What Role Does Sustainable Behavior and Environmental Awareness from Civil Society Play in the Planet's Sustainable Transition

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Abstract: The respect of human beings for the planet's boundaries is an obligation of humanity for the sake of our own and future generations. Achieving this planetary sustainability requires a radical change in the way humanity develops. This study aims to explore whether a sample of Portuguese civil society is committed to achieving this purpose. We explored: (i) citizens' adherence to sustainable behaviour in terms of purchases and household practices; (ii) if environmental concerns and activism are predictors of these sustainable behaviours; and (iii) if environmental concerns influence environmental activism. A quantitative approach was used based on partial least squares. The results revealed that respondents demonstrate sustainable behaviour in consumption by avoiding plastic and looking for recyclable packaging and in housework by saving energy; environmental activism proved to be the most significant predictor of these behaviours, followed by environmental concerns. This article constitutes an opportunity to take (suggested) measures that encourage a change in the behavioural patterns of societies.

Keywords: planetary sustainability; sustainable behaviours; environmental concerns; collective environmental actions; environmental activism

1. Introduction

The last few years have been fruitful in showing us the consequences of uncontrolled human action on the planet. Alerts about the degradation of natural resources have been given over the last two decades. Still, humanity accommodated itself through a comfortable lifestyle and focused only on the present, ignoring the environmental damage it has been causing or feigning concern without doing anything to reverse the situation. Of course, achieving economic and social growth without harming the environment is a real challenge. However, transitioning to planetary sustainability implies recognising economic, social, and environmental interconnections. In this regard, in 2015, the member states of the European Union signed a commitment with the United Nations 2030 Agenda for Sustainable Development. Transitioning to sustainable development presupposes achieving seventeen sustainable development goals within 15 years. Seven years have passed since the signing of the commitment, and everything remains to be done. Although much literature has appeared in recent years on sustainability (see [1] for a review), in concrete terms, very little has yet been achieved (e.g., the recent failure of the last COP27).

Converging towards planetary sustainability requires regenerative development as it involves a profound transformation in how we live, think, and act in resonance with the living Earth [2]. People need to become regenerative practitioners, i.e., to regenerate

their thinking, comprehension, and connection to the health of living systems as a whole. Only in this way will it be possible to answer the momentum question: how will humanity reposition itself to occupy a safe and just space within planetary [3]. The concept of sustainable development opens new radical changes in consumption and production patterns and lifestyles. At a time when the world's population already numbers eight billion people, the turns we have to take in our behaviours and lifestyles have to be circular to guarantee the planet's sustainability. This should be seen as a natural process in which humankind is in tune with the planetary circuit. In the same way, the earth makes circular movements around the sun and around itself; why shouldn't the population also follow a circular life?

Despite all stakeholders having a vital role in this transition to a sustainable planet, the individuals assume, in this context, an unprecedented role. The real transition starts with changes in individual behavioural patterns, such as adopting more conscious consumption approaches and sustainable everyday behaviours in line with the circular economy. Therefore, we may ask what will be the determinants that explain the mindset change of individuals in favour of pursuing these more sustainable behaviours. Previous research has shown that the relationships between studied determinants and pro-environmental behaviour are more complicated than first assumed [4]. Some scholars recognize that the 'bottom-up' approach to managing individual pro-environmental behaviours can be fostered by values [5] or social norms [6], while others recognize that environmental awareness is the trigger for adopting sustainable behaviours [7–9]. Furthermore, while a few studies have evaluated the factors affecting sustainable consumption behaviours [9,10], there is no evidence of the determinants of sustainable behaviours in everyday domestic life.

The present paper tackles the factors contributing to the adoption of two types of individual sustainable behaviours: sustainable consumption behaviours (translated into purchasing recyclable packaging, conscious shopping, and zero plastic) and daily sustainable domestic behaviours (translated into energy and water saving). The purpose is to find out if Portuguese civil society is, in fact, aware of the need to adopt these sustainable behaviours if they adopt them and what factors determine this adherence to a more sustainable lifestyle. In this regard, we assess whether environmental awareness and activism influence individual sustainable behaviours and whether environmental concerns determine ecological activism.

This study is particularly relevant to Portugal for four main reasons. First, recent data show that, on average, Portuguese progress in achieving the SDGs dedicated to the planet still needs to be improved to meet many targets [11]. For example, progress has been made on the efficient use of natural resources (target 12.2), food waste (target 12.3), waste generation (target 12.5), marine pollution (target 14.1), ecosystem protection (15.2), and threatened species, although this progress is still insufficient. Second, regarding "SDG 12—Responsible production and consumption", it has been highlighted that current targets are mainly focused on production and less on consumption. Thus, EU countries should focus more on the consumption side and on policy directly correlating with sustainable production [12]. Third, concerning SGD 13, it is worth mentioning that during the rotating EU presidency from January–June 2021, Portugal put climate emergency at the top of the agenda. Finally, the opinion of civil society about environmental concerns has not been known, nor has their adherence to sustainable consumption and domestic behaviours been studied.

This paper is relevant and contributes to the existing literature on planetary sustainability. Environmental activism represents this paper's first originality, conceived as a construct that underlies individual sustainable behaviours. The second originality element is to simultaneously compare the relevance of environmental concerns and environmental activism in explaining two sustainable habits: consumption behaviours and household practices.

2. Literature Review and Structural Model

2.1. Sustainable Behaviours

Sustainable behaviour (SB) is the set of deliberate actions that intends to satisfy present needs by considering its cost and benefit in terms of environmental impact [13]. SB is the set of deliberate actions that result in conserving natural and social resources and encompass pro-ecological and altruistic behaviours. Following SB allows the preservation of the natural environment and the protection of the integrity of society's contribution to the quality of life [14]. Put another way, SB is a way of life that embraces values, beliefs, and a sense of individual responsibility in deliberate actions aimed at the wellbeing of all living beings, including present and future generations.

Consumer decisions about what to buy, how much to buy, how much to consume, and how they will manage waste or dispose of products that they do not use or are at the end of their life will directly impact the environment and the sustainability of future generations [15]. Knowing whether civil society follows SB is essential to solving environmental problems and converging on a viable planet for all and forever. In the last two decades, research on SB demonstrated that this behaviour depends on individual decision making, focusing on consumers' motivations and psychological conditions that translate into pro-environmental behaviours [15]. These pro-environmental behaviours express consumers' environmental beliefs, solving their own identity. In pro-environmental consumption choices, the connection between the "I" and the "identity" does not result from external intervention. It is carried out by itself, even if it is later externally signaled so that individuals feel recognised. The external recognition can translate into a positive image of oneself, namely as someone that holds adaptive and appropriate behaviours [16], moral and global values [17], self-identification [18], status [19,20], and reputation [21]. Engaging in SB can be triggered by several individual drivers. For example, according to [22], recycling an item we no longer want and donating it to someone in need can contribute to the donors' wellbeing. We believe that the same is true for the recipient of the recycled good, who, by avoiding buying a new or virgin product, avoids encumbering the environment again. The energy-saving strategy is more effective when behaviours result from individual decisions induced by personal identities, such as not keeping lights on when not needed, saving energy in traveling, and recycling [23]. The choice to purchase products with ecological packaging and the intention to recycle are also the results of pro-environmental decisions based on self-identity [24]. The actions of reference groups can also drive individual motivations to trigger SB. [25] demonstrated that consumers are more motivated to engage in SB, such as composting, water conservation, and recycling, when collective actions surpass them in terms of environmental behaviours, with an additional drive to obtain a social identity. This social identity may result from individuals' altruism, already identified as the primary motivation for consumers to adopt circular behaviours and make sustainable purchases [26].

2.2. Pro-Environmental Collective Actions/Environmental Activism

Pro-Environmental Collective Actions (PECA) are actions triggered by individuals who identify as part of a group or categorize themselves as belonging to a group [27]. These individuals share common goals [28]. In the case of PECAs, the objective is not to improve the external visibility and status of the group but to increase the group's influence through an increase in elements (collective conversion movements) for identifying with the convictions defended by the group [29]. Collective actions play a leading role in solving environmental problems as they help to draw the attention of national and international organisations and decision makers. Furthermore, an environmental campaign is not a path to be followed alone but by all interested parties, thus benefiting humanity.

Environmental changes are one of the main concerns of all time, and collective action is required to solve them [30]. This joint action is essential due to the size and complexity of environmental problems and the need for the collective negotiation that the resolution of these problems requires ([29,31,32]).

This study will use the concept as a synonym for environmental activism (EA). EA can be understood as an individual's or group's deliberate actions that protect or aid the environment. Those involved in the movement identify issues threatening the planet's viability, from community to global concerns, and then develop strategies to promote awareness or produce solutions that directly address the problem. Thus, EA contributes to ecological conservation and cultivates environmental consciousness.

The Collective Action Social Identity Model (SIMCA) developed by [33] and later extended by [34] was identified as a predictor of integrated collective action. The social identity that can be processed through (i) identity with the group (individuals form action groups based on psychological ties identified with other individuals in the group), (ii) the perception of injustice (injustice experienced by the group or feelings of anger), (iii) the belief in the efficiency that a joint action allows to achieve the intended objectives, and (iv) the moral conviction of the individuals that make up the group (moral beliefs).

Most studies addressing pro-environmental actions consider them a personal decision-making process [35]. However, SIMCA has progressively been applied to understand the motivations of collective environmental actions [30,34], although there are still few studies that address the link between identity and PECA [29,35–38]. As a result of the need to reinforce the relationship between social identity and environmental activism, the Pro-Environmental Action Social Identity Model (SIMPEA) has been proposed by [35]. In this model, social identity requires that individuals think and perform actions as a group, which is essential to assess environmental problems due to their large scale. Therefore, social identity is the ability of individuals to define themselves as "We" instead of "I" [35].

The pro-environmental behaviours consumers adopt daily were identified as one of the levels of collective action [39]. Adopting circular behaviours, namely recycling processes [40] and reducing plastic consumption [41], can be motivated by pro-environmental collective actions.

Thus, a greater preponderance of EA can enhance environmental consciousness and trigger changing lifestyles in favour of more SB. In this way, a greater perception by individuals of the impact of their behaviours on the environment and the inherent costs and benefits can explain their convictions and decisions to adopt SB [42]. In this context, the following hypotheses were formulated:

H1. *Environmental activism positively influences SB.*

H1a. *Environmental activism positively influences the consumption of recyclable packaging.*

H1b. *Environmental activism positively influences conscious shopping.*

H1c. *Environmental activism positively influences the consumption of non-plastic.*

H1d. *Environmental activism positively influences energy saving.*

H1e. *Environmental activism positively influences water saving.*

2.3. Environmental Concerns

Environmental concern (EC) is an individual evaluation of the environmental consequences of one's behaviours. It refers to one's perception and knowledge about environmental issues and to what extent a person is worried about its threats and supports efforts to solve them [43,44].

Most existing literature on consumers' EC labels them as a construct of primitive beliefs [45]. These beliefs are supported by specific constructs such as mastery over environmental matters, ideas about environmentally friendly products, and intentions to behave as consequences of these beliefs [46]. Generically, we can define EC as the concern of individuals regarding the degradation of the natural environment [9,47]. These concerns

can be categorised according to [48] as (i) EC regarding concrete issues such as air and water pollution, recycling, waste disposal, and energy costs, and (ii) universal EC translated by opinions on climate problems and environmental crises. Our study considered the second definition of EC, which encompasses a more global view of environmental problems.

As a result of its definition, consumers concerned about the environment are highly motivated and interested in making environmentally conscious purchases [44] and engaging in SB. In our study, conscious purchases refer to buying organic products and recycling, the choice of products considering the carbon footprint, the purchase of recharge products, and a reduction in purchases down to only the necessary products. In recent years, several studies have considered EC a variable capable of inducing and explaining pro-environmental consumer behaviour and motivating the intention to purchase sustainable products [49,50]. For example, EC can positively contribute to circular consumption through recycling [51,52], avoiding plastic [53,54], purchasing sustainable packaging [47,55,56], energy savings at home [57], purchasing energy-efficient products [58,59], and saving water [60].

In addition, EC may be based on beliefs about the national identity of a more ecological image triggering pro-environmental actions, not only individually but also collectively [61]. Support for collective pro-environmental causes can also be reinforced by the social identity of individuals, an essential component of EC [62,63]. According to [64], people more concerned about climate change problems tend to support collective pro-environmental actions more. Figure 1 represents the structural model.
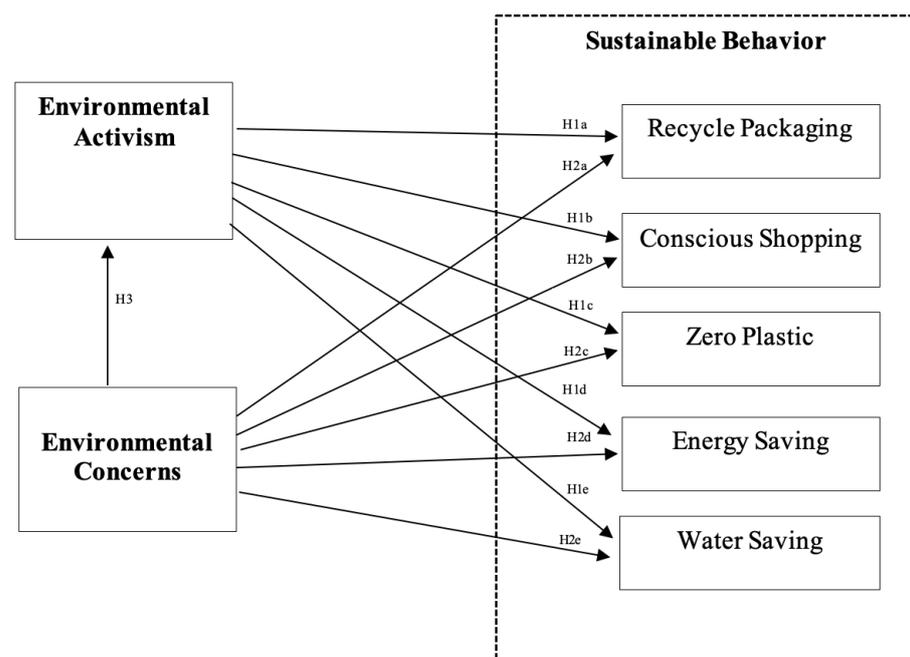
Figure 1. The structural model.

According to the previous literature, we hypothesize that:

H2. *Individuals' environmental concerns positively influence SB.*

H2a. *Individuals' environmental concerns positively influence the consumption of recyclable packaging.*

H2b. *Individuals' environmental concerns positively influence circular consumption choices.*

H2c. *Individuals' environmental concerns positively influence the consumption of no plastic.*

H2d. *Individuals' environmental concerns positively influence energy saving.*

H2e. *Individuals' environmental concerns positively influence water saving.*

H3. *Individuals' environmental concerns contribute positively to environmental activism.*

3. Materials and Methods

3.1. Data Collection and Measurement

Data were collected through an online questionnaire on social networks for two months (September and October 2022). The inclusion criterium for participants in the sample was residing in Portugal for at least 18 years. Participation was voluntary, and explicit informed consent was given. All potential participants were informed about the research objective, and anonymity was granted. A pre-test was carried out with twenty participants to assess their understanding of the questions. The validity and reliability test verified that the sample reveals high internal reliability (Cronbach's alpha = 0.986).

The questionnaire comprises three sections. The first section collected respondents' sociodemographic characteristics (age, gender, education, and income).

Section 2 collected information about respondents' sustainable habits. We divided the habits into sustainable consumption decisions and sustainable household practices. Three constructs were used to measure sustainable consumption decisions, namely, purchasing recyclable packaging (RP), conscious shopping (CS), and zero plastic (ZP). Two constructs were used to measure sustainable household practices: energy saving (ES) and water saving (WS). Four statements were used to measure RP, five items were used to measure ZP and WS, six were used to measure CS, and ten were used to measure ES. For all these constructs, a 4-point frequency scale was used from 1: Never, 2: Rarely, 3: Frequently, and 4: Always. Except for RP, which was taken from [9], all other constructs were taken from [65].

Section 3 collected participants' EC and their engagement with EA. Both variables were measured through five statements retrieved from [9]. For EC, we used a 5-point frequency scale from 1: Totally disagree, 2: Disagree, 3: Nor Disagree/Agree, 4: Agree, and 5: Totally agree. For EA, we used a 5-point frequency scale from: 1: Never, 2: Rarely, 3: Sometimes, 4: Often, and 5: Always/Whenever I have the chance.

Details of the statements can be found in the first columns of Table A1 in Appendix A.

3.2. Data Analysis

Descriptive statistics were performed through SPSS (25) to synthesise respondents' attitudes regarding the seven variables used in the study. Linear regression analyses were performed to evaluate the relationship between respondents' sociodemographic characteristics and their attitudes concerning each latent variable. The partial least squares (PLS) methodology was used to explore the association between the five dependent latent variables—PCP, CS, ZP, ES, and WS—and the two latent independent variables—EC and EA. The PLS method is adequate for the present study since the data were collected through multiple indicators [66] and all the items follow a non-normal distribution [67]. The reliability of the PLS model was assessed using composite reliability coefficients (CR > 0.70), and its validity was tested through the Cronbach's Alpha measures (Cα > 0.70), convergent validity (average variance extracted—AVE > 0.50), and discriminant validity tested by the Fornell–Larcker criterion.

4. Results

4.1. Descriptive Analysis

A sample of 826 Portuguese citizens was obtained. In total, 864 responses were collected, albeit only 826 (95.6%) were considered valid (questionnaires thoroughly answered). Most respondents were female (69.9%), and the median age of participants was 33.8 years. Most respondents have a net monthly income of less than €1000 (63.9%), and regarding education, 39.2% of respondents have completed secondary education while almost half (47.7%) are licensed.

Table A1, in Appendix A, summarizes the descriptive statistics of the seven constructs. Regarding SB, the results reveal that avoiding plastic dominated respondents' purchasing decisions (M = 3.11). Purchasing recycled packaging ranks as the second most prevalent sustainable consumption habit (M = 3.11), while significantly behind is the habit of conscious shopping (M = 2.83). Using their bag (M = 3.38) and water bottle (M = 3.33) were the most followed practices concerning avoiding plastic. When purchasing packaging, respondents' preference for simple packaging designs (mono-material) (M = 3.10) and those that can be reused (M = 3.06) was notorious. Fixing things before buying replacements, avoiding unnecessary shopping, and using recharge products were the habits more frequently followed by participants in shopping behaviours. Concerning sustainable household practices, respondents show energy-saving habits (M = 3.19) but less concern with water saving (M = 2.47). The most frequent way of saving water happens when respondents do their hygiene routine (washing their face and teeth and showering).

In sum, energy saving and zero plastic were the sustainable habits dominant in our sample.

The participants demonstrated great EC even though their adherence to activism for this cause could be more significant. Respondents were seriously concerned with the waste of resources (M = 4.86) and its consequences for future generations (M = 4.67). Regarding the practical actions of EC, participants mainly talk with people about environmental issues (M = 3.61) and visit natural sites in their residential area to support initiatives to protect the heritage (M = 3.08). Figure 2 synthesizes the mean results.
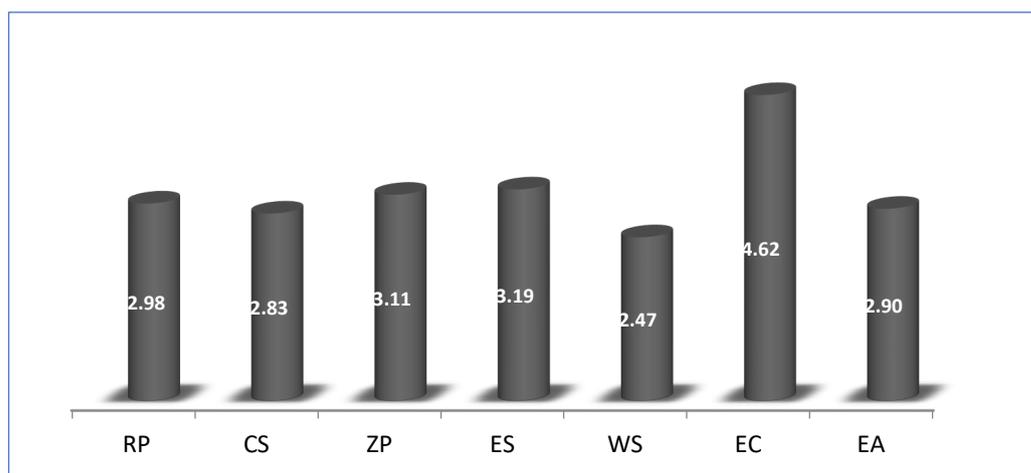
Figure 2. Adherence to sustainable habits and environmental issues (mean). Note: the variables RP, CS, ZP, ES, and WS used a scale of 1 to 4, while the variables EC and EA used a scale of 1 to 5.

Results from linear regression analysis (Table A2, in Appendix A) revealed that respondents' age and gender were statistically significant in explaining all the variables. Women and older participants were more adept at all sustainable practices, revealing more significant EC and a greater propensity in adhering to activist attitudes towards the environment.

4.2. Structural Model

We performed a confirmatory factor analysis (CFA) to specify the reflective model nature of item measurement. All items have high confirmatory factor loads (>0.50), and as such, no items were excluded (Table A3, in Appendix A). Table 1 presents the discriminant validity of the model. The results demonstrate that all variables are reliable and have discriminant validity and factorial convergence (CE > 0.50 and AVE > 0.50). Moreover, the quality of the model fit was validated by chi-square (*p* = 0.092), goodness-of-fit (0.934), the comparative fit index (0.9376), and the standard root mean square residual (0.066),

demonstrating that the items used to define the dependent and independent variables are suitable for the present investigation.

Table 1. Reliability of the dependent and independent variables.

	Cα	CR	AVE	RP	CS	ZP	ES	WS	EA	EC
Recyclable Packaging (RP)	0.863	0.907	0.709	0.842						
Conscious shopping (CS)	0.807	0.858	0.504	0.525	0.710					
Zero Plastic (ZP)	0.827	0.878	0.592	0.446	0.638	0.769				
Energy Saving (ES)	0.844	0.877	0.519	0.380	0.552	0.562	0.720			
Water Saving (WS)	0.752	0.775	0.519	0.381	0.525	0.544	0.605	0.720		
Environmemtal Concerns (EC)	0.753	0.834	0.508	0.353	0.310	0.335	0.552	0.317	0.713	
Environmental Activism (EA)	0.795	0.858	0.547	0.564	0.401	0.344	0.248	0.337	0.328	0.740

Figure 3 presents the PLS logarithm model, and Table 2 presents detailed results of the size and significance of the path coefficients. Significant relationships exist between the dependent and independent latent variables. Beyond the positive association between EC and EA (β = 0.38), there is a positive influence between them and the five sustainable habits. Moreover, EA is more influential on all SB than EC, except for ES. Concerning sustainable consumption decisions, more significant associations exist between EA and the purchasing of recycled packing (β = 0.502), followed by conscious shopping (β = 0.335) and zero plastic (β = 0.263). A reverse influence is observable for EC. EC exerts a more significant influence on avoiding plastic (β = 0.249), conscious consumption (β = 0.200), and finally, recycled packaging (β = 0.188). Thus, all our hypotheses were confirmed.
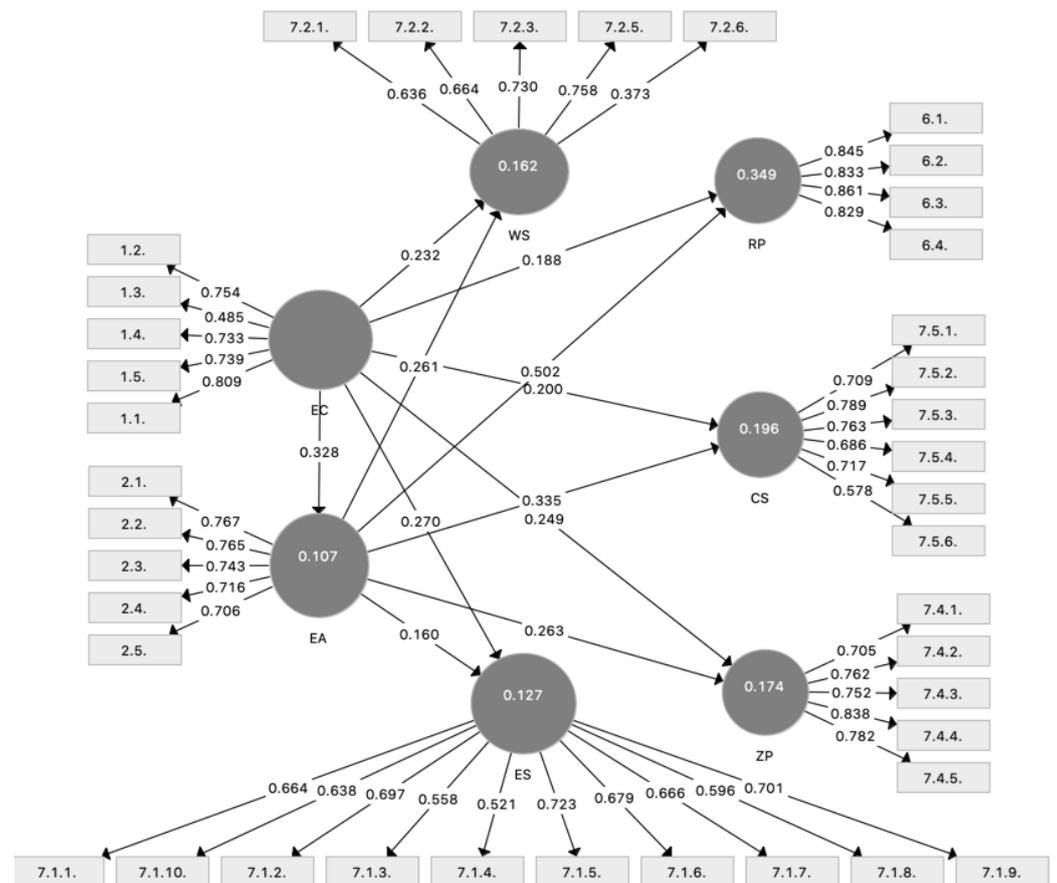
Figure 3. The PLS model.

Table 2. Effects on endogenous variables.

Effects on Endogenous Variable	Path (β)	*t* Value (Bootstrap)	Confidence Interval		Hypothesis Support
			2.5%	97.5%	
H1a: EA → RP	0.502	17.784	0.444	0.556	Yes
H1b: EA → CS	0.335	7.935	0.256	0.416	Yes
H1c: EA → ZP	0.263	6.301	0.181	0.346	Yes
H1d: EA → ES	0.160	3.318	0.067	0.260	Yes
H1e: EA → WS	0.261	6.501	0.181	0.339	Yes
H2a: EC → RP	0.188	4.948	0.101	0.249	Yes
H2b: EC → CS	0.200	4.293	0.107	0.287	Yes
H2c: EC → ZP	0.249	5.734	0.168	0.332	Yes
H2d: EC → ES	0.270	5.149	0.174	0.371	Yes
H2e: EC → WS	0.232	5.021	0.140	0.319	Yes
H3: EC → EA	0.328	10.366	0.271	0.387	Yes

5. Discussion and Implications

The transition and convergence toward planetary sustainability ceased to be an ideology, becoming a pressing global need. Global agreements like the 2030 Agenda for Sustainable Development seek to promote sustainable development and its integration into policymaking. The United Nations has declared 2020 to 2030 the Decade of Action to deliver on the SDGs and calls for greater ambition and a sense of urgency to accelerate the transition. The present study focuses on planet SDGs whose goals include sustainable consumption and production, the fight against climate change, and managing natural resources. The resilience of civil society is essential—the coexistence of humanity within the boundaries of the planet requires everyone's commitment to the good of all. In this study, we explored the commitment of Portuguese civil society to the transition to a sustainable planet. We investigated the Portuguese compromise in adopting SB and whether these habits are connected with their EC and collective actions.

Our hypotheses were all confirmed. On the one hand, respondents' sustainable habits about consumption and household practices were predicted either by their EA or EC. The main eco-friendly behaviours adopted by respondents were energy saving and plastic avoidance, while less care was shown for saving water. The habit of saving energy was also found to be the most popular among Russians and the inhabitants of Tokyo, Bangkok, and Seoul [65]. Although exhibiting EC does not necessarily translate into concrete environmental protection behaviours [68] our results reinforce the findings of [49,69] which suggest that a greater degree of EC entails a greater alignment of actions that value the environment, as opposed to a lower degree of EC. Indeed, empirical findings corroborated that environmental awareness predicts pro-environmental consumption habits [9,52,53,56,70], as well as household pro-environmental practices [57–60]. Despite the unexplored association between EA and eco-friendly behaviours, we found a positive and significant relationship between both variables. The greatest predictive effect was related to the purchase of recyclable packaging, and the same positive association was found elsewhere [9]. We can only speculate, but perhaps this substantial positive effect between EA and the use of recyclable packaging can be justified because people involved, for example, in cleaning beaches, forests, or parks, often find packaging on the ground.

On the other hand, we found that EC is strongly associated with environmental activism, which is a novel result. Since this analysis is new, there is no basis for comparison with other empirical evidence. However, [36] found an inverse relationship by showing that the citizenship component of environmental behaviour can be linked to EA through collective action.

Finally, the multi-group analysis indicates differences by age and gender but not education or income. We conclude that women and older respondents were more concerned with the environment, had a more activist attitude, and were keener to engage in SB. Our findings are partially in line with the empirical evidence. Gender gap differences have

been observed in studies investigating environmental issues (e.g., [71–74], revealing that, regardless of the nature of environmental problems, women show more concern for the environment than men. Moreover, many studies in different countries outline that women are more likely to take pro-environmental measures than men [75–77]. They engage in more sustainable consumption behaviours than men [78]. These differences in women's and men's SB are often linked to gender roles and associated practices [74]. Women are traditionally in charge of the house and assume the role of caregivers.

Concerning age, there is no defined pattern for the influence of this demographic characteristic on environmental issues in the empirical literature. While some studies indicate that younger people reveal greater concerns and trigger behaviours consistent with environmental preservation, others show the opposite, that older people are more likely to participate in environmental behaviour [79–81].

We found no correlation between the environmental issues studied and respondents' education, which contrasts with previous research that found a positive externality between have a higher-quality education and pro-ecological behaviour [65] but is aligned with studies that do not corroborate this relationship [82]. Finally, we found no correlation between environmental issues and respondents' economic characteristics compared to other empirical findings [65,82].

The present study is not without limitations. Thus, the results should be analyzed with caution due, first of all, to the non-representativeness of the sample. The results cannot be generalised to the whole Portuguese civil society. Moreover, although practical and cheap, collecting data through an online questionnaire is subject to bias. Our sample had more women and higher levels of education than the general Portuguese population, which may have biased the results. Besides, we used a survey-based methodology where respondents faced closed-ended statements. This type of data collection may have conditioned the responses and does not allow us to ascertain the reason for the behaviours that are said to be pursued and those that are not practiced.

In future research, it would be interesting to use a representative sample of the Portuguese population and complement the study using quantitative and qualitative data. Equally important would be to explore the role of psychological determinants in EC, activism, and SB. Finally, it would also be important to use the same study design in our neighbouring country, Spain, to make an Iberian investigation highlighting potential differences between both countries.

5.1. Theoretical Implications

Our study provides an important contribution to understanding SB, an underexplored research agenda in sustainability science [83]. We stress the importance of a civil environmental conscience for engaging in SB and environmental activism. In particular, we explored the role of EA in promoting pro-environmental behaviours, and divided these habits into consumption and household behaviours. Despite the growing research around sustainable development and circular economy, many environmental issues must be addressed.

5.2. Practical Implications

The present study allows for inferring a set of practical implications. First, exploring new ways to promote sustainable development, while limiting the pressure that human activities exert on the Earth, requires the prompt of all stakeholders—government, researchers, and civil society. Since EC positively influences adopting eco-friendly behaviours, policymakers should develop measures that act as triggers to foster greater societal ecological awareness. They should bet on information campaigns with images showing the planet's destruction. Second, since habits are an internalisation process that takes root over time, policymakers should create incentives of a financial nature (such as tax incentives) or non-pecuniary incentives that reward sustainable practices in both consumption and households. Last but not least, the government should encourage outdoor activities. Contact with nature may promote the development of greater environmental awareness and allows for

observing and recognising, in loco, the current level of ecological destruction. In addition, this incentive would not only promote the SDGs, directly related to the preservation of the planet, but would also encourage SDG3 to promote good health for all.

6. Conclusions

Transitioning to a sustainable planet and achieving sustainable development are the critical challenges of the 21st century. The global community came together in 2015 and committed to reaching seventeen strategic SDGs that form a triangle between the environmental, economic, and social dimensions. All stakeholders are called upon to contribute to this shared objective. Given the relevance of civil society among all social actors, it is important to know what contribution they can expect when we are halfway through the calendar to fulfill the 2030 Agenda.

The present study allows us to conclude that Portuguese respondents demonstrate high levels of EC and that these concerns trigger activist attitudes towards the environment and drive citizens to engage in SB in both dimensions: consumption and household. We also conclude that EA has an even more significant effect on sustainable habits than ecological concerns. Walking in the field and seeing the destruction with one's own eyes seems to have the greatest impact on behaviour change.

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

Appendix A

Table A1. Descriptive statistics of the latent variables. Mean and Standard Deviation.

	Mean (M)	Std. Deviation
A. Sustainable Behaviours		
A1. Sustainable consumption decisions		
Recyclable Packaging (RP)	**2.98**	**0.802**
#1. When I have to choose a personal care product (e.g., shampoo, shower gel), I buy one with packaging made from recycled material.	2.95	0.768
#2. When I buy bakery products (e.g., bread, sandwiches) I choose those that have a simple packaging design (e.g., monomaterial, which can be divided into recyclable materials)	3.10	0.77
#3. When purchasing a product, I check the recycling information on the packaging to ensure that it is easily recyclable.	2.80	0.873
#4. When I buy food products, I look for those with packaging that can also be used for other purposes (eg glass packaging that can be reused as a cup).	3.06	0.795
Conscious Shopping (CS) *	**2.83**	**0.712**
#5. I buy organic products	2.62	0.661
#6. I buy recycled products	2.76	0.611
#7. I choose products keeping in mind the CO_2 emission (carbon footprint)	2.4	0.771
#8. I try to fix things before buying replacement parts	3.09	0.765
#9. I use recharge products	3.04	0.711

Table A1. *Cont.*

	Mean (M)	Std. Deviation
#10. I don't buy unnecessary products	3.06	0.753
Zero Plastic (ZP) *	**3.11**	**0.760**
#11. I use my own bottle or glass of water	3.33	0.764
#12. I use a container instead of a plastic bag	2.89	0.843
#13. I use my own bag/purse to go shopping	3.38	0.714
#14. Reduce the use of disposable products	3.04	0.722
#15. I don't buy overpackaged products	2.92	0.773
*A2. Sustainable household practices ***		
Energy Saving (ES)	**3.19**	**0.785**
#16. Avoid overloading the fridge	2.91	0.803
#17. I reduce the opening and closing of the refrigerator door	3.19	0.776
#18. I use stairs instead of elevators	2.84	0.834
#19. Adjust the air conditioning temperature	3.06	0.956
#20. I turn off the lights in empty rooms	3.65	0.619
#21. Turn off devices not in use	3.46	0.716
#22. I turn off the TV when people aren't watching	3.49	0.721
#23. I set a lower shower temperature	2.63	0.929
#24. Buy energy efficient appliances	3.24	0.765
#25. I use LED lamp instead of fluorescent lamps	3.46	0.728
Water Saving (WS)	**2.47**	**0.712**
#26. I use the toothbrush cup	2.31	1.128
#27. I turn off the water when washing my face or brushing my teeth	3.42	0.762
#28. I take short showers	3.17	0.707
#29. I reduce the frequency of washing clothes	2.95	0.775
#30. Use dishwasher	2.96	0.897
B. Environmental Awareness **		
B1. Environmental Concerns	**4.62**	**0.657**
#31. I am concerned about the consumption of natural resources and the consequences for future generations.	4.67	0.634
#32. Waste of resources is a serious problem.	4.86	0.448
#33. In our country we are not doing enough to encourage waste recycling.	4.32	0.884
#34. Protecting the natural environment is one of the most important issues facing the world.	4.62	0.679
#35. Increasing the shelf life of the products we use must be a priority in order to preserve the balance of nature.	4.65	0.638
B2. Environmental Activism	**2.92**	**1.207**
#36. I talk to other people about environmental issues.	3.61	0.969
#37. I work with others to solve environmental problems or issues.	2.75	1.154
#38. I participate as a volunteer in initiatives aimed at improving the natural environment of my community.	2.35	1.24
#39. I visit natural sites where I live to support initiatives to protect natural heritage.	3.08	1.319
#40. I make donations and/or sign petitions to support environmental protection.	2.80	1.354

Note: * Statements retrieved from Ratner et al. (2021); ** Statements retrieved from Testa et al. (2020).

Table A2. Linear regression model estimates.

	Gender		Age		Education		Income	
	Beta	*p*-Value	**Beta**	*p*-Value	**Beta**	*p*-Value	**Beta**	*p*-Value
RecyclablePackaging (RP)	0.125	0.000	0.281	0.000	—	>0.05	—	>0.05
Conscious Shopping (CS)	0.100	0.015	0.178	0.000	—	>0.05	—	>0.05
Zero Plastic (ZP)	0.260	0.000	0.116	0.003	—	>0.05	—	>0.05
Energy Saving (ES)	0.141	0.000	0.262	0.000	—	>0.05	—	>0.05
Water Saving (WS)	0.173	0.000	0.263	0.000	—	0.018	—	>0.05
Environmental Concerns (EC)	0.148	0.000	0.144	0.000	—	>0.05	—	>0.05
Environmental Activism (EA)	0.180	0.000	0.239	0.000	—	>0.05	—	>0.05

Table A3. Confirmatory Factor Analysis.

	RP	CS	ZP	ES	WS	EC	EA
Recyclable Packaging (RP)							
#1. When I have to choose a personal care product (e.g., shampoo, shower gel), I buy one with packaging made from recycled material.	0.845						
#2. When I buy bakery products (e.g., bread, sandwiches) I choose those that have a simple packaging design (e.g., monomaterial, which can be divided into recyclable materials)	0.833						
#3. When purchasing a product, I check the recycling information on the packaging to ensure that it is easily recyclable.	0.861						
#4. When I buy food products, I look for those with packaging that can also be used for other purposes (eg glass packaging that can be reused as a cup).	0.829						
Conscious Shopping (CS)							
#5. I buy organic products		0.709					
#6. I buy recycled products		0.789					
#7. I choose products keeping in mind the CO_2 emission (carbon footprint)		0.763					
#8. I try to fix things before buying replacement parts		0.686					
#9. I use recharge products		0.717					
#10. I don't buy unnecessary products		0.578					
Zero Plastic (ZP)							
#11. I use my own bottle or glass of water			0.705				
#12. I use a container instead of a plastic bag			0.762				
#13. I use my own bag/purse to go shopping			0.752				
#14. Reduce the use of disposable products			0.838				
#15. I don't buy overpackaged products			0.782				
Energy Saving (ES)							
#16. Avoid overloading the fridge				0.664			
#17. I reduce the opening and closing of the refrigerator door				0.638			
#18. I use stairs instead of elevators				0.697			

Table A3. *Cont.*

	RP	CS	ZP	ES	WS	EC	EA
#19. Adjust the air conditioning temperature				0.558			
#20. I turn off the lights in empty rooms				0.521			
#21. Turn off devices not in use				0.723			
#22. I turn off the TV when people aren't watching				0.679			
#23. I set a lower shower temperature				0.666			
#24. Buy energy efficient appliances				0.596			
#25. I use LED lamp instead of fluorescent lamps				0.701			
Water Saving (WS)							
#26. I use the toothbrush cup					0.736		
#27. I turn off the water when washing my face or brushing my teeth					0.764		
#28. I take short showers					0.730		
#29. I reduce the frequency of washing clothes					0.758		
#30. Use dishwasher					0.773		
Environmental Concerns (EC)							
#31. I am concerned about the consumption of natural resources and the consequences for future generations.						0.754	
#32. Waste of resources is a serious problem.						0.785	
#33. In our country we are not doing enough to encourage waste recycling.						0.733	
#34. Protecting the natural environment is one of the most important issues facing the world.						0.739	
#35. Increasing the shelf life of the products we use must be a priority in order to preserve the balance of nature.						0.809	
Environmental Activism (EA)							
#36. I talk to other people about environmental issues.							0.767
#37. I work with others to solve environmental problems or issues.							0.765
#38. I participate as a volunteer in initiatives aimed at improving the natural environment of my community.							0.743
#39. I visit natural sites where I live to support initiatives to protect natural heritage.							0.716
#40. I make donations and/or sign petitions to support environmental protection.							0.706

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