NEWCOMERS European citizen survey on energy transition and energy communities

– Data Report –

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Abstract

The NEWCOMERS (New Clean Energy Communities in a Changing European Energy System) project aims to evaluate the status of energy communities for the energy transition in Europe and explore their future potentials. To this end, a large-scale citizen survey on energy communities was conducted between 13 October and 14 December 2021 in nine European countries (France, Germany, Italy, the Netherlands, Poland, Slovenia, Spain, Sweden, and the United Kingdom). It includes 13,499 individual observations, corresponding to 1,500 participants per country. Examples of energy communities comprise systems for the generation of (local) renewable energy, electricity storage, and local electricity trading projects. The citizen survey addresses preferences, attitudes, and perceptions of European citizens with respect to a renewable energy transition, their awareness of as well as their willingness to engage in energy communities and how such communities should be designed. The data further contains information on the respondents' socioeconomic and psychological characteristics. This data report accompanies the dataset and explains details of the data collection method and introduces the survey structure and its topics. It further presents socio-economic features of the study sample, evaluates its representativeness against country averages, and outlines initial, descriptive key findings on energy communities. Additionally, it provides information on the dataset itself and how to get access to it.

Key words: citizen survey, energy communities, renewable energy transition, survey experiments, climate change, prosocial behaviour

JEL classification: C81, O13, Q4

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Summary of NEWCOMERS's Objectives

As subsidiary objectives, the NEWCOMERS project aims to

- provide **a novel theoretical framework based on polycentric governance theory**, combined with elements from social practice theory, innovation theory and value theory, in which the emergence and diffusion of new clean energy communities can be analysed and opportunities for learning in different national and local polycentric settings can be explored;

- develop a **typology of new clean energy community business models** which allows to assess the different types of value creation of "newcomers" as well as their economic viability and potential to be scaled up under various conditions;

- identify the **types of clean energy communities that perform best along a variety of dimensions**, such as citizen engagement, value creation, and learning, and their potential to address energy poverty, while being based on sustainable business models;

- investigate the **regulatory, institutional, and social conditions**, at the national and local level which are favourable for the emergence, operation and further diffusion of new clean energy communities and enable them to unfold their benefits in the best possible way;

- explore **how new clean energy communities are co-designed with their members' (i.e., citizens' and consumers') needs**, in particular whether new clean energy communities have the potential to increase the affordability of energy, their members' energy literacy and efficiency in the use of energy, as well as their members' and society's participation in clean energy transition in Europe;

- deliver **practical recommendations based on stakeholder dialogue** on how the EU as well as national and local governments can support new clean energy communities to make them flourish and unfold their benefits in the best possible way;

- offer citizens and members of new clean energy communities a **new online platform 'Our-energy.eu'** on which new clean energy communities can connect and share best practices and interested citizens can learn about the concept of energy communities and find opportunities to join an energy community in their vicinity.

Find out more about NEWCOMERS at: https://www.newcomersh2020.eu/.

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NEWCOMERS Consortium Partners

Logo	Organization	Type	Country
	Institute for Environmental Studies (IVM), Vrije Universiteit Amsterdam (VUA)	University	The Netherlands
	International Institute for Industrial Environmental Economics (IIIEE) at Lund University (LU)	University	Sweden
	Environmental Change Institute (ECI), University of Oxford (UOXF)	University	United Kingdom
	Institute of Social Sciences, University of Ljubljana (UL)	University	Slovenia
	Institute for Advanced Energy Technologies "Nicola Giordano" (ITAE), National Research Council (CNR)	Research organization	Italy
	RWI – Leibniz Institute for Economic Research (RWI)	Research organization	Germany
	Consensus Communications (CONS)	Private for Profit (SME)	Slovenia
	GEN-I	Private for Profit (Large company)	Slovenia

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1 INTRODUCTION

In their recent Energy Union packages, the European Union is putting citizens at the centre of the clean energy transition. One social innovation that aims to do this are new clean energy communities. Through such energy communities, various partners, e.g., citizens and municipalities, jointly promote energy efficiency and a renewable energy generation. This can take the form of building a system for the generation of (local) renewable energy, through electricity storage or local electricity trading. The possible benefits of these "NEWCOMERS" for their members and for society at large are still emerging and their potential to support the goals of the Energy Union is unclear.

Therefore, a Citizen Survey on Energy Communities was conducted as part of the NEWCOMERS project. The survey addresses preferences, attitudes, and perceptions of European citizens with respect to a renewable energy transition, new forms of energy communities, and how they should be designed to be beneficial. Further, it aims at providing additional insights into the drivers and barriers of their diffusion across European countries and discusses the citizens' willingness to accept or decline demand response mechanisms, such as dynamic pricing.

The survey was conducted between 13 October and 14 December 2021 in nine European countries (Germany, Spain, France, Italy, the Netherlands, Poland, Sweden, Slovenia, and the United Kingdom) and complements other subprojects ("working packages") within the NEWCOMERS project by providing quantitative large-scale data on the general populations' views on energy-related issues, their awareness of energy communities as well as their willingness to engage in them . In addition, it contains socioeconomic and psychological characteristics and environmental attitudes. The sample consists of 13,500 participants, corresponding to 1,500 per country.

The Forschungsdatenzentrum (FDZ) Ruhr provides the data free of charge to all interested scholars via user agreements that can be applied for at the website www.rwi-essen.de/fdz/. The QR code will lead directly to an overview of all datasets provided by the FDZ, including the NEWCOMERS dataset.

In the next section (2), the process and methodology of data collection as well as the content of the questionnaire and the datasetare explained in more detail. In section 3, socio-economic features of the sample are presented. In section 4, a first look is taken at the respondents' awareness of energy communities and their membership status. Section 5 briefly reviews existing publications based on the dataset. This is followed by section (6) on how the data can be accessed. In the appendix, the corresponding questionnaire is enclosed. A codebook is also provided alongside the dataset.

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2 DATA COLLECTION AND SURVEY

As part of the working package 6 (WP 6) module, the RWI – Leibniz Institute for Economic Research has been tasked with designing the survey. It was conducted within the scope of the NEWCOMERS project which is funded through the European Union's Horizon 2020 research and innovation programme. **Figure 1** presents the role and position of working package 6 within the NEWCOMERS project.

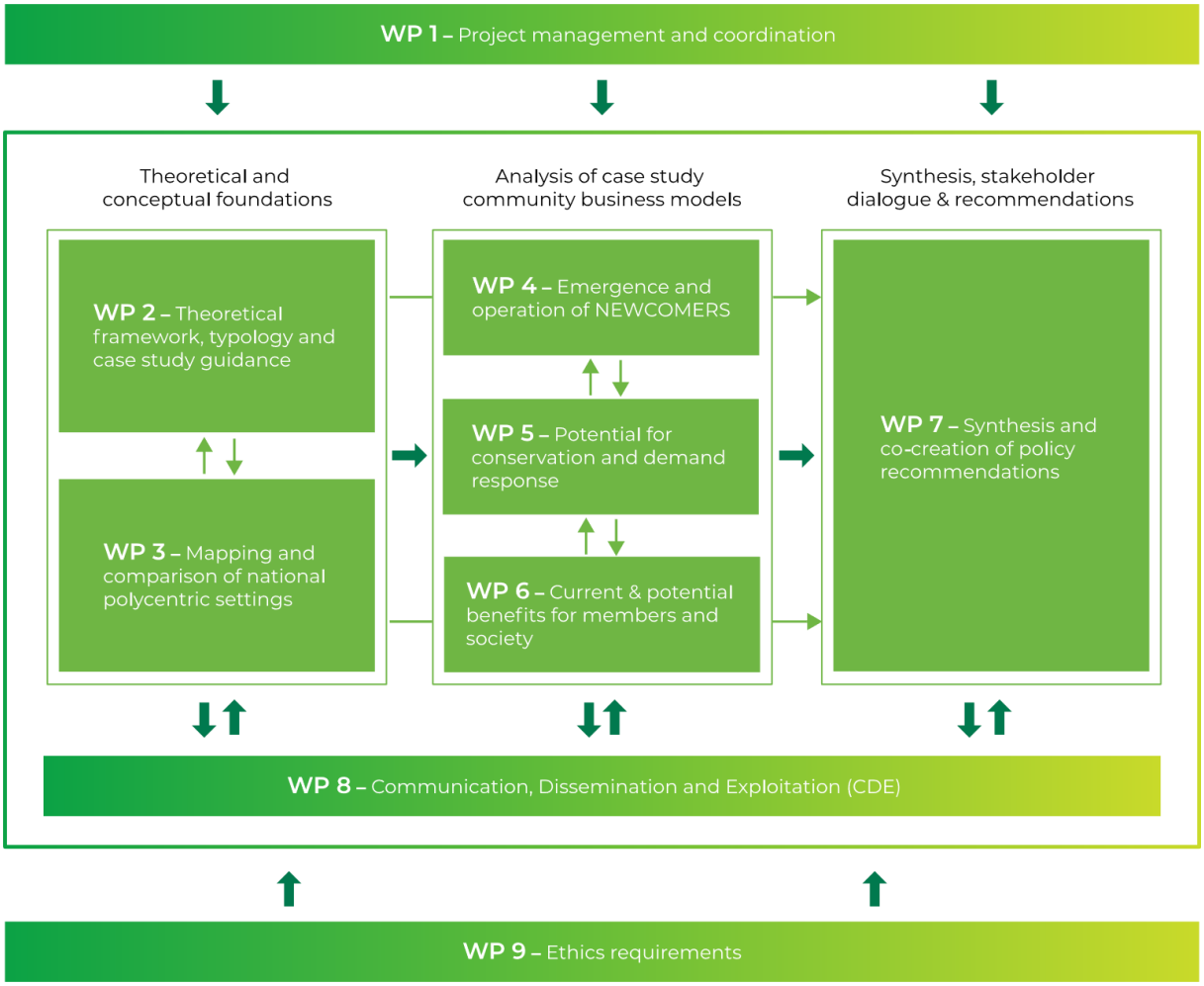

Figure 1: Working Package 6 within the NEWCOMERS project

The data collection was conducted online via the platform "mingle" which is administered by respondi AG, a firm specialised in digital market research and data science. Participants can register with mingle for free and are rewarded with "mingle points" for each completed survey. These points can be redeemed for shopping vouchers or cash.

In Germany (DE), Spain (ES), France (FR), Italy (IT), the Netherlands (NL), Poland (PL), Sweden (SE), Slovenia (SI), and the United Kingdom (UK) 1,500 participants each were sampled allowing for cross-country comparisons. For each country, participants were selected by drawing random subsamples from respondi's online panel under the contraint of meeting country-specific quotas for gender, age, education, and (equivalized) household income. By doing so, the study sample is representative for each country's general population with respect to these characteristics. All participants saw and answered the survey in the national language of the country in which they conducted it. The original surveys as well as the data set are in English language. Translations of the survey to each country's language are available upon request.

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All responses were treated anonymously. The Research Ethics Review Committee (BETHCIE) of the Science Faculty, Vrije Universiteit Amsterdam approved the project's compliance with the faculty's ethical guidelines In May 2020. The survey was conducted in accordance with the ethical standards of the 1964 Declaration of Helsinki and its later amendments. The panel provider respondi (now bilendi), who conducted the data collection, is an ISO 20252 (Market, Opinion, and Social Research) and ISO 27001 (Information Security Management) certified company. Respondi adhered to strict German legal standards for data protection and the professional codes of conduct set by ESOMAR and the ADM (Arbeitskreis Deutscher Markt- und Sozialforschungsinstitute e.V.). Participation was strictly voluntary and anonymous; Respondents were informed of the study's nature and their right to withdraw at any time without penalty.

For the published dataset, we censored the open text answers, such as answers from a final question on whether respondents encountered problems while filling out the survey. This was necessary as respondents repeatedly revealed sensitive, anonymity-compromising information, such as their real names or their e-mail addresses, in these open text answer questions. To maintain anonymity of the respondents while keeping the full zip-codes for each observation, some household-related variables are further top-censored at threshold values. More specifically, the number of adults and the number of children in the respondents' households as well the the total number of children (regardless of their age) are winsorized at a value of 5. This means that any value above 5 is numerically stored as »5« but labelled as »5 or more« in the dataset. An additional variable for the total household size, put together by the sum of adults and children before being top-censored, is added to the dataset. This variable is again top-censored at the value of 10. The aggregate socioeconomic desriptions of the sample in Section 3 of this data report are based on the original, uncensored data.

Throughout the dataset, missing answers from respondents within variables are generally coded with a value of »−99«. If participants were not asked a specific question, for example due to a previous answer excluding them from a follow-up question or due to random assignment to only certain parts of the survey, the value is shown as».« or »-66«.

The overall structure of the survey questionnaire, and thus the dataset, is shown in in **Table 1**. After collecting standard socioeconomic characteristics, respondents were asked about their attitudes and behaviours regarding the environment in general and energy-related issues. More specifically, survey questions addressed factors related to the energy transition, such as the use of different energy sources, energy efficiency, climate change, fairness, and the role of government in shaping energy policies. Next, energy literacy, citizen awareness of and engagement in energy communities as well as perceived benefits of energy communities across countries were elicited. Potential drivers and barriers of the diffusion of energy communities are further key topics. Further, the survey includes three experiments, in which individual preferences for different types and characteristics of energy communities, citizens' willingness to accept demand response mechanisms, and a revealed donations task to support clean energy projects in developing countries are elicited. After that, real-world prosocial behaviours, psychological concepts and some further socioeconomic features were collected.

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Table 1: Survey questionnaire structure (corresponds to dataset structure)

Section	Content
Introduction	Introduction to survey and its topics
SI. socioeconomic characteristics (I)	Central socioeconomic characteristics: household size, gender, age, education, income
AB. Attitudes and Behaviour wrt Energy Transition	Pro-environmental behaviour, support for energy-related policies
EL. Energy Literacy	Quiz on energy-related questions to assess level of knowledge
AW. Awareness of Energy	Awareness of and engagement in energy communities
PB. Perceived Benefits of Energy Communities	Perceptions of potential benefits of energy communities
DB. Drivers and Barriers for Diffusion of Energy Communities	Perceived barriers to joining and starting energy communities
EC. Experiment 1: Attractiveness of Energy Communities	Discrete choice experiment on which attributes in energy communities are perceived as attractive
DR. Experiment 2: Demand Response	Experiment on acceptance of demand-response pricing mechanisms
DON. Experiment 3: Donation Experiment	Incentivized donation experiment to atmosfair, which supports climate-friendly projects in developing countries
PS. Prosocial Behaviour	Self-reported real-world prosocial behaviour, such as monetary donations, blood donations, voluntary work, and compliance with rules during Covid-19
PC. Psychological Concepts	Psychological variables, such as trust, individualism, long-term orientation, wise reasoning, and locus of control
SII. Socioeconomic characteristics (II)	More socioeconomic characteristics, including employment, info on respondent's dwelling, and political orientation
Quiz Answers	Answers to energy literacy quiz (EL)
Final Screen	Including an open question on difficulties during the survey

While most sections' content shown in the overview in **Table 1** are self-evident and intuitive, the logic of the three experiments is explained in more detail below:

2.1 Experiment 1: Discrete choice experiment on the attractiveness of energy communities

The aim of the discrete choice experiment was to deepen our understanding of which features European citizens value the most in energy communities. We therefore randomly selected 50% of the survey respondents in each country to participate in the choice experiment. In the experiment, we presented four choice cards with two different energy community options to the respondents and asked them to select from each choice card the community that they would prefer to join, or to select the option to not join any of the two energy communities.

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2.2 Experiment 2: Demand response experiment

The second experiment addresses consumers' attitudes towards two variations of a demand response scheme and explores how it would work in combination with energy communities. This experiment is shown to only half of the participants, i.e., approximately 750 participants from each country. The other half of the participants participate in the choice experiment on energy communities as described above. As shown in **Figure 2**, for DR3 the sample was again divided into two groups, resulting in approximately 375 participants for each country per group.

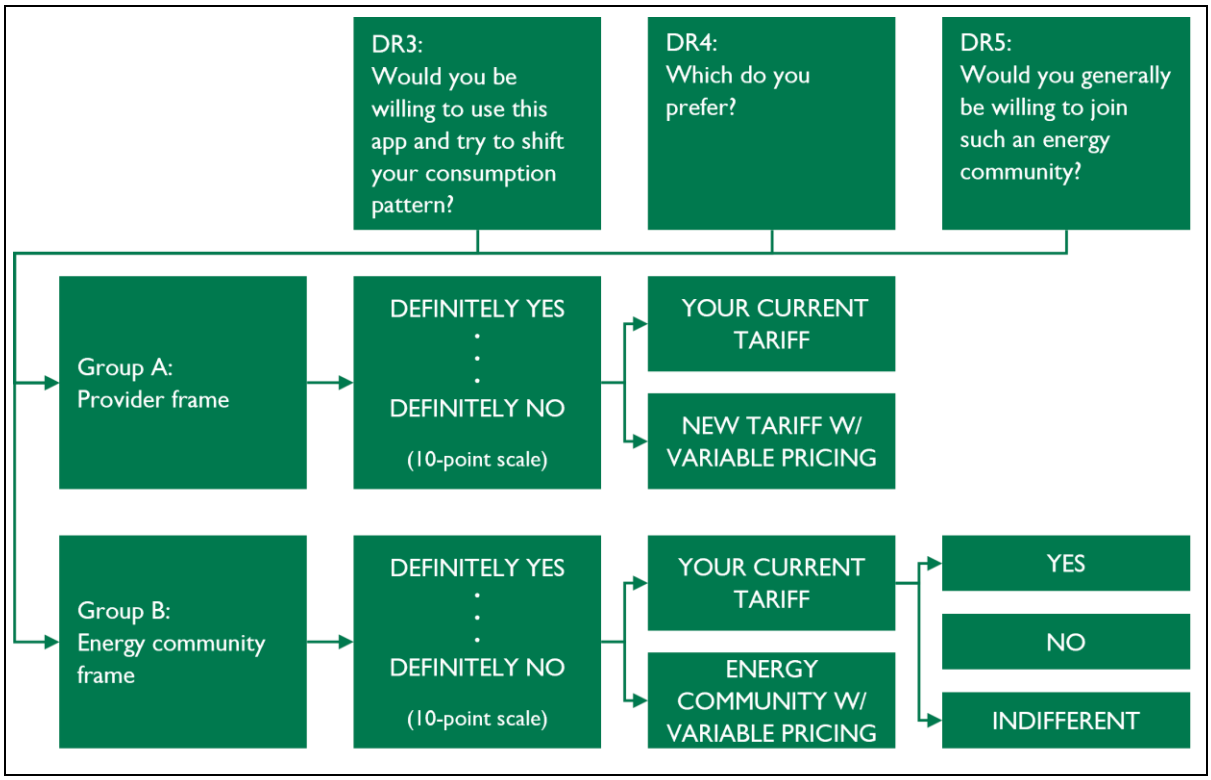

Figure 2: Design and randomisation procedure for demand response experiment

Both groups, Group A and Group B, are shown the following explanation:

> "One method to reduce the reliance on fossil fuels for energy supply is to spread out electricity consumption throughout the day. This can for example be done by running energy-intensive appliances during off-peak hours (for example, at night or noon) or by running them when a lot of renewable energy is available (for example, because of strong wind or sunshine)."

Group A is then shown the "provider frame":

> "Imagine your energy provider gives you access to an app that notifies you when most of the energy in the grid is produced from renewable sources, which would be an opportune time to save CO2 emissions associated with the use of energy-intensive appliances."

Meanwhile, Group B is shown the "energy community frame":

> "Imagine you are invited to join a local energy community, which is a group of households in your area who sustain their energy demand by producing renewable energy on their own, for example, through roof-top solar panels. As a member of this community, you are asked to align your energy use with the available energy produced by the community. To do so, your energy community gives you access to an app that notifies when production from renewable sources in your local energy community is high, which would be an opportune time to save CO2 emissions associated with the use of energy-intensive appliances."

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Participants of both groups are then asked on a ten-point scale with 1 "definitely no" to 10 "definitively yes", whether they would be willing to use this app and try to shift their consumption pattern (DR3).

Staying in the same groups of the previous questions, in DR4, the participants of Group A are shown the following text:

> "Now imagine your energy provider offers you to switch to a tariff where the electricity price is updated in real-time.
>
> During the hours of the day when the share of renewable energy is high and the overall electricity demand is low, your electricity price would be lower than your existing tariff. But in hours when the share of renewable energy is low and the overall electricity demand is high, your electricity price would be higher than your existing tariff. An app or in-home display would notify you about the changes in the electricity price throughout the day.
>
> By moving your use of energy-intensive appliances to hours when the share of renewable energy is high and the overall electricity demand is low, you could save up to 5 / 9 cent per kWh. For a typical household, this amounts to savings of €12 / €24 per month."

It is randomised, which amount of possible savings is shown and the amount is adjusted to national energy prices for each country specifically. They are calculated as either 15 or 30 percent of the average country specific price per kWh. Approximately half of the participants are shown the first, the other half are shown the second amount. The monthly savings are shown according to this randomisation. The group is then asked whether they prefer their current tariff or the new tariff with the described pricing scheme.

For DR4, the participants of Group B are shown the following text:

> "If you are a member of the energy community, you have access to self-produced renewable energy. But in hours when the members of the community use more electricity than is produced by the community, the community needs to buy energy from other suppliers.
>
> During the hours of the day when the amount of self-produced renewable energy is sufficient to cover the electricity demand of all community members, your electricity price would be lower than your existing tariff. But in hours when the community needs to buy energy from other suppliers, your electricity price would be higher than your existing tariff. An app or in-home display would notify you about the changes in the electricity price throughout the day.
>
> By moving your use of energy-intensive appliances to hours when the energy community is self-sustained, you could save up to 5 / 9 cent per kWh. For a typical household, this amounts to saving of €12 / €24 per month."

Again, the randomisation follows the same process as for Group A. The members of Group B are then also asked whether they prefer their current tariff or prefer becoming a member of the energy community with the described pricing scheme. Those participants who do not indicate they would choose the new pricing scheme are asked in a follow-up question whether they would be interested in joining an energy community in general, assuming that their tariff stays identical to their current tariff.

2.3 Experiment 3: Incentivized donation experiment

Additionally, the survey involves a donation experiment that considers how different variations of information about so-called micro-grids and their benefits for power supply affect people's willingness and motivations to donate. After being informed that the participants have the chance to win 100.00 euro (or an equivalent amount in the respective currency), they face two screens. The first screen introduces so-called Micro-Grids: in light of limited to no access to electricity for people in developing

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countries, Micro-Grids as decentralised power grids establish autonomous energy communities in rural areas. Thereby, they mitigate the impact of alternatively using firewood from rainforests instead of electricity. Subsequently, the second screen presents atmosfair, a non-profit organisation collecting donations to support Micro-Grids, and informs the respondent that every 100th participant will win 100.00 euro in form of mingle points. Afterwards, every participant was asked to indicate how much they would like to donate if they won.

Within the scope of this experiment (DON3), three treatments are applied while comparing them to a control group ("control"). The respective texts, as given in **Table 2**, are each shown to one quarter of the respondents. Treatment 1 (T1) focuses on an arbitrary village and the effect of Micro-Grids on the villagers, treatment 2 (T2) on the respondent living in that village and treatment 3 (T3) on living in that village and the effect of Micro-Grids on the respondent's life.

Table 2: Control and treatment texts (DON3)

Group	Text
Control	Before you decide, please reflect on the scenario you read above and consider the role of Micro-Grids for electrification in developing countries.
T1	Before you decide, please imagine a village without power supply. How will the availability of power supply through such a Micro-Grid change the lives of the people living there?
T2	Before you decide, please imagine living in a village without power supply. How will the availability of power supply through such a Micro-Grid change the lives of the people living there?
T3	Before you decide, please imagine living in a village without power supply. How will the availability of power supply through such a Micro-Grid change your own life?

Questions on wise reasoning in the context of the atmosfair donations were shown to about 3/5 of the respondents. 8,006 participants answered the corresponding 15 questions. These are based on the "situated wise reasoning scale" which was developed by Brienza et al. (2018). Questions on situated or general wise reasoning are also included in the survey and were answered by 3,527 participants. 1,271 respondents answered both donation specific and situated wise reasoning questions.

Towards the end, several questions are included regarding the participants' prosocial behaviour in their everyday life. The survey finishes with a psychology-based investigation, asking respondents about their attitudes towards people with varying degrees of closeness, their behaviour in a recent situation of conflict and their stance on concepts such as identity, time preferences and personal values.

Socioeconomic information is collected in two blocks, one placed at the start and one towards the end of the survey. In addition to general personal characteristics – such as age, gender, education, income, household size and number of children – questions relate to participants' housing situation, including their type of electricity tariff and conditions for photovoltaic on their roof.

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3 SOCIO-ECONOMIC FEATURES OF THE RESPONDENTS

3.1 General

In total, the survey reaches a sample size of 13,499, with approximately 1,500 participants per country (**Table 3**). One participant is missing in the Dutch sample, which therefore consists of only 1,499 participants. The person failed to indicate their income and can therefore not be accounted towards the quota scheme. It should be noted that the data is in raw condition with all answers as given by the survey respondents. Before analysis of data, cleaning should be considered according to the respective needs.

3.2 Age

Figure 3 shows the age of the participants ranging in six categories from 18 to 69. The mean age of all participants is 44.64. The participants from Sweden are on average the youngest with a mean of 43.34 years, while those from Germany are on average the oldest, with a mean of 45.79 years.

Table 3: Sample size and age (S4)

Country	Sample size	Mean age	Std. dev. age
DE	1,500	45.79	14.00
ES	1,500	44.56	13.38
FR	1,500	44.42	14.38
IT	1,500	45.05	13.71
NL	1,499	45.30	14.54
PL	1,500	43.76	14.32
SE	1,500	43.34	14.42
SI	1,500	44.93	13.80
UK	1,500	44.61	13.80
Total	**13,499**	**44.64**	**14.06**

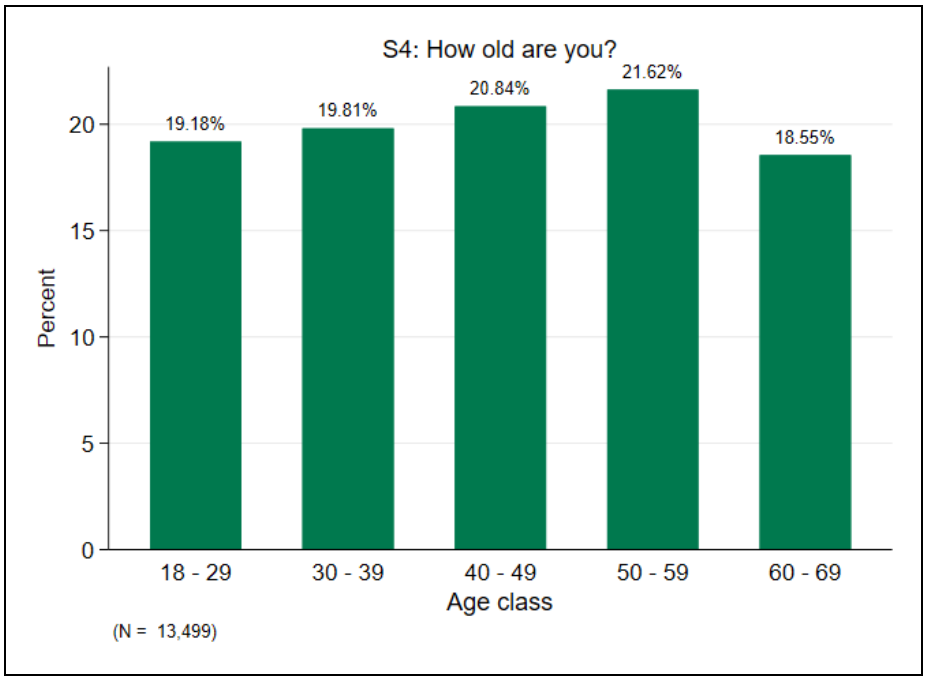

Figure 3: Age distribution (S4)

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3.3 Gender

As illustrated in **Figure 4**, the gender distribution across the participants is nearly even. While the samples from Germany, the Netherlands and Slovenia show a slightly higher proportion of male participants, there are a few more female than male participants in Spain, France, Italy, Poland, Sweden, and the United Kingdom. Sweden has the least even gender distribution with 699 male and 801 female participants. All in all, there are 6,678 (49.47%) male and 6,821 (50.53%) female participants.

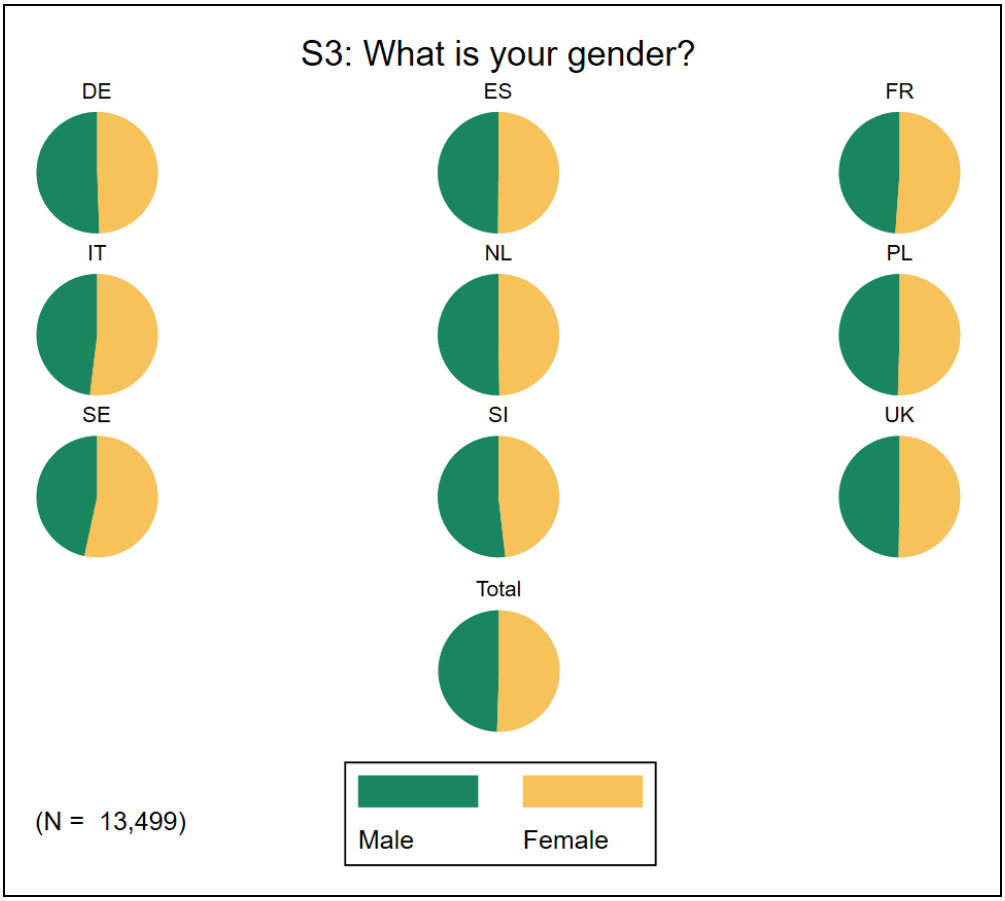

Figure 4: Gender distribution (S3)

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3.4 Education

Pursuant to **Table 4**, the education classification was translated and adjusted according to each country's particular educational system. Participants can be categorised into one of three aggregate classes as shown in **Figure 5**.

Table 4: International Standard Classification of Education (ISCED)

ISCED	Classification	Simplified classification
1	Primary education	Level I: "Below upper secondary"
2	Lower secondary education	
3	Upper secondary education	Level II: "Upper/post-secondary"
4	Post-secondary, non-tertiary education	
5	Short-cycle tertiary education	Level III: "Tertiary"
6	Bachelor's degree	
7	Master's degree	
8	Doctorate	

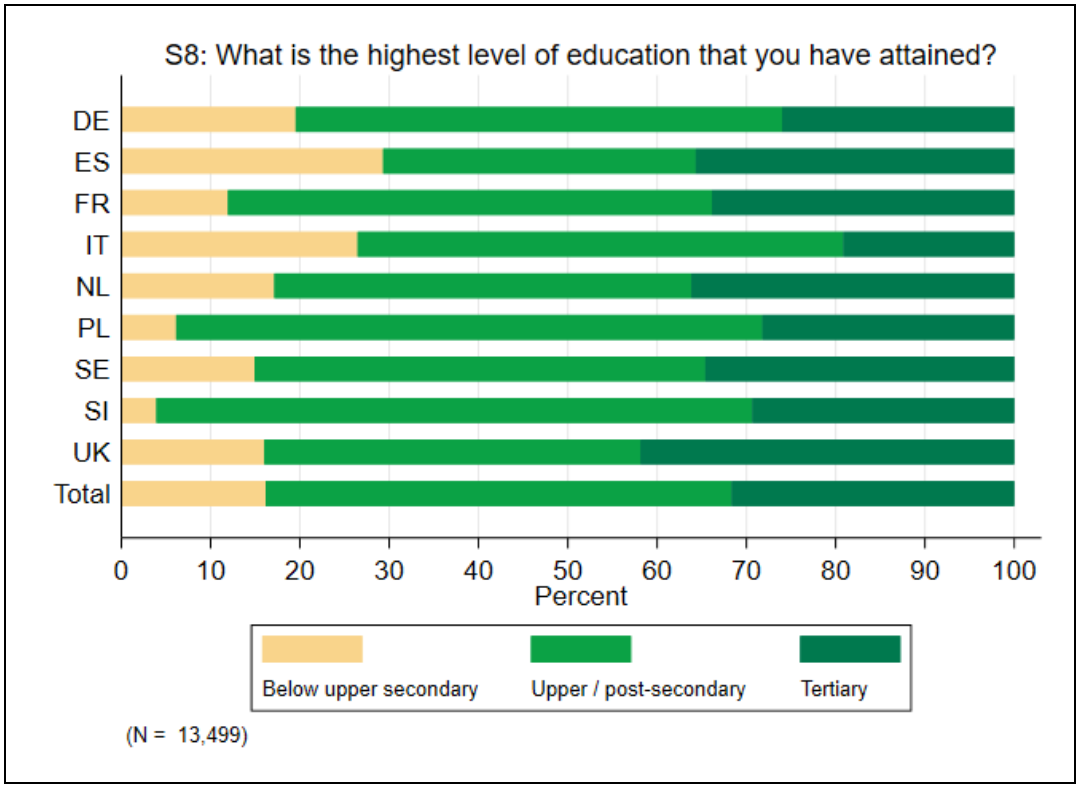

Figure 5: Distribution of education levels (S8)

It turns out that, across the entire sample, 16.16% have attained only primary or below upper secondary education, while more than half of the participants (52.20%) have attained upper secondary or post-secondary education (**Table 5**). About one third (31.65%) of the participants have attained tertiary education.

Spain stands out with a relatively high share (29.33%) of participants who have completed below upper secondary education as their highest level of education (**Table 5**). However, also in Spain, the share of participants who have attained tertiary education is the third highest with 35.67%, following the

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Netherlands (36.16%) and the United Kingdom, where 41.87% have attained tertiary education. In Slovenia, the proportion of participants with below upper secondary education is the lowest with only 3.93%. Simultaneously, Slovenia has the highest share of participants who have attained upper-secondary or post-secondary education with 66.73%. It should be noted that the ISCED-class pattern of educational outcomes does not always exactly match each country's national educational system. There are further variations in duration of educational cycles so that ISCED classes might not always be entirely comparable across countries.

Table 5: Frequency distribution: Distribution of education levels (S8)

Country	Below upper secondary	Upper / post-secondary	Tertiary
DE	293	817	390
	19.53%	54.47%	26.00%
ES	440	525	535
	29.33%	35.00%	35.67%
FR	179	813	508
	11.93%	54.20%	33.87%
IT	397	816	287
	26.47%	54.40%	19.13%
NL	257	700	542
	17.14%	46.70%	36.16%
PL	92	985	423
	6.13%	65.67%	28.20%
SE	224	757	519
	14.93%	50.47%	34.60%
SI	59	1,001	440
	3.93%	66.73%	29.33%
UK	240	632	628
	16.00%	42.13%	41.87%
Total	**2,181**	**7,046**	**4,272**
	16.16%	**52.20%**	**31.65%**

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3.5 Income

In S9, the participants are asked to indicate what range matches their household's total net monthly income. The income is asked as the total net household income (after taxes). As it is shown in **Figure 6**, the respondents are shown 22 income ranges starting with "less than 500 euro" and ending with "5,500 euro or more" as the last option. For countries outside the euro area, the respective currencies (i.e., PLN in Poland, SEK in Sweden, and GBP in the United Kingdom) are shown to the respondents according to the exchange rates and later adjusted to euro again for comparison reasons.

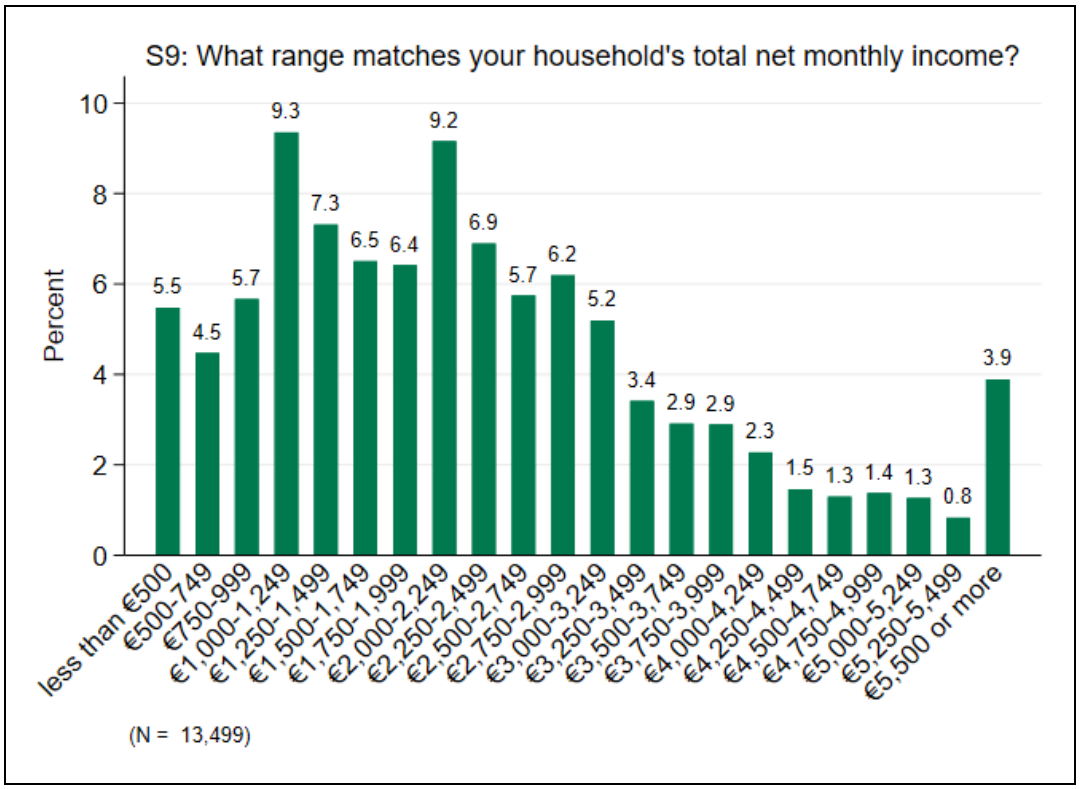

Figure 6: Income distribution all countries (S9)

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The median of the net monthly income across the participants of all countries falls into the category of 2,000-2,249 euro. The number of participants with an income ranging between 1,000 and1,249 euro makes up the largest share (mode) of the total sample with 9.35%, closely followed by those in the range of 2,000-2,249 euro (9.16%) (**Figure 6**). When comparing the different countries, on average, the participants from Sweden have the highest household's total net monthly income with a median at the 3,000-3,249-euro class, followed by the participants from the United Kingdom with a median at the 2,750-2,999-euro class (**Figure 7**)[1]. The participants from Poland have the lowest household's total net monthly income with a median at the 750–999-euro class. Countries from southern and eastern European countries tend to have lower median incomes than western and northern ones.

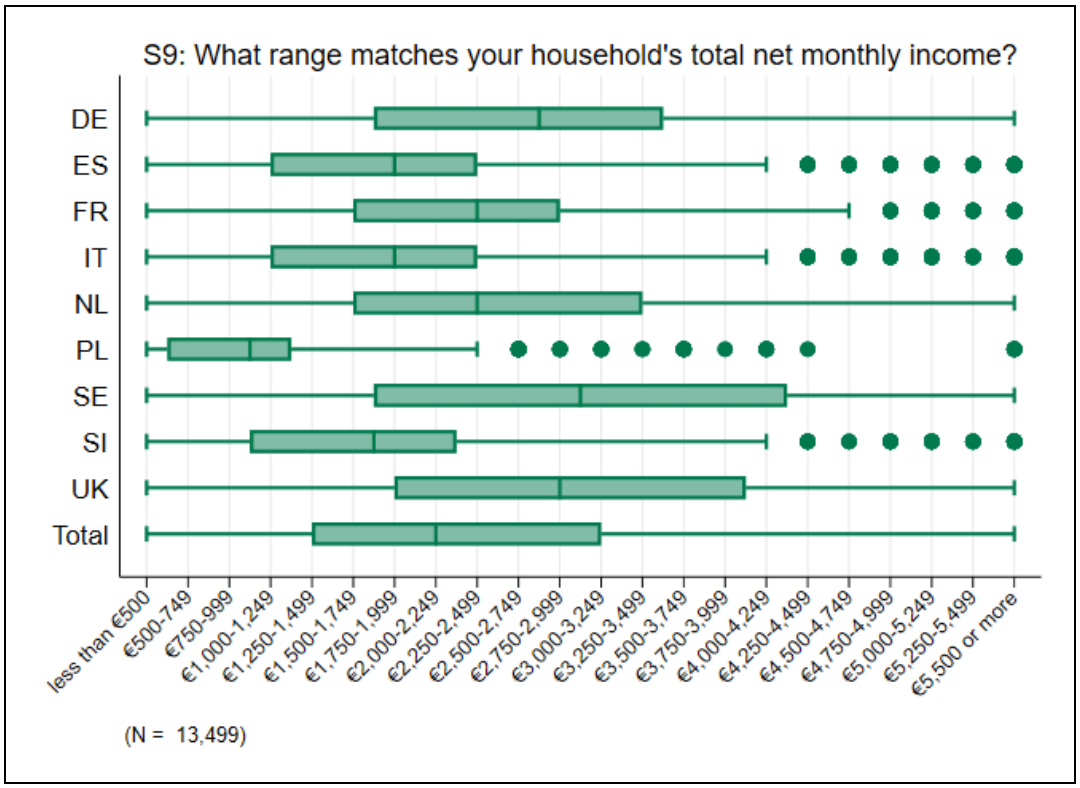

Figure 7: Income distribution across countries (S9)

[1] In this as well as in any following boxplot diagram, the rectangular ("box") displays the interquartile range (IQR), that is, all values greater than or equal to the first quartile and less than or equal to the third quartile. The vertical line inside the box is the median. A median refers to the value of a real-valued random variable for which 50% of all other values are less than or equal to that value and for which 50% of all other values are greater than or equal to that value. This holds analogously for the first quartile (i.e., 25% smaller and 75% larger or equal) and the third quartile (i.e., 75% smaller and 25% larger or equal). The vertical lines connecting the box with the adjacent lines on the left and right are called whiskers. They cover all values outside the box that are $1.5 \times IQR$ less than the first or greater than the third quartile, respectively. As the whiskers are based on data points and not the actual IQR length, their own length may vary on both sides. The adjacent lines are the whisker range's minimum or maximum, respectively. Consequently, all dots outside the whisker range represent outliers.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 837752.

3.6 Household size

Households with two persons make up the largest portion (34.37%) of surveyed households (**Figure 8**). While 37.93% of participants indicate to not have children, this also means that the majority of respondents do have children (**Figure 9**). **Table 6** shows that the mean household size is 2.74 and the mean number of children is 1.22. On average, the household size of the survey participants in Italy is largest with 3.10, yet it stands out that the mean number of children in Italy is the lowest among the nine countries with 1.03. The respondents in the United Kingdom have the highest number of children with 1.39. Some values for household size and number of children in household seem unrealistically large. The provided dataset has not been cleaned yet and provides raw survey responses.

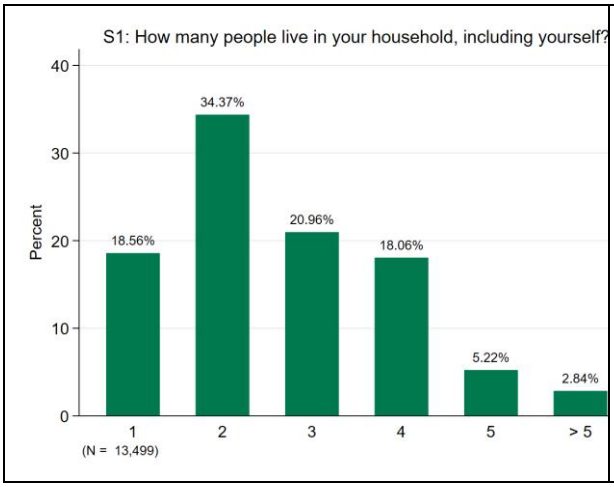

Figure 8: Household size distribution (S1)

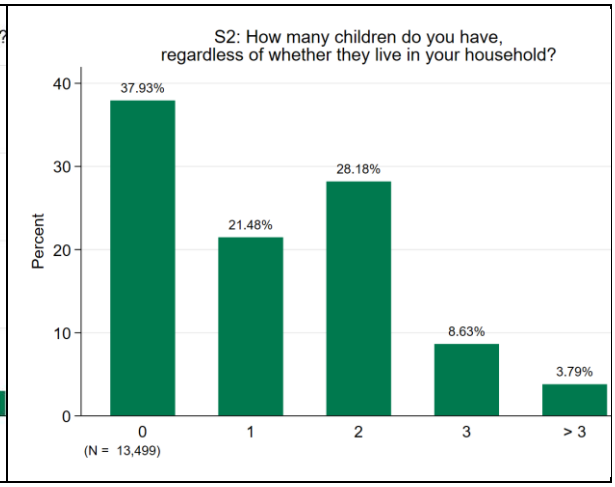

Figure 9: Distribution of number of children among participants (S2)

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Table 6: Summary statistics for household sizes and children (S1, S2)

Country	Variable	Mean	Std. dev.	Median	Min	Max
DE	Household size	2.33	1.31	2	1	26
	No. of children	1.06	1.24	1	0	8
ES	Household size	2.98	1.61	3	1	28
	No. of children	1.17	1.90	1	0	62
FR	Household size	2.65	1.34	2	1	19
	No. of children	1.27	1.26	1	0	7
IT	Household size	3.10	2.21	3	1	26
	No. of children	1.03	1.08	1	0	15
NL	Household size	2.51	1.62	2	1	26
	No. of children	1.31	1.56	1	0	24
PL	Household size	2.97	2.18	3	1	33
	No. of children	1.34	1.18	1	0	9
SE	Household size	2.28	1.66	2	1	28
	No. of children	1.12	1.28	1	0	9
SI	Household size	3.02	2.13	3	1	25
	No. of children	1.29	1.07	1	0	6
UK	Household size	2.81	1.88	2	1	32
	No. of children	1.39	1.46	1	0	14
Total	**Household size**	**2.74**	**1.82**	**2**	**1**	**33**
	No. of children	**1.22**	**1.36**	**1**	**0**	**62**

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3.7 Living area

As **Figure 10** shows, most survey participants live in cities, towns, or suburbs, whereas only a smaller fraction lives in rural areas. The highest rate of respondents in urban areas can be found in Spain, where only 6.27% of the participants indicate to come from a rural area (**Table 7**). In the other countries, the share of participants from rural areas is larger, especially in Germany and France with 29.27% and 35.27%, respectively. This distribution does not directly correspond to some standard classification instead it is as the respondent classifies the region.

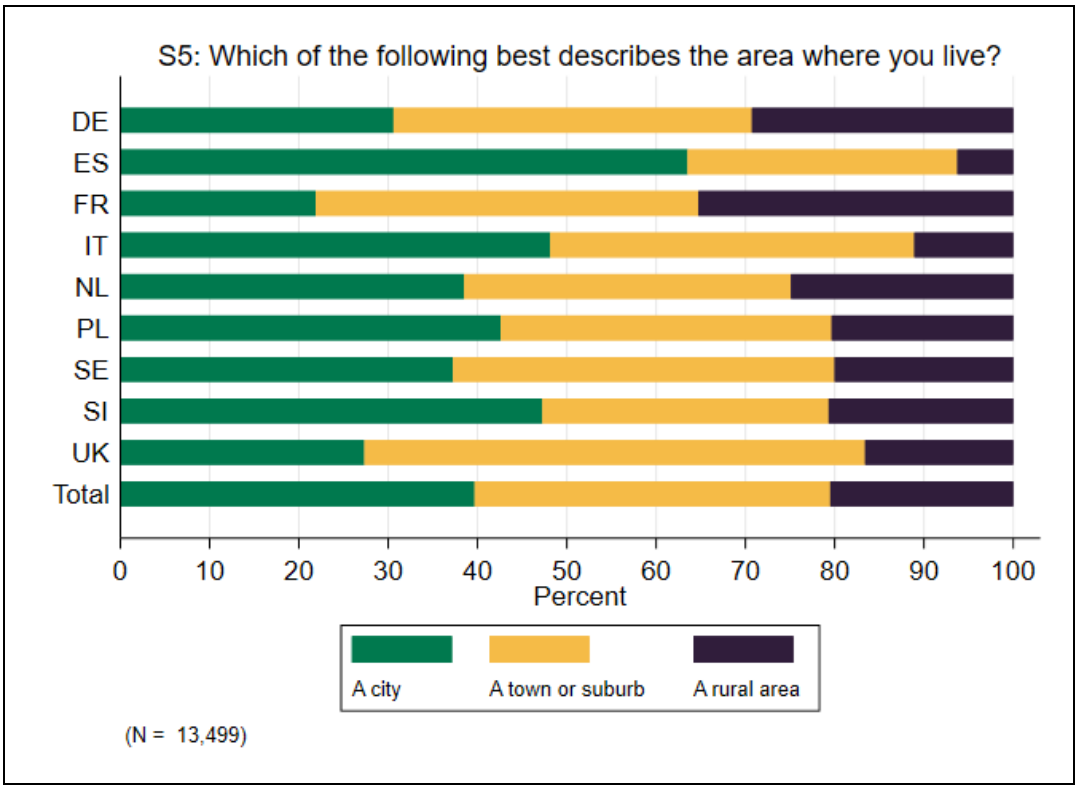

Figure 10: Living areas (S5)

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Table 7: Frequency distribution: Living areas (S5)

Country	A city	A town or suburb	A rural area
DE	459	602	439
	30.60%	40.13%	29.27%
ES	953	453	94
	63.53%	30.20%	6.27%
FR	328	643	529
	21.87%	42.87%	35.27%
IT	722	612	166
	48.13%	40.80%	11.07%
NL	577	549	373
	38.49%	36.62%	24.88%
PL	639	556	305
	42.60%	37.07%	20.33%
SE	559	641	300
	37.27%	42.73%	20.00%
SI	709	481	310
	47.27%	32.07%	20.67%
UK	410	841	249
	27.33%	56.07%	16.60%
Total	**5,356**	**5,378**	**2,765**
	39.68%	**39.84%**	**20.48%**

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3.8 Political orientation

Regarding their political orientation, on a scale from 0, being "far left", and 10, being "far right", out of the participants who identify their political views on the scale (N = 9,423), the biggest group (22.20%) describes it with a value of 5 (**Figure 11** and **Figure 12**). The mean value on the scale is 5.13. The proportions decrease towards both ends of the scale. There do not seem to be great variations across countries. Amongst those who do not reveal their political position on the scale from far left to far right, about half (51.05%) indicate to not be interested in politics. Another 34.67% of those respondents cannot find their position on the presented type of scale and 14.28% do not wish to disclose their political views.

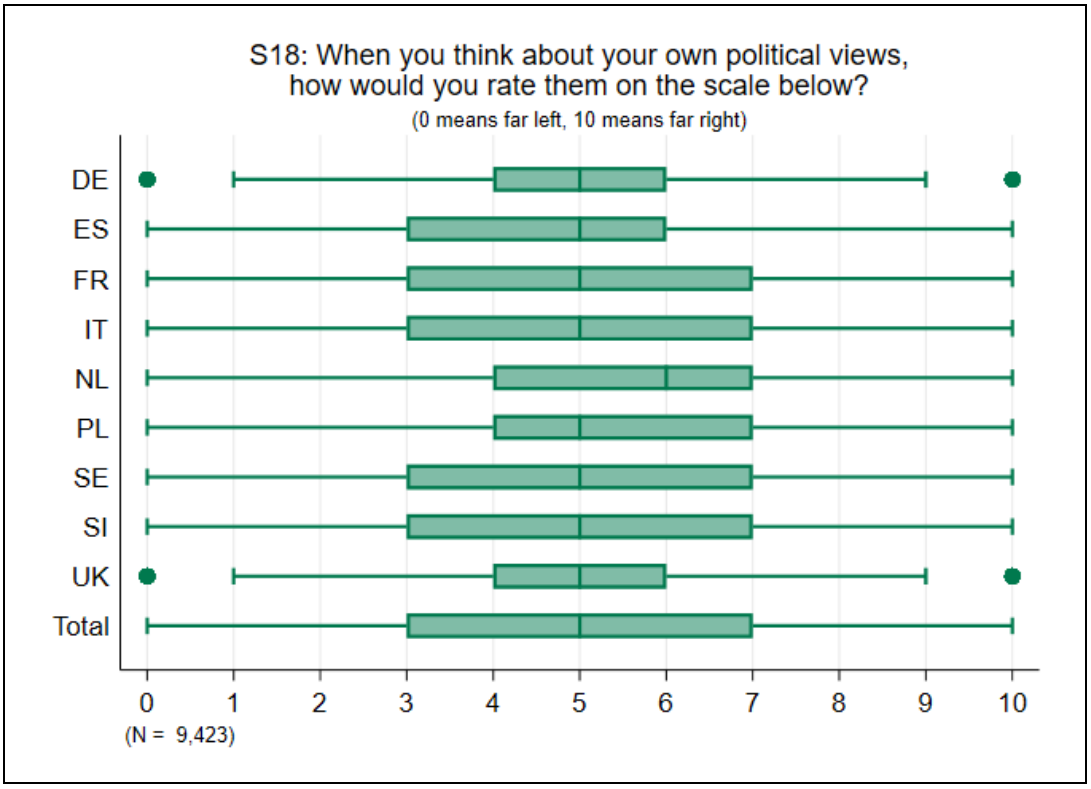

Figure 11: Political orientation (S18)

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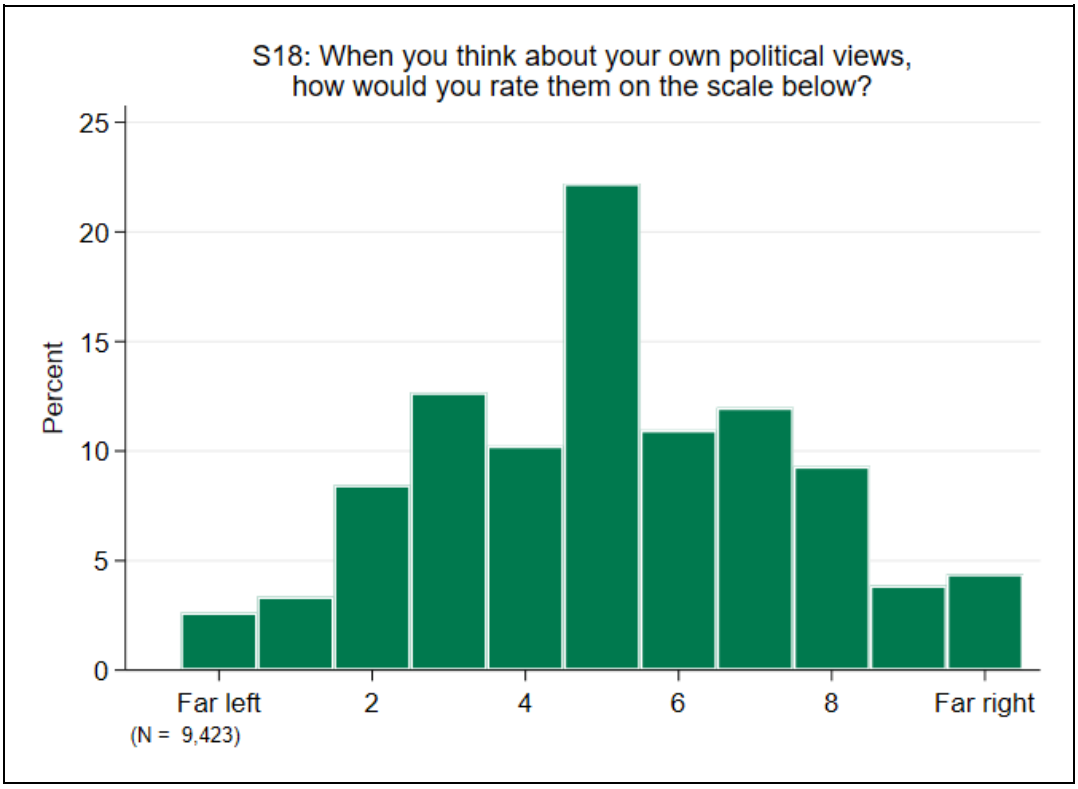

Figure 12: Political orientation (S18)

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3.9 Representativeness of the sample

This survey study aims at being as representative as possible for the whole population of its nine participating countries. Participants were selected randomly from large samples of registered users that participate in the surveys on mingle in each country. To avoid biases by self-selection of certain subgroups and consequently overrepresentation thereof, quotas for socioeconomic characteristics of participants were set that represent the actual distribution of these in each country. Target quotas for the variables age, gender and education originate from Eurostat (year 2020), while quotas for the total net household incomes were collected from European Social Survey (ESS, year 2018). Hence, quotas always originated from the same source for all countries per variable, which is advantageous in terms of comparability. Overall, it can be said that, while not perfect, this procedure led to a set of samples that could be considered representative to a substantial degree for all nine countries.[2] The age distribution of the sample overwhelmingly corresponds to the target age distribution and is therefore well representative in Spain, France, Italy, Poland, Sweden, and Slovenia. In Germany, the Netherlands and the United Kingdom persons between 18 and 29 years of age are slightly underrepresented, ranging from -3.15 percentage points in Germany to -4.63 percentage points in the United Kingdom (**Table 8** and **Table 9**).

Table 8: Relative target and sample age distribution per country (S4)

Country	Relative target age distribution					Relative sample age distribution				
	18-29 years	30-39 years	40-49 years	50-59 years	60-69 years	18-29 years	30-39 years	40-49 years	50-59 years	60-69 years
DE	20.15%	19.17%	18.10%	23.90%	18.68%	17.00%	19.33%	18.13%	26.20%	19.33%
ES	18.18%	18.97%	24.35%	21.87%	16.63%	18.00%	18.87%	24.13%	22.13%	16.87%
FR	21.41%	19.40%	20.04%	20.51%	18.65%	21.13%	19.27%	20.00%	20.47%	19.13%
IT	18.21%	17.21%	22.44%	23.64%	18.49%	17.80%	17.20%	22.87%	23.67%	18.47%
NL	22.89%	18.40%	18.91%	21.69%	18.11%	18.95%	19.01%	19.55%	22.41%	20.08%
PL	19.80%	22.61%	20.76%	17.33%	19.49%	19.80%	22.67%	20.73%	17.33%	19.47%
SE	23.42%	20.64%	19.61%	19.60%	16.74%	23.27%	20.67%	19.60%	19.60%	16.87%
SI	17.78%	20.13%	21.52%	21.13%	19.44%	17.73%	20.13%	21.53%	21.13%	19.47%
UK	23.56%	20.13%	19.65%	20.44%	16.23%	18.93%	21.13%	21.00%	21.67%	17.27%

Table 9: Deviation of age distribution in percentage points per country (S4)

Country	18-29 years	30-39 years	40-49 years	50-59 years	60-69 years
DE	-3.15%	0.16%	0.03%	2.30%	0.65%
ES	-0.18%	-0.10%	-0.22%	0.26%	0.24%
FR	-0.28%	-0.13%	-0.04%	-0.04%	0.48%
IT	-0.41%	-0.01%	0.43%	0.03%	-0.02%
NL	-3.94%	0.61%	0.64%	0.72%	1.97%
PL	0.00%	0.06%	-0.03%	0.00%	-0.02%
SE	-0.15%	0.03%	-0.01%	0.00%	0.13%
SI	-0.05%	0.00%	0.01%	0.00%	0.03%
UK	-4.63%	1.00%	1.35%	1.23%	1.04%

[2] For a detailed comparison between the data sample and the target distributions, see Andor et al. (2022).

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Regarding gender distribution, the sample matches the target distribution in all nine countries except for Italy and Sweden. In both countries, the proportion of female participants is higher than targeted, with +1.66 percentage points in Italy and +4.43 percentage points in Sweden (**Table 10**).

Table 10: Relative target and sample gender distribution as well as the deviation in percentage points per country (S3)

Country	Relative target gender distribution		Relative sample gender distribution		Deviation in percentage points	
	Female	Male	Female	Male	Female	Male
DE	49.53%	50.47%	49.47%	50.53%	-0.06%	0.06%
ES	50.14%	49.86%	50.13%	49.87%	-0.01%	0.01%
FR	51.06%	48.94%	51.13%	48.87%	0.07%	-0.07%
IT	50.27%	49.73%	51.93%	48.07%	1.66%	-1.66%
NL	49.80%	50.20%	49.77%	50.23%	-0.03%	0.03%
PL	50.46%	49.54%	50.47%	49.53%	0.01%	-0.01%
SE	48.97%	51.03%	53.40%	46.60%	4.43%	-4.43%
SI	48.18%	51.82%	48.20%	51.80%	0.02%	-0.02%
UK	50.27%	49.73%	50.27%	49.73%	0.00%	0.00%

In Germany, the education distribution of the sample corresponds to the target distribution. In all other eight countries, however, persons with below upper secondary education are mildly to severely underrepresented in the sample. The deviation ranges from -3.20 percentage points in the United Kingdom to -13.33 percentage points in Italy (**Table 11** and **Table 12**). The deficit of respondents with below upper secondary education is matched by a higher proportion of participants with upper secondary or post-secondary education.

Table 11: Relative target and sample distribution of education levels per country (S8)

Country	Relative target distribution of education levels			Relative sample distribution of education levels		
	Below upper secondary education (ISCED 0-2)	Upper secondary or post-secondary non-tertiary education (ISCED 3-4)	Tertiary education (ISCED 5-8)	Below upper secondary education (ISCED 0-2)	Upper secondary or post-secondary non-tertiary education (ISCED 3-4)	Tertiary education (ISCED 5-8)
DE	19.50%	54.50%	26.00%	19.53%	54.47%	26.00%
ES	39.60%	25.30%	35.10%	29.33%	35.00%	35.67%
FR	23.40%	42.80%	33.80%	11.93%	54.20%	33.87%
IT	39.80%	42.80%	17.40%	26.47%	54.40%	19.13%
NL	25.50%	39.70%	34.80%	17.14%	46.70%	36.16%
PL	13.30%	58.50%	28.20%	6.13%	65.67%	28.20%
SE	20.80%	41.50%	37.80%	14.93%	50.47%	34.60%
SI	15.80%	54.90%	29.30%	3.93%	66.73%	29.33%
UK	19.20%	40.20%	40.60%	16.00%	42.13%	41.87%

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Table 12: Percentage point differences between target and sample distribution of education levels per country (S8)

Country	Below upper secondary education (ISCED 0-2)	Upper secondary or post-secondary non-tertiary education (ISCED 3-4)	Tertiary education (ISCED 5-8)
DE	0.03%	-0.03%	0.00%
ES	-10.27%	9.70%	0.57%
FR	-11.47%	11.40%	0.07%
IT	-13.33%	11.60%	1.73%
NL	-8.36%	7.00%	1.36%
PL	-7.17%	7.17%	0.00%
SE	-5.87%	8.97%	-3.20%
SI	-11.87%	11.83%	0.03%
UK	-3.20%	1.93%	1.27%

As depicted in **Table 13**, the sample's income distribution is very well met in all nine countries. It corresponds perfectly to the target distribution in Germany, Poland, Sweden and Slovenia and it corresponds almost perfectly to the target distribution in Spain and the Netherlands. Only small deviations can be found in Italy, France, and the United Kingdom, with the highest deviation in Italy at -1.13 percentage points. Here, high-income earners are slightly underrepresented.

Table 13: Quartile definitions, relative sample income distribution and deviation in percentage points per country (S9)

Country	Total net income quartiles (in national currencies)			Relative sample income distribution				Deviation in percentage points			
	1st top cut-off point (T-1)	2nd top cut-off point (T-2)	3rd top cut-off point (T-3)	1	2	3	4	1	2	3	4
DE	1,749	2,749	3,499	25.00%	25.00%	25.00%	25.00%	0.00%	0.00%	0.00%	0.00%
ES	1,249	1,999	2,499	25.07%	25.00%	25.00%	24.93%	0.07%	0.00%	0.00%	-0.07%
FR	1,749	2,499	2,999	25.53%	25.00%	24.60%	24.87%	0.53%	0.00%	-0.40%	-0.13%
IT	1,249	1,999	2,499	25.33%	26.80%	24.00%	23.87%	0.33%	1.80%	-1.00%	-1.13%
NL	1,749	2,499	3,249	25.02%	25.02%	24.95%	25.02%	0.02%	0.02%	-0.05%	0.02%
PL	2,999	4,999	5,999	25.00%	25.00%	25.00%	25.00%	0.00%	0.00%	0.00%	0.00%
SE	17,499	29,999	42,499	25.00%	25.00%	25.00%	25.00%	0.00%	0.00%	0.00%	0.00%
SI	999	1,749	2,249	25.00%	25.00%	25.00%	25.00%	0.00%	0.00%	0.00%	0.00%
UK	1,649	2,449	3,249	25.80%	25.00%	24.20%	25.00%	0.80%	0.00%	-0.80%	0.00%

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 837752.

4 ENERGY COMMUNITIES

Regarding energy communities, a first and important insight is that only 16.00% of the participants are even aware of energy communities (**Table 14**). **Figure 13** shows that differences exist across countries. Awareness is highest in the Netherlands, with 29.29% of participants, and lowest in France, with only 9.07%. Hence, most participants are unaware of energy communities, varying from 55.24% in the Netherlands to 79.13% in France (**Table 14**). In total, the share of respondents who are not sure if they know any energy communities (15.09%) is similar to the share of participants who are aware of energy communities (16.00%).

Table 14: Frequency distribution: Awareness of energy communities (AW1)

Country	Yes	No	Not sure
DE	188	1,108	204
	12.53%	73.87%	13.60%
ES	224	1,086	190
	14.93%	72.40%	12.67%
FR	136	1,187	177
	9.07%	79.13%	11.80%
IT	190	1,100	210
	12.67%	73.33%	14.00%
NL	439	828	232
	29.29%	55.24%	15.48%
PL	276	909	315
	18.40%	60.60%	21.00%
SE	233	972	295
	15.53%	64.80%	19.67%
SI	254	977	269
	16.93%	65.13%	17.93%
UK	220	1,135	145
	14.67%	75.67%	9.67%
Total	**2,160**	**9,302**	**2,037**
	16.00%	**68.91%**	**15.09%**

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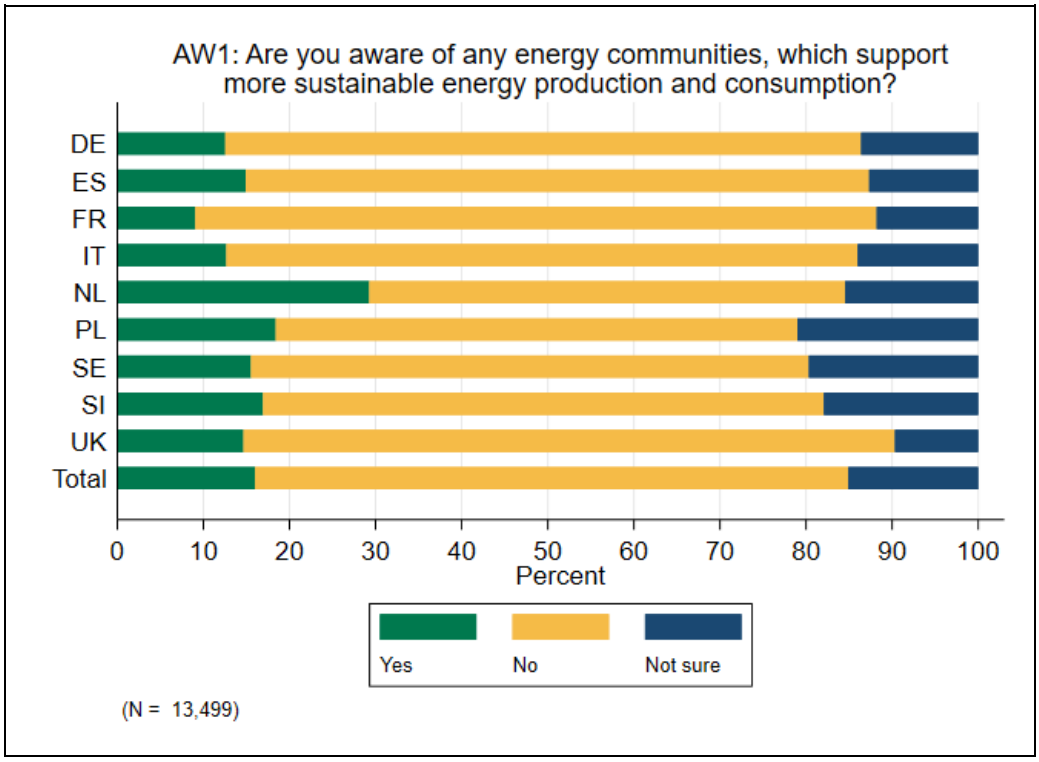

Figure 13: Awareness of energy communities (AW1)

The 2,160 respondents (16.00%) who are aware of energy communities are then asked about how they became aware of these. As depicted in **Figure 14**, the most popular source of information is the Internet (40.09%). The media is also an important information source, with 33.47% of the respondents naming social media and 30.23% naming the local media as another source of information.

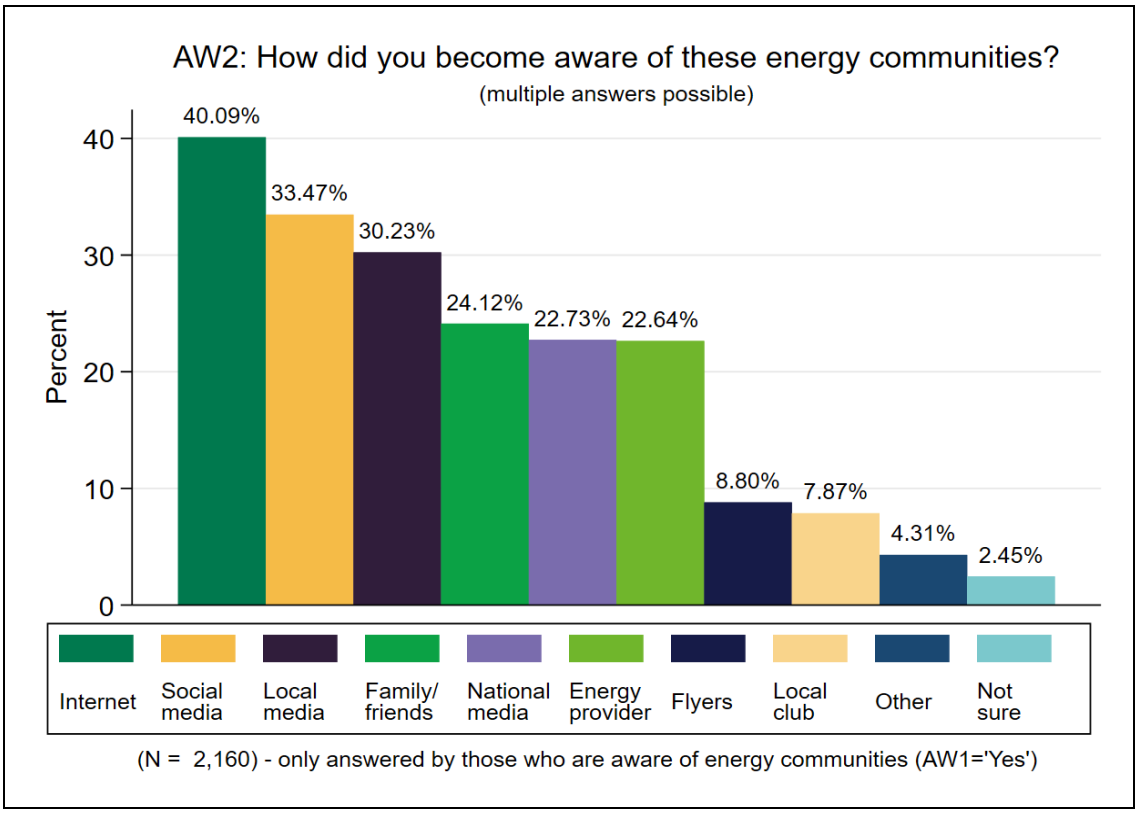

Figure 14: Source of awareness of energy communities (AW2)

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In a next step, those 2,160 respondents who are aware of energy communities are asked about the importance of energy communities for the transition towards a sustainable energy system (**Figure 15**). In all nine countries, 85.28% of the survey participants believe energy communities to be "important" or "very important" for this transition (**Table 15**). The highest number of respondents, who value energy communities as an "important" or "very important" factor for a sustainable energy system, can be found in Italy (93.16%). With 58.42%, Italy also has the highest share of respondents who believe energy communities to be "very important" for a sustainable energy transition.

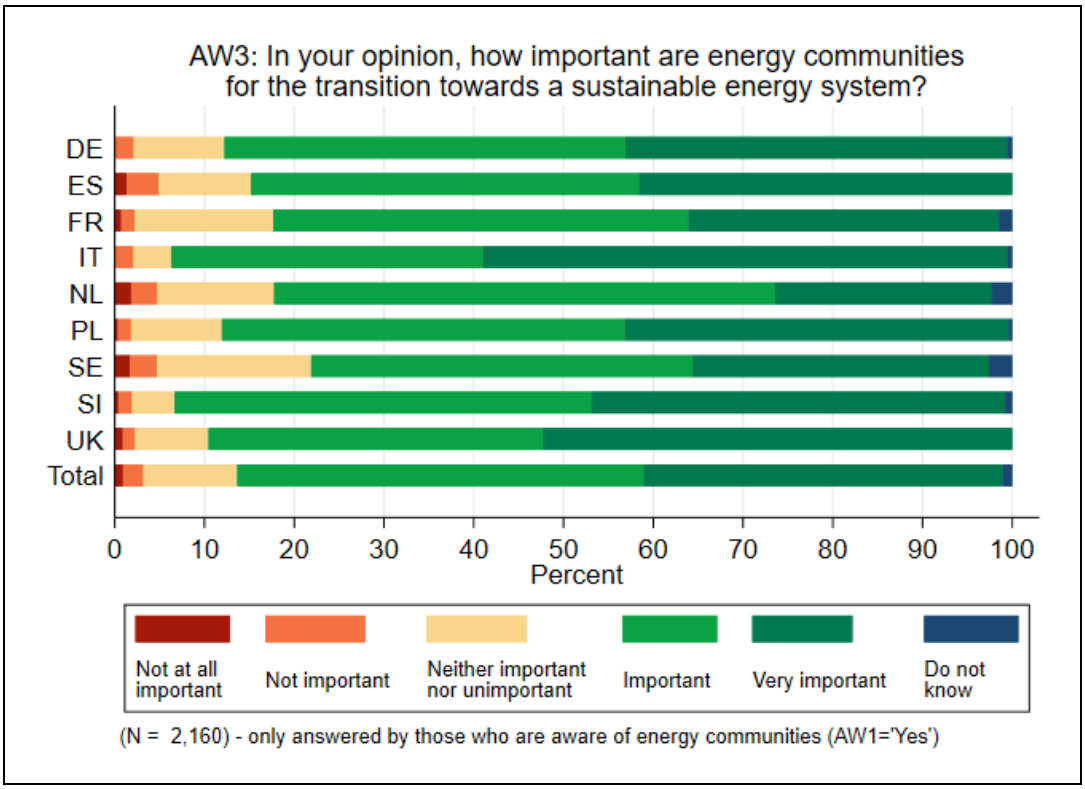

Figure 15: Perceived importance of energy communities for transition towards sustainable energy system (AW3)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 837752.

Table 15: Frequency distribution: Perceived importance of energy communities for transition towards sustainable energy system (AW3)

Country	Not at all important	Not important	Neither important nor unimportant	Important	Very important	Do not know	Total
DE	0	4	19	84	80	1	188
	0.00%	2.13%	10.11%	44.68%	42.55%	0.53%	100.00%
ES	3	8	23	97	93	0	224
	1.34%	3.57%	10.27%	43.30%	41.52%	0.00%	100.00%
FR	1	2	21	63	47	2	136
	0.74%	1.47%	15.44%	46.32%	34.56%	1.47%	100.00%
IT	0	4	8	66	111	1	190
	0.00%	2.11%	4.21%	34.74%	58.42%	0.53%	100.00%
NL	8	13	57	245	106	10	439
	1.82%	2.96%	12.98%	55.81%	24.15%	2.28%	100.00%
PL	1	4	28	124	118	1	276
	0.36%	1.45%	10.14%	44.93%	42.75%	0.36%	100.00%
SE	4	7	40	99	77	6	233
	1.72%	3.00%	17.17%	42.49%	33.05%	2.58%	100.00%
SI	1	4	12	118	117	2	254
	0.39%	1.57%	4.72%	46.46%	46.06%	0.79%	100.00%
UK	2	3	18	82	115	0	220
	0.91%	1.36%	8.18%	37.27%	52.27%	0.00%	100.00%
Total	**20**	**49**	**226**	**978**	**864**	**23**	**2,160**
	0.93%	**2.27%**	**10.46%**	**45.28%**	**40.00%**	**1.06%**	**100.00%**

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 837752.

As shown in **Figure 16**, only 3.69% of all respondents, which equates to 498 participants, are a member of an energy community. This means that 23.06% of those who are aware of energy communities are a member of such a community.

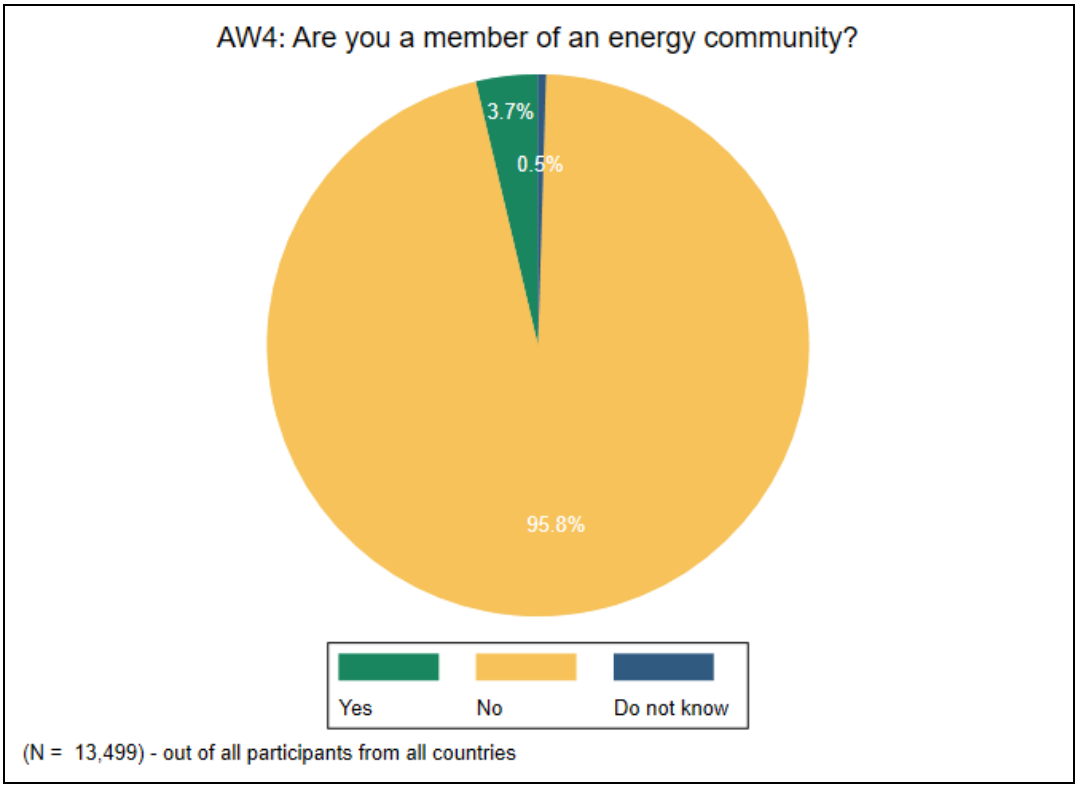

Figure 16: Energy Community members among all survey participants (AW4)

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Table 16 shows that energy community membership is not evenly distributed across countries. While e.g., in France, less than 1% (0.80%) of the respondents indicate membership, in the Netherlands 8.94% of the respondents are members of an energy community. These two countries represent the upper and lower bound of this distribution. Poland represents the second highest observation with a share of 4.60%, followed by Spain with a share of 4.47%. For the other countries, between 1.87% (Italy) and 4.00% (Sweden) of the participants are members of energy communities.

Table 16: Energy community members by country

Country	Member	Not a member
DE	30	1,470
	2.00%	98.00%
ES	67	1,433
	4.47%	95.53%
FR	12	1,488
	0.80%	99.20%
IT	28	1,472
	1.87%	98.13%
NL	134	1,365
	8.94%	91.06%
PL	69	1,431
	4.60%	95.40%
SE	60	1,440
	4.00%	96.00%
SI	41	1,459
	2.73%	97.27%
UK	57	1,443
	3.80%	96.20%
Total	**498**	**13,001**
	3.69%	**96.31%**

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5 PUBLICATIONS BASED ON THE NEWCOMERS CITIZEN SURVEY DATA

So far, several outputs based on the NEWCOMERS citizen survey data have been published. These are listed below in **Table 17** .

Table 17: Existing publications based on the NEWCOMERS citizen survey data

Publications
Andor M. A., Barnes J., Blasch J., Darby S., van der Grijp N., Hansen P., Hoenow N. C., Kamin T., Medved P., Nicita A., Oosterhuis F., Palm J., Petrovics D. & Smole A. (2022): *NEWCOMERS - Final policy recommendations prepared by NEWCOMERS H2020 project under grant agreement No 837752*
Andor, M. A., Blasch, J., Cordes, O., Hoenow, N. C., Karki, K., Koch, B. Y., Micke, K., Niehues, D., & Tomberg, L. (2022). *Report on cross-country citizen survey. Deliverable 6.3 developed as part of the NEWCOMERS project, funded under EU H2020 grant agreement 837752*..
Andor, M. A., Grossmann, I., Hoenow, N. C., & Tomberg, L. (2023). *Wisdom and prosocial behavior* (No. 1054). Ruhr Economic Papers.
COMETS, NEWCOMERS, SocialRES, & SONNET. (2022). *Putting people at the heart of energy transitions.: social innovation in energy: four projects shine a light on the path forward.* Policy brief, April 2022., Brussels/Antwerp. COMETS, NEWCOMERS. Social-RES, SONNET H2020 projects.
Hoenow, N. C., Karki, K., & Burger, M. N. (2025). Environmental attitudes and prosociality following a natural disaster: evidence from the 2021 flood in Germany. *Climatic Change, 178*(12), 222.
van der Grijp, N., Andor, M. A., Barnes, J., Darby, S., Hansen, P., Hoenow, N. C., ... & Tomberg, L. (2022). *Synthesis of research results: New clean energy communities and polycentric governance thinking. Deliverable developed as part of the NEWCOMERS project under grant agreement, 837752*.

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6 DATA ACCESS

The dataset is available as Scientific Use File (https://doi.org/10.7807/newcomers:energy:2021) at the FDZ Ruhr, the research data center at RWI – Leibniz Institute for Economic Research. The data access is only granted for scientific, non-commercial studies and to affiliated researchers of scientific institutions. It requires a signed data use agreement that can be applied for on the FDZ Homepage. The data can be obtained as a Stata® dataset (.dta) file or csv file. The users are requested to cite the source correctly and to inform FDZ Ruhr about publications with the data.

When using the data set, please cite it as:

- Andor, M. A., Hoenow, N. C., Niehues, D., & Tomberg, L. (2022). RWI Newcomers: Citizen Survey on Energy Communities 2021 - (SUF Off-site) [Data set]. In *RWI-MICRO* (Version 1). RWI – Leibniz Institute for Economic Research. https://doi.org/10.7807/NEWCOMERS:ENERGY:2021

In addition to the data, we would appreciate citation of this data report as:

- Andor, M. A., Blasch, J., Cordes, O., Hoenow, N. C., Karki, K., Koch, B. Y., Micke, K., Niehues, D., & Tomberg, L. (2026) NEWCOMERS European citizen survey on energy transition and energy communities – Data Report –, developed as part of the NEWCOMERS project, funded under EU H2020 grant agreement 837752.

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7 References

Andor M. A., Barnes J., Blasch J., Darby S., van der Grijp N., Hansen P., Hoenow N. C., Kamin T., Medved P., Nicita A., Oosterhuis F., Palm J., Petrovics D. & Smole A. (2022): *NEWCOMERS - Final policy recommendations prepared by NEWCOMERS H2020 project under grant agreement No 837752*

Andor, M. A., Blasch, J., Cordes, O., Hoenow, N. C., Karki, K., Koch, B. Y., Micke, K., Niehues, D., & Tomberg, L. (2022). *Report on cross-country citizen survey. Deliverable 6.3 developed as part of the NEWCOMERS project, funded under EU H2020 grant agreement 837752*.

Andor, M. A., Grossmann, I., Hoenow, N. C., & Tomberg, L. (2023). *Wisdom and prosocial behavior* (No. 1054). Ruhr Economic Papers.

Brienza, J. P., Kung, F. Y., Santos, H. C., Bobocel, D. R., & Grossmann, I. (2018). Wisdom, bias, and balance: Toward a process-sensitive measurement of wisdom-related cognition. *Journal of Personality and Social Psychology, 115*(6), 1093-1126.

COMETS, NEWCOMERS, SocialRES, & SONNET. (2022). *Putting people at the heart of energy transitions.: social innovation in energy: four projects shine a light on the path forward.* Policy brief, April 2022., Brussels/Antwerp. COMETS, NEWCOMERS. Social-RES, SONNET H2020 projects.

Hoenow, N. C., Karki, K., & Burger, M. N. (2025). Environmental attitudes and prosociality following a natural disaster: evidence from the 2021 flood in Germany. *Climatic Change, 178*(12), 222.

van der Grijp, N., Andor, M. A., Barnes, J., Darby, S., Hansen, P., Hoenow, N. C., ... & Tomberg, L. (2022). *Synthesis of research results: New clean energy communities and polycentric governance thinking. Deliverable developed as part of the NEWCOMERS project under grant agreement, 837752*.

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