*Systematic Review*

# How Do Companies Communicate Sustainability?
# A Systematic Literature Review

Eduardo Borges [1,*], Susana Campos [2], Mário Sérgio Teixeira [1], Maria Raquel Lucas [3], Ana Teresa Ferreira-Oliveira [4], Ana Sofia Rodrigues [5] and Manuela Vaz-Velho [5]

1   CETRAD—Centre for Transdisciplinary Studies for Development, School of Economics and Social Sciences, University of Trás-os-Montes e Alto Douro (UTAD), Polo II da ECHS, Quinta dos Prados, 5000-801 Vila Real, Portugal

2   CISAS—Centre for Research and Development in Agro-Food Systems and Sustainability, Polytechnic Institute of Viana do Castelo (IPVC), Rua Escola Industrial de Nun' Álvares, 4900-347 Viana do Castelo, Portugal; campossusana@ipvc.pt

3   CEFAGE—Centre for Advanced Studies and Training in Management and Economics and Department of Management, School of Social Sciences, University of Évora (UE), 7004-516 Évora, Portugal

4   CISAS—Centre for Research and Development in Agro-Food Systems and Sustainability, Higher School of Technology and Management, Polytechnic Institute of Viana do Castelo (IPVC), 4900-348 Viana do Castelo, Portugal; ateresaoliveira@estg.ipvc.pt

5   CISAS—Centre for Research and Development in Agro-Food Systems and Sustainability, Higher Agricultural School, Polytechnic Institute of Viana do Castelo (IPVC), Refóios, 4990-706 Ponte de Lima, Portugal; sofia@esa.ipvc.pt (A.S.R.); mvazvelho@estg.ipvc.pt (M.V.-V.)

*   Correspondence: joseborges@utad.pt

**Abstract:** Sustainability is a topic that is increasingly discussed in society and organizations, leading many companies to adopt communication strategies focused on this theme. The objective of this article was to identify in the literature the ways, means, or tools that companies use to communicate sustainability. This article was based on a systematic review of the literature on the topic, resulting in a final sample of 18 articles from 14 different journals. Seven potential topics were identified in the systematic review: (i) communication strategies, (ii) the relationship between communication and consumer behavior, (iii) communication and health benefits, (iv) sustainability and corporate social responsibility (CSR), (v) sustainable business models, (vi) sustainability and process optimization, and (vii) sustainability and environmental impact. The results obtained allowed us to conclude that the strategies that companies can use to communicate sustainability are as follows: use new technologies (internet, social networks, websites, etc.), make value propositions based on consumer behaviors, disseminate clear and consistent information, and ensure broader work teams, among others. These results contribute to the advancement of scientific literature and to the definition and implementation of more efficient and effective public policies that facilitate communication between companies and consumers. Finally, this paper offers practical suggestions to formulate sustainable communication strategies.

**Keywords:** sustainability; communication; attributes; food; companies

## 1. Introduction

Communication implies the transfer of ideas, thoughts, or feelings from the sender to the receiver through verbal and/or non-verbal forms. This transfer acquires greater importance for companies since they work with people, where communication assumes an important role. Sustainability has emerged as an influential corporate strategy, calling for responses to current needs while taking into account future financial, human, and natural resources and their depletion [1]. Sustainability has provoked various debates and reflections among various social actors, from discussions within academia to the political context.

The term sustainability has become popular in recent decades, mainly because of the social and environmental concerns that emerged from the second half of the century. Questions about sustainability have moved to the fore worldwide in the sense that people and organizations are increasingly concerned and aware of environmental and social issues, especially when purchasing products or services [2].

Sustainability has been repeatedly pointed out as a three-dimensional concept, encompassing environmental, social, and economic dimensions. Environmental sustainability focuses on the impact of human actions on the carrying capacity of the ecosystem (e.g., materials, energy, land, and water). Social sustainability refers to the social well-being of individuals, seeking a balance between the needs of the individual and the needs of the group (equity). Finally, economic sustainability focuses on the efficient use of resources to optimize operating profit and maximize market value [3]. According to [4], sustainable development is defined as the point of balance or intersection between these three dimensions of sustainability.

The theme of sustainability has increasingly aroused the attention of companies that are continuously seeking ways to respond to the so-called "green" trends. Firms have therefore been analyzing the constant changes in society's consciousness, seeking to adapt to new forms of production that are not as harmful to the environment [5]. This is to say that they have sought to create sustainability strategies.

Communication is an important dimension, playing a significant role in any sustainability strategy. Internal communication in an organization is essential for implementing changes to make it more sustainable. External communication with customers or consumers is essential for sustainability strategies so that companies do not face losses at the level of goods and services [1].

The present work aimed to identify in the literature the ways, means, or tools that companies use to communicate sustainability. We contribute by boosting knowledge about the best ways of communicating sustainability by companies in general and in the agri-food sector in particular so that the message that reaches and is interpreted by the consumer is in fact the one that is intended to be transmitted, constituting a true facilitator and diffuser of the precepts of sustainability that companies develop for their target audiences. This is an emerging and innovative theme since the information collected allows for providing consumers with information on how companies communicate sustainability in their products, helping the consumers to make more conscious choices. On the other hand, for the scientific community, it allows for opening new research focuses through the gaps identified. The advancement of science on this topic means more transparency for citizens, consumers, and investors.

*How Do Agri-Food Companies Communicate Sustainability?*

Communication can be done with employees, suppliers, partners, regulators, society, or consumers. Changing the perception of a key actor can create a lot of value for the brand.

Consumers increasingly value sustainability; hence, it is important for companies to understand how consumers perceive the value proposition of food to better communicate it. Cooper [6] analyzed how consumers perceive the value proposition of vegan food. The results showed that in light of the three main drivers for choosing vegan food (ethics, personal health, and environment), surprisingly, there were a reduced number of tweets motivated by the environment/sustainability. The value propositions most likely to impact consumers and motivate them to increase their consumption of vegan foods in addition to having environmental benefits were (i) value propositions communicated in relation to health characteristics (e.g., dairy-free and gluten-free foods) and (ii) value propositions related to consumption benefits (e.g., delicious foods). Furthermore, the authors noted that due to the divergence of attitudes and conversations occurring on Twitter between vegans and non-vegans, it is unlikely that a single value proposition can be achieved for both groups.

Other authors compared young consumers' purchasing behavior [7] and analyzed young consumers' attitudes and behaviors [8] toward organic food in the UK and Poland. The results showed that young consumers paid special attention to the freshness and quality of the products consumed; the main motivations for buying organic products were a concern for their own and their loved ones' health and the desire to consume better-quality products. The organic products most purchased by the participants were eggs, vegetables and fruits, dairy products, and meat. The main source of information for young people when purchasing this type of product was experts (doctors, nutritionists, etc.), followed by referrals from family members, the content of social networks, and information from websites run by institutions [7]. Furthermore, the UK participants were significantly more conscious green consumers with higher environmental attitude intensity than Polish consumers; the intensity of pro-environmental attitude components directly and indirectly influenced organic food choice; people with a higher pro-environmental attitude intensity were significantly more likely to choose organic food; the organic food perception influenced purchases only in Poland; and pro-environmental attitude components and organic food perception alone did not explain the results, which suggests that other independent variables may be influential [8].

For instance, it is important to understand how consumers search and process corporate social media, as well as social responsibility information on food company websites.

A study from [9] suggested that companies provide comprehensive information that can be easily filtered. In addition, companies should present specific information to credibly distance themselves from accusations of greenwashing, for example, by referring to external evidence.

Moreover, [10] analyzed consumer preferences for corporate social responsibility (CSR) in the food industry. The results revealed a high level of awareness among consumers about social responsibility initiatives by food industry companies, as well as a great interest in obtaining information and learning more about these initiatives. Five consumer groups were identified: "environmentalists", "pro-socialists", "collectivists", "animal-friendly", and "health-focused selfish". Furthermore, the study showed that consumers are willing to pay a premium price to reward food companies that address their CSR concerns and expectations.

Recently, nutritional marketing is widely used because it is an innovative strategy and an important form of product differentiation that is applied mainly at the level of nutrition and health claims and nutrition labeling.

Cavallo [11] analyzed the effect of visual elements of the packaging on the perceived healthiness of extra virgin olive oil in two populations with different levels of familiarity with the product and different cultural habits in terms of fat consumption.

The results showed that people in the Italian consumer group were more familiar with the product, were more frequent consumers of the product, and had greater knowledge about the product requirements and regulations. Most elements of the packaging were perceived similarly by Dutch and Italian consumers, which suggested that there is no need to create different labels for products sold in different countries. The data also showed that labels and packaging can be used to better communicate the healthiness of products; therefore, indicating the origin and organic production can be useful for companies, regardless of the country in which they operate.

It is important to think strategically about who will be impacted by the company's communication on sustainability and how this communication will be carried out.

From the literature review, it is possible to verify that there are many ways that companies from various sectors communicate sustainability. For example, in the study by [12], it was found that companies in the wood industry communicate on environmental issues mainly through their web pages and less frequently on social and economic issues. A study of companies in the ceramics industry [13] suggested some sustainability communication strategies, namely, the publication of actions related to the environment, the inclusion of

sustainability indicators in products, the publication of sustainability-related certificates, and the promotion of corporate social responsibility (CSR) activities.

The agri-food industry has struggled to implement sustainable innovations in the supply chain. The main drivers involved in sustainable supply chain management were identified: social responsibility, economic performance/improvement, regulations (environmental, regional, international), and the adoption of an innovative business model. Barriers to sustainability management were also identified: lack of government support, high complexity of processes, and communication failures [14].

The transition to sustainable food systems entails many changes, with one of them being the harnessing of internet technology in the form of an "Internet of food", offering the possibility to use global resources more efficiently, stimulate rural livelihoods, develop resilience systems, and facilitate responsible management through computing, communication, education, and trade. The "Internet of food" thus appears as a pre-competitive platform on which business models can be developed, quite similar to the internet as is currently known. As concluded by the authors, the ability to compute large amounts of data will change the way the food system is analyzed and understood and will enable a transition toward more sustainable food systems [15].

The tools used by companies to implement actions and properly communicate sustainability are various and can be carried out through corporate governance, diversity in the workplace, social campaigns, philanthropic activities, dialogue with stakeholders, etc. [16].

It was also concluded that many supply chain performance attributes represent credibility attributes that cannot be verified by the consumer, thus leading to an information asymmetry between the company and its consumers. As such, companies' responses to this situation should focus on symbolic actions and communication efforts through sustainability reports and other brand-strengthening marketing tools [17].

The remainder of this article is structured as follows. In the next section, we provide an overview of the process followed to conduct the bibliometric analysis and systematic literature review. We then summarize data extracted from the bibliometric analysis and reviewed literature using graphs and tables. Finally, we discuss the main results of the analysis, present implications for management, and propose ways to advance research in relation to sustainability communication in companies.

## 2. Materials and Methods

### 2.1. Bibliographic Conceptual Search

This study is a systematic literature review (SLR) to the extent that it is based on the premise of the systematization of the identification, selection, and analysis of texts [18,19]. The SLR method adopted herein followed the process recommended by [19] to identify published studies on the topic in question, select them, and assess their contributions. Their content was then analyzed and disclosed in a clear way that allows for drawing conclusions about what was found and the value of directions for future research. According to Lame [20], SLRs are a way of synthesizing scientific evidence in order to answer a given research question in a transparent and reproducible way, seeking to include all the evidence published about the topic under analysis.

To measure the existing publications, three types of indicators were used: quantity, quality, and structure [21]. The first measures productivity in terms of the number of publications, the second measures the impact of a publication regarding the number of its citations, and the third measures the connections between various works and authors. The review was organized in five stages: (1) definition of the research problem and objectives, (2) definition of the research and data analysis plan, (3) data search, (4) data analysis, and (5) interpretation and presentation of results.

In the search, the keywords defined above were used without delimitation regarding time, area, or other specificities in order to obtain more comprehensive results. Using the results obtained, the software "RStudio" was used to merge the databases and eliminate duplicates, and "biblioshiny" was applied to support the analysis of the results.

Then, the research database was synthesized, summarizing the main sections of each article with regard to the following: purpose/objectives, main results, and conclusions, thereby enabling the categorization of the material to be further developed.

Our research sought to answer the following questions: (1) What is the current state of research about sustainability communication? (2) What are the ways, means, or tools that companies use in sustainability communication?

### 2.2. Bibliographic Search Process

Five steps were defined to structure the process and analysis of the research results: (1) definition of the research problem and objectives, (2) definition of the research and data analysis plan, (3) data search, (4) data analysis, and (5) interpretation and presentation of the results.

This study was based on a search of the SCOPUS (SCO) and Web of Science (WoS) databases. These databases allow researchers to access research and other documents from scientific journals and books in all areas of science [22]. The databases were searched on 2 February 2023, respecting some criteria in order to standardize the results obtained and using the keywords "sustainability", "communication", "food", and "attributes" via the extensions in Scopus "(TITLE-ABS-KEY (sustainab* AND communicat* AND food*) AND (TITLE-ABS-KEY (attribut* OR indicat* OR goal*) AND (TITLE-ABS- KEY (compan* OR enterprise* OR business*))" and in Web of Science "(TS = (sustainab* and communication* and food*)) AND (TS = (attribut* OR indicat* OR goal*)) AND (TS = (compan* or enterprise* or business*))" with the use of the wild-card character (*), which allows for obtaining more extensive results that would otherwise be overlooked. Subsequently, inclusion and exclusion criteria were applied in order to focus the results obtained for the intended themes (Table 1).

**Table 1.** Inclusion and exclusion criteria.

| | |
|---|---|
| Inclusion Criteria | (a) Publications are present in one or both of the databases. |
| | (b) Publications contain the stipulated search terms. |
| | (c) Publications are in English. |
| | (d) Studies were published up to the year 2022. |
| Exclusion Criteria | (a) Opinion articles. |
| | (b) Conference papers. |
| | (c) Master's theses, reports, and doctoral dissertations. |

The recommendations of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) [23] were used to select the articles included in the study. The PRISMA recommendations consist of a checklist with 27 items and a flowchart, with the purpose of helping researchers to improve the reporting of systematic reviews and meta-analyses [24].

### 2.3. Bibliometric Review

The bibliometric analysis using the RStudio software identified 243 articles using the filters defined above. This allowed us to analyze the content in terms of the themes, years, sources, authors, citations, countries with the highest scientific production, geographical distribution, most frequent keywords, research connections, and evolution of trends in the dominant themes of the topics under study.

### 2.4. Systematic Literature Review

The articles obtained based on the results described in Section 2.2 were examined for possible inclusion in the systematic literature review. They were submitted to a detailed analysis of the abstracts, looking for the occurrence of keywords that would allow delim-

iting the results to the pre-defined criteria, in the title, abstract, or author's keywords of each article. When any author cited during the analysis of the abstracts stood out, these articles were analyzed to understand whether they would be included in the final sample for the SLR.

## 3. Results

### 3.1. Data Synthesis

The application of the criteria defined in Section 2 allowed us to systematize the research process, organize the articles, apply the inclusion and exclusion criteria, and obtain relevant results from the perspective of contextualization, evolution, and trends. This process was divided into two stages: the first stage consisted of a quantitative analysis, which culminated in a bibliometric analysis with a larger number of results; the second stage was a qualitative analysis that followed the work developed in the previous stage, which resulted in a systematic literature review with a detailed analysis of a more restricted set of results that followed the flowchart and the recommendations of the PRISMA protocol (Figure 1).
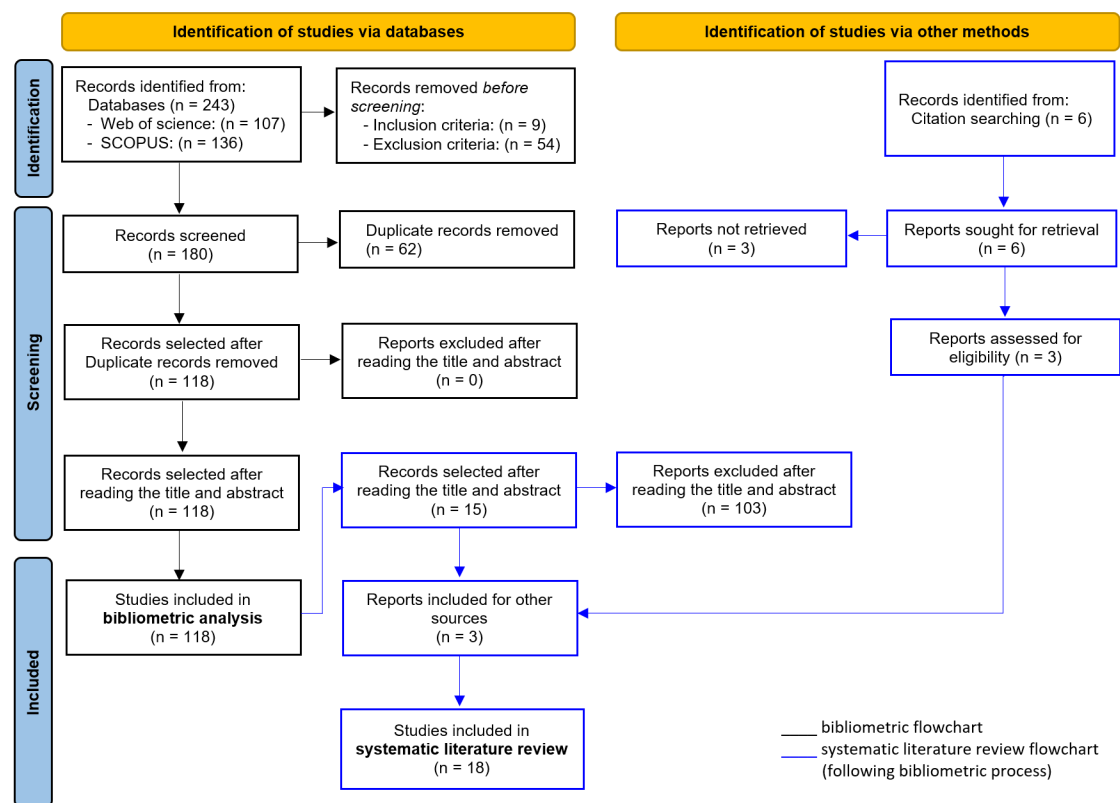


**Figure 1.** Flowchart of the research steps according to the protocol.

### 3.2. Descriptive Analysis (Bibliometric Analysis)

We present the results of the articles included in the bibliometric analysis examined in terms of themes, years, sources, authors, citations (authors and articles), countries with the highest scientific production, the most frequent keywords, geographic distribution, research connections, and the analysis of the evolution of trends in the dominant themes on the topics under study. The analysis and structuring of the results were supported by the "biblioshiny" tool (the aggregated data resulting from the search are given in Appendix A).

A total of 243 primary results were obtained: 136 from SCO and 107 from the WoS. Three filters were applied: one limiting data published up to and including 2022, a second limiting results to those in English, and a third selecting only articles and review articles. We then used the RStudio software, which not only allowed for merging the results

from both databases but also allowed for eliminating 62 duplicate articles, resulting in 118 selected articles.

### 3.2.1. Publication by Year

We obtained 118 results (104 articles, 2 early access articles, 1 proceeding article, and 11 review articles) that originated from 80 different sources published from 1999 to 2022 and represented the work of 434 authors (see Appendix A).

The growth of publications in the last 10 years of our period of search (from 2013 to 2022) was evident. The publications from this period represented 87% of the total number of publications, demonstrating the growing interest of the scientific community in this theme (Figure 2).
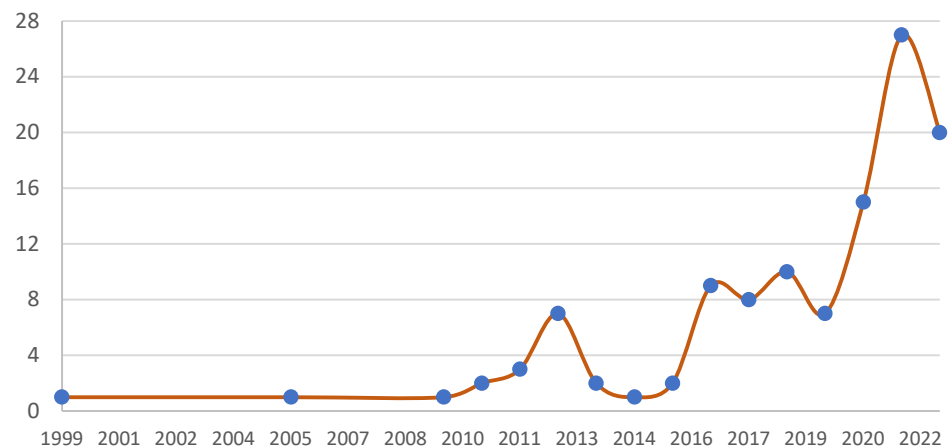


**Figure 2.** Number of publications per year.

### 3.2.2. Sources Analysis

Five journals that publish on the subject of sustainability accounted for 55% of the publications among the top journals, which demonstrated their keen interest in this area of research. These 5 were *Sustainability* with 19 articles, followed by the *Journal of Cleaner Production* with 4 publications, and the *British Food Journal*, *Foods*, and the *International Journal on Food System Dynamics* with 3 publications each (Table 2).

Among the journals with the highest impact factor H-index, once again, *Sustainability* and the *Journal of Cleaner Production* stood out, highlighting the relevance and prominence that these journals represent in the studies published in this area (Table 3).

### 3.2.3. Authors Analysis

Analyzing the 20 authors with the most number of published articles, all of them had two publications, revealing a balance. However, Arru, Asdrubali, Bartolioni, Bauer, and Bonomente may be mentioned (Table 4). Regarding the most cited authors, 12 had the same number of citations with 1, including, Cavallo, Carg, Hartlieb, Jones, and Lettenmeier (Table 4). The results of these data revealed that much opportunity for additional research on the topic remains.

### 3.2.4. Geographic Analysis

Additional relevant data to be gleaned from the present research was the scientific production by country (Figure 3). Italy stood out with 41 publications, Australia and the United States of America had 40 publications each, and Germany had 39 publications. These three countries accounted for 50% of the total number of publications among the top 20 (Appendix B).

**Table 2.** Top journals with the most published articles.

| Journal | Publications | Percentage | Cumulative |
|---|---|---|---|
| *Sustainability* | 19 | 33% | 33% |
| *Jounal of Cleaner Production* | 4 | 7% | 40% |
| *British Food Journal* | 3 | 5% | 45% |
| *Foods* | 3 | 5% | 50% |
| *International Journal on Food Systems Dynamics* | 3 | 5% | 55% |
| *Asia Pacific Journal of Marketing and Logistics* | 2 | 3% | 58% |
| *Corporate Social Responsibility and Environmental Management* | 2 | 3% | 61% |
| *Environmental Reviews* | 2 | 3% | 64% |
| *International Food and Agribusiness Management Review* | 2 | 3% | 67% |
| *Inter. Journal of Environmental Research and Public Health* | 2 | 3% | 70% |
| *International Journal of Life Cycle Assessment* | 2 | 3% | 73% |
| *Journal of Dairy Science* | 2 | 3% | 76% |
| *Plos One* | 2 | 3% | 79% |
| *Science of the Total Environment* | 2 | 3% | 82% |
| *Sustainable Production and Consumption* | 2 | 3% | 88% |
| *Abac Journal* | 1 | 3% | 91% |
| *Accounting, Auditing and Accountability Journal* | 1 | 3% | 94% |
| *Acta Horticulturae* | 4 | 3% | 97% |
| *Acta Turistica* | 4 | 3% | 100% |

**Table 3.** Local impact by H-index.

| Journal | H-Index |
|---|---|
| *Sustainability* | 8 |
| *Journal of Cleaner Production* | 3 |
| *British Food Journal* | 2 |
| *Environmental Reviewa* | 2 |
| *Int. Food and Agribusiness Man. Review* | 2 |
| *Int. Journal of Env. Research and Public Health* | 2 |
| *International Journal of Life Cycle Assessment* | 2 |
| *Internnational Journal on Food System Dynamics* | 2 |
| *Journal of Dairy Science* | 2 |
| *PLoS ONE* | 2 |
| *Science of the Total Environment* | 2 |
| *Sustainable Production and Consumption* | 2 |
| *Accounting, Auditing and Accountability Journal* | 1 |
| *Acta Turistica* | 1 |
| *Acta Universitatis Agriculture et Silviculture Mendelianae Brunensis* | 1 |
| *Agriculture-Basel* | 1 |
| *Aims Agriculture and Food* | 1 |
| *American Behavioral Scientist* | 1 |
| *Animal* | 1 |

**Table 4.** Top 20 authors.

| Authors | Articles | Authors | Citations |
|---|---|---|---|
| Arru B | 2 | Cavallo C | 1 |
| Asdrubali F | 2 | Garg D | 1 |
| Bartolini F | 2 | Hartlieb S | 1 |
| Bauer A | 2 | Jones B | 1 |
| Bonamente E | 2 | Lettenmeier M | 1 |
| Brunorig G | 2 | Liedtke C | 1 |
| Chalupova M | 2 | Lukas M | 1 |
| Cotana F | 2 | Luthra S | 1 |
| Dale V | 2 | Piqueras-Fiszman B | 1 |
| Eckhaus E | 2 | Rohn H | 1 |
| Gava O | 2 | Wiesen K | 1 |
| Govaerts B | 2 | Yadav S | 1 |
| Kline K | 2 | | |
| Levy S | 2 | | |
| Mark-Herbert C | 2 | | |
| Merico M | 2 | | |
| Olazo D | 2 | | |
| Rinaldi S | 2 | | |
| Rohn H | 2 | | |
| Sadovska V | 2 | | |
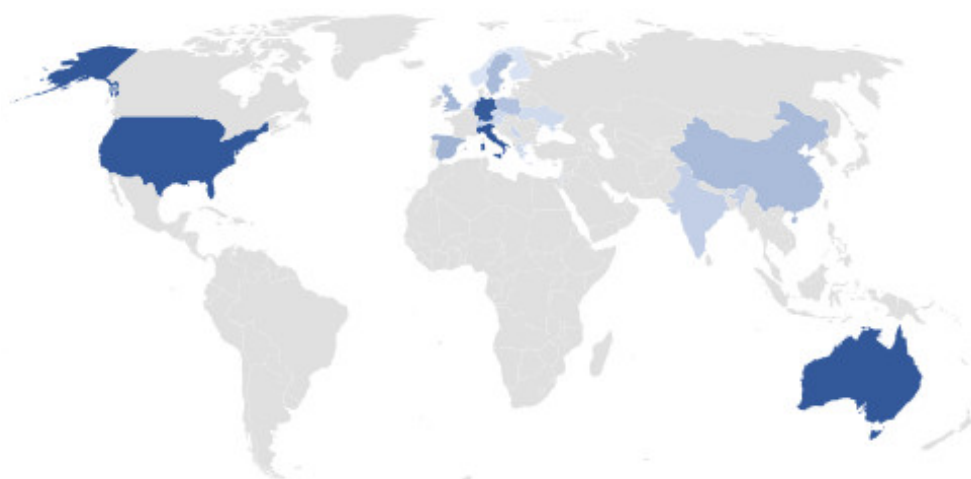


**Figure 3.** Top 20 countries with the highest scientific production.

To complement the geographical analysis, a top 20 chart of the most cited countries was created with the aim of understanding which countries were cited more often in the research papers in this area of study. There was a clear leadership position occupied by the United States of America with 265 citations, followed by Italy with 225 citations, Kenya with 159 citations, the United Kingdom with 139 citations, and Germany with 129 citations (Figure 4).

Another analysis to be noted was the collaboration networks between countries. In this regard, there were three groups of collaboration around Germany, Italy, and the United States of America, which, taken together with the other findings (Figure 5), reinforced the relevance of these geographical regions in the study of this theme.

3.2.5. Documents Analysis

In a brief analysis of the top 20 most cited articles on the topic, five stood out: Khan's with 159 citations, Shammi's with 82 citations, Richter's with 58 citations, Hartlieb's with 56 citations, and Dabija's with 45 citations (Table 5).
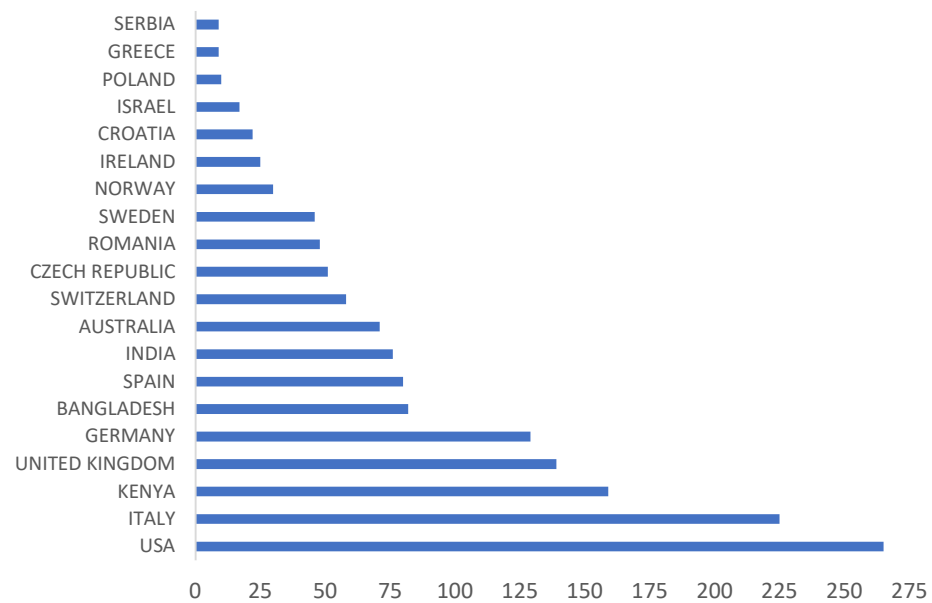
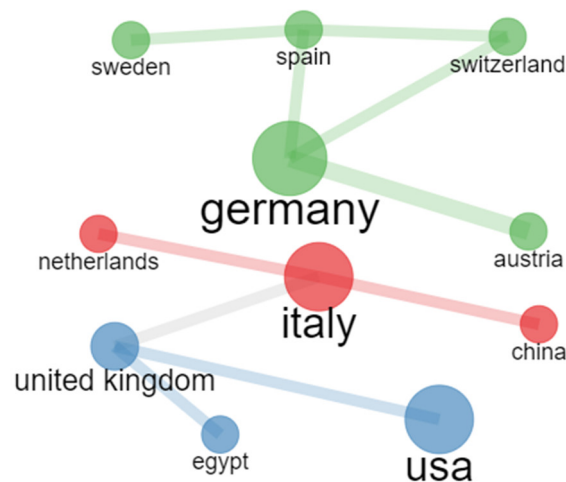**Figure 4.** Top 20 most cited countries.



**Figure 5.** Top 20 most quoted countries.

Our analysis of the frequency of the keywords most used by the authors was conducted from two perspectives: one analyzing the keywords most used by the authors, and a second aggregating the similar or related words, thereby allowing for a more consistent analysis of the results.

Among the top 20 keywords used for the papers, those most often used by the authors were "sustainability" with a frequency of 21, followed by "sustainable development" with 8, "food" with 6, and "consumer" with 5 (Figure 6).

This section is divided into subheadings to provide a concise and precise description of the experimental results and their interpretation, as well as the experimental conclusions that can be drawn.

Combining the original results and aggregating by similarity or connection (Table 6), we found that words around "sustainability" were the most used (frequency of 42), followed by "food" (frequency of 20) and "consumer" (frequency of 5).

**Table 5.** Top 20 most cited documents.

| First Author | Year | Journal | Total Citations |
|---|---|---|---|
| Khan ZR | 2014 | *Philos. Trans. R. Soc. B Biol. Sci.* | 159 |
| Shammi M | 2021 | *Environ. Dev. SustainN* | 82 |
| Richte B | 2016 | *Waste Manage* | 58 |
| Hartlieb S | 2009 | *J. Bus. Ethics* | 56 |
| Dabija DC | 2018 | *Morav. Geogr. Rep.* | 45 |
| Rinaldi S | 2016 | *Sustainability* | 41 |
| Hayat P | 2016 | *India Q* | 41 |
| Rinaldi S | 2016 | *Sustainability* | 41 |
| Laing SS | 2012 | *Prev. Chronic Dis.* | 39 |
| Lukas M | 2016 | *J. Clean. Prod.* | 37 |
| Lerro M | 2018 | *Corp. Soc. Rep. Environ. Manag.* | 35 |
| Cavallo C | 2017 | *J. Sens. Stud.* | 35 |
| Gold S | 2017 | *J. Insd. Ecol.* | 32 |
| Eckenwiler L | 2018 | *Bioethics* | 30 |
| Banhazi TM | 2012 | *Int. J. Agric. Biol. Eng.* | 30 |
| Schiano NA | 2020 | *J. Dairy Sci.* | 29 |
| Isaksson RB | 2015 | *Int. J. Product Perform. Manag.* | 29 |
| Jungbluth N | 2012 | *J. Clean. Prod.* | 28 |
| Gossling S | 2021 | *J. Sustain. Tour.* | 28 |
| Onel N | 2017 | *Soc. Mark. Q.* | 27 |



**Figure 6.** WordCloud of the 20 most used keywords by the authors.

### 3.2.6. Cluster Analysis

By analyzing the co-occurrence of the 20 keywords most used by the authors, we obtained four clusters of associated words, with the first around the word "sustainability", the second around "consumer", the third around "innovation", and the fourth around the words "corporate sustainability", demonstrating the centrality of the themes being investigated (Figure 7).

### 3.2.7. Trend Analysis

Trend analysis was one of the key aspects of this bibliometric analysis since it allowed us to obtain clues about the direction that researchers have been taking recently, thus allowing us to understand the framework of the research theme of this study. The evolution of the themes over time was analyzed by comparing the dominant themes in the first 20 years (1999–2018), the evolution in the following 3 years (2019–2021), and the dominant themes today (2022).

**Table 6.** Top 20 keywords most used by authors.

| Terms | Frequency | Similar Terms | Obtained | Cumulative |
|---|---|---|---|---|
| sustainability | 21 | sustainability | 21 | |
| sustainable development | 8 | sustainability assessment | 5 | |
| food | 6 | sustainability reporting | 5 | 42 |
| consumer | 5 | sustainable | 3 | |
| sustainability assessment | 5 | sustainable development | 8 | |
| sustainability reporting | 5 | food | 6 | |
| business | 4 | food industry | 4 | |
| corporate social responsibility | 4 | food supply chain | 4 | 20 |
| food industry | 4 | food production | 3 | |
| food supply chain | 4 | food systems | 3 | |
| indicators | 4 | consumer | 5 | 5 |
| innovation | 4 | business | 4 | 4 |
| life cycle assessment | 4 | corporate social responsibility | 4 | 4 |
| marketing | 4 | indicators | 4 | 4 |
| food production | 3 | innovation | 4 | 4 |
| food systems | 3 | life cycle assessment | 4 | 4 |
| nutrition | 3 | marketing | 4 | 4 |
| packaging | 3 | nutrition | 3 | 3 |
| sustainable | 3 | packaging | 3 | 3 |
| tourism | 3 | tourism | 3 | 3 |



**Figure 7.** Co-occurrence of the top 20 keywords.

From this analysis (Figure 8), we found that the predominant theme throughout the period was "sustainability", with "sustainable development" evolving into "responsibility", "innovation" evolving into "food", and the predominant theme of "consumer" in 2019–2021 giving way to the theme "marketing" without any highlight among the various themes.
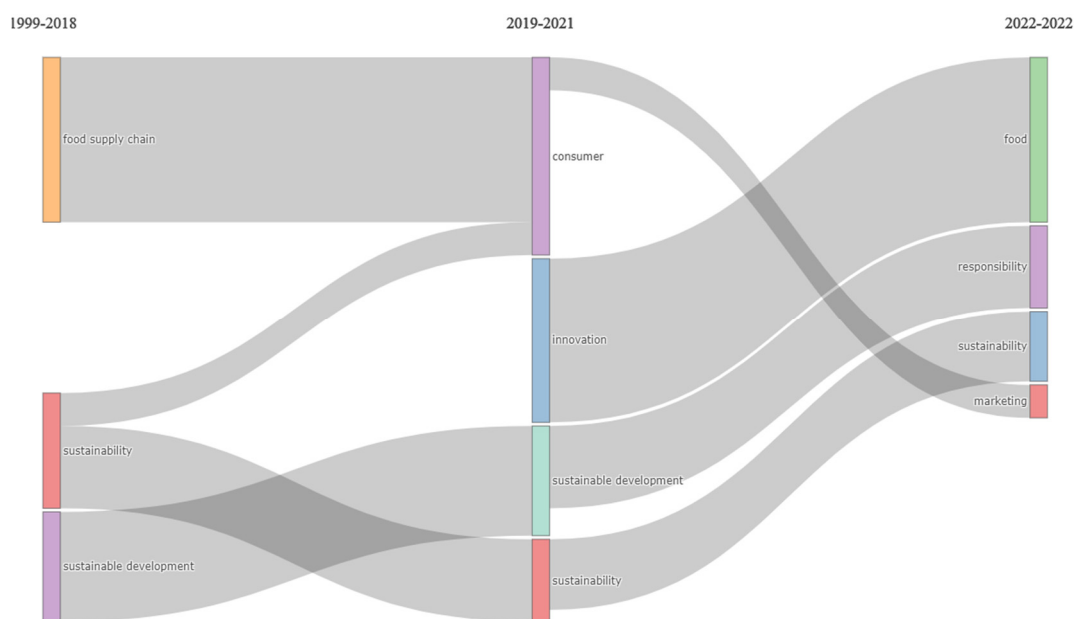
**Figure 8.** Evolution of the themes by the keywords of the authors.

The global trends shown in this graph were also reflected in the state of the art when the analysis focused on studies of the agri-food sector. The consumer is concerned with consuming responsibly and values companies that act positively at the environmental, social, and corporate governance levels. In this sense, their perception of how companies communicate sustainability affects their decision-making process at the time of purchase. These results corroborate the analysis carried out in greater depth and shown in the systematic literature review in Section 3.3.

### 3.3. Study Characteristics (Systematic Literature Review)

From the results obtained, we constructed thematic clusters, which we present in this section. Our systematic literature review was carried out through a detailed analysis of 18 articles (details in Appendix C). Through iterative testing and review, a data collection form was designed to guide the extraction of information from the studies with the aim of not only developing an instrument that could be used to identify issues and knowledge in the literature but also for greater transparency and minimization of bias.

For the systematic literature review, 18 articles were selected based on the 118 described in Section 2.2. These were subjected to a rigorous analysis of the abstracts in which the occurrence of the phrase "food product" or "food industry" was searched for in the author's title, abstract, or keywords, which excluded 103 results. Based on the citations of some of the articles, six articles were selected from other sources, and after analyzing their abstracts, only three articles were retained, and a detailed analysis was performed on 18 articles. A summary table was built on some of the characteristics of the studies (Table 7), and a table was built containing information on the authors, year, journal, objectives, nature/type of study, sample, and results/conclusions/contributions (Appendix C).

**Table 7.** Highlights of some of the characteristics of the studies included in this review.

| Variable | Category | N | % |
|---|---|---|---|
| **Typology** | Scientific article | 18 | 100% |
| **Nature** | Quantitative | 8 | 44% |
| | Qualitative | 10 | 56% |
| **Publication date** | 2013–2017 | 5 | 28% |
| | 2018–2022 | 13 | 72% |

As seen above, the studies were scientific articles (100%), mostly of a qualitative nature (56%), and most were published between 2018 and 2022 (72%).

Figure 9 shows the number of studies per year, where we see that 2022 was the year with the highest number of publications (n = 5).
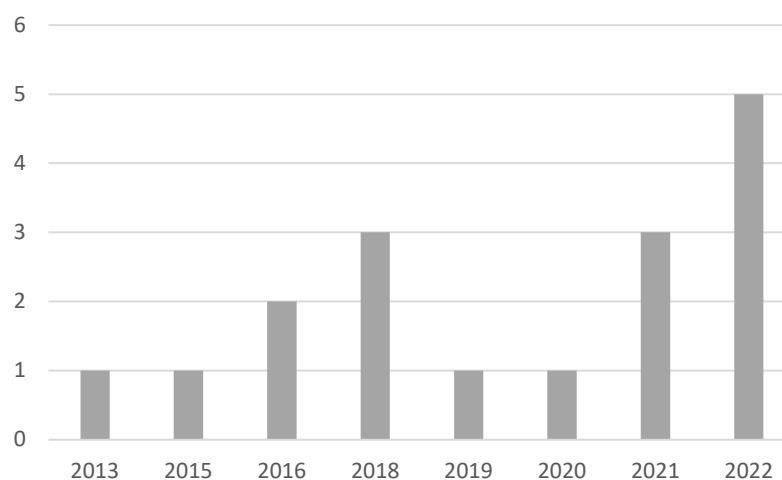


**Figure 9.** No. of studies by year of publication included in the SLR.

The selected studies were distributed among 14 journals (Table 8), where the journal *Sustainability* was the one with the greatest number (5).

**Table 8.** No. of studies per year of publication included in the SLR.

| Journal | N |
| --- | --- |
| *Sustainability* | 5 |
| *International Journal of Environmental Research and Public Health* | 1 |
| *Sustainable Production and Consumption* | 1 |
| *British Food Journal* | 1 |
| *Sustainability: Science, Practice and Policy* | 1 |
| *International Food and Agribusiness Management Review* | 1 |
| *Corporate Social Responsibility Environmental Management* | 1 |
| *Nature Partner Journals* | 1 |
| *Problemy Zarzadzania* | 1 |
| *Journal of Industrial Ecology* | 1 |
| *Journal of Sensory Studies* | 1 |
| *Waste Management* | 1 |
| *International Journal of Social Ecology and Sustainable Development* | 1 |
| *Frontiers in Sustainable Food Systems* | 1 |
| Total | 18 |

*3.4. Cluster Analysis*

3.4.1. Consumer Communication Strategies

As a communication strategy is the means by which an organization communicates, both internally and externally, it is especially important when the intention is to transmit information about what the public may not yet be properly informed. The definition of the chosen channels is decisive, as they must be adjusted to the target audience and be able to transmit the message efficiently. To achieve this, firms can disseminate content on social

networks and information through websites managed by institutions [7]; invest in digital transformation [25]; make use of digital technologies, particularly the internet [15–26]; and develop symbolic actions using brand strengthening marketing tools [17].

### 3.4.2. The Relationship between Communication and Consumer Behavior

The various dimensions by which consumer behavior can be perceived are the beliefs that consumers have, which influence their attitudes at the time of purchase. The possible goals of a firm may be to change the mindsets of the actors involved in the food industries [27] and/or to implement solutions related to consumption choices and consumer behavior at the time of purchase [8–28].

### 3.4.3. Communication (Labels) and Health Benefits

Labels are one of the favored means for organizations to communicate with consumers. Using labels and packaging to better communicate the health benefits of products, as well as indicating their origin and organic production, can be differentiating [11] in the same way that communicating value propositions in relation to health characteristics (e.g., dairy-free and gluten-free food) and value propositions related to consumption benefits (e.g., delicious food) [6] can also be determinants when defining communication policies.

### 3.4.4. Sustainability and the Role of Corporate Social Responsibility (CSR)

In the European Commission's definition, CSR comprises all corporate activities that integrate social, environmental, ethical, human rights, and consumer concerns into business operations [29]. In consumer research, the term "sustainability" is often used in the context of sustainable products or practices [30,31]. Sustainability and CSR have strong overlaps, for example, in the concepts of economic, social, and environmental concerns [32].

Measures were proposed that aim to strengthen CSR and its role in communicating sustainable practices, such as raising the level of awareness among consumers about social responsibility initiatives practiced by companies [10]; conducting social campaigns, philanthropic activities, and interaction with stakeholders [16]; investing in symbolic actions and communication efforts through sustainability reports [17]; and indirectly by encouraging more inclusive teams [25] and supporting and communicating actions based on reducing inequalities at work [33].

### 3.4.5. The Opportunity to Develop Sustainable Business Models

Ref. [25] provides some recommendations for defining new strategies for the creation and development of sustainable business models, enhancing them with innovative aspects. Although the strategies may not be disruptive, they extend traditional models, helping to adapt to a new reality and to create new business opportunities that are able to change the core of the business as a response to environmental challenges by building a product identity that is consistent with consumer needs, seeking to increase consumer loyalty, enhancing the relationship with stakeholders to increase learning and knowledge transfer, and facilitating entry into new markets.

### 3.4.6. Sustainability and Process Optimization

As one of the goals of sustainability is to promote awareness of balanced resource consumption, it is especially important to establish a transparent and fair distribution chain in order to enable reputational gains, optimize eco-efficient operations, and make efficient use of resources [25]. It is also important is to perform product life cycle assessments [34], allowing the company to benefit from the resulting savings.

### 3.4.7. Awareness of Sustainability and Environmental Impact

Notwithstanding the conclusion of [14], who identified failures in sustainability communication, other authors pointed out some ways forward. These include increasing the level of communication with customers about sustainability issues [35]; presenting

consistent and specific environmental information [36] to credibly distance themselves from accusations of greenwashing, for example, by referring to external evidence [9]; and expanding and disseminating knowledge about sustainability [25].

Barriers to sustainability management were also identified, notably in the study by [14], whose results demonstrate a lack of government support, the high complexity of certification processes, and several communication failures.

## 4. Discussion

Having defined the research protocol and the criteria adopted for inclusion and exclusion, our searches in the Scopus and WoS databases returned a total of 18 articles covering a period from 2013 to 2022 that were then subjected to analysis and mapping.

The content analysis found seven clusters using bibliographic coupling, e.g., **cluster 1—"Consumer communication strategies"**. Here, we have an understanding of the tools used by companies in the agri-food sector to communicate sustainability to consumers. Then, we found **cluster 2—"The relationship between communication and consumer behavior"**. In this cluster, we found the main variables that influence consumer choices when buying, such as beliefs and attitudes, specifically, when we refer to the purchase of ecological food products based on pro-environmental attitudes.

We found **cluster 3—"Communication (labels) and health benefits"**. The main topic addressed in this cluster was the labels related to the communication of health benefits, such as dairy-free and gluten-free food and the benefits of consumption, such as delicious food.

**Cluster 4—"Sustainability and the role of corporate social responsibility (CSR)"** identifies a set of measures, such as raising the level of awareness among consumers about social responsibility initiatives practiced by companies. This measures intent to strengthen CSR and its role in communicating sustainable practices.

**Cluster 5—"The opportunity to develop sustainable business models"** identified the main drivers involved in sustainable supply chain management as social responsibility; economic performance/improvement; and regulations, such as environmental, regional, and international regulations. Barriers to sustainability management were also identified: lack of government support, high complexity of processes, and communication failures.

**Cluster 6—"Sustainability and process optimization"** presented a comprehensive approach to jointly assess the carbon (CF) and water (WF) footprints of the wine industry from start to finish. Life cycle assessments play a strategic role in improving a company's environmental performance and supporting successful marketing communication. The high impact of the food industry on natural resources, in terms of water consumption and greenhouse gas emissions has been drawing the attention of consumers and producers toward environmentally sustainable products.

**Cluster 7—"Awareness of sustainability and environmental impact"** listed a set of barriers to sustainability management, such as the lack of government support, the high complexity of certification processes, and several communication failures. Moreover, in this cluster, strategies were identified to increase consumer confidence, such as increasing the level of communication with customers about sustainability issues, presenting consistent and specific environmental information, and expanding and disseminating knowledge about sustainability.

This study systematically reviewed articles on sustainability communication in agri-food companies that were extracted from the Web of Science and Scopus databases using mapping analysis and bibliographic coupling using R Bibliometrix software. This study's originality made it possible to systematize the literature on sustainability communication in companies in the agri-food sector, in addition to helping to fill the gap regarding the need to synthesize this important area of knowledge, generating valuable outputs as inspiration for future studies.

## 5. Research Applications

The present study produced a general review of the literature on sustainability communication by companies, with a particular emphasis on the case of the agri-food sector. In fact, this was the first study to extensively address this subject in macro- and microdimensions, contributing to the advancement of knowledge in this field and giving a detailed description of how the literature is organized. The present systematic review provides an organized and structured starting point for studying how the literature is sequenced, what has been done, what has been achieved, and its findings and contributions to future research. One of the main contributions is undoubtedly at the company level. The focus on the agri-food sector specifically allowed for identifying and analyzing what companies communicate in relation to sustainability, how what they communicate is translated, and the way they communicate to the consumer. On the other hand, it allowed us to understand how consumers perceive the information that is communicated by agri-food companies, the strategies that were used by companies to communicate sustainability, and their contribution to the valuation process of an agri-food product and how this is perceived by the consumer.

These findings have managerial implications. This means that companies must provide greater readability and simplicity of the information provided and that they must fully play their role in society with contributions at social, economic, environmental, and legal levels. Most managers are guided by the communication of sustainable practices, mainly due to their immediate impact on the business, in the permanent search for efficiency, and few are those who see the advantage of investing in sustainability as a differentiator. This is also reflected in the way they communicate sustainability issues to consumers. Companies that do not align discourse with effective practices could face a competitive disadvantage in the near future. A growing market segment is becoming aware of the sustainability of their purchasing choices, particularly the younger generation now entering the market. Companies that adopt more effective sustainability communication strategies differentiate themselves from others, and their products may be associated with a price premium. A good communication plan makes it possible to reinforce the reputation of companies and incorporate corporate values throughout the organization while also allowing for enhancing contact and engagement with its stakeholders.

## 6. Conclusions, Limitations, and Further Research Suggestions

The new challenges of globalized societies require new methodologies and instruments to analyze the way companies contribute to society. Organizations should be increasingly aware of the need to formulate their own approach to sustainability.

Based on the studies examined, we concluded that there are many ways available to companies to communicate sustainability. These include using content on social networks, websites, and the internet in general; making value propositions based on consumer behavior and preferences; and undertaking actions such as communicating consistent and accurate information on social responsibility actions, carrying out social campaigns, releasing sustainability reports, and disclosing clear information on product origins. Most of the studies examined were from the year 2022, suggesting an increase in scientific production over time, which is in line with the idea that the sustainability issue has become increasingly important for companies. Current consumers increasingly want brands that support sustainability and help them to have a more sustainable life; customers are willing to pay more for this if necessary and companies and managers are aware of these trends. Communicating complex and abstract topics, such as sustainability, requires a change in the traditional and unidirectional communication paradigm; currently, most companies use sustainability communication. Companies must stop talking "about" sustainability and start talking "for" sustainability. As a common vision for the future of humanity, sustainability has to be a collaborative and co-creative process.

This study had some limitations that should be mentioned. The first is related to the methodology regarding the search for data, which did not cover all the existing databases

and, as a result, some important studies may have been left out. The second limitation relates to the context of the studies analyzed, most of which relate to companies operating in the food sector. Nevertheless, we believe that the goal of the study was achieved and that it was possible to enrich the scientific literature on this theme, as well as knowledge regarding the best implementation actions or strategies in the communication of sustainability in companies.

Regarding suggestions for future research, we propose making studies that include companies from all sectors, for example, the clothing sector and the tourism sector. It would also be valuable to determine, in relation to the three pillars of sustainability (economic, social, and environmental), which indicators companies use and how they can measure them. Furthermore, we suggest that other quantitative studies be carried out, which involve introducing new variables to existing models, that can demonstrate the influence of consumer perception regarding sustainability communication in companies when buying food products.

## Appendix A

**Table A1.** Database description.

| Description | Results |
|---|---|
| MAIN INFORMATION ABOUT THE DATA | |
| Timespan | 1999:2022 |
| Sources (journals, books, etc.) | 80 |
| Documents | 118 |
| Average years since publication | 4.72 |
| Average citations per documents | 13.86 |
| Average citations per year per doc | 2.502 |
| References | 7793 |
| DOCUMENT TYPES | |
| Article | 104 |
| Article—early access | 2 |
| Article—proceedings paper | 1 |
| Review | 11 |
| DOCUMENT CONTENTS | |
| Keywords plus (ID) | 573 |
| Author's keywords (DE) | 556 |
| AUTHORS | |
| Authors | 434 |
| Author appearances | 455 |
| Authors of single-authored documents | 17 |
| Authors of multi-authored documents | 417 |
| AUTHORS COLLABORATION | |
| Single-authored documents | 18 |
| Documents per author | 0.272 |
| Authors per document | 3.68 |
| Co-authors per document | 3.86 |
| Collaboration index | 4.17 |
| MAIN INFORMATION ABOUT THE DATA | |

## Appendix B

**Table A2.** Top 20 countries with the highest production.

| Journal | Publications | Percentage | Cumulative |
|---|---|---|---|
| Italy | 41 | 13% | 13% |
| Australia | 40 | 13% | 26% |
| USA | 40 | 13% | 38% |
| Germany | 39 | 12% | 50% |
| Spain | 17 | 5% | 56% |
| UK | 16 | 5% | 61% |
| China | 15 | 5% | 66% |
| Sweden | 15 | 5% | 70% |
| Poland | 13 | 4% | 74% |
| India | 10 | 3% | 78% |
| Switzerland | 9 | 3% | 80% |
| Czech Republic | 8 | 3% | 83% |
| Netherlands | 8 | 3% | 85% |
| Serbia | 8 | 3% | 88% |
| Austria | 7 | 2% | 90% |
| Greece | 7 | 2% | 92% |
| Israel | 7 | 2% | 95% |
| Ukraine | 7 | 2% | 97% |
| Finland | 5 | 2% | 98% |
| Norway | 5 | 2% | 100% |

## Appendix C

**Table A3.** Synthesis of studies included in the review.

| Author | Year | Journals | Objectives | Nature of the Study | Sample | Results |
|---|---|---|---|---|---|---|
| Wojciechowska-Solis et al. [7] | 2022 | *International Journal of Environmental Research and Public Health* | The main aim of the study was to compare young consumers' purchasing behavior toward organic food in Poland and the UK. | Quantitative—cohort study | 892 Polish consumers and 161 consumers from the UK | The results showed that young consumers pay special attention to the freshness and quality of the products consumed; the main motivations for buying organic products were concerns for their own and their loved ones' health and the desire to consume better-quality products. The organic products most purchased by the participants were eggs, vegetables and fruits, dairy products, and meat. The main source of information for young people when purchasing this type of product was experts (doctors, nutritionists, etc.), followed by referrals from family members, the content of social networks, and information from websites run by institutions. |
| Guimarães et al. [14] | 2022 | *Sustainable Production and Consumption* | To study the coffee production industry in Brazil, bearing in mind that it is an agri-food industry that has struggled to implement sustainable innovations in the supply chain. | Qualitative—bibliometric analysis | Bibliography and questionnaire examining Brazilian coffee stakeholders | The results indicated that the main drivers involved in sustainable supply chain management in the Brazilian coffee industry are the following: social responsibility, economic performance/improvement, regulations (environmental, regional, international), and the adoption of an innovative business model. Barriers to sustainability management were also identified: lack of government support, high complexity of processes, and communication failures. |
| Cooper et al. [6] | 2022 | *Sustainability* | To understand how consumers, perceive the value proposition of vegan food. | Qualitative—documental analysis | Over 120,000 tweets related to veganism | The results showed that in light of the three main drivers for choosing vegan food (ethics, personal health, and environment), surprisingly, there were a reduced number of tweets motivated by the environment/sustainability. The value propositions most likely to impact consumers and motivate them to increase their consumption of vegan foods, in addition to having environmental benefits, were (i) value propositions communicated in relation to health characteristics (e.g., dairy-free and gluten-free foods) and (ii) value propositions related to consumption benefits (e.g., delicious foods). Furthermore, the authors noted that due to the divergence of attitudes and conversations occurring on Twitter between vegans and non-vegans, it is unlikely that a single value proposition can be achieved for both groups. |
| Iazzi et al. [33] | 2021 | *British Food Journal* | Assess the levels of communication by food and beverage companies on their sustainability activities and performance in terms of compliance with the requirements of the Global Reporting Initiative (GRI) standards and the consistency of the content of the sustainability reports they publish on the Sustainable Development Goals (SDGs). | Quantitative—content analysis | 102 food and beverage companies | The study showed that companies' transition to the GRI guidelines was still ongoing. It was also found that the companies under study were supporting the SDG standards by reducing inequalities at work. Finally, the analysis revealed that a company's presence on the stock market listing is a driver of corporate social responsibility communication. |

**Table A3.** *Cont.*

| Author | Year | Journals | Objectives | Nature of the Study | Sample | Results |
|---|---|---|---|---|---|---|
| Parekh and Svenfelt [28] | 2022 | *Sustainability: Science, Practice and Policy* | Assess the perspectives of stakeholders involved in the food supply system in order to identify barriers and potentials for integrating sustainable food practices. | Qualitative—descriptive | 11 stakeholders from food companies | The data showed that stakeholders pointed to many barriers to enabling sustainable food in the current food supply system, but they also identified considerable potential for change. Many of the solutions suggested by stakeholders were related to consumer choices and behaviors, and others (to a lesser extent) were related to the redesign and replacement of practices and the reconfiguration of how practices currently interconnect. |
| Sadovska et al. [25] | 2020 | *Sustainability* | Conduct a review on value creation in agriculture and propose a new conceptual framework. | Qualitative—systematic literature review | Articles | Based on the data obtained, the authors presented a new theoretical framework for sustainable value creation in the agricultural sector based on 10 clusters: 1—Knowledge and innovation: extending and spreading extended knowledge for future agriculture; 2—Digital transformation: transforming business through information technology; 3—Circularity: changing business as a response to environmental challenges; 4—Bio-economy: efficient use of resources; 5—Inclusiveness: ensuring wider teams in order to have greater community participation; 6—Product identity: build a product identity consistent with consumer needs in order to increase consumer loyalty; 7—Supply chain: establish a transparent and fair supply chain for reputational gains; 8—Collaboration: enhance relationships with stakeholders to increase learning and knowledge transfer; 9—Production: optimize the eco-efficiency of operations; 10—Diversification: enter new markets. |
| Gider and Hamm [9] | 2019 | *International Food and Agribusiness Management Review* | To analyze how consumers search and process corporate social media and social responsibility information on food company websites. | Qualitative—documentary analysis | Websites | The findings of this study suggest that companies provide comprehensive information that can be easily filtered. In addition, companies should present specific information to credibly distance themselves from accusations of greenwashing, for example by referring to external evidence. |
| Lerro et al. [10] | 2018 | *Corporate Social Responsibility Environmental Management* | Analyze consumer preferences for corporate social responsibility (CSR) in the food industry. | Quantitative—descriptive | 1007 participants | The results revealed a high level of awareness among consumers about social responsibility initiatives by food industry companies, as well as a great interest in obtaining information and learning more about these initiatives. Five consumer groups were identified: "environmentalists", "pro-socialists", "collectivists", "animal-friendly", and "health-focused selfish". Furthermore, the study showed that consumers are willing to pay a premium price to reward food companies that address their CSR concerns and expectations. |

**Table A3.** *Cont.*

| Author | Year | Journals | Objectives | Nature of the Study | Sample | Results |
|---|---|---|---|---|---|---|
| Holden et al. [15] | 2018 | *Nature Partner Journals* | Conduct a review on the sustainability of food systems and the transition through the "food internet". | Qualitative—literature review | Articles | The authors suggested that the transition to sustainable food systems will entail many changes, such as the harnessing of internet technology in the form of an "Internet of food"; offering the possibility to use global resources more efficiently; stimulating rural livelihoods; developing resilience systems; and facilitating responsible management through computing, communication, education, and trade. The "Internet of food" thus appears as a pre-competitive platform on which business models can be developed, which is quite similar to the Internet as currently known. As concluded by the authors, the ability to compute large amounts of data will change the way the food system is analyzed and understood and will enable a transition toward more sustainable food systems. |
| Bobola et al. [16] | 2018 | *Problemy Zarzadzania* | Evaluate and analyze reports developed by food companies. | Qualitative—case study/literature review | 38 reports | The results led to the conclusion that the tools used by companies to implement actions and properly communicate sustainability are various and can be carried out through corporate governance, diversity in the workplace, social campaigns, philanthropic activities, dialogue with stakeholders, etc. |
| Gold et al. [17] | 2016 | *Journal of Industrial Ecology* | This study investigated the factors that lead companies to delay the integration of the performance dimension of sustainability into global agri-food chains. | Qualitative—literature review | Articles | The authors pointed out sustainability indicators in the agri-food sector: local living conditions; workers' rights; land rights; safe food; the end-of-life cycle; valorization through reverse logistics (energy, nutrients, etc.); and other environmental issues (e.g., energy and consumption). It was also concluded that many supply chain performance attributes represent credibility attributes that cannot be proven by the consumer, thus leading to an information asymmetry between the company and its consumers. As such, companies' responses to this situation should focus on symbolic actions and communication efforts, through sustainability reports and other brand-strengthening marketing tools. |
| Cavallo and Piqueras-Fiszman [11] | 2017 | *Journal of Sensory Studies* | To analyze the effect of visual elements of the packaging on the perceived healthiness of extra virgin olive oil in two populations with different levels of familiarity with the product and different cultural habits in terms of fat consumption. | Quantitative—cohort study | 214 consumers—2 groups (Italian and Dutch) | The results showed that people in the Italian consumer group were more familiar with the product, were more frequent consumers of the product, and had greater knowledge about the product requirements and regulations. Most elements of the packaging were perceived similarly by Dutch and Italian consumers, which suggests that there is no need to create different labels for products sold in different countries. The data also showed that labels and packaging can be used to better communicate the healthiness of products; therefore, indicating the origin and organic production can be useful for companies, regardless of the country in which they operate. |
| Richter and Bokelmann [35] | 2015 | *Waste Management* | To analyze the treatment and importance of the food waste issue in manufacturing companies. | Quantitative—correlational | 51 companies in the German food industry | The results showed that the issue of food waste has a high significance in the food industry, which will possibly increase in the future. The data showed that the topic is more relevant for companies in the confectionery sector. Across the food industry, there was no communication with consumers about efforts regarding food losses. Therefore, the authors concluded that to decrease food losses at all stages of the supply chain, especially at the consumer level, it is necessary for companies to communicate with consumers and collaborate with various institutions if necessary. According to the authors, consumer perceptions on the issue of food losses are necessary to know whether people are interested or how their interest can be aroused. |

**Table A3.** *Cont.*

| Author | Year | Journals | Objectives | Nature of the Study | Sample | Results |
|---|---|---|---|---|---|---|
| Rinaldi et al. [34] | 2016 | *Sustainability* | Presents a comprehensive approach to jointly assess the carbon (CF) and water (WF) footprint of the wine industry from start to finish. | Quantitative—exploratory | Data collected directly from wineries | According to the authors, life cycle assessments play a strategic role in improving a company's environmental performance and supporting successful marketing communication. The high impact of the food industry on natural resources in terms of water consumption and greenhouse gas emissions has been drawing the attention of consumers and producers toward environmentally sustainable products. |
| Beckers et al. [36] | 2013 | *International Journal of Social Ecology and Sustainable Development* | Knowing the extent to which sustainability information is reflected by an existing enterprise resource planning (ERP) system, or what investments would be needed for companies to facilitate the reporting of sustainability data. | Qualitative—literature review | Companies in the meat industry | The data showed that up to the date of the study, companies reported the following consumption data: energy consumption via the provider's website, water consumption data, and sporadic energy data from raw materials and supplies. It was found that much of the relevant information (approx. 50%) was already available in the industry-specific PRE system but had not yet been sufficiently complemented by environmental information or some gaps still existed. |
| Kowalska et al. [8] | 2021 | *Sustainability* | The aim of this study was to analyze young consumers' attitudes and behaviors toward organic food. | Quantitative—comparative | 812 consumers from Poland and 161 from the UK | The results showed that UK participants are significantly more conscious green consumers with higher environmental attitude intensity than Polish consumers; the intensity of pro-environmental attitude components directly and indirectly influences organic food choice; people with higher pro-environmental attitude intensity are significantly more likely to choose organic food; organic food perception influences purchases only in Poland; and pro-environmental attitude components and organic food perception alone do not explain the results, which suggests that other independent variables may be influential. |
| Vrontis et al. [26] | 2022 | *Sustainability* | Analyze how the adoption of digital technology can influence both the economic sustainability and social value of businesses and improve regional socio-economic conditions. | Quantitative | 319 participants with at least basic knowledge of digital technologies and their contributions to SMEs. | The results showed that the adoption of digital technologies has a significant impact on the creation of economic sustainability and social value for SMEs. The study also found a significant impact of entrepreneurial orientation on the relationship between social and economic value creation and SME performance. |
| Kretschmer and Kahl [27] | 2021 | *Frontiers in Sustainable Food Systems* | To make a critical analysis of the driving forces in the food system on the assumption that mindset is the main predictor of food system outcomes. | Qualitative—theoretical review | Articles | This research shed new light on the nature of the drivers of change, which are often portrayed as powerful and inevitable trends that shape food systems. Instead, the authors proposed that drivers arise from the mindset of actors, affecting food system behavior in non-linear ways. |

# References

1. Genç, R. The Importance of Communication in Sustainability & Sustainable Strategies. *Procedia Manuf.* **2017**, *8*, 511–516. [CrossRef]
2. Vargas-Hernández, J.G. Strategic Organizational Sustainability. *Circ. Econ. Sustain.* **2021**, *1*, 457–476. [CrossRef]
3. Afzal, F.; Lim, B. Organizational Factors Influencing the Sustainability Performance of Construction Organizations. *Sustainability* **2022**, *14*, 10449. [CrossRef]
4. Coronato, M. The Sustainability Dimensions: A Territorialized Approach to Sustainable Development. *Glob. J. Hum. Soc. Sci.* **2020**, *20*, 23–31. [CrossRef]
5. Dos Santos, R. A Sustentabilidade e o Novo Modelo de Negócio Branding como Impulsionador de Oportunidades. Master's Thesis, Universidade da Beira Interior, Covilhã, Portugal, 2019. Available online: https://ubibliorum.ubi.pt/bitstream/10400.6/10519/1/7226_15346.pdf (accessed on 12 December 2022).
6. Cooper, K.; Dedehayir, O.; Riverola, C.; Harrington, S.; Alpert, E. Exploring Consumer Perceptions of the Value Proposition Embedded in Vegan Food Products Using Text Analytics. *Sustainability* **2022**, *14*, 2075. [CrossRef]
7. Wojciechowska-Solis, J.; Kowalska, A.; Bieniek, M.; Ratajczyk, M.; Manning, L. Comparison of the Purchasing Behaviour of Polish and United Kingdom Consumers in the Organic Food Market during the COVID-19 Pandemic. *Int. J. Environ. Res. Public Health* **2022**, *19*, 1137. [CrossRef]
8. Kowalska, A.; Ratajczyk, M.; Manning, L.; Bieniek, M.; Mącik, R. "Young and Green" a Study of Consumers' Perceptions and Reported Purchasing Behaviour towards Organic Food in Poland and the United Kingdom. *Sustainability* **2021**, *13*, 13022. [CrossRef]
9. Gider, D.; Hamm, U. How do consumers search for and process corporate social responsibility information on food companies' websites? *Int. Food Agribus. Manag. Rev.* **2019**, *22*, 229–246. [CrossRef]
10. Lerro, M.; Vecchio, R.; Caracciolo, F.; Pascucci, S.; Cembalo, L. Consumers' heterogeneous preferences for corporate social responsibility in the food industry. *Corp. Soc. Responsib. Environ. Manag.* **2018**, *25*, 1050–1061. [CrossRef]
11. Cavallo, C.; Piqueras-Fiszman, B. Visual elements of packaging shaping healthiness evaluations of consumers: The case of olive oil. *J. Sens. Stud.* **2017**, *32*, e12246. [CrossRef]
12. Primožič, L.; Kutnar, A. Sustainability Communication in Global Consumer Brands. *Sustainability* **2022**, *14*, 13586. [CrossRef]
13. Sabet, N. Sustainability Communications and the Ceramic Tile Industry. Master's Thesis, Instituto Politécnico de Leiria, Leiria, Portugal, 2021. Available online: http://hdl.handle.net/10400.8/6774 (accessed on 12 December 2022).
14. Guimarães, Y.M.; Eustachio, J.H.P.P.; Leal Filho, W.; Martinez, L.F.; do Valle, M.R.; Caldana, A.C.F. Drivers and barriers in sustainable supply chains: The case of the Brazilian coffee industry. *Sustain. Prod. Consum.* **2022**, *34*, 42–54. [CrossRef]
15. Holden, N.M.; White, E.P.; Lange, M.C.; Oldfield, T.L. Review of the sustainability of food systems and transition using the Internet of Food. *NPJ Sci. Food* **2018**, *2*, 18. [CrossRef] [PubMed]
16. Bobola, A.; Ozimek, I.; Szlachciuk, J. Social and Integrated Reports of Food Business as Tools of CSR and Sustainable Development. *Probl. Zarz.* **2018**, *16*, 101–113. [CrossRef]
17. Gold, S.; Kunz, N.; Reiner, G. Sustainable Global Agrifood Supply Chains: Exploring the Barriers. *J. Ind. Ecol.* **2017**, *21*, 249–260. [CrossRef]
18. Tranfield, D.; Denyer, D.; Smart, P. Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review. *Br. J. Manag.* **2003**, *14*, 207–222. [CrossRef]
19. Denyer, D.; Tranfield, D. Producing a Systematic Review. In *The SAGE Handbook of Organizational Research Methods*; SAGE: Newcastle, UK, 2009; pp. 672–689. Available online: https://www.cebma.org/wp-content/uploads/Denyer-Tranfield-Producing-a-Systematic-Review.pdf (accessed on 12 December 2022).
20. Lame, G. Systematic Literature Reviews: An Introduction. In *Proceedings of the Design Society: International Conference on Engineering Design*; Cambridge University Press: Cambridge, UK, 2019; Volume 1, pp. 1633–1642. [CrossRef]
21. Cadavid Higuita, L.; Awad, G.; Franco Cardona, C.J. A bibliometric analysis of a modeled field for disseminating innovation. *Estud. Gerenc.* **2012**, *28*, 213–236. [CrossRef]
22. Albort-Morant, G.; Ribeiro-Soriano, D. A Bibliometric Analysis of International Impact of Business Incubators. *J. Bus. Res.* **2015**, *69*, 1775–1779. [CrossRef]
23. Liberati, A.; Altman, D.G.; Tetzlaff, J.; Mulrow, C.; Gøtzsche, P.C.; Ioannidis, J.P.A.; Clarke, M.; Devereaux, P.J.; Kleijnen, J.; Moher, D. The PRISMA Statement for Reporting Systematic Reviews and Meta-Analyses of Studies That Evaluate Health Care Interventions: Explanation and Elaboration. *PLoS Med.* **2009**, *6*, e1000100. [CrossRef]
24. Page, M.J.; McKenzie, J.E.; Bossuyt, P.M.; Boutron, I.; Hoffmann, T.C.; Mulrow, C.D.; Shamseer, L.; Tetzlaff, J.M.; Akl, E.A.; Brennan, S.E.; et al. The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *Syst. Rev.* **2021**, *10*, 89. [CrossRef]
25. Sadovska, V.; Ekelund Axelson, L.; Mark-Herbert, C. Reviewing Value Creation in Agriculture—A Conceptual Analysis and a New Framework. *Sustainability* **2020**, *12*, 5021. [CrossRef]
26. Vrontis, D.; Chaudhuri, R.; Chatterjee, S. Adoption of Digital Technologies by SMEs for Sustainability and Value Creation: Moderating Role of Entrepreneurial Orientation. *Sustainability* **2022**, *14*, 7949. [CrossRef]
27. Kretschmer, S.; Kahl, J. Sustainable Development Goal Drivers in Food Systems. *Front. Sustain. Food Syst.* **2021**, *5*, 536620. [CrossRef]

28.  Parekh, V.; Svenfelt, Å. Taking sustainable eating practices from niche to mainstream: The perspectives of Swedish food-provisioning actors on barriers and potentials. *Sustain. Sci. Pract. Policy* **2022**, *18*, 292–308. [CrossRef]

29.  European Commission. A Renewed EU Strategy 2011-14 for Corporate Social Responsibility. 2011. Available online: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52011DC0681&from=EN (accessed on 12 December 2022).

30.  Glover, J.L.; Champion, D.; Daniels, K.J.; Dainty, A.J.D. An institutional theory perspective on sustainable practices across the dairy supply chain. *Int. J. Prod. Econ.* **2014**, *152*, 102–111. [CrossRef]

31.  Ju, S.; Chang, H. Consumer perceptions on sustainable practices implemented in foodservice organizations in Korea. *Nutr. Res. Pract.* **2016**, *10*, 108–114. [CrossRef]

32.  Montiel, I. Corporate social responsibility and corporate sustainability: Separate pasts, common futures. *Organ. Environ.* **2008**, *21*, 245–269. [CrossRef]

33.  Iazzi, A.; Ligorio, L.; Vrontis, D.; Trio, O. Sustainable Development Goals and healthy foods: Perspective from the food system. *Br. Food J.* **2022**, *124*, 1081–1102. [CrossRef]

34.  Rinaldi, S.; Bonamente, E.; Scrucca, F.; Merico, M.; Asdrubali, F.; Cotana, F. Water and Carbon Footprint of Wine: Methodology Review and Application to a Case Study. *Sustainability* **2016**, *8*, 621. [CrossRef]

35.  Richter, B.; Bokelmann, W. Approaches of the German food industry for addressing the issue of food losses. *Waste Manag.* **2016**, *48*, 423–429. [CrossRef]

36.  Beckers, C.; Marz, O.; Kolbe, L.M. Investing in Sustainability. *Int. J. Soc. Ecol. Sustain. Dev.* **2013**, *4*, 99–120. [CrossRef]