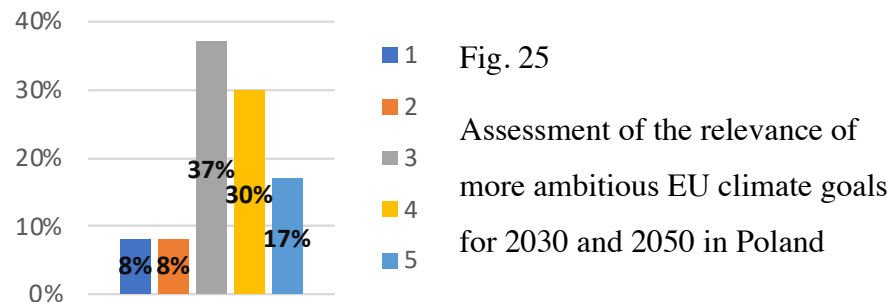


Fig. 25
Assessment of the relevance of more ambitious EU climate goals for 2030 and 2050 in Poland

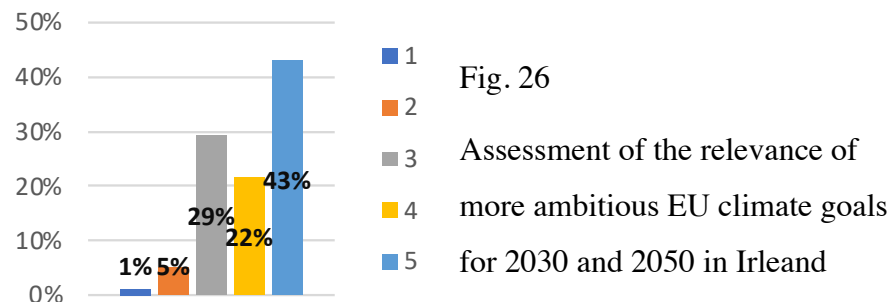


Fig. 26
Assessment of the relevance of more ambitious EU climate goals for 2030 and 2050 in Ireland

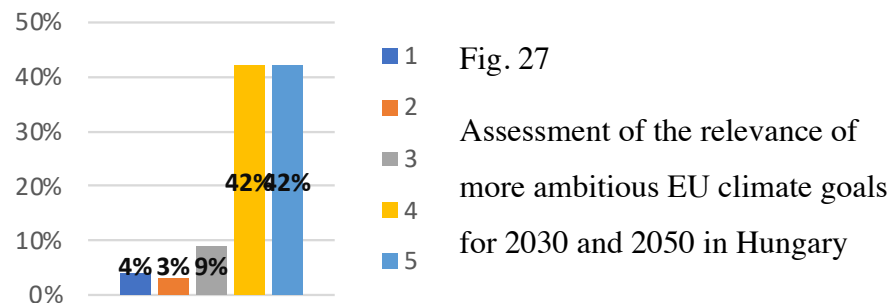


Fig. 27
Assessment of the relevance of more ambitious EU climate goals for 2030 and 2050 in Hungary

More ambitious climate goals for 2030 and 2050 are considered important by respondents, as indicated by 47% of positive responses. It should be noted, however, that it is also the lowest value among all the analysed elements. This does not mean, however, that the number of respondents negatively referring to this issue is large - on the contrary, only 16% of respondents stated that they disagreed with the thesis about the importance of this issue. It is puzzling that as many as 37% of respondents did not have a firm opinion on this issue.

Hungarian respondents share a similar opinion - more ambitious climate goals for 2030 and 2050 were considered important by a total of 85% of respondents.

Irish respondents showed slightly lower support for the thesis posed in the question. A positive opinion was expressed by 66% of respondents, but every third respondent had no opinion on the importance of ambitious climate goals.

ANALYSIS OF THE ANSWERS PROVIDED

Respondents had no problem assessing whether the provision of clean, affordable and secure energy should be considered an important element of the European Green Deal. This opinion was shared by 72% of respondents, with only 6% of negative answers. In the case of this issue, even the percentage of undecided people was lower than usual.

Among the participants of the survey in Hungary, the result for this question was even more unequivocal: a total of over 90% of respondents considered the issue to be important, 76% were definitely in favor of it.

The respondents from Ireland voted no differently - the provision of clean, affordable and secure energy was considered important by over 90% of the survey participants, for half of the respondents it was an extremely important issue.

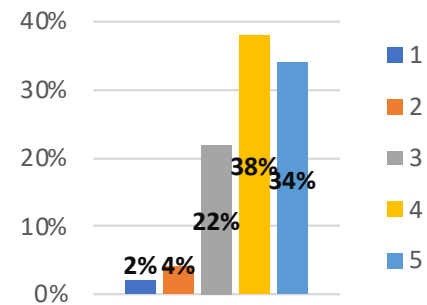


Fig. 28

Assessment of the importance of providing clean, affordable, and secure energy in Poland

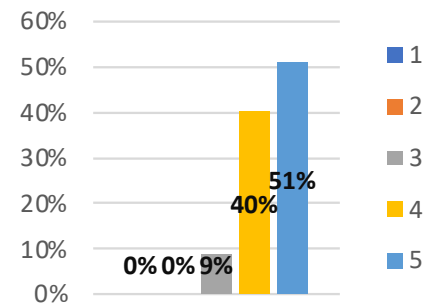


Fig. 29

Assessment of the importance of providing clean, affordable, and secure energy in Ireland

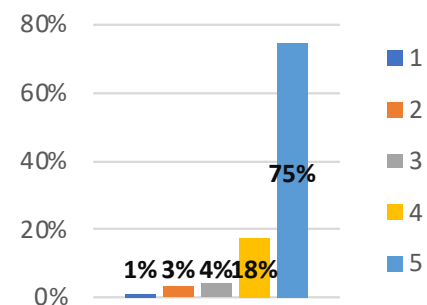
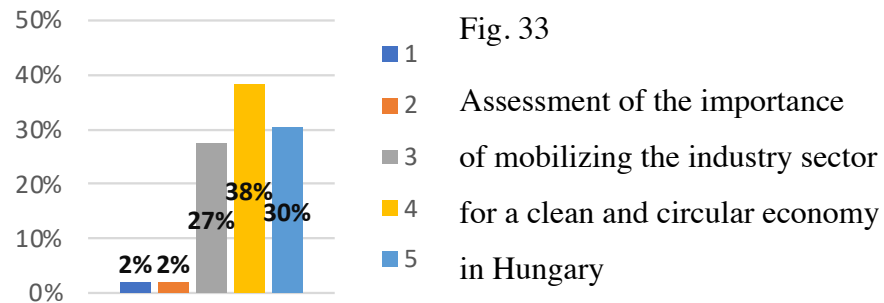
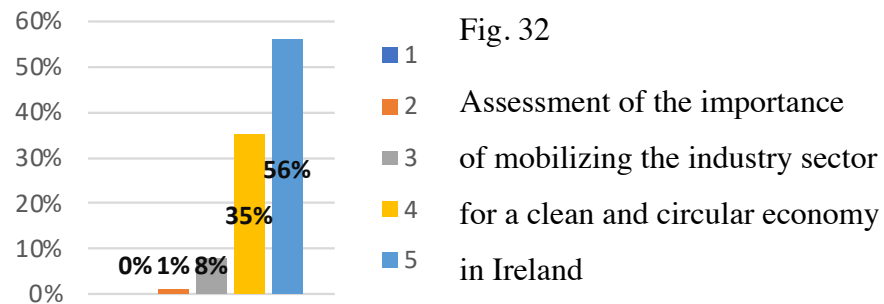
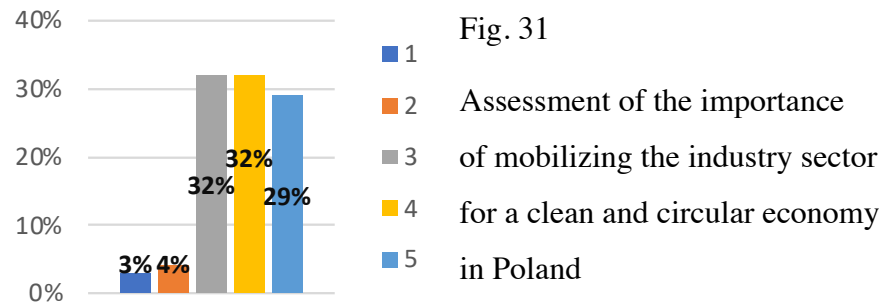


Fig. 30

Assessment of the importance of providing clean, affordable, and secure energy in Hungary



ANALYSIS OF THE ANSWERS PROVIDED



61% of respondents considered it important to mobilize the industry sector for a clean and circular economy. Only 7% of respondents were of the opposite opinion, but it should be noted that this issue could be too hermetic for many respondents and detached from their current experiences, which translated into a high percentage of unspecified answers, reaching 1/3.

In the case of Hungarian respondents, the total percentage of positive answers was 70%, but in this case it is surprising that almost every third respondent did not have a specific view.

Again, over 90% of Irish respondents were in favor of considering the analyzed element as significant. Only 1% of the respondents were of the opposite opinion.

ANALYSIS OF THE ANSWERS PROVIDED

According to the respondents, the impact of the program on the construction sector should be considered an important element of the European Green Deal. Building and renovating in a way that saves energy and resources found support in the eyes of 70% of respondents, ten times less respondents considered this issue to be of little importance.

The impact of the program on the construction sector is extremely important for Hungarian respondents - almost 90% of respondents were in favor of considering this issue as important.

The assessment of Irish respondents in the case of construction was unambiguous - the discussed issue was considered important by 99% of respondents..

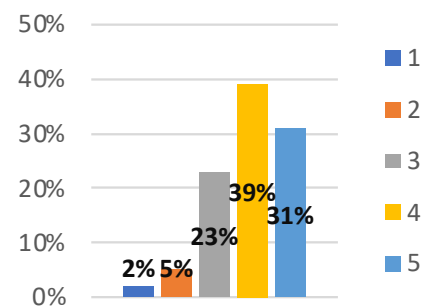


Fig. 34

Assessment of the importance of building and renovating in an energy and resource-saving way in Poland

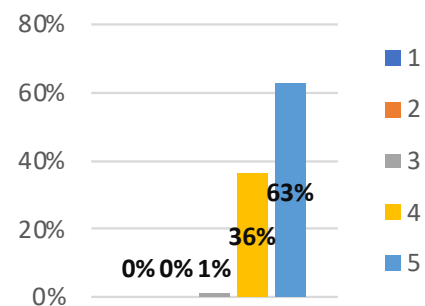


Fig. 35

Assessment of the importance of building and renovating in an energy and resource-saving way in Ireland

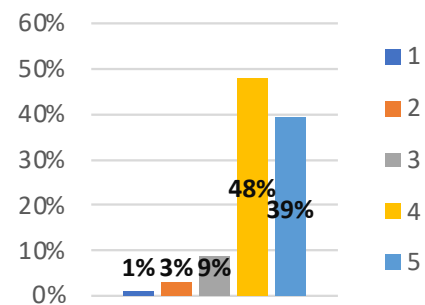
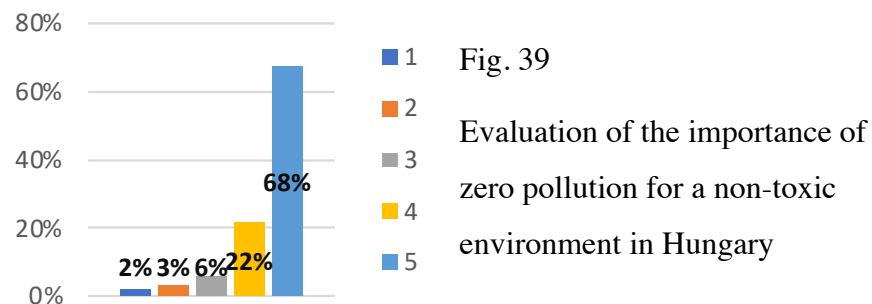
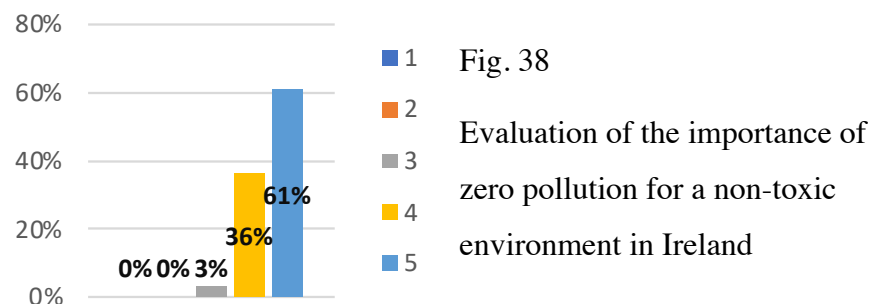
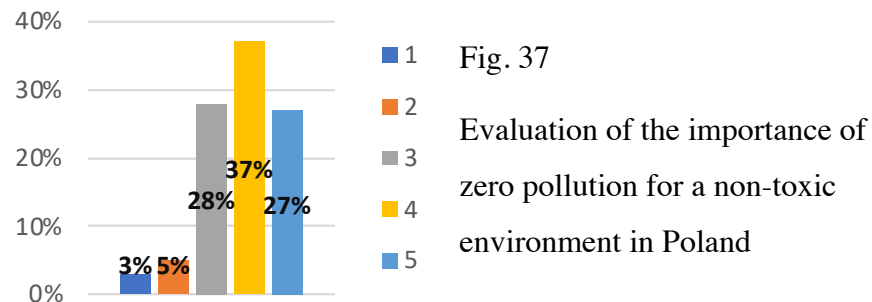


Fig. 36

Assessment of the importance of building and renovating in an energy and resource-saving way in Hungary



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Another element of the European strategy analysed was the pursuit of zero pollution for a non-toxic environment. Although only 8% of respondents did not recognize the importance of this issue, one in four respondents did not have a clear view of the issue. Perhaps this is due - as in the case of the mobilization of the industry sector for the circular economy - to the specificity of the issue, for which a significant percentage of respondents do not feel responsible.

The result of the survey in Hungary shows strong support for zero pollution. Such a view was expressed by 90% of the respondents, 69% were definitely in favour.

A similar situation occurred in Ireland: 97% of those polled were in favour, of which 62% strongly expressed this view.

ANALYSIS OF THE ANSWERS PROVIDED

The issue of protecting and restoring ecosystems and biodiversity was recognized in the research as an important element of the European Green Deal, which was indicated by 68% of people completing the survey. An important result is the extremely low percentage of respondents for whom this issue is not relevant - only 3% of respondents disagree that the protection of biodiversity is important from the point of view of the European strategy.

A similar result was recorded in Hungary - a total of 86% of respondents considered it important to protect and restore ecosystems and biodiversity, while only 3% were of the opposite opinion. The Irish respondents were surprisingly unambiguous - there were no votes against, there were also no undecided people.

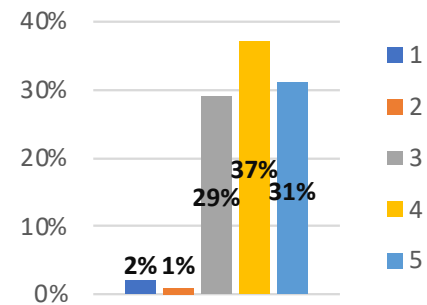


Fig. 40
Assessment of the importance of protecting and restoring ecosystems and biodiversity in Poland

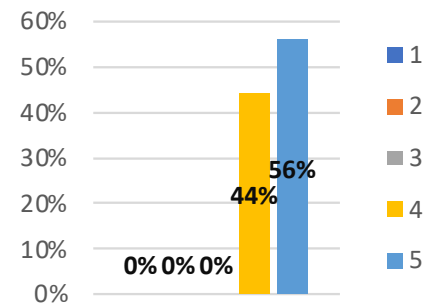


Fig. 41
Assessment of the importance of protecting and restoring ecosystems and biodiversity in Ireland

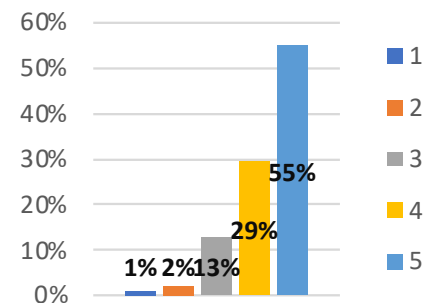


Fig. 42
Assessment of the importance of protecting and restoring ecosystems and biodiversity in Hungary



ANALYSIS OF THE ANSWERS PROVIDED

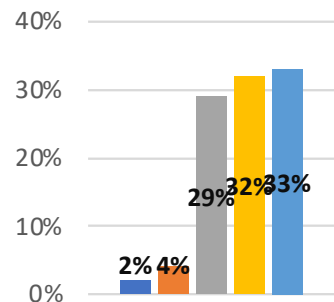


Fig. 43

Assessing the importance of the idea from farm to fork: a fair, healthy, and environmentally friendly food system in Poland

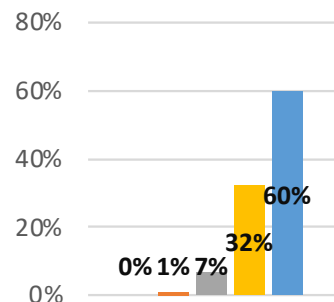


Fig. 44

Assessing the importance of farm to fork: a fair, healthy, and environmentally friendly food system in Ireland

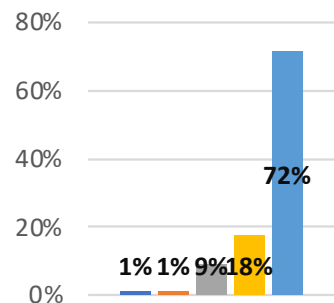


Fig. 45

Assessing the importance of the farm to fork idea: a fair, healthy, and environmentally friendly food system in Hungary

The total share of positive answers exceeding 60% was also marked in the case of the issue of a fair, healthy and environmentally friendly food system, referred to in the assumptions of the European Green Deal as "farm to fork". Only 6% of respondents did not consider this issue important, although nearly 1/3 of people who do not have a specific view are still wondering. While this is not surprising in the case of specialist issues concerning a narrow group of interested parties, it is difficult to conclude that the issue of the food system applicable in Europe and affecting all its inhabitants could be indifferent to someone.

Over 90% of survey participants in Hungary expressed support for a fair, healthy and inclusive food system, and 73% strongly believe so. Only 2% of respondents did not consider this issue significant.

Irish respondents were also over 90% in favor of recognizing a fair, healthy and inclusive food system as important. The percentage of undecided people and responses presenting a negative attitude to the analyzed issue did not exceed 9%.

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Slightly more mixed responses were given to the question of accelerating the transition to sustainable and smart mobility. While the total number of positive responses considering this element of the European Green Deal as important still exceeds 50%, the percentage of “strongly agree” responses is lower than the share of undecided responses and only 6% higher than the total number of “disagree” responses and "strongly disagree." This indicates that the issue of low- and zero-emission mobility was not considered a priority by the respondents in their considerations about the ecological transformation of European society.

3/4 of Hungarian respondents considered the transition to sustainable and smart mobility to be important. Noteworthy, however, is some hesitation in the responses - the percentage of answers "agree" exceeded "strongly agree" in the ratio of 2:1.

The Irish respondents answered a little less clearly than usual. 76% of respondents considered the transformation towards sustainable mobility as important, but every fifth respondent was unable to precisely define their attitude to the analyzed issue.

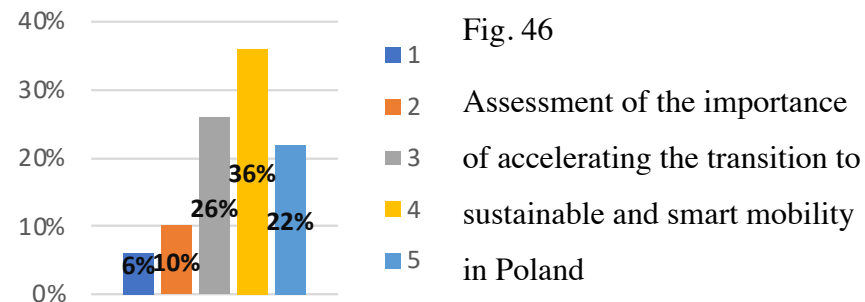


Fig. 46

Assessment of the importance of accelerating the transition to sustainable and smart mobility in Poland

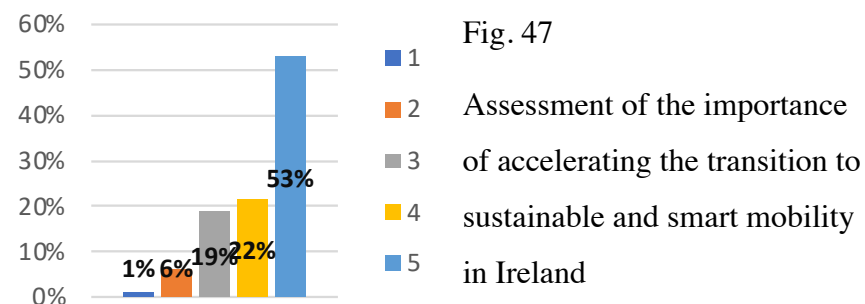


Fig. 47

Assessment of the importance of accelerating the transition to sustainable and smart mobility in Ireland

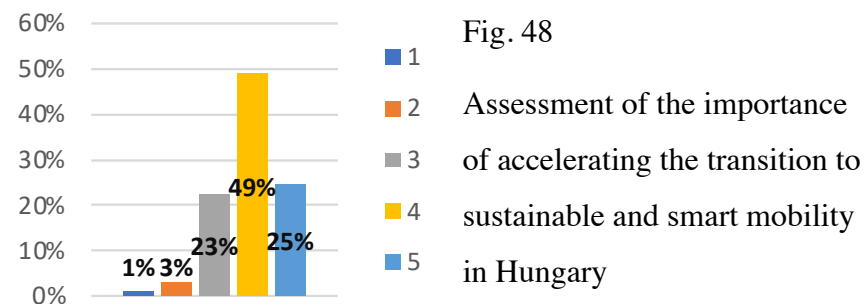
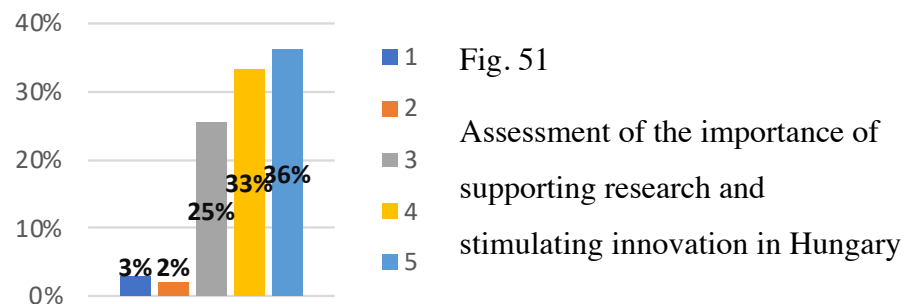
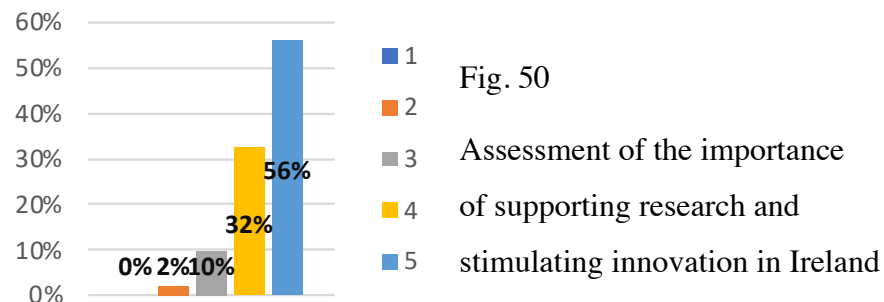
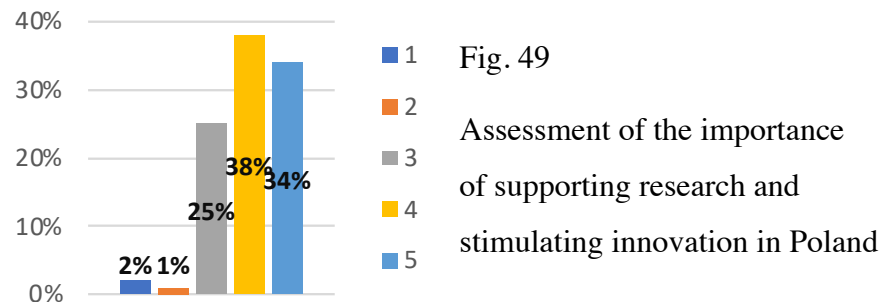


Fig. 48

Assessment of the importance of accelerating the transition to sustainable and smart mobility in Hungary



ANALYSIS OF THE ANSWERS PROVIDED



Respondents presented a much more explicit approach to the question of supporting research and stimulating innovation. In this case, the total number of 72% of positive answers relating to the analyzed issue, with only 3% of negative answers, fully corresponds to the high position of innovation in business, which was indicated by the respondents in the previous questions.

Over 70% of Hungarian respondents considered supporting research and innovation to be an important element of the European Green Deal. However, in the case of this issue, the percentage of people with an unspecified view was clear - it amounted to 26%.

90% of Irish respondents support research and innovation as part of the European Green Deal. 57% definitely consider this issue important.

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A high percentage of positive responses (63% in total) was given to empowering citizens to move towards a climate-neutral and sustainable Europe. This result is not surprising if we take into account the growing importance of civil society on the European continent. Enthusiasm that such a high result can cause is cooled down by the fact that 1/3 of the respondents do not have a clear opinion on the analysed topic.

Empowering citizens to move to a climate-neutral and sustainable Europe was considered important by just over half of Hungarian respondents. For the majority, however, this is not a key issue: the percentage of "strongly agree" answers was only 12%, while the percentage of undecided was as much as 36%.

The answer to the question of whether it is important to empower citizens in order to move towards a climate-neutral and sustainable Europe is interesting. Although 56% of Irish respondents considered this issue to be very important, there was also a clear share of those who were of the opposite opinion and undecided - 31% in total.

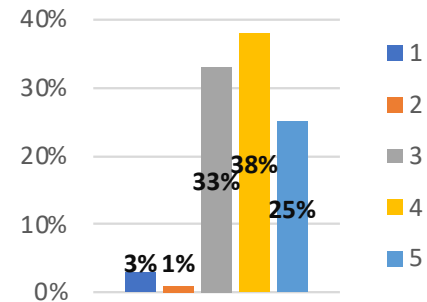


Fig. 52

Assessment of the importance of empowering citizens to move to a climate-neutral and sustainable Europe in Poland

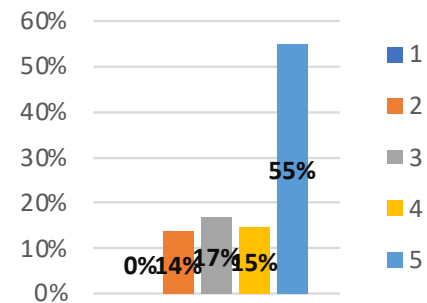


Fig. 53

Assessment of the importance of empowering citizens to move to a climate-neutral and sustainable Europe in Ireland

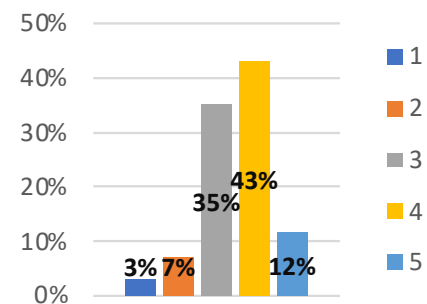


Fig. 54

Assessing the importance of empowering citizens to move to a climate-neutral and sustainable Europe in Hungary



ANALYSIS OF THE ANSWERS PROVIDED

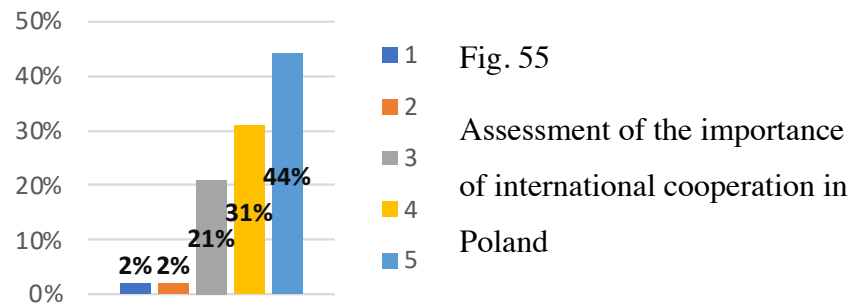


Fig. 55
Assessment of the importance of international cooperation in Poland

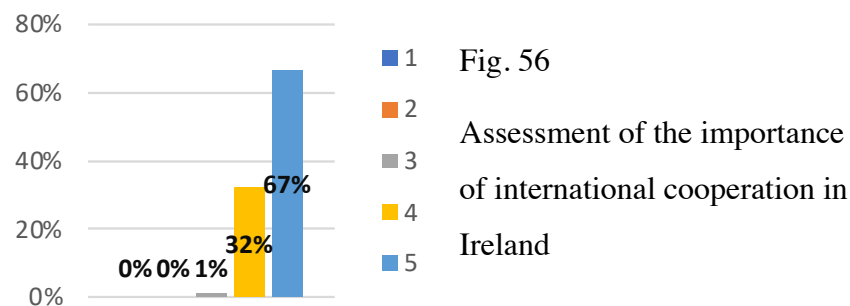


Fig. 56
Assessment of the importance of international cooperation in Ireland

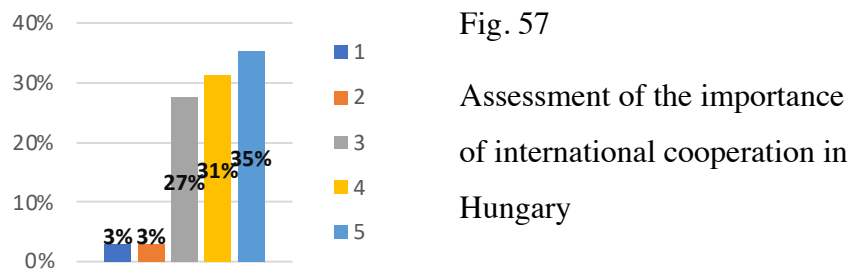


Fig. 57
Assessment of the importance of international cooperation in Hungary

The issue of implementing the European Green Deal is not possible without increased cooperation between the countries that make up the European Union - this is what the respondents said, indicating that international cooperation is an important area of the European Green Deal (a total of 75% of positive answers). Only 4% of respondents do not consider this issue important.

International cooperation is important in implementing the assumptions of the European Green Deal – this is what 68% of Hungarian respondents thought. Again, however, the percentage of people with an unspecified view was significant - 28%.

The issue of international cooperation is clearly positively assessed by Irish respondents - 99% of respondents were in favor or definitely in favor.

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Despite a broad understanding of the importance of the areas of the European Green Deal, many respondents still show far-reaching reservations when taking actions related to including these areas in the business practice of their companies or organizations. When asked about the extent to which the existing structure of the company/organization reflects taking action within the areas included in the European Green Deal, most respondents were unenthusiastic about the analyzed issues. Only two areas received more than 50% positive responses: supporting research and stimulating innovation, and international cooperation. This confirms the previously obtained results, which clearly indicate that among all the elements related to the idea of sustainability, it is easiest for business representatives to implement those that directly affect economic success and which - regardless of ideological issues - would be implemented in the present times anyway. Such issues undoubtedly include innovation and cooperation, without which running a business is impossible today.

Other areas of the European Green Deal have a lesser impact on creating the structure of a company or organization. The issues related to the more ambitious EU climate goals for 2030 and 2050 are least often taken into account (a total of 31% of negative answers), accelerating the transition to sustainable and smart mobility (30% of negative answers), zero pollution for a non-toxic environment (24%) and protecting and restoring ecosystems and biodiversity (23%). It can be concluded that in the eyes of the respondents, these issues are of little importance for running a business, or the impact on them from the level of a single company/organization is clearly limited.

In the answers to the analyzed question, there is again a significant, often exceeding 30%, percentage of unspecified answers, which suggests that for 1/3 of the respondents the analyzed issues are currently not of much importance, or they have not had the opportunity so far and the need to dwell on them longer.

ANALYSIS OF THE ANSWERS PROVIDED

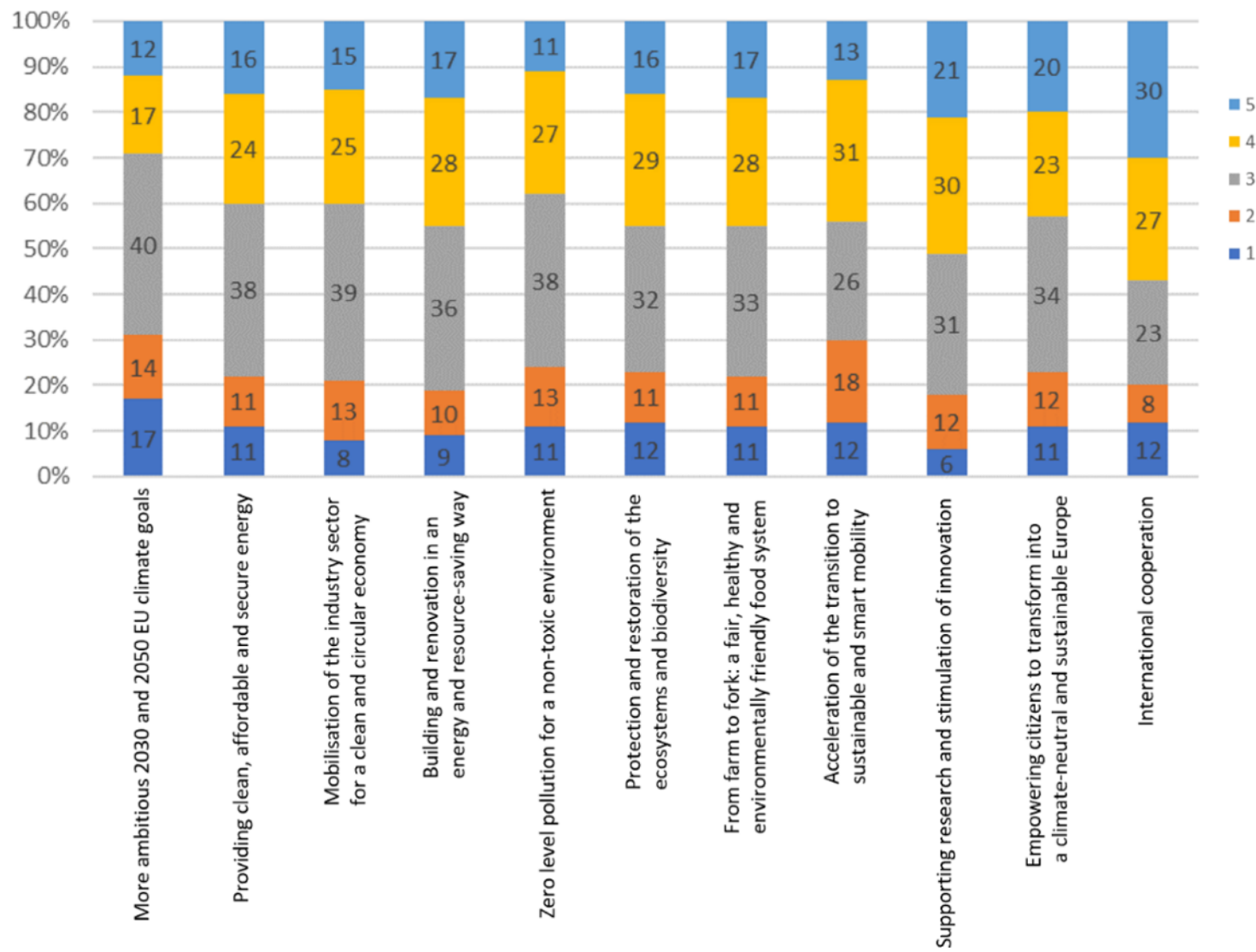


Fig. 58 Assessment of the extent to which the existing structure of organisations/companies in Poland reflects the activities undertaken within the areas included in the European Green Deal

ANALYSIS OF THE ANSWERS PROVIDED

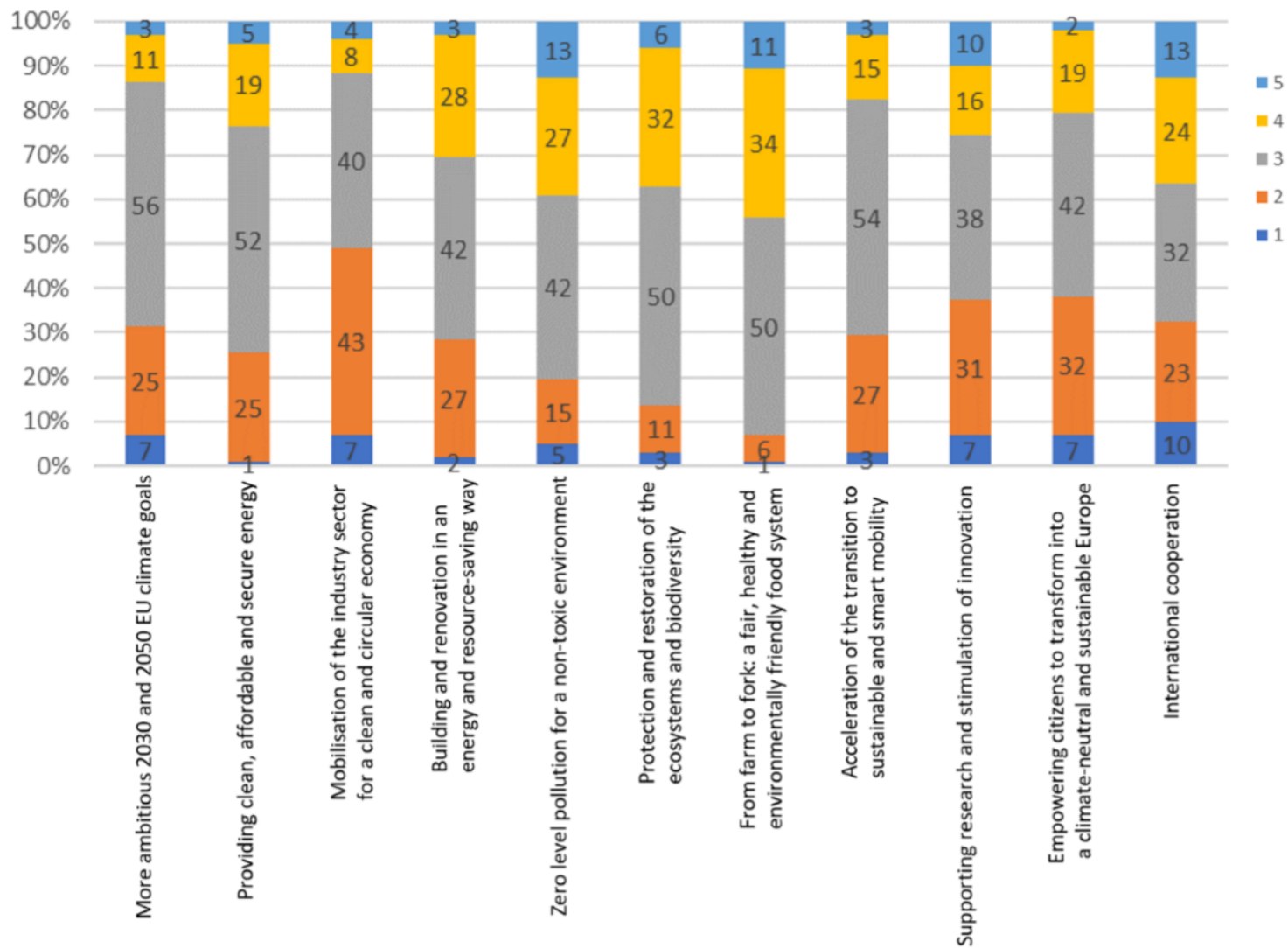


Fig. 59 Assessment of the extent to which the existing structure of organisations/companies in Hungary reflects taking action in the areas included in the European Green Deal

ANALYSIS OF THE ANSWERS PROVIDED

The question of how the existing structure of the company/organization reflects taking action within the areas included in the European Green Deal caused clear consternation in the Hungarian respondents. In many cases, the percentage of negative responses was definitely marked. Their highest share was in the case of the following issues:

- ➔ more ambitious EU climate targets for 2030 and 2050 (32%);
- ➔ mobilizing industry for a clean and circular economy (50%);
- ➔ accelerating the transition to sustainable and smart mobility (30%);
- ➔ supporting research and stimulating innovation (38%);
- ➔ empowering citizens to move towards a climate-neutral and sustainable Europe (39%);
- ➔ international cooperation (33%).

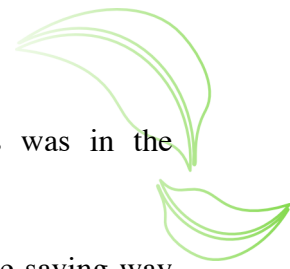
A significant number of respondents also did not have a precise view on the analysed issues, which was particularly visible - it did not fall below 30%, in many cases reaching more than half of the answers provided.

Respondents were much more in favor of taking into account the assumptions of the European Green Deal in the structure of an organization or company. More than 50% of the survey participants expressed this opinion in relation to each of the issues analysed in the

question. The highest percentage of positive responses was in the following areas of the European Green Deal:

- ➔ building and renovating in an energy and resource-saving way (80%);
- ➔ zero pollution for a non-toxic environment (83%);
- ➔ protection and restoration of ecosystems and biodiversity (83%);
- ➔ supporting research and stimulating innovation (84%);
- ➔ international cooperation (98%).

The Irish participants of the survey also did not have too much doubt as to the issue described in the question - the percentage of undecided answers did not exceed 24%.



ANALYSIS OF THE ANSWERS PROVIDED

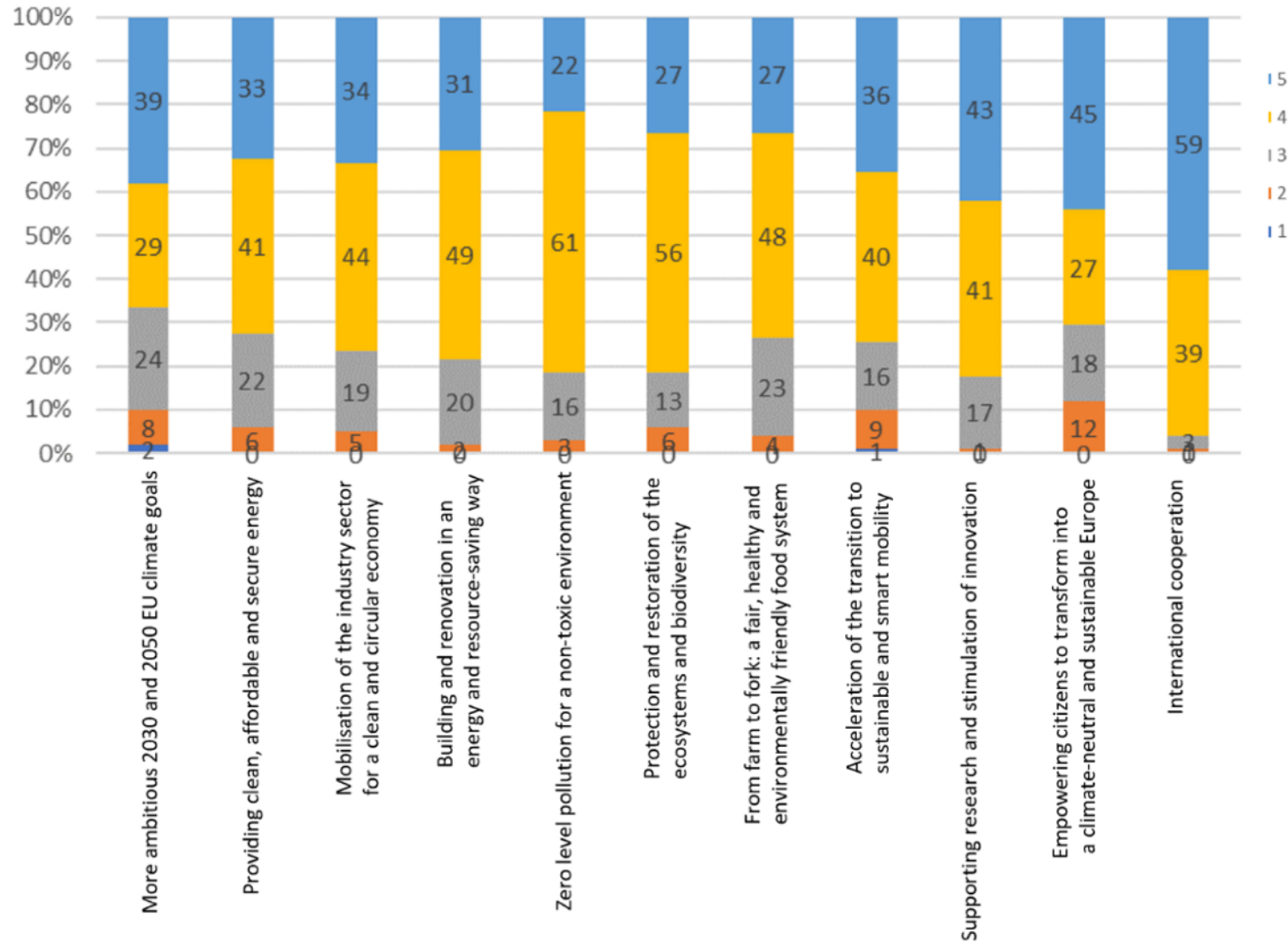


Fig. 60 Assessment of the extent to which the existing structure of organizations/companies in Ireland reflects taking action in the areas included in the European Green Deal

ANALYSIS OF THE ANSWERS PROVIDED

Interesting conclusions can be drawn from the analysis of the answers to the question to what extent the current competencies of the staff in the company/organization represented by the respondents correspond to the areas in which actions are taken resulting from the assumptions of the European Green Deal. In none of the analysed areas does the total percentage of positive responses exceed 50%. This suggests that the competencies currently expected from employees do not correspond to the requirements of the future, and the areas included in the European Green Deal should undoubtedly be considered such. The highest percentage of negative answers (34%, with 31% of positive answers) refers to a specific area of the European strategy, which is the more ambitious EU climate goals for 2030 and 2050. It should be presumed that the strategic goals of the European Union in the fight against climate change do not are an important factor for entrepreneurs when deciding on the direction of staff competence development.

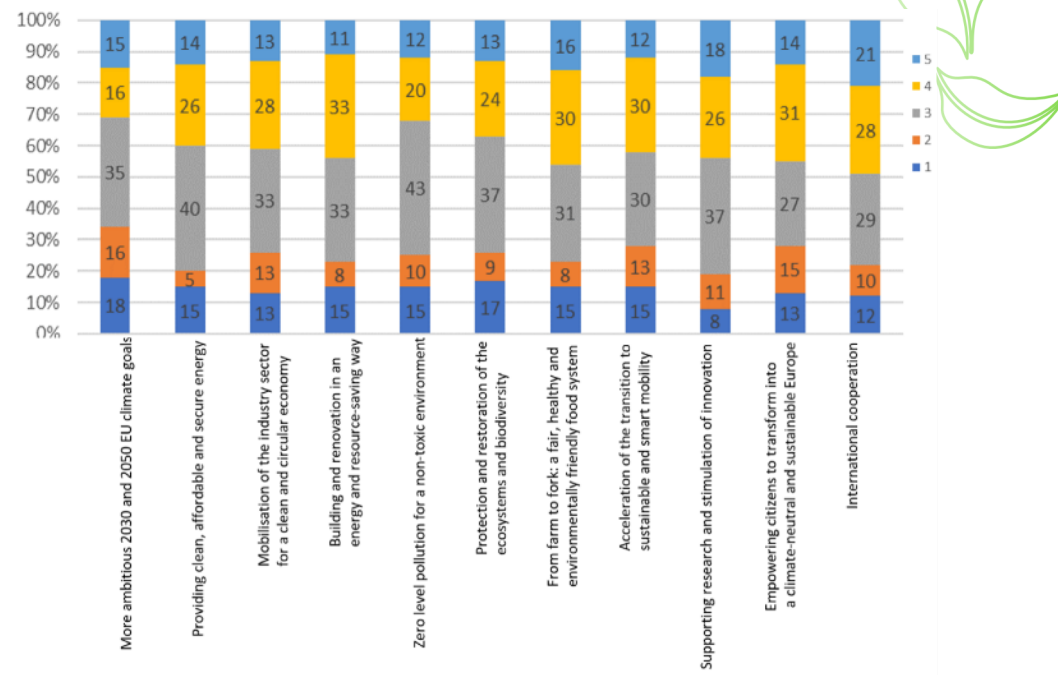


Fig. 61 Assessment of the current competencies of the staff of organisations/companies corresponding to the areas within which actions are taken regarding the areas included in the European Green Deal in Poland

A relatively high percentage of negative responses (reaching 25% and more of the votes cast) also occurred in the following areas:

- mobilizing industry for a clean and circular economy (26%);
- zero level of pollution for a non-toxic environment (25%);

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- ➔ protection and restoration of ecosystems and biodiversity (26%);
- ➔ accelerating the transition to sustainable and smart mobility (28%);
- ➔ empowering citizens to move towards a climate-neutral and sustainable Europe (28%).

It should be noted, however, that in the case of the above-mentioned areas, the level of positive responses exceeded 30-70%. This shows a strong polarization in the reception of the assumptions of the European Green Deal among representatives of business and non-governmental organizations, pointing to the need to conduct further research aimed at answering the question of what factors determine a specific approach to sustainable development in the EU over the next 20 years. This also suggests that it is justified to intensify activities promoting the assumptions of the European Green Deal.

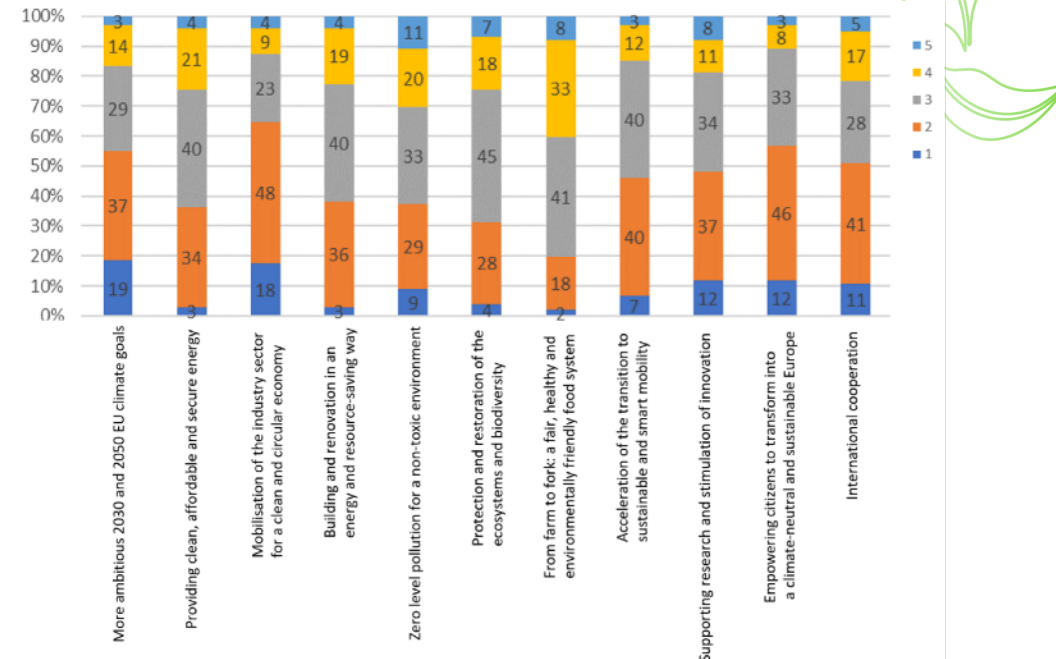


Fig. 62 Assessment of the current competencies of the staff of organizations/companies corresponding to the areas where actions are taken regarding the areas included in the European Green Deal in Hungary

Hungarian respondents negatively assessed the preparation of staff for activities resulting from the implementation of the principles of the European Green Deal. For each of the issues analysed, the total number of negative ratings was surprisingly high, ranging from 20% for the fair, healthy and environmentally friendly food system to 66% for mobilizing

ANALYSIS OF THE ANSWERS PROVIDED

industry for a clean and circular economy. The share of undecided respondents was also significant - the highest was recorded in the case of the protection and restoration of ecosystems and biodiversity (45%).

The assessment of the current competencies of the staff in relation to the activities resulting from the European Green Deal in the case of respondents from Ireland is positive in most cases. The greatest dispersion of answers was observed in the case of the more ambitious EU climate goals for 2030 and 2050. Despite 41% of answers definitely in favor of the thesis, 14% of respondents were against it, and 30% were unable to express their views on this topic. In other cases, the respondents considered that the competencies of the staff corresponded to the elements of the European Green Deal - the total percentage of positive answers was in no case lower than 60%.

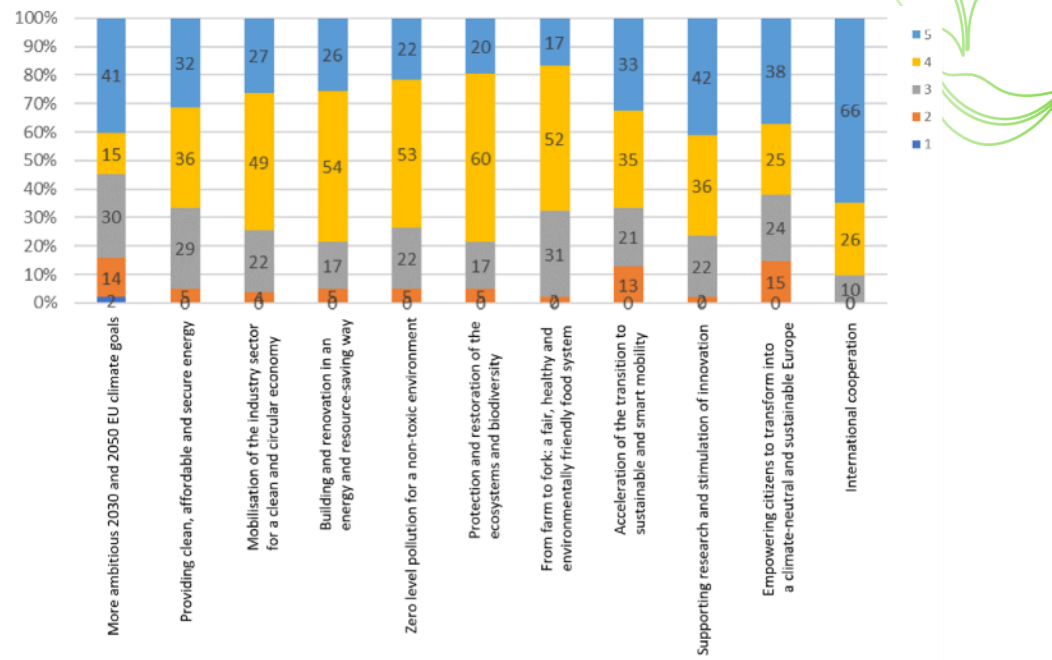
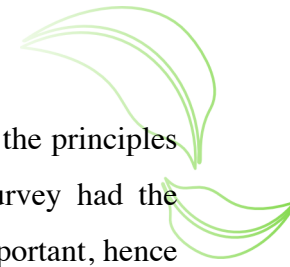


Fig. 63 Assessment of the current competencies of the staff of organizations/companies corresponding to the areas where actions are taken regarding the areas included in the European Green Deal in Ireland



ANALYSIS OF THE ANSWERS PROVIDED

In the last question, respondents were asked to assign ranks to individual competencies depending on their importance in implementing the principles of sustainable development in the company/organization of which the respondent was a representative. The participants of the survey had the opportunity to assign as many ranks as the competencies analyzed, but for the purposes of this study, the first five ranks are the most important, hence such a presentation in the table below.

	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	SUM
Work ethics	31	9	7	6	2	55
Interpersonal communication	4	26	12	8	7	57
Availability	4	8	21	5	10	48
Dealing with conflict situations	4	3	10	22	6	45
Motivating yourself and others	4	8	9	5	17	43
Emotional bond with the organization	7	8	3	6	10	34
Professional integration	1	2	6	3	9	21
Ability to cooperate with the environment	8	3	6	10	4	31
Ability to adapt to changing conditions	10	7	4	5	6	32
Raising qualifications	1	5	5	7	8	26
Creativity	5	1	3	8	4	21
Analytical skills	0	5	6	5	7	23
Flexibility, adaptability to the prevailing conditions, the ability to set priorities	8	9	5	6	3	31
Interpersonal skills	13	6	3	4	7	33



ANALYSIS OF THE ANSWERS PROVIDED

Analyzing the assigned ranks, it can be concluded that in the eyes of the respondents, the most important competences are not those related to technical or natural issues, but those that belong to soft skills. Two of those proposed in the survey stand out in particular, namely work ethics and interpersonal communication. Ethics was indicated as the most important by 31% of the respondents, which should not be surprising - in the eyes of the respondents, sustainable development seems to have a strong reference to the world of ideas, and its implementation results from conscious pro-ecological choices of every inhabitant of Europe. As the implementation of the assumptions of the European Green Deal is not possible without cooperation (and at the international level, as shown by the respondents in this study), the issue of interpersonal communication occupies an extremely high place among the analyzed competences - it was indicated as the second by 26% of the respondents, and as the third by next 12. According to the respondents, coping with conflict situations and motivating oneself and others are also important. The high position for competencies related to dealing with conflict situations is interesting. Taking it into account by the respondents (for every tenth it was the third choice, for more than 1/5 it was the fourth choice) means that they are aware of the fact that the implementation of the principles of sustainable development naturally leads to social tensions, which - in order to achieve the intended objectives - should be solved in an effective way.

Hungarian respondents in their first choice also considered ethics at work to be the most important in implementing the principles of sustainable development - 38% indicated it as their first choice. 21% considered that the most important is the issue of flexibility, adaptability to the prevailing conditions, the ability to set priorities, while nearly 12% pointed to creativity, which was also recognized as the second choice for over 13% of respondents. If we add to this 13% of respondents indicating interpersonal communication as their second choice, it is clear that, in the opinion of the participants of the survey in Hungary, the development of soft skills related to the choices made, the appropriate reaction to problems and interpersonal relations are extremely important.

The assessments of the Irish were similar to the opinions expressed by the Polish and Hungarian participants of the survey. They considered ethics at work as the most important in implementing the principles of sustainable development - 39% of respondents indicated it as the first choice. Every fifth respondent considered interpersonal communication to be the most important, it was also indicated as the second choice by nearly 33% of respondents. As a second choice, many respondents also indicated the ability to adapt to changing conditions (19%). This clearly indicates a clear trend towards recognizing social competences as crucial in implementing the assumptions of the European Green Deal.

SUMMARY OF IN-DEPTH INTERVIEWS AND CONCLUSIONS

Summary of in-depth interviews and conclusions

Activities related to the implementation of the principles of sustainable development in business in the current socio-economic conditions are not so much an option as a necessity. This is particularly evident in the context of the current energy crisis, which has raised the issue of limiting the use of fossil fuels, reducing greenhouse gas and particulate matter emissions, maintaining a circular economy, or reducing the carbon and water footprint of investments to the key issues. A sustainable approach to business currently increases the value of the company - it reduces the risk associated with the impact of climate change, the energy crisis and difficult access to resources, as well as reduces the costs of doing business (soaring in times of crisis) and allows you to take full advantage of the opportunities that arise in the era of necessary changes appear before businessmen. However, this is long-term, requires a specific strategy, not a quick profit focus.

The process of transitioning to sustainable management of a company/organization requires not only precise tools related to reducing its environmental impact, such as issues of zero-emission transport, circular economy or reducing resource consumption. Equally important are issues related to social responsibility - both at the level of an individual employee of a company/organization or meeting the real needs of

stakeholders from the socio-economic environment. However, the most important in the social context is the right approach of the management staff, expressed in environmental sensitivity and social responsibility in the decision-making process.

Among the respondents, general knowledge about sustainable development is high, but it is not built on solid foundations, which was evident in the answers to questions about specific issues related to the strategic intentions of the European Union expressed in the form of the European Green Deal. A significant percentage of neutral answers also indicated the lack of a clear opinion on a given topic. In this aspect, two explanations suggest themselves: the analysed issues are still purely theoretical for many respondents, detached from current business practice, or so far there has been no motivation and no need for in-depth reflection on them.

In the opinion of the respondents, it is important to improve the competences of the staff for the implementation of the principles of sustainable development. To a lesser extent, however, this applies to substantive or technical issues - in such matters many companies/organizations already declare themselves as environmentally friendly, and thus have qualified staff - but to social competences necessary to develop social responsibility in business. It is necessary to raise these competences through an appropriate educational process aimed not only

SUMMARY OF IN-DEPTH INTERVIEWS AND CONCLUSIONS

at improving knowledge or skills, but also at increasing the environmental awareness and sensitivity of employees. Among the competences that should be developed, creativity, the ability to learn independently, a creative approach to solving problems related to environmental protection, or the ability to enter social and cultural interactions appeared.

It is also extremely important to raise the environmental sensitivity of the management staff, especially at the senior level. The lack of a strategic view of the company's activities in the context of its impact on the environment significantly affects the direction of changes that are introduced in business. This requires increasing competences in the field of planning, as well as reorienting the optics of the conducted business from expecting a quick and high rate of return to long-term planning of activities combined with an increase in corporate social responsibility.

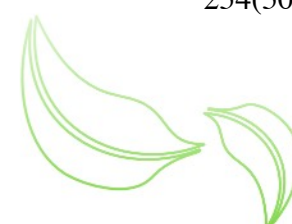
Sustainable development is an issue that cannot be considered only in a local or regional context. The impact of human activity and decisions taken by him is much wider than it may seem. Currently, there are no areas that can be considered fully natural. Air and water pollution or climate change are universal, they affect every place on the globe, regardless of latitude and longitude or the distance from industrial centers. This means that the approach to sustainable development should not be geographically limited – it has a global dimension.

Implementing the assumptions of sustainable development in business is a complex, multidimensional process that requires the involvement of both management and individual employees. A change of perspective is needed: companies should no longer be part of the problem, but should become part of the solution.

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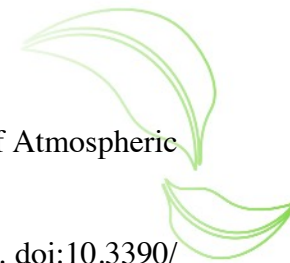
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