

# A Systematic Review of the Scope and Patterns of Green Consumption in Sub-Saharan Africa

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**Abstract:** Despite the importance of “green consumption”, it has received little attention in sub-Saharan Africa. To address this gap, a systematic review of the scientific literature was conducted on the patterns of green consumption in this region using three parameters: green consumption, behaviour, and location. Forty-eight articles and publications were identified between 2010 and 2021 on Scopus, Web of Science, Google Scholar and grey literature. Scientific literature on green consumption in sub-Saharan Africa has expanded over the last five years, but it focuses primarily on emerging countries (Republic of South Africa and Nigeria) and the upper social classes. Most articles used the theory of planned behaviour as a theoretical framework. Green consumption of food and agricultural products are the most studied, with 14 articles. Energy, cosmetics, tourism, and textiles are each the subject of three specific publications. The emergence of middle-class consumers in sub-Saharan Africa is likely to contribute to the expansion of green consumption for a broad spectrum of goods and services.

**Keywords:** behaviour; green consumption; attitude; intention; theory of planned behaviour



**Citation:** Traoré, L.; Belinga, B.; Lescuyer, G. A Systematic Review of the Scope and Patterns of Green Consumption in Sub-Saharan Africa. *Sustainability* **2023**, *15*, 6343. <https://doi.org/10.3390/su15086343>

Academic Editors: Hanna Górska-Warsewicz and Krystyna Rejman

Received: 10 February 2023

Revised: 20 March 2023

Accepted: 3 April 2023

Published: 7 April 2023



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## 1. Introduction

With climate change, biodiversity loss, and deforestation, companies are increasingly sensitive to global environmental issues [1]. These problems require the integration of environmental management into the management system of companies [2,3]. Taking the environment into account has become the mantra of companies wishing to expand their market share and have a competitive advantage in the global market [4]. As a result, an increasing number of companies are engaging in green production and adopting corporate social responsibility strategies [5].

Consumption patterns have also changed, and green consumption is developing throughout the world. Promoting green consumption is essential to achieving sustainable development [6,7]. We are witnessing the emergence of green consumption [8]. The global green consumption market has grown sevenfold in 20 years [9] and represents more than 4% of the food market [10].

Also called sustainable, ethical, or responsible consumption [4], green consumption consists of purchasing goods or services that meet individual needs, improving quality of life, minimising the use of natural resources and toxic materials, and reducing the amount of waste and pollutants throughout the life cycle of the service or product [11–15]. Green consumption behaviour has been the subject of numerous studies in developed countries over the past forty years [13,16–20], and more recently in emerging economies [21,22]. Less developed countries, especially in sub-Saharan Africa, have not yet been significantly influenced by this phenomenon [23–25]. Some researchers have started to study the premises

of green consumption in sub-Saharan Africa in diverse sectors, ranging from timber [26], packaging [27,28], textiles [29,30], hotels [31,32] to organic food [33,34]. However, to date, no systematic review of the scientific literature on green consumption in sub-Saharan Africa has been conducted.

The objective of this article is to highlight the characteristics underlying green consumption patterns in sub-Saharan Africa based on a systematic review of the scientific and technical literature. The article starts with a detailed description of how we conducted the systematic review. We then present and classify our results to show the main green consumption patterns. Lastly, we discuss the limitations of the systematic review exercise and identify some avenues for reflection and action based on the current green consumption patterns in sub-Saharan Africa.

## 2. Methods

The review is based on standard research methods involving systematic research criteria [35–37]. The literature search for the systematic review was carried out between September and November 2021, using the PRISMA guidelines (Supplementary Materials) [38,39], SPAR-4-SLR protocols [40], and following the rules established by the publishers [41].

The systematic review combines three inclusion criteria: a thematic criterion that groups the terms that can be assimilated to green consumption, behaviour, and the geographical criterion of sub-Saharan Africa that gathers the countries concerned.

A preliminary reading of literature provides the words and expressions synonymous or similar to green consumption and behaviour, namely: green consumption, sustainable consumption, responsible consumption, ethic consumption, energy consumption, green purchase, green market, green product, sustainable products, environment, friendly product, eco-friendly product, environmental market, sustainable market, behaviour, attitude, intention, decision, and green consumption behaviour.

The geographical criterion is based on the list of the countries located in sub-Saharan Africa, namely: «south africa», «rsa», «angola», «benin», «botswana», «burkina faso», «burundi», «cameroon», «ivory coast», «ethiopia», «gabon», «gambia», «ghana», «guinea», «kenya», «lesotho», «liberia», «madagascar», «malawi», «mali», «mauritius», «mauritania», «mozambique», «namibia», «niger», «nigeria», «uganda», «central african republic», «congo», «drc», «rwanda», «senegal», «sierra leone», «somalia», «sudan», «swaziland», «tanzania», «chad», «togo», «zambia», «zimbabwe».

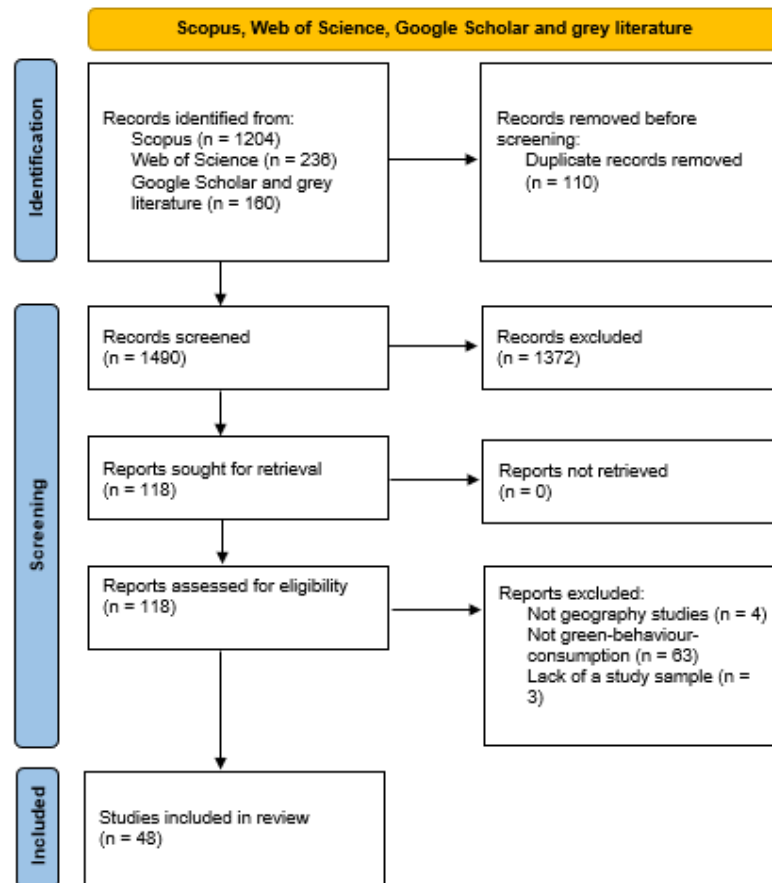
The literature search was conducted on abstract, title, and keywords of the publications. We created algorithms based on the keywords and synonyms identified during the preliminary qualitative literature review (see in the Appendix A). Several iterations were necessary to perfect our algorithms. For example, we discarded words likely to yield irrelevant results and added other terms to capture all the articles on the topic that had been identified during the preliminary documentary research. The study period considered is 2010 to 2021. The review was conducted in English and French, i.e., the two most widely spoken languages in sub-Saharan Africa.

Key terms from a preliminary reading were used interchangeably and applied in Scopus and Web of Science, which are the main transdisciplinary databases for scientific articles. They are the most frequently used databases for systematic reviews in economic and environmental fields [42].

We also conducted literature searches using Google Scholar by entering keywords similar to those used in the review of the two scientific databases. Lastly, we included grey literature (dissertations and theses) mentioned in the articles identified in the peer-reviewed journals. Green consumption in sub-Saharan Africa is poorly studied and documented, so the grey literature provided some relevant complementary publications.

Four stages were necessary to select relevant articles based on inclusion and exclusion criteria: identification, selection, evaluation, and inclusion. The final choice to include or exclude articles was made once they had been read in full. Using the selection criteria, 1600 studies were initially identified from Scopus, Web of Science, Google Scholar, and

grey literature. After deleting duplicates, we were left with 1490 articles. Next, we read the abstracts and discarded 1372 papers which did not meet some of the inclusion criteria, such as geographical area or the main topic of the publication. Lastly, after reading the remaining 118 articles in full, we retained 48 studies from 2010 to 2021 that met the inclusion criteria (Figure 1).



**Figure 1.** Flow chart for article selection process based on the PRISMA.

### 3. Results

#### 3.1. Characteristics of the Studies

Given the heterogeneity of our database, we designed a qualitative synthesis for publications based on four variables: country, theoretical framework, sample size, product types, nature of respondents (Table 1). Theoretical framework shows the main theories used by the authors to analyse consumers' behaviour. Sample size indicates the representativeness of the study. The nature of the respondents gives an idea of the customers' patterns. The type of product makes explicit the sectors most influenced by green consumption.

We also drew out the main insights of each publication.

**Table 1.** Characteristics of green consumption found in the studies included in the systematic review.

Authors	Country	Theoretical Framework	Product or Service	Sample Size and Nature of Respondents	Main Results
Ackaah et al., 2021 [43]	Ghana	Theory of planned behaviour	Electric vehicles	404 drivers	Attitude, subjective norms, and perceived behavioural control positively impact purchase intention. Environmental concerns, consumer awareness influence purchase intention. Government policies affect purchase intention through perceived behavioural control.
Adetola et al., 2021 [32]	Nigeria	Social exchange theory	Green hotels	401 hotel guests	Environmental knowledge, environmental concern, and consumption values positively affect the intention to visit green hotels. Environmental knowledge and concern indirectly influence the intention to visit green hotels in terms of consumption value.
Agyeiwaah et al., 2021 [44]	Ghana	Attitude model	Hiking	400 hikers	The perceived impacts of hiking positively affect sustainable behaviour.
Amoako et al., 2020 [3]	Ghana	Theory of planned behaviour	Green products	417 consumers in the main grocery stores in Accra	Green knowledge and green attitude positively influence young people's green purchasing behaviour.
Anvar et al., 2014 [45]	Republic of South Africa	Social identification model	Green agricultural products	200 students	Social influence, environmental concern, and price influence consumers' attitude towards green products. In turn, attitude has a positive impact on sustainable consumption behaviour. Being a woman has a greater influence on green purchasing behaviour and attitudes than being a man.
Armel et al., 2021 [46]	Cameroon	Theory of planned behaviour, Cognitive-affective system theory	Natural agricultural products	18 residents in the city of Douala	Egocentricity, eco-responsible behaviour, altruism, social norms, and needs for self-esteem positively influence ecological behaviour. On the other hand, the lack of municipal services, the feeling of inefficiency, the mentality, lack of knowledge of environmental issues, price, and time negatively impact ecological behaviour.
Belinga et al., 2021 [26]	Cameroon	Theory of planned behaviour	Legal wood	463 consumers	The media campaign has a positive impact on the intention to buy legal wood through attitude and subjective norms. Individual variables, such as previous buying behaviour and education, positively influence the intention to buy legal wood.
Beneke et al., 2010 [47]	Republic of South Africa	Undefined theory	Cosmetics	4% of male consumers and 96% of female	Age and income influence the consumption of green cosmetics. Affective and cognitive influences affect the buying attitude of green cosmetics.

Table 1. Cont.

Authors	Country	Theoretical Framework	Product or Service	Sample Size and Nature of Respondents	Main Results
Chao and Uhagile, 2020 [48]	Tanzania		Green food	399 consumers	Health, product quality, food safety, and age positively affect the purchase intention of green products. Intention affects actual purchase behaviour.
Ashinze et al., 2021 [49]	Nigeria	Theory of planned behaviour, Technology acceptance model, Theory of innovation diffusion	Renewable energy	500 heads of household	Subjective norms, attitude, ease of use, price, and awareness have a positive and direct impact on purchase intention. Also, attitude has a mediating effect on the intention to use renewable resources. Furthermore, intention also mediates the relationship between the determinants of consumption and use behaviour.
Dilotsothe et al., 2021 [50]	Republic of South Africa	Theory of planned behaviour, Theory of innovation diffusion	Household electrical products	500 middle-class users and non-users	Relative advantage, compatibility, and observability explain 84% of the attitude towards green products. Also, attitude, social value, subjective norms, and perceived behavioural control explain 83.1% of green product purchase intention. In addition, the perceived behavioural control variable alone explains 24.2% of actual consumption behaviour.
Dilotsothe, 2021 [34]	Republic of South Africa	Theory of planned behaviour, Theory of innovation diffusion	Green products	355 users and non-users	Relative advantage, compatibility, and observability explain 84.0% of the attitude towards green purchasing. Attitude, subjective norms, and perceived behavioural control explain 83.4% of green purchase intention. Behavioural intention explained 24.2% of the variance in adoption behaviour.
Eyinade et al., 2021 [51]	World	Theory of planned behaviour	Organic products	25 items including 10 North America, 13 Western Europe, 2 rest of the world	Socio-economic and demographic variables affect organic purchasing behaviour. In addition, human health, food safety, intention, attitude, subjective norms and willingness to pay more, and local origin influence organic purchase.
Fatoki, 2020 [31]	Republic of South Africa	Theory of planned behaviour	Green hotels	416 hotel guests	Attitude, subjective injunctive norms, subjective descriptive norms, perceived behavioural control, altruism, and green self-identity have a positive and significant impact on consumer intention to choose green hotels. The partial mediating effect of attitude in the relationship between altruism and intention is significant.
Fatoki, 2020 [52]	Republic of South Africa	Theory of planned behaviour	Organic care products	412 students	Attitude, subjective norms, perceived behavioural control, moral norms, and ethical identity positively influence the purchase intention of organic personal care products.

Table 1. Cont.

Authors	Country	Theoretical Framework	Product or Service	Sample Size and Nature of Respondents	Main Results
Fatoki, 2020 [53]	Republic of South Africa	Theory of the five (5) factors	Green products	298 students in two universities	Awareness, extraversion, and openness to experience have a significant and positive impact on green purchasing behaviour.
Gashu et al., 2020 [54]	Ethiopia	Undefined theory	Sustainable infrastructure	430 users	Gender positively influences the behaviour of visiting sustainable infrastructure in cities, especially for men. Age, accessibility, safety, level of education, type of green infrastructure, level of sensitivity, location, and opportunities for social activities are statistically significant factors influencing the perception of sustainable urban infrastructure.
Hamilton and Terblanche-Smit, 2018 [55]	Republic of South Africa	Theory of planned behaviour	Electric vehicles	Online survey with 196 people	Attitude, perceived behavioural control, and subjective norms have a positive impact on the purchase intention of electric vehicles.
Ibok and George, 2014 [56]	Nigeria	Undefined theory	Green products	102 members of the Green Brigade	Age, household income, professional status, purchasing habits, education level, and place of residence have a significant influence on the environmental responsibility and, therefore, the green consumption behaviour of consumers.
Idoko et al., 2021 [57]	Nigeria	Theory of planned behaviour	Smart meter	150 semi-urban households that use, have used, or paid for and are in the process of installing smart meters.	Anxiety and perceived behavioural control are the most influential variables on purchase intention for smart meters. Environmental concern, attitude, subjective norm indirectly affect sustainable consumption behaviour.
Ifeanyichukwu and Nwaizugbo, 2020 [58]	Nigeria	Undefined theory	Green food	250 students	Nutritional balance, economic factors, socio-cultural factors, and environmental factors influence the consumption behaviour of sustainable food products.
Igwe et al., 2021 [59]	Nigeria	Theory production	Biomass	268 members of the farmers' association, 22 agricultural extension workers	Extension training promotes the use and production of biomass from waste.
Issock Issock et al., 2018 [60]	Republic of South Africa	Social marketing	Home appliances	440 consumers	Environmental concern, social standards, and attitude significantly influence purchase intention. Attitude and price positively impact trust in environmental labels.

Table 1. Cont.

Authors	Country	Theoretical Framework	Product or Service	Sample Size and Nature of Respondents	Main Results
Issock Issock et al., 2020 [61]	Republic of South Africa	Social marketing	Electric products	517 customers who paid for an electronic device in the latest three years	Consumer satisfaction, attitude, product quality, loyalty, and price are significant and positively influence customer knowledge. Customer knowledge significantly and positively affects customer intention and loyalty towards eco-labelled products. Customer confidence has a positive partial mediating effect between the consumption determinant variables and the dependent variables (attitude, loyalty), except for the relationship between price and loyalty.
Karatu and Mat, 2015 [62]	Nigeria	Theory of planned behaviour	Green products	440 students	Perceived behavioural control, ecological knowledge, availability have a direct effect on purchase intention for green products. Perceived ecological value and ecological trust indirectly impact purchase intention through perceived behavioural control.
Kini et al., 2020 [63]	Burkina Faso	Neo-classical consumer theory	Organic vegetables	202 consumers	The more health-sensitive consumers are, the more they buy organic vegetables. However, distance and price demotivate consumers to buy organic products.
Mkhize et al., 2020 [64]	Republic of South Africa	Theory of planned behaviour	Organic agricultural products	25 people with knowledge of organic products or irregular consumers.	People are sensitive to price, availability and labelling of organic products, which are barriers to organic purchasing behaviour. However, through communication marketing, these barriers can become factors that stimulate consumption.
Momberg et al., 2012 [29]	Republic of South Africa	Neo-classical consumer theory	Eco-friendly clothing	29 students	Consumers are sensitive to price, aesthetics, and product maintenance, which affect their willingness to purchase eco-friendly clothing.
Muposhi et al., 2021 [28]	Republic of South Africa	Theory of planned behaviour	Non-plastic reusable bags	487 consumers	Awareness of consequences has a significant positive influence on the attribution of responsibility. Also, personal norm has a positive effect on green bag purchasing behaviour.
Muposhi et al., 2021 [27]	Republic of South Africa	Theory of planned behaviour	Non-plastic reusable bags	487 consumers	Personal norms and attitude have a positive and significant effect on the purchase intention of non-plastic reusable bags while subjective norms negatively influence purchase intention. On the other hand, purchase intention has a significant and positive effect on the actual use behaviour of non-reusable plastic bags.



Table 1. Cont.

Authors	Country	Theoretical Framework	Product or Service	Sample Size and Nature of Respondents	Main Results
Nduneseokwu et al., 2017 [65]	Nigeria	Theory of planned behaviour	Electronic waste	384 consumers	Attitude, subjective norms, and environmental knowledge influence the intention to participate in e-waste collection. Access to collecting infrastructure moderates the relationship between attitude, subjective norms, and environmental knowledge.
Obayelu et al., 2015 [66]	Nigeria	Theory of planned behaviour	Natural product	150 consumers	Labelling and certification have a positive impact on the consumption of moringa.
Ogiemwonyi, 2020 [67]	Nigeria	Theory of planned behaviour	Green products	267 consumers	Health and environmental concerns have a positive impact on purchasing behaviour. Organic culture, perceived behavioural control, and attitude positively influence green purchasing behaviour.
Ojiaku et al., 2018 [68]	Nigeria	Cognitive, affective and behavioural model	Green products	348 workers in a health institution	Knowledge of green and environmental products positively influences the purchase intention for green products.
Opoku et al., 2020 [69]	Ghana	Theory of planned behaviour	Green products	306 students	Attitude, self-identity, and subjective norms positively affect green purchase intention.
Pacho and Batra, 2021 [70]	Tanzania and Denmark	Theory of planned behaviour	Organic agricultural products	730 and 663 consumers in Tanzania and Denmark	Knowledge and health are channels through which attitude, subjective norms, and perceived behavioural control influence organic purchasing behaviour.
Pacho, 2020 [33]	Developing countries	Theory of planned behaviour	Organic products	730 consumers	A positive relationship exists between subjective norms and attitude. Both variables have a positive impact on organic purchase intention. Knowledge and health have an indirect effect on the relationship between attitude, subjective norms, and purchase intention.
Petzer et al., 2011 [18]	Republic of South Africa	Green information systems theory	IT system	7 companies	Economic factors are the most influential in the adoption of the green information system. Ethnic factors motivate the adoption of this behaviour, but to a lesser extent than economic factors.
Pudaruth et al., 2015 [71]	Mauritius	Theory of planned behaviour	Green care products	150 consumers	Lifestyle, self-image, health, and economic conditions influence the purchase of green skin care products among women.



Table 1. Cont.

Authors	Country	Theoretical Framework	Product or Service	Sample Size and Nature of Respondents	Main Results
Schulte et al., 2021 [72]	Diamond producing countries	Theory of planned behaviour	Diamond	418 buyers and potential buyers of diamonds	Ethics-sensitive consumers are willing to pay more for environmentally friendly goods. Country of safe origin has a positive impact on ethical consumer behaviour. Furthermore, income influences the choice of ethical diamond consumption.
Scott and Vigar-Ellis, 2014 [73]	Republic of South Africa	Undefined theory	Eco-friendly packaging	323 respondents on Facebook	Although consumers are aware of environmental concerns, they lack knowledge about sustainable packaging.
Synodinos et al., 2013 [74]	Republic of South Africa	Theory of planned behaviour	Organic clothing	400 students	Advertising, cognitive attitudes positively affect environmental behaviour.
Synodinos et al., 2014 [75]	Republic of South Africa	Theory of planned behaviour	Pro-environmental products	332 students	Environmental attitude, subjective norms, and perceived behavioural control have a direct and positive impact on students' pro-environmental purchase intention and behaviour.
Taljaard et al., 2018 [30]	Republic of South Africa	Norm activation theory	Eco-friendly clothing	305 male consumers	Attitudes and self-efficacy positively influence the purchase intention of green clothing.
Thondhlana and Hlatshwayo, 2018 [76]	Republic of South Africa	Theory of planned behaviour	Student residence	160 students	Women and older people are more likely to adopt pro-environmental behaviour.
Wang et al., 2019 [77]	Kenya and Tanzania	Theory of planned behaviour	Organic products	331 and 350 consumers in Tanzania and Kenya	Attitude, subjective norms, health have a significant impact on purchase intention for organic products. Perceived behavioural control has a weak influence on purchase intention in Kenya and is insignificant in Tanzania. Knowledge positively moderates the relationship between subjective norms, attitude, health concern, and intention to purchase organic food.
Wekeza and Sibanda, 2019 [78]	Republic of South Africa	Neo-classical consumer theory	Organic products	150 consumers of organic fruit and vegetables	Consumer income, technicality, education level positively influence the intention to buy organic products. Price has a negative influence on the intention to buy organic products.
Yang et al., 2021 [79]	Ghana	Theory of planned behaviour and theory of reasoned action	Renewable energy	1068 consumers	Environmental concern, perceived usefulness, perceived ease of use, and affordability have a significant and positive impact on the attitude towards renewable energy consumption. Environmental concern, attitude, affordability positively influence purchase intention.

### 3.2. Classification of Selected Articles

- By Journal

The 48 articles selected were published in 37 journals. Numerous scientific reviews discuss the topic of green consumption behaviour in sub-Saharan Africa, but only four journals published more than one article on the issue: Sustainability, Mediterranean Journal of Social Sciences, International Journal of Consumer Studies, and Journal of Cleaner Production, which published six, four, three and two articles, respectively, between 2010 and 2021.

- By the Nature and Number of Respondents Interviewed

The studies on green consumption behaviour were based on surveys involving three types of respondents: consumers, consumers and non-consumers, students and households. In our sample, four studies have less than 50 respondents, 20 studies have a sample size of between 51 and 399 respondents, 21 studies have a sample size between 400 and 999 respondents, and only one study has more than 1000 respondents. One article does not mention the size of their sample, but simply the geographical scope of their analysis.

- By Sector

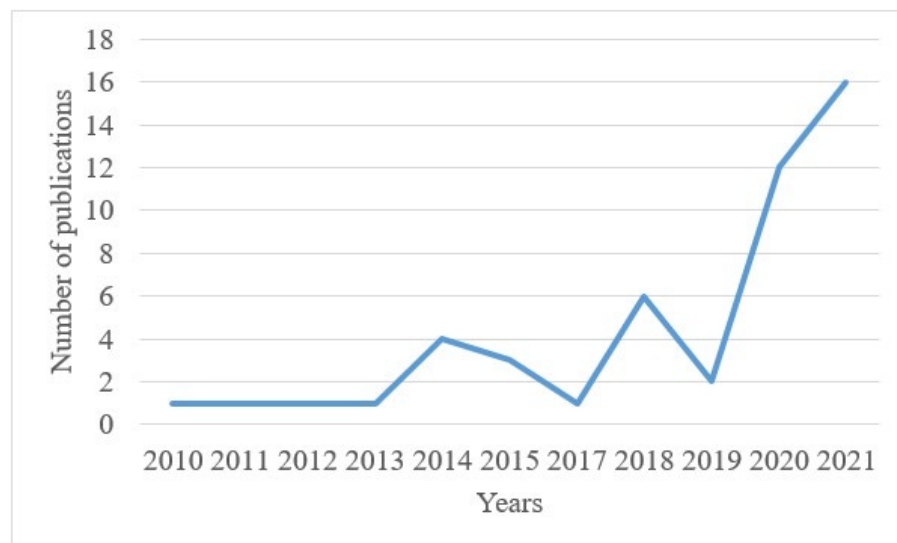
The issue of green consumption behaviour is tackled in several economic sectors. Most relevant publications concern agriculture, which is covered in 14 studies. The circular economy is addressed in three studies, as well as natural resources and green technology and energy. Cosmetics, tourism, and textiles are each covered in three studies. Other sectors, such as marketing, construction, and natural resources appear in fewer publications on green consumption behaviour. In addition, seven studies discuss green consumption behaviour in general, without specifying the sectors concerned.

- By Country

A total of 44% of the publications in the systematic review focus on the Republic of South Africa (RSA), 23% on Nigeria, 10% on Ghana, and 4% on Cameroon, and Tanzania. Eight percent of the studies concern Burkina Faso, Ethiopia, Kenya and Tanzania, and Mauritius. However, 6% of the studies deal with green consumption behaviour in developing countries, but do not give any further details on the countries concerned.

- By Year of Publication

The articles included in the review date from 2010 to 2021. The number of publications on consumer behaviour has risen steadily, although the pattern has been uneven (Figure 2). From the year 2020 onwards, the number of publications increased, reaching its highest level in 2021.



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

- By Theoretical Frameworks

The majority of publications (57.14%) rely wholly or partly on Ajzen’s theory of planned behaviour [80] to explain the relationship between the environment and consumer behaviour [26,34,43,49,51,57]. This theory is derived from Fishbein and Ajzen’s theory of reasoned behaviour [80]. It states that green purchase intention is driven by three predictor variables:

1. Attitude, which reveals the favourable or unfavourable feeling an individual may have about a product [81];
2. Subjective norms, which reflect the influence that society may have on an individual’s consumption choice [81];
3. Perceived behavioural control, which indicates an individual’s view of the ease or difficulty of engaging in responsible behaviour.

In addition, the indirect and/or direct effect of these three behavioural variables are generally assessed by the notion of mediator and moderator. The mediator effect is a mechanism by which an independent variable influences a dependent variable through a so-called mediating variable. The moderator variable determines the strength of the relationship between two variables [65]. This model has been used by several authors [3,32,33,62]. For example, media campaigns, consumer confidence, and altruism can be mediating or moderating variables. In some studies, behavioural variables may also act as mediators [49,62].

#### 4. Discussion: What Are the Prospects for Green Consumption in Sub-Saharan Africa?

This systematic review is the first ever to highlight the characteristics of green consumption behaviour in sub-Saharan Africa. It highlights the factors that influence green consumption choices and serve as a signal for companies to increase their competitive advantage.

Using Prisma’s analysis method, we selected 48 articles for our study. The number of publications has increased over the past ten years and risen sharply since 2020. This topic appears to be generating more interest in the scientific world, a trend that is likely to continue in the coming years.

The number of economic sectors involved in green production is also increasing, although food remains the dominant sector.

Although the number of publications on green consumption in sub-Saharan Africa is growing, the number of green consumers remains limited. More than half of the publications focus on the RSA and Nigeria, the two largest economies in sub-Saharan Africa. These two countries are often referred to as “emerging countries” and, therefore, they are not necessarily representative of the economic situation in most African countries.

In addition, irrespective of the African country studied, the purchase of green products only concerns the upper—or extreme upper—fringe of the population, i.e., the wealthy and/or well educated [49,60,61]. The latter are more aware of the impact of responsible consumption and its virtues for health. The urban middle class, which is growing in sub-Saharan Africa, is not very aware of the issue [64,78]. In Africa, the working classes are still the majority in terms of sheer numbers, but their situation (poverty and lack of education) means that meeting their basic needs at the lowest cost is their main priority, rather than the environment [46,82].

Several studies demonstrated that the motivation to pay for green products was driven by attitude, subjective norms, and perceived behavioural control that positively impact the purchase intention of green products [32,43]. Some authors have gone further by providing an extension field to the theory of planned behaviour by adding some variables such as altruism, anxiety, knowledge, loyalty [46,57,61]. In sub-Saharan Africa's economic context, where the vast majority of consumers have a limited budget, the pertinence of the theory of planned behaviour is debatable. Other variables besides attitudes, subjective norms, and perceived behavioural control determine the volume and type of consumption, such as social and economic variables (income level, gender, geographical origin, cultural background, etc.). For example, in a study, [54] came to the conclusion that gender positively influences the behaviour of visiting sustainable infrastructure in cities, especially among men. Similarly, [76] assessed a positive influence between gender and consumption behaviour. In addition, the study of [2] showed a positive relationship between consumer confidence and green consumption behaviour. Thus, a green marketing policy is essential to stimulate consumer confidence which will act directly on green purchasing behaviour. One perspective would therefore be to identify thresholds in terms of national economic development and individual income to optimise the explanatory and predictive power of the theory of planned behaviour.

Despite the relevance of this study, it has some limitations. The systematic review exercise is based on algorithms which were tested and readjusted many times to obtain a coherent and reliable list of scientific articles related to the topic, geographical area, and time period. However, this standardized analysis has three limitations. First, it must be supplemented by a non-automated review of technical reports and more “grey literature”, which are not published by the major private scientific publishers. This complementary review is inevitably partial, especially because it concerns an original field of study, where recent advances may not have been the subject of formal scientific publications. This is the case, for example, with participatory guarantee systems, which have developed rapidly in recent years [83], and are often based on small-scale forms of responsible consumption.

Second, the low number of articles is a limitation. Indeed, the last search was done in November 2021, so the articles from 2022 and 2023 are not among our selected articles. Moreover, the geography of the study means that we also have fewer articles.

Third, the systematic review revealed the diversity of green consumption patterns in sub-Saharan Africa, despite the dominant use of the theory of planned behaviour framework. For instance, several factors related to cultural heterogeneity explain the diversity of green consumption behaviour in this region and in different sectors, although the systematic review was unable to make them explicit.

## 5. Research Direction

Our results show that the emergence of green consumption in sub-Saharan Africa does not depend on a single factor, but on several other factors that jointly determine consumer behaviour. This paper provides an overview of the factors influencing green consumption behaviour to researchers who want to contribute to the emergence of green products in developing economies. Through further analysis of the factors and their correlation on the purchase of green products, researchers can determine the factors that most influence green consumption for a well-defined sector through a quantitative or quantitative analysis.

Based on these results, they can propose sustainable policies to further stimulate this consumption, while controlling the factors that risk negatively impacting this consumption.

Interdisciplinary studies that integrate insights from psychology and economics should also be explored [84] in the context of new behavioural economics models. The acceleration in 2019 in the number of publications devoted to green consumption behaviours in sub-Saharan Africa draws on a wide range of research models published in various journals. Our study shows a predominance of the planned behaviour model. In the case of developing countries, a threshold in terms of national economic development or individual income should be established to see the effects of the theory of planned behaviour, which could be an avenue to explore for future research.

Future studies can use complementary theoretical frameworks such as self-determination theory [85] that could be useful in conceptualizing the origin of the precursors to theory of planned behaviour by bringing the concept of motivation into play [86,87]. Another avenue would be to use prospect theories that link psychological and economic prescriptions within the framework of behavioural economics [88]. Finally, future research can rely on experience-based methodological tools, as suggested by new models in behavioural economics [89].

## 6. Conclusions

The protection of the environment is a global concern. Faced with this situation, the demand for green products is on the rise, which has sparked interest in this subject in the research community. Green consumption is growing rapidly in sub-Saharan Africa too, but with greater expansion in emerging countries, such as South Africa and Nigeria. Moreover, its socio-economic scope is limited because only the upper classes can afford to pay for green products. The emergence of the middle classes is likely to be a major turning point in the expansion of green consumption in the region. The medium-term challenge is to raise awareness about responsible consumption among a less wealthy target audience, by developing approaches that are not necessarily linked to a higher level of income or education.

**Supplementary Materials:** The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/su15086343/s1>.

**Author Contributions:** L.T. performed the systematic analysis; L.T., B.B. and G.L. wrote the paper; G.L. managed the revision of the paper. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research was funded by Consortium of International Agricultural Research Centers Research Programme on Forests, Trees, and Agroforestry.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Not applicable.

**Data Availability Statement:** Not applicable.

**Acknowledgments:** The authors thank Emilie Chirouze and Guillaume Cornu in CIRAD for their technical support. They also thank Isis Olivier for her review of this article in English.

**Conflicts of Interest:** The authors declare no conflict of interest.

## Appendix A

Algorithm used for research in Scopus; the following algorithm was used:

TITLE-ABS-KEY((((“green consum\*” OR “sustainab\* consum\*” OR “responsib\* consum\*” OR “ethic\* consum\*” OR “energy consum\*” OR “green purchas\*” OR “green market\*” OR “green product\*” OR “sustainable products” OR “environment\* friendly product\*” OR “eco-friendly product\*” OR “environment\* market\*” OR “sustainable market\*”) AND (behavior\* OR attitude\* OR intention\* OR decision)) OR (“consum\* behavior\*” OR “purchas\* behavior\*” OR “buy\* behavior\*” OR “consum\* attitude\*” OR “purchas\* attitude\*” OR

“buy\* attitude\*” OR “consum\* intention\*” OR “purchas\* intention\*” OR “buy\* intention\*” OR “consum\* decision\*” OR “purchas\* decision\*” OR “buy\* decision\*” OR “consum\* value\*”) AND (green\* OR environment\* OR proenvironment\* OR sustainab\* OR ecolog\* OR biodiversit\* OR organic\* OR natur\* OR responsib\* OR ethic\* OR moral\* OR fair\* OR conscious\* OR “eco-friendly” OR certified OR label\* OR renewab\* OR clean\* OR wast\* OR recycl\* OR pollution\* OR energy OR food\* OR water\* OR climat\* OR carbon\* OR ecosystem\* OR agricultur\* OR forest\*) OR (“green\* behavior\*” OR “environment\* behavior\*” OR “proenvironment\* behavior\*” OR “environment\* friendly behavior\*” OR “sustainab\* behavior\*” OR “ecolog\* behavior\*” OR “responsib\* behavior\*” OR “recycl\* behavior\*” OR “green attitude\*” OR “environment\* attitude\*” OR “environment\* responsib\*” OR “social\* responsib\*” OR “environment\* concern\*” OR “environment\* conscious\*” OR “environment\* value\*” OR “environment\* self-identity” OR “environment\* identity” OR “sustainab\* practice\*”) AND (consum\* OR purchas\* OR buy\*)) AND (“sub saharan africa” OR “south africa” OR rsa OR angola OR benin OR botswana OR “burkina faso” OR burundi OR cameroon OR “ivory coast” OR ethiopia OR gabon OR gambia OR ghana OR guinea OR kenya OR lesotho OR liberia OR madagascar OR malawi OR mali OR mauritius OR mauritania OR mozambique OR namibia OR niger OR nigeria OR uganda OR “central african republic” OR congo OR drc OR rwanda OR senegal OR “sierra leone” OR somalia OR sudan OR swaziland OR tanzania OR chad OR togo OR zambia OR zimbabwe)).

We used the following algorithm in the Web of Science: TOPIC: (“green consumption” OR “sustainable consumption” OR “responsible consumption” OR “ethic consumption” OR “energy consumption” OR “green purchase” OR “green market” OR “green product” OR “sustainable products” OR “environment friendly product” OR “eco-friendly product” OR “environment market” OR “sustainable market”) AND TOPIC (behavior OR attitude OR intentio OR decision) AND ADDRESS: (“sub saharan africa” OR “south africa” OR rsa OR angola OR benin OR botswana OR “burkina faso” OR burundi OR cameroon OR “ivory coast” OR ethiopia OR gabon OR gambia OR ghana OR guinea OR kenya OR lesotho OR liberia OR madagascar OR malawi OR mali OR mauritius OR mauritania OR mozambique OR namibia OR niger OR nigeria OR uganda OR “central african republic” OR congo OR drc OR rwanda OR senegal OR “sierra leone” OR somalia OR sudan OR swaziland OR tanzania OR chad OR togo OR zambia OR zimbabwe).

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