



## Credibility of certified environmental management systems: Results from focus group interviews

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### ABSTRACT

The implementation and use of environmental management systems (EMSs) depend on the perceived credibility of their certificates. This study aims to identify and describe factors influencing the importance of certification credibility of EMSs. This study discusses the significance of such systems to enterprise credibility by administering and analysing focus group interviews with 20 representatives from the production industry, education sector, certification bodies, and non-profit associations for environmental protection. The paper concludes that credibility of EMSs' certification depends on the certifying companies, and poor-quality audits facilitate the possession of certification as well as the universality of using certified systems. The positive reception of certified EMSs in companies induces the widespread use of certificates, fashion, and credibility, which can be increased by publication of audit reports. These conclusions emphasise the importance of strict auditing and control systems for certifications.

### 1. Introduction

An enterprise comprises several parts that constitute environmental management. They can be fairly developed and possibly include solutions based on the use of appropriate corrective actions. By introducing an environmental management system (EMS), remedial actions can become an integral part of the organisational structure. Such systems may be certified by third parties (Lannelongue and González-Benito, 2012; Murillo-Luna et al., 2011). An EMS is perceived as a platform necessary for developing proactive environmental strategies. Accordingly, several scientific articles have focused on and described how implementation and certification impact an enterprise's environmental outcomes (Boiral and Henri, 2012; Comoglio and Botta, 2012). Nonetheless, the results and findings from these studies have not been decisive, probably owing to solutions such as the Eco-Management and Audit Scheme (EMAS) or ISO 14001 standard. These two approaches underpin several EMS implementations. However, these are not performance-based standards and, consequently, do not ensure the achievement of a certain environmental standard by a certified company. The certification process confirms that the organisation has implemented a particular number of practices that support the management in handling the organisation's environmental impact, but it

does not ensure that these processes have brought about better environmental performance. Nevertheless, the certification is interpreted by market participants as a sign that the organisation has made an effort regarding environmental management (Christmann and Taylor, 2006; Lannelongue and González-Benito, 2012; Prakash and Potoski, 2007).

There have also been several publications concerning the lack of importance of the certificate itself as well as the fact that the certification process does not lead to the improvement of companies' environmental performance (Ammenberg et al., 2001; Heras-Saizarbitoria et al., 2013). Some scholars state that certification of EMSs is pointless and adds nothing to environmental excellence (King et al., 2005).

Because of such an interpretation, this paper attempts to describe factors influencing the importance of certification credibility of EMSs.

To address these interpretations, this study aims to describe factors influencing the importance of certification credibility of EMSs. This research discusses the importance of such systems to enterprise credibility by administering and analysing focus group interviews with 20 representatives from the production industry, education sector, certification bodies, and non-profit associations for environmental protection.

This study aims to determine the credibility of EMS certification (hereafter referred to as 'credibility importance') and identify conditions required for implementing and supporting EMSs as well as issues

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affecting their maintenance.

## 2. Literature review

### 2.1. Environmental management systems

Currently, companies increasingly face a high risk environment (Morrow and Rondinelli, 2002; Rivas-asanza et al., 2018) owing to the worldwide recession, uncertainty regarding the competitive environment, the need to reduce costs, and other factors (van der Leeuw, 2018). Concerns related to global environmental issues have forced companies to adopt a proactive approach in management (Epstein et al., 2017), which is why companies increasingly implement alternative solutions, especially environmental ones (Herghiligiu et al., 2019).

The literature on the subject indicates various factors that motivate organisations to implement an EMS. An example is when the customer demands an EMS (Gomez and Rodriguez, 2011). It is generally assumed that certification increases trust among stakeholders who are interested in the organisation's involvement in environmental issues (Jiang and Bansal, 2003; Kouakou et al., 2013). According to Corbett and Kirsch (2009), the certification also improves the image of the organisation and is a potential source of competitive advantage. Campos (2012) indicates that having a certified environmental system is an additional advantage to the organisation (Campos, 2012). Here, there is a certain risk that the top management will treat the environmental system certification as a market innovation that only increases the company's prestige (Pacana and Ulewicz, 2017).

Another determinant is the pressure from various stakeholder groups, including citizens, consumers, NGOs, and even employees who relate to the environmental awareness of societies (Pislaru et al., 2019). To meet the requirements of these stakeholders, enterprises decide to implement solutions focused on environmental protection (Fontaine, 2013). It should be emphasised, however, that enterprises apply environmental management on a voluntary basis (Seifert, 2018).

The transition to a new economic model requires entrepreneurs to approach management activities while accounting for an EMS (Herghiligiu, 2018; Lozano and Vallés, 2007), which is becoming increasingly complex and varied (Karapetrovic and Willborn, 2000). However, if the system is implemented properly, its benefits can significantly change the entire staff's approach to the way the organisation is managed (Zhu et al., 2012).

A condition that is crucial for the proper functioning of the EMS is its integration with the overall organisation management system (Filho and Voudouris, 2009). It must be correlated with the overall goals, priorities, and procedures of the organisation (Walker et al., 2007). This applies not only to environmental policy, which should form an integral part of the organisation's overall policy, but also to all practices, procedures, processes, and measures (Arimura et al., 2008). If such action is not taken, conflicts could occur due to the incompatibility of the environmental and economic goals of the organisation (Daily, 2001).

Organisations adhering to EMS standards are required to adopt environmentally friendly production processes that result in improved environmental performance and, ultimately, improved raw material efficiency, recycling processes, and, consequently, product and service quality (Bozowsky and Mizuno, 2004). Integrating management standards such as an EMS is widely recognised as an effective way for organisations to achieve social, environmental, and economic business goals (Melnyk et al., 2003). Therefore, an EMS is a method for companies to internalise environmental problems by demonstrating a proactive approach to environmental issues (Testa et al., 2018).

The choice of development strategy and environmental protection is the basis for determining an enterprise's ecological policy (Gou, 2014). The concept of enterprise development aimed at implementing environmental aspects may take the shape of an offensive, innovative, defensive, or passive strategy (Azzone et al., 1997; Kumar et al., 2016). It is emphasised that environmental management in the enterprise is

carried out only when a proactive or innovative strategy is chosen (Brockhoff et al., 1999; Kolk and Mauser, 2002). The choice of development strategy is important because of the specific nature of the enterprise's environmental policy, which stimulates the implementation and improvement of the entire management system in the company (Lanoie et al., 2011). The size of the enterprise also affects the internalisation of proactive environmental practices. Small businesses and micro enterprises take proactive measures mainly owing to external pressure, which may result from customer requirements and competitors' choices (Testa et al., 2016; Todaro et al., 2019). Regarding this transformation, co-financing for enterprises and organisations that adhere to pro-ecological standards is also proposed by the EU and national governments (Kotchen and Negi, 2019).

The last 20 years have brought the development of many methods and solutions regarding environmental management within enterprises. The complex generic criterion makes it possible to distinguish between traditional, unconventional, and voluntary systems, including ISO standards as well as information support systems (Arimura et al., 2008; Lozano and Vallés, 2007).

### 2.2. Certification of EMSs

A main task of modern business management is managing a company's activities in a sustainable and environmentally friendly way. Managing production sustainably means that processes and systems need to be modernised such that they do not cause environmental pollution. In addition, caring for the environment by minimising the negative externalities of a company's processes improves the company's image and, thus, increases the trust of both customers and partners (Brodnicka and Jakubiec, 2016).

Global systems that support enterprises in minimising environmental impact are voluntary systems such as eco-management, the EMAS, and the ISO 14001 EMS (Di Noia and Nicoletti, 2016).

The EMAS is an EU environmental certification system that operates based on Regulation (EC) No 1221/2009 of the European Parliament and of the Council of November 25, 2009 with further changes, followed by Regulation (EC) No 2017/1505 on the voluntary participation of organisations in a Community eco-management system and community audit (European Commission, 2017; European Parliament, 2009). EMAS is addressed to all types of organisations, representatives of both enterprises and non-commercial institutions, that are interested in implementing comprehensive solutions for environmental protection. It is a useful tool for creating a culture of sustainable development and effective management of available resources and energy in organisations. EMAS requirements provide specific guidelines according to which companies organise their obligations in the scope of environmental protection, optimise incurred costs, and effectively manage energy and resources. EMAS is also a reliable tool for reporting an organisation's environmental impact, and, thus, it facilitates an open dialogue with interested parties. Registration in EMAS means that the organisation meets the most stringent environmental requirements, and this assures it the prestige of being in a group of enterprises that conducts business in accordance with the concept of sustainable development.

Every organisation that intends to be registered within EMAS needs to follow these steps:

- Conduct an environmental review
- Create an effective EMS
- Conduct an internal environmental audit
- Draw up and develop an environmental declaration
- Be verified by an independent EMAS auditor who has been accredited by the national centre for accreditation
- Apply for registration, together with an environmental declaration validated by the auditor, to the General Director for Environmental Protection.

The EMS, according to ISO 14000 series standard, is a tool that facilitates adapting organisational processes to national and international legal regulations regarding limiting the production and emission of pollutants into the environment, among others. This system is considered an integral part of an organisation's management system. The ISO 14000 series standard provides practical solutions for all types of organisations that actively seek sustainable management of their environmental duties (Castka and Corbett, 2013; Poksinska et al., 2003; Weerasinghe and Jayasooriya, 2020). By the time the newest revision of ISO 14001 was completed in 2015, the sector had been experiencing continued growth for some time due to the interest of client institutions in rational decision making regarding sustainable consumption. (da Fonseca, 2015).

The above-mentioned environmental systems are the two most common in Europe. Although ISO 14000 and EMAS have the same target (developing a sustainable economy), the EMAS system necessitates meeting stricter requirements (Ziegler and Seijas Nogareda, 2009; Anne et al., 2020).

Many companies have attempted to look for an efficient EMS, which led to the development and implementation of ISO 14001. Casadesús et al. (2008) find that the interest of organisations and other entities in implementing EMS, especially the ISO 14000 series standard and EMAS regulations in Europe, has grown dynamically for many years worldwide. Nevertheless, in some countries, there has been a saturation and, later, a slow decline in the number of EMS implementations and certifications observed (Kafel and Nowicki, 2014).

Unfortunately, while the number of companies certified by other systems, such as supplier management systems or health and occupational management systems, at least remains stable, companies possessing an EMS certification tend not to value it in the context of the future (Kafel and Nowicki, 2014; Merli et al., 2018). This trend can be observed in Table 1, which provides the most recent data from the ISO Survey showing the total number of valid ISO 14001 certificates through the years 2009–2019. It shows that after 2016, enterprises started to forgo ISO 14001 certification processes (The ISO Survey, 2020). This trend may be increasingly visible in the following years owing to the global crisis caused by the COVID-19 pandemic as companies, especially the smaller ones, will attempt to cut costs and save funds as much as they can to stay on the market.

Considering only Europe, the number of valid ISO 14001 certifications also started to decrease after 2016 and, according to the current report of the ISO Survey, there were 111,133 certified organisations by the end of 2017. A similar trend can be observed within the EMAS regarding drop outs as well as new resignations from the program (Merli and Preziosi, 2018). According to the latest available data report of the European EMAS Helpdesk, EMAS is held by 3652 organisations in Europe (European Commission, 2020).

Accounting for the above-mentioned cases of withdrawal from certification in recent years from both EMS programs and the research by King et al. (2005), it can be concluded that the certification confirms the existence of a core management system and shows that such systems are associated with the improvement of a company's environmental performance. However, these tests do not confirm that the certification process itself leads to improvement, or that the certification is proof of excellence of the environmental performance of a company. In addition, King et al., from observing this schema of results, found that implementing an EMS is a meaningful activity, while certification is pointless and does not add much to environmental performance (King et al., 2005).

**Table 1**

Total valid ISO 14001 certificates worldwide during 2009–2019.

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of valid certificates	222,974	239,880	243,393	260,852	273,861	296,736	319,496	346,147	317,941	307,059	312,580

Source: (The ISO Survey, 2020).

A similar opinion was presented by Ammenberg et al. (2001) on the lack of importance of the certificate itself. According to them, an ISO 14001 certificate does not reveal much about an organisation's environmental performance and it would be desirable that certified organisations demand more than a certificate from their suppliers (Ammenberg et al., 2001).

Moreover, Heras-Saizarbitoria et al. (2013) indicate that environmental certification audits focus on the procedure rather than the substantive approach to environmental requirements, which raises serious questions about the importance and credibility of the ISO 14001 certification process. According to these studies, the process focuses on documents provided by organisations, regardless of their actual impact on the environment. Therefore, the ISO 14001 certification itself cannot be regarded as a reliable signal of greening the environment, but merely as an external recognition that a structured EMS has been implemented (Heras-Saizarbitoria et al., 2013).

Another conclusion arises from the research conducted by Dogui et al. (2014), where their study demonstrated that auditors often adapt their behaviour to the client's economic context and the company size, which may call into question the prevailing opinion on the independence and impartiality of the certification process as well as the fact that certain pressures to adapt the requirements of an audit to the size of the audited client do exist (Dogui et al., 2014). Dogui et al. (2014) were concerned with ISO 14001 auditing as a field permeated with persistent threats towards auditor independence, which invariably appeared to loom in the shadows of practice. They concluded that ISO auditors encounter, in the course of their work, several aberrations and abnormalities pertaining to independence. ISO auditors assiduously strive to mitigate these aberrations by resorting to various sense-making strategies (Kouakou et al., 2013).

Regardless of the issues described above, there are several positive aspects and benefits to EMS certification. Implementing and certifying a formal and structured EMS based on ISO 14001 or EMAS offers many benefits to a company, including (Al-Kahlout et al., 2019; Boiral and Henri, 2012; Christini et al., 2004; D'Aveni et al., 2010; de Jong et al., 2014; Santos et al., 2016):

- Environmental risk prevention
- Environmental protection
- Company image improvement
- Compliance with legislation
- Rational utilisation of natural resources
- Promotion of recycling
- Raised awareness of employees in environmental issues
- Improved environmental performance and ensured environmental compliance
- Direct and indirect cost savings from increased efficiency, reductions in waste disposal and energy costs, and avoiding costs such as insurance premiums, clean-up costs, legal costs, and fines
- Opening of markets and reduction of trade barriers
- Ensured rigor and effectiveness of practices
- Improved tracking, documentation, and management of environmental issues
- Improved employee involvement, training, and knowledge
- Increased internal visibility, awareness, and motivation for environmental issues
- Improved relationships with stakeholders.

In addition to these, other benefits have been pointed out by Potoski

and Prakash (2005); joining ISO 14001 reduces facilities' time spent on compliance, at a broad level, voluntary programs may serve as institutionalised and, therefore, more credible mechanisms for building trust between firms and regulators, as well as joining an effective voluntary program such as ISO 14001 may institutionalise firms' commitment to cooperating with government regulators (Potoski and Prakash, 2005).

Despite the undisputed advantages of EMS implementation and certification, some studies gain the reliability of data collected by researchers. As pointed by Boiral et al. (2018), the relevance and reliability of the indicators chosen to measure the effectiveness of ISO 14001 are rarely well established (Boiral et al., 2018). This can indirectly lower the confidence level for EMS certification.

The EMSs based on either ISO 14000 series standard or EMAS are not a standard for products, but a standard for systems, which is not aimed at what 'is' manufactured, but rather 'how', with the precondition of legislative fulfilment. From the methodological point of view, the general principle of continuous improvement encompasses the measurement and record of environmental performance and forms the key element of these types of systems (Di Noia and Nicoletti, 2016).

Summarising the research on the certification of EMSs (Grolleau et al., 2007), enterprise size, having previous ISO 9001 certifications, customer needs, human resource management, as well as legislative compliance play a crucial role in an EMS certification decision. Moreover, two sets of factors determine a certification decision process: the first one is generic across different sectors, while the second one is more specific to a given sector.

### 2.3. Credibility of certification

Credibility can be defined as the reliability of a source and it is largely based on perceptions of the veracity and expertise of the information source as viewed by the evidence receiver (Hovland et al., 1953). According to Metzger and Flanagan (2013), this definition concentrates on source credibility, usually conceptualised as the reliability of a speaker or the credibility of data, where the accent has been put on believability of information rather than the speaker. These perspectives can be used to investigate the credibility of certification. Behaviours related to trust and credibility can be divided into two categories, namely, interpersonal and institutional (Misztal, 1996). In the context of certification, trust can be defined (Bugdol, 2010; Rotter, 1980) as the general expectation of individuals or groups that oral or written promises and commitments will be respected and implemented. The certificate of compliance can be considered as a promise made by the organisation, which is confirmed by an external, third party regarding, for example, a specific level of sustainable management commitment by the organisation.

Asymmetry in information about product quality that occurs between buyers and sellers is an important factor that affects consumer attitudes. In this situation, sellers have more data than buyers about the features of products and services and their means of production (Vertinsky and Zhou, 2000). The same asymmetry can be observed in the estimation of an organisation's environmental performance and sustainable attitudes. According to Akerlof's theory of market for lemons, such asymmetry suggests that only poor quality products are enticed to the market, even though buyers are willing to pay more for better quality and suppliers can provide the desirable quality (Akerlof, 1984). Similarly, in the case of information asymmetry, uncertainty and dishonesty regarding the ecological characteristics of products and the sustainability-focused organisations that produce them, will cause consumer rational behaviour to reduce environmental quality expectations. The typical and most popular ways to deal with the problem of asymmetries in information are guarantees, repeat purchase, brand-name goods, licensing practices, and quality signalling (Akerlof, 1984; Belleflamme and Peitz, 2014; Kafel, 2018). According to Belleflamme and Peitz (2014), quality signalling is recommended as a remedy for asymmetric information. Certification of voluntary management standards

responds to the weakness of international governmental authorities in sanctioning and enforcement of legal regulations (Heras-Saizarbitoria et al., 2020b), and consequently, reduces the information asymmetry. EMS certification and green labelling (environmental labelling) are some of the best ways to inform the consumers about the qualities of the product or organisation. Unfortunately, organisations abusing the certification results to increase sales is a common trend currently. As a side effect of such actions, credibility of the certification as perceived by consumers decreases. The greenwashing phenomena in sustainability was indicated as an important problem (Boiral et al., 2020; Wang et al., 2020). The Wang et al. (Wang et al., 2020) study went beyond this and discussed an approach to regain consumer trust after negative greenwashing effects.

Consumers often do not comprehend the meaning of certification and this may lead to mistrust. Zhang et al. (2014) claimed that the meaning of an eco-certification is sometimes confusing for the consumers and they do not know what that certification guarantees. This could be one of the reasons that organisations, which adopt third-party voluntary certification of environmental standards, do not engage in significant, detailed communication activities regarding the real meaning of the achieved certification (Heras-Saizarbitoria et al., 2020a). Moreover, starting from the development process of standards, confusion concerning the main outcome of the management standards is tangible and leads to social conflicts even between the designers of these standards (Heras-Saizarbitoria et al., 2020b). A visible loss of credibility in certification and accreditation systems is indicated as one of the sources of decertification of the management systems such as ISO 9001 or ISO 14001 in Europe (Kafel and Simon, 2017). There is also the problem of faking ISO certificates, which Heras-Saizarbitoria and Boiral (2019) compared to fake educational degrees. The authors detected 4 types of fraudulent ISO certificates in China, namely, counterfeit ISO 9001, unaccredited ISO 9001, paper-worked ISO 9001, and implemented-but-not-in-use ISO 9001. Such challenges can be seen with varying intensity not only in China but also in other countries, making the question of certification credibility a key issue.

According to Bildtgaard (2008) and Tonkin et al. (2015), there are two main dimensions that can be discussed when considering the credibility of the certification, namely, the credibility of the certification processes that are under third party surveillance and the credibility of certification schemes, which consider the wider range of the certification activities, where parties such as the accreditation body, law regulators, or private owners of certification schemes, have a real impact on the final perception of certification results. It is possible to analyse international management standards from both technical and non-technical perspectives. Technical perspectives consider the standards as apolitical artefacts that are taken for granted, with no consideration of their political and social aspects. Non-technical approaches or political approaches focus on the analysis of the development, rationality, and social legitimacy of standards from a wider and more theoretical perspective (Heras-Saizarbitoria et al., 2020b).

The certification principles contained in the ISO / IEC 17021-1 standard indicate that the general purpose of certification is to ensure that all parties trust that the management system meets specified requirements (ISO, 2015). The authors of the standards point out the basic elements of building confidence, namely (ISO, 2012, 2015), neutrality, competence, confidentiality and openness, responding to complaints and appeals, and accountability. In addition, the principle of risk-based approach was indicated as an element for building confidence for management system certification bodies in previously conducted certification processes. Further, the ISO 19011 standard dedicated to the auditing of the management system standards, highlights that audits should be a reliable tool for managers. To achieve this and reach similar conclusions in similar circumstances during the audit processes, the integrity, fair presentation, professional care, confidentiality, independence evidence, and risk-based approach principles are called for (ISO, 2018). According to Boiral and Heras-Saizarbitoria (2015), the external



recognition of ISO certification is largely taken for granted, but its added value and credibility in the eyes of different stakeholders remain unclear. The certified management system standards are described by Heras-Saizarbitoria et al. (Heras-Saizarbitoria et al., 2020b) as a 'meta-standard industry'. It is clear from this that these organisations are mainly interested in the legitimation, sustainability, and growth of this sector (Garud et al., 2002; Heras-Saizarbitoria et al., 2020b; Zinenko et al., 2015).

### 3. Research methodology

We employed focus group interviews (FGIs) to understand the importance of credibility of the certification process of managements systems in the context of EMS. This method made it possible to examine not only the opinions of individual participants on various topics but also how sense-making occurs in action (Morgan, 1997; Wilkinson, 2008). Since focus groups can be viewed as miniature versions of thinking societies, they can be used to methodologically analyse established areas of research (Wibeck et al., 2019). Fig. 1 presents the research design for collecting and analysing the data.

The FGIs were conducted with a semi-structured questionnaire, where the interviewer had a number of items or topics to cover, but did not follow a classical pre-prepared questionnaire (Ginesta et al., 2020).

This study included three focus groups, which were organised during the first quarter of 2020. A total of 20 respondents from different types of organisations that were located in different parts of Poland, acting nationally and internationally, took part in group interviews. Accordingly, two focus groups consisted of seven persons and one focus group consisted of six persons, respectively. The selection of respondents was purposeful. The members of the focus groups were chosen from three different target groups with one common issue – an interest in EMS. So, there were representatives of the production industry, education sector, certification bodies, as well as non-profit associations for environment protection. Representatives of production organisations were responsible for the management of production in their respective enterprises. Participants from universities and research units had scientific interest in environment management. Representatives from service companies (certification bodies as well as from non-profit environmental associations) were strongly oriented towards management systems and environmental issues. Based on the research questions' nature, we invited those business representatives and researchers who had experience and knowledge about the phenomenon being studied and we also kept a balance in terms of the representatives' gender, work, job, and function.

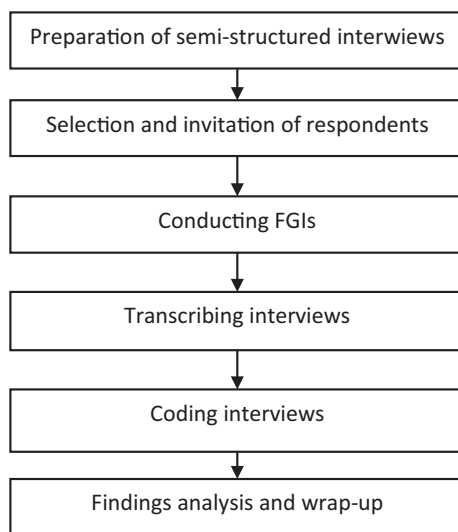


Fig. 1. Research design flowchart.

None of the respondents knew each other prior to this research.

The invited participants were interviewed and key topics were covered with the help of a moderator, namely, implementation of circular economy in organisations, management systems certification for EMS and its role, as well as the conditions needed for implementing EMSs. Table 2 presents the characteristics of respondents.

All FGIs were administered in one of the university's rooms and moderated by a scholar who specialised in the topic of interest, and was aided by an assistant who helped in organising the issues. The interviews lasted approximately 2 h. To transcribe and analyse the interviews, we used NVivo, a qualitative data analysis software. We coded material created from the answers to the following main questions: What is the current role of EMS certification? How do you assess the certification systems currently operating in Poland (ISO 14001, ISO 14000 series for environmental labelling) in terms of ensuring a level of confidence in their results? What actions can contribute to the credibility of existing environmental certification systems? Accordingly, respondent statements were thematically coded at two levels: general themes and detailed issues explaining the major theme. The code hierarchy was agreed among research team members. The categorisation was based on codes' affinity. To illustrate the relationship among key terms, two causal loop diagrams were created and discussed by team members. The causal loop diagrams were created based on the key code and context of respondents' utterance to explain their statements. A total of 155 codes were created and categorised into 29 key codes. The key codes constitute variables that are depicted in the two causal loop diagrams (Figs. 2 and 3) and Table 3, which present factors concerning implementation and sustainability of certified EMSs. The primary codes were used to discuss key codes in a detailed manner.

### 4. Results

The analysis of respondent answers, which was focused on the credibility of EMS's certification, led to the preparation of the causal loop diagram (Fig. 2). Cause-effect relations allowed us to indicate links among particular issues mentioned by the respondents and define the loops.

Credibility of EMS's certification mainly depends on the certifying companies. These entities appear twice in the chart. The certifying companies undertake activities for promoting implementation of the system. For example, Society for Cleaner Production cooperates with the government on the Circular Economy development. According to interviewees, many certifying entities influence the quality of delivered services. Respondents perceived relations between good quality of services and credibility, which is represented by properly performed audits that help to improve the management systems of investigated enterprises. It was summarised in the second FGI as follows: 'If the audit is well done, the auditor is able to point out our problems and we do not treat the audit as a necessary evil, but as an element of improvement'. A poor-quality audit enhances the ease of gaining the certification and this lowers the prestige of certification.

Table 2  
Respondents characteristics (N = 20).

Characteristic	N	%
Gender	–	–
Female	11	55
Male	9	45
Work type	–	–
University	5	25
Production company	8	40
Service company	7	35
Job type	–	–
Business manager	8	40
Researcher	5	25
Business consultant	7	35

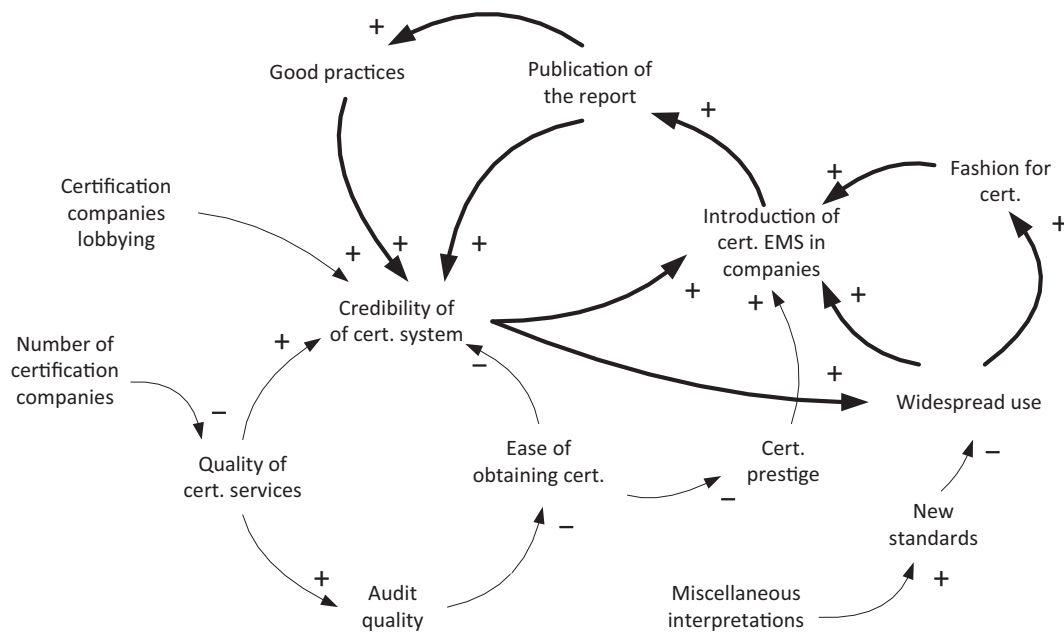


Fig. 2. Casual loop diagram for credibility of EMS's certification.

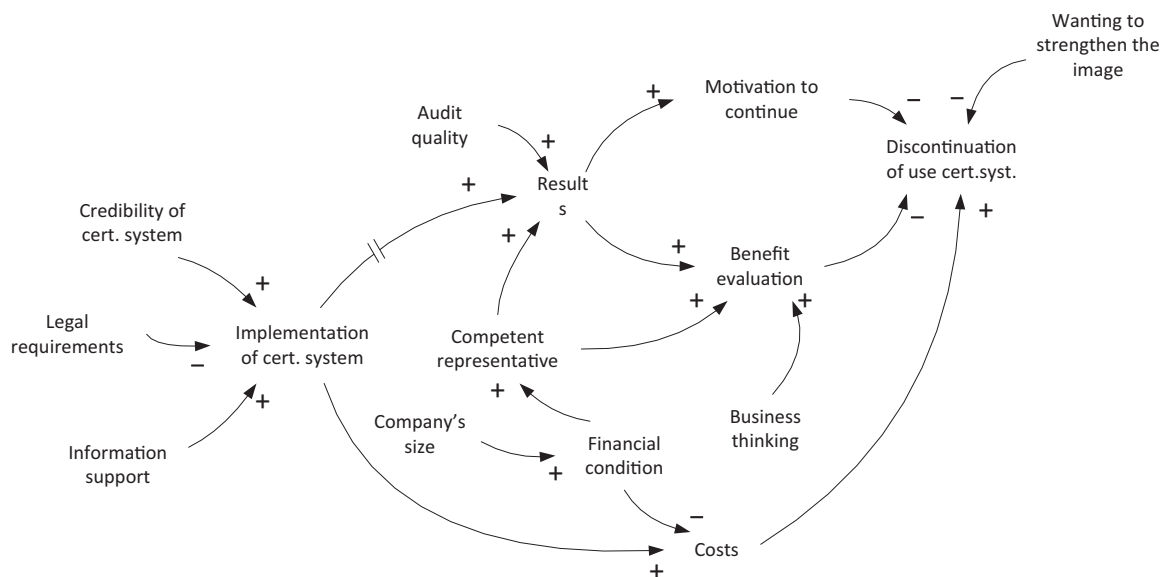


Fig. 3. Casual loop diagram for implementation and maintenance of certified EMSs.

**Table 3**  
Factors affecting the implementation and sustainability of certified EMSs.

Internal factors	External factors
- The wish to strengthen company's brand	- Fashion regarding certification
- Managers' evolving mindset about the environment	- Credibility of certified EMS
- Noticeable benefits	- Pressure from business partners
- Appropriate competences of environmental management representatives	- Financial aid from government
- Possession of financial resources	- Information support by other organisations
	- Legal requirements referring to environmental protection for businesses
	- Quality of audits

A separate impact of certification credibility can be observed in the universality of using certified systems in any given industry. The more common the system, the more implementations occur. Interviewees pointed out the paradox of 'voluntary but compulsory' possession of this system. Fashion and expectation are drivers of what this quote illustrated as the external pressure for certification: 'In the case of ISO, I think it was a bit forced. Anyway, in many cases we are certified as well, or our customers or suppliers ask about our certificates of various kinds'.

If the certification of systems is more common, possessing it becomes trendy, which can result in an increased number of implementations. The respondents also referred to the subject of certification, i.e., environmental management, which is – in their opinions – difficult to standardise. It leads to the creation of new standards, very often replacing former standards by making them outdated and obsolete, and this process restricts the universal nature of existing certification systems.

Reinforcing loops appear among implementation of certified systems and their credibility. An increase in credibility can take place via publications of audit reports that cover conclusions and recommendations. As one respondent explains: ‘These are reliable records, but also because there is this environmental statement and you can scan this company. Each of us can open the webpage, there is a list of registers, there is a name of the company, there is a declaration attached, that is, each of us sees what impact this company has on the environment, what it intends to do to reduce this impact, what it has already done’.

Demonstrating the benefits achieved from EMS’s certification also increases the credibility of such a system. Further, additional credibility’s reinforcement can be derived by the dissemination of best practices. Undoubtedly, the bigger the number of publicly available reports, the better the access to efficient implementations. This, in turn, would increase belief in the effectiveness of EMS’s certification.

The next topic that emerged in respondent statements was the assessment of certification. Opinions about it are divided into three themes. The first refers to cost of certification, where interviewees pointed out the possibility of receiving certifications by paying a fee. The convenience of obtaining certification lead to opinions about the possibility to buy a certification without taking additional actions. This remark was made in the context of differentiated certificates being issued locally or regionally. Costs of certificate maintenance are also a reason to quit re-certification. The second judgement was expressed regarding the reason of being assessed as ‘the desire to shine’. The last theme referred to a relatively small share of certified EMSs in each industry. Resultingly, their real impact on environmental benefits is also small.

Recorded evidence of the impact of implemented, certified EMS influences its credibility. Respondents indicated the benefits gained after introduction of EMS. The first was implementation of a systemic approach towards management that allowed the alignment and clarification of issues that went unnoticed during daily activities, such as legal issues evoked by ISO 14000. This systemic nature and complexity as a feature of certified management systems, was assigned by interviewees as the main benefit. The next advantage stated was the system’s impact on a company’s performance via ‘top management engagement, delegation of duties, definition of goals, and achieving and monitoring these goals’. An opportunity to obtain significant positive environmental effects is secured through examination of the product’s entire life cycle, or more broadly, the entire value chain.

Another key topic discussed during FGIs was the introduction of certified EMSs and their support. Interviewees distinguished several factors that can enhance implementation of EMS (Table 3). A division of internal and external factors, allows us to indicate the key motives to introduce or resign from a certified EMS. One can infer that the strength of these factors affects the final decisions made by company managers.

Some points in Table 3 require additional explanation, especially those about environmental management representatives changing their business mindset and acquiring proper competences. Respondents who talked about managers’ change in the way of thinking, mentioned the applicability of environmental management as a tool for business development. In their opinions, such transformation can appear when benefits are noticeable and significant. However, due to managers’ expectations of receiving quick results, these positive effects do not appear when efforts towards environmental management are suspended.

Such issues can be supported by the training of environmental management representatives. Assigning this role to workers who are not-properly skilled, both in terms of knowledge and tasks, causes environmental issues to be neglected. Respondents pointed out a discrepancy between the theoretical and empirical training of employees who are assigned to oversee environmental management.

Among external factors, some of which were discussed earlier, the respondents focused on incentives. They pointed out legal requirements as having a significant role initially, which if not fulfilled, could make it impossible to proceed to successive environmental management

activities. Respondents underlined the possibility of different interpretations of legal acts, which impacts the undertaking of ostensible actions. Participants emphasised the lack of proper tools for enforcement of laws relevant to environment protection, this was illustrated by the following statement:

‘Nobody will tell me that the landfill, which was created illegally and on it lie 2000 tons [of garbage], was created yesterday. No. It was created months ago or earlier’.

The statement above underscores the need for provision of support by external institutions and stimuli from professional associations.

The role of society was mentioned in the context of expectations towards ecological production and social conscience about the significance of possessing certification by companies. From the perspective of price, consumers perceive ecological products as more expensive, and sometimes dangerous for use. The following opinion of one of the respondents illustrated this issue:

‘You have to face it, that the consumers’ trust is diminishing and actually consumers do not trust in virtually every aspect. Does this packaging harm me? - they think to themselves, and they do not know whether it is harmful or not, but just in case they are sceptical that it is waste’.

Incentives for certification should be defined more broadly regarding environmental management in companies. Respondents recommended the use of positive motivation, mainly associated with financial incentives, like tax exemptions. However, it is not only the existence of these financial incentives that matters, but also how substantial these incentives are for businesspeople.

The factors presented above can be aligned by using the causal loop diagram. Fig. 3 depicts the main relations among the topics that appeared in FGIs with marked directions of impact. Factors leading to implementation of certified EMS were presented earlier, therefore they will be not discussed in a more detailed manner hereafter. Fig. 3 presents all factors that directly impact the introduction of certified EMS or cause its implementation to be waived, these factors have a general nature like that of a governmental policy. The links between the isolated topics indicate one-way causal sequences, without any subsequent reaction. The resulting model presents the continuation of certification not only because of external factors, but also - if not primarily - internal factors related to the quality of EMS implementation.

The implementation of a certified EMS is associated with the impact of such implementation and the costs of its maintenance. The respondents emphasised the delay in the appearance of the results of such a system. The occurrence of effects of the functioning of the system is critical for decision-making regarding the fate of the certified system. The respondents note that the emergence of benefits depends on a well conducted audit as well as a well-prepared environmental management representative. It is indicated that the role of the representative is not only symbolically assigned to accountants or occupational health and safety specialists, but that competence-based training also applies to other employees. According to the respondents, the financial situation of the company, depending on its size, is a factor that influences this. While larger companies can implement their own EMSs and allocate appropriate resources to it, small companies will primarily perceive the costs associated with maintaining the system as a non-returnable investment.

The change in the main management’s way of thinking about the environment, which is reflected in the business practices regarding the environment, plays a separate role that is also important in assessing the benefits. According to the respondents, a broader perspective and way of thinking, increases the positive assessment of the obtained results in the long term. However, if the effects do not appear, the benefits will be small and the cost of system maintenance will be relatively significant for the management. This may increase the probability of resignation regarding certification and implementation of environmental management standards. Finally, another internal factor that should be added to this is the management’s willingness to strengthen the company’s image as a serious business partner.

## 5. Conclusions

The objective of this study was to investigate the importance of credibility of the certification process of managements systems in the context of EMS. In recent decades, scientists in various fields related to environmental research have focused on issues of ecological credibility in the context of a product, especially the direct and indirect environmental impact of the product (Chairy and Alam, 2019; Rosli and Ahmad, 2019). Extant research has focused, inter alia, on determining the credibility of environmental labelling as regarded by consumers (Cai et al., 2017). There is an agreement in the literature to use life cycle assessment LCA as a tool for more reliable environmental labelling (Baldo et al., 2002).

Ecological credibility can be defined as 'a willingness to depend on a product, service, or brand based on the belief or expectation resulting from its credibility, benevolence, and ability about its environmental performance' (Lee et al., 2019). Researches by Chen and Chang (2012) and Lam et al. (2016) confirm that 'green credibility' has a positive impact on green purchasing intention (Chen and Chang, 2012; Lam et al., 2016). Based on the results of the research by Alamsyah and Febriani (2020), it can be concluded that brand environmental awareness is strongly correlated with improving green consumer confidence (Alamsyah and Febriani, 2020). Furthermore, according to (Karatu and Nik Mat, 2015), credibility is one of the fundamental factors of product or service marketing, and thus improves the relationship between the consumer and the seller.

According to the results of our study, an increase in credibility can occur via publications of audit and environmental reports. In addition, the high quality of audits during the certification processes is a key factor that increases the credibility of EMS. In this context, the role of accreditation bodies and international accreditation forums should be highlighted. During this study, respondents pointed out the possibility of receiving certifications by simply paying a fee. In line with this finding, the problem of poor quality of some certification bodies and illegal activities such as fake certification phenomena described by Heras-Saizarbitoria and Boiral (2019), do not bode well for growth EMS credibility.

Previous research, however, overlooked whether the certification of EMSs increases consumer confidence in the organisation. This article focuses on the importance of credibility and reliability in EMS certification. There are several significant conclusions from this study, that are as follows:

- Credibility of EMS certification depends primarily on certifying companies.
- Poor quality audits enhance the ease of obtaining certification and lead to lower prestige of certifications.
- Universality of using certified systems in each industry impacts the certification's credibility.
- An increase in credibility can occur via publication of audit reports that cover conclusions and recommendations.
- Recording evidence of implemented and certified EMS impact positively influences credibility.
- FGI respondents note that the emergence of benefits depends on an audit that is conducted correctly as well as a well-prepared environmental management representative in an enterprise.
- Larger companies are keen to implement their own EMSs and allocate appropriate resources to them, however, small companies will mainly perceive the costs associated with maintaining the system as a non-returnable investment.

These conclusions do not detract from the importance of certification processes for EMSs, as we only have focused on the aspect of credibility of certification. Our findings emphasise the importance of strict auditing and control systems for certifications, which will protect and strengthen the efforts organisations make regarding environmental issues. Trust in

the results of certification can be strengthened through the maturity of certification. According to (Boiral et al., 2018), most of the studies of EMS have concluded that the internalisation and effectiveness of the standard is greater when an organisation has been certified for longer.

As environmental movements become increasingly common, consumers will eventually change their purchasing behaviour and become more open to organisations' environmental behaviours that are confirmed by appropriate certificates (Krause, 1993). The environmental movement has expanded to organisational practices that determine environmental performance. This includes higher environmental standards to innovate and stimulate the efficiency of technology that affects the performance of companies (González-Ruiz et al., 2018). These developments are related to the growth of environmental awareness in the society. Research by other authors also confirms that a large number of consumers are willing to buy organic products even when the price of ecological products is relatively higher (Henriques and Sadorsky, 1996; Laroche et al., 2001; Vapa-Tankosić et al., 2020). Another factor influencing the decisions regarding trust in the certification of EMSs is the quality and satisfaction as perceived by the customer, which are reflected in the trust and loyalty of customers. The implementation of EMSs is therefore, one of the critical organisational factors regarding their environmental performance (Ho et al., 2017).

The conclusions of this study are subject to the inherent limitations of qualitative focus studies. From a theoretical perspective, this research enriches the current literature about credibility of EMS certification. The main contribution of this study is the in-depth analysis of the relationships between credibility of certification and EMS. We strongly recommend further research into the different perspectives and goals of stakeholders interested in EMS certification credibility.

From a managerial perspective, it is important to focus on the long-term perspective because expectations of immediate environmental results can be detrimental. Moreover, according to our study, a broader perspective and way of thinking in the long term increases the positive assessment of the results obtained. Based on our findings, it could be recommended to managers to strengthen the training of environmental management representatives. To achieve this goal, it is essential to reduce the discrepancy between the theoretical and empirical preparation of employees.

From a practical point of view, this study offers the certification bodies an opportunity to seize new opportunities within the field of auditing improvements to increase the credibility of issued certificates. However, there is a need for further research to investigate the effectiveness of accreditation body surveillances under the EMS certification bodies.

This study focused on the credibility of EMS certification. Concerning the existence of other popular management standards, it is recommended that further research explore the credibility phenomena and compare the systems that are gaining popularity to others that have relatively high rates of decertification.

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### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

### Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.eiar.2021.106556>.



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