

## RESEARCH ARTICLE OPEN ACCESS

# Environmental Sustainability Award Winners: Do They Communicate Their Environmental Performance Without Potential Greenwashing?

Luca Marrucci  | Roberta Iovino  | Fabio Iraldo

Sant'Anna School of Advanced Studies, Institute of Management, Pisa, Italy

**Correspondence:** Luca Marrucci ([luca.marrucci@santannapisa.it](mailto:luca.marrucci@santannapisa.it))

**Received:** 13 October 2024 | **Revised:** 29 November 2024 | **Accepted:** 15 December 2024

**Keywords:** communication standards | environmental communication | green awards | green claims | greenwashing

## ABSTRACT

Sustainability awards are often seen as a mark of credibility and can help companies attract new customers, investors and partners. However, there is some question as to whether the companies that win sustainability awards—and therefore who ought to be genuinely committed to sustainability—correctly communicate their environmental performances according to internationally recognised principles for the fair use of environmental labels and claims such as those set by ISO standards. This study examined the web communication practices of a sample of 100 Italian companies that had won a sustainability award. Our findings showed that, while most of these companies boasted their environmental performance in several ways, they did not always follow the above-mentioned communication principles. This suggests that companies need further training and education on how to communicate their environmental performance correctly and in a substantiated manner, thus preventing the risk of greenwashing.

## 1 | Introduction

At its core, green marketing embodies the integration of environmental considerations within a company's strategies, product development and communication efforts. It transcends mere tokenism, aiming for a substantial contribution to environmental conservation and societal well-being (Gionfriddo et al. 2023). This approach does not solely revolve around product innovation or packaging, but encompasses the entire organisational structure, fostering sustainability as a fundamental pillar (Chen et al. 2020).

However, amid the genuine efforts to reduce the burden on the environment, an insidious phenomenon has crept into the corporate landscape, that is, greenwashing. This refers to the deceitful practice of creating an eco-friendly image, misleading consumers into believing that a product or company is more environmentally friendly than it truly is. Greenwashing dilutes

the authenticity of genuine sustainability efforts, blurring the lines between meaningful initiatives and superficial marketing ploys (Chen and Dagestani 2023).

Greenwashing tactics vary widely, ranging from vague or unsubstantiated eco-friendly claims to the strategic manipulation of visuals, labels and buzzwords to evoke a false sense of environmental responsibility. These tactics not only mislead consumers but also undermine the credibility of authentic green initiatives, eroding trust and impeding progress towards genuine sustainability (Marquis, Toffel, and Zhou 2016).

The implications of green marketing and greenwashing are multifaceted, influencing consumer behaviour, market dynamics and the overall sustainability landscape (Khanchel, Lassoued, and Gargouri 2024). On the one hand, sincere green marketing initiatives can foster consumer trust, enhance brand loyalty and contribute positively to environmental conservation

This is an open access article under the terms of the [Creative Commons Attribution](https://creativecommons.org/licenses/by/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2025 The Author(s). *Corporate Social Responsibility and Environmental Management* published by ERP Environment and John Wiley & Sons Ltd.

(Mehnaz et al. 2024). Conversely, the repercussions of greenwashing are profound, tarnishing a company's reputation and eroding consumer trust. This creates a sense of disillusionment among consumers, making it challenging to distinguish between genuinely eco-conscious products and misleading claims. This scepticism can breed cynicism, undermining the collective efforts towards a more sustainable future (Lim and Lee 2023; Moreno and Kang 2020). In fact, the risk is not only to mislead consumers through the excessive and incorrect use of 'green' claims but also to lead genuinely committed companies to lose their competitiveness. All this could lead to market saturation, to the extent that the consumer may not care about whether or not a product or service is ecological as well as leading to a loss of trust in companies (Liu et al. 2024). Adopting a green marketing strategy that is based on generic communication related to the environment, which is not supported by concrete commitment, carries a risk that the company's image will be damaged, losing credibility and trust on the part of customers (Tao and Chao 2024).

Green marketing strategies have evolved due to the tendency of consumers to express conscious purchasing choices and to prefer increasingly more sustainable products and services from both environmental and social points of view (Testa, Iovino, and Iraldo 2020). The current task that green marketers face is therefore to communicate the environmental advantages associated with the consumption of products in a way that is specific and clearly understandable, as well as being substantiated with tangible and scientifically recognised evidence (Iovino, Testa, and Iraldo 2023).

To combat the detrimental effects of greenwashing, new European regulations are emerging. Directive 2024/825/EU recently modified Directive 2005/29/EC on Unfair Commercial Practices by adding new definitions, rules and bans concerning green claims (EC 2024). These bans prohibit generic and vague claims without recognised excellent environmental performance and sustainability labels that lack independent third-party certification or public bodies. The provision of the new directive needs to be transposed into national law by member states, but until then, companies that proactively familiarise themselves with them will be better prepared when the deadline arrives.

In addition, the proposal for the 'Green Claims' Directive on the substantiation and communication of explicit environmental claims (EC 2023) aims to empower consumers to make informed choices about products with environmental claims by ensuring that such claims are clear, accurate, reliable and non-misleading. The Directive introduces a set of harmonised rules for businesses that make environmental claims across all sectors and product categories. In particular, businesses will need to review their current practices and ensure that their claims comply with the new requirements before using them on the market.

Before these stricter regulations came into play, several voluntary frameworks acted as recognised references for evaluating the accuracy and soundness of environmental communication practices. For instance, ISO 14020 and 14021 still provide guidance on making clear, accurate and nonmisleading environmental claims. Businesses of all sizes and sectors can use these

standards to develop and communicate their sustainability performance.

In addition, bodies and industry watchdogs have introduced guidelines and certifications to substantiate and validate the environmental claims made by businesses. Certifications, with all their limitations, have emerged as beacons of authenticity, providing consumers with credible markers to identify genuinely greener products and practices (Testa, Boiral, and Iraldo 2018).

Prizes and awards related to green commitment have also been created, aimed at fostering a landscape where authenticity, transparency and meaningful environmental actions are celebrated and incentivised. These awards should serve as catalysts for driving authentic environmental stewardship and help to distinguish between credible green initiatives and misleading marketing tactics. However, these awards are often promoted by private entities that present strong conflicts of interest with the companies connected to the award itself, thus undermining the principle of fundamental transparency in drawing the boundary between green marketing and greenwashing.

This study, thus, aims to explore whether the environmental web communication of 100 selected companies, which has been deemed 'green' by a known prize, is solid or whether it falls within potential greenwashing practices. As an evaluation method, we used compliance with the principles and requirements proposed by international standards on a product's environmental labels and communications. In particular, the study considered the principles provided by ISO 14020 which sets the fundamental principles regarding the use of environmental labels and declarations, and ISO 14021 which sets the fundamental principles for self-declared environmental claims.

This study highlights the most common environmental communication mistakes made by 'awarded' companies—namely, those that are expected to be more virtuous—and inspires researchers and policymakers to develop more robust antigreenwashing measures. By combining academic rigour with practical relevance, this study helps foster a more informed understanding of greenwashing aimed at promoting more transparent, credible environmental communication.

## 2 | Theoretical Framework and Research Questions

### 2.1 | The Rise of Green Marketing

Green marketing refers to the practice of promoting products, services or brands by highlighting their environmentally friendly aspects or sustainability initiatives (Dangelico and Vocalelli 2017).

Organisations have started aligning marketing efforts with broader CSR initiatives, demonstrating a commitment to environmental causes beyond profit making by highlighting how a product or service impacts the environment (Crapa, Latino, and Roma 2024; Waheed and Yang 2019). This transition has been supported by consumers, who respond favourably to companies with corporate social responsibility initiatives (Hayat

et al. 2020). In fact, consumers actively seek out products that align with their values, preferring brands that demonstrate a commitment to environmental responsibility (Bianchi, Reyes, and Devenin 2020).

However, consumers' reactions to green marketing are influenced by a combination of factors, including personal values, trust in the brand's authenticity, market trends, pricing, product quality and effective communication of environmental benefits (Cerri, Testa, and Rizzi 2018; Dangelico, Ceccarelli, and Fraccascia 2024).

In particular, as proven by Abid, Abid-Dupont, and Moulins (2020), authenticity, transparency and genuine efforts related to sustainability are crucial for successful green marketing. Clear communication and education on the environmental impact of products or services can influence consumer behaviour. Brands that effectively convey how their offerings contribute positively to the environment tend to receive better responses (Opferkuch et al. 2023). In addition, external factors, such as prevalent environmental concerns or social movements advocating for sustainability, can significantly impact consumer reactions (Louis and Lombart 2024).

However, despite the emphasis on environmental benefits, consumers still prioritise essential functional attributes such as product performance and quality (Boccia, Malgeri Manzo, and Covino 2019). Moreover, while many consumers express interest in more sustainable products, price remains a significant factor (Dangelico, Nonino, and Pompei 2021).

Since people are more aware of environmental issues and look for products aligned with their values, organisations realise the importance of demonstrating their commitment to environmental causes beyond mere profit making (Seele and Lock 2015). Green marketing, thus, offers a competitive edge (Xia et al. 2023). Businesses that concretely back CSR and green advertising with actions and practices can attract environmentally conscious consumers and gain market share (Di Iorio et al. 2023).

Companies across the spectrum recognise the importance of showcasing their commitment to environmental responsibility to attract consumers who prioritise sustainability in their purchasing decisions (Taylor, Vithayathil, and Yim 2018). While the trend towards sustainability and eco-consciousness has permeated many industries, the emphasis on green marketing may vary across sectors since some have a more natural alignment with eco-friendly initiatives (Wang and Juo 2024).

However, green marketing is not without its challenges. Its future depends on continued consumer demand for more sustainable products, stringent regulations promoting eco-friendly practices, fair and scientifically substantiated green claims and the genuine commitment of businesses to environmental sustainability beyond mere marketing strategies.

## 2.2 | Greenwashing

One significant issue is 'greenwashing', where companies might exaggerate or falsely claim that their products are

environmentally friendly in order to attract consumers, without genuine commitment or actions towards environmental sustainability (Lyon and Maxwell 2011). Greenwashing is thus a deceptive marketing strategy employed by corporations or organisations to present an environmentally responsible public image while often engaging in practices that are harmful to the environment (Seele and Gatti 2017). The origins of greenwashing can be traced back to the rise of environmental awareness in the mid-20th century (Delmas and Burbano 2011).

As people became more concerned about issues such as pollution, climate change and resource depletion, companies began to adopt green marketing strategies aimed at appealing to environmentally conscious consumers (Taoketao et al. 2018). However, instead of making substantial changes to their practices, some companies opted for superficial or misleading tactics to capitalise on emerging green trends (Keresztúri, Berlinger, and Lublóy 2024). Greenwashing can thus have detrimental effects on consumers creating confusion and distrust, making it challenging to make informed purchasing decisions (de Vries et al. 2015). Consumers might end up supporting companies that falsely claim to be environmentally responsible, inadvertently contributing to environmental degradation or, conversely, developing scepticism towards genuinely committed companies that may, thus, face unfair competition from those engaging in greenwashing (Jung and Lee 2022).

To counter greenwashing, various organisations and watchdog groups have begun to scrutinise and expose misleading environmental claims. Some governments have also implemented regulations and guidelines to prevent deceptive green marketing practices, urging companies to substantiate their environmental claims or face penalties (He and Gan 2024). Consumers can also take steps to identify and avoid greenwashing by conducting research, looking for credible certifications, examining a company's track record and transparency regarding its environmental initiatives and supporting brands with proven commitments to sustainability (Todaro and Torelli 2024).

Companies often use ambiguous terms or vague language in their marketing materials without providing concrete evidence or specific details regarding their environmental efforts (Wang, Hsieh, and Sarkis 2018). Sometimes companies highlight less important environmental aspects of their products or operations while ignoring the more significant environmental issues related to their overall impact. Even using images or symbols related to nature, greenery or animals in advertisements can create an association with environmental friendliness, even if the product or company has little or no connection to such values (Seele and Schultz 2022).

Companies may focus on one positive aspect of their product while ignoring other negative environmental impacts or making sustainability claims without credible certifications and evidence (Testa et al. 2015). Overstating the environmental benefits of a product or service or making claims that cannot be substantiated are also categorised as greenwashing.

Greenwashing, thus, hampers informed decision-making and impedes the growth of genuinely sustainable markets, potentially leading to apathy or disengagement from environmentally

conscious purchasing practices (Ferrón-Vílchez, Valero-Gil, and Suárez-Perales 2021). As consumers become disillusioned with false claims, they might opt for cheaper, nongreen products, leading to a potential loss of market share for genuinely eco-conscious brands (Zhou et al. 2024). This scepticism, in addition, can erode the credibility of authentic green products and also discourage companies from focusing on green technologies and investments, thus slowing down decarbonisation and the ecological transition (Ramasamy et al. 2020).

Although scholars have already investigated sustainability and corporate responsibility from different perspectives (Kucharska and Kowalczyk 2019; Nave and Ferreira 2019), research needs to specifically address the individual practices adopted by organisations, also considering different geographical, cultural and legislative contexts.

### 2.3 | Research Questions

The literature on greenwashing has focused primarily on consumer responses to the advertisements themselves, on the framing of green claims as well as on the drivers (Velte 2023). However, to date, no research has explored whether companies that overall are deemed to be highly engaged in CSR management use potential greenwashing practices in their communication initiatives, which could impact their long-term reputation and loyalty (Wang et al. 2023). Organisations that win sustainability awards base their strategies on using sustainability as leverage, implying that they are confident in associating their brand with an environmental commitment. These organisations are then recognised as leaders in environmental sustainability by industry professionals, and their marketing campaigns are often centred on this aspect. Given that today's consumers want organisations to take a stand on environmental issues and pay attention to green initiatives during their purchasing activities, it is important to scrutinise the authenticity of their claims and statements on green behaviours. However, this research field is in its infancy and no work has previously examined greenwashing hidden in the overall green strategies of organisations that are widely recognised as the most sustainable ones. This study, thus, explores the following:

RQ1. *Do sustainability award-winning companies respect anti-greenwashing principles in their communication initiatives?*

There are many potential greenwashing practices that organisations might use to communicate the environmental characteristics of their process or products/services. To further understand the extent to which greenwashing occurs in this context, it is also important to examine the types of misleading practices that recur the most and least often by these organisations. These findings shed light on the errors that organisations commit the most in order to communicate their environmental performance to consumers and thus, which could be avoided.

RQ2. *Which types of greenwashing practices are committed most often and least often by sustainability award-winning companies?*

## 3 | Methods

### 3.1 | Materials Selection

The list of companies analysed within this study had all received an award for their environmental commitment and efforts. All the companies are Italian and had been recognised as the 'best sustainable companies by the Sustainability Award Italia. This award aims to reward those companies that distinguish themselves in terms of sustainable development, social responsibility and respect for the environment. In fact, according to the Sustainability Award website, it 'aims to enhance and promote entrepreneurial experiences oriented towards the intelligent innovation of processes, systems and products, while at the same time stimulating sustainable behaviour'. Any company that has their registered office in Italy and has achieved a turnover of at least 10 million euros and no more than 600 million euros in the last 2 years can participate in this award. To date, there have only been two editions, 2021 and 2022, which have issued awards to the top 100 Italian companies. A third edition is ongoing. This sample size provided sufficient data to address the research questions proposed and exceeds those used in similar research (Li, et al. 2023; Cerciello, Busato, and Taddeo 2023).

Companies typically communicate their sustainability activities through many channels such as annual reports, CSR reports and websites, which are the most commonly used sources for analysing and profiling environmental actions (Engert and Baumgartner 2016; Lock and Seele 2016). Since the companies were awarded because of their strong environmental commitment, we analysed their websites as the most likely places to communicate their initiatives and environmental performance to consumers and customers. However, as suggested by Jestratijevic, Uanhoro, and Rana (2024), this study also analysed the CSR reports in order to better understand the companies' overall priorities and strategies and to assess the verifiability of the environmental claims made on the websites.

### 3.2 | Coding Schema and Analysis

The requirements established by the ISO 14020 (ISO 2023) and ISO 14021 (ISO 2016) standards were used as criteria for evaluating the environmental communication of the awarded companies. While ISO 14020 sets general principles for the correct use of environmental claims and labels, ISO 14021 sets out the requirements for self-declared environmental claims by producers, importers or distributors of products, without the need for intervention by an independent certification body. The requirements used to analyse the communication initiatives and green claims of the 100 companies are shown in Table 1 below.

These criteria were then used to evaluate whether the environmental communication of these TOP companies was carried out correctly or was potentially misleading.

The communication adopted by the awarded companies was also analysed using the 'Seven Sins of Greenwashing' promoted by Terrachoice (Terrachoice 2010), which is a consulting firm specialising in environmental sustainability, product certification

**TABLE 1** | Requirements, adapted from ISO 14020 and 14021 standards, used as evaluation criteria.

Requirement	Description
Clarity	Claims must be presented in a way that clearly indicates whether the claim applies to the complete product or only to one component or packaging of the product.
Comprehensibility	The declarations must be presented in a way that is comprehensible and easily interpretable by the target audience.
Specificity	Statements must be specific regarding the environmental aspect or environmental improvement claimed. 'Environmentally friendly', 'Sustainable' and 'non-polluting' should not be used without any qualifications as to what they actually mean.
Explanatory Statements	An environmental claim must be accompanied by an explanatory statement if the primary statement alone may be easily misunderstood.
Relevance	Environmental labels and declarations must provide all the key information so that the claim regarding the reported environmental benefits is understandable. The label must refer to all phases relating to the product life cycle or specify that it is limited to only one element of the product/service.
Consistency with the product	Assertions must be relevant to the product. They must not concern characteristics that have never been associated with that product/service category.
Consistency with the context	Declarations must be relevant to the area in which the corresponding environmental impact occurs.
Temporal relevance	Assertions must be based on a recent process or product change.
Correct comparison	If the claim includes a comparison, it must be on a specific environmental aspect or impact, clarifying the methodology used for the comparison and all the relevant elements for the correct interpretation.
Existence of evidence	Assertions must be substantiated and verified. Evidence must be available or provided upon request to all interested parties.
Disclosure	The evidence must be consultable and verifiable by interested parties. The responsible person must be easily and clearly traceable.
Scientific methodology	Environmental declarations must be based on a sufficiently comprehensive and complete scientific methodology.
Truthfulness	Claims must relate to an existing environmental benefit and not exaggerate the environmental aspect of the product to which it refers.
No false marks	Environmental declarations must not be false. They must be presented in a way that does not imply that the product is endorsed or certified by an independent third-party organisation when it is not.

and testing services and is now known as the UL Environment. These seven sins (shown in Table 2) highlight misleading marketing tactics used by companies to portray their products as environmentally friendly when they might not be.

All the authors autonomously examined and evaluated the collected materials according to the evaluation criteria and the greenwashing sins. The results were thus compared when opinions differed, the specific case was analysed by all the authors together and a final evaluation was made. The results were thus checked using a random sampling technique by two external researchers in order to guarantee reliability and accuracy of the analysis.

#### 4 | Results

To assess whether sustainability award-winning companies respect antigreenwashing principles in their communication

initiatives, this study evaluated the communication adopted by companies on their websites in relation to environmental topics. The requirements of ISO 14020 and 14021 were used as evaluation criteria to assess the reliability of the claims. However, it was also important to determine whether certain aspects of a company's communication strategy could be classified as one of the greenwashing sins. As such, the second research question looked at what kinds of greenwashing practices sustainability award-winning companies were more likely to adopt.

Based on the methodology and the sample presented, Figure 1 reports the results obtained by analysing the principles included in the ISO 14020 and 14021.

The percentages represent the companies that did not respect the ISO principles. However, it is worth noting that within the top 100 companies, 14 did not present their environmental communication on the website in any way, while 17 companies

**TABLE 2** | The 'Seven Sins of Greenwashing'.

Sin	Description
Hidden Trade-Off	Suggesting that a product is 'green' based on an unreasonably narrow set of attributes without focusing on other important environmental issues.
No proof	An environmental claim that cannot be substantiated by easily accessible supporting information or by a reliable third-party certification.
Vagueness	Any claim that is so poorly defined or broad that its real meaning is likely to be misunderstood by the consumer.
Irrelevance	An environmental claim that may be true, but which is also unimportant or unhelpful for consumers seeking environmentally products.
Lesser of two evils	Claims that may be true within the product category, but which risk distracting the consumer from the greater environmental impacts of the category as a whole.
Fibbing	Environmental claims that are simply false.
Worshiping false labels	A product that gives the impression of a third-party endorsement through either words or images where no such endorsement actually exists; in other words, fake labels.

presented sustainability reports as the only environmental communication tool. Although the sustainability report is a form of communication, it is strange that a company awarded for its commitment to environmental sustainability would not use other forms of environmental communication. In fact, most of the companies analysed had a specific section regarding their sustainability strategies and actions and, as a further communication tool, also presented the sustainability report. However, the most surprising aspect emerging from the analysis is that none of the top 100 companies respected all the requirements simultaneously. At least one principle was always violated.

Of 100 companies, 42% did not respect the 'clarity' principle. For instance, one company claimed to have used 6,000,000 m<sup>2</sup> of recycled PET film, exclusively reporting the absolute data without specifying either a time reference or a connection with production outputs. Other unclear claims are often related to the reduction in CO<sub>2</sub> emissions. Companies reported CO<sub>2</sub> reductions without reporting concrete data or without specifying the

necessary elements for the correct interpretation: the methodology used for the calculation, the phases included in the calculation, the baseline year and so on. Others seemed to only communicate targets set for 2030 rather than a particular result achieved.

Of 100 companies, 47% did not respect 'Comprehensibility'. Although clarity and comprehensibility are very similar concepts, they are slightly different. Clarity in environmental claims refers to the transparency and accuracy of the information conveyed. Comprehensibility, on the other hand, involves the broader concept of how well the environmental claim is understood and grasped by the target audience. This goes beyond mere clarity and delves into whether the claim is understandable and meaningful to the intended consumers.

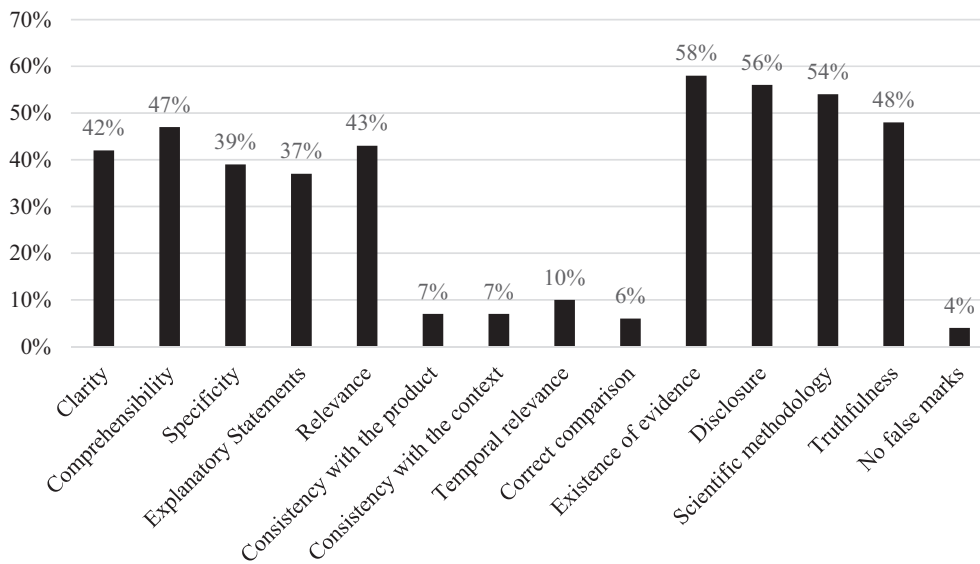
A total of 39% of companies presented an environmental communication that did not respect the 'Specificity' principle. '100% Natural', 'Eco-Friendly Packaging', 'Green Product', 'Environmentally Safe', 'Chemical-Free' and so on, all lacked the necessary specifications together with the product's actual environmental aspect or impact from which the environmental benefit derived. Using vague terminology prevents consumers from having a clear and univocal understanding and interpretation of the environmental characteristics subject of the claim.

A total of 37% of companies did not present 'explanatory statements', that is, the necessary information to better understand the meaning of any statement. The claim and the explanatory statement need to be presented in such a way that it is clear that they should be read together. In general, consumers need to be given access to the information necessary to understand and correctly interpret the meaning of any statement, symbol or term.

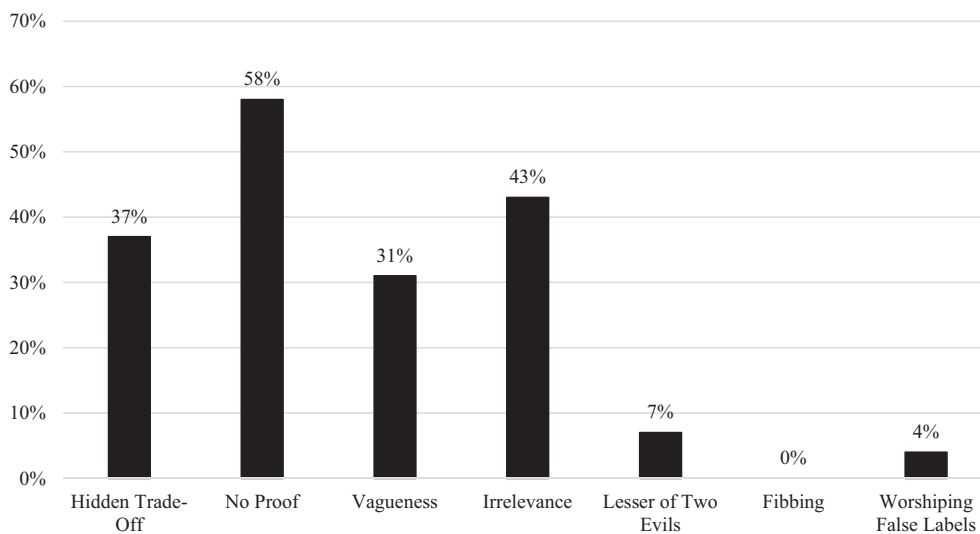
'Product coherence' and 'Context coherence' were not respected by 7% of the companies. A company that designs and builds custom-made homes highlighted the removal of 2072 m<sup>2</sup> of asbestos among its sustainability results. However, this statement is not consistent with the product or with the context, as the production and installation of asbestos have been prohibited by law since 1992, and since 2013 there has been a legal obligation to remove it.

Only seven companies used a 'correct comparison' in their communication strategies. Within this small group, six of seven companies did not respect the requirements laid down by the ISO. Regardless of the data or the information reported, none of the companies highlighted the methodology adopted. 'Existence of proof' and 'Disclosure' were not respected by 58% and 56% of the companies, respectively. These were mainly cases where there was no documentation to support the company's claim or a specific contact to request further information.

Often, when there are no supporting documents, it is difficult to evaluate the 'truthfulness' of a company's claim. In fact, 48% of companies did not respect this principle. Although the statement is literally true, it could be misinterpreted or misleading due to the omission of important facts. For example, the claim 'contains recycled material' could suggest that all or just part of the material contained in the product is recycled. This therefore



**FIGURE 1** | Percentage of the 100 awarded companies whose communication practices were not compliant with the ISO principles.



**FIGURE 2** | Percentage of the 100 awarded companies that presented communication practices that fell within the seven sins of greenwashing.

needs qualifying (correctly indicating which components and what percentage is made with recycled material) to ensure that consumer is not misled.

A total of 54% of companies did not present the ‘Scientific Method’ to support the assertion and produce accurate and reproducible results. Very often there was no LCA study, third-party certification or laboratory analysis that certified the product’s characteristics mentioned in the environmental communication. To conclude the analysis, 4% of companies presented ‘false marks’. In these cases, the specific rule governing the use of the assertion/logo was not reported or the actual compliance with the requirements set out in the rules governing the use of the claim/logo is not clear.

Based on the results of this first analysis, another survey was carried out in order to verify how many of these 100 companies had committed the seven sins of greenwashing, identified in 2010 by Terrachoice (Figure 2).

Returning to the ‘specificity’ principle envisaged by the ISO 14020 and 14021 standards, ‘vagueness’ could be ascribed to 39% of companies. A total of 43% of companies used claims that came under ‘irrelevance’ category by violating the ‘relevance’ principle of the ISO standards. ‘Hidden trade-offs’ sin could be ascribed to 37% of companies, as companies limited themselves to highlighting only some aspects of the products, services or decisions that might appear beneficial in terms of one aspect, but could be compromising in another area. A total of 58% of companies did not respect the ‘Existence of evidence’ principle and thus also ‘No proof’. ‘Lesser than two evils’ could be ascribed to 7% of the companies by involving the misleading portrayal of a product, service or practice as more environmentally friendly than a comparable alternative, when both options were still harmful to the environment. As regards ‘Fibbing’, we found no robust of the companies’ claims being fake, although, as highlighted by the requirement of ‘truthfulness’, the omission of relevant facts was quite common.

## 5 | Discussion

### 5.1 | Theoretical and Political Implications

The purpose of this study was to examine to what extent environmental communication principles are respected in green claims and whether the companies that have been recognised and awarded for their environmental sustainability commitment could be described as using greenwashing in their communications. Unfortunately, the results highlighted that misleading claims are often used by companies although with a strong heterogeneity.

Institutional theory has reported that firms gain legitimacy by complying with stakeholders' requirements. However, stakeholder pressure may also push companies to greenwashing behaviours. In addition to environmental actions not all being equally effective in creating environmental legitimacy, the type of greenwashing strategies adopted by companies can generate different outcomes.

Greenwashing can be viewed as an attempt to manage stakeholders' perceptions and expectations, particularly those of consumers and investors. Companies might use information asymmetry in greenwashing to satisfy stakeholder demands for environmental responsibility without making substantial changes (García-Sánchez and Noguera-Gámez 2017; Marrucci and Daddi 2021). Companies may also engage in greenwashing to conform to institutional pressures, such as societal norms, industry standards or regulatory expectations, without fundamentally changing their practices as shown by Ren, Wu, and Hou (2024). While conforming to institutional pressures is crucial for legitimacy, companies should strive to move beyond mere compliance (Cubilla-Montilla et al. 2020). By embracing and influencing institutional changes positively, they can drive real shifts towards sustainability through reliable sustainability ratings (Muñoz-Torres et al. 2019; Majid et al. 2020).

Greenwashing can stem from the principal-agent problem, where management might prioritise short-term financial gains (the agent's interest) over genuine long-term sustainability (the principal's interest). Aligning the interests of management with the long-term interests of shareholders and the broader society is essential. This can involve incentivising executives based on long-term sustainability goals and ensuring transparent reporting to mitigate agency conflicts (Marrucci, Daddi, and Iraldo 2024).

If greenwashing becomes widespread, it might undermine global efforts by creating scepticism or cynicism regarding the sincerity of corporate and national commitments to combating climate change and prompting the circular economy (Marrucci et al. 2022). Instances of greenwashing may prompt governments to introduce stricter regulations and monitoring mechanisms (Hristov and Searcy 2024). This could lead to the implementation of clearer guidelines and penalties for false or misleading environmental claims, impacting corporate practices and marketing strategies. While public scrutiny of greenwashing practices can pressure companies into adopting more authentic and comprehensive sustainability practices, greater awareness of greenwashing can empower consumers to demand

transparency and hold companies accountable for their environmental claims.

Existing frameworks, such as the European Union's Green Claims Directive, represent a significant step towards harmonising environmental communication rules across member states. However, the study reveals gaps in corporate adherence to even voluntary standards like ISO 14020 and 14021. These findings suggest that voluntary compliance alone is insufficient and point to the necessity of mandatory, enforceable rules with clear penalties for noncompliance. Governments must integrate these findings into policy by introducing stricter monitoring mechanisms and penalties for misleading claims to deter companies from adopting superficial sustainability practices. The findings also raise broader questions about corporate governance and its alignment with public policy goals on sustainability and climate action. Greenwashing erodes public trust, potentially leading to apathy towards genuine sustainability efforts. Politically, this mistrust could weaken support for broader environmental initiatives and policy measures aimed at achieving national and international sustainability goals, such as those outlined in the Paris Agreement or the European Green Deal. The political challenge lies in balancing incentives for companies to adopt genuine sustainability practices with punitive measures for deceptive behaviour.

As the study shows, even companies celebrated for their environmental commitment engage in communication practices that can mislead consumers. This undermines the credibility of such awards and calls into question the integrity of entities granting them. Politically, this necessitates a review of award criteria, requiring third-party verification and transparency to maintain their legitimacy. Policymakers could promote certification programmes overseen by independent bodies to ensure unbiased assessments and safeguard public confidence in these markers of sustainability.

### 5.2 | Practical Implications

For companies, greenwashing has several practical implications that can significantly impact their operations, reputation and long-term sustainability strategies. Greenwashing can lead to a loss of consumer trust and damage a company's reputation extending beyond the specific product or campaign, affecting the overall brand image. Rebuilding trust can be lengthy and challenging. Making false or exaggerated environmental claims can result in legal repercussions. Regulatory bodies may impose fines or sanctions for deceptive marketing practices, leading to financial losses and legal battles that tarnish a company's standing. Greenwashing can attract negative attention and criticism from the stakeholders, impacting investment decisions and relationships with key stakeholders. Responding to the growing demand for authentic sustainability can put pressure on companies to innovate and adapt their practices requiring substantial investments and changes to meet genuine environmental goals.

However, this research shows that rather than making false claims, companies are mainly using vague and unclear messages that could mainly confuse consumers. Environmental declarations should be understandable and clear; thus, the



message must be correctly and easily interpretable by the target audience. The language used needs to be checked to ensure that the message is formulated in such a way that the interpretation is unambiguous. A claim should not be used if it could lead to erroneous interpretations or could be misleading due to the omission of relevant facts. Assertions must be presented in such a way that it is clear whether they apply to the complete product, a single component or packaging of the product, an element of the service or the company's business in general. It is not only the message itself that should be considered but also 'where' the claim is applied or used.

This study also highlights that the absence of proof and explanatory statements connected with environmental communication is, by far, the most common greenwashing practice. In fact, if the statement alone could be misunderstood, this should be accompanied by an explanatory statement. The assertion and explanatory statement should be presented in such a way that it is clear that they are to be read together. In general, consumers need to be given access to the information necessary to understand the meaning of any statement, symbol or term. On the website, access to explanatory statements, for example, should be possible through a link accessed by clicking on the term or phrase that could be misunderstood. The actual and technical sources of environmental labels and declarations must be proven and verifiable. The person responsible for the content of the claim and whose role is to respond in the event of a request for information should be clearly identified. Evidence to support environmental labels and claims should be available and provided upon request to all interested parties.

Long-term viability increasingly depends on genuine commitment to eco-friendly practices that can be, however, overshadowed by the competitors' deceptive claims, making it harder for companies with authentic environmental initiatives to stand out in the market undermining the competitive advantage of truly sustainable products or practices. To regain consumer trust and maintain credibility, companies need to adopt transparent communication strategies. Authenticity, backed by clear evidence and verifiable data, is critical in communicating sustainability efforts. Companies that prioritise authenticity in their sustainability initiatives stand to gain not just in terms of consumer trust but also in long-term profitability and positive societal impact (Dainelli, Daddi, and Marrucci 2024).

### 5.3 | Limitations and Future Research

While analysing 100 Italian sustainability awarded companies is a significant number, it might not represent the entire landscape. It is crucial to ensure that the sample is diverse enough to draw generalisable conclusions. Future research could thus extend the analyses to provide an international view. Social norms and policies related to green communication differ across countries and could thus play a role in the greenwashing practices observed. It could also be useful to understand the contribution of nonawarded companies to greenwashing.

ISO 14020 and ISO 14021 are critical references, but focusing solely on these two standards, which are still voluntary, might overlook other important criteria or laws that companies should

follow. Future investigations could use the Green Claims Directive as evaluation parameters.

Although all we have extensive experience in environmental sustainability and, above all, in green marketing, assessing compliance can be subjective. Despite the crosscheck approach adopted in the methodology, the interpretation of compliance may vary across researchers, leading to inconsistencies in evaluations. Exploring how stakeholders perceive and respond to companies' environmental communications could provide valuable feedback on the effectiveness of green initiatives and marketing.

Interpreting environmental communications involves language nuances and subjective analyses. Different interpretations or translations could influence the evaluation process. Incorporating qualitative methodologies, such as interviews or case studies, could provide deeper insights into the motivations, challenges and successes behind companies' environmental communications.

Lastly, standards and practices evolve over time. Companies might have updated their strategies or adhered to newer standards since the study was conducted, potentially impacting the study's relevance. Tracking the evolution of these companies' sustainability practices over time could provide insights into trends, improvements or regressions in environmental communications.

## 6 | Conclusions

The growing societal focus on the natural environment has prompted businesses to undertake various initiatives aimed at adopting more environmentally friendly practices, motivated by a desire to maintain a positive image and earn the support of their stakeholders. However, for the same reason, companies may resort to greenwashing practices, despite also being rewarded and applauded through industry awards. The absence of clear and enforced mandatory regulations for eco-friendly claims enables some companies to exaggerate or misrepresent their environmental efforts without facing any consequences. Public entities such as the European Commission could use their main tools based on certification schemes and third-party verifications to evaluate and verify green communications adopted by companies (Marrucci, Daddi, and Iraldo 2019; Darnall et al. 2022).

With the rise in eco-conscious consumers and the presence of vigilant environmental NGOs, such symbolic environmental tactics are not likely to succeed and could even be detrimental (Lee 2019). This study takes a first step in examining whether a relationship exists between a company's commitment to environmental sustainability and the company's tendency to use greenwashing strategies to promote their environmental causes. Based on the information available, a significant proportion of the award-winning companies were found to engage in incorrect environmental communication practices, without respecting internationally recognised communication principles within their advertising campaigns. This study represents an initial examination of the commitment and environmental communications of companies, which could provide guidance for future research and for companies that wish to commit more fully.

## Acknowledgments

Open access publishing facilitated by Scuola Superiore Sant'Anna, as part of the Wiley - CRUI-CARE agreement.

## References

- Abid, T., M.-A. Abid-Dupont, and J.-L. Moulins. 2020. "What Corporate Social Responsibility Brings to Brand Management? The Two Pathways From Social Responsibility to Brand Commitment." *Corporate Social Responsibility and Environmental Management* 27, no. 2: 925–936. <https://doi.org/10.1002/csr.1856>.
- Bianchi, C., V. Reyes, and V. Devenin. 2020. "Consumer Motivations to Purchase From Benefit Corporations (B Corps)." *Corporate Social Responsibility and Environmental Management* 27, no. 3: 1445–1453. <https://doi.org/10.1002/csr.1897>.
- Boccia, F., R. Malgeri Manzo, and D. Covino. 2019. "Consumer Behavior and Corporate Social Responsibility: An Evaluation by a Choice Experiment." *Corporate Social Responsibility and Environmental Management* 26, no. 1: 97–105. <https://doi.org/10.1002/csr.1661>.
- Cerciello, M., F. Busato, and S. Taddeo. 2023. "The Effect of Sustainable Business Practices on Profitability. Accounting for Strategic Disclosure." *Corporate Social Responsibility and Environmental Management* 30, no. 2: 802–819. <https://doi.org/10.1002/csr.2389>.
- Cerri, J., F. Testa, and F. Rizzi. 2018. "The More I Care, the Less I Will Listen to You: How Information, Environmental Concern and Ethical Production Influence consumers' Attitudes and the Purchasing of Sustainable Products." *Journal of Cleaner Production* 175: 343–353. <https://doi.org/10.1016/j.jclepro.2017.12.054>.
- Chen, P., and A. A. Dagestani. 2023. "Greenwashing Behavior and Firm Value - From the Perspective of Board Characteristics." *Corporate Social Responsibility and Environmental Management* 30, no. 5: 2330–2343. <https://doi.org/10.1002/csr.2488>.
- Chen, Y.-S., S.-H. Lin, C.-Y. Lin, S.-T. Hung, C.-W. Chang, and C.-W. Huang. 2020. "Improving Green Product Development Performance From Green Vision and Organizational Culture Perspectives." *Corporate Social Responsibility and Environmental Management* 27, no. 1: 222–231. <https://doi.org/10.1002/csr.1794>.
- Crapa, G., M. E. Latino, and P. Roma. 2024. "The Performance of Green Communication Across Social Media: Evidence From Large-Scale Retail Industry in Italy." *Corporate Social Responsibility and Environmental Management* 31, no. 1: 493–513. <https://doi.org/10.1002/csr.2581>.
- Cubilla-Montilla, M. I., P. Galindo-Villardón, A. B. Nieto-Librero, M. P. Vicente Galindo, and I. M. García-Sánchez. 2020. "What Companies Do Not Disclose About Their Environmental Policy and What Institutional Pressures May Do to Respect." *Corporate Social Responsibility and Environmental Management* 27, no. 3: 1181–1197. <https://doi.org/10.1002/csr.1874>.
- Dainelli, F., T. Daddi, and L. Marrucci. 2024. "Financial Sustainability of Circular Innovations in SMEs. A Case Study From the Fashion Industry in Italy." *Journal of Cleaner Production* 451: 142042. <https://doi.org/10.1016/j.jclepro.2024.142042>.
- Dangelico, R. M., G. Ceccarelli, and L. Fraccascia. 2024. "Consumer Behavioral Intention Toward Sustainable Biscuits: An Extension of the Theory of Planned Behavior With Product Familiarity and Perceived Value." *Business Strategy and the Environment* 33, no. 6: 5681–5702. <https://doi.org/10.1002/bse.3774>.
- Dangelico, R. M., F. Nonino, and A. Pompei. 2021. "Which Are the Determinants of Green Purchase Behaviour? A Study of Italian Consumers." *Business Strategy and the Environment* 30, no. 5: 2600–2620. <https://doi.org/10.1002/bse.2766>.
- Dangelico, R. M., and D. Vocalelli. 2017. "“Green Marketing”: An Analysis of Definitions, Strategy Steps, and Tools Through a Systematic Review of the Literature." *Journal of Cleaner Production* 165: 1263–1279. <https://doi.org/10.1016/j.jclepro.2017.07.184>.
- Darnall, N., H. Ji, K. Iwata, and T. H. Arimura. 2022. "Do ESG Reporting Guidelines and Verifications Enhance firms' Information Disclosure?" *Corporate Social Responsibility and Environmental Management* 29, no. 5: 1214–1230. <https://doi.org/10.1002/csr.2265>.
- de Vries, G., B. W. Terwel, N. Ellemers, and D. D. L. Daamen. 2015. "Sustainability or Profitability? How Communicated Motives for Environmental Policy Affect Public Perceptions of Corporate Greenwashing." *Corporate Social Responsibility and Environmental Management* 22, no. 3: 142–154. <https://doi.org/10.1002/csr.1327>.
- Delmas, M. A., and V. C. Burbano. 2011. "The Drivers of Greenwashing." *California Management Review* 54, no. 1: 64–87. <https://doi.org/10.1525/cmr.2011.54.1>.
- Di Iorio, V., F. Testa, D. Korschun, F. Iraldo, and R. Iovino. 2023. "Curious About the Circular Economy? Internal and External Influences on Information Search About the Product Lifecycle." *Business Strategy and the Environment* 32, no. 4: 2193–2208. <https://doi.org/10.1002/bse.3243>.
- EC. 2023. "Proposal for a Directive on Substantiation and Communication of Explicit Environmental Claims (Green Claims Directive)." COM(2023) 166 final. COM(2023) 166 final.
- EC. 2024. "Directive EU 2024/825, Amending Directives 2005/29/EC and 2011/83/EU as Regards Empowering Consumers for the Green Transition Through Better Protection Against Unfair Practices and Through Better Information." *Official Journal of the European Union*.
- Engert, S., and R. J. Baumgartner. 2016. "Corporate Sustainability Strategy—Bridging the Gap Between Formulation and Implementation." *Journal of Cleaner Production* 113: 822–834. <https://doi.org/10.1016/j.jclepro.2015.11.094>.
- Ferrón-Vilchez, V., J. Valero-Gil, and I. Suárez-Perales. 2021. "How Does Greenwashing Influence managers' Decision-Making? An Experimental Approach Under Stakeholder View." *Corporate Social Responsibility and Environmental Management* 28, no. 2: 860–880. <https://doi.org/10.1002/csr.2095>.
- García-Sánchez, I.-M., and L. Noguera-Gámez. 2017. "Integrated Reporting and Stakeholder Engagement: The Effect on Information Asymmetry." *Corporate Social Responsibility and Environmental Management* 24, no. 5: 395–413. <https://doi.org/10.1002/csr.1415>.
- Gionfriddo, G., F. Rizzi, T. Daddi, and F. Iraldo. 2023. "The Impact of Green Marketing on Collective Behaviour: Experimental Evidence From the Sports Industry." *Business Strategy and the Environment* 32, no. 8: 5349–5367. <https://doi.org/10.1002/bse.3420>.
- Hayat, K., Z. Jianjun, H. Zameer, and S. Iqbal. 2020. "Understanding the Influence of Corporate Social Responsibility Practices on Impulse Buying." *Corporate Social Responsibility and Environmental Management* 27, no. 3: 1454–1464. <https://doi.org/10.1002/csr.1898>.
- He, L., and S. Gan. 2024. "Floodlight or spotlight? Public attention and corporate social responsibility decoupling. Corporate Social Responsibility and Environmental Management." *Corporate Social Responsibility and Environmental Management*: 2950. <https://doi.org/10.1002/csr.2950>.
- Hristov, I., and C. Searcy. 2024. "Integrating Sustainability With Corporate Governance: A Framework to Implement the Corporate Sustainability Reporting Directive Through a Balanced Scorecard." *Management Decision*. <https://doi.org/10.1108/MD-10-2023-1995>.
- Iovino, R., F. Testa, and F. Iraldo. 2023. "Do Consumers Understand What Different Green Claims Actually Mean? An Experimental Approach in Italy." *Journal of Advertising* 53, no. 2: 200–214. <https://doi.org/10.1080/00913367.2023.2175279>.

- ISO. 2016. "ISO 14021:2016—Environmental Labels and Declarations—Self-Declared Environmental Claims (Type II Environmental Labelling)."
- ISO. 2023. "ISO 14020:2023—Environmental Statements and Programmes for Products—Principles and General Requirements."
- Jestratijevic, I., J. O. Uanhoro, and M. R. I. Rana. 2024. "Transparency of Sustainability Disclosures Among Luxury and Mass-Market Fashion Brands: Longitudinal Approach." *Journal of Cleaner Production* 436: 140481. <https://doi.org/10.1016/j.jclepro.2023.140481>.
- Jung, S., and S. H. Lee. 2022. "The Buffering Effect of Continuous Corporate Social Responsibilities Engagement on Negative Consumer Responses Toward Brand Crises." *Corporate Social Responsibility and Environmental Management* 29, no. 5: 1636–1646. <https://doi.org/10.1002/csr.2309>.
- Keresztúri, J. L., E. Berlinger, and Á. Lublóy. 2024. "Environmental Policy and Stakeholder Engagement: Incident-Based, Cross-Country Analysis of Firm-Level Greenwashing Practices." *Corporate Social Responsibility and Environmental Management*: 2945. <https://doi.org/10.1002/csr.2945>.
- Khanchel, I., N. Lassoued, and R. Gargouri. 2024. "Have Corporate Social Responsibility Strategies Mattered During the Pandemic: Symbolic CSR Versus Substantive CSR." *Corporate Social Responsibility and Environmental Management* 31, no. 2: 1380–1398. <https://doi.org/10.1002/csr.2632>.
- Kucharska, W., and R. Kowalczyk. 2019. "How to Achieve Sustainability? Employee's Point of View on company's Culture and CSR Practice." *Corporate Social Responsibility and Environmental Management* 26, no. 2: 453–467. <https://doi.org/10.1002/csr.1696>.
- Lee, M. K. K. 2019. "Effective Green Alliances: An Analysis of How Environmental Nongovernmental Organizations Affect Corporate Sustainability Programs." *Corporate Social Responsibility and Environmental Management* 26, no. 1: 227–237. <https://doi.org/10.1002/csr.1674>.
- Li, W., W. Li, V. Seppänen, and T. Koivumäki. 2023. "How and When Does Perceived Greenwashing Affect employees' Job Performance? Evidence From China." *Corporate Social Responsibility and Environmental Management* 29, no. 5: 1722–1735. <https://doi.org/10.1002/csr.2321>.
- Lim, R. E., and W.-N. Lee. 2023. "Communicating Corporate Social Responsibility: How Fit, Specificity, and Cognitive Fluency Drive Consumer Skepticism and Response." *Corporate Social Responsibility and Environmental Management* 30, no. 2: 955–967. <https://doi.org/10.1002/csr.2399>.
- Liu, G., H. Qian, Y. Shi, D. Yuan, and M. Zhou. 2024. "How Do Firms React to Capital Market Liberalization? Evidence From ESG Reporting Greenwashing." *Corporate Social Responsibility and Environmental Management* 31, no. 5: 4329–4344. <https://doi.org/10.1002/csr.2808>.
- Lock, I., and P. Seele. 2016. "The Credibility of CSR (Corporate Social Responsibility) Reports in Europe. Evidence From a Quantitative Content Analysis in 11 Countries." *Journal of Cleaner Production* 122: 186–200. <https://doi.org/10.1016/j.jclepro.2016.02.060>.
- Louis, D., and C. Lombart. 2024. "Impact of a Corporate Social Responsibility Message on consumers' Sustainable Behaviours and Purchase Intentions." *Corporate Social Responsibility and Environmental Management* 31, no. 1: 579–599. <https://doi.org/10.1002/csr.2587>.
- Lyon, T. P., and J. W. Maxwell. 2011. "Greenwash: Corporate Environmental Disclosure Under Threat of Audit." *Journal of Economics and Management Strategy* 20, no. 1: 3–41. <https://doi.org/10.1111/j.1530-9134.2010.00282.x>.
- Majid, A., M. Yasir, M. Yasir, and A. Javed. 2020. "Nexus of Institutional Pressures, Environmentally Friendly Business Strategies, and Environmental Performance." *Corporate Social Responsibility and Environmental Management* 27, no. 2: 706–716. <https://doi.org/10.1002/csr.1837>.
- Marquis, C., M. W. Toffel, and Y. Zhou. 2016. "Scrutiny, Norms, and Selective Disclosure: A Global Study of Greenwashing." *Organization Science* 27, no. 2: 483–504. <https://doi.org/10.1287/orsc.2015.1039>.
- Marrucci, L., F. Corcelli, T. Daddi, and F. Iraldo. 2022. "Using a Life Cycle Assessment to Identify the Risk of "Circular Washing" in the Leather Industry." *Resources Conservation and Recycling* 185: 106466. <https://doi.org/10.1016/j.resconrec.2022.106466>.
- Marrucci, L., and T. Daddi. 2021. "The Contribution of the Eco-Management and Audit Scheme to the Environmental Performance of Manufacturing Organisations." *Business Strategy and the Environment* 31, no. 4: 1347–1357. <https://doi.org/10.1002/bse.2958>.
- Marrucci, L., T. Daddi, and F. Iraldo. 2019. "The Integration of Circular Economy With Sustainable Consumption and Production Tools: Systematic Review and Future Research Agenda." *Journal of Cleaner Production* 240: 118268. <https://doi.org/10.1016/j.jclepro.2019.118268>.
- Marrucci, L., T. Daddi, and F. Iraldo. 2024. "Creating Environmental Performance Indicators to Assess Corporate Sustainability and Reward Employees." *Ecological Indicators* 158: 111489. <https://doi.org/10.1016/j.ecolind.2023.111489>.
- Mehnaz, J.432J., A. Hussain, M. A. Warraich, and A. Waheed. 2024. "Impact of Perceived CSR Practices on Customers Loyalty. The Mediating Role of Reputation and Customer Satisfaction." *Corporate Social Responsibility and Environmental Management* 31, no. 5: 3724–3734. <https://doi.org/10.1002/csr.2762>.
- Moreno, F., and J. Kang. 2020. "How to Alleviate Consumer Skepticism Concerning Corporate Responsibility: The Role of Content and Delivery in CSR Communications." *Corporate Social Responsibility and Environmental Management* 27, no. 6: 2477–2490. <https://doi.org/10.1002/csr.1969>.
- Muñoz-Torres, M. J., M. Á. Fernández-Izquierdo, J. M. Rivera-Lirio, and E. Escrig-Olmedo. 2019. "Can Environmental, Social, and Governance Rating Agencies Favor Business Models That Promote a More Sustainable Development?" *Corporate Social Responsibility and Environmental Management* 26, no. 2: 439–452. <https://doi.org/10.1002/csr.1695>.
- Nave, A., and J. Ferreira. 2019. "Corporate Social Responsibility Strategies: Past Research and Future Challenges." *Corporate Social Responsibility and Environmental Management* 26, no. 4: 885–901. <https://doi.org/10.1002/csr.1729>.
- Opferkuch, K., A. M. Walker, E. Roos Lindgreen, S. Caeiro, R. Salomone, and T. B. Ramos. 2023. "Towards a Framework for Corporate Disclosure of Circular Economy: Company Perspectives and Recommendations." *Corporate Social Responsibility and Environmental Management* 30, no. 5: 2457–2474. <https://doi.org/10.1002/csr.2497>.
- Ramasamy, S., K. S. Dara Singh, A. Amran, and M. Nejati. 2020. "Linking Human Values to Consumer CSR Perception: The Moderating Role of Consumer Skepticism." *Corporate Social Responsibility and Environmental Management* 27, no. 4: 1958–1971. <https://doi.org/10.1002/csr.1939>.
- Ren, J., P. Wu, and L. Hou. 2024. "Social Media Attention and Corporate Greenwashing: Evidence From China." *Corporate Social Responsibility and Environmental Management* 31, no. 6: 5446–5465. <https://doi.org/10.1002/csr.2875>.
- Seele, P., and L. Gatti. 2017. "Greenwashing Revisited: In Search of a Typology and Accusation-Based Definition Incorporating Legitimacy Strategies." *Business Strategy and the Environment* 26, no. 2: 239–252. <https://doi.org/10.1002/bse.1912>.
- Seele, P., and I. Lock. 2015. "Instrumental and/or Deliberative? A Typology of CSR Communication Tools." *Journal of Business Ethics* 131, no. 2: 401–414. <https://doi.org/10.1007/s10551-014-2282-9>.

- Seele, P., and M. D. Schultz. 2022. "From Greenwashing to Machinewashing: A Model and Future Directions Derived From Reasoning by Analogy." *Journal of Business Ethics* 178, no. 4: 1063–1089. <https://doi.org/10.1007/s10551-022-05054-9>.
- Tao, Z., and J. Chao. 2024. "Unveiling the Influence of Corporate Greenwashing on employees' Pro-Environmental Behavior: A Cross-Cultural Study From China, United Kingdom, Republic of Korea, and Japan." *Corporate Social Responsibility and Environmental Management* 31, no. 6: 6103–6130. <https://doi.org/10.1002/csr.2896>.
- Taoketao, E., T. Feng, Y. Song, and Y. Nie. 2018. "Does Sustainability Marketing Strategy Achieve Payback Profits? A Signaling Theory Perspective." *Corporate Social Responsibility and Environmental Management* 25, no. 6: 1039–1049. <https://doi.org/10.1002/csr.1518>.
- Taylor, J., J. Vithayathil, and D. Yim. 2018. "Are Corporate Social Responsibility (CSR) Initiatives Such as Sustainable Development and Environmental Policies Value Enhancing or Window Dressing?" *Corporate Social Responsibility and Environmental Management* 25, no. 5: 971–980. <https://doi.org/10.1002/csr.1513>.
- Terrachoice. 2010. "The Sins of Greenwashing, Home and Family Edition."
- Testa, F., O. Boiral, and F. Iraldo. 2018. "Internalization of Environmental Practices and Institutional Complexity: Can Stakeholders Pressures Encourage Greenwashing?" *Journal of Business Ethics* 147: 287–307. <https://doi.org/10.1007/s10551-015-2960-2>.
- Testa, F., R. Iovino, and F. Iraldo. 2020. "The Circular Economy and Consumer Behaviour: The Mediating Role of Information Seeking in Buying Circular Packaging." *Business Strategy and the Environment* 29, no. 8: 3435–3448. <https://doi.org/10.1002/bse.2587>.
- Testa, F., F. Iraldo, A. Vaccari, and E. Ferrari. 2015. "Why Eco-Labels Can Be Effective Marketing Tools: Evidence From a Study on Italian Consumers." *Business Strategy and the Environment* 24, no. 4: 252–265. <https://doi.org/10.1002/bse.1821>.
- Todaro, D. L., and R. Torelli. 2024. "From Greenwashing to ESG-Washing: A Focus on the Circular Economy Field." *Corporate Social Responsibility and Environmental Management* 31, no. 5: 4034–4046. <https://doi.org/10.1002/csr.2786>.
- Velte, P. 2023. "Determinants and Consequences of Corporate Social Responsibility Decoupling—Status Quo and Limitations of Recent Empirical Quantitative Research." *Corporate Social Responsibility and Environmental Management* 30, no. 6: 2695–2717. <https://doi.org/10.1002/csr.2538>.
- Waheed, A., and J. Yang. 2019. "Effect of Corporate Social Responsibility Disclosure on firms' Sales Performance: A Perspective of Stakeholder Engagement and Theory." *Corporate Social Responsibility and Environmental Management* 26, no. 3: 559–566. <https://doi.org/10.1002/csr.1701>.
- Wang, C.-H., and W.-J. Juo. 2024. "Sustainable Environmental Performance: The Mediating Role of Green Reputation in the Choice of Green Marketing or Green Demarketing." *Corporate Social Responsibility and Environmental Management* 31, no. 3: 1756–1768. <https://doi.org/10.1002/csr.2658>.
- Wang, W., Z. Sun, W. Zhu, et al. 2023. "How Does Multi-Agent Govern Corporate Greenwashing? A Stakeholder Engagement Perspective From "Common" to "Collaborative" Governance." *Corporate Social Responsibility and Environmental Management* 30, no. 1: 291–307. <https://doi.org/10.1002/csr.2355>.
- Wang, Z., T.-S. Hsieh, and J. Sarkis. 2018. "CSR Performance and the Readability of CSR Reports: Too Good to Be True?" *Corporate Social Responsibility and Environmental Management* 25, no. 1: 66–79. <https://doi.org/10.1002/csr.1440>.
- Xia, F., J. Chen, X. Yang, X. Li, and B. Zhang. 2023. "Financial Constraints and Corporate Greenwashing Strategies in China."
- Corporate Social Responsibility and Environmental Management* 30, no. 4: 1770–1781. <https://doi.org/10.1002/csr.2453>.
- Zhou, Y., L. Chen, Y. Zhang, and W. Li. 2024. "Environmental Disclosure Greenwashing" and Corporate Value: The Premium Effect and Premium Devalue of Environmental Information." *Corporate Social Responsibility and Environmental Management* 31, no. 3: 2424–2438. <https://doi.org/10.1002/csr.2698>.