

# Navigating Responsible Consumption: Unveiling Consumer Perceptions and the Role of Bio-Based Products in Sustainable Decision-Making

**Magdalena Klimczuk-Kochańska**

University of Warsaw

Email: [mkochanska@wz.uw.edu.pl](mailto:mkochanska@wz.uw.edu.pl)

ORCID: 0000-0002-0069-110X

Journal of Marketing  
and Consumer Behaviour in Emerging Markets

ISSN: 2449-6634

Issue 2024, 2(19): pp. 37–52

© The Author(s) 2024

**Magdalena Marczevska**

University of Warsaw

Email: [mmarczevska@wz.uw.edu.pl](mailto:mmarczevska@wz.uw.edu.pl)

ORCID: 0000-0003-4301-2741

Creative Commons license BY 4.0 DEED

DOI: [10.7172/2449-6634.jmcbem.2024.2.4](https://doi.org/10.7172/2449-6634.jmcbem.2024.2.4)

[www.jmcbem.wz.uw.edu.pl](http://www.jmcbem.wz.uw.edu.pl)

*Received: 21 August 2024/ Revised: 26 November 2024/ Accepted: 28 November 2024/ Published online: 2 December 2024*

## ABSTRACT

The modern consumer society is criticised for its harmful impact on individual well-being and the environment, prompting a call for a transition to responsible consumption. This article explores emerging trends in consumer behaviour towards responsible consumption. Drawing from existing literature and empirical findings, it examines the multifaceted dimensions of responsible consumption, encompassing environmental, ethical, and social considerations.

Conscious consumers prioritise basic needs over excessive consumption, opting for high-quality, reliable, and environmentally friendly products, especially those derived from biomaterials called bio-based products. Furthermore, responsible consumers recognise the social and environmental consequences of their consumption behaviour, advocating for sustainable practices and supporting initiatives for societal improvement.

The article discusses conscious consumption aiming to mitigate consumerism's environmental impact, focusing on bio-based products.

Insights from focus group discussions conducted in Poland, Finland, the Netherlands, and Spain, as part of the 3-CO project, shed light on consumer perceptions and concerns regarding bio-based products, providing valuable input for decision-makers, businesses, and environmental organisations seeking to promote responsible consumer behaviour and support the transition towards more sustainable consumption patterns.

**JEL classification:** M10, M14, M31, O52

**Keywords:** responsible consumption, sustainable consumption, responsible consumer, conscious consumer, ethical consumer

## 1. INTRODUCTION

Responsible consumption is purchasing decisions that consider the long-term impact on the environment. The context of this issue is shaped by the growing recognition of environmental degradation and social injustices associated with conventional consumption habits. As industrialisation and consumerism increase, adverse effects on ecosystems and communities increase (Elkington, 1997). This is due to the production activities of enterprises and farms, as well as household waste disposal. As a result, we are facing increasing environmental degradation and visible climate change (Thøgersen, 2002). Furthermore, expanding production leads to the exploitation of local communities, deepening poverty and inequality in many societies.

From this perspective, responsible consumption has become a critical approach to mitigating the harmful effects of human impact on the natural environment. Product biodegradability and the possibility of recycling are becoming increasingly important. By purchasing products that, for example, are made from renewable resources consumers have a real influence on limiting emerging environmental crises. By choosing products made from renewable resources, having a lower environmental impact, designed to last, and recyclable, consumers can help reduce the ecological crises facing our planet. This approach is reflected in assessing products' ecological footprints and in designing environmentally friendly production processes.

Consumers are becoming increasingly aware of the results of their consumption behaviours. Some are more interested than others in reducing their ecological footprint. However, widespread adoption of responsible consumption is hindered by, for example, perceived higher costs of sustainable products and limited availability of some products in the market (Gleim et al., 2013). It is, therefore, essential to better understand what environmental, ethical or social factors influence consumer-responsible behaviour and consumption.

Responsible consumption includes innovations related to the design and production of bio-based products, which are a sustainable alternative to conventional ones (Zuiderveen et al., 2023). The development of these products is aided by their link to ethical production practices and ability to contribute to the local economy, making them attractive to socially responsible consumers.

Thus, the aim of this paper is to explore the evolving trends in consumer behavior towards responsible consumption, with a particular focus on the adoption of bio-based products. The paper contributes to the understanding of how environmental, ethical, and social factors influence consumer choices, offering valuable insights for policymakers, businesses, and environmental organisations seeking to promote sustainable consumption practices. Thanks to empirical insights from multiple countries, the research results can help shape strategies for promoting sustainable consumer behavior and support the transition towards more environmentally and socially responsible consumption patterns.

By supporting responsible consumption, individuals can help reduce environmental degradation, support social justice and increase sustainable economic development. Consumer adoption of bio-based products remains limited, and understanding the factors influencing consumer behaviour is crucial to promoting responsible consumption. The transition to a more sustainable and just society requires a comprehensive understanding of how consumers can be motivated to make responsible choices, especially for bio-based products with significant environmental and social benefits. Research in this area can provide valuable information about consumers' feelings and attitudes towards bio-based products, informing changes in strategies for policymakers, businesses and marketers to encourage more sustainable purchasing habits (Prothero et al., 2011).

## 2. LITERATURE REVIEW

### 2.1. Responsible Consumption Concept

An essential paradigm of consumer behaviour is the concept of responsible consumption. It emphasises ethical and environmentally sustainable purchasing decisions. Global challenges, including climate change, are behind this approach. Contemporary consumption patterns and online shopping contribute to this because of a tendency to overconsumption. Understanding responsible consumption requires examining its various dimensions, including the rational and efficient use of resources and the impact of consumer choices on the environment and society.

The concept of responsible consumption has now reached the forefront of academic and public discourse. Responsible consumption encompasses various consumer behaviours. They can positively impact the environment, society and ethical standards (Jackson, 2005). This means moving to more sustainable practices (Seyfang, 2006). Fisk (1973) defines responsible consumption as making choices that maximise individual and collective well-being while minimising the depletion of natural resources. This approach means using resources wisely and reducing waste. Consumption patterns cannot limit the ability of future generations to meet their needs. This, therefore, requires making consumers aware that their purchasing decisions will have long-term effects. Paavola (2001) argues that consumers can significantly influence environmental outcomes by choosing the right products and services. Consumers play a key role in driving sustainable development by making informed choices. They can reduce the negative impact of consumption. Kemppainen et al. (2019) note that consumers increasingly express concerns about the “throw-away culture”. The waste phenomenon is strongly driven by marketing activities, such as promotional offers or quantity discounts, which can cause unnecessary purchases. That is why promoting responsible consumption is a very important decision-making factor. Consumption must be responsible and involve rational and efficient choices, promoting environmentally friendly and ethically produced goods (Webster, 1975). It goes beyond individual actions and includes the systemic impact of consumption patterns on society and the environment. The United Nations (2015) shares a similar view and defines responsible consumption as “doing more and better with less, increasing net wealth from economic activity by reducing resource consumption, degradation and pollution throughout the life cycle while improving the quality of life”. This definition emphasises reducing resource consumption and pollution while improving the overall quality of life of societies. Despite the growing awareness and commitment to responsible consumption, there is a gap between consumer intentions and their actual behaviour. Although, as Biswas (2016) shows, consumers are increasingly willing to pay a premium for products with less negative environmental impact, Joshi and Rahman (2015) note that various factors influence consumer behaviour.

## **2.2. Environmental dimensions of Responsible Consumption**

Since the context of this study refers to the growing environmental crises that require a shift towards more sustainable consumption practices, it is therefore necessary to include the environmental dimension of responsible consumption.

It is worth noting that early economic theories focused mainly on consumption in the dimension of income function (Wilk, 2002). However, as an understanding of this economic area developed, researchers also began to study consumption from the perspective of environmental aspects, referring to the scarcity of resources.

According to the Brundtland report (1987), sustainable development requires balancing growth with environmental protection. It emphasises the need for responsible consumption practices that prioritise long-term environmental health. Responsible consumption includes resource conservation, waste management, and ecological footprint reduction. The environmental dimension of responsible consumption means prioritising products with a lower environmental footprint, which are biodegradable, recyclable, or produced with the help of sustainable technologies (Girod & de Haan, 2010; Geiger et al., 2018). This area includes resource awareness, waste management, and carbon footprint reduction (Freestone & McGoldrick, 2008). About the above, we can talk about environmentally conscious consumers who are understood to make conscious decisions, reduce unnecessary purchases, and choose sustainable alternatives (Buhay, 2021). For example, furniture made of sustainable wood or clothing made from recycled fibres are products whose production and use help to save natural resources and minimise waste.

## **2.3. Ethical Dimensions of Responsible Consumption**

The ethical aspect of responsible consumption focuses on moral considerations. It refers to ethical labour practices, fair trade, and animal welfare (Nicholls & Opal, 2005). Ethical considerations also focus on supporting businesses, especially regarding fair labour practices.

Ethical consumption has evolved from focusing mainly on environmental issues to a more comprehensive framework covering different ethical dimensions. It is not only about social justice but

also about its economic dimension. The increasing importance of these aspects is underlined by the growing visibility of ethical consumption practices (De Pelsmacker et al., 2005).

The motivations driving ethical consumption are pretty broad. For example, some consumers will be interested in achieving altruistic motives. Through their actions, they can contribute positively to society and the environment. At the same time, others may be driven by self-interest and only seek healthier or higher-quality products (Freestone & McGoldrick, 2008).

Both of the above approaches are widespread. For example, Anderson and Cunningham (1972) described the ethical dimension of responsible consumption as a philanthropic perspective in which consumers act out of a desire to help others without personal gain. Thus, consumers are portrayed here as agents of social good whose purchasing decisions can support broader social goals. Gandhi and Kaushik (2016) highlighted the “buying for a purpose” perspective. It can be, for example, a percentage of the purchase price for supporting humanitarian efforts. This form of consumption transforms purchases into actions that contribute to social well-being.

Moreover, consumer behaviour often reflects a desire to “do good” while feeling good. For example, consumers may choose locally grown products, which gives them personal satisfaction (Mohr & Webb, 2005). In other words, ethical consumers consider the broader impact of their purchases. These can include, for example, working conditions and fair trade practices (Sandin & Röcklinsberg, 2016).

Ethical consumption can drive social change. For example, consumers are paying increasing attention to companies’ social and environmental sustainability (Webster, 1975). This type of consumer behaviour also evaluates organisations’ sustainability practices. Different entities are more interested in a commitment to ethical and environmental principles (Galbreath & Shum, 2012). Companies are thus induced to adopt sustainable practices to meet consumer needs.

Despite the growing importance of ethical consumption, its widespread adoption is hampered by several challenges. It often encounters an “attitude-behaviour gap” (Boulstridge & Carrigan, 2000; Shaw et al., 2016; Kutaula et al., 2024). This refers to the disconnect between consumers’ ethical intentions and purchasing behaviours (Prothero, 1990). Barriers such as the lack of market incentives for ethical products and minimal penalties for unethical practices contribute to the gap between consumers’ intentions and their actual behaviour. As a result, although they have good ethical intentions, they tend to choose products that do not support the ethical behaviour of the producers. They also often lack the ethical knowledge necessary to make informed purchasing decisions.

## **2.4. Social Dimension of Responsible Consumption**

From a sociological perspective, consumption studies were already carried out at the turn of the 20th century. At that time, scientists emphasised that consumption patterns reflect social status, lifestyles and cultural values. Veblen introduced the concept of “conspicuous consumption” to demonstrate social status and gain recognition (Veblen, 2007). This perspective prepared the ground for contemporary discussions on responsible consumption, which now includes various social aspects. The social dimension of responsible consumption is primarily related to socially responsible consumption. Webster (1975) was one of the first to define it as a consumer behaviour that considers the public consequences of private consumption decisions. This early definition presented the social issues of responsible consumption as an individual act and a potential agent of social change. Roberts (1995) extended this concept to environmental issues, defining it as the practice of products and services with a positive or less negative environmental impact. He expanded the scope of responsible consumption to include environmental responsibility, reflecting the growing awareness of the interdependence between consumption and environmental sustainability. Uusitalo and Oksanen (2004) addressed ethical aspects and argued that an essential aspect of responsible consumption is linking individual choices with aligning consumption with broader societal values and goals.

Later studies have refined this concept. Pivato et al. (2008) emphasised that socially responsible consumers take into account companies’ activities in terms of labour practices, environmental protection, and transparency. Integrating corporate social responsibility (CSR) with the social aspects of responsible consumption emphasises the importance of aligning consumer behaviour with corporate practices. Webb et al. (2008) further pointed out that consumers link their purchasing decisions to organisations’ CSR compliance. This can minimise harmful effects and maximise long-term beneficial effects on society.

Responsible consumers often demonstrate loyalty to national brands to support the local economy. This nationalist element reflects how cultural and social context can influence consumer behaviour to promote regional economic growth and stability. Socially responsible consumption influences consumer decision-making, from product selection to disposal. More customers can now interact with suppliers, physically and digitally, at multiple points in the supply chain (Lacy & Rutqvist, 2015). Mohr et al. (2001) pointed out that the basis for responsible consumption is a good understanding of the entire product life cycle.

## **2.5. Driving Responsible Consumption Through Bio-based Products**

This paper analyses consumer attitudes and beliefs regarding responsible consumption. Bio-based products are the central core of this review. These goods are environmentally friendly substitutes for traditional goods (Zwicker, 2023). It is crucial to understand how much customers appreciate these advantages and how difficult it is to embrace “improved” ethical and environmentally sound products (Thøgersen et al., 2015).

Bio-based products can be further defined as products made entirely or partly from bio-based materials. According to the European Commission, a bio-based product is “wholly or partly derived from biomass, such as plants, trees or animals”. Biomass in this context refers to the biodegradable fraction of products, waste and residues from agriculture, forestry and related industries and the biodegradable fraction of industrial and municipal waste (European Commission). In addition to food and feed, the USDA BioPreferred® program makes it clear that a significant portion of these goods are made of biological elements that come from aquatic, forest, or agricultural sources. These criteria offer biobased products as ecologically benign alternatives by highlighting their renewable nature and potential biodegradability. Lower greenhouse gas emissions are one of the key benefits of biobased goods (USDA BioPreferred® Program, 2013). For example, manufacturing and using biobased products like biofuels (ethanol, biodiesel) usually results in lower carbon dioxide emissions. When burned, they emit fewer emissions than conventional gasoline and diesel. In addition, the cultivation of biobased resources such as crops and forests can act as carbon sinks, removing CO<sub>2</sub> from the atmosphere as they grow (Cherubini & Strømman, 2011). This is also emphasised by McDonald et al. (2015), who point out that these products contribute not only to lower greenhouse gas emissions but also to lower utility bills.

Many bio-based products, like bioplastics, exhibit improved biodegradability. Bioplastics can be produced from renewable resources such as corn starch, sugar cane or cellulose. These plastics are used in packaging, consumer goods, automotive parts and electronics. Bio-based building materials such as bio-concrete containing biomass such as rice husks or bamboo fibres improve circularity, reduce carbon emissions and bind carbon throughout their service life (Shen et al., 2009).

The production and use of bio-based products also contribute to economic and social benefits, especially by creating new jobs. It is very important in rural areas, as the production of bio-based products largely involves agriculture and forestry (Carus & Dammer, 2018). Despite the visible benefits, adopting bio-based products is associated with some challenges. Consumers are often sceptical about the environmental claims associated with these products. They are aware about “greenwashing” and misleading marketing tactics of companies (Peattie & Crane, 2005). Significant barriers to their widespread adoption of bio-based products are also higher costs and limited availability of them (Bos et al., 2024).

## **2.6. Research Gap and Original Contribution**

The existing literature provides a comprehensive understanding of responsible consumption, highlighting its importance and the factors influencing consumer behaviour. However, a more detailed look at the multidimensional aspects of responsible consumption is needed, particularly the interplay of ethical, environmental and social dimensions in consumer decision-making.

This article uncovers the research gap that remains in considering bioproducts in consumer behaviour. While studies have analysed the benefits of bioproducts, consumer behaviour analysis is lacking. This gap limits the understanding of how bioproducts affect overall consumption patterns.

On the other hand, a study of consumer perceptions and acceptance of biobased products is needed to understand the different dimensions of responsible consumption. While consumer



preferences for sustainable products are documented, little research exists on the factors influencing consumer perceptions of biobased products. Understanding these factors is essential to promoting wider adoption.

An essential contribution of the study will be a comprehensive analysis integrating the environmental, ethical and social dimensions of responsible consumption. The study provides a holistic view of responsible consumption and insight into how these factors converge in consumer decision-making. The study will also explore the differences between attitudes and behaviours linking consumers' environmental, ethical, and social intentions to their bioproduct purchasing behaviour.

The results will provide practical recommendations for policymakers and businesses to increase the attractiveness and availability of sustainable products and promote more responsible consumption practices. They also discuss increasing the attractiveness and availability of bioproducts by encouraging more responsible consumption practices.

The following research questions will be verified to fill the identified research gap:

**RQ1:** How do environmental, ethical and social dimensions of responsible consumption influence consumers' choices?

**RQ2:** What factors influence consumers' perceptions of bio-based items?

**RQ3:** How can the "attitude-behaviour gap" be reduced considering the interplay of environmental, ethical and social dimensions of responsible consumption?

The analysis of the above issues will provide the basis for broader knowledge on responsible consumption and its dimensions. It will also allow for the presentation of practical proposals that promote more responsible actions in consumer behaviour.

### 3. DATA AND METHODS

The study was conducted using the Focus Group Discussion (FGD) method. This method collected qualitative data from consumer groups in four European countries: Finland, Poland, the Netherlands and Spain. This method was chosen because it effectively obtained detailed answers and allowed for in-depth discussion on the topic. FGDs are particularly suitable for studying complex and nuanced issues related to responsible consumption.

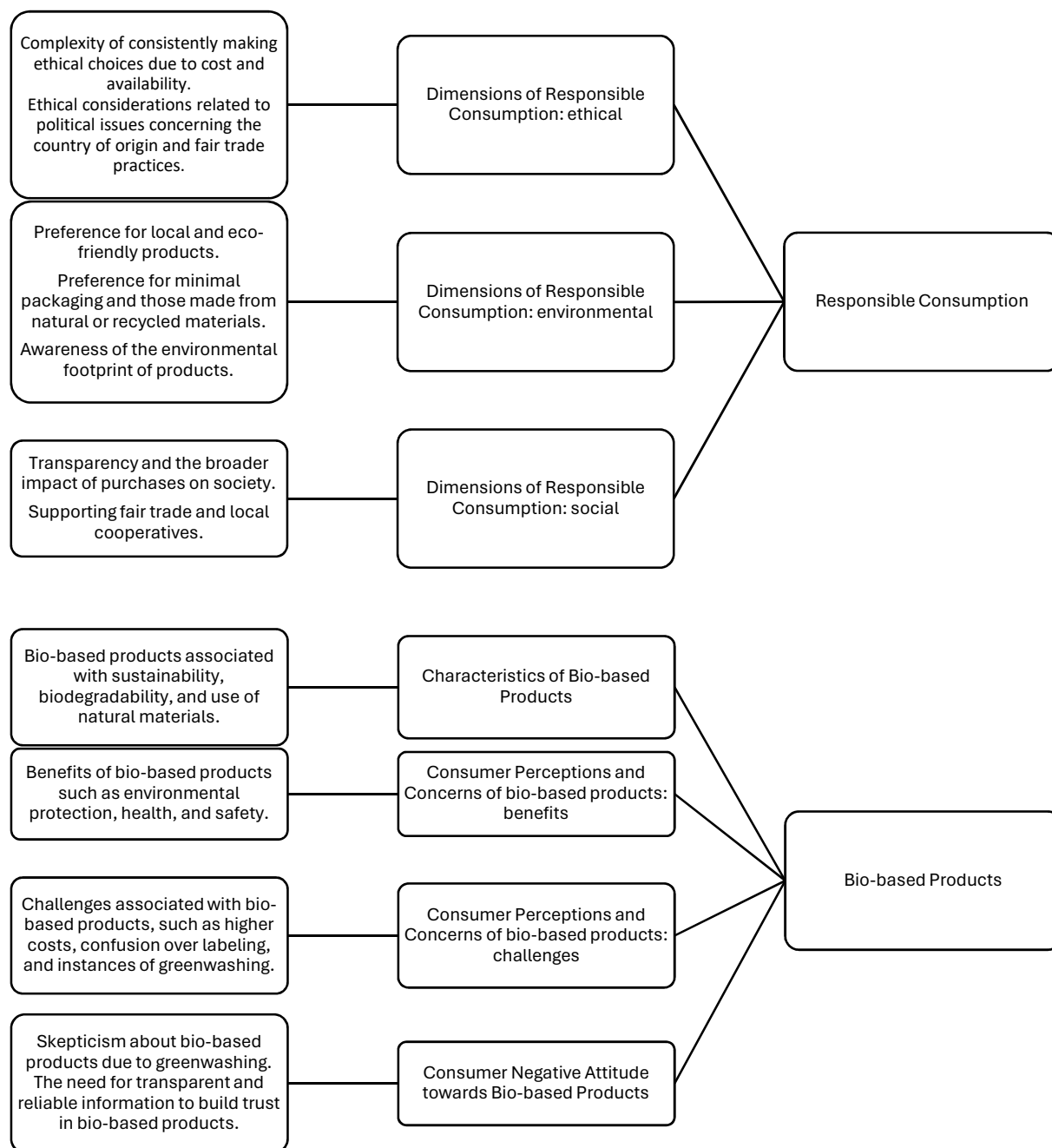
The focus group discussions were carefully divided into six thematic sections related to the consumption of bio-based products and issues such as labelling, certification systems and digital solutions. A comprehensive set of 43 questions (including guiding questions) formed the basis for the focus group discussions. The questions were carefully designed to cover all relevant aspects of consumer perceptions. They help to provide an in-depth analysis of the research topics. Each session was recorded and transcribed by moderators. The interview guide, including the interview presentation with visual aids, provided structured instructions for the interviewers, ensuring consistency and reliability across focus group sessions.

The focus group discussions were conducted online using Zoom or Teams communication platforms. Thanks to that, seamless interaction between participants and researchers was possible regardless of geographical location. In addition, the Mural platform with its boards was used. It enhanced the discussions and allowed participants to collaborate effectively.

The data from the focus group discussions were structured using the framework developed by Gioia et al. (2012). It allows for a systematic and rigorous analysis. This approach involves identifying and coding relevant themes and patterns in the qualitative data. Using Gioia's methodology (Gioia et al., 2012; Corley & Gioia, 2004) ensured that the study was data-driven and provided a clear structure for interpreting the results. The data structure and corresponding codes used in this study are presented in Figure 1.

**Figure 1**

Data Structure and Codes: 1<sup>st</sup> Order Concepts → 2<sup>nd</sup> Order Themes → Aggregate Dimensions



Source: Own elaboration based on focus group discussions research results.

The sample comprised 34 participants who participated in the focus group research in April 2024. To ensure a diverse range of perspectives, participants were segmented into two distinct age groups for each country: 18–35 and 40–55.

The research results presented in this article concern consumers' views of responsible consumption in different dimensions. The authors also discussed consumer feelings and attitudes toward bio-based products.

## 4. RESULTS

The findings presented in this section are derived from a qualitative research study that explores the responsible consumption idea. This analysis of the focus group discussions revealed two key themes related to consumers' viewpoints on the idea of responsible consumption and their feelings and attitudes toward bio-based products.

### 4.1. Consumer Perception of Responsible Consumption

Respondents see responsible consumption as making informed decisions to purchase products that minimise negative environmental impacts. It includes preferring durable goods, sustainable materials, and products with recognised certifications. Participants highlighted the importance of labels such as the European Union Ecolabel and FSC (Forest Stewardship Council). They emphasised avoiding overconsumption and choosing products that are beneficial in the long term, such as eco-friendly household items and organic cosmetics. Participants displayed a practical approach to responsible consumption, often influenced by financial considerations and a desire to avoid waste. For example, one participant mentioned, "I try not to buy more than I need, not to waste and unnecessarily buy". This reflects a pragmatic mindset where avoiding waste and unnecessary expenditure are key elements of responsible consumption. Another participant emphasised the importance of durability, stating, "No matter how bio-based it is, if you have to change them every few days, then yes, it pollutes more than a durable product that lasts to it".

Responsible consumption has at least three dimensions: ethical, environmental and social. Environmental responsibility was a significant focus. Participants discussed buying local and organic products to reduce transportation impacts and support sustainability. The preference for local and eco-friendly products was evident. One participant shared, "I often buy local products, which often makes a difference as well. So eggs from local farmers or various types of fruits and vegetables instead of everything being transported from distant countries".

Moreover, they preferred products with minimal packaging and natural or recycled materials. For example, a participant highlighted the transition from plastic to bio-based disposable cutlery, reflecting a growing trend towards environmentally friendly alternatives. This dimension included a strong awareness of the products' environmental footprint.

Ethical dimensions of responsible consumption were discussed less frequently. Participants noted the complexity of consistently making ethical choices due to cost and availability. Ethical considerations concerned political issues concerning the country of origin and fair trade practices. Ethical considerations were highlighted by participants who expressed a preference for products with ethical certifications. One participant mentioned, "I buy many items with certifications: 'Beter Leven' or organic products". Ethical consumption also extended to animal welfare concerns, as noted by a participant who said, "I also think about the rights of animals that since there are other materials here including silk feathers wool beeswax. It makes me think in what kind of conditions these exploited animals have been".

While social dimensions were not explicitly detailed, supporting companies with positive societal contributions was implicit in discussing ethical certifications and local products. Participants valued transparency and the broader impact of their purchases on society, which aligns with socially responsible consumption. Social responsibility included supporting fair trade and local cooperatives. Participants looked for labels indicating fair trade or local production to ensure their purchases supported positive social outcomes. There was also an emphasis on products that contribute to societal well-being.

### 4.2. Consumer feelings and attitudes toward bio-based products

During the focus group discussions participants paid particular attention to bio-based products. Bio-based products were recognised for their sustainability, biodegradability, and use of natural materials. Participants appreciated various bio-based products such as bamboo fibers, bioplastic toys, and cosmetics made from natural ingredients. These products were valued for their eco-friendly attributes and reduced environmental impact. The advantages of these products include reduced carbon footprint and biodegradability, which are significant benefits for environmentally conscious consumers.



The perceived benefits of bio-based products included environmental protection, health, and safety. One participant noted the preference for products with less environmental impact, saying, “I personally prefer that if it's the case when there are two similar products, always take more of the bio-based one.” Another participant mentioned, “Even if it's in plastic bags like this one or if I see long-lasting bags, always prefer the one bio one”, emphasising the environmental benefit of choosing bio-based options.

Participants identified several challenges associated with bio-based products, including higher costs, availability, awareness, confusion over labelling, and instances of greenwashing. Participants expressed frustration with misleading labels and the higher prices of bio-based products, which limited their accessibility. They also noted the lack of sufficient information and clear communication about the benefits of bio-based products. One participant pointed out, “Bio-based products are quite expensive, and not everyone can afford to pay that extra for the sustainability or quality of these products”. There was also concern about the transparency and reliability of certifications associated with bio-based products.

Negative attitudes towards bio-based products were evident among some participants due to concerns about greenwashing and the complexity of verifying product claims. One participant mentioned, “There is an incredible greenwashing; they sell everything to you with blue or greenish that if it has been studied, it has to be green so that you relate it to nature”. Another participant doubts the benefits of bio-based products, saying, “It raises almost more suspicion that it is really in any way better for the environment. Or is this just a matter of wanting to stick the word bio-based on a product and maybe a picture in a magazine and things like that?”. This highlights the mistrust and confusion consumers face regarding the authenticity of bio-based products.

In conclusion, the analysis reveals a cautious but generally positive approach to responsible consumption among participants. While there is a clear preference for ethical, environmental, and social dimensions in theory, practical challenges such as cost and accessibility significantly influence consumer behaviour. Bio-based products are viewed positively for their potential benefits, yet scepticism and concerns about greenwashing and certification reliability persist.

## 5. DISCUSSION

First, it should be noted that the research results presented in the section above allow us to identify three dimensions of responsible consumption. These dimensions are presented in detail in Table 1.

**Table 1**

Responsible Consumption Dimensions

Responsible Consumption Dimensions	Participants' Views
Environmental	<ul style="list-style-type: none"> <li>– Preference for Eco-friendly Products (<i>products with minimal packaging from natural or recycled materials</i>)</li> <li>– Buying Local and Organic Products (<i>minimisation of carbon emissions from long-distance transportation</i>)</li> </ul>
Ethical	<ul style="list-style-type: none"> <li>– Political and Fair-Trade Issues (<i>concerns about supporting fair trade and ensuring fair treatment of workers in the supply chain</i>)</li> <li>– Preference for Ethical Certifications (<i>prioritisation of products with ethical certifications indicating a commitment to supporting ethical production practices</i>)</li> <li>– Animal Welfare Concerns (<i>concerns about the treatment of animals in the production process for acquiring materials like silk, feathers, wool, and beeswax</i>)</li> </ul>
Social	<ul style="list-style-type: none"> <li>– Supporting Fair Trade Practices and Local Cooperatives (<i>actively seeking labels indicating Fair Trade or local production to support local communities</i>)</li> <li>– Implicit Support for Societal Contributions (<i>importance of certifications and local products implicitly support companies that make positive societal contributions</i>)</li> <li>– Emphasis on Societal Well-being (<i>emphasis on purchasing products that contribute to societal well-being</i>)</li> </ul>

Source: Own elaboration based on literature review and focus group research results.

First, respondents' references to the environmental dimension. Participants strongly preferred environmentally friendly products, especially those with minimal packaging. They are interested in buying products made of natural or recycled materials. This preference reflects a growing awareness of the environmental impact of packaging waste and a desire to reduce it. Consumers understand packaging innovations.

It aligns with other study highlighting consumers' growing preference for sustainable packaging (Sheth et al., 2011). Similarly, Magnier and Cri  (2015) found that consumers are willing to pay more for products with these solutions in this area. The results presented by Koenig-Lewis et al. (2014) indicate that environmentally conscious consumers prioritise products with minimal environmental impact, especially regarding packaging.

Another issue is that respondents clearly emphasise buying local and organic products. They believe that it will minimise the carbon emissions associated with long-distance transport. Participants recognised the environmental benefits of supporting local producers and eating organic produce, often without synthetic pesticides and fertilisers. This preference for local and organic products aligns with the environmental dimension of responsible consumption.

Respondents emphasise environmentally friendly products and preference for local and green goods. They highlight the importance of the environmental dimension in responsible consumption. Respondents' views show that participants expressed significant concerns about promoting fair trade. According to De Pelsmacker et al. (2005), consumers are willing to pay more for fair trade products, highlighting the importance of ethical considerations in purchasing decisions. Similarly, a study by Ma et al. (2012) showed that ethical consumers strongly prefer fair trade products. Participants prefer products with certifications that indicate production in line with ethical production practices. They emphasised the importance of certifications. This is in line with the findings of other studies (Hainmueller et al., 2015). Especially ethical labels can significantly influence consumer behaviour (Grunert et al., 2014).

Respondents also considered animal welfare, which emerged as a significant issue, particularly with producing materials such as silk, feathers, wool and beeswax. Ethical concerns about animal welfare are increasingly influencing consumer behaviour. Many consumers seek products that provide humane treatment. Research by Schr der and McEachern (2004) shows that ethical consumers are willing to pay more for products that guarantee animal welfare.

Participants in the study expressed strong support not only for fair trade practices and local cooperatives but also actively sought labels indicating regional production. It is an essential aspect of the social dimension of responsible consumption. In this way, respondents implicitly support companies that make a positive social contribution. Although often not explicitly stated, this support is evident in their purchasing choices (Carrigan & Attalla, 2001). The emphasis on local cooperatives and regional production is consistent with the fact that GI products are perceived to be of higher quality. Consequently, consumers are willing to pay more.

Participants' feelings and attitudes towards biobased products (Table 2.) reflect the same three perspectives on responsible consumption.

The respondents' opinions on the environmental dimension of responsible consumption indicate some positive feelings and attitudes. According to them, bio-based products are primarily due to their biodegradability. These products are perceived as having a lower impact on the environment. Respondents also believe that these products' carbon footprint is smaller than that of conventional products.

Scepticism about biological products is not unfounded. Such concerns align with the facts, which show that, typically, life-cycle assessments of bioplastics show significant reductions in greenhouse gas emissions compared to petroleum-based plastics (Narayan, 2006). In contrast, research by Levidow et al. (2012) suggests that while bioplastics may reduce dependence on fossil fuels, they may also have unintended environmental consequences. These changes may include land use and biodiversity loss if not managed sustainably.

It is unreasonable for consumers to point out that bio-based products are only sometimes as beneficial to the environment as advertised. It reflects broader concerns about real and perceived environmental benefits. McDonald and Oates (2006) also highlighted this scepticism when discussing consumer cynicism about claims of green marketing and the authenticity of ecological benefits. Such concerns are rooted in past experiences of misleading green marketing claims. This makes modern consumers wary of uncritically accepting information about the environmental benefits of various "bio" solutions.

**Table 2****Consumer Feelings and Attitudes Toward Bio-Based Products**

Feelings and Attitudes	Participants' Associations	Dimension of Responsible Consumption
Positive	Sustainable, Biodegradable, Environmentally friendly, Reduced carbon footprint, Lower environmental impact, Reduction of reliance on fossil fuels, Lower greenhouse gas emissions, Less toxic and chemical	Environmental
	Safety	Ethical
	Health, Safety	Social
Negative	Unknown environmental impact	Environmental
	Greenwashing, Misleading labels and marketing tactics, Marketing ploy / Buzzword	Ethical
	Misleading labels and marketing tactics	Social
Challenges	Limited information about consequences of bio-based products	Environmental
	Lack of sufficient information, Confused labeling, Questionable credibility of certifications	Ethical
	Expensive, Limited availability, Lack of sufficient information, Confused labeling, Questionable credibility of certifications	Social

Source: Own elaboration based on focus group research results.

In addition, it has been noted that information on the consequences of using (and previously also producing) bio-based products is limited. As a result, consumers often do not have enough information to make informed decisions, leading to confusion and distrust. Consequently, the lack of clear communication about the impact of bio-based products on the environment deepens consumer scepticism (Boiral et al., 2012).

Better education and clear communication about the impact of bio-based products on the environment are necessary to meet these challenges. Moreover, effective product promotion depends not only on the benefits of specific products, but also on the way in which these benefits are communicated to consumers (Van Dam & Apeldoorn, 1996).

Focus groups' participants perceived bio-based products as beneficial in several ethical dimensions. This was primarily due to using less toxic and chemical ingredients in their production. In other words, respondents perceived bioproducts as safe. This is consistent with the finding that consumers perceive bioproducts as healthier, reflecting their producers' commitment to sustainability and fair practices.

Despite this positive perception, the survey found significant ethical concerns among consumers. There is widespread scepticism about greenwashing, misleading labelling and unfair marketing tactics. Some respondents perceive bioproducts as marketing gimmicks or trendy buzzwords rather than genuine ethical alternatives. Consumers reported similar concerns about the authenticity of ethical claims made by manufacturers. Lyon and Montgomery's (2015) findings support the need for more stringent regulations on producing and labelling bio-based products. They argue that clear and enforceable standards are essential to prevent "money laundering". Furthermore, Taufique et al. (2017) suggest that increasing the transparency of environmental labels should go hand in hand with providing consumers with easy-to-understand information. This can significantly improve the credibility and effectiveness of green marketing.

Consumers value bioproducts for their potential to support local economies and promote fair trade practices. This is linked to the social dimension of responsible consumption. By supporting bioproducts, consumers feel that they are contributing to social welfare. The participants' focus on health and safety

also increases the social appeal of bio-based products. Adams and Raisborough (2010) highlighted that consumers prioritise ethical consumption. They believe purchasing such products will lead to more comprehensive social benefits, not just their own. At the same time, however, critical challenges to the social dimension of responsible consumption are the high cost and limited availability of bio-based products. Also, the price is often higher, according to respondents, than conventional alternatives. This can be a significant barrier to their widespread use. Vermeir and Verbeke (2007) discussed similar barriers in their study. Higher prices often discourage consumers from purchasing ethically produced goods despite their willingness to support such ecological practices.

## 6. CONCLUSION

This study investigates responsible consumption as a critical mechanism for shaping consumer behaviour, situating the analysis of bio-based products within the broader context of responsible consumption. The research explores consumer perceptions, attitudes, and challenges associated with bio-based products, focusing on responsible consumption's ethical, environmental, and social dimensions. The findings suggest that responsible consumption encompasses "sustainable consumption," "ethical consumption," and "socially responsible consumption," providing a nuanced understanding of consumer behaviour and preferences.

The study reveals that consumers prioritise the environmental benefits of bio-based products, particularly valuing attributes such as sustainability, biodegradability, and a reduced carbon footprint. It indicates that environmental considerations dominate consumer decision-making, suggesting a need to effectively balance this focus by promoting the ethical and social dimensions. However, consumer scepticism is pronounced within the ethical dimension of responsible consumption, where concerns about greenwashing, misleading labels, and deceptive marketing practices are prevalent. This scepticism underscores a general distrust of ethical claims made by producers, which highlights the critical role of building consumer trust through transparent communication and stringent certification standards.

While the study demonstrates that the environmental dimension of responsible consumption aligns with positive consumer attitudes and perceived environmental benefits, it also highlights that the ethical dimension is more strongly associated with negative consumer perceptions. This disparity suggests that stronger advocacy and clearer communication about ethical benefits are needed to align consumer perceptions across all dimensions of responsible consumption. Although the social dimension is not explicitly addressed, it is implicitly present in discussions about ethical issues surrounding the consumption of bio-based products. Participants in the study expressed support for social contributions such as fair trade practices and local economic support. It underscores the potential for bio-based products to foster societal well-being and support local economies when communicated effectively. However, significant barriers to the widespread adoption of bio-based products remain, including high costs, limited availability, and consumer confusion and distrust stemming from insufficient information. These barriers highlight the need for policies and industry strategies that enhance affordability and accessibility while providing more explicit education about the benefits and authenticity of bio-based products.

### 6.1. Theoretical implications

This study significantly contributes to the theoretical understanding of responsible consumption by comprehensively analysing its multidimensional nature – spanning environmental, ethical, and social dimensions – and its collective influence on consumer behaviour. It extends prior research by emphasising the nuanced and sometimes conflicting factors that drive responsible consumption, particularly in the context of bio-based products. The findings challenge established theories that assume a direct alignment between consumer intentions and behaviours by illustrating the pervasive "attitude-behaviour gap", especially within the ethical dimension, where scepticism about greenwashing and misleading claims undermines consumer trust. Furthermore, the study offers a detailed exploration of the environmental dimension, underscoring the importance of biodegradability, carbon footprint

reduction, and sustainable packaging as critical motivators for consumer preferences. The research also highlights the implicit presence of social responsibility in purchasing decisions, suggesting that consumers' ethical choices often overlap with their support for local economies and fair trade practices. These insights necessitate rethinking existing theoretical frameworks to incorporate elements such as perceived authenticity, trust in certifications, and consumer education as central components of responsible consumption. By integrating these factors, the study enhances our understanding of how environmental, ethical, and social considerations converge to shape complex consumer decision-making processes, thereby providing a more holistic and dynamic perspective on sustainable consumption patterns.

## **6.2. Practical implications**

The findings offer valuable practical implications for businesses, policymakers, and marketers seeking to promote responsible consumption and enhance the adoption of bio-based products. For businesses, the study underscores the necessity of fostering transparency and trust by addressing consumer concerns about greenwashing through robust and credible certifications and clear labeling practices. Companies should prioritise communicating the environmental and health benefits of bio-based products, such as reduced carbon footprints, biodegradability, and safety, to align with consumer priorities and build confidence. Policymakers can play a critical role by creating incentives for producing and distributing bio-based products, ensuring their affordability and availability in the market, particularly in underserved regions. Educational initiatives aimed at improving consumer awareness of the environmental and social benefits of bio-based products can bridge the information gap and mitigate scepticism. For marketers, the research highlights the importance of tailoring strategies to address cost-related barriers, such as offering competitive pricing or bundling bio-based products with other sustainable alternatives. Additionally, marketing campaigns should emphasise the social value of responsible consumption, such as supporting local economies and promoting fair trade practices, to strengthen these products' emotional and ethical appeal. By leveraging these insights, stakeholders can collectively foster a more informed and engaged consumer base, driving a broader transition toward sustainable consumption practices that benefit the environment, society, and the economy.

## **6.3. Limitations and future research directions**

This study is subject to several limitations. The reliance on focus group discussions may introduce bias due to the influence of group dynamics on participants' views. Additionally, the geographical scope of the study – limited to Finland, Poland, the Netherlands, and Spain – may not fully capture the diversity of global consumer opinions. A broader, more diverse sample could reveal regional variations in perceptions of responsible consumption and bio-based products. The lack of a specific focus on the social dimension further constrains the depth of insights in this area. Future research should also examine the interplay between the environmental, ethical, and social dimensions, as these are interconnected and collectively shape consumer behaviour.

Despite these limitations, the study offers valuable insights into the impact of various dimensions of responsible consumption on consumer behaviour. It emphasises that responsible consumption is a multifaceted construct requiring equal environmental, ethical, and social attention. Future research should address these limitations by incorporating a more diverse and representative sample encompassing a broader range of geographical locations. Quantitative studies could complement the qualitative findings by statistically validating identified trends. Furthermore, future research should explicitly examine the social dimension of responsible consumption, mainly how bio-based products influence local communities and contribute to social well-being. A specific focus on reducing barriers to bio-based product adoption – such as high costs, limited availability, and consumer scepticism – can enhance their market penetration and societal impact. This comprehensive analysis would enhance understanding responsible consumption and its implications for consumer behaviour.



## Acknowledgements

The focus group discussions was conducted as part of the 3-CO project titled “Concise Consumer Communication through Robust Labels for Biobased Systems,” funded by the European Union’s Horizon Europe programme for research and innovation under grant agreement No. 101086086. The project is classified as a Coordination and Support Action (CSA) under HORIZON-CL6-2022-GOVERNANCE-01-04, explicitly addressing the work programme topic “Consumer-focused labelling options for bio-based products.”

## Declaration of Conflicting Interests

The author declared no potential conflicts of interest with respect to the research, authorship, and publication of the article.

## Declaration about the scope of AI utilization

The authors did not use an AI tool in the preparation of the article.

## REFERENCES

- Adams, M., & Raisborough, J. (2010). Making a Difference: Ethical Consumption and the Everyday. *The British Journal of Sociology*, 61(2), 256–274. <https://doi.org/10.1111/j.1468-4446.2010.01312.x>
- Anderson, W.T., & Cunningham, W.H. (1972). The Socially Conscious Consumer. *Journal of Marketing*, 36(3), 23–31. <https://doi.org/10.2307/1251036>
- Biswas, A. (2016). A Study of Consumers' Willingness to Pay for Green Products. *Journal of Advanced Management Science*, 4(3), 211–215. <https://doi.org/10.12720/joams.4.3.211-215>
- Boiral, O., Henri, J. F., & Talbot, D. (2012). Modeling the Impacts of Corporate Commitment on Climate Change. *Business Strategy and the Environment*, 21(8), 495–516. <https://doi.org/10.1002/bse.723>
- Bos, P., Ritzen, L., van Dam, S., Balkenende, R., & Bakker, C. (2024). Bio-Based Plastics in Product Design: The State of the Art and Challenges to Overcome. *Sustainability*, 16(8), 3295. <https://doi.org/10.3390/su16083295>
- Boulstridge, E., & Carrigan, M. (2000). Do Consumers Really Care About Corporate Responsibility? Highlighting the Attitude-Behaviour Gap. *Journal of Communication Management*, 4(4), 355–368. <https://doi.org/10.1108/eb023532>
- Brundtland, G.H. (1987). *Our Common Future*. Report of the World Commission on the Environment and Development. Geneva, UN-Dokument A/42/427.
- Buhay, B. (2021). What Works for Recycled Wearables: Brand, Cause, or Cost?. <https://www.greenpeace.org/philippines/story/10979/what-works-for-recycled-wearables-brand-cause-or-cost/>, access date: 30.05.2024.
- Carrigan, M., & Attalla, A. (2001). The Myth of the Ethical Consumer – Do Ethics Matter in Purchase Behaviour? *Journal of Consumer Marketing*, 18(7), 560–577. <https://doi.org/10.1108/07363760110410263>
- Carus, M., & Dammer, L. (2018). The “Circular Bioeconomy” – Concepts, Opportunities and Limitations. *Industrial Biotechnology*, 14(2), 1–9. <https://doi.org/10.1089/ind.2018.29121.mca>
- Cherubini, F., & Strømman, A. H. (2011). Life Cycle Assessment of Bioenergy Systems: State of the Art and Future Challenges. *Bioresource Technology*, 102(2), 437–451. <https://doi.org/10.1016/j.biortech.2010.08.010>
- Corley, K. G., & Gioia, D. A. (2004). Identity Ambiguity and Change in the Wake of a Corporate Spin-off. *In Administrative Science Quarterly*, 49 (2), 173–208. <https://doi.org/10.2307/4131471>
- De Pelsmacker, P., Driesen, L., & Rayp, G. (2005). Do Consumers Care about Ethics? Willingness to Pay for Fair-Trade Coffee. *Journal of Consumer Affairs*, 39(2), 363–385. <https://doi.org/10.1111/j.1745-6606.2005.00019.x>
- Elkington, J. (1997). *Cannibals with Forks. The Triple Bottom Line of 21st Century Business*. Capstone, Oxford. <https://doi.org/10.1002/tqem.3310080106>
- European Commission. (n.d.) *Bio-Based Products*. [https://single-market-economy.ec.europa.eu/sectors/biotechnology/bio-based-products\\_en](https://single-market-economy.ec.europa.eu/sectors/biotechnology/bio-based-products_en), access data: 15.06.2024.
- Fisk, G. (1973). Criteria for a Theory of Responsible Consumption. *Journal of Marketing*, 37(2), 24–31. <https://doi.org/10.2307/1250047>
- Freestone, O.M., & McGoldrick, P.J. (2008). Motivations of the Ethical Consumer. *Journal of Business Ethics*, 79(4), 445–467. <https://doi.org/10.1007/s10551-007-9409-1>



- Galbreath, J., & Shum, P. (2012). Do Customer Satisfaction and Reputation Mediate the CSR–FP Link? Evidence from Australia. *Australian Journal of Management*, 37(2), 211–229. <https://doi.org/10.1177/0312896211432941>
- Gandhi, M., & Kaushik, N. (2016). Socially Responsible Consumption Behaviour – an Indian Perspective. *Social Responsibility Journal*, 12(1), 85–102. <http://dx.doi.org/10.1108/SRJ-08-2014-0110>
- Geiger, S. M., Fischer, D., & Schrader, U. (2018). Measuring What Matters in Sustainable Consumption: An Integrative Framework for the Selection of Relevant Behaviors. *Sustainable Development*, 26(1), 18–33. <https://doi.org/10.1002/sd.1688>
- Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2012). Seeking Qualitative Rigor in Inductive Research. *Organisational Research Methods*, 16(1), 15–31. <https://doi.org/10.1177/1094428112452151>
- Girod, B., & de Haan, J. (2010). More or Better? A Model for Changes in Household Greenhouse Gas Emissions due to Higher Income. *Journal of Industrial Ecology*, 14(1), 31–49. <https://doi.org/10.1111/j.1530-9290.2009.00202.x>
- Gleim, M. R., Smith, J.S., Andrews, D., & Cronin, J. J., Jr. (2013). Against the Green: A Multi-Method Examination of the Barriers to Green Consumption. *Journal of Retailing*, 89(1), 44–61. <https://doi.org/10.1016/j.jretai.2012.10.001>
- Grunert, K. G., Hieke, S., & Wills, J. (2014). Sustainability Labels on Food Products: Consumer Motivation, *Understanding and Use*. *Food Policy*, 44, 177–189. <https://doi.org/10.1016/j.foodpol.2013.12.001>
- Hainmueller, J., Hiscox, M.J., & Sequeira, S. (2015). Consumer Demand for the Fair Trade Label: Evidence from a Multi-Store Field Experiment. *Review of Economics and Statistics*, 97(2), 242–256. [https://doi.org/10.1162/REST\\_a\\_00467](https://doi.org/10.1162/REST_a_00467)
- Jackson, T. (2005). Live Better by Consuming Less? Is There a “Double Dividend” in Sustainable Consumption? *Journal of Industrial Ecology*, 9 (1-2), 19–36. <https://doi.org/10.1162/1088198054084734>
- Joshi, Y., & Rahman, Z. (2015). Factors Affecting Green Purchase Behaviour and Future Research Directions. *International Strategic Management Review*, 3(1-2), 128-143. <https://doi.org/10.1016/j.ism.2015.04.001>
- Kemppainen, T., Makkonen, M., & Frank, L. (2019). *Exploring Online Customer Experience Formation: How do Customers Explain Negative Emotions during Online Shopping Encounters?*. BLED 2019 Proceedings. <https://aisel.aisnet.org/bled2019/26>
- Koenig-Lewis, N., Palmer, A., Dermody, J., & Urbye, A. (2014). Consumers' Evaluations of Ecological Packaging – Rational and Emotional Approaches. *Journal of Environmental Psychology*, 37, 94–105. <https://doi.org/10.1016/j.jenvp.2013.11.009>
- Kutaula, S., Gillani, A., Gregory-Smith, D., & Bartikowski, B. (2024). Ethical Consumerism in Emerging Markets: Opportunities and Challenges. *Journal of Business Ethics*, 191(4), 651–673. <https://doi.org/10.1007/s10551-024-05657-4>
- Lacy, P., & Rutqvist, J. (2015). *Waste to Wealth. The Circular Economy Advantage*. London: Palgrave Macmillan. <https://doi.org/10.1057/9781137530707>
- Levidow, L.; Birch, K.; Papaioannou, T. (2012). EU Agri-Innovation Policy: Two Contending Visions of the Bio-Economy. *Critical Policy Studies*, 6(1), 40–65. <https://doi.org/10.1080/19460171.2012.659881>
- Lyon, T.P., & Montgomery, A.W. (2015). The Means and End of Greenwash. *Organization & Environment*, 28(2), 223–249. <https://doi.org/10.1177/1086026615575332>
- Ma, Y.J., & Lee, H.-H., (2012). Understanding Consumption Behaviours for Fair Trade Non-Food Products: Focusing on Self-Transcendence and Openness to Change Values. *International Journal of Consumer Studies*, 36(6), 622–634. <https://doi.org/10.1111/j.1470-6431.2011.01037.x>
- Magnier, L., & Cri  , D. (2015). Communicating Packaging Eco-Friendliness: An Exploration of Consumers' Perceptions of Eco-Designed Packaging. *International Journal of Retail & Distribution Management*, 43(4/5), 350–366. <https://doi.org/10.1108/IJRDM-04-2014-0048>
- McDonald, S., & Oates, C. J. (2006). Sustainability: Consumer Perceptions and Marketing Strategies. *Business Strategy and the Environment*, 15(3), 157–170. <https://doi.org/10.1002/bse.524>
- McDonald, S., Oates, C., Thyne, M., Timmis, A., & Carlile, C. (2015). Flying in the Face of Environmental Concern: Why Green Consumers Continue to Fly. *Journal of Marketing Management*, 31(13–14), 1503–1528. <http://dx.doi.org/10.1080/0267257X.2015.1059352>
- Mohr, L.A., & Webb, D.J. (2005). The Effect of Corporate Social Responsibility and Price on Consumer Responses. *Journal of Consumer Affairs*, 39(1), 121–147. <https://doi.org/10.1111/j.1745-6606.2005.00006.x>
- Mohr, L.A., Webb, D.J., & Harris, K.E. (2001). Do Consumers Expect Companies to Be Socially Responsible? The Impact of Corporate Social Responsibility on Buying Behavior. *Journal of Consumer Affairs*, 35(1), 45–72. <https://doi.org/10.1111/j.1745-6606.2001.tb00102.x>
- Narayan, R. (2006). *Biobased and Biodegradable Polymer Materials: Rationale, Drivers, and Technology Exemplars*. [In:] Khemani, K.C., Scholz, C., & Kobayashi, S. (2006). *Degradable Polymers and Materials. Principles and Practices*. ACS Symposium Series. 939, 282–306. doi:10.1021/bk-2006-0939.ch018.
- Nicholls, A., & Opal, C. (2005). *Fair Trade: Market-Driven Ethical Consumption*. London: SAGE Publications. <https://doi.org/10.4135/9781446211526>
- Paavola, J. (2001). Towards Sustainable Consumption: Economics and Ethical Concerns for the Environment in Consumer Choices. *Review of Social Economy*, 59(2), 227–248. <https://doi.org/10.1080/00346760110036175>

- Peattie, K., & Crane, A. (2005). Green Marketing: Legend, Myth, Farce or Prophecy? *Qualitative Market Research: An International Journal*, 8(4), 357–370. <https://doi.org/10.1108/13522750510619733>
- Pivato, S., Misani, N., & Tencati, A. (2008). The Impact of Corporate Social Responsibility on Consumer Trust: The Case of Organic Food. *Business Ethics: A European Review*, 17(1), 3–12. <https://doi.org/10.1111/j.1467-8608.2008.00515.x>
- Prothero, A. (1990). Green Consumerism And The Societal Marketing Concept: Marketing Strategies for the 1990's. *Journal of Marketing Management*, 6(2), 87–103. <https://doi.org/10.1080/0267257X.1990.9964119>
- Prothero, A., Dobscha, S., Freund, J., Kilbourne, W.E., Luchs, M.G., Ozanne, L.K., & Thøgersen, J. (2011). Sustainable Consumption: Opportunities for Consumer Research and Public Policy. *Journal of Public Policy & Marketing*, 30(1), 31–38. <https://doi.org/10.1509/jppm.30.1.3>
- Robert, J.A. (1995). Profiling Levels of Socially Responsible Consumer Behavior: A Cluster Analytic Approach and Its Implications for Marketing. *The Journal of Marketing Theory and Practice*, 3(4), 97–117. <https://doi.org/10.1080/10696679.1995.11501709>
- Sandin, P., & Röcklinsberg, H. (2016). The Ethics of Consumption. *Journal of Agricultural and Environmental Ethics*, 29(1), 1–4. <https://doi.org/10.1007/s10806-015-9588-1>
- Schröder, M.J.A., & McEachern, M.G. (2004). Consumer Value Conflicts Surrounding Ethical Food Purchase Decisions: A Focus on Animal Welfare. *International Journal of Consumer Studies* 28(2), 168–177. <https://doi.org/10.1111/j.1470-6431.2003.00357.x>
- Seyfang, G. (2006). Ecological Citizenship and Sustainable Consumption: Examining Local Organic Food Networks. *Journal of Rural Studies*, 22(4), 383–395. <https://doi.org/10.1016/j.jrurstud.2006.01.003>
- Shaw, D., McMaster, R., & Newholm, T. (2016). Care and Commitment in Ethical Consumption: An Exploration of the 'Attitude–Behaviour Gap'. *Journal of Business Ethics*, 136(2), 251–265. <https://doi.org/10.1007/s10551-014-2442-y>
- Shen, L., Haufe, J., & Patel, M. K. (2009). *Product Overview and Market Projection of Emerging Bio-Based Plastics*. PRO-BIP 2009, Final Report. [https://www.uu.nl/sites/default/files/copernicus\\_probip2009\\_final\\_june\\_2009\\_revised\\_in\\_november\\_09.pdf](https://www.uu.nl/sites/default/files/copernicus_probip2009_final_june_2009_revised_in_november_09.pdf), access data: 15.06.2024.
- Sheth, J.N., Sethia, N.K., & Srinivas, S. (2011). Mindful Consumption: A Customer-Centric Approach to Sustainability. *Journal of the Academy of Marketing Sciences*, 39(1), 21–39. <https://doi.org/10.1007/s11747-010-0216-3>
- Taufique, K. M. R., Vocino, A., & Polonsky, M. J. (2017). The Influence of Eco-Label Knowledge and Trust on Pro-Environmental Consumer Behaviour in an Emerging Market. *Journal of Strategic Marketing*, 25(7), 511–529. <https://doi.org/10.1080/0965254X.2016.1240219>
- Thøgersen, J. (2002). *Promoting Green Consumer Behavior With Eco-Labels*. [In:] T. Dietz, P. Stern (eds), *New Tools For Environmental Protection: Education, Information and Voluntary Measures*, Washington, DC: National Academy Press, 83–104. <https://doi.org/10.17226/10401>.
- Thøgersen, J., de Barcellos, M. D., Perin, M. G., & Zhou, Y. (2015). Consumer Buying Motives and Attitudes Towards Organic Food in Two Emerging Markets: China and Brazil. *International Marketing Review*, 32(3/4), 389–413. <http://dx.doi.org/10.1108/IMR-06-2013-0123>
- United Nations (2015) *Responsible Production and Consumption*. <https://www.un.org/en/academic-impact/page/responsible-production-and-consumption>, access data: 10.06.2024.
- USDA BioPreferred® Program. (2013) *Biopreferred Program Overview*. [https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprd3806163.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3806163.pdf), access data: 10.06.2024.
- Uusitalo, L., & Oksanen, R. (2004). Ethical Consumerism: A View from Finland. *International Journal of Consumer Studies*, 28(3), 214–221. <https://doi.org/10.1111/j.1470-6431.2003.00339.x>
- Van Dam, Y.K., & Apeldoorn, P.A.C. (1996). Sustainable Marketing. *Journal of Macromarketing*, 16(2), 45–56. <https://doi.org/10.1177/0276146796016002>
- Veblen, T. (2007). *The Theory of the Leisure Class*. New York: Oxford University Press.
- Vermeir, I., & Verbeke, W. (2007). Sustainable Food Consumption Among Young Adults in Belgium: Theory of Planned Behaviour and the Role of Confidence and Values. *Ecological Economics*, 64(3), 542–553. <https://doi.org/10.1016/j.ecolecon.2007.03.007>
- Webb, D.J., Mohr, L.A., & Harris, K.E. (2008). A Re-Examination of Socially Responsible Consumption and its Measurement. *Journal of Business Research*, 61(2), 91–98. <https://doi.org/10.1016/j.jbusres.2007.05.007>
- Webster, F.E. (1975). Determining the Characteristics of the Socially Conscious Consumer. *Journal of Consumer Research*, 2(3), 188–196. <https://doi.org/10.1086/208631>
- Wilk, R. (2002). Consumption, human needs, and global environmental change. *Global Environmental Change*, 12(1), 5–13. [https://doi.org/10.1016/S0959-3780\(01\)00028-0](https://doi.org/10.1016/S0959-3780(01)00028-0)
- Zuiderveen, E. A. R., Kuipers, K. J. J., Caldeira, C., Hanssen, S. V., van der Hulst, M. K., de Jonge, M. M. J., Vlysidis, A., van Zelm, R., Sala, S., & Huijbregts, M. A. J. (2023). The Potential of Emerging Bio-Based Products to Reduce Environmental Impacts. *Nature Communications*, 14(1), 1–7. <https://doi.org/10.1038/s41467-023-43797-9>
- Zwicker, M.V., (2023). *The Complexity of Consumer Attitudes Towards Sustainable Alternatives*, Enschede: Ipskamp Printing, <https://pure.uva.nl/ws/files/126417967/Thesis.pdf>