



WP3 – Understanding behavioural factors in the decision making of farmers and the buying behaviour of products from SFS

D3.2: Opportunities for policy and business strategies for SFS with citizen-consumers



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List of abbreviations

CAP – Common Agriculture Policy

EC – European Commission

GA – Grant Agreement

PBC – Perceived Behavioural Control

PCA – Principal Component Analysis

SFS – Sustainable food system

TPB – Theory of Planned Behaviour

WP – Work package

1 Executive summary

This deliverable, part of ENFASYS Work Package 3 (Understanding behavioural factors in the decision-making of farmers and the buying behaviour of products from SFS), examines how European citizen-consumers can accelerate the transition towards Sustainable Food Systems (SFS) and provides evidence-based recommendations for policy and business strategies that can advance SFS adoption. European citizen-consumers play a pivotal role in promoting Sustainable Food Systems, both through market choices and as political advocates. Drawing on data from a comprehensive survey conducted across twelve European countries, the report identifies four consumer segments—Disengaged, Price- and Convenience-Focused, Balanced, and Highly Sustainable Consumers—each characterised by distinct levels of engagement with nutritional, environmental, social, and economic sustainability. Highly Sustainable Consumers, making up 27.9% of the sample, hold strong ethical convictions and consistently practise sustainable behaviours. In contrast, Disengaged Consumers (20.9%) display minimal engagement, possibly due to economic constraints and limited access to information. Balanced Consumers constitute the largest segment (32.3%) and show moderate commitment, while Price- and Convenience-Focused Consumers (18.9%) prioritise affordability and ease, integrating sustainability when it aligns with their immediate needs.

The analysis also explores citizen advocacy, revealing a complex interplay of socio-demographic factors, policy perceptions, and political efficacy. Younger respondents, while less engaged in sustainable purchasing, in this research exhibited a higher propensity for advocacy, particularly when the required time and financial commitments were relatively low, such as voting or signing petitions. Perceived political influence and a clear prioritisation of environmental and social goals emerged as key motivators, underlining the importance of trust in institutions and the visibility of policy outcomes.

The findings underscore the necessity of integrated strategies tailored to the distinct motivations of each consumer segment while fostering greater political engagement. Policymakers are encouraged to address economic barriers through subsidies or tax incentives, promote participatory governance mechanisms, and highlight the tangible benefits of sustainable choices. Businesses play a complementary role by providing affordable sustainable options, transparent labelling, and evidence of environmental and social impacts, appealing to cost-conscious consumers and reinforcing the commitment of highly engaged individuals.

The results highlight how citizen-consumer behaviour may influence farmers to adapt their practices to better align with consumer preferences for sustainability. As citizen-consumers increasingly prioritise sustainable products and advocate for supportive policies, farmers may be motivated to adjust their methods to meet these evolving demands. By aligning their products with the sustainability expectations of their customers, farmers can remain competitive in the marketplace while contributing to broader environmental, social, and economic sustainability goals.

Ultimately, the report emphasises the need for collaborative efforts between policymakers, businesses, and civil society to create a more inclusive and resilient food system. By aligning consumer behaviours with advocacy actions, stakeholders can accelerate the transition to sustainable food systems, fostering collective action and public trust in the process. These interventions, designed to accommodate diverse socio-economic and cultural contexts, offer a pathway to achieving the environmental, social, and economic goals necessary for a sustainable food future in Europe.

2 Introduction

The ENFASYS project is designed to promote a just and resilient transition to sustainable, productive, climate-neutral, biodiversity-friendly, and adaptable farming systems. This objective is pursued by developing enhanced policies and business strategies that actively encourage farmers to transition their production methods toward sustainability. The project acknowledges the complexity of agricultural systems and emphasises the importance of holistic approaches that address the economic, environmental, and social dimensions of farming. This deliverable contributes to these aims by exploring how citizen-consumers can drive the shift towards sustainable food systems (SFS) and by offering evidence-based recommendations for policies and business strategies to support SFS adoption.

To effectively advance this transition, strategies must account for the interdependent roles of policymakers, businesses, and social actors, particularly citizen-consumers. Recognising the dual roles of individuals as both citizens and consumers is critical for designing effective policy measures and market-oriented solutions. Understanding this distinction allows for the creation of targeted interventions that leverage the political influence of citizens and the purchasing power of consumers, ensuring a more integrated and impactful approach to achieving sustainability goals. From a simplified perspective, individuals are frequently portrayed exclusively as food consumers, that is, people who purchase food for personal use or who eat a food product (Lockie, 2002). However, to fully understand the potential contribution of individuals to the transition toward SFS, it is essential to adopt a broader perspective that also considers their ability to act as citizens.

The term citizen-consumer refers to a dual role in which individuals' function both as consumers, driven by personal utility, and as citizens, committed to the common good and to sustainability. This interplay between individuals' needs and collective values underscores their capacity to serve as agents of change. On the one hand, the consumer role is defined by the pursuit of personal needs and shaped by considerations such as price, quality, taste, convenience and market availability (Frank, 2018; Johnston, 2008; Kvakkestad et al., 2018; Michalopoulos et al., 2007; Uliano et al., 2023). On the other hand, the citizen role embodies the awareness of the collective ramifications of one's choices, engaging in advocacy, social movements, or supporting policies that promote sustainability (Frank, 2018; Gumbert, 2019; Johnston, 2008; Kvakkestad et al., 2018; Lockie, 2009; Michalopoulos et al., 2007). Within this context, the concept of food citizenship is defined as the practice of engaging in food-related behaviours that support the development of a democratic, socially and economically just, and environmentally sustainable food system (Tittarelli et al., 2022).

The fusion of these two dimensions gives rise to the citizen-consumer, a figure in which individual needs and ethical values intertwine, prompting people to make purchasing and consumption choices oriented toward social and environmental responsibility. In this sense, the citizen-consumer exerts a form of political agency through the market (Johnston, 2008; Kriflik, 2006; Schröder & McEachern, 2004). Nevertheless, the literature also indicates a potential tension between these two spheres: purchasing behaviours do not always reflect declared ethical principles, due to price constraints, lack of clear information, ingrained habits, or a reduced perception of the impact of one's own choices (Busa & Garder, 2015; De Tavernier, 2012; Dixon & Isaacs, 2013; Frank, 2018; Jokinen et al., 2012; Lockie, 2009; Uliano et al., 2023).

The confluence of these two dimensions yields the citizen-consumer, whose individual needs and ethical principles converge to guide purchasing and consumption choices toward sustainable responsibility. As such, the citizen-consumer carries out a form of political agency through market choices (Busa & Garder, 2015; Chiu et al., 2019; De Tavernier, 2012; Dixon & Isaacs, 2013; Escobar-López et al., 2019; Henchion et al., 2022; Hepting et al., 2014; Johnston, 2008; Jokinen et al., 2012; Kriflik, 2006; Lockie, 2009; Michalopoulos et al., 2007; Uliano et al., 2022, 2023).

Nonetheless, the literature also notes that certain tensions may arise between these two dimensions: purchasing behaviour does not invariably align with declared ethical commitments, due to price constraints, insufficient information, entrenched habits, or limited perceptions regarding the impact of personal choices (Cornish et al., 2019; Ellingsen et al., 2015; Frank, 2018; Kanis et al., 2003; Schröder & McEachern, 2004). Hence, the term citizen-consumers will be used throughout this text to refer to individuals considering their intrinsic duality of roles.



In food system sustainability policies, the citizen-consumer can influence decision-makers by advocating for stricter regulations, such as subsidies for sustainable production practices. Participation in associations, campaigns, and movements - whether online or offline - contributes to shaping consensus around themes such as responsible resource use, environmental protection, and social justice (Busa & Garder, 2015; Gumbert, 2019; Lockie, 2009). By directing consumption toward sustainable food products, citizen-consumers also influence public debate and foster the adoption of less environmentally harmful agricultural practices (Escobar-López et al., 2019). Their involvement in labelling initiatives or collective discussions can reinforce transparency and accountability among producers (Kanis et al., 2003). Food democracy emerges when citizen-consumers, guided by their ethical commitment to sustainability, collectively create a self-reinforcing cycle that strengthens food governance, expands available information, and fosters a more inclusive public discourse (Gumbert, 2019; Hepting et al., 2014). Despite the sustainability objectives often tied to the citizen dimension, conflicts may arise when the consumer dimension is guided by convenience or cost, underscoring the need for supportive measures that enable the citizen dimension to translate ideals into tangible action (Cornish et al., 2019; Ellingsen et al., 2015; Frank, 2018; Kanis et al., 2003; Schröder & McEachern, 2004). If supported by subsidies, tax incentives, or clear regulations (e.g., those related to labelling), public policies can help bridge the gap between pro-environmental intentions and concrete buying behaviours (Gumbert, 2019; Hepting et al., 2014). Moreover, targeted interventions and educational programs—as well as support for short and local supply chains (Uliano et al., 2023)—offer potential pathways to overcome these obstacles.

In business strategies, the citizen-consumer's function is equally significant. In their consumer role, they influence market offerings through demand for sustainable food products (Johnston, 2008). Their willingness to pay a premium for social or environmental attributes (Uliano et al. 2022) creates incentives for producers to adopt virtuous practices. Nevertheless, such adoption can encounter barriers tied to higher prices or restricted product availability (Kriflik, 2006). Businesses, recognizing the growing interest in sustainability, can differentiate themselves through process innovations—such as reducing pesticide use or investing in renewable energies—and product innovations, including ethical certifications. Within this dynamic, trust emerges as a central component: supply chain transparency, the safeguarding of animal welfare, and raw material traceability can all strengthen the relationship with citizen-consumers (Jokinen et al., 2012). It is also suggested that citizen-consumer engagement in deliberative processes helps redefine sustainability criteria, prompting firms to improve their standards (Hepting et al., 2014; Michalopoulos et al., 2007). Finally, recent studies underscore that implementing short food supply chains and limiting intermediaries reinforces trust between producers and citizen-consumers (Lockie, 2009; Uliano et al., 2023), while further evidence highlights how citizen-consumers' ecological concerns can prompt companies to embrace sustainable innovation, thereby transforming environmental responsibility into a competitive advantage (Escobar-López et al., 2019).

In conclusion, the transition toward sustainable food systems demands an integrated approach that fully recognizes the role of the citizen-consumer. On the one hand, citizen dimension can support policies that advance sustainability; on the other, consumer dimension shape market dynamics through their purchasing decisions. This hybrid figure links the civic and economic spheres, using consumption as a tool for social and political change. Some challenges remain, stemming from economic, cultural, and informational barriers that can hinder the full alignment between stated ethical values and actual behaviours. Nevertheless, forward-looking public policies and business strategies rooted in transparency and innovation can enable the citizen-consumer to transform personal convictions into concrete actions, setting in motion a virtuous cycle capable of building a more sustainable, resilient, and inclusive food future for present and future generations.

2.1 Mapping the sustainable food purchasing behaviours of consumers

The sustainability of food systems is at the heart of global efforts to address critical challenges such as climate change, resource depletion, and social inequities. As food production and consumption account for significant environmental impacts, promoting sustainable practices has become a priority for policymakers, businesses, and civil society. While advances in technology and policy frameworks are essential, the role of consumers in shaping sustainable food systems is equally vital. Their choices and behaviours influence market trends, resource use, and the broader cultural acceptance of sustainability as a societal norm.

Understanding consumer behaviours is particularly important in Europe, where diverse cultural, economic, and political contexts shape food-related attitudes and practices. European citizen-consumers not only act as buyers in the marketplace but also as advocates for systemic change, influencing policy agendas and business strategies. However, achieving the goals of sustainable food systems requires a nuanced understanding of how individual, social, and contextual factors drive or hinder sustainable consumption.

This report seeks to bridge critical gaps in the understanding of consumer behaviours within the framework of sustainable food systems. It explores how consumers' intentions, attitudes, perceived subjective norms, and sense of control influence their sustainable food choices. Furthermore, it examines the interplay of these psychological constructs with socio-demographic and regional factors, providing a comprehensive perspective on the motivations and barriers to sustainable food consumption.

The central research questions guiding examination of European consumers in this report are:

- How do consumer intentions, attitudes, and perceptions shape their engagement with sustainable food behaviours?
- What role do socio-demographic factors, such as age, gender, and income, play in influencing sustainable food choices?
- How do regional and cultural contexts across Europe affect consumer behaviours related to sustainable food systems?
- What strategies can policymakers and businesses adopt to align consumer behaviours with sustainability goals?

By addressing these questions, this report aims to generate actionable insights that inform the design of targeted interventions. These insights are intended to support the transition towards more sustainable food systems, leveraging the potential of consumer behaviour to drive environmental, social, and economic sustainability.

2.2 Mapping the sustainable food advocacy behaviours of citizens

As the need to transition towards sustainable food systems becomes increasingly urgent, understanding the role of citizens as advocates for change is essential. Citizens are not only consumers who influence markets but also key players in shaping public policies and driving systemic transformations. Advocacy behaviours—such as voting, petitioning, and engaging with policymakers—serve as critical pathways for citizens to support and promote sustainable food systems. By examining these behaviours, we gain insights into the drivers of civic engagement and the societal conditions that foster collective action for sustainability.

Sustainable food systems integrate multiple dimensions, including environmental stewardship, economic viability, and social equity. However, achieving these goals requires more than policy mandates and business initiatives; it necessitates the active participation of citizens. Advocacy can amplify public demand for sustainable practices, hold institutions accountable, and bridge the gap between policy intentions and implementation. Despite its importance, citizen advocacy remains an underexplored area, particularly in the context of sustainable food systems.

This report aims to address this gap by investigating the factors that influence citizen advocacy behaviours for sustainable food systems across Europe. Specifically, it explores the following research questions:

- What motivates citizens to engage in advocacy activities for sustainable food policies?
- How do perceptions of policy priorities, such as environmental protection, social equity, economic security, and health & nutrition, influence advocacy behaviours?
- What role do socio-demographic characteristics and political efficacy play in shaping citizens' engagement?

Through an in-depth analysis of data collected from 12 European countries, this study seeks to uncover the mechanisms that drive citizen advocacy and identify opportunities to enhance public engagement in sustainability transitions. By advancing our understanding of these dynamics, the report contributes to the broader discourse on fostering inclusive, participatory approaches to building sustainable food systems.



3 Methods

3.1 Pan-EU Citizen-Consumer Survey

A pan-European consumer survey was conducted across 12 countries: Belgium, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Serbia, Slovenia, Switzerland, and the United Kingdom. Recognising that European countries vary significantly in cultural dimensions (Hofstede, 2014), which can influence how individuals engage with sustainability actions, these countries were selected to ensure a diverse European sample.

The survey was designed based on established behavioural frameworks, particularly the Theory of Planned Behaviour (TPB) (Ajzen, 1991). The survey structure included four main sections: (1) socio-demographic information, (2) citizen and consumer behaviours, (3) behavioural predictors based on TPB, and (4) perceptions of policy goals and political influence. To ensure accuracy, the survey was translated into each country's primary language using a rigorous back-translation method performed by a market research agency.

Data collection was conducted online between November 2024 and January 2025 by a market research agency. A quota sampling procedure was employed, with quotas set for age, gender, income (adjusted for each country), and region to ensure a balanced and representative sample. The target sample size was 800 participants per country. Informed consent was obtained from all participants at the outset of the survey, and the study received full ethical approval from the Teagasc Social Science Research Ethics Committee.

Details of the survey sample's characteristics for each country can be found in Table 7 in the Appendix. Information on data quality control measures, including attention checks and systematic screening for inconsistent responses, is provided in the data integrity report, also included in the Appendix.

3.2 Analysis

3.2.1 Sustainable food purchasing behaviours of consumers

The study aimed to explore sustainable food purchasing behaviours among consumers, focusing on four dimensions of sustainability: nutrition and health, environmental sustainability, social sustainability, and economic sustainability. Respondents were asked to indicate the likelihood of engaging in 12 specific behaviours, measured on a 7-point Likert scale ranging from *highly unlikely* to *highly likely*. These behaviours were grouped into four sustainability domains:

- **Nutrition & Health:**
 - N1: Buy mostly whole fruits, vegetables, grains, nuts, and beans.
 - N2: Avoid most highly processed foods.
 - N3: Buy a diversity of foods with many different fats, proteins, vitamins, etc.
- **Environmental Sustainability:**
 - EV1: Avoid buying too much food and creating food waste.
 - EV2: Buy foods with lower land, water, and greenhouse gas footprints.
 - EV3: Avoid highly packaged foods and single-use plastics.
- **Social Sustainability:**
 - SO1: Buy food that is produced humanely for both animals and workers.
 - SO2: Avoid food businesses that are unfair or exploitative in their practices.
 - SO3: Buy food that fits my cultural or customary diet.
- **Economic Sustainability:**
 - E1: Buy food that is affordable and fits my budget.
 - E2: Buy food from stores and restaurants where I have lots of options.
 - E3: Buy food whenever and wherever I want it.

A cluster analysis was conducted to identify distinct consumer segments based on sustainable food purchasing behaviours. A K-means clustering algorithm was employed, with the elbow method and principal component analysis (PCA) used to determine the optimal number of clusters. This approach allowed the identification of groups with similar purchasing patterns across the four sustainability dimensions.

To explore the relationships between sustainable food purchasing behaviour segments and theoretical predictors, a series of statistical tests were conducted:

- One-way ANOVAs were used to assess the association between consumer segments and variables derived from the Theory of Planned Behaviour (TPB), including attitudes, intentions, subjective norms, and perceived behavioural control (PBC). Due to low reliability in scales for subjective norms and PBC, individual items were analysed instead of aggregated scales.
- One-way ANOVAs were also applied to examine differences in sustainable food purchasing behaviours across demographic variables such as age and income.
- Chi-square tests were used to explore associations between segments and categorical demographic variables such as gender and country of residence.

3.2.2 Sustainable food advocacy behaviours of citizens

This study investigated sustainable food advocacy behaviours among citizens by asking respondents how likely they were to engage in five key advocacy actions. Each behaviour was measured on a 7-point Likert scale ranging from 1: *highly unlikely* to 7: *highly likely*. The behaviours included:

- Contacting local representatives about the need to transition towards sustainable food systems.
- Signing or starting a petition and sharing it.
- Donating money or time to groups advocating for more sustainable foods.
- Voting for political candidates based on their sustainable food policies.
- Participating in community or local groups promoting sustainable foods.

The relationship between these advocacy behaviours and a range of variables, including attitudes towards policy goals, perceived political influence, self-reported political orientation, and socio-demographic factors, was examined.

Scale Development and Factor Analysis

To assess sustainable food advocacy behaviours, a single scale was created from the five advocacy items, demonstrating high internal consistency (*Cronbach's alpha* = 0.89).

To explore whether attitudes towards sustainable food policies influenced advocacy behaviours, exploratory factor analysis (EFA) was conducted to group citizens' views on the importance of sustainable food policy goals. The factor analysis grouped views onto three underlying dimensions (Table 1). The first factor emphasised ensuring a high-quality, affordable, and sustainable food supply, encompassing food safety and quality standards, nutritious foods, affordable prices, local production, and environmental quality (e.g., water quality). The second factor centred on promoting social and economic security for agricultural stakeholders, focusing on fair income for farmers, improving working conditions for seasonal workers, and supporting the profitability of food businesses. The third factor highlighted environmental stewardship and animal welfare, prioritizing reductions in greenhouse gas emissions, the promotion of biodiversity, and the improvement of animal welfare standards. Together, these factors suggest that European citizens value a holistic approach to sustainable food policies, integrating affordable and nutritious food access, fair economic conditions, and strong environmental and animal welfare protections.

Table 1: Summary of factor analysis of citizens' views on the importance of sustainable food policy goals

| Factor label | Key Items (Highest Loadings) | Main Themes | Alpha |
|---|---|---|-------|
| Accessible & healthy | N1 (Food safety), N2 (Nutritious foods), EV1 (Freshwater quality), E1 (Reduce food prices), E2 (Domestic food production) | Ensuring safe, nutritious, affordable, and locally supplied food, along with environmental quality aspects (clean water). | 0.85 |
| Social & Economic Security for Agricultural Producers and Workers | SO2 (Adequate income for farmers), E3 (Profitability for farmers/businesses), SO3 (Worker conditions) | Supporting farmers' and workers' livelihoods, economic viability, and fair labour conditions. | 0.81 |
| Environmental Stewardship & Animal Welfare | EV2 (Reduce GHGs), EV3 (Biodiversity), S)1 (Animal welfare) | Protecting the environment, mitigating climate change, preserving biodiversity, and ensuring animal welfare. | 0.76 |

Finally a multiple linear regression model was run to understand the relationship between the dependent variable citizen behaviour and the independent variables attitudes towards agricultural policy goals (split into three scales based on the factor analysis), perceived political influence, self-reported political orientation, and socio-demographic factors.

4 Results: Sustainable food purchasing behaviours of consumers

4.1 Descriptives

The survey results (Figure 1) provide a detailed overview of the sustainable food purchasing behaviours taken by consumers, across nutrition and health, environmental, social, and economic dimensions. Participants were asked to indicate their likelihood of engaging in a range of behaviours on a seven-point scale.

Most respondents prioritised buying affordable foods that fit within their budgets, with 82% indicating they were somewhat likely to very likely to do so. Limiting food waste was similarly endorsed, as 80% of participants reported a strong inclination to reduce excess consumption. Cultural preferences also played a notable role in purchasing decisions, with 73% stating they would seek out foods aligned with their customary or traditional diets.

Nutritional behaviours garnered moderately high support. Sixty-seven per cent indicated they were likely to buy mostly whole foods such as fruits, vegetables, and grains, while 66% aimed to avoid highly processed foods. Equally, 66% were inclined to purchase food produced humanely, and 65% were drawn to shops or restaurants offering a wide selection. A further 65% reported they would buy food whenever it suited them, suggesting a focus on convenience in their choices.

Environmental efforts were mixed. Sixty-four per cent affirmed they would avoid excessive packaging or single-use plastics, while an equal proportion sought to include diverse nutrient sources in their diets. On the social dimension, 59% said they would avoid patronising businesses deemed exploitative, reflecting a somewhat lower concern for fair labour and ethical standards. The least prevalent intention was purchasing food with a reduced environmental footprint, reported by only 52% of respondents as somewhat likely to very likely.

Overall, affordability and waste reduction emerged as the most widely practised aspects of sustainable behaviour, with other social and environmental concerns receiving more modest levels of support. These results suggest that economic and practical factors are primary motivators of consumers' sustainable food purchasing habits, while some broader ethical and environmental practices remain less universally adopted.

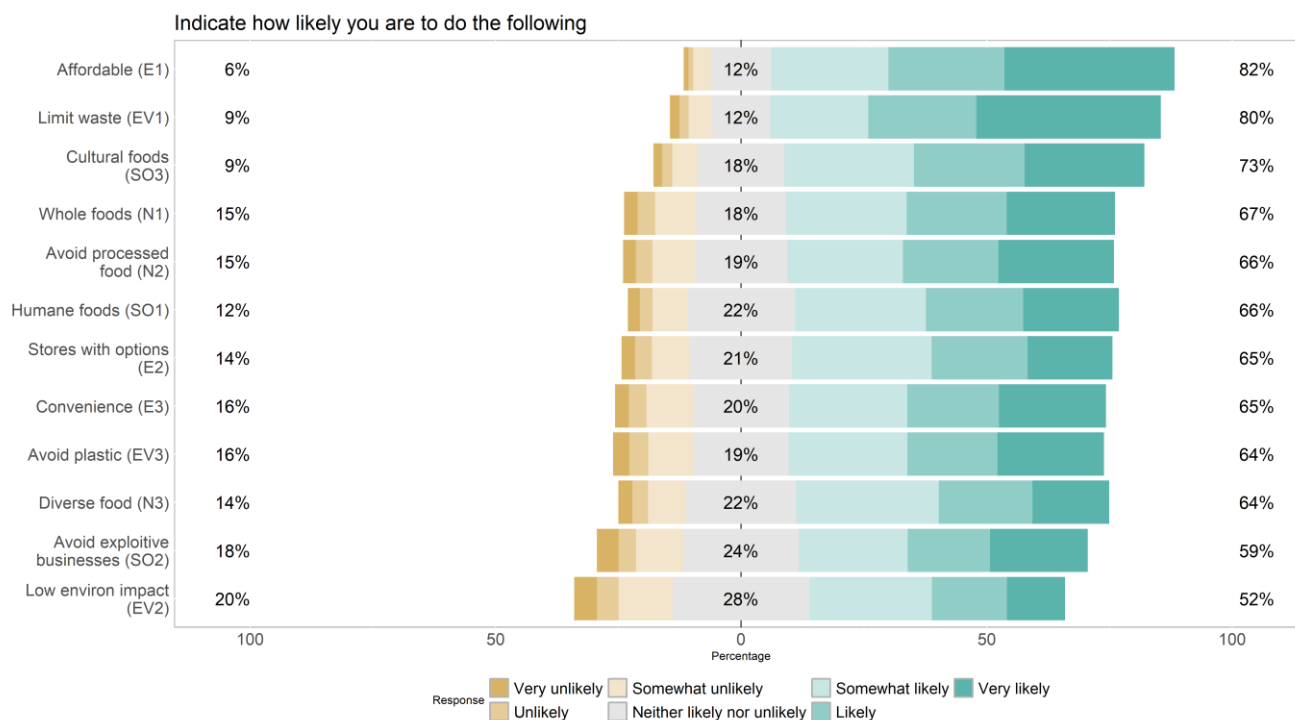


Figure 1: Consumer likelihood to engage in sustainability behaviours

4.2 Cluster analysis

A cluster analysis carried out on the sustainable food behaviour variables determined that a four-cluster solution provided the most distinct and conceptually meaningful clustering of participants on these variables. Table 2 shows a summary of the sustainability behaviour profiles for the four segments.

Table 2: Means for consumer behaviour variables on 7-point scales across the four identified consumer segments (n = 9,600).

| Cluster | N1 | N2 | N3 | EV1 | EV2 | EV3 | SO1 | SO2 | SO3 | E1 | E2 | E3 |
|--|------|------|------|------|------|------|------|------|------|------|------|------|
| Price- & Convenience-Focused Consumers | 4.53 | 4.40 | 5.16 | 5.92 | 3.44 | 4.01 | 4.32 | 3.76 | 5.78 | 6.47 | 5.60 | 5.79 |
| Disengaged Consumers | 3.85 | 3.81 | 4.01 | 4.16 | 3.61 | 3.76 | 3.78 | 3.73 | 4.05 | 4.05 | 4.64 | 4.06 |
| Balanced Consumers | 5.20 | 5.35 | 4.64 | 5.65 | 4.80 | 5.29 | 5.28 | 5.13 | 5.04 | 5.04 | 5.33 | 4.45 |
| Highly Sustainable Consumers | 6.21 | 6.24 | 5.75 | 6.49 | 5.80 | 6.22 | 6.23 | 6.11 | 6.21 | 6.28 | 5.78 | 5.65 |

Price- & Convenience-Focused Consumers

Price- & Convenience-Focused Consumers represent 18.9% of the sample. Individuals in this segment exhibit a moderate orientation towards nutrition, as evidenced by their tendency to buy predominantly whole fruits, vegetables, grains, nuts, and beans (N1=4.53), avoid highly processed foods (N2=4.40), and maintain a relatively strong interest in dietary diversity (N3=5.16). Environmentally, they show a pronounced commitment to minimising food waste (EV1=5.92) but demonstrate lower concern for selecting foods with reduced land, water, and greenhouse gas footprints (EV2=3.44) or avoiding excessive packaging (EV3=4.01). Socially, they place moderate value on humane production practices (SO1=4.32) and exhibit limited avoidance of exploitative businesses (SO2=3.76), yet they strongly prefer foods that align with their cultural or customary diets (SO3=5.78). Economically, they give considerable weight to affordability (E1=6.47), appreciate having multiple purchasing options (E2=5.60), and favour the flexibility to buy food whenever and wherever they choose (E3=5.79). This segment emerges as highly motivated by cost-effectiveness and convenience, yet they incorporate certain sustainable elements—particularly around reducing waste and preserving cultural food practices—where these aspects do not conflict with their primary focus on price and ease of access.

Disengaged Consumers

Disengaged Consumers account for 20.9% of the sample. Participants in this group display low or near-midpoint scores across most sustainable food behaviours. Their nutritional engagement is modest, with limited emphasis on buying whole foods (N1=3.85), avoiding processed items (N2=3.81), and diversifying nutrient intake (N3=4.01). Environmentally, they show only moderate efforts to prevent food waste (EV1=4.16) and exhibit relatively weak commitments to choosing foods with lower environmental footprints (EV2=3.61) or avoiding high levels of packaging (EV3=3.76). Socially, they tend to place minimal importance on humane production (SO1=3.78) or avoiding exploitative businesses (SO2=3.73), alongside modest adherence to cultural or customary diets (SO3=4.05). On the economic front, these consumers demonstrate moderate concern for affordability (E1=4.05), of having multiple options (E2=4.64), and reveal similarly tepid enthusiasm for being able to purchase food whenever and wherever they please (E3=4.06). This segment's disengagement underscores the need for heightened awareness and interventions that can make sustainable choices more compelling and readily accessible.

Balanced Consumers

Balanced Consumers make up 32.3% of the sample. Individuals within this segment exhibit moderate to moderately high engagement with sustainable food behaviours across all dimensions. Nutritionally, they show an inclination towards whole foods (N1=5.20) and a stronger-than-average tendency to avoid highly processed products (N2=5.35), though their enthusiasm for diverse food sourcing is closer to the midpoint (N3=4.64). Environmentally, they demonstrate a fairly robust effort to reduce food waste (EV1=5.65) and limit packaging (EV3=5.29), while placing somewhat less, though still noteworthy, emphasis on selecting foods with lower

environmental impacts (EV2=4.80). Socially, they exhibit a consistent concern for humane production (SO1=5.28), steer clear of exploitative practices (SO2=5.13), and maintain alignment with their cultural diets (SO3=5.04). Economically, they place reasonable importance on affordability (E1=5.04), appreciate having a variety of purchasing options (E2=5.33), and show moderate interest in the flexibility of food access (E3=4.45). Overall, Balanced consumers indicate a willingness to invest in more sustainable behaviours, though they may benefit from further guidance and incentives to strengthen their commitment across all dimensions.

Highly Sustainable Consumers

Highly Sustainable Consumers constitute 27.9% of the sample. Participants in this segment demonstrate consistently strong sustainable behaviours and a clear dedication to making mindful food choices. Nutritionally, they place high importance on consuming whole fruits, vegetables, grains, nuts, and beans (N1=6.21), avoiding highly processed foods (N2=6.24), and embracing dietary variety (N3=5.75). Environmentally, they take a proactive stance on minimising food waste (EV1=6.49), selecting foods with lower environmental footprints (EV2=5.80), and avoiding heavily packaged goods (EV3=6.22). Socially, they are highly attentive to humane production methods (SO1=6.23), do their utmost to bypass exploitative businesses (SO2=6.11), and choose foods that reflect cultural or customary preferences (SO3=6.21). Economically, they maintain a strong focus on affordability (E1=6.28), appreciate multiple purchasing options (E2=5.78), and welcome the flexibility to buy food when and where it suits them (E3=5.65). This group emerges as the leading force in sustainable consumer practices, showcasing an extensive commitment to nutritional, environmental, social, and economic dimensions of sustainability.

4.3 Profiling the segments

A series of one-way ANOVAs and chi-squares were used to profile and compare the four segments on key socio-demographic factors and theory of planned behaviour variables. Table 4 provides a summary of the findings from the cluster analysis and the profiling.

4.3.1 Theory of Planned Behaviour Variables

A series of one-way ANOVAs were conducted to compare the four consumer segments— Price- & Convenience-Focused Consumers, Disengaged consumers, Balanced consumers, and Highly Sustainable Consumers—across various Theory of Planned Behaviour (TPB) variables. All ANOVAs revealed significant differences between segments ($p < .001$).

Intentions varied significantly across the four segments ($F(3, 9596) = 947.5, p < .001$). Post-hoc Tukey tests showed that Highly Sustainable Consumers reported significantly higher intentions to purchase sustainable foods compared to Balanced Consumers (difference = 0.779, $p < .001$), Price- & Convenience-Focused Consumers (difference = 1.697, $p < .001$), and Disengaged Consumers (difference = 1.920, $p < .001$). Balanced Consumers displayed higher intentions than both Price- & Convenience-Focused Consumers (difference = -0.918, $p < .001$) and Disengaged Consumers (difference = -1.141, $p < .001$). Finally, Price- & Convenience-Focused Consumers also demonstrated higher intentions than Disengaged Consumers (difference = 0.223, $p < .001$).

Attitudes towards purchasing sustainable foods varied significantly across the segments ($F(3, 9596) = 916.7, p < .001$). The post-hoc analyses showed that Highly Sustainable Consumers reported significantly more favourable attitudes than Balanced Consumers (difference = 0.710, $p < .001$), Price- & Convenience-Focused Consumers (difference = 1.732, $p < .001$), and Disengaged Consumers (difference = 1.742, $p < .001$). Balanced Consumers also exhibited more positive attitudes compared to Price- & Convenience-Focused Consumers (difference = 1.022, $p < .001$) and Disengaged Consumers (difference = 1.032, $p < .001$). However, the difference between Price- & Convenience-Focused Consumers and Disengaged Consumers was not statistically significant (difference = 0.010, $p = .996$).

Regarding **Subjective Norms, Norm1**, which assesses perceived encouragement from important others to buy sustainable foods, varied significantly across the segments ($F(3, 9596) = 454, p < .001$). Post-hoc Tukey tests showed that Highly Sustainable Consumers reported significantly higher Norm1 scores than Balanced Consumers (difference = 0.611, $p < .001$), Price- & Convenience-Focused Consumers (difference = 1.569, $p < .001$), and Disengaged Consumers (difference = 1.385, $p < .001$). Balanced Consumers also scored significantly higher than



Price- & Convenience-Focused Consumers (difference = 0.958, $p < .001$) and Disengaged Consumers (difference = 0.774, $p < .001$), while Disengaged Consumers reported higher Norm1 scores than Price- & Convenience-Focused Consumers (difference = 0.184, $p = .003$).

Norm2, which measures perceived social pressure to buy sustainable foods, likewise differed among segments ($F(3, 9596) = 69.33$, $p < .001$). Balanced Consumers scored significantly higher than Highly Sustainable Consumers (difference = 0.242, $p < .001$) and Price- & Convenience-Focused Consumers (difference = 0.730, $p < .001$), but did not differ significantly from Disengaged Consumers (difference = 0.094, $p = .251$). Disengaged Consumers reported significantly higher Norm2 scores than Highly Sustainable Consumers (difference = 0.148, $p = .025$) and Price- & Convenience-Focused Consumers (difference = 0.636, $p < .001$). Highly Sustainable Consumers also scored significantly higher than Price- & Convenience-Focused Consumers (difference = 0.489, $p < .001$).

Norm3, which assesses the perceived lack of support from important others for purchasing sustainable foods, yielded significant differences across the clusters as well ($F(3, 9596) = 169.6$, $p < .001$). Disengaged Consumers reported significantly higher Norm3 scores than Balanced Consumers (difference = 0.631, $p < .001$) and Highly Sustainable Consumers (difference = 1.166, $p < .001$), while they also scored higher than Price- & Convenience-Focused Consumers (difference = 0.430, $p < .001$). Price- & Convenience-Focused Consumers reported higher Norm3 scores than Balanced Consumers (difference = 0.201, $p = .001$) and Highly Sustainable Consumers (difference = 0.736, $p < .001$). Finally, Balanced Consumers scored significantly higher than Highly Sustainable Consumers (difference = 0.535, $p < .001$).

All **Perceived Behavioural Control (PBC)** variables exhibited significant differences across the consumer segments. For **PBC1** ($F(3, 9596) = 193.1$, $p < .001$), which measures the extent to which individuals do not depend on others when buying sustainable foods, Disengaged consumers scored significantly lower than Balanced consumers (diff = -0.552, $p < .001$), whereas Price- & Convenience-Focused Consumers (diff = 0.157, $p = .007$) and Highly Sustainable Consumers (diff = 0.609, $p < .001$) both outperformed Balanced consumers. Highly Sustainable Consumers also had higher PBC1 scores than both Price- & Convenience-Focused Consumers (diff = 0.453, $p < .001$) and Disengaged consumers (diff = 1.162, $p < .001$), while Price- & Convenience-Focused Consumers reported higher scores than Disengaged consumers (diff = 0.709, $p < .001$).

For **PBC2** ($F(3, 9596) = 684.8$, $p < .001$), which captures confidence in purchasing sustainable foods, Disengaged consumers reported significantly lower scores than Balanced consumers (diff = -1.059, $p < .001$), and Price- & Convenience-Focused Consumers also scored lower than Balanced consumers (diff = -0.785, $p < .001$). Highly Sustainable Consumers, in contrast, registered higher PBC2 scores than Balanced consumers (diff = 0.797, $p < .001$). Furthermore, Highly Sustainable Consumers outperformed Disengaged consumers (diff = 1.856, $p < .001$) and Price- & Convenience-Focused Consumers (diff = 1.582, $p < .001$), while Price- & Convenience-Focused Consumers scored higher than Disengaged consumers (diff = 0.274, $p < .001$).

Lastly, **PBC3** ($F(3, 9596) = 139.2$, $p < .001$), which reflects the feeling of having little control over whether one buys sustainable food products, showed no significant difference between Price- & Convenience-Focused Consumers and Balanced consumers (diff = 0.022, $p = .976$). However, Disengaged consumers scored significantly higher than Balanced consumers (diff = 0.542, $p < .001$), while Highly Sustainable Consumers scored significantly lower than Balanced consumers (diff = -0.532, $p < .001$). Disengaged consumers also surpassed Price- & Convenience-Focused Consumers (diff = 0.520, $p < .001$), whereas Price- & Convenience-Focused Consumers registered higher PBC3 scores than Highly Sustainable Consumers (diff = 0.554, $p < .001$). Finally, Highly Sustainable Consumers reported significantly lower PBC3 scores compared to Disengaged consumers (diff = -1.074, $p < .001$).

Overall, Highly Sustainable Consumers displayed the most favourable results across all theory of planned behaviour variables, reporting the highest intentions, most positive attitudes, greatest social support, and strongest perceptions of control in purchasing sustainable foods. Balanced Consumers followed closely, with moderately high intentions and attitudes, as well as reasonable levels of social encouragement and perceived control. Price- & Convenience-Focused Consumers showed somewhat lower scores than the first two segments, particularly in their confidence to purchase sustainable foods, but still surpassed Disengaged Consumers. Disengaged Consumers consistently registered the lowest ratings in terms of intentions, attitudes, subjective norms, and perceived behavioural control, signalling a need for targeted interventions to enhance their awareness and motivation toward sustainable food choices.



4.3.2 Socio-demographic factors

To compare the profiles of the four segments with socio-demographic factors, one-way ANOVAs were conducted for age and income, while chi-squares were used for gender and country of residence.

Age differed significantly across the clusters, $F(3, 9596) = 73.59, p < .001$. Post-hoc Tukey analyses indicated that Disengaged Consumers were significantly younger than Balanced Consumers (diff = -4.906, $p < .001$). Highly Sustainable Consumers were significantly older than both Balanced Consumers (diff = 2.071, $p < .001$) and Disengaged Consumers (diff = 6.977, $p < .001$). Price- & Convenience-Focused Consumers were older than Disengaged Consumers (diff = 4.993, $p < .001$), but did not differ significantly from Balanced Consumers ($p = .997$). However, Highly Sustainable Consumers were older than Price- & Convenience-Focused Consumers (diff = 1.984, $p < .001$).

Income also yielded a significant effect of cluster membership, $F(3, 9472) = 13.50, p < .001$. Tukey tests revealed that Disengaged Consumers had lower incomes than Balanced Consumers (diff = -0.251, $p < .001$). Highly Sustainable Consumers reported higher incomes than Disengaged Consumers (diff = 0.224, $p < .001$), whereas there was no significant difference between Highly Sustainable and Balanced Consumers ($p = .905$). Price- & Convenience-Focused Consumers had slightly lower incomes than Balanced Consumers (diff = -0.112, $p = .049$) but surpassed Disengaged Consumers (diff = 0.139, $p = .020$). There were no significant differences between Price- & Convenience-Focused Consumers and Highly Sustainable Consumers ($p = .221$).

A chi-squared test demonstrated a significant relationship between cluster membership and **gender**, $\chi^2(3) = 65.754, p < .001$. The standardised residuals indicated that Highly Sustainable Consumers were predominantly female (std. residual = 7.36, $p < .001$), whereas Disengaged Consumers (std. residual = 4.77, $p < .001$) and Price- & Convenience-Focused Consumers (std. residual = 3.29, $p = .001$) had more males than expected. Balanced Consumers showed no significant gender difference, suggesting a relatively even distribution of males and females in this segment.

A chi-squared test revealed a significant association between cluster membership and **country of residence**, $\chi^2(33) = 265.98, p < .001$. Balanced Consumers were notably overrepresented in Italy and underrepresented in Serbia. Disengaged Consumers were more prevalent than expected in the Netherlands, Serbia, and the UK, yet underrepresented in France, Greece, Italy, and Switzerland. Highly Sustainable Consumers appeared more frequently in France, Greece, Italy, and Switzerland, while being underrepresented in the Netherlands, Serbia, and the UK. Finally, Price- & Convenience-Focused Consumers were overrepresented in the Netherlands, Norway, and Serbia, but underrepresented in Italy, suggesting that preferences for sustainable food behaviours differ substantially across national contexts.

Overall, the socio-demographic analysis revealed distinct patterns across the four consumer segments. Highly Sustainable Consumers tended to be older, reported higher incomes, and were predominantly female. By contrast, Disengaged Consumers were generally younger, had lower incomes, and were more likely to be male, reflecting a segment less engaged with sustainable behaviours. Price- & Convenience-Focused Consumers shared some traits with Disengaged Consumers, including lower incomes and a higher male proportion, though their age profile was closer to Balanced Consumers. Balanced Consumers themselves exhibited relatively moderate age and income levels, along with an even distribution of males and females. Across countries, Highly Sustainable Consumers were particularly common in France, Greece, Italy, and Switzerland, whereas Disengaged Consumers and Price- & Convenience-Focused Consumers were more prevalent in Serbia, the Netherlands, and the UK. Balanced Consumers were notably overrepresented in Italy and underrepresented in Serbia. These differences underscore the need for tailored interventions that align policy and business initiatives with the unique demographic and geographic characteristics of each consumer segment.

5 Results: Sustainable food advocacy behaviours of citizens

5.1 Descriptives

The survey findings (Figure 2) indicate notable variation in the extent to which respondents are willing to engage in sustainable food advocacy behaviours. Voting for parties that support sustainable food policies garnered the highest proportion of somewhat likely to very likely responses (43%), while the lowest proportion was observed for contacting local representatives (28%). Signing or creating petitions (41%) also received relatively higher endorsement than participating in local groups (34%), or donating to groups or campaigns (30%).

Conversely, between 35% and 50% of respondents reported being somewhat unlikely to very unlikely to undertake these activities, with contacting local representatives and donating exhibiting the largest shares of negative responses (50% and 49% respectively). Approximately one-fifth of respondents chose the neutral category for most actions. Taken together, these data suggest that although many participants express a willingness to vote or sign petitions in support of sustainable food initiatives, they exhibit comparatively lower enthusiasm for activities entailing either more substantial time commitments (e.g., participating in groups) or financial outlays (e.g., donating).

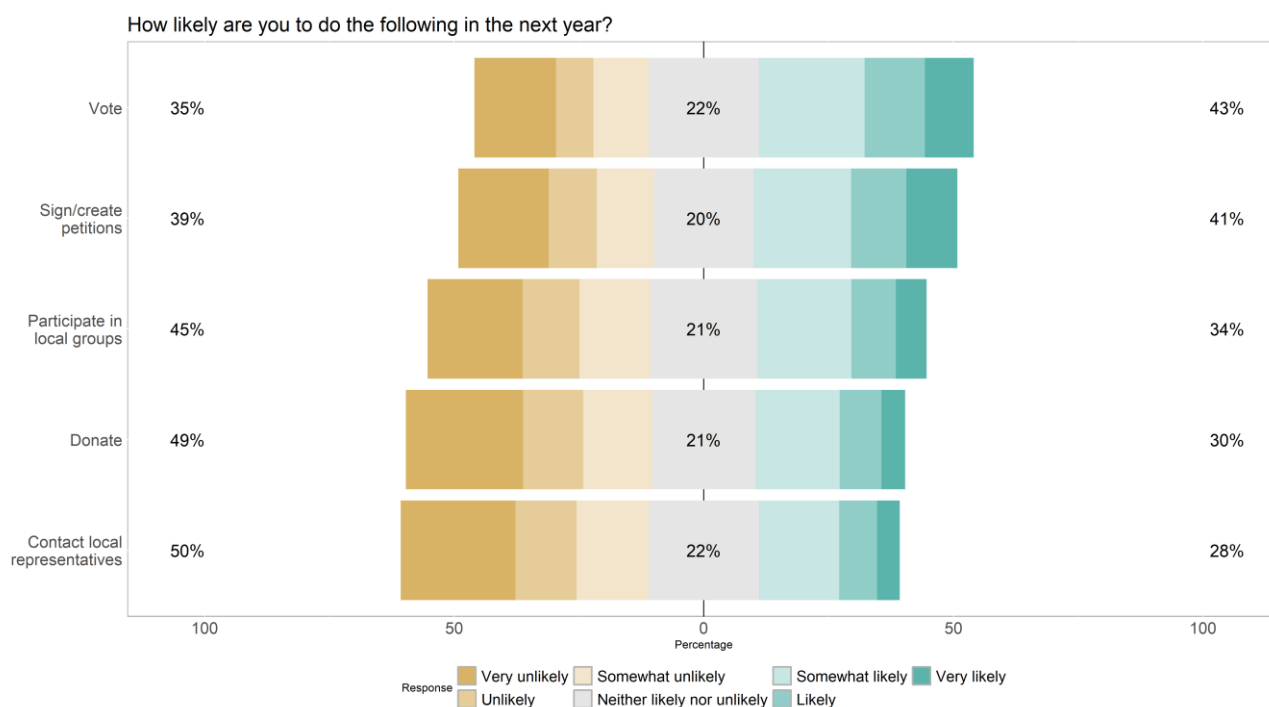


Figure 2: Likelihood of engaging in sustainable food advocacy

The survey results (Figure 3) also revealed widespread support for a range of agricultural policy goals, with improving freshwater quality eliciting the strongest endorsement: 85% of respondents view it as important to extremely important. Food safety, providing nutritious foods, and ensuring adequate farmer income each received similarly high ratings of 84%. Reducing food prices, promoting healthy diets, and increasing animal welfare each garnered approximately 83% agreement that these goals are important to extremely important, while policies related to supporting seasonal workers, increasing domestic production, and enhancing sector profitability ranged between 79% and 82%.

Although reducing greenhouse gas emissions and promoting biodiversity attracted the lowest proportions—77% and 78% respectively—these figures still indicate that a substantial majority value these environmental aims. Only

a small minority (between 4% and 9%) rated any goal as “not important” to “somewhat important,” underscoring the strong overall consensus on the relevance of these topics. Taken together, the findings emphasise the perceived importance of safeguarding environmental resources (especially water), ensuring public health through food safety and nutrition, and maintaining the economic viability of farming. This broad-based endorsement suggests that European agricultural policies addressing multiple sustainability dimensions—ecological, socio-economic, and nutritional—are likely to resonate positively with the public.

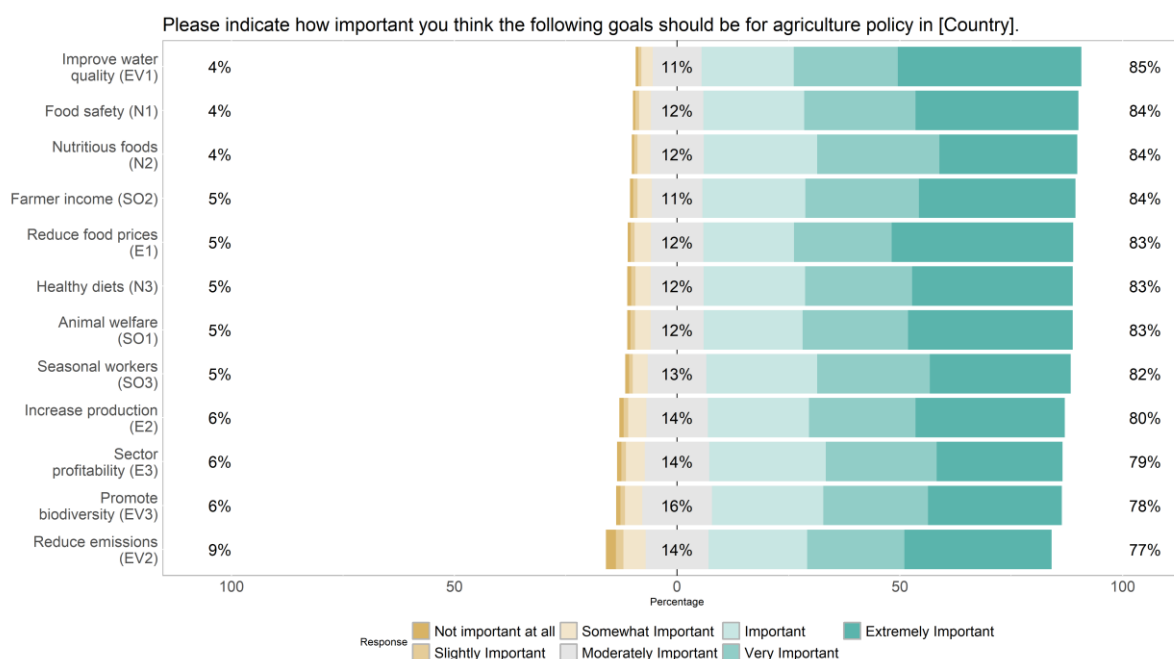


Figure 3: Citizens’ views on the importance of agricultural policy goals.

5.2 Multiple linear regression: Understanding behavioural factors

A multiple linear regression model was run to understand the relationship between the dependent variable citizen behaviour and the independent variables attitudes towards agricultural policy goals (split into three scales), political influence, political orientation, and socio-demographic factors. Table 3 provides the results of this analysis.

The results indicate that valuing environmental protection as a policy goal is strongly linked to higher advocacy behaviours (0.459, $p < 0.001$). Political influence also emerged as a robust predictor (0.412, $p < 0.001$), suggesting that individuals who feel they can affect government decision-making are more inclined to engage in sustainability actions. Perceiving social support as an important goal has a positive effect (0.114, $p < 0.001$), whereas prioritising accessible and healthy food is negatively associated with citizen behaviour (-0.159 , $p < 0.001$). Age shows a negative relationship (-0.018 , $p < 0.001$), indicating that younger individuals tend to be more active in these advocacy activities, while income has a modest positive effect (0.030, $p < 0.01$). Political orientation and gender are not significant predictors in this model.

In terms of national context, Greece (0.238, $p < 0.001$), Italy (0.513, $p < 0.001$), and Serbia (0.215, $p < 0.01$) exhibit notably higher advocacy behaviours than the reference country Belgium, whereas Norway reports a lower likelihood (-0.281 , $p < 0.001$). Other countries do not differ significantly from the reference category. Overall, the final model explains approximately 24.9% of the variance in citizens’ advocacy behaviours ($R^2 = 0.249$), indicating that while policy perceptions and socio-demographic differences are important, there are additional factors influencing individuals’ willingness to support sustainable food systems.

Table 3: Results of the linear regression model of citizen advocacy behaviour

| | Coefficients (SE) |
|-------------------------|-------------------------------|
| | Citizen behaviour |
| Policy:Accessible | -0.159*** (0.027) |
| Policy:Social | 0.114*** (0.021) |
| Policy:Environment | 0.459*** (0.020) |
| Political influence | 0.412*** (0.014) |
| Political orientation | -0.007 (0.007) |
| Gender:Male | -0.055 (0.030) |
| Age | -0.018*** (0.001) |
| Income | 0.030** (0.010) |
| Country:France | 0.078 (0.071) |
| Country:Germany | 0.070 (0.070) |
| Country:Greece | 0.238*** (0.071) |
| Country:Italy | 0.513*** (0.070) |
| Country:Netherlands | -0.108 (0.070) |
| Country:Norway | -0.281*** (0.070) |
| Country:Ireland | -0.129 (0.070) |
| Country: Serbia | 0.215** (0.074) |
| Country:Slovenia | -0.040 (0.071) |
| Country:Switzerland | -0.068 (0.071) |
| Country:UK | 0.027 (0.070) |
| Constant | 1.170*** (0.128) |
| Observations | 8,299 |
| R ² | 0.249 |
| Adjusted R ² | 0.247 |
| Residual Std. Error | 1.313 (df = 8279) |
| F Statistic | 144.601*** (df = 19; 8279) |
| <i>Note:</i> | *p<0.05; **p<0.01; ***p<0.001 |

6 Discussion

6.1 Sustainable food purchasing behaviours of consumers

The analysis of sustainable consumer behaviours among European consumers reveals a complex and nuanced landscape, segmented into four distinct clusters: Disengaged Consumers, Price- & Convenience-Focused Consumers, Balanced Consumers, and Highly Sustainable Consumers. These groups demonstrate varying levels of commitment to sustainability across nutritional, environmental, social, and economic dimensions, highlighting the multifaceted nature of consumer engagement with sustainable food systems (Table 4).

Disengaged Consumers, accounting for 20.9% of the sample, exhibit the lowest levels of commitment, performing poorly across all dimensions. This group represents a critical target for policy and business intervention. Their demographic profile—characterised by younger age, relatively lower income, and a higher proportion of males—suggests that interventions must prioritise affordability, convenience, and effective communication. Strategies to make sustainable options more cost-effective and relatable, particularly through messaging that resonates with younger audiences, could help raise awareness and motivation. Policymakers and businesses have an opportunity to create incentives that gradually shift this segment's low engagement towards more sustainable practices.

Price- & Convenience-Focused Consumers make up 18.9% of the sample and, while showing moderate attention to nutrition and some concern for waste reduction, are primarily driven by economic considerations and ease of access. This segment's emphasis on affordability and flexibility indicates that competitive pricing, promotions, and strategies showcasing the economic advantages of sustainable choices could be particularly effective. Their partial orientation towards sustainability—especially in areas such as minimising food waste and respecting cultural dietary preferences—presents an opportunity for targeted campaigns. Policies like subsidies for sustainable products, tax incentives, or retailer promotions that highlight cost savings could align with this group's primary motivations and encourage further engagement.

Balanced Consumers, the largest segment at 32.3%, demonstrate relatively high levels of engagement across all dimensions, indicating a broad recognition of sustainability's importance, albeit with room for further improvement. This group's stronger intentions and attitudes, compared to the Disengaged and Price- & Convenience-Focused segments, suggest significant potential for deepening their commitment. Educational campaigns emphasising the societal and environmental benefits of sustainable consumption could reinforce existing behaviours, while policy frameworks that reward eco-friendly choices—such as loyalty programmes or discounts for local, organic, or otherwise sustainable products—could drive further progress. Given the demographic diversity within this cluster, interventions designed to accommodate a wide range of lifestyles and economic conditions are likely to be effective.

Highly Sustainable Consumers, comprising 27.9% of the sample, stand out for their consistently strong motivations and practices. This group exhibits a high level of nutritional awareness, environmental concern, commitment to ethical production standards, and attention to affordability. Their demographic profile—older, higher-income, and predominantly female—indicates that policies and business strategies should leverage their leadership potential to influence broader consumer trends. Initiatives that empower this group to advocate for sustainability, such as referral programmes or community-based campaigns, could amplify their impact. Additionally, businesses can cater to their preferences by diversifying product lines to include innovative, sustainable solutions, positioning them as early adopters and champions of such offerings.

Across all clusters, the variables from the Theory of Planned Behaviour (TPB) reveal some of the mechanisms driving sustainable purchasing behaviours. Highly Sustainable Consumers score most positively on TPB variables, underscoring how strong attitudes, perceived social support, and confidence in one's ability to act sustainably predict higher engagement. Conversely, Disengaged Consumers score poorly on these variables, signalling a need for comprehensive interventions that address social influence, personal beliefs, and practical barriers to sustainable consumption. Country-specific differences further emphasise the importance of tailoring interventions to local norms and infrastructure, as the availability of sustainable options, cultural values, and economic conditions may influence consumer behaviours.

Overall, these findings underline the necessity of targeted policy and business strategies that address the distinct priorities and demographics of each consumer segment. Approaches that make sustainable options more financially accessible and socially desirable can engage Disengaged and Price- & Convenience-Focused Consumers, while tailored incentives and education may enhance the commitment of Balanced Consumers. For Highly Sustainable Consumers, maintaining momentum through innovative offerings and recognising their leadership role can further drive sustainable practices. By integrating these nuanced consumer insights with responsive policy and market initiatives, stakeholders can guide all segments toward more responsible consumption, contributing to a sustainable future for Europe’s food sector.

Table 4: Summary table that encapsulates the key findings for each consumer segment

| Segment | Description | Key Behaviours | Motivations | Demographic Profile |
|---|------------------------------------|--|--|---|
| Disengaged Consumers (20.9%) | Low Engagement with Sustainability | <ul style="list-style-type: none"> - Limited focus on whole foods (N1=3.85), avoidance of processed foods (N2=3.81), and dietary diversity (N3=4.01) - Moderate efforts to reduce food waste (EV1=4.16) but weak concern for lower footprints (EV2=3.61) and packaging reduction (EV3=3.76) - Low to moderate emphasis on humane production (SO1=3.78), avoiding exploitative businesses (SO2=3.73), and cultural dietary alignment (SO3=4.05) - Moderate concern for affordability (E1=4.05), purchasing options (E2=4.64), and flexibility (E3=4.06) | <ul style="list-style-type: none"> - Low intentions and unfavourable attitudes - Lack of social support and perceived behavioural control - Minimal internal drive for sustainability | <ul style="list-style-type: none"> - Younger demographic - Lower income - Predominantly male - Overrepresented in Netherlands, Serbia, and the UK - Underrepresented in France, Greece, Italy, and Switzerland |
| Price- & Convenience-Focused Consumers (18.9%) | Economic- & Accessibility-Driven | <ul style="list-style-type: none"> - Moderate focus on whole foods (N1=4.53), strong dietary diversity (N3=5.16), and moderate avoidance of processed foods (N2=4.40) - High engagement in food waste reduction (EV1=5.92) but lower concern for land/water/GHG footprints (EV2=3.44) and packaging reduction (EV3=4.01) - Moderate interest in humane production (SO1=4.32) and limited avoidance of exploitative businesses (SO2=3.76), but strong cultural dietary alignment (SO3=5.78) - Significant focus on affordability (E1=6.47), | <ul style="list-style-type: none"> - Primarily motivated by cost-effectiveness - Driven by convenience and flexibility - Will adopt sustainable practices if economically viable | <ul style="list-style-type: none"> - Middle-aged - Lower-to-moderate income - Higher proportion of males - Overrepresented in Netherlands, Norway, and Serbia - Underrepresented in Italy |

| Segment | Description | Key Behaviours | Motivations | Demographic Profile |
|---|---------------------------------------|--|---|---|
| | | purchasing options (E2=5.60), and flexibility (E3=5.79) | | |
| Balanced Consumers (32.3%) | Moderate Commitment to Sustainability | <ul style="list-style-type: none"> - Fairly high purchase of whole foods (N1=5.20) and avoidance of processed foods (N2=5.35), with moderate dietary diversity (N3=4.64) - Strong inclination to reduce food waste (EV1=5.65) and limit packaging (EV3=5.29), with lower emphasis on lowering footprints (EV2=4.80) - Notable concern for humane production (SO1=5.28) and avoiding exploitative businesses (SO2=5.13) - Reasonable focus on affordability (E1=5.04) and purchasing options (E2=5.33) | <ul style="list-style-type: none"> - Moderate intentions and positive attitudes - Likely open to guidance, incentives, and education - Positioned to increase sustainability engagement with support | <ul style="list-style-type: none"> - Largest segment - Balanced age profile - Middle-income range - Even gender distribution - Overrepresented in Italy - Underrepresented in Serbia |
| Highly Sustainable Consumers (27.9%) | Leaders in Sustainable Consumption | <ul style="list-style-type: none"> - Strong preference for whole foods (N1=6.21), avoidance of processed items (N2=6.24), and high dietary diversity (N3=5.75) - Proactive in waste reduction (EV1=6.49), choosing lower-impact foods (EV2=5.80), and avoiding packaging (EV3=6.22) - Highly concerned with humane production (SO1=6.23) and avoiding exploitative practices (SO2=6.11). Embraces cultural dietary alignment (SO3=6.21). - Emphasis on affordability (E1=6.28), variety (E2=5.78), and flexibility (E3=5.65) | <ul style="list-style-type: none"> - Strongest intentions and positive attitudes - High social support and perceived behavioural control - Motivated by ethics, environmental impact, and health | <ul style="list-style-type: none"> - Typically older - Higher incomes - Predominantly female - More common in France, Greece, Italy, and Switzerland - Underrepresented in Netherlands, Serbia, and the UK |

6.2 Sustainable food advocacy behaviours of citizens

The findings suggest that engaging citizens in the transformation towards more sustainable food systems depends on a combination of policy perceptions, political efficacy, and socio-demographic factors (Table 5). The strong association between prioritising environmental protection and higher rates of advocacy implies that promoting public awareness and highlighting tangible environmental benefits may be an effective way to enhance citizens' willingness to engage in political actions, such as contacting representatives or signing petitions. Citizens who perceive they have greater political influence are also more likely to engage in these activities, indicating that improving channels of democratic participation, or even simply raising awareness of existing pathways to participation, may bolster the sense that political engagement can make a tangible difference.

Beyond environmental concerns and political influence, the findings indicate that people who value social equity—supporting farmer livelihoods and fair labour conditions—are also more likely to participate in sustainability advocacy. By contrast, the negative coefficient for policies focused on food accessibility and affordability may seem counterintuitive at first. One possible explanation is that individuals who already prioritise accessible and healthy food might place more emphasis on personal consumption choices rather than political or collective action; they may feel that meeting these policy goals involves improving market mechanisms or government support, rather than direct citizen involvement.

The socio-demographic effects reveal nuances in how willingness to engage varies among individuals. Age's negative coefficient indicates that younger people are more inclined towards sustainability advocacy, potentially reflecting broader generational trends in environmental activism. Although the effect of income is modest, it still points to a pattern whereby those with slightly higher earnings are more inclined to engage in advocacy. This could relate to the resource hypothesis, suggesting that individuals with more financial security feel more capable of dedicating resources (time, money, or attention) to collective political action.

In terms of country-level variation, some contexts appear more conducive to sustainable food advocacy. Citizens in Greece, Italy, and Serbia show higher levels of advocacy than those in Belgium (the reference country), possibly reflecting local cultures of grassroots activism or greater public discourse around food-related issues. By contrast, Norway's lower coefficient may arise from differences in political culture or trust in existing policy mechanisms to deliver sustainable solutions without widespread citizen intervention. Although gender and political orientation did not emerge as significant, it is possible that specific policy issues, rather than broad ideological positions, drive engagement with sustainable food advocacy.

Businesses and policymakers alike can draw on these insights to improve citizen advocacy for sustainable food systems. Companies might demonstrate environmental responsibility by adopting transparent sourcing and labelling practices, as well as investing in cleaner production methods, and then actively engaging consumers through messaging that underscores these environmental gains. For policymakers, reinforcing the sense that individual action matters—perhaps through participatory budgeting, local citizen assemblies, or accessible feedback mechanisms—could foster higher levels of engagement. Emphasising tangible, localised outcomes, such as improved biodiversity in nearby farmlands or measurable reductions in carbon emissions, may further boost citizens' sense of influence, thereby strengthening overall support for European food policies and encouraging sustained advocacy.

Overall, the model accounts for roughly a quarter of the variance in citizen advocacy, indicating that while policy perceptions, feelings of political efficacy, and certain socio-demographic factors are important drivers, other unmeasured influences—such as social norms, community networks, or personal experiences of environmental problems—may also play a role. Further inquiry into these wider factors, alongside efforts to bolster the sense of political influence among citizens, could help policymakers and stakeholders design strategies that better harness the evident enthusiasm for environmental goals. By creating pathways for more meaningful engagement and demonstrating how individual actions can help shape policy outcomes, it may be possible to broaden participation in the transition towards sustainable food systems.

Table 5: Summary of Key Citizen Advocacy Findings and Recommendations

| Aspect | Key Findings | Interpretation | Recommended Strategies |
|-----------------------------|--|---|--|
| Citizen Advocacy Behaviours | Moderate likelihood of voting for sustainable food policies (43%) and willingness to sign petitions (41%). Lower likelihood of contacting local representatives (28%), donating to groups (30%), or participating in community groups (34%). | Citizens appear more inclined to participate in actions that are less time-intensive or financially demanding. Activities requiring higher levels of commitment, such as donating money or directly contacting representatives, see lower uptake. | Offer clear, accessible channels for advocacy (e.g., online petitions, straightforward ways to contact representatives). Provide concrete examples of the impact donations or local group participation can have, helping citizens see clear outcomes and benefits of their involvement. |
| Policy Perceptions | Environmental protection (Policy:Environment) is the strongest positive predictor of advocacy (0.459***). Policy:Social also increases advocacy (0.114***), whereas Policy:Accessible reduces it (-0.159***). | Individuals who prioritise environmental conservation and socio-economic fairness are more likely to take political action. By contrast, those primarily focused on accessibility and affordability may view consumer choices as sufficient, lowering their motivation to advocate. | Highlight the links between affordability and broader sustainability goals so that citizens see how collective advocacy can complement their personal food choices. Communicate environmental and social benefits prominently in policy discussions to maintain public interest in political engagement. |
| Political Influence | Positive and significant association with advocacy (0.412***). | Feeling empowered to shape policy outcomes fosters higher levels of participation in activities like voting and signing petitions. This underscores the importance of trust in political institutions and democratic processes. | Increase transparency and accessibility of policy-making (e.g., open consultations, citizen panels, participatory budgeting). Reinforce the message that individual voices matter, emphasising real-world examples where citizen input has impacted outcomes. |
| Socio-Demographic Factors | Age has a negative effect (-0.018***): younger people are more likely to participate in advocacy activities. Income shows a small positive effect (0.030**). No significant effect of gender or political orientation. | Younger generations often show greater engagement in environmental and socio-political movements, possibly due to heightened awareness of sustainability issues. Those with higher incomes may feel more secure in dedicating resources (time or money) to advocacy. | Tailor messaging and engagement strategies to younger demographics through digital platforms or targeted campaigns in universities. Offer low- or no-cost advocacy opportunities to ensure inclusivity, so that financial constraints are not a barrier to participating in sustainable food advocacy. |
| Country Differences | Greece (0.238***), Italy (0.513***), and Serbia (0.215**) report higher advocacy than Belgium (reference). Norway demonstrates lower engagement (-0.281***). Other countries do not differ significantly. | Variations in civic traditions, cultural norms, and trust in political processes contribute to differing advocacy levels across countries. In some contexts, collective or grassroots action may be more culturally entrenched or historically prevalent. | Develop locally tailored interventions and outreach efforts. In countries with high engagement, build on existing community networks. In countries with lower engagement, introduce awareness campaigns and more participatory |

| Aspect | Key Findings | Interpretation | Recommended Strategies |
|---------------------------|--|--|---|
| Overall Model Performance | The final model explains around 24.9% of the variance in citizens' advocacy behaviours ($R^2=0.249$), suggesting that while policy perceptions, sense of political influence, and certain socio-demographics are relevant, other unmeasured factors also shape advocacy. | A substantial portion of advocacy is accounted for by the identified predictors, but social norms, personal ethical commitments, local community dynamics, or personal exposure to environmental problems may also be influential. | mechanisms to foster a sense of relevance and efficacy. Use a holistic approach that combines policy-level interventions with educational initiatives and collaborations between businesses, civil society, and grassroots groups. Explore further factors like social networks, cultural values, and personal experiences to boost engagement in sustainable food advocacy. |

Note: Coefficients shown in parentheses (e.g., 0.459***) refer to the regression results provided in Table 3. Significance levels are indicated as * $p<0.05$, ** $p<0.01$, *** $p<0.001$.

6.3 Integrating findings across ENFASYS work packages

The findings from this deliverable will play a crucial role in shaping activities within other ENFASYS work packages. In particular, WP4 (Developing systems- and behaviour-based theories of change to understand the potential impact of public and private interventions) will draw on these insights to refine the ENFASYS landscape theory of change. By identifying where consumer behaviour is likely to most strongly influence farmer decisions, WP4 will be better able to determine the strategic points for intervention, ensuring that policy measures and private-sector actions are grounded in robust behavioural evidence.

Additionally, WP6 (Enhancing policy design and implementation for climate-neutral and sustainable EU farming systems) will use the results to explore the policy design space for sustainability measures. Understanding how various citizen-consumer segments respond to policy goals, incentives, and communications will help WP6 anticipate the types of support or opposition specific segments might exhibit. This evidence base will enable the creation of more targeted and effective policies that both reflect citizen-consumer demand and align with farmers' capacity to adapt and innovate.

Finally, WP7 (Developing business strategies or social innovation models that collectively incentivise farmers to move to Sustainable Food Systems) will integrate the findings into its workshops on emerging business models. By drawing on the consumer segmentation analysis, WP7 can help farmers identify potential new markets, tailor their production methods to meet consumer preferences, and collaborate with businesses to capitalise on the growing interest in sustainable goods. This alignment between market demand and on-farm practices not only benefits farmers' livelihoods but also supports the broader goal of fostering a resilient and sustainable food system.

7 Conclusions

The findings from both the consumer segmentation analysis and the examination of citizen advocacy underscore the complexity of transforming Europe's food systems to align with sustainability objectives (see Table 6 for an overview). The consumer typology identifies four distinct segments—Disengaged Consumers, Price- & Convenience-Focused Consumers, Balanced Consumers, and Highly Sustainable Consumers—that differ not only in their commitment to nutritional, environmental, social, and economic dimensions of sustainability but also in the kinds of incentives and messages to which they are likely to respond to. Concurrently, the analysis of advocacy behaviours highlights how socio-demographic factors, policy perceptions, and political efficacy shape citizens' willingness to participate in collective actions supporting sustainable food systems. Together, these findings underline the need for integrated approaches that acknowledge diverse consumer motivations while expanding pathways for political engagement and public participation.

A notable insight is that younger, lower-income, and male consumers often display lower engagement with sustainable consumption yet younger participants exhibited a higher propensity for advocacy. This apparent paradox suggests a dual strategy for policymakers and businesses: making sustainable products more affordable and convenient can help shift habitual purchasing patterns among Disengaged and Price- & Convenience-Focused Consumers, while campaigns emphasising the tangible outcomes of political participation can leverage younger generations' willingness to advocate for change. For example, highlighting the local benefits of sustainability—such as improved biodiversity or fairer farmer livelihoods—can inspire cost-conscious consumers to view their shopping decisions as opportunities to contribute to broader societal goals.

At the other end of the spectrum, Highly Sustainable Consumers exhibit strong ethical convictions and robust purchasing behaviours, mirroring the motivations of citizens who recognise the political significance of environmental and social issues. While these consumers already purchase responsibly, they can further amplify their impact by influencing social norms through word-of-mouth, community campaigns, or support for policy initiatives. Encouraging these engaged individuals to champion sustainability—for instance, by facilitating referral programmes or creating local advocacy groups—could raise awareness and motivation among less sustainable segments. Balanced Consumers, meanwhile, may be receptive to messages about environmental and social benefits but may need additional guidance or incentives to transition from moderate to more committed behaviours. Offering discounts on sustainable products and clearly labelling items that uphold ethical production standards can reinforce their intentions and demonstrate that adopting a sustainable lifestyle is both attainable and convenient.

For businesses, insights from both consumer clusters and advocacy trends indicate a need for inclusive strategies that address varied motivational profiles. Companies can develop product lines that cater to the price sensitivity of certain groups while appealing to the aspirational mindset of Highly Sustainable Consumers. Transparent labelling and credible certification schemes highlighting reduced environmental footprints or ethical sourcing can attract those already prioritising sustainability, while promotions, subsidies, or loyalty rewards can persuade cost-conscious segments to try new, more responsible offerings. Providing information on the environmental and social impacts of products, such as quantifying water or carbon savings, can offer tangible evidence of the broader benefits of purchasing decisions, inspiring consumers to feel part of a larger movement and reinforcing citizen advocacy.

For policymakers, the strong link between perceived political influence and higher rates of advocacy underscores the importance of nurturing trust in institutions and ensuring that citizens see tangible outcomes from their participation. Tools like participatory budgeting, public consultations, and digital platforms for feedback could make engagement with policy more transparent and accessible, enhancing feelings of political efficacy. In contexts where affordability is a significant concern, subsidies or tax incentives that directly lower the price of sustainable products could shift purchasing patterns at scale, especially among Disengaged and Price- & Convenience-Focused clusters. Equally critical is demonstrating how collective advocacy efforts, such as contacting representatives or signing petitions, can lead to policy advancements that integrate environmental, social, and economic priorities in the food sector. This is particularly relevant in countries where activism is already strong, such as Greece and Italy, yet it may also spur engagement in contexts where trust in policy mechanisms is lower.

These findings have significant implications for driving farmers towards adopting sustainable practices. As the demand for responsibly produced goods grows, particularly through consumer advocacy that pushes for higher standards and clearer labelling, farmers gain stronger incentives to align their methods with evolving market

preferences. This rising demand provides farmers with greater confidence that a sufficiently large and stable market exists for their sustainable products, reducing the risks associated with transitioning to new practices. In response, farmers are more likely to adopt methods such as reducing chemical inputs, improving animal welfare, and implementing regenerative techniques that protect biodiversity. Stronger policy signals and market incentives further encourage these transitions by supporting farmers in diversifying their production systems, investing in innovative technologies, and participating in sustainability-focused value chains. As farmers shift their practices to meet consumer expectations, they contribute to reinforcing consumer trust in sustainable products, which in turn sustains and expands demand. This creates a self-reinforcing cycle where citizen-consumer behaviour drives agricultural innovation, and sustainable farming practices bolster consumer confidence, ultimately accelerating the transition towards sustainability across the food system.

Overall, the convergence of consumer behaviour and citizen advocacy findings reveals both immediate challenges and considerable opportunities. European consumers vary not only in their purchasing habits but also in the extent to which they engage in political processes. Targeted policy measures that reduce the price gap between sustainable and conventional products, alongside business-driven innovations that highlight ethical and environmental benefits, can drive shifts in consumption patterns across all segments. Simultaneously, investments in participatory governance and transparent policymaking can foster a sense of empowerment and legitimacy, motivating more citizens to take collective action. By addressing the economic, environmental, social, and political dimensions of food systems, policymakers and industry leaders can bolster public trust, deepen consumer engagement, and expand advocacy efforts. These strategies, implemented collaboratively and adapted to local cultures and infrastructures, can accelerate Europe’s transition to a more sustainable food future.

Table 6: Summary of results and recommendations

| Aspect | Key Findings | Recommended Approaches |
|---|--|---|
| Disengaged Consumers | <ul style="list-style-type: none"> - Typically younger, lower-income, and predominantly male, with minimal engagement in sustainable consumption. | <ul style="list-style-type: none"> - Focus on affordability and convenience: Offer competitively priced sustainable products, subsidies, or loyalty schemes. - Use clear, relatable messaging that resonates with younger demographics, emphasising tangible local benefits (e.g., improved biodiversity, farmer livelihoods). - Highlight direct impacts of purchasing decisions to prompt a sense of social contribution. |
| Price- & Convenience-Focused Consumers | <ul style="list-style-type: none"> - Primarily motivated by cost and ease of purchase, paying less attention to environmental or social considerations. - Willing to shift behaviour if sustainable products are positioned as affordable and easily accessible. | <ul style="list-style-type: none"> - Provide financial incentives like discounts, subsidies, or targeted loyalty programmes that lower the cost barrier. - Streamline product availability and highlight convenience (e.g., clear labelling, prominent shelf placement). - Use messaging that shows how sustainable options can be both economically and socially beneficial, leveraging cost-conscious values to prompt incremental change. |
| Balanced Consumers | <ul style="list-style-type: none"> - Exhibit moderate but promising engagement with environmental and social sustainability. - Require additional clarity, guidance, or incentives to move from moderate to more committed behaviours. | <ul style="list-style-type: none"> - Offer discounts or price-matched alternatives for sustainable products to encourage trial and repeated purchases. - Implement clear, trustworthy labelling (e.g., ethical production, low-carbon footprint) to reinforce positive intentions. - Provide accessible information on the social and environmental impact of purchases, reinforcing that more sustainable choices are both attainable and beneficial. |
| Highly Sustainable Consumers | <ul style="list-style-type: none"> - Already demonstrate strong ethical convictions and robust sustainable purchasing habits. | <ul style="list-style-type: none"> - Encourage leadership roles (e.g., referral programmes, advocacy groups) to amplify their positive influence within communities. |

| Aspect | Key Findings | Recommended Approaches |
|---|--|--|
| | . | <ul style="list-style-type: none"> - Facilitate peer education and community campaigns, leveraging word-of-mouth credibility. - Collaborate on policy initiatives that harness their high motivation, turning them into ambassadors for sustainability efforts (e.g., local councils, public consultations). |
| Citizen Advocacy Behaviours | <ul style="list-style-type: none"> - Socio-demographic factors, policy perceptions, and political efficacy strongly shape willingness to engage in collective actions. - Younger generations, despite lower sustainable purchasing, are more prone to advocacy. | <ul style="list-style-type: none"> - Create transparent, accessible channels for participation (e.g., digital platforms, public consultations) and ensure feedback loops that highlight the impact of citizen input. - Run campaigns emphasising real-world results of political engagement (e.g., local biodiversity improvements, fairer livelihoods) to bolster advocacy motivation. - Nurture political efficacy by demonstrating how collective efforts lead to policy progress and institutional responsiveness. |
| Socio-Demographic Variation | <ul style="list-style-type: none"> - Younger consumers tend to be less engaged in sustainable consumption but more open to advocacy and activism. - Higher incomes associated with engagement in sustainable consumption and advocacy | <ul style="list-style-type: none"> - Address the affordability gap with targeted subsidies, discounts, or policy instruments (e.g., tax breaks). - Ensure that advocacy opportunities are inclusive, easy to join, and visibly impactful (e.g., petitions, community forums). - Leverage social media campaigns and relatable narratives to mobilise younger groups who already show a readiness to speak out. |
| Business Implications | <ul style="list-style-type: none"> - Companies must accommodate diverse motivations and budgets to expand the market for sustainable goods. - Transparent product information and credible certification schemes are vital to building consumer trust and driving responsible consumption. | <ul style="list-style-type: none"> - Develop inclusive product lines and pricing strategies to cater to different segments (e.g., budget-friendly sustainable options vs premium ethical lines). - Use clear, standardised labelling (e.g., reduced carbon footprint, fair trade) to communicate benefits. - Offer loyalty rewards or time-bound promotions to motivate trial among price-sensitive consumers. - Publicise tangible environmental and social impacts (e.g., water savings) to reinforce the connection between consumption and advocacy. |
| Policy Implications | <ul style="list-style-type: none"> - Greater political efficacy correlates with higher advocacy; thus, visible policy outcomes and institution transparency are crucial. - Subsidies or tax incentives can address affordability barriers and encourage the uptake of sustainable products. - Enhancing participation through tools like participatory budgeting could improve citizen trust in institutions. | <ul style="list-style-type: none"> - Implement financial measures (e.g., subsidies) to narrow the price gap between sustainable and conventional products. - Expand participatory governance (e.g., citizen assemblies, online feedback portals) to boost policy transparency, inclusivity, and trust. - Highlight the role of collective advocacy (e.g., contacting representatives, signing petitions) in driving legislative advancements for greener, fairer food systems. |
| Overall Implications for Europe's Food Systems | <ul style="list-style-type: none"> - Transforming European food systems requires simultaneously addressing cost barriers, | <ul style="list-style-type: none"> - Combine public policies (e.g., subsidies, transparent policymaking) with private-sector innovations (e.g., accessible green products, clear certifications). |

| Aspect | Key Findings | Recommended Approaches |
|--------|---|--|
| | <p>communication gaps, and political participation.</p> <ul style="list-style-type: none"> - Integrated approaches that link consumer purchase decisions with broader collective advocacy could drive system-wide change. - Collaborative efforts by industry, government, and civil society can accelerate the transition to more sustainable consumption and production models. | <ul style="list-style-type: none"> - Design multi-stakeholder initiatives that highlight economic, environmental, social, and political benefits of sustainability. - Invest in awareness campaigns and advocacy support to cultivate a culture of empowerment and legitimacy, ultimately motivating more citizens to engage in sustainable consumption and policy actions at multiple scales. |

8 References

- Busa, J. H., & Garder, R. (2015). Champions of the Movement or Fair-weather Heroes? Individualization and the (A)politics of Local Food. *Antipode*, 47(2), 323–341. <https://doi.org/10.1111/anti.12108>
- Chiu, T., Ortiz, J., Chih, W., Pang, L., & Huang, J. (2019). Antecedents of consumers' citizenship behaviour towards organic foods. *Journal of Consumer Behaviour*, 18(4), 332–349. <https://doi.org/10.1002/cb.1774>
- Cornish, A., Jamieson, J., Raubenheimer, D., & McGreevy, P. (2019). Applying the Behavioural Change Wheel to Encourage Higher Welfare Food Choices. *Animals*, 9(8), 524. <https://doi.org/10.3390/ani9080524>
- De Tavernier, J. (2012). Food Citizenship: Is There a Duty for Responsible Consumption? *Journal of Agricultural and Environmental Ethics*, 25(6), 895–907. <https://doi.org/10.1007/s10806-011-9366-7>
- Dixon, J., & Isaacs, B. (2013). Why sustainable and 'nutritionally correct' food is not on the agenda: Western Sydney, the moral arts of everyday life and public policy. *Food Policy*, 43, 67–76. <https://doi.org/10.1016/j.foodpol.2013.08.010>
- Ellingsen, K., Grimsrud, K., Nielsen, H. M., Mejdell, C., Olesen, I., Honkanen, P., Navrud, S., Gamborg, C., & Sandøe, P. (2015). Who cares about fish welfare?: A Norwegian study. *British Food Journal*, 117(1), 257–273. <https://doi.org/10.1108/BFJ-08-2013-0223>
- Escobar-López, S. Y., Espinoza-Ortega, A., Lozano-Cabedo, C., Aguilar-Criado, E., & Amaya-Corchuelo, S. (2019). Motivations to consume ecological foods in alternative food networks (AFNs) in Southern Spain. *British Food Journal*, 121(11), 2565–2577. <https://doi.org/10.1108/BFJ-01-2019-0051>
- Frank, P. (2018). Me, my family or the public good? Do inter-role conflicts of consumer–citizens reduce their ethical consumption behaviour? *International Journal of Consumer Studies*, 42(3), 306–315. <https://doi.org/10.1111/ijcs.12417>
- Gumbert, T. (2019). Anti-Democratic Tenets? Behavioural-Economic Imaginaries of a Future Food System. *Politics and Governance*, 7(4), 94–104. <https://doi.org/10.17645/pag.v7i4.2216>
- Henchion, M. M., Regan, Á., Beecher, M., & MackenWalsh, Á. (2022). Developing 'Smart' Dairy Farming Responsive to Farmers and Consumer-Citizens: A Review. *Animals*, 12(3), 360. <https://doi.org/10.3390/ani12030360>
- Hepting, D. H., Jaffe, J., & Maciag, T. (2014). Operationalizing Ethics in Food Choice Decisions. *Journal of Agricultural and Environmental Ethics*, 27(3), 453–469. <https://doi.org/10.1007/s10806-013-9473-8>

- Hofstede, G. (2014). Cultural tools: Country comparison. *The Hofstede Centre. Disponível Em* < [Http://Geert-Hofstede. Com/Germany. Html](Http://Geert-Hofstede.Com/Germany.Html)> *Acesso Em*, 16(04), 2020.
- Johnston, J. (2008). The citizen-consumer hybrid: Ideological tensions and the case of Whole Foods Market. *Theory and Society*, 37(3), 229–270. <https://doi.org/10.1007/s11186-007-9058-5>
- Jokinen, P., Kupsala, S., & Vinnari, M. (2012). Consumer trust in animal farming practices – exploring the high trust of Finnish consumers. *International Journal of Consumer Studies*, 36(1), 106–113. <https://doi.org/10.1111/j.1470-6431.2011.00996.x>
- Kanis, E., Groen, A. F., & De Greef, K. H. (2003). Societal Concerns about Pork and Pork Production and Their Relationships to the Production System. *Journal of Agricultural and Environmental Ethics*, 16(2), 137–162. <https://doi.org/10.1023/A:1022985913847>
- Kriflik, L. (2006). Consumer citizenship: Acting to minimise environmental health risks related to the food system. *Appetite*, 46(3), 270–279. <https://doi.org/10.1016/j.appet.2006.01.011>
- Kvakkestad, V., Berglann, H., Refsgaard, K., & Flaten, O. (2018). Citizen and consumer evaluation of organic food and farming in Norway. *Organic Agriculture*, 8(2), 87–103. <https://doi.org/10.1007/s13165-017-0176-8>
- Lockie, S. (2002). ‘The Invisible Mouth’: Mobilizing ‘the Consumer’ in Food Production–Consumption Networks. *Sociologia Ruralis*, 42(4), 278–294. <https://doi.org/10.1111/1467-9523.00217>
- Lockie, S. (2009). Responsibility and agency within alternative food networks: Assembling the “citizen consumer.” *Agriculture and Human Values*, 26(3), 193–201. <https://doi.org/10.1007/s10460-008-9155-8>
- Michalopoulos, T., Korthals, M., & Hogeveen, H. (2007). Trading “Ethical Preferences” in the Market: Outline of a Politically Liberal Framework for the Ethical Characterization of Foods. *Journal of Agricultural and Environmental Ethics*, 21(1), 3–27. <https://doi.org/10.1007/s10806-007-9059-4>
- 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>
- Tittarelli, F., Saba, A., Di Pierro, M., & Ciaccia, C. (2022). Food Citizenship as an Agroecological Tool for Food System Re-Design. *Sustainability*, 14(3), 1590. <https://doi.org/10.3390/su14031590>
- Uliano, A., Stanco, M., Lerro, M., Marotta, G., & Nazzaro, C. (2022). Evaluating citizen-consumers’ attitude toward high social content products: The case of social farming. *British Food Journal*, 124(11), 4038–4053. <https://doi.org/10.1108/BFJ-07-2021-0775>

Uliano, A., Stanco, M., & Nazzaro, C. (2023). Short Food Supply Chain and Resilience: An Analysis during COVID-19 Pandemic in Inner Areas of Campania Region. *Sustainability*, 15(17), 12721.

<https://doi.org/10.3390/su151712721>



9 Appendix

9.1 Citizen-consumer survey

Informed Consent

Dear Participant,

As a citizen in Europe, I would like to invite you to take part in a study for a European Project called ENFASYS. The ENFASYS project aims to stimulate a just and robust transition to sustainable, productive, climate-neutral, biodiversity friendly, and resilient farming systems by improved policies and business strategies that encourage farmers to change their production systems.

The purpose of the survey is to examine consumer preferences for different sustainable food system products, citizen preferences for different interventions, and end markets based on market segmentation for both.

What is ENFASYS?

The ENFASYS project is funded under the EU Horizon research and innovations actions. The goals of the project are (1) an improved understanding of lock-ins and levers in farming and food systems; (2) an improved understanding of behavioural factors of farmers, consumers and other food chain actors; (3) more and better evidence on the potential effectiveness of interventions; (4) a more structured approach to link knowledge to action. For more information on the ENFASYS project, please visit <https://www.enfasysproject.eu/>

What will the study involve?

We are asking you, as a citizen, to complete a short survey. The survey will take approximately 7-10 minutes.

Why I am being asked to take part?

As a citizen in Europe, we are interested in hearing your opinions on the transition towards sustainable food systems.

Do you have to take part? Participation is voluntary. Withdrawal of consent is possible up to the point at which you complete the survey. You can choose to opt out of the study by leaving the online survey. Incomplete online responses will be deleted.

Will your participation in the study be kept confidential? The data you provide will be kept confidential.

Information concerning personal data: It should be noted that personal data will only be used for the purpose of the study, will be stored securely by Teagasc and not shared outside of the organisation or only shared outside the organisation as specified. Only the minimum amount of personal data necessary will be collected and it will be stored for the minimum period of time required. The Teagasc Data Protection Officer may be contacted at DPO@Teagasc.ie at any stage. A copy of Teagasc's privacy policy is available at <https://www.teagasc.ie/media/website/publications/2018/Data-Privacy-Notice-A5-4pp.pdf> which provides further information about how Teagasc will process your personal data in connection with the study.

What will happen to the information which you give? The information collected in the survey will be used for data analysis at an aggregated and anonymized level. The data may be shared on data repositories for future research and learning.

What will happen to the results?

The results from the survey will be used to understand European citizens' preferences for sustainable food system interventions and products. These results will help inform the design of policy mixes, business strategies, and social innovations. The results may also be disseminated via academic publication, conference proceedings and internal reports. Results may be used in social media or popular press.

Future publishing, archiving and reuse of the data

Anonymized research data collected from this study may be deposited in a recognized repository so it can be shared and used for learning and potentially reused for future research – namely, the Teagasc Data Value Platform. Open data sharing in research enhances collaboration, accelerates discoveries, improves reproducibility, validates findings, reduces duplication, and fosters interdisciplinary innovation, leading to robust, generalizable results.

What are the possible risks of taking part?

There are no anticipated risks associated with taking part but if you have any concerns, you can contact niall.hammond@teagasc.ie

Who has reviewed this study?

Ethical approval has been attained by the Teagasc Social Science Ethics Committee.

Any further queries?

If you require any further information you can contact me at niall.hammond@teagasc.ie

Please read the following statements and indicate if you agree to participate in the study:

1. I have read and understood the information provided, or it has been read to me. I have been able to ask questions about the study and my questions have been answered to my satisfaction.
2. I consent voluntarily to being a participant in this study.
3. I understand that even if I agree to participate now, I can choose to end my participation in the survey, by leaving the survey platform, without having to give a reason.
4. I have been given sufficient information about this study and have read and understood this information.
5. I understand that all information I provide in this study will be treated confidentially.



6. I consent to the use of the data in this study in research and in the further development of ENFASYS educational related material.
7. I understand that personal information collected about me that can identify me will not be shared beyond the study team.
8. I give permission for the anonymised data I provide to be deposited in an open data repository so it can be shared and used for learning and potentially reused for future research.

I agree to take part in this survey

Yes (1) / No (2)

Demographics / Quotas

[Q_Gender]. - Market research agency categorisation

Are you:

- Male (1)
- Female (2)
- Prefer to self-describe: (3)
- Prefer not to say (4)

[Q_AgeRange] - Market research agency categorisation

- 18-24 years (1)
- 25-34 years (2)
- 35-44 years (3)
- 45-54 years (4)
- 55-64 years (5)
- 65+ years (6)

[Q_Region] - Market research agency categorisation

Where do you currently live?

[Q_Income]. Market research agency categorisation

In which of the following bands would you place your household's combined yearly income (before tax and other deductions)? Household income is a measure of the combined incomes of all people sharing a particular household or place of residence. It includes every form of income, e.g. salaries and wages, retirement income, investment gains etc.

Consumer Preferences for Different SFS products

A sustainable food system is one that produces food in a way that benefits people, animals, and the environment. In short, it's about growing, distributing, and consuming food in a way that's good for the earth, fair to people, and sustainable for the long term.

This survey aims to understand your views on sustainable food systems

[TPB_Consumer]. Please indicate how strongly you agree or disagree with each of these statements, using a scale from 1 to 7, where 1 means you 'strongly disagree' and 7 means you 'strongly agree'



| | | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 | |
|----------------------------|--|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------------------------------|--|
| | | Strongly Disagree | | | | | Strongly Agree | |
| (Intent1) | I intend to buy some sustainable foods within the next week. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 | |
| (Intent2) | I want to purchase some sustainable foods within the next week. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 | |
| (Intent3) *reverse code | I do not plan to purchase some sustainable foods over the next week. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 | |
| (Att1) | Buying sustainable foods is advantageous for me. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 | |
| (Att2) | It is important to me that I purchase sustainable foods. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 | |
| (Att3) *reverse code | Buying sustainable foods in the next week would be unpleasant. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 | |
| (Norm1) | People who are important to me (family, friends, colleagues) have/would encourage me to buy sustainable foods. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 | |
| (Norm2) | I feel under social pressure to purchase sustainable foods over the next week. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 | |
| (Norm3) *reverse code | People who are important to me do not think I should purchase sustainable foods. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 | |
| (PBC1) | I do not depend on anyone when buying sustainable foods. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 | |
| (PBC2) | I am confident I will be able to buy some sustainable food products in the next week. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 | |
| (PBC3) *reverse code | I have very little control in deciding if I buy sustainable food products. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 | |

[Behaviour_Consumer_Specific]. Reflect on your own diet and your experience purchasing food in recent weeks. Think about the food you plan to buy over the next week. How likely are you to do the following in the next week?

| N = Nutrition EV = Environment S = Social E = Economic | | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
|---|---|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------------------------------|
| | | Highly Unlikely | | | | | Highly likely |
| (N_1) | Buy mostly whole fruits, vegetables, grains, nuts, and beans. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (N_2) | Avoid most highly processed foods. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (N_3) | Buy a diversity of foods with many different fats, proteins, vitamins, etc. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |

| | | | | | | | |
|--------|---|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------------------------------|
| (EV_1) | Avoid buying too much food and creating food waste. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (EV_2) | Buy foods with lower land, water, and greenhouse gas footprints. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (EV_3) | Avoid highly packaged foods and single-use plastics. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (S_1) | Buy food that is produced humanely for both animals and workers. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (S_2) | Avoid food businesses that are unfair or exploitative in their practices. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (S_3) | Buy food that fits my cultural or customary diet. | 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (E_1) | Buy food that is affordable and fits my budget. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (E_2) | Buy food from stores and restaurants where I have lots of options. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (E_3) | Buy food whenever and wherever I want it. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |

Citizen behaviours

People in [country] may advocate for a more sustainable food system. This advocacy may include encouraging friends/family/colleagues to choose more sustainably produced foods, vote for parties that support policies aimed at changing the current food system, sign petitions, and/or by participating in demonstrations calling for these changes.

[Behaviour_Citizen_Specific]. *There are different ways of contributing towards the transition to sustainable food systems. Reflect on your own behaviour in recent weeks. Do you expect to make any changes? How likely are you to do the following in the next year?*

| | | | | | | | | |
|-----------|--|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------------------------------|--|
| | | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 | |
| | | Highly Unlikely | | | | Highly likely | | |
| (Public1) | Contact your local representatives about the need to transition towards sustainable food systems | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 | |
| (Public2) | Sign a petition or start one and share it | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 | |
| (Public3) | Donate money or time to groups that advocate for more sustainable foods | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 | |
| (Public4) | Vote for political candidates based on their sustainable food policies. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 | |
| (Public5) | Participate in community or local groups that help promote sustainable foods. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 | |

[Citizen_Policy_Goals]. Please indicate how important you think the following goals should be for **agriculture policy** in [Country].

| | | | | | | | | |
|---|--|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------------------------------|--|
| N = Nutrition EV = Environment S = Social E = Economic | | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 | |
| | | Not important at all | | | | Extremely important | | |

| | | | | | | | |
|-------------|---|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|------------------------------|
| (Goal_EV_1) | Improve river water quality. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (Goal_EV_2) | Reduce greenhouse gas emissions. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (Goal_EV_3) | Promote species richness/biodiversity. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (Goal_S_1) | Increase animal welfare. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (Goal_S_2) | Ensure an adequate income for farmers. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (Goal_S_3) | Improve working conditions for seasonal farm workers. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (Goal_E_1) | Reduce food prices for consumers. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (Goal_E_2) | Increase domestic food production. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (Goal_E_3) | Support the profitability of farmers and food businesses. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (Goal_H_1) | Increase food safety and quality standards. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (Goal_H_2) | Ensure access to a wide range of nutritious foods. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |
| (Goal_H_3) | Promote healthy diets. | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 | 6 <input type="checkbox"/> 7 |

[Politico_LeftRight] In politics people sometimes talk of 'left' and 'right'. Where would you place yourself on this scale, where 1 means 'very left-wing' and 10 means 'very right-wing'.

(Very left-wing) 1 2 3 4 5 6 7 8 9 10 (Very right-wing)

[Politico_Influence] How much would you say the political system in [country] allows people like you to have an influence in what the government does?

Not at all (1)

Very little (2)

Some (3)

A lot (4)

A great deal (5)

Don't know/Prefer not to say (6)

Debriefing

Thank you for your participation!

Your contribution is deeply valued and your insights will be essential to advancing our understanding in this critical field, helping to recommend more effective strategies and policies around sustainable food systems. Should you wish to stay engaged with the outcomes of this study, the results will be published on our website <https://www.enfasysproject.eu/> in early 2025.

<Survey ends>



9.2 Data integrity report

Data integrity report

STRAT7
Audiences

Client: Teagasc

Project: Sustainable Food Consumption

Throughout the project the Data Integrity Team carefully checked every participant, removing those whose responses we did not deem acceptable. These checks are a mixture of technological automations and human interpretation, using internal and external resources to create assurance in your final data set.

Project information:

Sample type: B2C

Markets: UK,IT,FR,NO,NL,BE,SI,GR,DE,ROI,RS,CH

A summary of the removals can be found below:

| | | | |
|-----------------------|-----|----------------------|------|
| Duplicate responses: | 76 | Plausibility checks: | 1460 |
| Fraudulent responses: | 47 | Poor verbatim: | 1679 |
| Speeders: | 374 | Total removals: | 4316 |
| Straightliners: | 678 | % Removals: | 44% |

Additional thoughts from the Data Integrity Team:

Removal rate per market:
United Kingdom (42%) Italia (35%) France (47%) Norge (53%) Nederlands (37%) Belgium (40%) Slovenij (52%) Greece (34%) Deutschland (36%) Republic of Ireland (38%) Srbiji (57%) Schweiz (40%)

The above has been completed in accordance with the project specific Data integrity check pro forma and the Data integrity standards charter and has been reviewed and signed by the following team members:

Completed by: Boyan Manchev

Date: 1/8/2025

Reviewed by:

Date:

Please contact your Client Manager for any further information.



9.3 Sample characteristics

Table 7: Characteristics of respondents in the ENFASYS Citizen-Consumer Behaviour Survey

| Characteristic | Overall N = 9,600 | UK N = 800 | Italy N = 800 | France N = 800 | Norway N = 800 | Netherlands N = 800 | Belgium N = 800 | Slovenia N = 800 | Greece N = 800 | Germany N = 800 | Rep. of Ireland N = 800 | Serbia N = 800 | Switzerland N = 800 |
|-------------------------|-------------------------|----------------|------------------|-------------------|-------------------|------------------------|--------------------|---------------------|-------------------|--------------------|-------------------------------|-------------------|------------------------|
| Gender | | | | | | | | | | | | | |
| Male | 4,866 (50.7%) | 389 (48.6%) | 394 (49.3%) | 389 (48.6%) | 411 (51.4%) | 410 (51.3%) | 391 (48.9%) | 426 (53.3%) | 428 (53.5%) | 398 (49.8%) | 392 (49.0%) | 441 (55.1%) | 397 (49.6%) |
| Female | 4,695 (48.9%) | 410 (51.3%) | 401 (50.1%) | 409 (51.1%) | 387 (48.4%) | 390 (48.8%) | 408 (51.0%) | 371 (46.4%) | 367 (45.9%) | 400 (50.0%) | 408 (51.0%) | 342 (42.8%) | 402 (50.3%) |
| Prefer to self-describe | 21 (0.2%) | 0 (0.0%) | 1 (0.1%) | 2 (0.3%) | 1 (0.1%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 3 (0.4%) | 1 (0.1%) | 0 (0.0%) | 13 (1.6%) | 0 (0.0%) |
| Prefer not to say | 18 (0.2%) | 1 (0.1%) | 4 (0.5%) | 0 (0.0%) | 1 (0.1%) | 0 (0.0%) | 1 (0.1%) | 3 (0.4%) | 2 (0.3%) | 1 (0.1%) | 0 (0.0%) | 4 (0.5%) | 1 (0.1%) |
| Age Bracket | | | | | | | | | | | | | |
| 18-24 | 908 (9.5%) | 71 (8.9%) | 47 (5.9%) | 71 (8.9%) | 89 (11.1%) | 83 (10.4%) | 76 (9.5%) | 72 (9.0%) | 83 (10.4%) | 73 (9.1%) | 92 (11.5%) | 94 (11.8%) | 57 (7.1%) |
| 25-34 | 1,561 (16.3%) | 133 (16.6%) | 107 (13.4%) | 116 (14.5%) | 142 (17.8%) | 131 (16.4%) | 120 (15.0%) | 140 (17.5%) | 117 (14.6%) | 119 (14.9%) | 144 (18.0%) | 162 (20.3%) | 130 (16.3%) |
| 35-44 | 1,728 (18.0%) | 131 (16.4%) | 126 (15.8%) | 130 (16.3%) | 150 (18.8%) | 128 (16.0%) | 129 (16.1%) | 164 (20.5%) | 156 (19.5%) | 113 (14.1%) | 187 (23.4%) | 169 (21.1%) | 145 (18.1%) |
| 45-54 | 1,819 (18.9%) | 140 (17.5%) | 161 (20.1%) | 142 (17.8%) | 158 (19.8%) | 142 (17.8%) | 146 (18.3%) | 165 (20.6%) | 167 (20.9%) | 139 (17.4%) | 147 (18.4%) | 164 (20.5%) | 148 (18.5%) |
| 55-64 | 1,569 (16.3%) | 126 (15.8%) | 141 (17.6%) | 134 (16.8%) | 117 (14.6%) | 128 (16.0%) | 139 (17.4%) | 137 (17.1%) | 149 (18.6%) | 144 (18.0%) | 104 (13.0%) | 130 (16.3%) | 120 (15.0%) |
| 65+ | 2,015 (21.0%) | 199 (24.9%) | 218 (27.3%) | 207 (25.9%) | 144 (18.0%) | 188 (23.5%) | 190 (23.8%) | 122 (15.3%) | 128 (16.0%) | 212 (26.5%) | 126 (15.8%) | 81 (10.1%) | 200 (25.0%) |
| Income Bracket | | | | | | | | | | | | | |
| Low1 | 844 (8.8%) | 86 (10.8%) | 70 (8.8%) | 70 (8.8%) | 35 (4.4%) | 41 (5.1%) | 41 (5.1%) | 57 (7.1%) | 83 (10.4%) | 93 (11.6%) | 48 (6.0%) | 133 (16.6%) | 87 (10.9%) |
| Low2 | 1,902 (19.8%) | 181 (22.6%) | 134 (16.8%) | 142 (17.8%) | 184 (23.0%) | 155 (19.4%) | 202 (25.3%) | 137 (17.1%) | 108 (13.5%) | 196 (24.5%) | 147 (18.4%) | 110 (13.8%) | 206 (25.8%) |
| Mid1 | 2,340 (24.4%) | 195 (24.4%) | 197 (24.6%) | 195 (24.4%) | 213 (26.6%) | 197 (24.6%) | 206 (25.8%) | 179 (22.4%) | 213 (26.6%) | 196 (24.5%) | 202 (25.3%) | 148 (18.5%) | 199 (24.9%) |
| Mid2 | 2,285 (23.8%) | 172 (21.5%) | 196 (24.5%) | 197 (24.6%) | 202 (25.3%) | 200 (25.0%) | 199 (24.9%) | 212 (26.5%) | 205 (25.6%) | 163 (20.4%) | 206 (25.8%) | 152 (19.0%) | 181 (22.6%) |

| Characteristic | Overall N = 9,600 | UK N = 800 | Italy N = 800 | France N = 800 | Norway N = 800 | Netherlands N = 800 | Belgium N = 800 | Slovenia N = 800 | Greece N = 800 | Germany N = 800 | Rep. of Ireland N = 800 | Serbia N = 800 | Switzerland N = 800 |
|--|-------------------------|----------------|------------------|-------------------|-------------------|------------------------|--------------------|---------------------|-------------------|--------------------|-------------------------------|-------------------|------------------------|
| Mid3 | 1,249 (13.0%) | 85 (10.6%) | 119 (14.9%) | 117 (14.6%) | 104 (13.0%) | 119 (14.9%) | 72 (9.0%) | 127 (15.9%) | 103 (12.9%) | 91 (11.4%) | 121 (15.1%) | 123 (15.4%) | 68 (8.5%) |
| High1 | 596 (6.2%) | 51 (6.4%) | 65 (8.1%) | 56 (7.0%) | 33 (4.1%) | 58 (7.3%) | 41 (5.1%) | 56 (7.0%) | 46 (5.8%) | 36 (4.5%) | 43 (5.4%) | 81 (10.1%) | 30 (3.8%) |
| High2 | 260 (2.7%) | 20 (2.5%) | 9 (1.1%) | 13 (1.6%) | 18 (2.3%) | 20 (2.5%) | 28 (3.5%) | 22 (2.8%) | 33 (4.1%) | 15 (1.9%) | 22 (2.8%) | 42 (5.3%) | 18 (2.3%) |
| Prefer not to say | 124 (1.3%) | 10 (1.3%) | 10 (1.3%) | 10 (1.3%) | 11 (1.4%) | 10 (1.3%) | 11 (1.4%) | 10 (1.3%) | 9 (1.1%) | 10 (1.3%) | 11 (1.4%) | 11 (1.4%) | 11 (1.4%) |
| Education Level | | | | | | | | | | | | | |
| European Qualifications Framework (EQF) | | | | | | | | | | | | | |
| EQF 1 | 247 (2.6%) | 2 (0.3%) | 7 (0.9%) | 20 (2.5%) | 22 (2.8%) | 76 (9.5%) | 27 (3.4%) | 11 (1.4%) | 8 (1.0%) | 17 (2.1%) | 4 (0.5%) | 11 (1.4%) | 42 (5.3%) |
| EQF 2 | 1,266 (13.2%) | 38 (4.8%) | 82 (10.3%) | 354 (44.3%) | 59 (7.4%) | 179 (22.4%) | 146 (18.3%) | 32 (4.0%) | 66 (8.3%) | 91 (11.4%) | 49 (6.1%) | 127 (15.9%) | 43 (5.4%) |
| EQF 3 | 1,483 (15.4%) | 197 (24.6%) | 36 (4.5%) | 0 (0.0%) | 165 (20.6%) | 0 (0.0%) | 159 (19.9%) | 278 (34.8%) | 72 (9.0%) | 266 (33.3%) | 8 (1.0%) | 162 (20.3%) | 140 (17.5%) |
| EQF 4 | 233 (2.4%) | 81 (10.1%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 152 (19.0%) | 0 (0.0%) | 0 (0.0%) |
| EQF 5 | 1,921 (20.0%) | 139 (17.4%) | 331 (41.4%) | 180 (22.5%) | 151 (18.9%) | 110 (13.8%) | 50 (6.3%) | 201 (25.1%) | 126 (15.8%) | 151 (18.9%) | 150 (18.8%) | 78 (9.8%) | 254 (31.8%) |
| EQF 6 | 2,589 (27.0%) | 205 (25.6%) | 98 (12.3%) | 132 (16.5%) | 258 (32.3%) | 234 (29.3%) | 252 (31.5%) | 185 (23.1%) | 342 (42.8%) | 128 (16.0%) | 318 (39.8%) | 274 (34.3%) | 163 (20.4%) |
| EQF 7 | 1,379 (14.4%) | 110 (13.8%) | 170 (21.3%) | 88 (11.0%) | 119 (14.9%) | 119 (14.9%) | 116 (14.5%) | 55 (6.9%) | 131 (16.4%) | 114 (14.3%) | 103 (12.9%) | 132 (16.5%) | 122 (15.3%) |
| EQF 8 | 186 (1.9%) | 22 (2.8%) | 25 (3.1%) | 14 (1.8%) | 14 (1.8%) | 7 (0.9%) | 15 (1.9%) | 10 (1.3%) | 26 (3.3%) | 15 (1.9%) | 11 (1.4%) | 10 (1.3%) | 17 (2.1%) |
| Other please specify | 296 (3.1%) | 6 (0.8%) | 51 (6.4%) | 12 (1.5%) | 12 (1.5%) | 75 (9.4%) | 35 (4.4%) | 28 (3.5%) | 29 (3.6%) | 18 (2.3%) | 5 (0.6%) | 6 (0.8%) | 19 (2.4%) |
| Location: Rural/Urban | | | | | | | | | | | | | |
| Urban City | 3,413 (35.6%) | 180 (22.5%) | 341 (42.6%) | 257 (32.1%) | 308 (38.5%) | 271 (33.9%) | 186 (23.3%) | 326 (40.8%) | 489 (61.1%) | 198 (24.8%) | 172 (21.5%) | 501 (62.6%) | 184 (23.0%) |



| Characteristic | Overall N = 9,600 | UK N = 800 | Italy N = 800 | France N = 800 | Norway N = 800 | Netherlands N = 800 | Belgium N = 800 | Slovenia N = 800 | Greece N = 800 | Germany N = 800 | Rep. of Ireland N = 800 | Serbia N = 800 | Switzerland N = 800 |
|-------------------|-------------------------|----------------|------------------|-------------------|-------------------|------------------------|--------------------|---------------------|-------------------|--------------------|-------------------------------|-------------------|------------------------|
| Urban Town | 1,986 (20.7%) | 188 (23.5%) | 301 (37.6%) | 142 (17.8%) | 91 (11.4%) | 166 (20.8%) | 134 (16.8%) | 113 (14.1%) | 153 (19.1%) | 221 (27.6%) | 195 (24.4%) | 125 (15.6%) | 157 (19.6%) |
| Suburban | 1,787 (18.6%) | 272 (34.0%) | 42 (5.3%) | 123 (15.4%) | 163 (20.4%) | 160 (20.0%) | 187 (23.4%) | 105 (13.1%) | 105 (13.1%) | 180 (22.5%) | 185 (23.1%) | 113 (14.1%) | 152 (19.0%) |
| Rural Village | 1,817 (18.9%) | 133 (16.6%) | 84 (10.5%) | 223 (27.9%) | 133 (16.6%) | 177 (22.1%) | 247 (30.9%) | 173 (21.6%) | 47 (5.9%) | 154 (19.3%) | 130 (16.3%) | 56 (7.0%) | 260 (32.5%) |
| Rural Countryside | 597 (6.2%) | 27 (3.4%) | 32 (4.0%) | 55 (6.9%) | 105 (13.1%) | 26 (3.3%) | 46 (5.8%) | 83 (10.4%) | 6 (0.8%) | 47 (5.9%) | 118 (14.8%) | 5 (0.6%) | 47 (5.9%) |





End of Document



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