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ENTRACK

Empowering local and regional authorities to design clean energy transition plans

Report on perceptions, needs and priorities of citizens concerning the energy transitions

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List of Abbreviation and Acronyms

Abbreviation	Meaning
EC	European Commission
EU	European Union
GA	Grant Agreement
ENTRACK	Empowering local and regional authorities to design clean energy transition plans
CINEA	European Climate, Infrastructure, and Environment executive agency
WP	Work Package
EPAH	Energy Poverty Advisory Hub
ITRE	European parliament committee on industry, research and energy
SEO	Search Engine Optimization
CoP	Community of Practice
MRP	Municipality Regions partnerships
CE	Climate Explorer
FP	Focal Point

ENTRACK Consortium

The ENTRACK consortium is consisted of the following organisations:

#	Role	Short name	Participant organization name	Country
1	COO	AISFOR	AISFOR SRL	IT
1.1	AE	RETE	RETE ASSIST- ETS	IT
2	BEN	KILOWATT	KILOWATT SOC COOP	IT
3	BEN	Piano di Sorrento	COMUNE DI PIANO DI SORRENTO	IT
4	BEN	Vico Equense	COMUNE DI VICO EQUENSE	IT
5	BEN	ECOSERVEIS	ASOCIACION ECOSERVEIS	ES
6	BEN	ASSOCIACIO PER LA GESTIO DEL PROGRAMA LEADER RIPOLLES GES BISAURA	ASSOCIACIO PER LA GESTIO DEL PROGRAMA LEADER RIPOLLES GES BISAURA	ES
7	BEN	NOVA	UNIVERSIDADE NOVA DE LISBOA	PT
8	BEN	AREANATEJO	AREANATEJO- AGENCIA REGIONAL DE ENERGIA E AMBIENTE DO NORTE ALENTEJANO E TEJO	PT
09	BEN	MUNICIPALITY OF AVDERA	DIMOS AVDIRON	EL
10	BEN	TOPEIROS	DIMOS TOPEIROU	EL
11	BEN	E3-MODELLING AE	E3-MODELLING AE	EL
12	BEN	IEECP	INSTITUTE FOR EUROPEAN ENERGY AND CLIMATE POLICY STICHTING	NL

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Executive summary

This report presents the findings from ENTRACK's ethnographic research, which explores community perceptions, behaviors, and challenges around energy use and sustainability in rural Mediterranean regions. Conducted across eight municipalities in Greece, Italy, Portugal, and Spain, the study involved interviews led by Climate Explorers—individuals trained specifically for this project in ethnographically inspired interviewing techniques. Through these interviews, the Climate Explorers engaged directly with residents, uncovering some of the social and cultural dynamics that influence how communities understand, adopt, or resist sustainable energy practices.

Several cross-cutting themes emerge from the analysis. Economic barriers, such as high upfront costs for renewable technologies and complex subsidy processes, pose significant obstacles to energy transitions. Generational differences also shape attitudes, with younger participants often open to sustainable practices, while older individuals view energy-saving as a practical necessity, primarily driven by economic factors. A consistent gap between community needs and institutional support highlights the importance of localized, community-based solutions to foster collective responsibility and engagement.

The report concludes with specific recommendations for policymakers and stakeholders, advocating for targeted financial support, improved infrastructure, and educational campaigns designed to engage local communities. Recognizing that sustainability efforts must be collaborative, it underscores the potential for intergenerational knowledge sharing and community-driven projects to create a more inclusive and practical path toward sustainability. Also, for this reason, the more descriptive sections of the contextual analyses could also be shared within each community to ensure transparency and to encourage a more active role in shaping policies that directly impact daily life, moving beyond passive acceptance of top-down approaches.

By centering the lived experiences of Mediterranean communities, this report offers a grounded, actionable framework that can contribute to developing energy policies that are socially responsive and contextually informed. Alongside findings from previous ENTRACK project phases, it serves as a valuable resource to guide future project actions.

1 Introduction

This report presents and details the results of Task 3.3 Understanding citizens' perceptions, needs, and priorities concerning energy planning (from now on referred to as T3.3), outlining the methodological framework that guided the activities, the actors involved, the tools employed, the data collection practices used, the data gathered, and the analysis of such data.

The main objective of T3.3, which is part of the Work Package 3 Framing the social energy transition at local level in rural Mediterranean areas (from now on referred to as WP3), was to gather data through ethnographic interviews in small communities of rural areas in Greece, Italy, Portugal, and Spain to analyze energy-related perceptions, key trends, concerns, and preferences among locals.

A key element that distinguishes this activity is that individuals, called Climate Explorers (from now on referred to as CEs), were specifically trained for this task. A foundational ethnographic training program was created for them, offering an overview of ethnography's origins and objectives, its role in examining human behavior, and the value of methods like participant observation and in-depth interviews. The training further demonstrated how ethnographic methods extend beyond academic research into areas like policymaking and market analysis, underscoring their relevance to ENTRACK's mission to foster sustainable energy practices.

CEs were responsible for conducting the interviews within their respective local areas and this approach also addressed an indirect objective of the task, which was to expose and raise awareness among as many people as possible within the communities about energy-related issues.

The ultimate goal was to promote participatory bottom-up approaches and ensure alignment with the broader objectives of the ENTRACK project, providing actionable insights for policymaking and improving the understanding of energy dynamics in rural Mediterranean municipalities, laying the groundwork for co-creation processes where decision makers, stakeholders, and citizens collaborate on energy policy design in the Work Package 4, Building capacity for co-designing social energy plans.

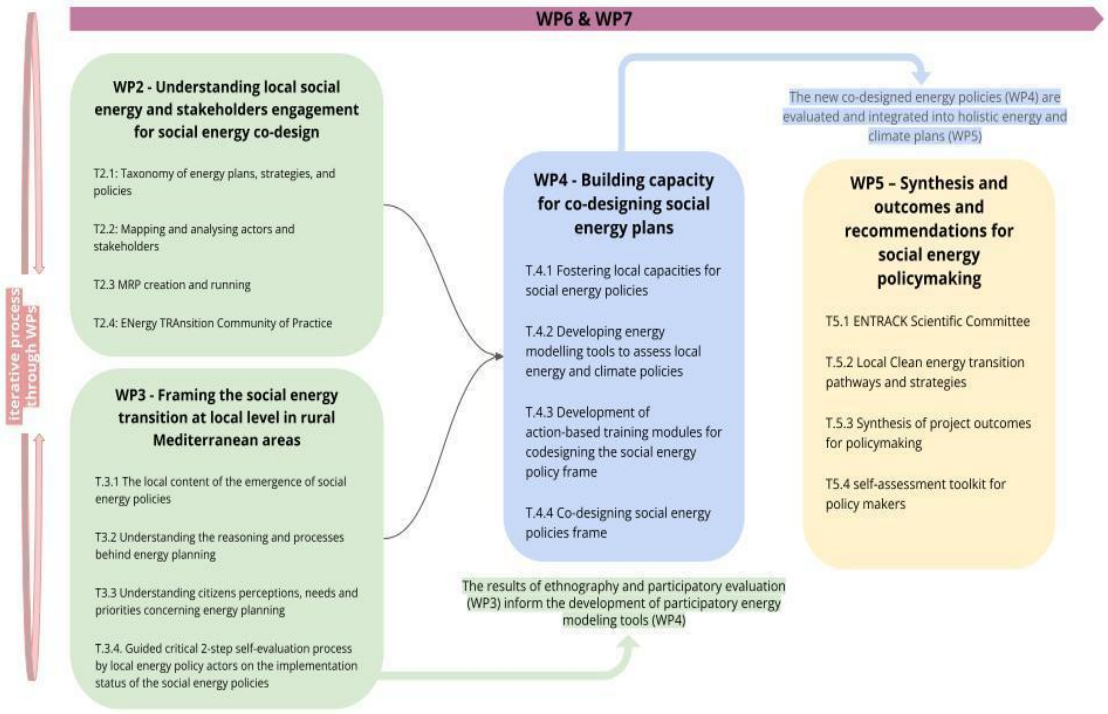

Figure 1 - Interconnections within the ENTRACK project

1.1 ENTRACK project

The European Union is actively pursuing a transition to a more sustainable energy system, with the ambitious goal of reducing greenhouse gas emissions by at least 55% by 2030 and achieving climate neutrality by 2050[1]. To achieve this goal, the EU is focusing on three main pillars: reducing harmful emissions, increasing the share of renewable energy and improving energy efficiency.

These efforts require cooperation at all levels of government, from the European institutions to national governments and regional and local authorities. Local authorities have a crucial role to play as they are closer to citizens and local realities. Understanding the specific needs of communities is essential to ensure a fair and inclusive transition that leaves no one behind.

A key concept underlying this transformation is that of a just energy transition, which aims not only to decarbonise the energy system but also to redress existing social and economic inequalities. This means, for example, tackling energy poverty, which affects millions of European citizens, and ensuring that the transition creates new job opportunities and does not exacerbate inequalities.

To achieve these goals, the EU has launched several initiatives, including the European Green Deal, an ambitious action plan involving massive investment in green technologies, renewable energy and energy efficiency. The EU is also promoting the active participation of citizens and local communities in planning

[1] www.consilium.europa.eu/en/policies/eu-recovery-plan/repowereu/. Accessed 15 Oct. 2024.

and implementing the energy transition through instruments such as the Covenant of Mayors for Climate and Energy.

The Empowering local and regional authorities to design clean ENTRACK project, funded by the EU LIFE programme, contributes to this effort by providing concrete support to local communities in developing and implementing sustainable energy plans. ENTRACK focuses on the following three main objectives.

1. Strengthening the capacity of decision-makers at regional and local level: through the creation of partnerships between municipalities and regions, the definition of a replicable methodology for the co-design of social energy policies and the provision of practical tools and guidelines.
2. Ensuring multi-level coordination and harmonization of energy policies: promoting cooperation between different levels of government and providing a taxonomy of social energy policies.
3. Contributing to the achievement of European and national sustainable energy objectives: providing policy makers with up-to-date knowledge on the design of energy plans, monitoring the impact of the project and promoting synergies with other initiatives, such as the fight against energy poverty and the renovation of buildings.

ENTRACK uses a bottom-up participatory approach, actively involving citizens and local communities in the definition of energy policies. This approach helps to ensure that the energy transition is not only environmentally sustainable, but also fair, inclusive and responsive to the needs of communities.

1.2 Intended Readership

This report is intended for policymakers, local authorities, community leaders, and stakeholders involved in energy policy, sustainability, and rural development. It also serves as a resource for environmental organizations, NGOs, and research institutions interested in community engagement and the social aspects of energy transitions. The analytical and descriptive sections of local scenarios are also directed at the public, encouraging both citizens and stakeholders to approach policy as a collaborative effort. In this way, the report seeks to support all parties committed to building a sustainable future together.

1.3 Contribution to other ENTRACK activities

ENTRACK's innovative approach is based on a deep understanding of the social dynamics within each participating community. This is where ethnography plays a crucial role. By using ethnographic methods in WP3, ENTRACK aims to gain valuable information about the lived experiences of citizens and their perceptions of energy policies. This 'bottom-up' perspective complements the 'top-down' policy analysis carried out in WP2, where a taxonomy of social energy policies was developed. The ethnographic research, conducted by local Climate Explorers, provides rich qualitative data for the subsequent evaluation (WP3) and co-design process (WP4). This will ensure that the energy policies developed are not only technically sound, but also socially relevant and responsive to the specific needs and concerns of the communities they serve. In essence, ethnography promotes a more participatory and inclusive approach to energy transitions.

In particular, the elements that emerge during ethnography are read together with the results of stakeholder interviews (T3.1 & T3.2). This approach allows for a deeper understanding of the area and ensures that these insights are taken into account in the analysis of the citizen interviews.

The analysis revealed that energy emerges as a central issue, deeply intertwined with social concerns such as poverty and inclusiveness, emphasizing a holistic understanding of the challenges. While municipalities are recognized as key actors, the lack of awareness of other institutional actors underlines the need for transparent communication and public engagement in energy governance. The desire for planning and participation in decision-making processes, coupled with a preference for cooperation and networking, shows a strong inclination towards inclusive and participatory approaches to energy policymaking. While stakeholders express a clear desire for concrete policy measures, the limited specificity of existing programmes indicates a lack of knowledge. These findings highlight the need for tailored policy interventions that consider both common concerns and the nuances of regional perspectives in order to facilitate a fair and equitable energy transition.

2 Ethnography for ENTRACK: methodology

The ENTRACK project aims to empower local communities in eight rural municipalities across four Mediterranean countries (Greece, Italy, Portugal, and Spain) to work collaboratively toward fair, inclusive energy policies. To support this goal, T3.3 adopted an ethnographic approach, a research method rooted in cultural anthropology, focused on understanding behaviors and beliefs by immersing in people's daily lives and exploring the motivations and practices that shape their decisions.

In fact, while financial considerations play a critical role, energy consumption choices are influenced by more than just cost or efficiency; they are impacted by social, generational, emotional, and moral factors. By promoting open discussions and challenging assumptions, ethnography encourages participants to reflect on their choices and critically assess the norms influencing energy use. Ethnographic interviews, in particular, can reveal factors that either enable or hinder sustainable energy practices, such as the presence of safe bike paths or limited public transport options.

From a methodological standpoint, this fieldwork was distinct in that it was conducted by non-professional researchers. "Climate Explorers", lay individuals trained by the Kilowatt team in foundational ethnographic techniques, engaged directly with community members, establishing relationships and exploring the underlying motivations for energy-related decisions. Consequently, the ethnographic approach was adapted with a practical focus aligned with ENTRACK's goals from the outset. While cultural anthropology offers academic references on similar themes like sustainability and clean energy practices, this report's focus remains on practical application.

Unlike traditional ethnography, where researchers conducting fieldwork typically perform analysis, the data here were analyzed by a separate team of experienced researchers who reviewed the material multiple times across contexts, examining it both "vertically" (by question across respondents) and "horizontally" (as full interviews). This iterative process aimed to identify recurring themes, nuances, contradictions, and any potential gaps in the data. To bring each context closer to the reader and amplify the voices of interviewees, select extended quotes were chosen from each country. These quotes were selected for the significance of the insights they provide, especially in relation to the local context, and because they conveyed coherent, detailed narratives.

Given that those analyzing the data did not conduct the interviews themselves, this process required a degree of caution in drawing definitive conclusions, particularly as the range of captured voices was diverse and rich. This, however, does not pose a limitation, as all raw data—including descriptions of each interviewee—are available in the appendix and these materials can further serve as a foundation for future, more targeted local analyses.

Before presenting the fieldwork findings and data analysis, the following sections provide an overview of the actors involved and their roles, along with the preparatory training activities and specific tools developed for ENTRACK to support ethnographic data collection and reporting.

2.1 Ethnographic actors

2.1.1 Focal Points (FP)

Focal Points played a central role in the ENTRACK project, acting as intermediaries between Kilowatt and the various pilot areas. FPs participated in training on the ethnographic toolkit, reviewed its translation into local languages, and then transmitted this training to the CEs, ensuring they were well-prepared for fieldwork.

In addition to coordinating, FPs developed engagement strategies for recruiting CEs, including distributing a call for participation across their territories. They were also pivotal in promoting the ENTRACK project within their communities, ensuring the involvement of local people and identifying suitable individuals for interviews. Their role as interviewers during the ethnographic fieldwork, including through dedicated field visits, was crucial in collecting quality data.

Figure 2 - Total number of focal points per rural area

From the beginning, FPs were actively involved in shaping the interview protocol. At their suggestion, a short online survey was conducted among the Focal Points themselves to better identify key concepts for the ethnography, specifically around sustainability and clean energy. The survey asked, "How would you explain the concept of sustainability and clean energy to a 12-year-old?". This resulted in simple, clear insights that helped guide the ethnographic focus during the field research. The support of the FPs

extended beyond coordination, as they helped maintain data quality and adherence to the research standards. Through monthly coordination meetings with Kilowatt, they addressed challenges, facilitated the project's promotion, and provided real-time feedback to ensure effective project implementation. In addition, they also contributed to the drafting of some sections of this report.

2.1.2 Climate Explorers (CE)

The CEs were volunteers who played a crucial role in the ENTRACK project. While their training in ethnographic practices was introductory, they demonstrated motivation and a commitment to learning and applying interview techniques in the field. In some cases, according to local needs and possibilities, small incentives were provided to encourage participation. Some individuals joined the initiative mid-project, reflecting the flexible and dynamic nature of ethnographic research.

Figure 3 - Total number of Climate Explorers per rural area

Climate Explorers acted as ethnographers, conducting interviews and reporting their findings through an online form. They were not required to be natives of the communities they worked in but needed to speak the language, have a good understanding of local life, and be present in the area. Throughout the activity, Climate Explorers built trust with interviewees, contributing to valuable insights while working closely with Focal Points. Their willingness to experiment with ethnographic interviewing, reflect on their experiences, and collaborate with others was essential to the success of the project.

Figure 4 - Certificate of Participation for Climate Explorers in ENTRACK Ethnographic Research

2.1.3 Local Communities

People from the local communities in Greece, Italy, Portugal, and Spain are at the heart of the ENTRACK project. In fact, the value placed on their experiences and perspectives is the driving force behind the decision to use an ethnographic approach for this part of the project.

In line with the core ethnographic principle of valuing others' perspectives, every individual in the community who was willing to respond to questions about their lived experiences and potential visions regarding sustainability and clean energy was considered a potential interviewee. The aim was not to filter participants for statistical representativeness, such as by demographic criteria, but rather to capture the diverse range of experiences within these communities. The fundamental requirement for participating in the project as an interviewee was to have some meaningful connection to the community in question, without the strict condition of being native to that place. This open and inclusive approach aimed to gather a broad spectrum of perspectives by valuing diverse experiences and backgrounds within the community. Inclusivity here means welcoming both long-term residents and those who contribute to the community in other ways—such as workers, seasonal inhabitants, or recent settlers—thus ensuring that the gathered insights reflect a fuller range of relationships to local energy practices and sustainability concerns.

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In Greece, the municipalities of Avdera (19,000 inhabitants) and Topeiros (9,473 inhabitants) in the Xanthi region highlight a balance between cultural heritage and environmental conservation. In Italy, the towns of Piano di Sorrento (12,300 inhabitants) and Vico Equense (20,222 inhabitants) on the Sorrento Peninsula blend tourism, agriculture, and sustainable energy practices. In Portugal, in Alto Alentejo sub-region, the Municipalities of Gavião (293 km², 4,000 inhabitants) and Ponte de Sor (839 km², 16,691 inhabitants) reflect the close relationship between agriculture and natural resources. Finally, in Spain, the rural Catalan communities of Gombrèn (200 inhabitants), Sant Quirze de Besora (2,000 inhabitants), and Campdevànol (3,212 inhabitants) showcase different levels of infrastructure and community engagement. Each municipality adds valuable insights into how rural Mediterranean communities approach energy transition and sustainability.

2.1.4 Task Coordination Team

The Task coordination team was composed of Kilowatt staff assigned to the ENTRACK project and a professional anthropologist brought on specifically for this work. The team was responsible for the design and delivery of ethnographic training to FPs and CEs, providing them with the necessary tools to conduct fieldwork effectively.

The team offered continuous support directly to the Focal Points through monthly meetings, which not only addressed challenges encountered in the field but also served as opportunities to refine and adapt the interview protocol based on feedback and suggestions from both the Focal Points and Climate Explorers.

Additionally, the team closely monitored the data collection process, ensuring quality and adherence to research protocols. They implemented mechanisms such as a shared drive for real-time data monitoring, ensuring the timely return and organization of collected data. Since the interviews were conducted and recorded through the online form in the four original languages, the team also translated all the collected data into English using software. These translations were then reviewed for accuracy by the Focal Points, as had been done with the training materials. The team's work culminated in the analysis of the translated data and the writing of this report.

2.2 Ethnographic Training and Tools

The ethnographic training provided to the Focal Points and Climate Explorers was designed to equip participants with the necessary knowledge and skills to conduct and report ethnographic interviews within their local communities. The training consisted of two online sessions in English, respectively lasting 3 and 6 hours, led by a professional anthropologist.

The main educational resource for this training was the dedicated ethnographic toolkit, which served as the foundational text for both theoretical learning and practical application. The toolkit was originally written in English and then translated using software into the four languages of the ethnographic actors (Greek, Italian, Portuguese, and Catalan). The Focal Points from each area/language reviewed the translation to ensure its accuracy before the toolkit was distributed in the various local contexts.

The toolkits, available as a digital appendix to this report (from Appendix I to V), provide detailed instructions and practical tips for engaging communities in ethnographic research. However, to ensure

ease of reading and to facilitate a comprehensive understanding of this report, Box 1 offers a brief summary of the key elements of the toolkit.

BOX 1: Ethnographic Toolkit

The toolkit emphasizes the use of ethnography, a method chosen for its ability to reveal the cultural, social, and emotional factors that influence energy-related decisions. Through fieldwork and qualitative interviews, it is possible to gain insights into the lived experiences and motivations of individuals and communities regarding energy consumption, mobility habits, and sustainability practices.

- ➔ Ethnographic interviews are designed as dialogues: the aim is to listen actively and engage with participants' perspectives without imposing preconceived ideas. The toolkit provides guidelines for structuring these interviews, focusing on open-ended questions that encourage interviewees to share their experiences freely.
- ➔ The choice of interview location, whether in person or online, is also addressed in the toolkit, with recommendations on creating comfortable, distraction-free environments that foster open conversation. Basic tools for conducting interviews, including recording devices and interview guides, are outlined to ensure smooth data collection.
- ➔ Ethical considerations are central to the ethnographic process. The toolkit highlights the importance of obtaining informed consent and ensuring that the research is conducted with respect for participants' privacy and well-being.
- ➔ Finding the right interviewees is approached through community engagement and snowball sampling, with flexibility to adapt to local conditions.
- ➔ In cases where additional input is required, the toolkit suggests the use of qualitative surveys, which can complement the depth of interviews by reaching a broader audience.

For a more detailed exploration of the ethnographic methodology, interview techniques, and fieldwork strategies used in the ENTRACK project, the full toolkit in the different languages is available as a digital appendix of this report.

The first training session focused on some theoretical aspects of ethnography and fieldwork. Participants were introduced to the history and purpose of ethnography, its significance in understanding human practices, and the importance of participant observation and in-depth interviews. Key points covered included the value of exploring the underlying meanings behind everyday behaviors, the necessity of flexibility and patience in fieldwork, and the skills required to build trust within the community.

The theoretical component emphasized how ethnography is applied across various fields other than academic research, from policy design to market research, demonstrating its relevance to the ENTRACK project's goals of promoting sustainable energy practices. Due to the highly practical and applied nature of the project, a key feature of the training was the inclusion of practical activities in small groups. This aspect was particularly emphasized in the second and longer session, though time was also dedicated to a hands-on activity during the first session.

Activity 1. Exploring local contexts and climate explorers' engagement strategies

The first group activity aimed to familiarize participants with ethnographic observation and initial research into their local contexts and communities. Participants were asked to individually describe their municipality or local area, focusing on geographical features, community layout, demographics, local economy, institutions, and cultural traditions. They were also invited to select up to three photos representing their local context.

As part of this activity, participants were tasked with identifying three concrete actions to engage more Climate Explorers in the field. The reminder emphasized key traits that Climate Explorers should have, such as familiarity with the local context, language proficiency, willingness to dedicate time to the project, and readiness to experiment with ethnographic interviewing. For those who had already implemented engagement strategies, they were encouraged to describe their approach in detail.

The session concluded with a 45-minute plenary discussion, where participants shared insights from their local contexts, discussed good practices, and explored challenges in engaging Climate Explorers on the ground. This discussion allowed Focal Points in different areas to begin to learn from each other's experiences and refine their strategies for building trust and relationships within their communities.

The second training session focused more directly on the practical ethnographic work and the sharing of objectives, responsibilities, and resources. The session included two hands-on activities, specifically designed to allow participants to practice their roles as interviewers, experiment with reporting tools, and discuss strategies for engaging with local communities.

It was also an opportunity to reiterate the more operational procedures of the work. In addition to the ethnographic aspects (such as conducting field interviews) the Focal Points, given their pivotal role, needed to be well-versed in managing shared workspaces, such as online drive folders and various documents for systematically recording the most relevant information.

Activity 1. Conducting and reporting interviews

This activity was divided into two parts. In the first part, participants engaged in couple or small group activities, where they took on the roles of interviewer, interviewee, and observer to practice using the sample interview protocol provided (see Box 2). This 45-minute session allowed participants to experiment with the interview questions, test the dynamics of the interaction, and adjust the protocol as needed. After the interview practice, participants shared their experiences, both in terms of content and the emotional aspects of conducting the interview.

In the second part, participants practiced reporting the interviews using the Google form provided (see Box 3). This hands-on exercise was essential for familiarizing participants with the reporting process, making it easier to collect and analyze the data from the field efficiently. The session ended with a group discussion where participants shared their questions, doubts, and suggestions for improving the reporting process.

Activity 2: Finding interviewees and monitoring contacts

In this activity, participants worked in small groups to brainstorm potential strategies for engaging interviewees and identifying their first interview contacts. Building on the local context descriptions from the first training session, participants were asked to describe two types of individuals who would make good interviewees and outline their plans for contacting them. Additionally, they identified two real people they knew who could be interviewed for the project and formulated a strategy for reaching out to them.

The final part of the activity introduced participants to the monitoring tool, a shared Excel file designed to track interview contacts and progress. Participants were given time to explore the tool, fill out sample entries, and raise questions and suggestions for its improvement and adjustments to best fit the local contexts and needs.

BOX 2: Sample Interview Protocol

As part of the ENTRACK ethnographic toolkit, a sample interview protocol was developed to provide Climate Explorers with a structured yet flexible script and list of questions to guide their interviews. This protocol was designed to help Climate Explorers familiarize themselves with the process and to ensure consistency across all interviews. By starting from the same base of questions, the protocol allowed for a comparative analysis of the results across different municipalities and contexts. The full protocol is available in the appendix, but a brief overview of its structure is provided here for ease of reference.

- ➔ The interview begins with a brief introduction where the Climate Explorer explains the purpose of the conversation, reassures the interviewee about the anonymity of their responses, and seeks permission to record the session if necessary. Following this, the interview is divided into several sections:
- ➔ Ice-breaking. The first question encourages the interviewee to introduce themselves and share general information about their daily life and environment, helping to establish rapport.
- ➔ Core questions on energy use. This section explores the interviewee's energy-related habits and practices in their everyday life, touching on topics like water usage, transportation, and waste management. Additional prompts are provided to delve deeper into behaviors that may be sources of pride, embarrassment, or convenience.
- ➔ Sustainability and clean energy. These questions focus on the interviewee's views and discussions around sustainability, clean energy, and any social pressures they may feel in relation to their energy consumption.
- ➔ Challenges and incentives. The protocol then addresses the obstacles the interviewee has encountered when trying to adopt sustainable energy practices, as well as incentives or government initiatives that could encourage further adoption of clean energy.
- ➔ Past, present, and future. The interview concludes with reflective questions about past behaviors that have changed over time, personal contributions to sustainability, and the interviewee's hopes for the future of clean energy in their community.
- ➔ Final questions. The session wraps up with an invitation for the interviewee to share any additional thoughts and consent to potential follow-up questions.

The complete sample interview protocol, including the full list of questions and guidelines for conducting these interviews, is available in the appendix for further consultation.

BOX 3: Report Form

To support the work of the Climate Explorers, in addition to the structured interview guide, an online form was created based on the interview protocol. This form served as an efficient reporting tool, particularly appreciated by non-professional ethnographers. Its simplicity allowed for the quick and organized collection of key data from the interviews, without requiring word-for-word transcription, which would have been time-consuming and unnecessary for the project's objectives. The form included both closed-response fields, such as the duration of the interview and demographic details, as well as open-ended questions, mirroring the structure of the interview itself. The form enabled Climate Explorers to document both the interviewees' responses and their personal reflections, facilitating effective comparative analysis across the different municipalities.
The full form is available in the appendix.

2.3 Limits, Challenges and Unforeseen Opportunities

There are certain limits and challenges posed by the decision to apply the ethnographic method in the ENTRACK project. One of the most evident challenges was the limited timeframe: just a few months to identify and train individuals, conduct hundreds of interviews, and report the findings. Language barriers also posed a challenge, with varying levels of English proficiency among participants in training and the need to translate interviews conducted in local languages into English, thus risking the loss of some meaningful nuances in certain expressions.

Another challenge was entrusting non-professionals with the task of conducting interviews. However, this approach had a highly positive impact in terms of capacity building. The training provided to Focal Points and especially Climate Explorers gave them the opportunity to engage with a new practice (conducting interviews) while also allowing them to approach energy issues in their communities through fresh perspectives and possibly deepen their understanding of the complexities involved.

While these also introduced limitations, such as the reduced flexibility in adapting questions during interviews, a hallmark of ethnographic methods, the decision to use a shared script and structured reporting form helped ensure consistency while still fostering community engagement and personal growth for the interviewers. However, during the ethnography, based on feedback and observations from the field, some questions were added or slightly adjusted. This flexibility demonstrated the responsiveness of the Climate Explorers and Focal Points, and the coherence of the reporting form was not significantly affected.

An additional limitation, mainly due to time constraints, was that the coordination team was unable to conduct preliminary on-site visits to gain a clearer understanding of the various local contexts. This limitation was partially mitigated through classroom activities, where trainees were asked to describe their respective contexts.

In one specific territorial context, there was a need to expand the action area due to the very low number of inhabitants and the difficulty in making contact and obtaining consent for interviews. As often happens during ethnographic fieldwork, unforeseen challenges or difficulties can arise that require adjustments to the original plans. Based on what was shared during the training sessions and indicated in the toolkit, the possibility of creating an online questionnaire to broaden the pool of participants and gather data in some

form was considered. However, given the small population in that context and the risk that online respondents might actually come from different areas, the idea was ultimately discarded. In agreement with the coordination team, it was therefore decided to slightly broaden the scope of action to achieve satisfactory results, demonstrating the flexibility to adapt to local contexts and challenges.

Despite not being professionals and having limited time to complete their tasks, the feedback from the interviewers reveals that the process of conducting interviews on energy-saving and sustainability was not only informative but also highly reflective for them. Many interviewers reported learning new things during the discussions, particularly about alternative approaches to energy efficiency and the practical challenges people face in adopting sustainable practices. A common theme throughout the interviews was the opportunity for self-reflection. As interviewers listened to different perspectives, they were often encouraged to critically evaluate their own behaviors and attitudes toward energy use. This highlights the dual nature of the interviews: they were not just about gathering information but also fostering a deeper awareness of personal responsibility toward sustainability.

When asked "How did it go? Have you learned something new? How did you feel?", many interviewers described the experience as positive, with smooth communication and good cooperation. In several cases, interviewers felt that they had gained new insights, particularly from interviewees who were knowledgeable or engaged with energy efficiency and sustainability. Some mentioned learning about specific practices, while others appreciated hearing different perspectives on the importance of sustainable energy, both locally and globally. However, not all interviews were equally successful. Some interviewers felt that they didn't learn anything new or that the interview was challenging due to the interviewee's lack of knowledge or interest in the topic. A few interviewees were described as hesitant, distracted, or rushed, making it harder to gather detailed responses.

In contrast, other interviews flowed smoothly, with participants sharing valuable insights or technical knowledge, especially those who worked in related fields. Interviewers also noted that the setting of the interview played a role in the interaction, with more casual environments leading to a relaxed and open conversation. Conversely, remote interviews or hurried participants sometimes created challenges in maintaining engagement. Overall, while there were some difficulties, most interviewers felt the discussions were enriching, and many participants expressed their willingness to contribute to future sustainability efforts.

3 The ENTRACK Ethnographic Process

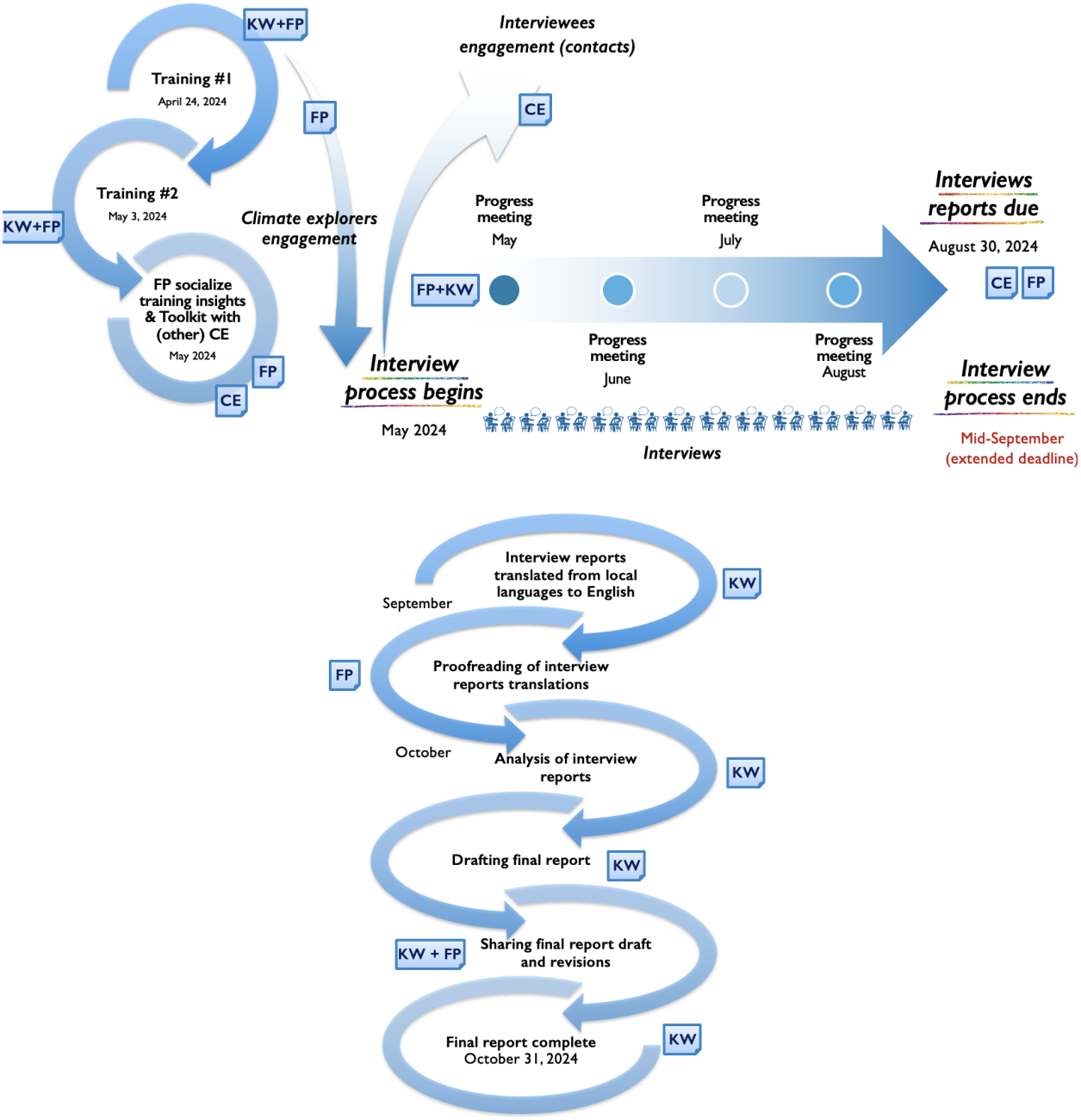

Figure 5 - ENTRACK ethnographic process: roles and phases during ethnographic research

This diagram illustrates the project's completed process for data collection and analysis, involving Focal Points, Climate Explorers, and the Kilowatt team. The workflow can be divided into three main phases:

1. Training and Engagement (April-May 2024)
Ethnographic Training. The process began with two training sessions (Training #1 and Training #2) in April and May 2024, conducted by a professional anthropologist and the Kilowatt team. These sessions introduced the ethnographic approach and Toolkit, equipping Focal Points with the skills needed for the project.
Climate Explorers Engagement. After receiving training, Focal Points engaged Climate Explorers, preparing them for the upcoming interviews by familiarizing them with the project's ethnographic techniques and objectives.
2. Fieldwork (May-September 2024)
Interviewee Engagement. Starting in May, Climate Explorers reached out to potential interviewees within their communities, establishing connections and setting up interviews.
Monthly Progress Meetings. Regular progress meetings were held from May through August, where Focal Points and Kilowatt discussed the quantity and quality of interviews, making any necessary adjustments to the approach.
Interview Process. Interviews continued through to August 30, 2024, with an extended deadline in mid-September to allow for any additional data collection.
3. Data Systematization and Final Analysis (September-October 2024)
Translation and Proofreading of Interviews. In September, Kilowatt translated the interview reports from local languages into English, followed by proofreading conducted by Focal Points to ensure accuracy and coherence.
Analysis of Interview Reports. In October, Kilowatt conducted a detailed analysis of the interview data to identify key insights and patterns.
Drafting and Finalizing the Report. Following the analysis, Kilowatt drafted the final report, sharing it with Focal Points for additional feedback. The finalized report was completed by October 31, 2024.

This structured approach ensured a thorough and collaborative process, moving from training and engagement to fieldwork, and concluding with systematic data analysis and reporting.

Before diving into the analysis, two charts are presented below to provide an overview of the activity, offering a clear picture of the engagement efforts and the distribution of interviews conducted. Figure 5 provides an overview of the total number of people reached by the ENTRACK ethnographic initiative through the engagement actions developed in the various territorial contexts by the Focal Points; it also shows the total number of interviews conducted.

Figure 6, on the other hand, details the number of interviews conducted in each country, identifying the individual Climate Explorers who carried them out by code, thus offering a more granular look at the distribution of interviews across the project.

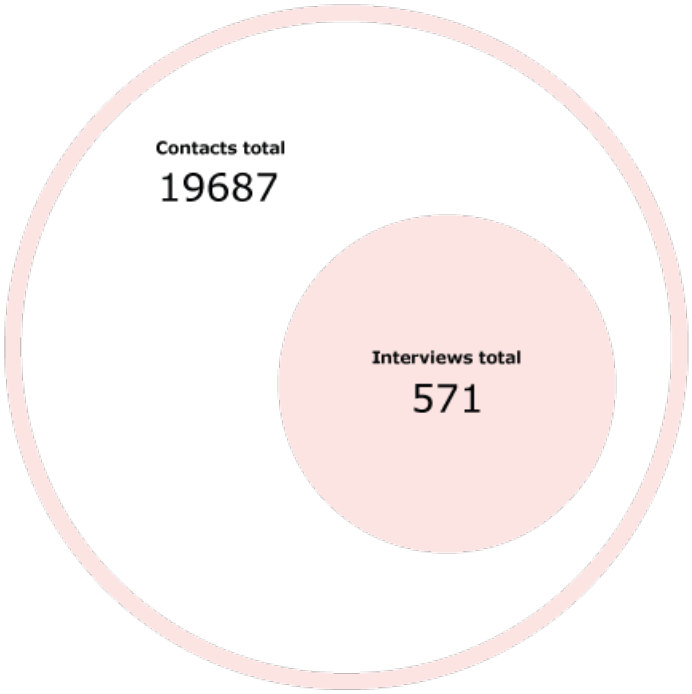

Figure 6 - Participants developed strategies for engaging interviewees and identified potential contact

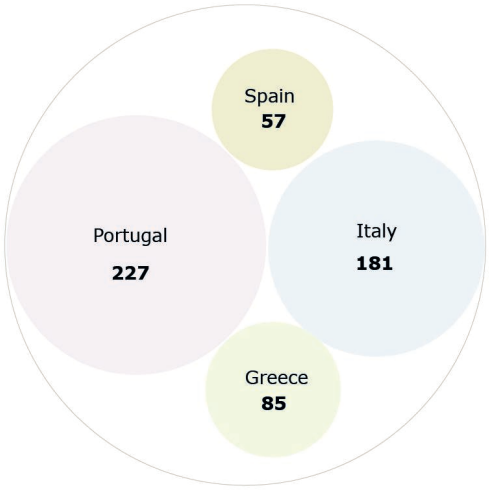

Figure 7 - Total interviews conducted in the four rural areas

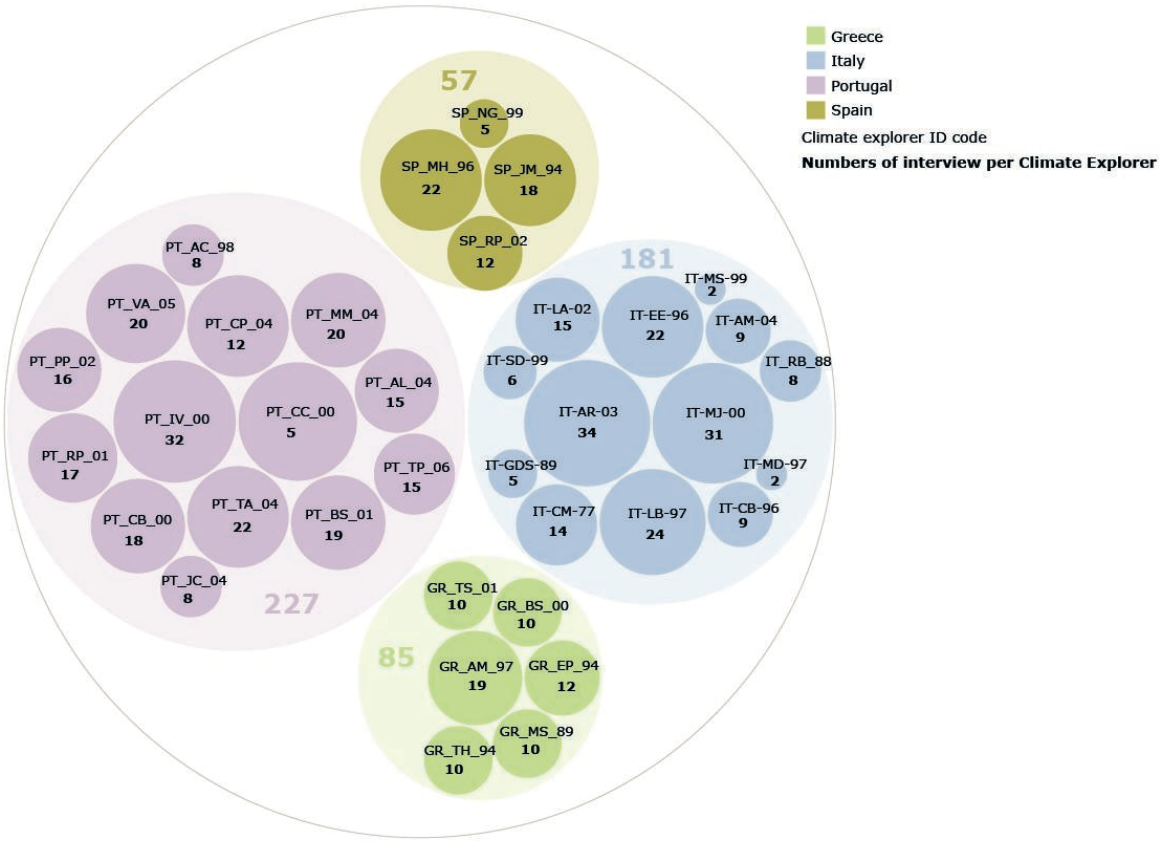

Figure 8 - Total interviews conducted in the four rural areas per Climate Explorer

3.1 The ENTRACK Ethnography: Analysis

The ENTRACK ethnography gathered diverse perspectives on energy-saving practices from various rural Mediterranean communities. By adopting a participatory approach, it reveals both the actions taken by individuals and the gaps in collective awareness, highlighting the complexity of local engagement with sustainable energy practices. The findings point to a spectrum of behaviors, attitudes, and contradictions that are key for policymakers aiming to design interventions that resonate with the lived experiences of these communities. The analytical section of this report is composed of four in-depth analyses, based on responses from individuals in Greece, Italy, Portugal, and Spain. It concludes with cross-cutting insights and a set of practical recommendations for policymakers, local stakeholders, and the ongoing ENTRACK project.

3.2 Greece

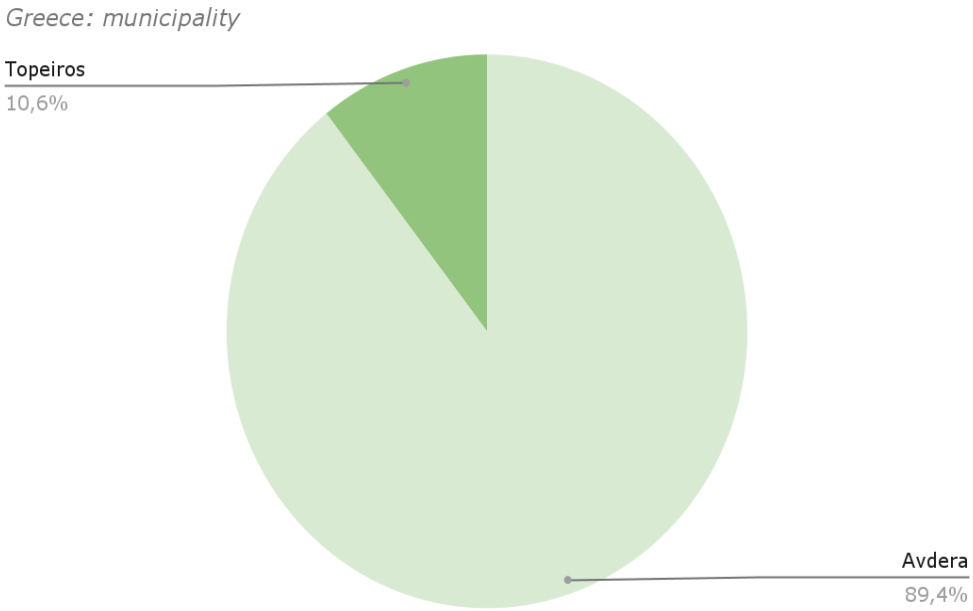

Figure 9 - Distribution of interviews per municipality in Greece

The interviews in Greece were conducted in a variety of locations, primarily in professional and office settings. Many took place in financial or municipal services. A few interviews were conducted at the interviewees' homes, while others were done remotely via Facebook Messenger, Viber, or telephone. Additionally, some interviews were held in public spaces such as parks and coffee shops.

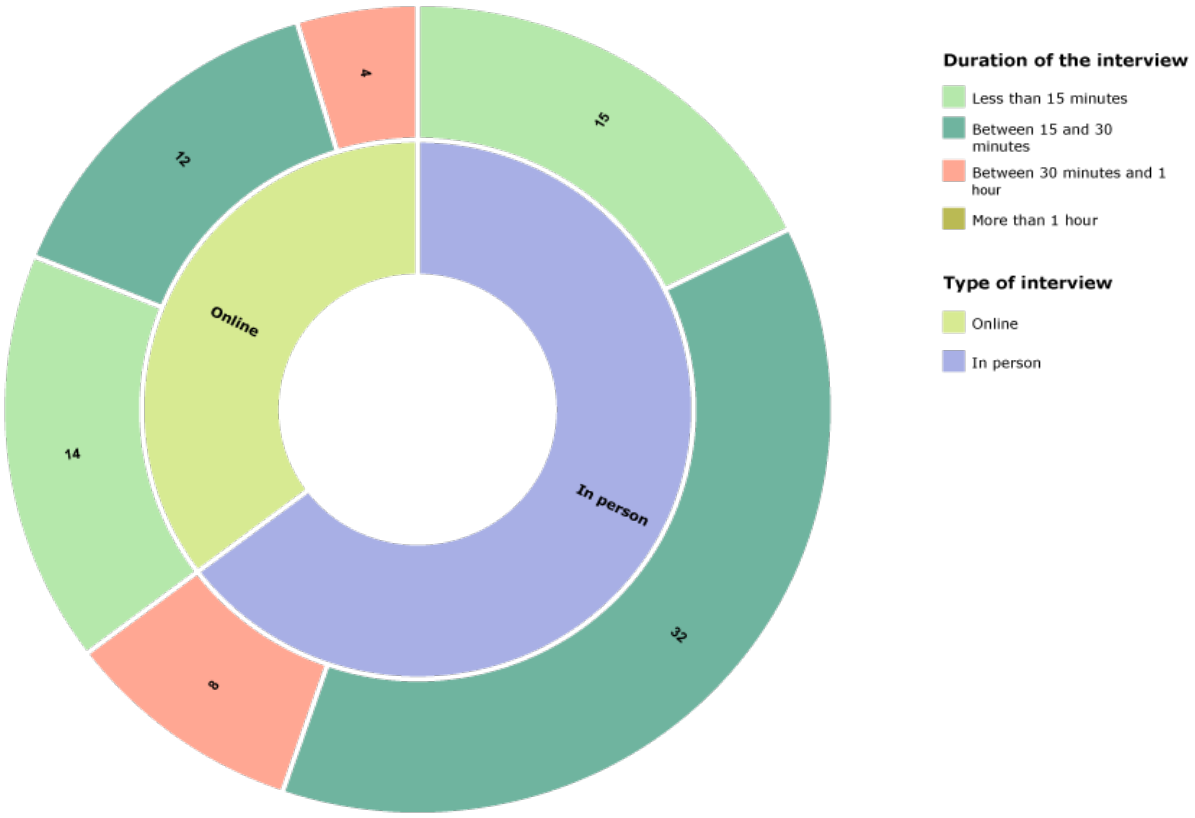

Figure 10 - Distribution of interviews by type and duration in Greece: online and face-to-face interviews, classified by time intervals (<15 min, 15-30 min, 30-60 min, >1 hour)

The interviewees consisted of people from diverse professional backgrounds, including private employees, municipal officers, small business owners, retirees, students, but also individuals working in education, the public sector, and a few who identified as activists or individuals working in environmental sectors.

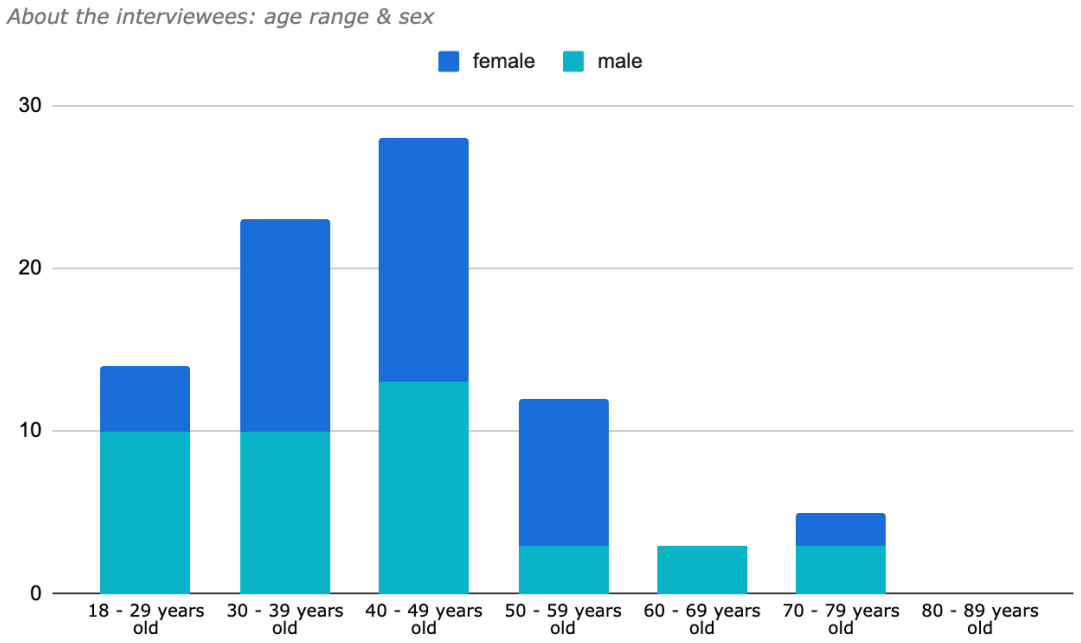

Figure 11 - Distribution of interviewees by gender and age range in Greece

3.2.1 Energy use Practices

Energy use practices among the respondents in Avdera and Topeiros showed a mix of awareness and traditional habits. Many were mindful of turning off appliances when not in use and using energy-saving techniques like night tariffs to reduce electricity costs. Some respondents paid close attention to not leaving devices plugged in or running unnecessarily, while others admitted higher energy consumption, particularly for heating and air conditioning, especially when caring for young children or dealing with health issues.

Concerns about rising energy costs have also made some more attentive to their usage. Specific examples of good practices included motion control lighting in toilets, using LED lamps, induction cookers, smart lighting systems, minimizing air conditioner use by substituting with fans, and unplugging devices at night. Some respondents mentioned using underfloor heating, electric bikes, electric skateboards, and even low-light screens to save energy. Others also took pride in larger investments like installing solar panels or purchasing hybrid cars. On the other hand, feelings of embarrassment often revolved around excessive air conditioning use or failing to adopt energy-efficient measures earlier.

Responsibility for energy management at home varied. Those living alone handled it themselves, while in families it was often shared between spouses. Some noted that younger generations attempted to influence the energy habits of older family members, highlighting a generational gap that emerged as significant in several aspects.

3.2.2 Sustainability and Clean Energy

The interviews reveal that sustainability and clean energy are not recurring topics of discussion among respondents, although they are occasionally brought up in family or workplace settings when considering certain energy-related investments, such as purchasing an electric car or switching to smart lighting. In general, however, a few respondents noted that energy and sustainability topics were not well understood or prioritized by their friends and family, especially among older generations. On the other hand, some mentioned that discussing these topics at home had led them to successfully convince older relatives to adopt more sustainable practices, which was seen as an achievement given their resistance to change.

In line with this, most respondents had a generally positive view of clean energy, though some were concerned about costs or felt uninformed about the available options, displaying a largely neutral stance on the issue in practice. While many recognized the importance of clean energy and expressed a desire to take action, others struggled with skepticism or saw clean energy initiatives as either insufficient or overly expensive. A few respondents noted the need for better education on the topic and hoped more people would take concrete steps toward sustainability.

Social pressure regarding energy behaviors was minimal for most respondents, with many reporting that they did not feel pressured to change their energy habits. However, a few experienced negative pressure, such as feeling forced to pay high electricity prices despite the perception that renewable energy sources might be more readily available than one might think. Others felt proud of their energy-saving efforts, citing actions like purchasing hybrid cars or using solar power, and expressed satisfaction with their decisions. There were also mentions of frustration with others' lack of effort in conserving energy, leading to a sense of isolation in their sustainability efforts and perhaps some systemic disillusionment with the topic.

3.2.3 Challenges and Incentives

The difficult economic situation in Greece in recent years has been a major obstacle to the adoption of sustainable energy practices. Many respondents highlighted the high costs associated with green technologies, such as solar panels, energy-efficient appliances, and eco-friendly heating systems, which are often out of reach for individuals dealing with financial constraints. This economic barrier is further compounded by the fact that many individuals feel that the financial returns on these investments are too slow, making it difficult to justify the initial expense in the context of Greece's current financial climate. Additionally, respondents noted that even when government subsidies or programs are available, the bureaucracy involved can be overwhelming, discouraging people from pursuing these sustainable options.

Beyond cost, respondents also mentioned other challenges, such as inadequate infrastructure, unclear regulatory frameworks, and a lack of support from local governments. The absence of effective public transportation options, including free or publicly available bikes, was frequently mentioned as a barrier to sustainable energy adoption. Long bureaucratic processes dissuaded many from pursuing initiatives like installing solar panels. Additionally, the lack of will among elected officials to prioritize clean energy policies was highlighted, alongside the high costs of products like electric cars. A lack of awareness and education about clean energy options was also identified as a significant barrier, particularly among older generations.

In terms of government initiatives, many respondents were aware of the "I am saving" program, which offers subsidies for home energy upgrades and photovoltaic installations. However, several participants felt that these programs were insufficient or difficult to access, often delayed or entangled in bureaucratic obstacles. EU-funded initiatives like "NextGeneration EU" were also known to a few respondents, though navigating these programs was similarly difficult. Some mentioned that countries like Germany provide compensation or financial support in certain areas and suggested that similar policies could be implemented in Greece to help vulnerable individuals adopt sustainable practices.

When asked about potential incentives, most respondents emphasized the need for greater financial support through subsidies or direct financial aid. Improving infrastructure, such as expanding electric vehicle charging stations and promoting community-based energy projects, were also highlighted as necessary steps. There was an acknowledgment that changes in mindset, particularly among older populations, would be crucial to fully embracing sustainable energy.

In terms of community initiatives, many respondents were unaware of local clean energy projects. However, some mentioned large photovoltaic stations or small-scale initiatives like energy-efficient upgrades in public buildings. While individual willingness to participate existed, local efforts were seen as limited, requiring more promotion and support.

3.2.4 Past, Present and Future

Many respondents had modest reflections on their past, present, and future energy practices, with some admitting they hadn't deeply considered how their behaviors had evolved over time. This suggests that for some, sustainability and energy use are not always at the forefront of daily life. However, those who did engage with the topic noted a shift in their attitudes toward energy consumption, particularly as energy costs have risen. Behaviors that were once common, like leaving lights on throughout the house during holiday seasons or running air conditioners and heaters for long periods without considering their impact, are now seen as wasteful. One example mentioned involved a respondent who reflected on how they no longer leave the heater on for extended hours but use it only when necessary, such as before a bath. These adjustments indicate a growing consciousness of energy efficiency, often motivated by economic factors rather than purely environmental concerns. Over time, this shift represents a broader trend toward more mindful energy practices, even if the primary driver remains financial.

Looking toward the future, many respondents felt that education plays a crucial role in fostering more sustainable habits, both on an individual and community level. Some mentioned personal efforts to invest in eco-friendly appliances or smart lighting, but there was also a call for greater support from local governments. For instance, one respondent appreciated the municipality's effort to make schools more energy-efficient by installing new frames and heating systems. However, for many, adopting sustainable practices remains a challenge due to limited knowledge or financial constraints. This underscores the need for ongoing education and training, as well as accessible programs that make clean energy solutions feasible for a broader population. Overall, in fact, while there is a growing recognition of the importance of energy conservation, much of this awareness is reactive—motivated by rising costs or external pressures—rather than proactive environmental consciousness.

3.2.5 Additional Remarks

In the final reflections, many respondents did not have additional comments to share, reinforcing the idea that energy and sustainability topics, while important, are not always at the forefront of their daily concerns. However, those who did contribute emphasized several key themes. A common suggestion was the need for greater financial support, such as higher subsidies for installing photovoltaic systems and other green technologies, especially given the ongoing financial difficulties in Greece. Several participants noted how the Greek economic crisis continues to affect people's ability to invest in sustainable solutions, making government assistance essential. Some respondents expressed a desire for better energy alternatives and more government aid to make the transition to clean energy more accessible.

Another point raised was the limited exploitation of existing energy sources, such as geothermal energy, and the lack of district heating networks. This was linked to criticism of the broader international orientation toward energy saving, with some respondents expressing skepticism about the motives behind the global campaign to reduce energy consumption.

Education was highlighted by several respondents as a critical factor for driving long-term change, with a particular focus on starting environmental education early in schools. Some noted that by 2030, the government will have to upgrade the country's energy infrastructure, further emphasizing the need for both education and investment. Respondents acknowledged the importance of raising awareness about sustainability to foster a broader cultural shift toward more responsible energy use. However, one respondent highlighted how "the mind of the Greeks" often resists adopting new technologies like electric cars, bicycles, and skateboards, preferring comfort over innovation.

A few respondents pointed to international examples, such as Curitiba in Brazil and Freiburg in Germany—both recognized as green cities—as models for successful sustainability initiatives that could be adapted in their communities. Others stressed the need for more local and cooperative efforts alongside government action to ensure the implementation of clean energy practices.

Overall, while many respondents supported the notion of moving toward a more sustainable future, they recognized the significant economic, infrastructural, and cultural challenges that still need to be addressed.

3.2.6 Quotes

> Given that Greece is grappling with an aging population, it presents a unique challenge in changing established habits. Elderly individuals often prefer keeping lights and televisions on throughout the day, and they show a strong inclination towards gasoline-powered vehicles. This not only highlights the difficulty in altering long-standing behaviors but also significantly complicates our efforts to transition towards more sustainable environmental practices.
>
> Δεδομένου ότι η Ελλάδα αντιμετωπίζει μια γήρανση του πληθυσμού, αποτελεί μια μοναδική πρόκληση για την αλλαγή των καθιερωμένων συνηθειών. Οι ηλικιωμένοι προτιμούν συχνά να έχουν τα φώτα και τις τηλεοράσεις αναμμένα όλη την ημέρα και δείχνουν έντονη κλίση προς τα βενζινοκίνητα οχήματα. Αυτό όχι μόνο υπογραμμίζει τη δυσκολία αλλαγής μακροχρόνιων συμπεριφορών, αλλά επίσης περιπλέκει σημαντικά τις προσπάθειές μας για μετάβαση σε πιο βιώσιμες περιβαλλοντικές πρακτικές.
>
> **GR_TS_01 – Female, 30-39 years old, Avdera**

Just last week, I engaged in a discussion about energy usage with my parents. To my surprise, they were operating the air conditioner with the windows firmly closed, even though it was a pleasantly cool 20 degrees outside. This instance serves as a poignant reminder of the challenges we face in shifting towards more energy-efficient practices, especially when conventional habits prevail over environmental considerations.

Μόλις την περασμένη εβδομάδα, συμμετείχα σε μια συζήτηση σχετικά με τη χρήση ενέργειας με τους γονείς μου. Προς έκπληξή μου, λειτουργούσαν το κλιματιστικό με τα παράθυρα καλά κλειστά, παρόλο που έξω είχε μια ευχάριστη δροσερή θερμοκρασία 20 βαθμών. Αυτή η περίπτωση χρησιμεύει ως μια οδυνηρή υπενθύμιση των προκλήσεων που αντιμετωπίζουμε για τη μετάβαση σε πιο ενεργειακά αποδοτικές πρακτικές, ειδικά όταν οι συμβατικές συνήθειες υπερισχύουν των περιβαλλοντικών εκτιμήσεων.

GR_AM_97 – Male, 18 -19 years old, Avdera

By the year 2030, the Greek government is mandated to significantly enhance the nation's energy infrastructure, as stipulated by the provisions outlined in the National Energy and Climate Plan. This commitment is not just a policy but a promise to the citizens, representing a pivotal effort to modernize our energy systems. It's essential that these promises are kept, to align our practices with sustainable and environmentally friendly standards, ensuring a more resilient and energy-efficient future for Greece.

Έως το 2030, η ελληνική κυβέρνηση έχει εντολή να βελτιώσει σημαντικά τις ενεργειακές υποδομές της χώρας, όπως ορίζεται από τις διατάξεις που περιγράφονται στο Εθνικό Σχέδιο Ενέργειας και Κλίματος. Αυτή η δέσμευση δεν είναι απλώς μια πολιτική, αλλά μια υπόσχεση προς τους πολίτες, αντιπροσωπεύοντας μια κομβική προσπάθεια εκσυγχρονισμού των ενεργειακών μας συστημάτων. Είναι σημαντικό να τηρηθούν αυτές οι υποσχέσεις, για να ευθυγραμμίσουμε τις πρακτικές μας με βιώσιμα και φιλικά προς το περιβάλλον πρότυπα, διασφαλίζοντας ένα πιο ανθεκτικό και ενεργειακά αποδοτικό μέλλον για την Ελλάδα.

GR_BS_00 – Male, 40-49 years old, Avdera

3.3 Italy

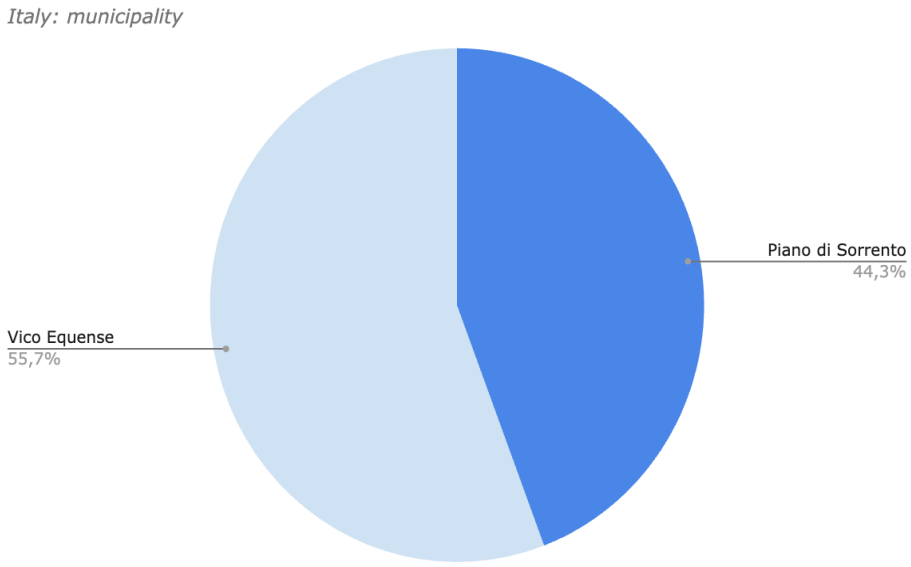

Figure 12 - Distribution of interviews per municipality in Italy

The interviews took place in a variety of settings, including municipal offices, private residences, and other workplaces, such as commercial businesses. Several interviews were conducted outdoors in public spaces like parks, streets, beaches, and squares, as well as at cafés and bars. Some interviews took place at venues such as the municipal library, parish center, and civil protection headquarters. Other interviews were held in quieter, more private locations like homes and secluded offices, with some conducted online via video calls.

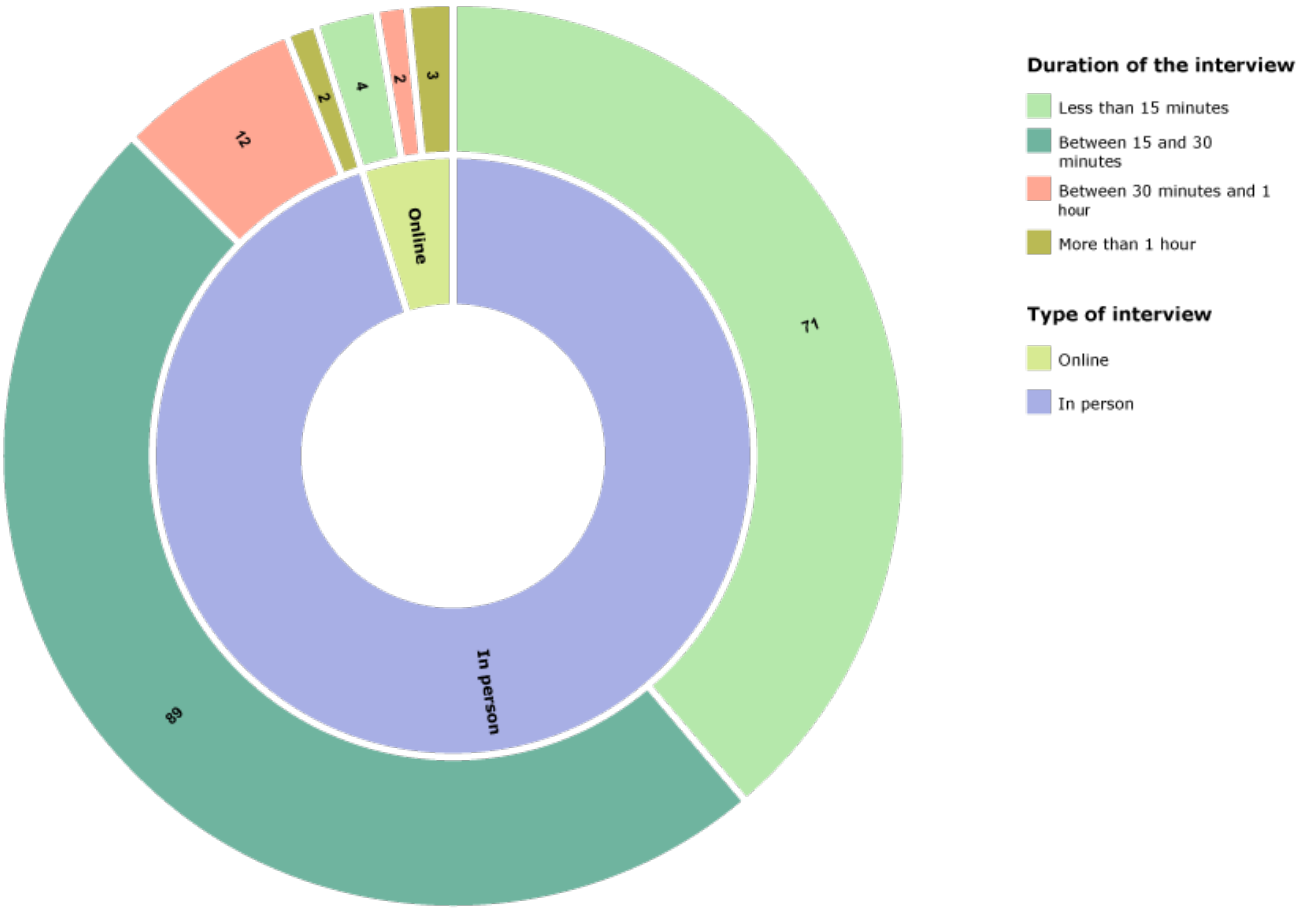

Figure 13 - Distribution of interviews by type and duration in Italy: online and face-to-face interviews, classified by time intervals (<15 min, 15-30 min, 30-60 min, >1 hour

The interviewees came from very diverse backgrounds, with many working in fields related to the environment, engineering, architecture, public administration, constructions, education, tourism and commerce, among others, but there were also students and retired individuals.

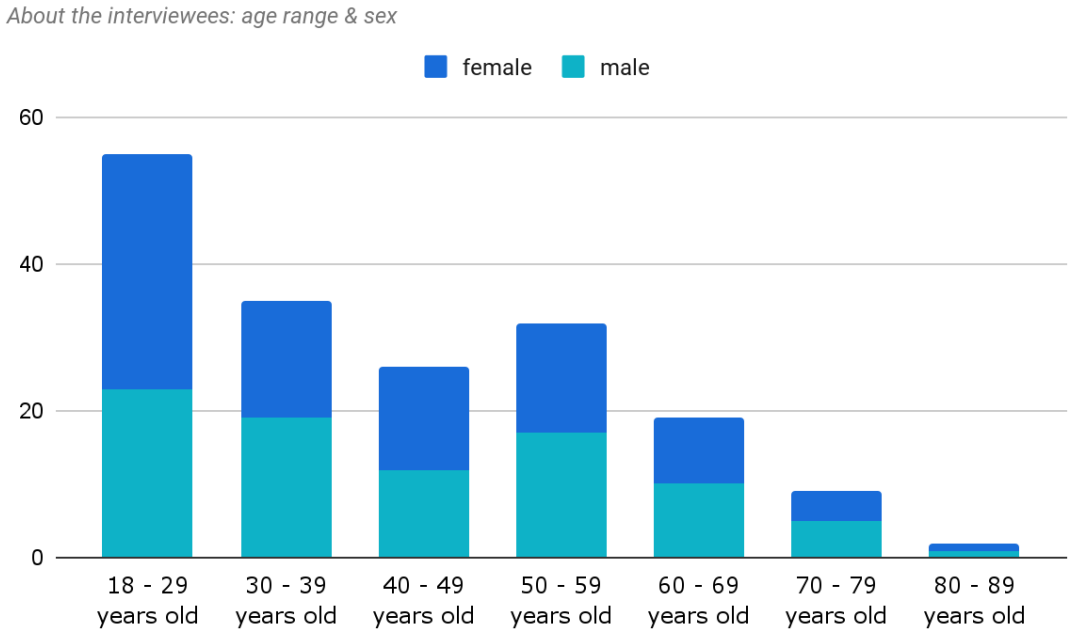

Figure 14 - Distribution of interviewees by gender and age range in Italy

3.3.1 Energy Use Practices

In the interviews conducted in Vico Equense and Piano di Sorrento, respondents generally demonstrated an awareness of energy consumption, integrating energy-saving practices into their daily routines. Common actions included turning off unnecessary lights, conserving water, unplugging devices not in use or charging. Someone also highlighted, as part of their virtuous personal practices, a commitment to stop consuming meat due to its environmental impact, while another expressed a similar awareness by reducing the purchase of fast-fashion clothing, recognizing the environmental consequences of that industry. Several respondents declared using energy-intensive appliances during off-peak hours. However, this last point likely reflects a shared perception among some, though potentially misleading, where lower cost is equated with lower environmental impact.

The territory's unique features influence energy-related practices. Living in a peninsula with hilly terrain, many rely on scooters and cars, often citing the lack of efficient public transportation as a barrier to adopting more sustainable behaviors. Also, some acknowledged the challenge of avoiding high-consumption conveniences, especially air conditioning during summer months, while others focused on reducing household energy use by installing solar panels as flat roofs are ideal. Additionally, as this area experiences increasing tourism, particularly during certain times of the year, some respondents pointed out the significant environmental issue of excessive food waste.

The interviews also highlighted the complexities of reconciling everyday comforts with sustainable living. Despite a desire to reduce energy use and improve their habits, respondents acknowledged the challenge of giving up certain conveniences. Commonly mentioned items included overusing air conditioning, forgetting or deliberately leaving the lights on, and - paradoxically, for a warm and sunny Mediterranean

location - using the clothes dryer. Someone admitted to excessively using a hair straightener, while another confessed to always leaving a small light on at night due to a fear of the dark. Additionally, the practice of leaving the television on all day was mentioned as a form of companionship for elderly individuals living alone, highlighting a widespread sense of social isolation in a country that is increasingly aging. Overall, while energy-saving behaviors are common, individuals in these communities wanting to lower their environmental impact still face structural and cultural obstacles.

3.3.2 Sustainability and Clean Energy

In terms of sustainability and clean energy, participants showed mixed levels of awareness and engagement. Several individuals commented on the fact that their discussions with household members about energy and sustainability usually revolve around practical matters such as energy consumption and savings at home; for some, these discussions are linked to broader topics like renewable energy or climate change. However, many respondents admitted they rarely engage in such conversations, either because it's not a common topic among their social circles or due to a lack of interest. Nonetheless, those who are passionate about the topic often initiate discussions to raise awareness among friends and family.

While many respondents expressed a general desire to contribute to a more sustainable future, their specific knowledge about clean energy solutions varied significantly. Solar energy, in particular, was seen as a promising solution due to the region's favorable climate. Many interviewees had already installed or were considering installing solar panels, emphasizing both their environmental and (eventually) economic benefits. However, some were concerned about the costs and bureaucracy involved, which they felt limited widespread adoption.

Beyond personal investments, several participants highlighted the importance of public awareness and the need for more community-level education on sustainable practices. They believed that the government should play a more active role in promoting sustainability through incentives, public awareness campaigns, and easier access to clean energy technologies. However, skepticism about government policies and the effectiveness of certain green technologies was also expressed. For instance, a few participants viewed the push for electric vehicles with suspicion, questioning whether these technologies were as environmentally friendly as they claimed, pointing to concerns about the environmental impact of producing and disposing of electric cars, but also of solar panels.

Education, especially among younger generations, was frequently highlighted as essential for fostering long-term sustainability. At the same time, according to some interviewees, positive social pressure from younger people is also playing a growing role, gradually encouraging more eco-friendly behaviors across different age groups. However, many believe that continued support and awareness-raising are needed to make this behavioral and cultural shift widespread and lasting.

3.3.3 Challenges and Incentives

Participants expressed a range of challenges related to adopting more sustainable energy practices, with financial constraints being the most mentioned barrier. The initial costs of installing solar panels or upgrading home insulation were often perceived as prohibitive, despite the long-term benefits. Many respondents mentioned the lack of sufficient government incentives or support to make these transitions more feasible. More than one interviewee highlighted the frustration with bureaucratic obstacles, a

sentiment echoed by others who felt that, although there are programs available, they are not always easy to understand or navigate.

In fact, another significant challenge was the lack of clear, accessible information. Respondents frequently called for more local outreach and education on energy-saving practices and available incentives. They felt that the information provided by government websites or local institutions was often too technical or fragmented, making it difficult for ordinary citizens to engage. However, many believed that if the process were easier and more transparent, more people would take advantage of these opportunities. Finally, a knowledge gap also extended to understanding the real impact of certain energy-saving measures, leading to skepticism about their effectiveness or importance.

Geographical and infrastructural limitations posed additional obstacles. Many interviewees pointed to the challenges of living in hilly, coastal areas, where public transport is insufficient, and cycling infrastructure is almost nonexistent. As already mentioned, this makes it harder for residents to reduce their reliance on personal vehicles, particularly scooters and cars, which are seen as essential for getting around the region.

Respondents also pointed to social and cultural factors that hinder the adoption of sustainable energy practices. In some cases, generational differences played a role, however, many participants emphasized the difficulty of addressing a complex issue like sustainability, highlighting the need to bring the topic closer to people in simple and accessible terms. In their view, this approach could help gradually shift mindsets and behaviors, contributing to long-term change in how individuals engage with environmental sustainability. At the same time, several participants suggested that better community engagement, particularly with younger generations, could help bridge these gaps and foster a more collective approach to sustainability.

3.3.4 Past, Present and Future

Overall, participants reflected on how energy consumption and sustainability have evolved over time. Some older respondents recalled a time when energy-saving behaviors were more common out of necessity rather than environmental awareness. However, they noted that as technology and modern conveniences became more widespread, energy consumption increased, and many traditional practices were lost, meaning that new sustainability practices must now be integrated and consolidated into people's everyday lives.

Looking to the future, there was hope that younger generations, better informed and more aware of climate change, would lead the shift towards more sustainable living. Yet, many interviewees emphasized the need for systemic changes, expressing skepticism about whether individual actions alone would be sufficient to combat the growing environmental crisis. Some participants believed that individual efforts, such as turning off lights or installing solar panels, are important but not enough to drive real change. They urged a combination of personal responsibility and collective action, driven by better policy frameworks and public initiatives.

3.3.5 Additional Remarks

In the final reflections, respondents touched on several themes, including the urgency of addressing environmental challenges and the slow pace of change. Some interviewees stressed their concerns about specific environmental issues that were particularly relevant to their region, such as noise pollution, food waste linked to overtourism, and the inefficiency of local public services, as well as the environmental, artistic, landscape, and urban planning constraints that further complicate sustainable development efforts.

In general, there was frustration with the disconnect between sustainability rhetoric and actual actions taken by both individuals and the local municipalities. Many participants emphasized that while individual efforts are important, systemic changes, especially at the governmental level, are necessary for meaningful progress.

Some participants suggested that community-driven initiatives could help bridge the gap between personal responsibility and collective action. A few mentioned the importance of local forums or groups to discuss energy and sustainability, promoting more cooperation within the community. Additionally, education and awareness-raising campaigns were seen as crucial for ensuring that both current and future generations are better prepared to adopt sustainable behaviors.

3.3.6 Quotes

> In theory, everyone agrees on the need to achieve greater sustainability, but in practice, these goals involve changes in habits that are difficult to accept and accommodate. I believe that awareness is slowly emerging, and therefore, a certain pressure is being placed on people regarding the behaviors we adopt in relation to daily energy consumption and its consequences. I believe this social pressure is both useful and positive…
>
> Sul piano teorico sono tutti d'accordo sulla necessità di raggiungere una maggiore sostenibilità, ma nella pratica questi obiettivi comportano dei cambiamenti di abitudini difficili da accogliere e accettare. Credo che stia lentamente emergendo una consapevolezza, e quindi anche una certa pressione sulle persone, sui comportamenti che adottiamo in merito ai consumi energetici quotidiani e sulle relative conseguenze. Credo sia una pressione sociale utile e positiva…
>
> **IT_046 - woman, 18-29 years old, Piano di Sorrento**

> I'm not interested in talking about these things, about energy and sustainability, they don't fascinate me. I don't have air conditioning, a dryer, a dishwasher, or any of those things people have. I only do laundry at night because it's cheaper. Clean energy doesn't exist: do you really think solar panels are clean? Or electric cars? And how do you build that battery? And then how do you dispose of it? I don't believe it's clean energy, in this country nothing is clean, everything is dirty and corrupt.
>
> A me non interessa parlare di queste cose, di energia e sostenibilità, non mi affascina. Non ho aria condizionata, asciugatrice, lavastoviglie, e tutte quelle stronzate che ha la gente. La lavatrice la faccio solo di notte perché costa meno. L'energia pulita non esiste: ti sembra che i fotovoltaici siano puliti?

O la macchina elettrica? E quella batteria come la costruisci? E poi come la smaltisci? Io non credo sia energia pulita, in questo paese non c'è niente di pulito, è tutto sporco e corrotto.

IT_118 - man, 60-69 years old, Vico Equense

For me, clean energy means consuming just the right amount. If everyone only consumed what we really need, everything would be much cleaner. In my life, I consume very little because I like doing things by hand: washing dishes, using a broom, doing laundry… it's my exercise and it keeps me active. It's not a sacrifice, I enjoy it. What's the point of having all these vacuum cleaners? We're not in a good time, and we need to be careful. Plus, I do it because, for me, it's a matter of respect. Saving and being mindful means valuing what you have, even the little you have, and not wasting anything. For example, when I shower, I always keep a basin to collect the excess water and then reuse it. Waste, for me, is something I see in stores: often in these small towns you find four stores selling the same thing side by side, but why? That's where there's waste – of energy, money, everything. The real waste is in the organizational and logistical management of services, public transport, and all that… and the municipalities here are awful. They only care about getting votes, not having a political vision or doing something that generates positive change. In this area, they're more attentive to the environment and maintenance because there's tourism, so it benefits them to keep the place nice. But if you move a little further into other towns in the Vesuvian area, it's a disaster—they don't even have a water treatment plant.

Per me energia pulita significa consumare il giusto, se tutti consumassero solo quello di cui abbiamo veramente bisogno sarebbe tutto più pulito. Io nella mia vita consumo pochissimo, perché mi piace fare le cose a mano: lavare i piatti, usare la scopa, fare il bucato… è la mia ginnastica e mi tiene attiva. Non è una rinuncia, a me piace. Che senso ha avere tutte queste aspirapolvere? Non siamo in un buon momento e bisogna starci attenti. E poi lo faccio perché per me è una questione di rispetto, risparmiare e stare attenti significa dare valore a quello che hai, anche a quel poco che hai, e non buttare via nulla. Ad esempio quando faccio la doccia tengo sempre una bacinella con cui raccolgo l'acqua in eccesso e poi la riutilizzo. Lo spreco lo vedo per esempio nei negozi: spesso in questi paesini trovi 4 negozi che vendono tutti la stessa cosa uno accanto all'altro, ma perché? È lì c'è spreco di energia, di soldi, di tutto… Lo spreco vero è nella gestione organizzativa e logistica dei servizi, i trasporti pubblici e tutto… e poi qui i comuni fanno schifo, gli interessa solo prendere voti, non avere una visione politica e fare qualcosa che generi cambiamento positivo. In questa zona sono più attenti all'ambiente e alla cura, perché c'è il turismo quindi gli conviene tenere il posto bello. Se ti sposti un po' più in là in altri paesi del vesuviano è un disastro, non hanno neanche un depuratore dell'acqua.

IT_124, woman, 70-79 years old, Piano di Sorrento

3.4 Portugal

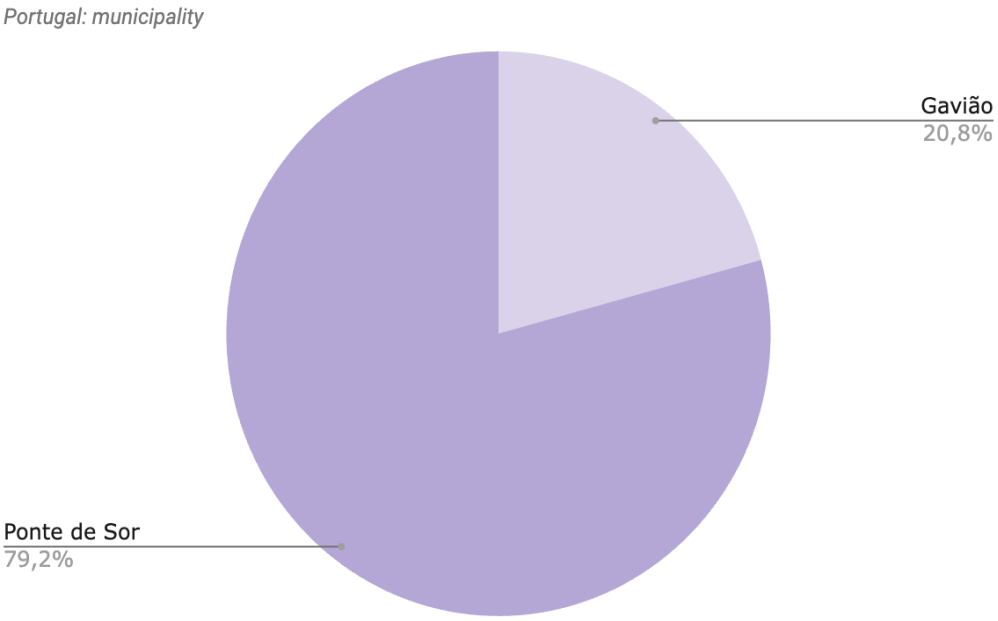

Figure 15 - Distribution of interviews per municipality in Portugal

The interviews were conducted in a variety of locations, including public spaces such as parks, cafés, and riverside areas, as well as more formal settings like municipal offices, health centers, schools, and kindergartens. Some took place in the interviewees' homes or workplaces, while others were conducted in local shops, libraries, and community centers. Several interviews also occurred during town festivities and in rural areas.

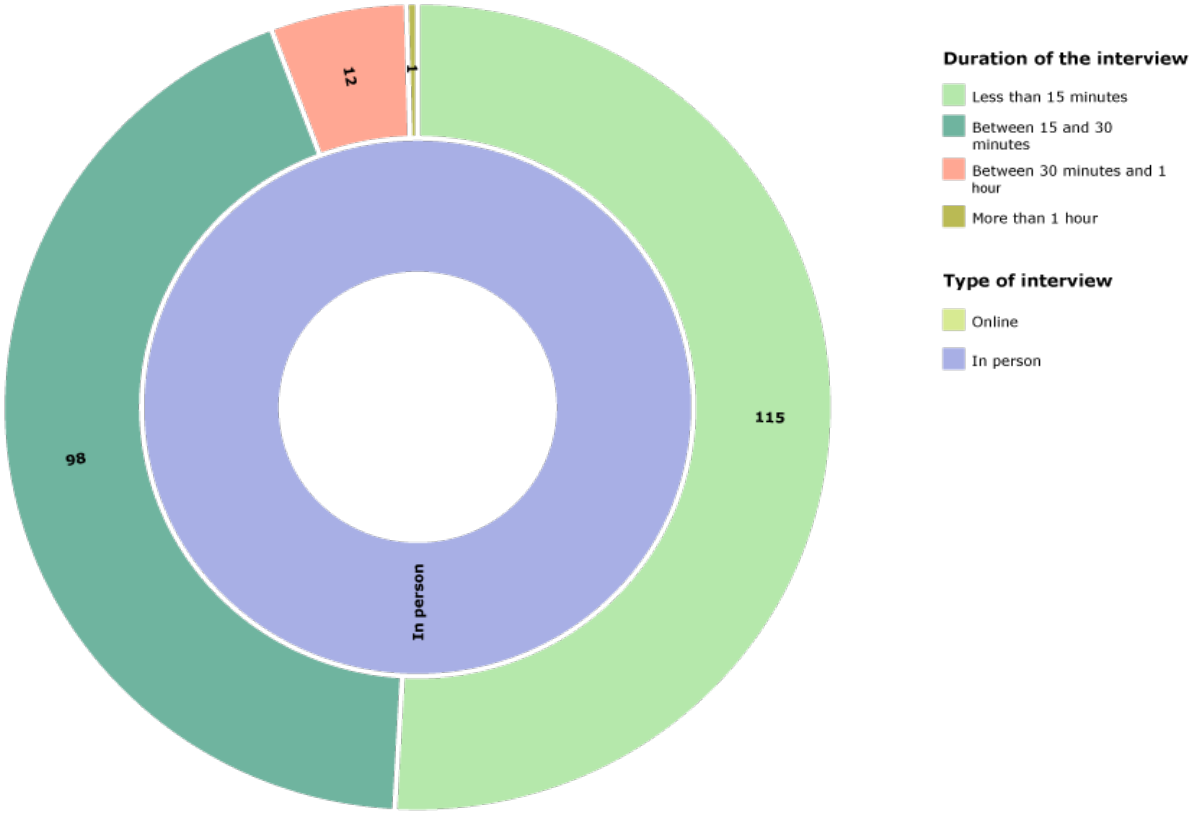

Figure 16 - Distribution of interviews by type and duration in Portugal: online and face-to-face interviews, classified by time intervals (<15 min, 15-30 min, 30-60 min, >1 hour).

The interviewees came from very diverse backgrounds, with some working in fields related to environmental and technical fields, and others being unemployed, students, museum employees, teachers, health professionals, engineers, farmers, shopkeepers, small business owners, municipal workers, café and bakery employees, kindergarten staff, firefighters, retirees, shepherds, construction workers, social workers, lwyers, IT professionals, transportation workers, security guards, housewives, etc.

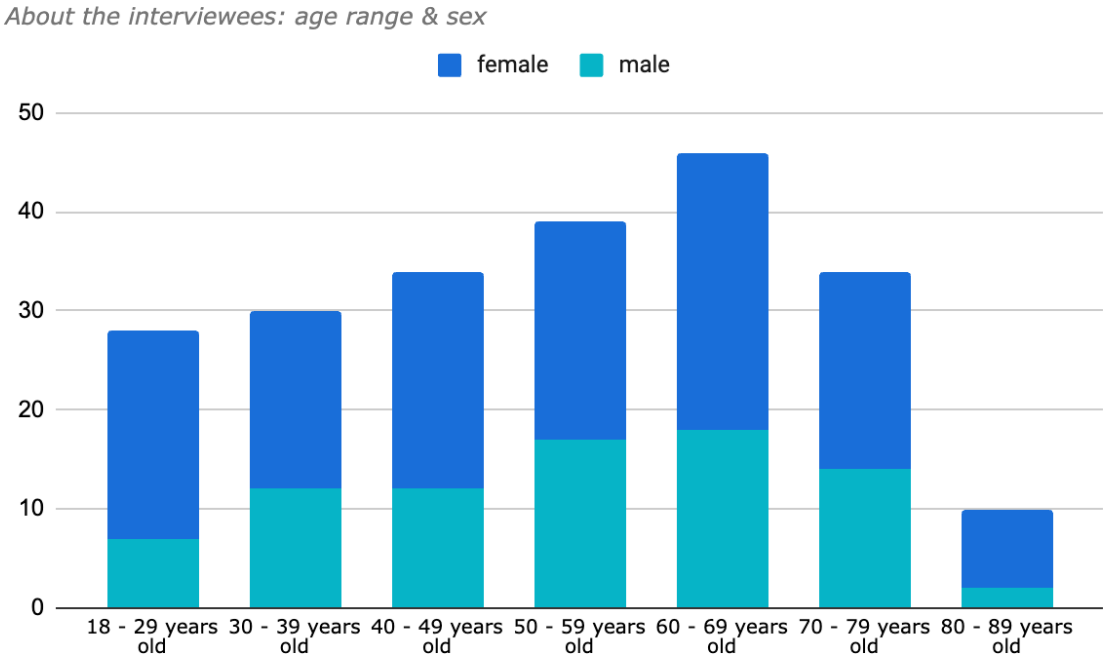

Figure 17 - Distribution of interviewees by gender and age range in Portugal

3.4.1 Energy Use Practices

Across the interviews conducted in Gavião and Ponte de Sor, a range of daily energy-use practices were discussed, with most respondents demonstrating varying levels of awareness and concern about energy consumption, while few others were indifferent altogether.

Most common virtuous habits include turning off taps while brushing teeth, switching off lights when leaving a room, and making the most of natural light during the day. Walking to work or using public transport were also highlighted as ways to reduce energy use, although many people rely on cars for longer commutes. In terms of heating and cooling, to save on electricity, some people rely on fireplaces and wood-burning stoves in winter (sometimes combined with going to bed early with a hot water bottle when it's cold) or natural ventilation instead of air conditioning in summer.

Some respondents displayed a certain level of environmental consciousness, using solar panels, energy-efficient appliances and bulbs like LEDs, and turning off devices when not in use. One person even compared their habit of turning off lights to Queen Elizabeth II, known for her attention to energy conservation. Other good practices included avoiding standby consumption, using reusable bottles, and scheduling the use of washing machines to take advantage of solar panel energy, often using the "eco" cycles to save further. In households with solar panels, respondents would optimize energy use by running

washing machines and dishwashers during peak solar production hours. Some respondents have invested in energy-efficient solutions other than solar panels, such as double-glazed windows and using plugs with electricity meters that connect to their phones, showing how much electricity is being used at any time. Some interviewees described other specific efforts, such as having lights at home with three phases of intensity (allowing them to adjust based on the situation), turning off the lights when using the PlayStation, using a suction cup clock to control bath time, turning off everything when they go on vacation to reduce unnecessary consumption. One individual with a personal vegetable garden mentioned the use of plastic bottles for planting due to sandy soil, which doesn't retain water well, while others have experimented with hydroponics to reduce water consumption in gardening. Someone else emphasized reducing travel by plane as a way to minimize their carbon footprint.

On the other hand, some individuals admitted to being less meticulous, for example leaving appliances on or relying heavily on-air conditioning in the summer months. Recycling habits also varied, with some making a conscious effort to separate waste and compost organic materials, while others were either openly indifferent or only recycled sporadically. One person even mentioned they don't like using recycled paper for napkins, so they avoid it altogether. Some expressed pride in using eco-friendly alternatives to plastic, such as reusable bags, or reducing waste by avoiding products with excessive packaging.

It is interesting to note that the motivations behind some seemingly sustainability-driven behaviors can be irrational or based on misbeliefs: for example, one respondent mentioned unplugging everything when leaving the house, not for energy-saving purposes, but out of fear something might happen. On a similar note, one interviewee revealed that they used to take a lot of showers at home but now shower at the gym and workplace, demonstrating a misconception: while they might reduce personal costs, the environmental impact remains the same.

In general, though many respondents felt proud of their energy-saving habits, a few admitted to feeling embarrassed about habits they knew could be improved, such as taking long showers or leaving appliances on standby. At the same time, some confessed that they hadn't adopted significant energy-saving practices and sometimes let appliances like televisions and computers run unnecessarily. Finally, some people felt that they were already doing everything they could, given their current resources and knowledge.

3.4.2 Sustainability and Clean Energy

When asked about "sustainability", most respondents associated it with environmental conservation, reducing waste, and responsible consumption. They emphasized the need to preserve resources for future generations and maintain a balance between human needs and nature, with some also noting the economic benefits of sustainability through cost savings. Regarding "renewable energies", solar power was the most frequently mentioned, followed by wind and hydropower. Respondents viewed renewable energy as a clean alternative to fossil fuels, important for reducing pollution and promoting energy independence, though some expressed concerns about the environmental impact of large solar farms, such as deforestation.

However, not everyone felt confident in their understanding of the concepts of sustainability and renewable energy. A significant number of respondents admitted unfamiliarity with these terms or struggled to define them clearly. For some, these ideas seemed abstract or distant from their daily lives,

with terms like "sustainability" and "renewable energy" being associated more with modernity or "the future" without further explanation.

Many respondents mentioned that discussions related to energy or sustainability are rare within their social circles, with only a few able to recall recent conversations on the topic. When energy is discussed, it tends to focus on practical matters like managing energy bills, household improvements, or energy-saving habits such as turning off lights or reducing water use. The approach to sustainability and clean energy often revolves around a cost/benefit perspective, with the prevailing mindset being "save energy to save money". Conversations around renewable energy, like solar panels or electric cars, were more likely to happen when decisions about purchasing new technologies arose. In rural or older communities, these topics are even less common, with some respondents noting that they're not a priority or feel too abstract to be part of daily conversations.

A few respondents expressed concerns about the environmental impact of renewable energy, particularly regarding the installation of solar panels. They pointed to the felling of trees to make space for solar farms, citing specific examples in the area. Many interviewees felt that solar panels should be installed on rooftops or car parks rather than large solar farms that spoil the local landscape or damage fields that could be used for agriculture. Others expressed doubts about whether a truly viable green energy solution has been discovered, questioning the current focus on phasing out fossil fuels.

While social pressure from younger generations to adopt more sustainable behaviors was noted by various respondents, some felt that energy-saving choices should be made based on benefits rather than guilt. There was a sentiment that people should be informed and understand the reasons behind these choices to avoid purely guilt-driven decisions. For most people, however, financial obstacles remain a key factor in energy-related behaviors, and societal expectations play a relatively small role in shaping their energy practices.

3.4.3 Challenges and Incentives

Several obstacles were identified when implementing sustainable energy practices, with the most common being financial and structural challenges. Many respondents mentioned the high cost of acquiring and maintaining technologies like solar panels and energy-efficient appliances. In fact, the initial investment required is often seen as a major barrier, even though these technologies may provide long-term benefits. Additionally, government support is perceived as insufficient or delayed, with bureaucratic hurdles making it difficult for individuals to access subsidies or incentives. Long wait times for reimbursements and high taxes further complicate the process.

According to the interviewees, a significant challenge would be changing people's mindset. Many emphasized the need for simple, authoritative information to combat misinformation through all means. Older residents, particularly those with limited education, may struggle to be well-informed, making it harder for them to adopt sustainable practices. The lack of tailored, local-level campaigns also contributes to resistance: national campaigns are often distrusted, and people expressed a preference for local initiatives that feel more relevant and trustworthy. This resistance extends to political powers, with some respondents pointing out that oil companies have an influence on government decisions, slowing down the transition to renewable energy.

For those living in apartment buildings or rented homes, infrastructure limitations present another challenge. In condominiums, collective agreement is required to implement energy-saving technologies, while restrictions from landlords prevent tenants from making significant changes to rented properties. The lack of recycling points in rural areas outside of town was also highlighted as a considerable logistical obstacle.

Financial incentives were seen as a key motivator for adopting sustainable practices, but there is a strong need for more measures tailored to the specific needs of the population. Suggestions included tax reductions, phased payment plans, and incentives specifically targeting the elderly or people in need, who often lack the financial resources to adopt new technologies. Several respondents pointed out that banks should play a more significant role in publicizing available support, and municipalities could create dedicated counters where people can ask questions or apply for incentives—especially since not everyone has access to the internet.

In terms of government initiatives promoting sustainable energy practices, awareness among respondents was varied. Some were familiar with programs like the "Environmental Fund" or European efficiency vouchers, but many felt these initiatives were poorly communicated and difficult to access. Several respondents noted long wait times for reimbursements or unclear application processes, discouraging participation. There is a need for better public outreach, especially in areas where the older population may not have access to social media or online resources. Community initiatives were also mentioned: examples included talks at community centers, composting workshops, or events like "Car Free Day".

3.4.4 Past, Present and Future

Many respondents acknowledged that behaviors considered normal a few years ago, like throwing cigarette butts on the ground and overusing plastic, are now seen as wasteful and unacceptable. Recycling, once rare, has become more ingrained, especially among younger generations. However, some individuals remain disillusioned with the current recycling system, feeling that waste is often mixed after collection.

Looking to the future, many respondents expressed a strong desire to see broader community-level changes that would make sustainability more accessible and widespread. A common request was for more affordable access to solar panels, with some suggesting government-backed initiatives to install them. Lowering the cost of renewable technologies, particularly for low-income households, was seen as key to encouraging greater adoption. Several participants also mentioned the importance of improving home insulation, installing energy-efficient windows, and mandating stricter building regulations for new homes that incorporate these energy-saving measures as a standard.

Urban planning and public spaces were a recurring theme in future-oriented discussions. Some respondents advocated for planting more trees both in residential areas and public spaces to create shade, improve thermal comfort, and make cities more sustainable. Transportation improvements were another recurring theme. Many respondents advocated for more electric vehicle charging stations, the expansion of public transportation, and the introduction of bike lanes to reduce reliance on cars. In terms of public infrastructure, participants suggested replacing traditional street lighting with LED lights and installing solar panels on public buildings as a visible example of renewable energy in use.

Education and awareness campaigns were frequently mentioned as priorities. Respondents called for better communication on renewable energy options and energy-saving practices, particularly through local initiatives that could reach rural areas and older populations more effectively. Schools were highlighted as key venues for raising environmental awareness, with respondents stressing the importance of instilling sustainable habits in children from a young age. Some even noted that grandparents could play a role in teaching their grandchildren about recycling and saving energy, creating a two-way exchange of knowledge between generations.

Furthermore, participants emphasized the need to raise awareness not just among the public, but also among government officials, who they felt were often underinformed about sustainable energy solutions. Someone suggested that municipal governments should create initiatives to invest in bio-waste collection, which could benefit local farmers by producing fertilizer for their vegetable gardens (something that could generate additional income for the municipality while also reducing organic waste).

3.4.5 Additional Remarks

Some respondents expressed more concerns about various environmental and social issues. A common theme was the high cost of maintaining and implementing renewable energy sources, with some questioning the long-term viability of alternative options (like electric cars).

Inequalities were also highlighted, particularly the privilege of living in certain kinds of homes, while others struggle with rising energy costs, especially the elderly who avoid using heaters in winter to save money. For these vulnerable groups, lowering energy prices was seen as crucial, as they are unable to reduce consumption further. The difficulty of balancing busy routines with energy-saving habits was another concern, with some stating that it's a privilege to have the time to focus on being frugal. For many, work commitments leave little time to consider sustainability.

Some individuals raised concerns about agricultural pollution, particularly regarding chemicals used by foreign companies that affect land and water quality. Climate change was also an issue, with references to rising temperatures and droughts, and there were also concerns about biodiversity loss, the use of pesticides, and pollution of the food chain.

Several respondents expressed concern about the future of their children and grandchildren if societal mindsets do not change. They emphasized the need for a global shift in behavior, supporting the idea of "thinking globally and acting locally". However, a distrust in large companies and corporations was evident, with many feeling that these entities prioritize profit over sustainability.

Although a few respondents were hopeful about a better future also through government-led initiatives and public awareness campaigns, others were more pessimistic, particularly about the resistance to change among older generations. Overall, there was a strong call for more effective awareness-raising campaigns, with respondents emphasizing the importance of communicating about these issues daily to instill long-term behavioral changes.

3.4.6 Quotes

> I live in Gavião and I walk everywhere. When I brush my teeth, I let the tap run into a bowl, and then I use that water to flush it down the toilet. When I wash vegetables and fruit, and when I rinse

the dishes, I save the water for the same purpose. I recycle, and I give the organic waste to animals. The fact that they have to cut down trees to build power plants. It doesn't make sense, "trees are essential".

Moro no Gavião e vou para todo o lado a pé. Quando lavo os dentes, deixo a torneira a correr para um alguidar e depois aproveito essa água para descarregar na sanita. Quando lavo vegetais e frutas, e quando enxáguo a loiça, guardo a água para o mesmo fim. Faço reciclagem e os restos orgânicos dou aos animais. O facto de terem de cortar árvores para implementarem centrais não faz sentido, "as árvores são essenciais".

PT_034 - woman, 70-79 years old, Gaviao

As I have been a teacher all my life, I am very concerned about sustainability. I do my part, I contribute and do what I can. Yesterday I saw a programme about renewable energy, about how much we pay to buy coal-fired energy from Spain. I have heard a lot of bad things about offshore wind farms, but I am not familiar with the subject. But I think there are many interests. We talk a lot about the subject, among friends. We watch programs, read articles, news. We don't have the power to do much more. The local authority should inform the population more. There is a lot of cultural information, but little is discussed about energy. But people are concerned about the economic aspect, and this makes them save. Those who read, know and practice, but not everyone knows. For example, I know someone who signed up for a solar panel project and still hasn't received the first part of the refund. If people don't have money to invest right away, it's difficult. I hope the world leaves enough for you and my grandchildren. This is scary.

Como fui professora a vida toda preocupo-me muito com a sustentabilidade. Faço a minha parte, contribuo e faço o que posso. Ontem vi um programa sobre as energias renováveis, sobre o quanto pagamos para comprar energia a carvão a Espanha. Já ouvi dizer muito mal das eólicas offshore, mas não estou dentro do assunto. Mas acho que há muitos interesses. Falamos muito sobre o tema, entre amigos. Vemos programas, lemos artigos, notícias. Não temos poder para muito mais. A autarquia devia informar mais a população. Há muita coisa a nível cultural mas aborda-se pouco sobre a energia. Mas as pessoas preocupam-se com o aspeto económico, e isso faz com que poupem. Quem lê, sabe e prática, mas nem toda a gente sabe. Por exemplo, conheço uma pessoa que aderiu a um projeto de painéis solares, e ainda não recebeu a primeira parte do reembolso. Se as pessoas não têm dinheiro para investir imediatamente, é difícil. Espero que o mundo deixe o suficiente para vocês e para os meus netos. Isto está assustador.

(PT_052 - woman, 60-69 years old, Ponte de Sor)

My parents have a vegetable garden and are very careful with water, they collect rainwater to water it. We go with bottles to get water from the spring. I don't wash the car with spring water, I go to the designated places to wash it. The obstacles are financial. A cylinder is cheaper than a solar panel. I know that the solar panel ends up compensating in the end, in monetary terms. We end up reviewing what we spend on the solar panel, but the problem is the initial investment, people

don't have that purchasing power. They don't have the same purchasing power as people in the city. Well, it's not quite like that now, because people in the city have high housing costs, so they don't have much purchasing power either. I do my best to avoid wasting water and electricity. I separate my trash, because I know that plastic doesn't decompose in the soil. I use the ashes to put in the soil of my plants, in the garden. I give my mother some ashes so she can do the same. We all have to do a little bit. We have many high points here. They could take advantage and install wind turbines in these points. I think it would be a good bet. And if they lowered the price of solar panels, people would be more likely to adopt them. There should be support for young people. Older people have some difficulty in changing. My generation (30-50 years old) still has some flexibility to change. But the important thing is to reach young people, they are the future, and we need to help them, with housing, and also to save water and electricity. We need to preserve the environment, because people are suffering, and everyone will be affected by these problems.

Os meus pais têm uma horta e têm muitos cuidados com a água, recolhem água da chuva para regar. Vamos com as garrafas buscar água à fonte. Não lavo o carro com a água da fonte, vou aos sítios próprios para lavagem. Os obstáculos são financeiros. Um cilindro é mais barato do que um painel solar. Eu sei que o painel solar acaba por compensar no fim, em termos monetários. Acabamos por rever aquilo que gastamos com o painel solar, mas o problema é o investimento inicial, as pessoas não têm esse poder de compra. Não têm o mesmo poder de compra que se tem na cidade. Bem, agora não é bem assim, porque as pessoas da cidade têm custos elevados com a habitação, portanto também não têm grande poder de compra. Eu faço o melhor possível para evitar gastar água, luz. Faço a separação do lixo, porque sei que o plástico não se decompõe na terra. Aproveito as cinzas para colocar no solo das plantas, na horta. Dou cinzas à minha mãe para ela fazer o mesmo. Todos temos de fazer um pouco. Nós temos aqui muitos pontos altos. Podiam aproveitar e colocar eólicas nesses pontos. Acho que era uma boa aposta. E se baixassem o preço dos painéis solares, as pessoas iriam aderir muito. Deviam haver apoios aos jovens. As pessoas de maior idade têm alguma dificuldade em mudar. A minha geração (30-50 anos) ainda tem alguma flexibilidade para mudar. Mas o importante é chegar aos jovens, eles são o futuro, e é preciso ajudá-los, com habitação, e também para pouparem, água e luz. Precisamos de preservar o ambiente, porque as pessoas estão a sofrer, e toda a gente vai ser afetada com estes problemas.

(PT_095 - woman, 40-49 years old, Ponte do sor)

There is a major revolution taking place in terms of energy, and here in Portugal, we have enough solar energy, and we haven't reached that conclusion yet. But that is bad for big companies. This will take time. People need to have a sense of water. I warn my grandchildren when they flush the toilet 10 times. But things are improving. There is a serious problem because it rained and water needs to be collected, there are no necessary dams. The Catalan use the Alqueva dam without paying, and they practice intensive agriculture. In the Algarve, a lot of water is wasted, with crops that use a lot of water. Water needs to be well managed and adapted.

Está a haver uma grande revolução a nível de energia, e aqui em Portugal, temos energia do sol que chegue e ainda não chegamos a essa conclusão. Mas isso é mau para as grandes empresas. Isto vai demorar.

As pessoas têm de ter sentimento pela água. Eu aviso os meus netos, quando eles puxam 10 vezes o autocolismo. Mas as coisas estão a melhorar. Há um problema grave porque choveu e tem de se juntar água, não há barragens necessárias. Os espanhóis usam a barragem do Alqueva sem pagar, e fazem agricultura intensiva. No Algarve gasta-se muita água, com culturas que gastam muita água. A água deve ser bem gerida e adaptada.

PT_115 - man, 70-79 years old, Ponte do sor

Human beings ruin everything, ruin the planet, ruin everything. In the past, the seasons were known, but today everything is confused. No one knows when it's winter and when it's summer, the seasons are all mixed up. It was human beings, chemicals and the desire to want more that led to this current situation. But nobody cares about that. People just want to be glued to their phones and don't want to do much. Young and old! In a few years we will all be finished. Humans have poisoned everything, they poison the air, they build factories, they travel on planes. In China, you can only walk down the street wearing masks. One day it will be the same here. This will all end.

O ser humano estraga tudo, estraga o planeta, estraga tudo. Antigamente, as estações do ano eram conhecidas, hoje está tudo confundido. Ninguém sabe quando é inverno, quando é verão, as estações estão todas trocadas. Foi o ser humano, os químicos e a vontade de querer mais que levaram a esta situação atual. Mas ninguém liga a isso. As pessoas querem é estar agarradas aos telemóveis e não querem fazer grande coisa. Novos e velhos! Daqui a uns anos acabamos todos, o ser humano intoxicou tudo, intoxicam o ar, colocam fábricas, andam nos aviões. Na china já só podem andar na rua de mascaras, qualquer dia vai ser igual aqui. Isto acaba tudo.

PT_221 - man, 80-89 years old, Ponte do sor

3.5 Spain

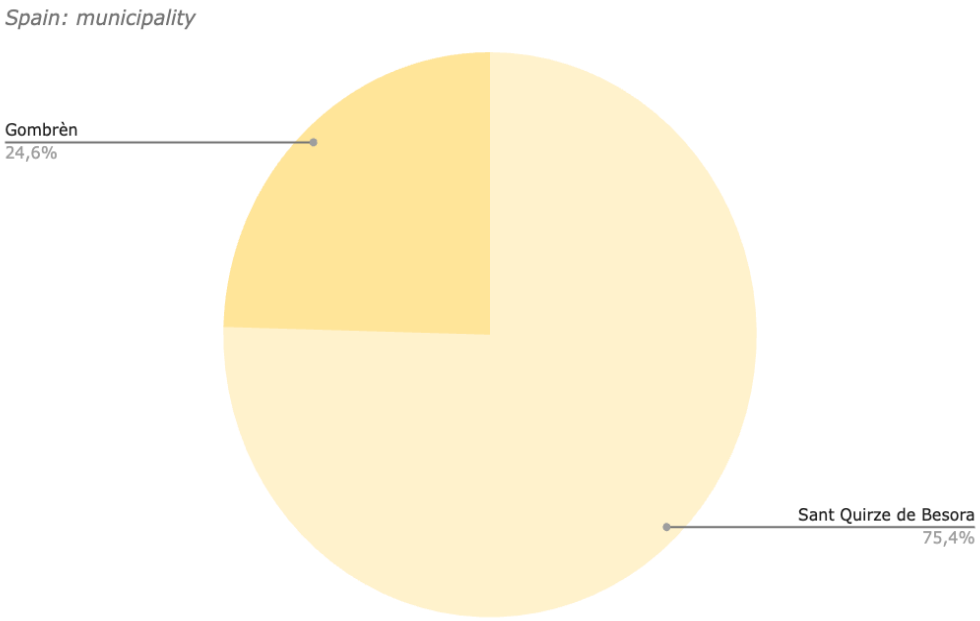

Figure 18 - Distribution of interviews per municipality in Spain

The interviews were conducted across a variety of settings. Many took place in the respondents' homes, while others were held in public spaces, like village squares, pedestrian streets, or home gardens, often during local events. A few interviews were held at local town halls. Several interviews were conducted remotely by phone due to time constraints or availability.

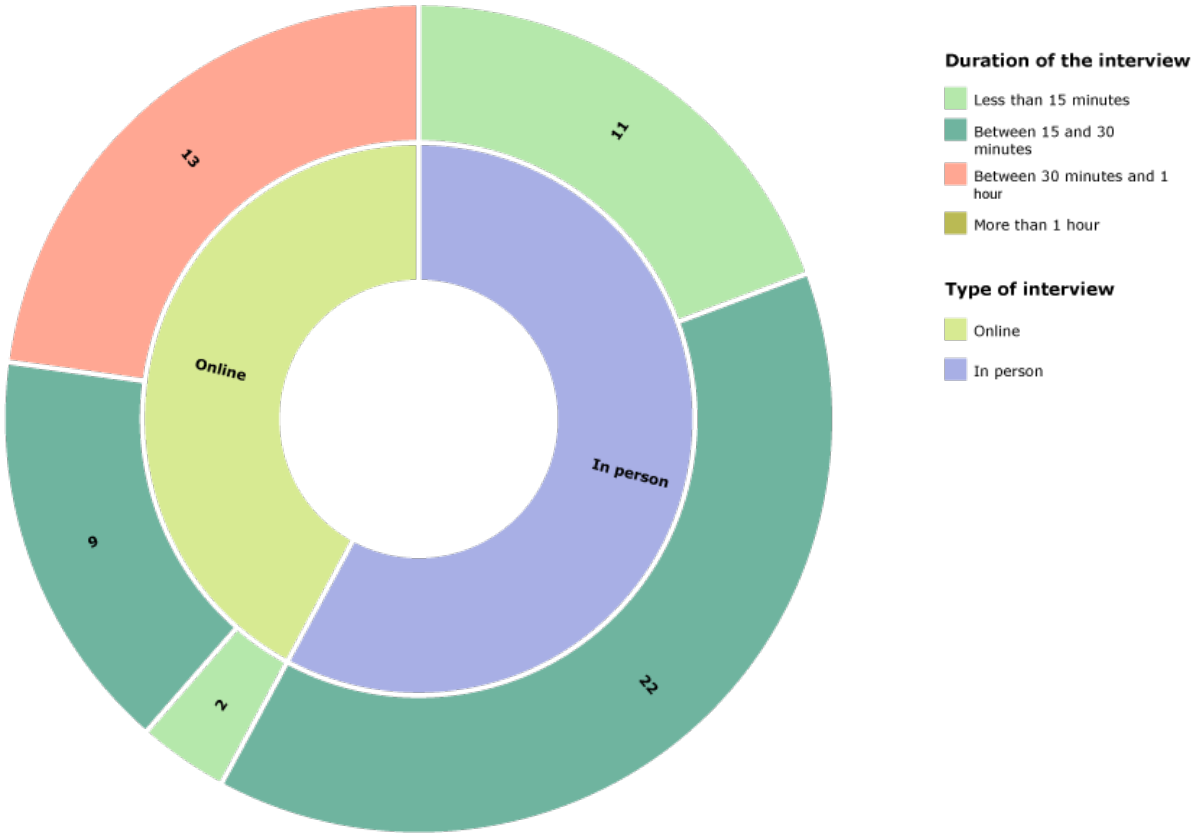

Figure 19 - Distribution of interviews by type and duration in Spain: online and face-to-face interviews, classified by time intervals (<15 min, 15-30 min, 30-60 min, >1 hour)

Interviewees ranged from young professionals in their 20s to older people in their 70s and 80s. Professions included teachers, police officers, doctors, agronomists, accountants, factory workers, therapists, and retirees, among others.

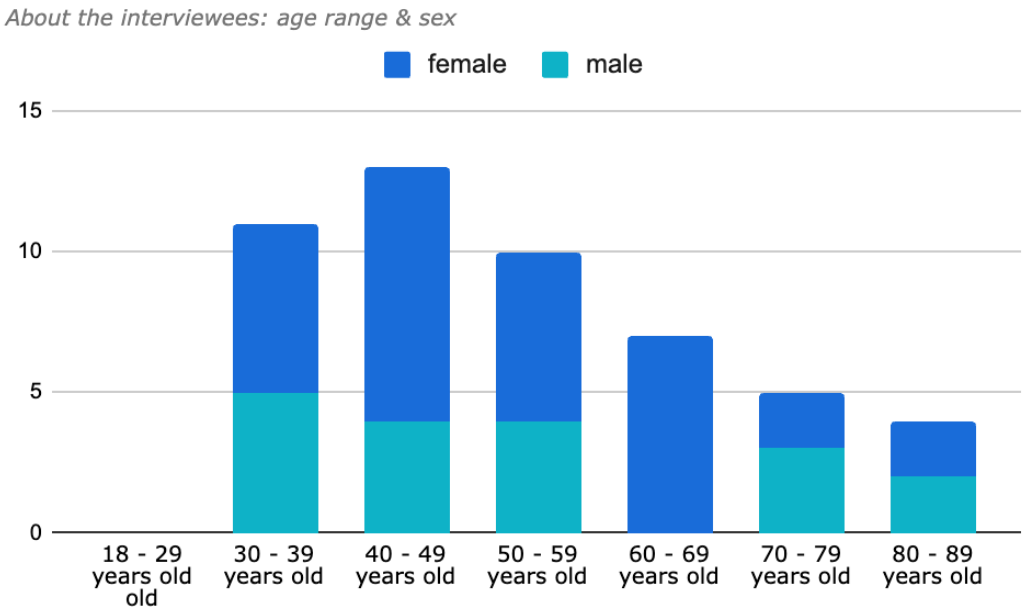

Figure 20 - Distribution of interviewees by gender and age range in Spain

3.5.1 Energy Use Practices

The interviewees in Gombrèn and Sant Quirze de Besora described a variety of daily energy-use habits, with many actively trying to reduce consumption based on their routines, home setups, and local infrastructure. Common energy-saving practices included turning off lights when not in use, relying on natural light during the day, and using energy-efficient appliances. Water conservation methods, such as reusing greywater for irrigation and collecting cold water from showers, were frequently mentioned. Recycling and waste management were also prioritized, with many following local recycling schemes and composting organic waste. When it came to managing indoor temperatures, several interviewees emphasized using energy-efficient methods, such as improving insulation, programming heating systems, but also using wood stoves instead of central heating. In general, differences in energy-use practices often stemmed from home size and generational preferences. Older respondents focused on traditional methods of conservation, such as drying clothes outdoors and wearing clothes until they wear out, while younger individuals leaned towards technological solutions like programmable heating and cooling systems.

Specific examples of good practices included making a composter to grow vegetables on a terrace, avoiding disposable products by using glass tupperware, and choosing eco-friendly appliances. Some participants emphasized careful planning, such as car sharing, optimizing trips, and baking multiple items at once in the oven to save energy. Others mentioned programming their household energy consumption based on the power generated by their photovoltaic panels, reusing pool water by installing a treatment plant, and walking or using the train to reduce transportation-related energy use.

Additionally, some interviewees admitted to areas where they struggle with energy-saving efforts, such as using air conditioning at night when solar panels are inactive and dealing with excessive packaging in

everyday products. Many expressed a desire to adopt more sustainable practices but cited barriers such as the high upfront cost of renewable energy systems. Interviews also revealed challenges and barriers related to the specific characteristics of the territory, particularly concerning transportation. Many respondents mentioned the lack of effective public options (trains and buses), which made the use of private cars essential, undermining the implementation of more sustainable practices.

3.5.2 Sustainability and Clean Energy

The interviewees showed differing degrees of involvement in discussions about energy and sustainability, both within their households and in social environments. In households, energy-saving practices and renewable energy solutions, such as solar panels, are often frequent topics of discussion, especially in response to rising energy costs. Families with members working in energy-related fields tend to discuss these topics more regularly. Conversations in workplaces also revolve around energy efficiency and sustainability, particularly among colleagues directly involved in the energy sector. However, discussions with friends are less frequent, with some avoiding the topic to prevent disagreements or because it doesn't naturally arise.

Economic concerns were a dominant theme in discussions about clean energy. While many acknowledge the importance of transitioning to renewable energy, the high initial investment required for solar panels or energy-efficient systems often prevents action. Some respondents feel frustrated by the slow pace of change due to financial and bureaucratic barriers. Generational differences were also highlighted, with younger people more engaged in sustainability efforts than older generations. Although awareness of environmental issues is growing, many feel that concrete action is still lacking, and some express skepticism about placing responsibility on individuals rather than large corporations or governments.

A notable point of skepticism emerged from several respondents who expressed doubt about the current narrative around individual responsibility for climate change. They felt that while personal actions like reducing energy consumption are important, the real responsibility lies with large corporations and industries that contribute disproportionately to environmental degradation. These respondents argued that shifting the burden of sustainability to individuals can obscure the larger issue of corporate environmental impact. Some also expressed frustration at governments and policymakers, whom they see as ineffective in regulating corporate practices or making meaningful structural changes that could ease the transition to clean energy for everyday consumers. This skepticism, combined with the perceived high costs of adopting renewable energy solutions, has led some individuals to question the practicality of making personal changes when larger systemic issues are left unaddressed.

Regarding social pressure, many respondents indicated that they don't feel significant pressure to adopt sustainable energy practices, with personal motivations or economic concerns driving their behavior. Some individuals create their own internal pressure to behave more sustainably, based on personal values or a heightened awareness of environmental issues. These self-motivated individuals often strive to adopt energy-saving behaviors regardless of what others around them are doing.

However, several respondents felt that society does not emphasize sustainability enough, with too little public discourse and institutional support to foster widespread change. Some participants pointed out that awareness campaigns and societal norms around issues like recycling or water conservation have

succeeded in shifting public behavior in the past and that similar efforts could be applied to energy use. In their view, more collective consciousness and pressure from communities, governments, and media are necessary to create changes in energy habits.

Economic pressure also played a central role in many responses, with the rising cost of energy often cited as the primary motivator for behavior change. For many, the desire to save money on bills drives them to adopt more energy-efficient practices, rather than societal or environmental pressure. This financial motivation highlights a gap between environmental awareness and actual behavior change; however, several interviewees acknowledged that, in the end, the result can be beneficial both economically and ecologically.

3.5.3 Challenges and Incentives

Respondents identified several significant obstacles to adopting sustainable energy practices, highlighting a range of economic, bureaucratic, and social barriers. A primary challenge is the high initial cost of renewable energy solutions, such as solar panel installations and energy-efficient upgrades, which often deter individuals, despite available subsidies. Many respondents noted that these financial incentives, while helpful, typically require upfront investments and involve complex bureaucratic processes, making them inaccessible to those with limited financial resources. Furthermore, some expressed frustration with the delayed economic returns on these investments, making it harder to justify the cost, while others pointed to the extensive paperwork and delays in obtaining permits for renewable energy installations as significant deterrents. In terms of incentives, financial support was seen as the most critical motivator for encouraging clean energy practices. Respondents emphasized the need for upfront subsidies, rather than reimbursement models, to make sustainable energy more accessible.

Social and cultural resistance presents another obstacle. A respondent in particular noted a "Not In My Back Yard" (NIMBY) mentality, where people support sustainability in theory but resist its implementation in their local areas due to concerns about visual impact or inconvenience. Additionally, the lack of awareness and education around energy-saving options contributes to slow adoption, with many respondents mentioning that societal attitudes are not yet fully aligned with the need for sustainability. For this reason, many respondents also felt that better public education and promotion of renewable energy options could help motivate individuals to adopt sustainable practices.

Technological limitations were another challenge mentioned by some respondents. Long charging times for electric vehicles and the high costs of batteries for solar energy storage were cited as technological barriers that slow the transition to renewable energy. Respondents felt that the development of better technologies is necessary to make clean energy more practical and appealing. Someone also pointed out a side effect of solar panel installation: even with panels, it is not possible to completely disconnect from the traditional energy grid, and this was seen as a limitation of current technologies and infrastructure, suggesting that incentives to disconnect from traditional energy providers or achieve self-sufficiency could drive more people toward clean energy.

Community-based initiatives, such as solar panel installations on municipal buildings and the development of local energy communities, were recognized by some respondents, though participation in these projects varied. Some were actively involved or expressed interest in these efforts, while others cited barriers such

as living in rented homes or lack of awareness. Additionally, projects like door-to-door recycling and the replacement of street lighting with energy-efficient LED bulbs were seen as part of broader community sustainability efforts.

More broadly, several respondents expressed dissatisfaction with the slow pace of policy changes and the limited action from governments and large corporations. They felt that political interests, especially those tied to the fossil fuel industry, hinder the widespread adoption of renewable energy.

3.5.4 Past, Present and Future

The interviewees also reflected on how much behaviors around energy and sustainability have evolved over the years. Some past habits, now seen as unthinkable, were once considered normal. Someone recalled throwing tuna oil down the sink or using excessive plastic in food packaging, and other harmful behaviors cited included dumping sewage from homes and businesses directly into rivers without any purification and routinely disposing of waste in nature. These practices have now largely been abandoned in favor of more environmentally responsible actions, reflecting a shift in societal norms around waste management and environmental protection.

Presently, many respondents are committed to contributing to a more sustainable future through personal actions like recycling, reducing energy consumption, and making more conscious choices about what they buy. In fact, there has also been a notable shift towards sustainable consumption, with several respondents focusing on buying bulk and Km0 products that generate less waste and have a lower carbon footprint.

Looking ahead, respondents expressed ambitious goals for the future of sustainability in their communities. Many hopes for communal solar panels on all blocks of flats and better facilities for recirculating water. There is also a strong desire for structural change at a systemic level to promote a new energy model. For example, respondents expressed frustration with efforts to reduce cars while the number of ships and planes continues to grow, emphasizing that changes need to be more consistent and widespread. Some suggested supporting the primary sector without overwhelming it with bureaucracy and called for the municipalization of hydroelectric plants. There was also a desire to see advancements in nuclear fusion and a public energy system that covers both production and distribution, with the installation of solar panels on the roofs of industrial areas and a reactivation of hydroelectric plants. The use of biomass, particularly given the local wooded environment, was also highlighted as a potential energy source.

In terms of transportation, respondents stressed the need for better public transport maintenance, expansion to other municipalities, and overall higher quality service.

They also called for braver and more ambitious political action, such as ensuring that financial aid for sustainable energy projects doesn't need to be returned. Water management is another area of concern, with respondents pushing for an end to water loss through municipal pipes and for more efficient use of natural resources. Reducing meat consumption, promoting word-of-mouth awareness about sustainability, and embracing a collective responsibility for energy and environmental practices were also seen as key to fostering long-term change.

3.5.5 Additional Remarks

In their final remarks, respondents expressed a mix of concerns, hopes, and frustrations about energy and sustainability issues. A prominent concern was the future well-being of children and future generations, with many worried about the long-term effects of climate change and environmental degradation. Criticism of political and corporate responsibility was a recurring theme, as several respondents believe that governments and large corporations are not doing enough to address the root causes of pollution and global warming. Many feel that individuals are unfairly pressured to change their behavior while the larger polluters, especially businesses, face little accountability. This frustration extended to clean energy solutions, with skepticism about electric vehicles and concerns about the ethical and environmental costs of battery production and lithium mining.

The need for systemic change was also highlighted, with several participants calling for braver policies that target major polluters, regulate air travel, and improve public transportation. Respondents noted that while individuals are encouraged to adopt sustainable practices, meaningful change requires tackling larger, global contributors (like China and the U.S.). Ultimately, while personal responsibility and local initiatives are seen as important, respondents believe that larger political and corporate accountability are essential to drive meaningful global change.

3.5.6 Quotes

> Since I live alone, my consumption is not very high. It is also true that I have light from the outside in a large part of the house all day and therefore, I hardly ever turn on any lights during the day. In the lower part of the house, I have a small laundry room that has been there all my life and I always keep some water there for different things that I might need and, if I can, I reuse it so that I don't have to spend it every time. It's true that it doesn't come from rainwater, which I once thought might be interesting, but if I need to soak some clothes, for example, I don't have to turn on the faucet every time. My kids gave me a dishwasher a while ago too and they always tell me it costs less than washing dishes by hand, so I use it often. I always hang my clothes outside in the garden, I don't have a dryer… I think that what should be looked at is not to spend so much, neither on water nor on electricity. Before, resources were more limited because sometimes our water was cut off, or we used a gas stove and we didn't have one in every room, but now, since there is one, we spend too much. I'm old and I don't know much about it.

> Com que visc sola el meu consum no és gaire elevat. També és veritat que tinc llum de l'exterior a bona part de la casa tot el dia i per tant, de llums quasi no n'encenc durant el dia. A la part de baix de casa tinc un petit safareig que hi ha sigut tota la vida i hi guardo sempre una mica d'aigua per diferents coses que pugui necessitar i, si puc, la reutilitzo per no haver-ne de gastar cada vegada. És veritat que no prové d'aigua de pluja, que alguna vegada he pensat que potser podria ser interessant, però si necessito remullar alguna peça de roba, per exemple, no he d'encendre l'aixeta cada cop. Els meus fills em van regalar un rentaplats fa un temps també i sempre em diuen que gasta menys que rentar els plats a mà, o sigui que el faig servir sovint. La roba sempre l'estenc a fora l'hort, no tinc assecadora… Penso que el que s'ha de mirar és de no gastar tant, ni d'aigua ni d'electricitat. Abans els recursos eren més limitats perquè a vegades ens tallaven l'aigua, o anàvem amb estufa de gas i no en teníem a cada habitació, però ara, com que n'hi ha, en gastem massa. Soc gran i no ho conec massa.

SP_004 - woman, 80-89 years old, Sant Quirze de Besora

I spend the morning at home until lunchtime when I go down to the store to have lunch with two of my children. What I do during the day is to have the TV on all the time, but I spend little because I don't do big things at home either. I really like to do work, and I do it next to the window, so I don't need to turn on the light either. I always have buckets on the terrace so that they are filled when it rains, and I can use the water to water all the plants I have. Before people didn't recycle as much as they do now. In Sant Quirze, we have been doing door-to-door not long ago and now I recycle a lot more.

El matí el passo a casa fins a l'hora de dinar que baixo a la botiga a dinar amb dos dels meus fills. El que faig jo durant el dia és tenir la tele engegada tota l'estona, però gasto poc perquè tampoc faig grans coses a casa. M'agrada molt fer labors i ho faig al costat de la finestra, així que tampoc necessito encendre el llum. Jo sempre tinc galledes a la terrassa perquè se m'omplin quan plou i pugui fer servir l'aigua per regar totes les plantes que tinc. Abans no es reciclava com ara. A Sant Quirze no fa gaire que fem el porta a porta i ara reciclo molt més.

SP_005 - woman, 80-89 years old, Sant Quirze de Besora

We live in a very energy efficient house as it is very well insulated and does not lose heat in the winter nor does much heat enter it in the summer. Some time ago, my wife decided to remove the pipe from the toilet sink and put a bucket under it. We use the water from the bucket instead of pulling the chain and it is impressive how much water we are saving. Everything we have set out to do at a family level, we have been doing to contribute as much as possible to a good, sustainable future. It also happens that when you do it there are neighbors who ask you, so I understand that by reporting, in some way we are also contributing. I'm glad that this type of activity [Entrack interviews] is being done so that people are becoming aware little by little.

Vivim en una casa molt eficient energèticament ja que està molt ben aïllada i no perd l'escalfor a l'hivern ni hi entra gaire calor a l'estiu. Fa temps, la meva dona va decidir que treia la canonada de la pica del lavabo i hi posava una galleda a sota. L'aigua de la galleda la fem servir per tirar la cadena i és impressionant la quantitat d'aigua que estem estalviant. Tot el que ens hem plantejat fer a nivell familiar, ho hem anat fent per contribuir el màxim possible a un bon futur sostenible. També passa que quan ho fas tu hi ha veïns que et demanen, així que entenc que informant, d'alguna manera també hi estem contribuint. M'alegra que es facin aquest tipus d'activitats [Entrack interviews] perquè la gent es vagi conscienciant mica en mica.

SP_006 - man, 60-69 years old, Sant Quirze de Besora

The big companies that promote fossil energies are the main obstacle we face to be able to make a radical and effective change in the energy model. On the other hand, we could also include that

there are many people/politicians who do not support this change and, therefore, put obstacles in the way. Thinking that what we pollute the most on a day-to-day basis are the journeys we make, whether to go to work or to go shopping (you have to leave Gombrèn to do so), we would need a good infrastructure that would allow to change the conventional car for an electric one. Right now, having an electric car in town is not profitable. In addition, you would also need an electric car that had sufficient autonomy and power to make the minimum journey Gombrèn-Ripoll-Gombrèn without problem (24km with a lot of unevenness and curves), without assuming an exorbitant price. It would take effective cars at a reasonable price for everyone to participate in this change… The town hall is currently promoting shared self-consumption where we can benefit from the energy generated through the solar panels, they have installed by paying an annual fee. Currently, all the neighbors interested in being part of it are signing up, in my house we are one of them. On a personal level, I believe that I am taking all the actions that are possible for me right now to have a more sustainable future. At the work level, I managed to get the company to go ahead with a furnace change project that will allow a saving of 2GW of gas per year. I think it's an important step to consider… I would like to see a fusion power plant promoted in the municipality, which would above all allow us to take advantage of the biomass resources we have.

Les grans empreses que fomenten les energies fòssils són el principal obstacle que ens trobem per poder fer un canvi radical i efectiu en el model energètic. Per altra banda també hi podríem incloure que hi ha moltes persones/polítics que no aposten per aquest canvi i, per tant, hi posen traves. Pensant que el amb el que contaminem més en el dia a dia són els desplaçaments que fem, ja sigui per anar a treballar com per anar a comprar (s'ha de sortir de Gombrèn per fer-ho), caldria una bona infraestructura que ens permetés canviar el cotxe convencional per un d'elèctric. Ara mateix tenir un cotxe elèctric al poble no surt rentable. A més a més, també caldria un cotxe elèctric que tingués autonomia i potència suficient per fer el trajecte mínim Gombrèn-Ripoll-Gombrèn sense problema (24km amb força desnivell i corbes), sense que suposes un preu desorbitat. Caldrien cotxes efectius a un preu raonable perquè tothom pugui participar d'aquest canvi… Ara mateix s'està impulsant des de l'ajuntament una autoconsum compartit on ens podem beneficiar de l'energia generada a través de les plaques solars que han instal·lat pagant una quota anual. Actualment ens estem apuntant tots els veïns interessats en formar-ne part, a casa meva som un d'ells. A nivell personal crec que estic fent totes les accions que ara mateix em són possibles per tenir un futur més sostenible. A nivell laboral he aconseguit que a l'empresa es tiri endavant un projecte de canvi de forns que permetrà un estalvi de 2GW de gas a l'any. Crec que és un pas important a tenir en compte… M'agradaria que s'arribés a impulsar una central de fusió al municipi, que permeti sobretot aprofitar els recursos de biomassa que tenim.

SP_010 - man, 18-29 years old, Gombren

We live in a capitalist society and therefore the most ecological practices are not rewarded but the most economically efficient practices. Therefore, the pressure is only positive if, in addition to generating positive environmental externalities, it generates economic benefits or savings. The price of the initial investment of the works. Although in some cases it ends up turning back economically, the initial investment means that a significant part of society cannot afford this first investment. Access is limited to middle and upper class… Get the municipal power plants that are in private hands to end up in public hands and that there is a reversion to the town.

Vivim en una societat capitalista i per tant no es premien les pràctiques més ecològiques sinó les pràctiques més eficients econòmicament. Per tant, la pressió només és positva si, a més de generar externalitats mediambientals positives, genera beneficis econòmics o estalvi. El preu de la inversió inicial o de les obres. Malgrat en algun cas acabi revertint econòmicament, la inversió d'entrada provoca que una part important de la societat no pugui permetre's aquesta primera inversió. L'accés es limita a classe mitja i alta… Aconseguir que les centrals elèctriques del municipi que estan en mans privades acabin en mans públiques i que hi hagi una reversió cap al poble.

SP_014 - woman, 30-39 years old, Sant Quirze de Besora

I try to have minimal energy and resource consumption, we try not to generate waste and we compost organics, we consume local products, we always take advantage of trips to other municipalities to do more than one management and thus avoid going up and down several times, we take advantage the water to wash the food or from the shower to irrigate... Start with small actions that do not involve a great effort, and little by little you will pick up more and better habits. Taking advantage of natural light is an action that costs nothing and is better for health. I feel quite proud of the actions I carry out daily (those mentioned in the first question), I could certainly do more, but there are also things that take work, and you often don't have time to do everything you would like. Obviously, I make mistakes and sometimes I don't do everything I advocate, but it's clear that no one can do it perfectly. The problem arises when we cannot accept that we are human, that with the world that exists it is very easy not to comply with everything that you defend, but we must understand that we must not be ashamed because then frustrations are generated, and it ends up being counterproductive to promote more actions. In general, we believe that a radical change is needed in the system, as it is currently, no matter how many measures are implemented, it will not go very far, because they are not groundbreaking and do not have a real effect on the population. Lack of interest, both citizen and politician. Many people do not see that switching to renewable energies is a safe bet, they see that many changes are needed, and they are afraid that they will have to give up the comforts they have right now, they wait a lot for someone else to do it and see what happens. At the political level, there is a lack of policies that are groundbreaking, that cause a radical change in the system that allows a real empowerment of citizens, but right now there are still too many influences of the energy oligopoly in politics and not much can be done… The town hall has promoted an energy community to share photovoltaic energy with the public, in addition to a consumption study to optimize them for all those partners who are part of it. Municipal woodsheds will also be installed to store wood and thus promote the consumption of biomass and that it is local. I will be part of both as I think they are very positive initiatives for the municipality. I can be part of the actions that are being developed and also act as a megaphone for them so that more people join in.

Intento tenir un consum mínim energètic i de recursos, intentem no generar residus i fem compostatge amb els orgànics, consumim producte de proximitat, aprofitem sempre els viatges a altres municipis per fer més d'una gestió i així evitar pujar i baixar diverses vegades, aprofitem l'aigua de rentar el menjar o de la dutxa per regar… Començar per petites accions que no suposin un gran esforç, i mica en mica aniràs agafant més i millors hàbits. Aprofitar la llum natural és una acció que no costa i realment va millor per la salut. Em sento força orgullosa de les accions que

porto durant el dia a dia (les comentades a la primera pregunta), segurament es podria fer més, però també hi ha coses que porten feina i sovint no tens temps de fer tot el que voldries. Òbviament cometo errors i a vegades jo mateixa no faig tot allò que defenso, però esta clar que ningú ho pot fer perfecte. El problema neix quan no podem acceptar que som humans, que amb el món que hi ha és molt fàcil no complir amb tot allò que defenses, però hem d'entendre que no ens hem d'avergonyir perquè llavors es generen frustracions i acaba sent contraproduent per promoure més accions. En general creiem que cal un canvi radical en el sistema, com està actualment per més mesures que s'implementin no s'arribarà gaire lluny, perquè no són trencadores i no acaben de tenir un efecte real en la població. Manca d'interès, tan ciutadà com polític. Molta població no veu que sigui una aposta segura el canvi a energies renovables, veuen que calen molts canvis i els hi fa por que hagin de renunciar a les comoditats que tenen ara mateix, esperen molt que ho faci un altre i a veure què passa. A nivell polític, falten polítiques que siguin trencadores, que provoquin un canvi radical en el sistema que permeti un apoderament real de la ciutadania, però ara mateix hi ha massa influències encara de l'oligopoli energètic en la política i no es pot fer massa res trencador… Des de l'ajuntament s'ha impulsat una comunitat energètica per compartir energia fotovoltaica amb la ciutadania, a més d'un estudi de consums per tal d'optimitzar-los a tots aquells socis que en formen part. També s'instal·laran uns llenyers municipals per guardar-hi fusta i així potenciar el consum de biomassa i que aquesta sigui local. Formaré part de tots dos ja que crec que són iniciatives molt positives pel municipi.

SP_016 - woman, 18-29, Gombren

4 Profiles, Key Insights and Common Themes

This analysis aims to better understand community perceptions and behaviors related to energy efficiency, sustainability, and renewable energy adoption. While it does not seek to provide conclusive or exhaustive insights into the views of entire populations, nor to draw definitive conclusions about societal attitudes toward energy and sustainability, the findings allow to identify several "profiles" that may prove useful when considering new policies and effective communication strategies with the public:

- the pragmatic/economically motivated adopts energy-saving practices primarily to reduce costs rather than out of environmental concern, focusing on cutting bills rather than saving the planet;
- the committed environmentalist actively engages in sustainable behaviors driven by strong ecological values, often frustrated by what they perceive as insufficient governmental or corporate action;
- the misinformed or skeptic either lacks awareness of clean energy or doubts its effectiveness, showing resistance to change due to mistrust or limited information;
- the economically vulnerable acknowledges the importance of sustainability but is held back by the high upfront costs of renewable technologies and insufficient financial support;
- the technological innovator is enthusiastic about adopting new energy-saving technologies, viewing innovation as key to sustainability;
- the traditionalist/conservative sticks to older, more familiar energy practices, driven more by economic necessity than environmental ideals, and is hesitant to adopt new solutions.

These descriptions are not intended as the outcome of a systematically designed profiling effort but rather to offer a set of potential group types with whom institutions might engage. In this sense, they are included in this report to serve as a prompt for potential future work, where a more granular and context-specific analysis of the communities involved may be required.

In terms of key insights, several cross-cutting themes emerged from the interviews conducted in Greece, Italy, Portugal, and Spain. Economic barriers, such as the high cost of renewable technologies, remain a significant obstacle to adopting clean energy practices, even where subsidies are available. Rising energy costs also prompted behavioral shifts, while frustration with bureaucratic hurdles in accessing subsidies and government programs discouraged many from making energy-efficient upgrades. This aligns closely with findings in D3.1, which originated from interviews with political actors. It's noteworthy that the analysis from the citizens' perspective already mirrors the overall stakeholders' analysis, highlighting a shared recognition of these challenges across different groups.

Limited public transportation and infrastructure, especially in rural and coastal areas, were frequently cited as challenges, forcing reliance on private cars or scooters. Territorial vulnerability thus played a significant role in shaping people's concerns, and the interviews depict sustainability as heavily constrained by financial and infrastructural factors, particularly in already socio-economically disadvantaged regions.

Generational differences also surfaced, with younger people generally more open to sustainable practices than older generations. There was a consistent call for better education and public awareness campaigns

about clean energy, alongside a desire for systemic changes to make sustainability more accessible. Respondents often expressed skepticism toward government initiatives and corporate accountability, feeling that large polluters avoid responsibility while individuals bear the burden of change.

Although some respondents were aware of local clean energy initiatives, participation was limited, and there were calls for more community-driven efforts.

A notable gap emerged between the individual and governmental levels, highlighting the potential for community-based initiatives as a space for experimentation and action. While some respondents mentioned local clean energy projects, such as photovoltaic installations or energy-efficient public buildings, participation remained limited. Strengthening the role of local communities in the sustainability transition could foster shared responsibility, mutual learning, and a supportive environment for adopting sustainable practices. Additionally, social pressure—though not strongly perceived in the interviews—could have a more positive effect if nurtured in a community context. In such a setting, social influence could motivate individuals to adopt more sustainable behaviors, creating a ripple effect of change.

Intergenerational knowledge-sharing also emerged as a valuable dynamic. Younger generations often introduced sustainable practices learned in school, such as waste reduction, while older generations contributed their knowledge of resource conservation. Encouraging these exchanges within communities could create a more integrated approach to sustainability, leveraging both innovation and experience. This intergenerational dialogue could help communities adopt cleaner energy practices more effectively, with social pressure playing a constructive role in driving change.

Moreover, some of the economic and infrastructural barriers could be more effectively addressed at the community level through shared resources and collective investments. Local energy cooperatives or community-based solar projects could reduce the high initial costs that individuals face when adopting clean energy technologies. These efforts would also alleviate the sense of isolation expressed by some respondents, fostering a sense of collective ownership over the sustainability transition. Local governments, in collaboration with civil society organizations, could play a key role in supporting these initiatives, providing not only financial incentives but also the necessary infrastructure and educational programs to empower communities.

Several interviewees acknowledged that engaging with sustainability—whether by becoming informed, questioning habits, making changes, or investing money—is ultimately a choice often linked to privilege. In other words, sustainable practices depend not only on economic but also on cultural capital. Institutions need to recognize this dynamic and ensure that interventions address various forms of vulnerability, both financial and social.

Finally, the inherent complexity and contradictions within communities should not serve as an excuse for inaction. Public communication must balance these contradictions with imaginative and achievable solutions. Sustainability efforts must avoid becoming inaccessible, rhetorical, or limited to those already engaged. The responses to future-oriented questions revealed valuable insights, mixing hope, concern, guilt, and frustration. While there is widespread awareness of the potential for devastating environmental impacts, changing entrenched habits and mindsets remains challenging. Moreover, many interviewees struggled to envision concrete proposals, particularly at the community level. This highlights the need to transform these gaps into spaces where individuals can come together around shared ideas, motivations,

and actions, and in doing so, "become" a community. Despite the acknowledgment among people in Greece, Italy, Portugal, and Spain that dealing with sustainability and clean energy is complex and requires time and effort, creating these spaces would ensure that change feels inclusive, achievable, and grounded in real possibilities.

5 Practical Recommendations

Building on the findings of the ethnographic study, a number of actionable insights have emerged for policymakers and other key stakeholders. As ENTRACK moves into its next phase, particularly the co-design of new and improved local energy policies, the following points can serve as a foundation for creating targeted interventions:

1. Address economic barriers through tailored financial support and energy efficiency programs for low-income households

The high upfront costs of renewable technologies, such as solar panels and energy-efficient appliances, emerged as a significant barrier across communities. To overcome this, government institutions, local authorities, financial institutions, and the private sector must collaborate to offer targeted financial support, including subsidies, low-interest loans, and grants, particularly for low-income households and small businesses. Flexible financing options from private companies can further reduce financial strain. Policymakers should also develop programs that provide free or heavily subsidized energy efficiency improvements for vulnerable populations, ensuring broader access to sustainable technologies.

2. Simplify bureaucratic processes and increase accessibility

Many respondents expressed frustration with the bureaucratic challenges of accessing government support programs for clean energy adoption. To promote wider participation, it is critical to streamline these processes, reduce paperwork, and offer clearer guidance to applicants. Governments should consider establishing local support centers or online platforms to assist individuals in navigating these programs. Importantly, these local centers would play a key role in enhancing accessibility, as some individuals—particularly elderly people, but not only them—may struggle to use exclusively online platforms. Providing in-person assistance would help ensure that all community members, regardless of digital literacy, can access the support they need to adopt clean energy practices.

3. Improve public transportation and energy infrastructure

In many interviews, the lack of adequate public transportation and energy infrastructure, particularly in rural areas, was highlighted as a major barrier to sustainable energy practices. National and local governments, along with transportation agencies, should prioritize investments in electric vehicle infrastructure, bike lanes, and energy-efficient public transit options. These measures are crucial not only for environmental reasons but also to prevent the isolation of vulnerable populations. Without such improvements, the responsibility for adopting sustainable practices falls disproportionately on individuals, particularly those with fewer resources. This can lead to unfair pressure and even the stigmatization of those who cannot afford further sacrifices or adopt greener practices. Partnerships with private transportation companies could also lead to innovative solutions that better serve these communities while alleviating the burden on individuals.

4. Develop community-based energy projects

One significant gap identified was the lack of (awareness of) community-driven energy projects. Local authorities, civil society organizations, and private investors can play a critical role in fostering community energy cooperatives or shared solar projects, where for example residents collectively invest in renewable

energy. This should also take into account renters, providing them with clear opportunities to participate. These initiatives can reduce the financial burden on individuals, increase access to clean energy, foster long-term engagement, and empower communities to take charge of their energy futures.

5. Promote intergenerational knowledge sharing

Throughout the study, the potential for intergenerational knowledge sharing was evident, with younger generations offering fresh ideas on sustainability and older generations possessing resource-conservation skills developed through necessity. Schools, community centers, and local governments should create opportunities for these exchanges to thrive, while companies and NGOs could support such initiatives. By integrating the efficiency and resourcefulness of traditional practices with modern and more technological approaches, policymakers and community leaders can inspire more sustainable behaviors across generations, also fostering a sense of community.

6. Enhance public awareness through education and local communication campaigns

Many interviewees across countries highlighted that concepts like sustainability and clean energy often feel too abstract or distant to be fully understood or adopted by the general public. To address this, local authorities, NGOs, and educational institutions should lead targeted campaigns that break down these complex ideas into more tangible, relatable information. These efforts should aim to demystify energy-saving practices and clearly communicate the long-term benefits of renewable energy. Collaborative efforts with private companies, local businesses, and public institutions could ensure these campaigns reach a wider audience, offering simple, actionable steps that can be easily integrated into daily routines.

7. Encourage behavioral change through incentives, social pressure, and leading by example

While many interviewees recognized the importance of energy efficiency, changing ingrained habits proved to be challenging. This highlights the gap between awareness and consistent action, particularly when the benefits are not immediately visible. To address this, behavioral change interventions should go beyond providing information, they should also focus on forming new habits. Policymakers, local leaders, and businesses can foster this change by offering incentives for energy-saving actions and leveraging positive social pressure within communities. Importantly, local stakeholders should lead by example, normalizing these behaviors and adopting sustainable practices rather than simply advocating for them, which is essential for building public acceptance and social legitimacy in the transition to more sustainable practices.

8. Provide training and capacity-building for local actors

As local governments and community organizations take on a more central role in energy policy, training and capacity-building become essential[2]. NGOs, universities, and private training institutes should offer workshops to enhance the technical knowledge and skills of local actors involved in energy planning. Beyond technical expertise, it is equally important to equip these local leaders with the ability to actively listen and respond to the real needs of the communities they serve. This dual approach ensures that local

[2] "Local Clean Energy Transition: Local Authorities as Drivers for a Decarbonised Europe." CORDIS, cordis.europa.eu/article/id/450490-local-clean-energy-transition-local-authorities-as-drivers-for-a-decarbonised-europe. Accessed 29 Oct. 2024.

policy interventions are not only effective but also aligned with the lived experiences and priorities of the people they aim to support, fostering more inclusive and community-driven initiatives.

9. Foster trust and accountability through partnerships

Many respondents expressed skepticism about government and corporate efforts to address climate change. Building trust requires collaboration between national and local governments, businesses, civil society, and communities. Transparent, accountable partnerships can demonstrate that sustainability goals are achievable and that stakeholders are committed to delivering real change. Promoting trust and accountability also means encouraging individuals to take responsibility and actively participate in community-driven actions and possibly fostering cohesive social associations that can build trust within the community and raise awareness simultaneously. However, this sense of responsibility must be reciprocated by other stakeholders; for instance, companies can work with local authorities to fund community-based clean energy projects, ensuring their social and environmental commitments are visible and genuine, while local communities see their involvement reflected in real outcomes.

10. Integrate energy policy into broader social and economic agendas

For energy policies to be effective, they must be aligned with broader social and economic strategies. Energy should be recognized as a basic right for all, and the current energy model is not only unsustainable but also contributing to geopolitical issues. Change is necessary, but both governments and citizens are often resistant. Policymakers should integrate energy goals with economic and social development to make sustainability more accessible and relevant to everyday concerns. Because isolated efforts won't be enough, broader participation is required: if only a few people make changes, progress will stall. Only collaborative efforts between local governments, the private sector, community leaders, and citizens can ensure that energy policies contribute to wider societal well-being, making the transition to sustainability an inclusive and comprehensive process.

Bonus ENTRACK Recommendation

The ENTRACK ethnographic work is notable both for the number of people reached and interviewed across Mediterranean communities and for its impact on the Climate Explorers who conducted the interviews. For many, the process went beyond data collection, offering new perspectives and prompting them to reflect on their own energy practices. In other words, the ethnographic approach exposed them to the complexities of sustainability, enhancing their understanding and potentially influencing their commitment to energy-saving behaviors.

This combination of broad community engagement and the personal learning experience of the Climate Explorers demonstrates the practical value of the participatory approach used in ENTRACK. It shows how involving individuals at different levels can support local energy transitions by building both knowledge and awareness in a meaningful way. Policymakers and stakeholders should consider incorporating similar participatory models in their projects, as they can enhance both community engagement and individual understanding of energy-saving practices. Moreover, these practices contribute to the development of cross-disciplinary skills and soft skills that are still underexplored within the context of "green jobs", roles linked to the ecological transition. In addition to technical and specialist expertise, it is in fact essential to foster the capacity to engage with citizens and gain a deeper understanding of their behaviors and

motivations. This will enable policymakers to more effectively integrate these insights into the design and implementation of environmental policies.

6 Closing Remarks

In conclusion, this report has presented the results of the ethnographic work conducted within the ENTRACK project, highlighting the lived experiences, perceptions, and concerns of citizens regarding energy and related practices, particularly in the context of sustainability.

While ethnography is traditionally a method focused on deep, localized understanding, its application in the ENTRACK project demonstrates its practical and, in some ways, scalable potential. Although not designed for large-scale replication, the insights gained from ethnographic work in rural Mediterranean communities provide a flexible foundation for understanding some of the social dimensions of energy practices and, potentially, transitions.

These ethnographic insights intend to offer a valuable resource to inform public decision-making processes and applied strategies. They demonstrate how citizen engagement can support the development of energy policies that are responsive to the real needs and behaviors of local communities, providing practical guidance for decision makers to co-design more inclusive and sustainable energy policies.

The collaboration and commitment of the focal point, Climate Explorers, and all those who contributed their views were essential, and without their input this work would not have been possible.

APPENDICES (Digital Format)

Appendix I: Ethnographic toolkit (English)

For an in-depth examination of the ethnographic methodology, interview techniques, and fieldwork strategies deployed in the ENTRACK project, the complete toolkit is accessible in English through the provided link for detailed exploration: https://entrack-project.eu/wp-content/uploads/2024/10/Appendix-I_-Ethnographic-toolkit-English-master-copy.pdf

Appendix II: Ethnographic toolkit (Greek)

For an in-depth examination of the ethnographic methodology, interview techniques, and fieldwork strategies deployed in the ENTRACK project, the complete toolkit is accessible in Greek through the provided link for detailed exploration: https://entrack-project.eu/wp-content/uploads/2024/10/Appendix-II_-Ethnographic-toolkit-Greek.pdf

Appendix III: Ethnographic toolkit (Italian)

For an in-depth examination of the ethnographic methodology, interview techniques, and fieldwork strategies deployed in the ENTRACK project, the complete toolkit is accessible in Italian through the provided link for detailed exploration: https://entrack-project.eu/wp-content/uploads/2024/10/Appendix-III_-Ethnographic-toolkit-Italian.pdf

Appendix IV: Ethnographic toolkit (Portuguese)

For an in-depth examination of the ethnographic methodology, interview techniques, and fieldwork strategies deployed in the ENTRACK project, the complete toolkit is accessible in Portuguese through the provided link for detailed exploration: https://entrack-project.eu/wp-content/uploads/2024/10/Appendix-IV_-Ethnographic-toolkit-Portuguese.pdf

Appendix V: Ethnographic toolkit (Catalan)

For an in-depth examination of the ethnographic methodology, interview techniques, and fieldwork strategies deployed in the ENTRACK project, the complete toolkit is accessible in Catalan through the provided link for detailed exploration: https://entrack-project.eu/wp-content/uploads/2024/10/Appendix-V_-Ethnographic-toolkit-Spanish.pdf

Ethnographic training

Appendix VI: Introduction to ethnography #1

The ethnographic introduction, designed for climate explorers and focal points within the ENTRACK project, can be found in the provided link for detailed exploration: https://entrack-project.eu/wp-content/uploads/2024/10/Appendix-VI_-Introduction-to-ethnography-1-slides.pdf

Appendix VII: Activity I: field description

For additional information concerning the scope of activities undertaken by the Climate Explorers, kindly refer to the provided link: https://drive.google.com/file/d/1i7imJrXMof784Te8Fxnw4hgMu95Sx51W/view?usp=sharing

Appendix VIII: Introduction to ethnography #2

For details pertaining to the second training focused on ethnographic methods, refer to the provided link: https://entrack-project.eu/wp-content/uploads/2024/10/Appendix-VIII_-Introduction-to-ethnography-2-slides.pdf

Appendix IX: Activity II: engagement practices

To explore how Focal Points have facilitated the involvement of Climate Explorers in conducting interviews and advancing community awareness of sustainability, refer to the provided link: https://entrack-project.eu/wp-content/uploads/2024/10/Appendix-IX_-Activity-II_-engagement-practices.pdf

Appendix X: Sample interview protocol (English)

The comprehensive sample interview protocol in , encompassing the entire set of questions along with instructions for administering these interviews in English, may be accessed for further consultation via the following link: https://entrack-project.eu/wp-content/uploads/2024/10/Appendix-X_-Sample-interview-protocol-English-master-copy.pdf

Appendix XI: Sample interview protocol (Greek)

The comprehensive sample interview protocol, encompassing the entire set of questions along with instructions for administering these interviews in Greek, may be accessed for further consultation via the following link:

https://entrack-project.eu/wp-content/uploads/2024/10/Appendix-XI_-Sample-interview-protocol-Greek.pdf

Appendix XII: Sample interview protocol (Italian)

The comprehensive sample interview protocol, encompassing the entire set of questions along with instructions for administering these interviews in Italian, may be accessed for further consultation via the following link: https://entrack-project.eu/wp-content/uploads/2024/10/Appendix-XII_-Sample-interview-protocol-Italian.pdf

Appendix XIII: Sample interview protocol (Portuguese)

The comprehensive sample interview protocol, encompassing the entire set of questions along with instructions for administering these interviews in Portuguese, may be accessed for further consultation via the following link: https://entrack-project.eu/wp-content/uploads/2024/10/Appendix-XIII_-Sample-interview-protocol-Portuguese.pdf

Appendix XIV: Sample interview protocol (Catalan)

The comprehensive sample interview protocol, encompassing the entire set of questions along with instructions for administering these interviews in Catalan, may be accessed for further consultation via the following link: https://entrack-project.eu/wp-content/uploads/2024/10/Appendix-XIV_-Sample-interview-protocol-Spanish.pdf

Appendix XV: Report interviews (English)

The English interview report, which has been translated and proofread by Focal Points, is available for consultation via the provided link: https://entrack-project.eu/wp-content/uploads/2024/10/Appendix-XV_-Report-interviews-English.pdf

Appendix XVI Report Interviews answers

The Excel spreadsheet, which encompasses the interviews conducted by Climate Explorers in Italian, Catalan, Portuguese, and Greek, is accessible through the provided link: https://entrack-project.eu/wp-content/uploads/2024/10/Appendix-XVI_-ENTRACK-interview-report-ANSWERS.xlsx

Appendix XVII: ENTRACK Monitoring tool

The Excel document, structured to record and track the interview contacts and progression activities undertaken by Climate Explorers, may be accessed through the provided link: https://entrack-project.eu/wp-content/uploads/2024/10/Appendix-XVI_-ENTRACK-Monitoring-tool.xlsx

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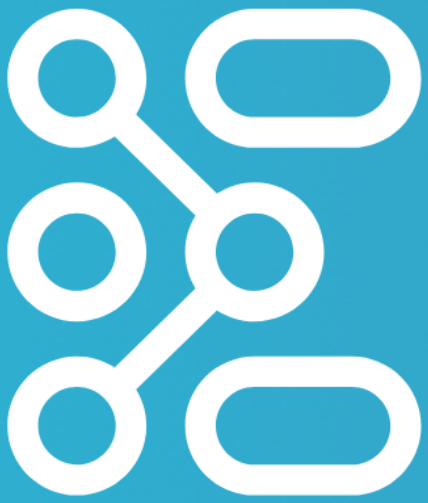

ENTRACK

Empowering local and regional authorities to design clean energy transition plans

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