



# Lessons learned from the PSLifestyle citizen science labs

Deliverable 1.9

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# Abstract

This report is the result of monitoring and controlling the implementation of the citizen science labs (CSLs) in the PSLifestyle project. While the project has created documents on the findings from each of the three lab iterations, this report is designed to provide an overarching analysis of the process and the insights across topics and locations which have developed throughout the journey. It includes analysis from reports from CSLs in each country after each meeting, participation data, analysis of CSLs discussion content and a survey with the participants, providing an overview of the challenges and success factors of the PSLifestyle CSLs process with a view to inspiring similar future projects.

## Executive summary

This report is the result of **monitoring and controlling the implementation of the citizen science labs (CSLs) in the PSLifestyle project**. Anchored to four key aims related to the different elements of the process, we have conducted a **mixed-methods evaluation of the CSLs** (methodology in [Chapter 2](#)) and **an analysis of the insights gathered from participants across the six lab meetings in the eight PSLifestyle project countries** (Estonia, Finland, Germany, Greece, Italy, Portugal, Slovenia and Türkiye). While the project has created documents on the findings from each of the three lab iterations, this report is designed to provide **an overarching analysis of the process and the insights across topics and locations** which have developed throughout the journey. It includes **analysis from reports from CSLs** in each country after each meeting, **participation data**, analysis of **CSLs discussion content** and a **survey** with the participants.

We first explore the ability and effectiveness of the PSLifestyle CSLs format to engage the expected number of participants and generate results ([Chapter 3](#)). **The project exceeded the target number of participations in the CSLs and generated the desired type of results**. In this report we analyse our process to share **what went well** as well as the **challenges**. In terms of the PSLifestyle CSL process, we developed an overarching framework, accompanied with documentation and training sessions to equip all implementing partners with the resources and skills to be able to effectively achieve the project's associated aims. We explore the **ways in which this structure worked well as designed**, and some **elements where we required flexibility according to circumstance and context throughout the timeline**, such as in the structure and location of CSL meetings, and for the most effective ways of recruiting participants. We summarise our procedural learnings by providing some considerations **for others who are looking to drive successful citizen science initiatives**. These include elements such as having a **clear shared vision** and a **practical plan for implementing it**; having **roles and responsibilities** shared in a way which maximises **collaboration**, as well as an ability to be **flexible** in the process; and **leveraging key partnerships** and **strategic communication** with the target audience.

Additionally, we set out some **indications of the impact of participating in CSLs on those who took part**, as we analyse results from a survey with CSLs participants from across the countries (**Chapter 4**). From a questionnaire completed by some CSL participants, we were able to have some initial insights on aspects such as: their **views on sustainability and sense of community** – the role of community and at which levels the participants felt responsibility towards their community; **benefits to health and wellbeing** – the ways in which participants felt their health and wellbeing could improve as a result of a range of sustainability-oriented actions; and **motivation to make sustainable changes** – insights into how much participants were already doing, and were willing to do, and the role of feeling part of a common movement in their motivation.

We also take a look at what we found out from the CSLs activities in terms of **behavioural and consumption insights on four key domains: housing, food, mobility and consumption (Chapter 5)**. Taking this overarching view **across all CSL meetings**, we were able to **identify factors affecting citizens' ability to take up a variety of actions** across the domains. In addition, through this analysis, we found several **cross-cutting challenges** in terms of citizens' engagement with different types of actions, which presented themselves across more than one domain. For example: **finances; social and cultural resistance; information and understanding; responsibility – government or individual; and maintaining motivation and adapting to circumstance**.

The CSLs were at the heart of **the co-design and development of the PSL Tool**. In this regard, we look into the **themes of feedback provided by participants** in the penultimate section of the report (**Chapter 6**). Our analysis highlights some common themes across the project countries: **1.5-degree limit to global warming; carbon footprint methodology and figures; understanding, comprehensiveness and relevance; use of the skip function; designing an attractive and easy-to-use PSL Tool; and engagement features and user journey**.

Finally, we take a step back and look at the **CSL process as a whole** and **place the learnings into a broader future outlook**, which we hope can **inspire future similar projects (Chapter 7)**. We set out our key thoughts on the **translation of citizen awareness into action**, how to manage the question of **responsibility**, and the potential role of **pathways that are more disruptive to existing systems**, as steps towards more sustainable lifestyles across Europe. The **appendices** provide an additional **overview of some of the key materials used in this evaluation**, including country summaries of the results of the survey of lab participants.

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# 1. Introduction

This report is the result of monitoring and controlling the implementation of the citizen science labs (CSLs) in the PSLifestyle project. In the following pages, **Box 1**, presents the **PSLifestyle project** in a nutshell; **Box 2** provides a brief overview of the **PSLifestyle CSLs**; and **Box 3** explores the **PSL Tool and its user journey**.

## The PSLifestyle project

The European Union Horizon funded project ‘Co-creating positive and sustainable lifestyle tool with and for European citizens – **PSLifestyle**’ aims to help **close the gap** between climate awareness and individual action, and to **increase citizen participation** in sustainability topics. It does this by **engaging citizens through a digital tool, called the PSL Tool (box 3)**, to collect, monitor and analyse their environment and consumption data as well as co-research, co-develop, and uptake everyday life solutions for climate change.

The project will build a data-driven movement with and for the citizens to enable more sustainable lifestyles across Europe. The ambition of the project is to **engage a total of 4-four million European citizens** – with a particular focus on 8 European countries: Estonia, Finland, Greece, Germany, Italy, Portugal, Slovenia and Türkiye in data collection and data sharing through the **PSL Tool**.

The PSL Tool is based on the consumption-based **carbon footprint calculator ‘Lifestyle Test’**, set up by the project partner Sitra in 2017. In the PSLifestyle project, an improved version of the digital tool is further developed and contextualized to align with the citizens’ local realities in the pilot regions. This will be done by co-creating a **localized version of the tool** through **citizen science labs (CSLs)** to understand the local **capabilities, opportunities and motivations** of the citizens in engaging in more sustainable lifestyles. For more information on the PSLifestyle CSLs please see **box 2**. The PSLifestyle project will also work with other societal catalysts, including policymakers, businesses, civil society organisations (CSOs), and academia to design solutions based on citizen data. After the co-development process in CSLs, the project will focus on the **wider deployment of the service and on expansion** into other European countries.

*Box 1 – The PSLifestyle project in a nutshell*



While the project has created reports on the findings from each of the three PSLifestyle CSL iterations, this report is designed to provide an **overarching analysis of the process and the insights across topics and locations which have developed throughout the journey**. It includes analysis from reports from CSLs in each country after each meeting, participation data, analysis of CSLs discussion content and a survey with the participants, providing an overview of the challenges and success factors of the PSLifestyle CSLs process with a view to inspiring similar future projects. An overview of our **methodology** for this report is set out in **Chapter 2**.

## The PSLifestyle Citizen Science Labs (CSLs)

The PSLifestyle CSLs are a combination of **two participatory governance approaches**, namely, **living labs and citizen science**, that aim to ensure and **enable citizens' involvement** in shaping our **socio-economic and political frameworks** through **co-creation and data collection/provision**. Such a methodological approach helps to **increase the transparency, credibility and legitimacy of solutions** that might impact citizens' lives.

The PSLifestyle CSLs have brought together European citizens **to co-create and shape visions of a good life** within environmental boundaries as well as **design solutions for making those visions a reality**. Throughout six meetings together, together with members of their community/city, citizens participating in the CSLs will have the opportunity to:

- **collect and provide information** through speaking and exchanging about challenges they face in their neighbourhoods/cities/regions and for more sustainable living throughout 4 areas such as food, transport, housing and general consumption;
- **co-design solutions and everyday actions** that hold potential for overcoming those challenges and increase our share of sustainable living;
- **exchange on barriers** that could inhibit the uptake of those solutions **as well as on opportunities** that could accelerate their wider roll out.

The **output of the exchanges** with the citizens with **directly feed into the content and creation and localisation of the PSL Tool**. Besides co-defining and localising this content, the participants of the CSLs have been **engaged to co-create the functionalities of the PSL Tool also**. This approach will ensure the tool reflects the needs and expectations of its users and as such increase the chances of its broad and continuous usage.

The PSLifestyle CSLs Governance Framework provides a more detailed overview of the project's citizen science labs.

*Box 2 – A brief overview of the PSLifestyle CSLs*

With the data from the procedural side, we have reflected in **Chapter 3** on the **lessons we have learned** through the **process of designing and implementing citizen science labs** across Europe. We share initial **insights from a survey** of some of the **CSL participants** and the impact that the experience had on their attitudes towards sustainability and the role they play in it, in **Chapter 4**.

Through an overview of all content discussions with CSL participants across the 8 countries, in **Chapter 5** we have **analysed behaviour** in relation to various actions through points CSL participants raised across the **domains of housing, mobility, food and consumption**, as well as cross-cutting challenges found across the local contexts and throughout the CSL process. Additionally, we have shared highlights of the **main inputs gathered from participants** which influenced the development of the **PSL Tool** in **Chapter 6**.

## User's interaction with the PSL Tool

The **PSL Tool** is based on the carbon footprint calculator 'Lifestyle test' set up by the Finnish Innovation Fund Sitra in 2017: <https://lifestyletest.sitra.fi/>. The PSL Tool will be available as a **web version** and in **the pilot countries' national languages**.

Users' interaction will start with a **measurement of their lifestyle carbon footprint** through a series of questions pertaining to different living areas i.e., housing, mobility, food, and general consumption.

As a follow up, and based on their results, users will be able to **select and commit to a variety of practical actions** (i.e., Smart Everyday Actions), summarised in a **lifestyle plan** that could support them to improve their carbon footprint. Through the digital tool, users will be able to **keep track of their progress** and highlight the encountered **barriers and drivers** when implementing their lifestyle plans. The PSLifestyle digital tool will rely on **behavioural tools** to increase the likelihood of the **effective implementation** of the **lifestyle plans** as well as **improve users' experience** with the tool.

The data generated by the users will be unified into a dataset which will be analysed and aggregated by the consortium partners before becoming a **subject of a dialogue and conversation** with the other **key project stakeholders** as a means to create **products, services and other actions plans** that are based on **citizens' realities**.



Box 3 – The PSL Tool and its user journey

This report aims to provide **learnings, analysis and reflections which are designed to inspire and help future projects** looking to use a similar format of citizen participation. We provide an overview of the **key take-aways** in the final chapter of this report, **“what does this mean for the future? An outlook”**.

## 2. Methodology

We set out to evaluate the PSLifestyle CSLs in terms of four key elements:

1. **The ability of the labs format to engage the expected numbers of participants and generate results**
2. **The effectiveness of the implementation of the PSLifestyle CSLs structure**
3. **The behavioural and consumption insights gathered through the CSLs**
4. **The impact of the CSLs experience on those who took part**

For each element we had a specific focus area and associated guiding questions. These are set out in **Table 1** Error! Reference source not found. below. We followed a mixed-methods approach to collecting and analysing the data for this research, with **qualitative analysis** accompanied by some **descriptive statistical analysis**. In addition to the methods presented in the table below, we had a **final workshop session with partners** at the PSLifestyle meeting in spring 2023 in order to reflect on the CSLs process as a whole.

This analysis was conducted specifically on the data and outcomes available from the PSLifestyle CSLs. Due to the fact that the labs were implemented in parallel across European countries with different local contexts and participant communities, **a degree of flexibility and adaptability was required**. While structures were put in place to ensure a reasonable level of consistency, this diversity means that the data collected from the labs – including procedural, content-related and survey responses – varied in terms of quantity and sometimes format or types of content provided. Where appropriate, we have further explained any considerations of this kind in the associated text.

The aim of this analysis was primarily to evaluate **how well the CSLs structure and process created for the PSLifestyle project achieved its intended aims**. However, these learnings could also **inform potential future initiatives**.

Table 1 – Evaluation of PSLifestyle CSLs

Evaluation of PSLifestyle CSLs
<p><b>1) The ability of the CSLs format to engage the expected numbers of participants and generate results</b></p> <p><b>Guiding questions:</b> Were the appropriate results generated? Was an appropriate number of participants engaged? What could be improved to support future CSLs in terms of structure/process related to participant numbers and generation of results?</p> <p><b>Data collection methods:</b> Reporting template filled in after each lab meeting by local partner implementers; transcriptions of the exchanges between participants in each lab meeting, documented by local partner implementers; filling in of planning overview spreadsheets (containing practical details and the number of participants)</p> <p><b>Analysis:</b> Quantitative analysis of the facts and figures; learnings shared by CSL implementation partners in meetings of project partners</p> <p><b>Relevant sections of this report:</b> Chapter 3, chapter 6</p>
<p><b>2) The effectiveness of the implementation of the PSLifestyle CSLs structure</b></p> <p><b>Guiding questions:</b> Did the procedure for the CSLs set out in the <u>PSLifestyle CSLs Governance Framework</u><sup>1</sup>, <u>PSLifestyle CSLs Manual</u><sup>2</sup>, and <u>Participant Recruitment and Engagement Strategy</u><sup>3</sup> work as planned? What could be improved for future CSLs in terms of structure/process/ support for implementation? Did we manage to recruit an inclusive and diverse group of participants? Were we able to retain participants between meetings?</p> <p><b>Data collection methods:</b> Group discussions with local partner implementers in regular calls after each lab (e.g., after summary meeting reports completed, with notes taken to share with partners); participant feedback activities at end of the labs, summarised in CSLs reporting templates</p> <p><b>Analysis:</b> Synthesis of feedback gathered in the group discussions and in the CSLs reporting templates</p>

<sup>1</sup> Xhelili, Arlind (2022). The PSLifestyle Citizen Science Labs Governance Framework. PSLifestyle project. Wuppertal, 2022.

<sup>2</sup> Xhelili, Arlind (2022). The PSLifestyle Citizen Science Labs Manual. A step-by-step approach to implementing citizen science lab meetings. PSLifestyle project. Wuppertal, 2022.

<sup>3</sup> Godfrey, A. & Tonello, S. (2022). Participant recruitment and engagement strategy. PSLifestyle Citizen Science Labs. PSLifestyle project.

**Relevant sections of this report:** Chapter 3

### 3) The behavioural and consumption insights gathered through the CSLs

**Guiding questions:** What information on behavioural motivations, opportunities, and capabilities (and related barriers) did we gather from lab participants in the fields of housing, food, mobility, and consumption?

**Data collection methods:** Reporting template filled in after each lab by local partner implementers; transcriptions of the exchanges between participants in each lab, documented by local partner implementers; reports on each round of CSLs, produced by project partners

**Analysis:** Synthesis and analysis of the narrative and transcription templates from across the labs

**Relevant sections of this report:** Chapter 5

### 4) The impact of the CSLs experience on those who took part

**Guiding questions:** What impact did participation in the labs have on participants' feelings of responsibility towards sustainable consumption? How has participation in the CSLs impacted citizens' willingness to adopt lifestyle changes? Have the CSLs had any impact on creating a sense of (local/global) community? Do participants think that lifestyle changes may have an impact on their health and wellbeing?

**Data collection methods:** Questionnaire sent to participants (distributed in most countries after lab 4, in early 2023)

**Analysis:** Content analysis of data collected (descriptive and qualitative)

**Relevant sections of this report:** Chapter 4

## 3. From start to finish: procedural learnings from the PSLifestyle CSLs

Running CSLs across different European locations with a joint goal can be an exciting and rewarding process with regards to **both the generated insights but also the more procedural aspects** of the exercise. Simultaneously, it is a demanding process, especially when considering the presence of various **contextual and cultural conditions that can influence the process across the targeted locations**.

As highlighted, the PSLifestyle CSLs took place **in eight European countries** (Estonia, Finland, Germany, Greece, Italy, Portugal, Slovenia and Türkiye) between April 2022 and May 2023. In a journey of **three lab**

**iterations** with several interaction points with **1.699 European citizens**<sup>4</sup> (Error! Reference source not found.), we sought to **co-create** further insights on the potential of leading sustainable lifestyles in those countries and broadly in Europe from a local and citizen driven perspective. **These insights have been primarily utilised to further develop the content base of the PSL Tool.** In addition to the content exchanges, together with the CSLs participants the project further developed the functions and features of the PSL Tool.

*Table 2 – CSLs implementing locations and participation KPIs*

Country	Cities	KPIs	Progress
Estonia	Tallin, Tartu, Narva, Pärnu, Online	175	182
Finland	Tampere, Lappeenranta, Helsinki, Turku, Jyväskylä	180	298
Germany	Wuppertal, Solingen, Cologne, online	190	207
Greece	Athens, Xanthi, Xylokastro, Patras	200	232
Italy	Prato, Parma, Verona, Firenze	160	171
Portugal	Lisbon, online	200	221
Slovenia	Ljubljana	150	184
Türkiye	Izmir	200	218
<b>Total</b>		<b>1.455</b>	<b>1.713</b>

It is worthwhile to highlight that in the PSLifestyle project **the concept of citizen science is adopted** in two main activities, namely, 1) **within the CSLs** where citizen science is combined with the living labs concept to create the project's CSLs, which seek to increase citizens participation on the topic of sustainability (as described above); and 2) the **PSL Tool deployment and user generation** where European citizens will support the **large-scale data collection** about sustainability challenges across different European countries, potential actions to mitigate such challenges, and the feasibility of such actions in practice.

Accordingly, the design of the PSLifestyle CSLs was based to a large degree on **other practitioners' experiences in the field** of citizen science, living labs and other participatory approaches. These experiences

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<sup>4</sup> In some instances, the CSLs participants returned from one meeting to the other. However, they are counted as new participants due to the challenge of monitoring participation patterns of individuals over time.

were explored at the start of the PSLifestyle project in the report “**Citizen Science for Sustainability**”<sup>5</sup>. Both successful and challenging factors were taken into account to design a process that would allow the PSLifestyle project to reach the intended goals. To ensure the project will also **contribute to such knowledge and experiences**, for other practitioners who would like to adopt similar approaches, throughout the implementation of the CSLs a particular focus has been put on **tracking our experience of conducting this activity across the 8 project regions**. As a result, an array of successful and challenging factors has been collected that cover aspects of two interconnected themes such as **participant recruitment, engagement and retention** and very close **design of, implementation of and reporting on the CSLs**.

The following sections (what worked well and what did not work so well) summarise these results and lay down the basis for the key considerations put forward for practitioners (**Chapter 3 and 7**) on how to establish and engage with people through CSLs, always from the PSLifestyle project experiences, without claiming full exhaustion and/or comprehensiveness of our insights. Error! Reference source not found. provides a brief analysis of the PSLifestyle’s CSLs **demographic composition**.

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<sup>5</sup> Old, Rosalyn (2022). Citizen science for sustainability. Report on lessons learned, synergies and activities to build upon, with database of 30 inspiring citizen science initiatives. PSLifestyle project. Wuppertal, 2022.

**Gender:** more female participants took part in the labs in Estonia, Finland (up to 94% in one of the labs), in most of the Turkish labs and in some of the Italian and Portuguese ones. Participation in other countries was more balanced in terms of gender, and a few gathered more male participants – in the fourth living lab in Greece, 60% of participants were male.

**Age:** all project countries reported a wide distribution of participants across age groups, noting how this reflected a positive diversity of views and fostered intergenerational collaboration. Partners in Estonia, Finland, Slovenia, Greece, and Italy gave a very similar overview of participants' ages, with the youngest participants less than 20 years old and the oldest more than 75 years old. On average, participants fell within the 35 to 45-year-old age group. In a few cases participation significantly skewed towards younger generations, as in some of the Turkish labs, in one meeting in Finland where organisers decided to focus on international students' views, and in Germany where CSLs with school pupils were organised and implemented.

**Profession:** partners also collected information on participants' working status, which was very diverse across all project countries. Most of the younger participants were students, either finishing secondary schools or at university, and older participants were mostly retired. Among those in employment, participants ranged from working in the private sector, to the public sector, non-governmental organizations, and academia. A few unemployed persons took part in the meetings.

**Minorities:** the participation by individuals with a migrant background was sought in some countries such as Germany and Italy.

#### *Box 4 – A short analysis of the CSLs demographic composition*

### 3.1 What worked well?

As highlighted at the beginning of this section, **conducting CSLs in different countries with a similar goal is an exciting yet demanding process**, however, at the end, the PSLifestyle project estimates that such ambitious activity was **successfully conducted and goals were reached**. This is based on the **generated results** which were aligned to the initial research goals, the **participant KPIs** which were met and in certain cases exceeded, and the **positive shared experience** among the CSLs implementing partners.

A good practice that contributed towards such effectiveness was the level of **preparation, documentation as well as support provided to CSLs implementing partners** throughout the entire process, from start to finish. For example, at the beginning, **three documents** were brought together that acted as the **overarching materials for the organisation and implementation of the CSLs** (Error! Reference source not found.).



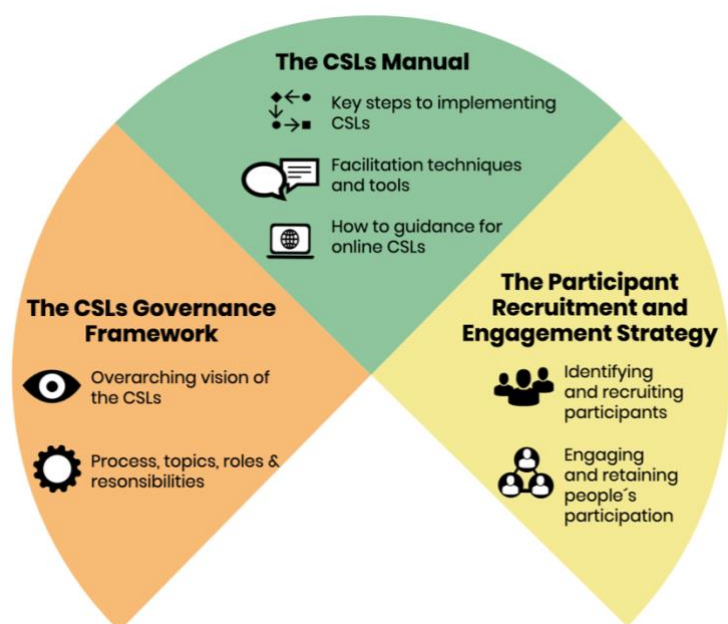


Figure 1 – The PSLifestyle CSLs key documents

- 1) The PSLifestyle CSLs Governance Framework<sup>6</sup> which outlined the key procedural considerations to factor in for the successful planning, establishment, running and monitoring of the CSLs. These included the vision, purpose as well as specific themes of focus, target group, places and timeline of implementation as well as roles and responsibilities of those involved;
- 2) The PSLifestyle CSLs Manual<sup>7</sup>, a step-by-step guideline on organising and conducting CSLs meetings; and
- 3) The Participant Recruitment and Engagement Strategy<sup>8</sup> that defined a strategic approach to project's CSLs.

To ensure all local partner implementers were on the same page regarding the CSLs but also to help increase their skills and confidence to deliver the process, **3 Train-the-Trainer sessions**<sup>9</sup> (*the link to the report will be provided as soon as it is available online*) were conducted. In addition, before each interaction point with citizens, **guidelines were prepared** which included more specific goals/research questions, agenda examples, facilitation techniques and respective materials as well as **reporting and transcription templates**. This contributed to a planned and systemic implementation of the CSLs as well as the generation of the results that **to the best degree possible were coherent and comparable** across the eight project countries.

In such long-term processes, conducted in multiple places and by many people, it can be difficult to maintain the scope, and consequently one might end up generating results which might not always be in line with the overarching idea. Accordingly, it was a positive learning to **have partners who are responsible for maintaining the overarching idea and scope as well as steer the local implementers towards the desired trajectory**. In addition, **regular feedback points** between the implementing partners helped not only to maintain the scope, but also learn from one another on the strengths and weaknesses of the process and exploit or mitigate them accordingly. Such feedback points contributed for the local partner implementers to **feel inspired and motivated** about the process.

<sup>6</sup> Xhelili, Arlind (2022). The PSLifestyle Citizen Science Labs Governance Framework. PSLifestyle project. Wuppertal, 2022.

<sup>7</sup> Xhelili, Arlind (2022). The PSLifestyle Citizen Science Labs Manual. A step-by-step approach to implementing citizen science lab meetings. PSLifestyle project. Wuppertal, 2022.

<sup>8</sup> Godfrey, A. & Tonello, S. (2022). Participant recruitment and engagement strategy. PSLifestyle Citizen Science Labs. PSLifestyle project.

<sup>9</sup> Old, Rosalyn (2022). 3 Train the Trainers (ToT) online sessions. PSLifestyle project. Wuppertal, 2022.

Initially, the idea was for the PSLifestyle CSLs to take place in one city within the eight project target regions (specific approach). Nonetheless, during the finalisation of the CSLs process design as well as the first meetings, we came to realise that **in some cases it would be beneficial to expand the list of cities/locations** to be present in. This would have allowed the project to meet the intended participant KPIs much better, but also **ensure the desired requirement for diversity and inclusivity** of the CSLs participants, both with regard to demographics and geographical origin. Furthermore, for the effective engagement with citizens, **a successful factor was the decision to move the CSLs and organise them where our target group was present already (mobile CSLs), as opposed to continuing with the expectation that the citizens would come to us.** This also contributed to avoid overwhelming citizens with additional requests to their time, which is generally considered as a barrier for them to participate in such events. **Error! Reference source not found.** provides an overview of the locations where the CSLs were present throughout the three lab iterations and interaction points with citizens.

Mobile CSLs was an approach taken by almost all local implementers. E.g., in Italy we organised CSLs with a company; in Germany as part of a local annual sustainability event and festival.

Although partners organised most of their labs in-person, some countries, such as Germany and Portugal, achieved good turnouts with **online meetings** as well. Meeting online increased outreach in terms of numbers and variety of participants, since individuals did not have to spend time travelling and they found it easier to access the meeting. Hence, while in person meetings offer benefits that cannot be replicated online, **it could at times be useful to organise some digital meetings to facilitate participation from groups that might struggle to access physical meetings.**

Finland reported that the labs organised during the week and daytime gathered more students, pensioners, and unemployed people than labs organised on Saturdays.

One important learning from the PSLifestyle CSLs is that the **date and time of the meetings can affect who manages to participate.** Hence, when deciding on such organisational details, time options should be chosen according to the voices that need to be highlighted. If it is possible to hold a series of meetings rather than a single one, setting them at different times can help to include different socio-economic groups in the conversation.

In Finland, several of the CSLs meetings were organised in collaboration with a university and city library. Similarly, in Germany, several CSLs were organised in collaboration with various schools. In Slovenia one of the local organising partners was a local municipality; in Türkiye the CSLs were endorsed by the local municipality.

When it comes to bringing participants on board, it helped a lot to **collaborate with local organisations whose operational model is to engage and work with people.** For example, social, environmental

organisations and/or any other such as sport clubs as well as universities, schools and similar. In addition, very importantly, a good set of collaborative actors were the **local municipalities**. This is due to their outreach potential, expertise in working with local communities but also the credibility they provide when endorsing an activity.

From research and partners' experience, it was clear that **the effective engagement with citizens**, from various demographical backgrounds also, requires for **them to see a value and direct relation to their needs, wants, as well as realities**. Therefore, when designing the CSLs but also the communication around it, we tried to adopt a rather **human-centric approach** and highlight how such a process and generally sustainability can be beneficial to people as such (e.g., increasing their wellbeing both in term of finances and health) **beyond the environmental benefits it provides**. This was especially important in view of the general knowledge that for various demographical groups sustainability is not very high in their agenda, especially in view of global crises such as war in Ukraine, energy crisis, inflation etc.

Capitalising on the concept of living labs, having at the centre of the CSLs meetings the **co-creation of a tangible product such as the PSL Tool was a strength for recruiting, engaging as well as maintaining participants' interest**. Throughout all the meetings, participants in all countries expressed positive attitudes towards the aim of the PSL Tool and how it would enable them to track the environmental impact their specific consumption patterns/behaviours would have.

Similarly, stemming from the key principles of the living labs approach, **sharing the ownership of the process with the participants was a successful factor**. Accordingly, participants were considered as **co-owners of the process as opposed to passive subjects of research**. This was done by integrating many feedback points during the direct interactions with citizens as well as in follow up processes to ensure people would have the chance to indicate their opinions about the meetings. In more than one case, this meant changing the topics of focus from the original plan, however, this was also a good point for engagement, mainly because it showed to participants that their **feedback was considered and appreciated**.

Based on other practitioners' and project partners experiences, the project found it helpful to entice people's participation with some more **tangible incentives** that would show an appreciation for the time spent with the project. This was a **symbolic gesture such as small parting gifts, a social get together after the meetings, cooking sessions with a known local chef** and/or as simple as offering food/snacks and networking

In Slovenia, CSLs organisers prepared well-branded small gifts, such as a reusable shopping bag from old curtains and a "Plant-me" ornament. In Slovenia and Türkiye organisers rewarded participation to the labs with a personalised certification. Lunch was offered across all countries enabling a social and convivial moment where participants could exchange more informally. In Greece, this was complemented by a famous Greek chef cooking some sustainable recipes for the participants.

opportunities. Such ideas were proactively sought by the CSLs implementing partners, and it was considered successful and appreciated by the participants themselves.

**Learning incentives** can also be offered as a way to make the engagement activities more attractive and add further value to participants (e.g., giving back to them rather than just “taking”).

In Estonia for instance, organisers branded the meeting as a 10-month joint learning and development process for climate ambassadors, rather than a one-off discussion. In Germany, a small exhibition of different lifestyle themes was organised as part of the CSLs meeting, which helped participants to get a feeling for the topic to be discussed.

Similarly, a positive point mentioned by participants in several countries were the various **interactive and dynamic techniques** that were utilised to facilitate the conversations within the various meetings as well as the opportunity for them to raise any points without feeling judged by either the other participants or the CSLs organisers.

**Maintaining communication with the CSLs participants in-between meetings** helped them feel connected with the project and process and not lose the sense of co-ownership. This was as simple as sharing a summary of the meeting, photos, general updates about the project and similar. Depending on the cultural context, the communication was facilitated by formal or informal means and/or both.

In Türkiye, the CSLs organisers created a PSL CSLs WhatsApp group. In all countries a mailing list was established to keep participants informed about the CSLs meetings. In Germany the newsletter that was sent out to participants showcased impressions by participants on the CSLs journey, besides progress updates (project and CSLs meetings).

The fact that the CSLs were **organised and implemented simultaneously in eight European countries** increased the attractiveness of the CSLs to the citizens. Participants reported a **feeling of community and appreciation for sharing an activity jointly with citizens from other countries** as well as other organisations and cities within their countries.

## 3.2 What did not work so well?

For the project it was quite important to work with a diverse set of participants so we can be as inclusive as possible in our learnings. However, despite careful planning and project partners’ efforts, **bringing people from all demographic groups was a bit more challenging, especially those that fall under lower socio-economic groups**. Participating in such events did not seem to be a priority for them when juxtaposing it with other more pressing day to day issues e.g., financial. Similarly, **people who are not driven by sustainability**

**values were more difficult to reach** out to. Since most of our CSLs meetings took place in cities, **involving people from rural areas was a logistical challenge** also.

Often, participants who took part in the CSLs meetings were already interested in sustainability topics. The consequence of having participants who are already invested in sustainability, while much appreciated, may not always be the most impactful. This is mainly because it could **potentially limit the amount of critical feedback on the PSL Tool from a diversity of people**. This would counteract the goal of the PSL Tool to reflect different realities and be utilised by people from all demographic backgrounds, geographical regions, and values they hold.

At the beginning of our CSLs journey, which was relatively close to the end of the COVID-19 pandemic and related lockdowns, it was recorded that **the pandemic had slightly affected people's willingness to participate in events similar to the PSLifestyle CSLs meetings**. This might be due to the fear of being in a confined space with other people, or just the desire to spend one's time on other activities after some limitations in this regard. This is just our deduction, however, and there might be other reasons at play as well.

Another challenge faced by almost all CSLs partners was the **high cancellation rate shortly before the CSLs meetings and/or no-show rate on the day**. This was the case with first-time participants, but also with people who had already attended previous CSLs meetings. The fact that people are excessively busy (in particular in the period after COVID-19 restrictions) could have been a reason. Alternatively, this may also be connected to the time and date of the CSLs meetings. For example, in Türkiye it was noted that when the meetings were held over the weekend, several people did not show up, so they planned the following sessions during the week. Some partners also noted that **having too long a gap between meetings increased the challenge of retaining participants' interest**.

Within the project, **we were ambitious and aimed to cover both the co-creation of content, and also functions and features of the PSL Tool within a limited number of meetings with the CSLs participants**. This proved to be **slightly challenging, because the meetings at points were potentially lengthy** (in view of the lack of time challenge above) and packed with different topics, leading to participants receiving a lot of information. Hence, it is a learning of the project to **reduce the topics one would like to cover with the target audience and/or potentially organise more but shorter interaction points with citizens**. This could lead to more engaged participants but also the generation of the desired results.

Another challenge recorded during the implementation period concerns **the connection between the PSL Tool, how it was presented, and participants' motivation**. Those taking part in the CSLs meetings had different levels of interest and excitement, so it was a bit more difficult to balance the presentation of the PSL Tool to these diverse views. Moreover, at points the speed of technical development (at the PSL Tool level) did not always match the timeline of the CSLs meetings, which increased participants' impatience to

see some of their feedback integrated into the PSL Tool. Such developments and the desire of participants to focus more on the functions and features of the PSL Tool led to changing the focus of the CSLs meetings as we progressed.

**When confronted with their carbon footprint results and the ambition of where we need to be in the upcoming years such as the 1.5-degree target, the first immediate reaction by CSLs participants was feeling of hopelessness.** This was a challenge especially at the beginning of the journey when the PSL Tool was limited to the lifestyle test sections and did not have the sequential sections which focused on supporting users to mitigate their footprint. Participants started to feel more comfortable as we progressed and upon the realisation that additional features will be added into the tool which will focus on the mitigation of the carbon footprint.

### 3.3 Some considerations for driving successful citizen science initiatives

As highlighted in the previous sections, in the design of the project's CSLs we have relied extensively on the experiences of other practitioners and found their insights very helpful for building a process without having to reinvent the wheel. Accordingly, it was our aim to collect lessons learned and share those with the community of practitioners in an attempt to enrich the overview of successful factors that can contribute to driving successful citizen engagement and participatory processes. These are summarised below.

Important to highlight is that the below listed insights are inspired from our processes but presented in a more overarching and macro-level language/nature to avoid repeating more specific content/procedural considerations that have been included in the previous section and/or the other PSLifestyle CSLs documentation (Error! Reference source not found.).

- **WHAT IS OUR VISION?** A good starting point of any initiative is a good vision that aims to provide solutions to some of the most pressing needs and challenges that a society is experiencing. Equally important is for that vision to be shared and accepted by the people who are involved in the implementation of the initiative. Having such buy-in and confidence is key to a successful collaboration, partnership, and implementation of the initiative in practice.
- **WHY IS THIS IMPORTANT FOR OUR TARGET AUDIENCE?** Nowadays, people are approached with many initiatives that require their attention and effort, while accounting that our lives are more dynamic than ever. In such a context, people are more and more prioritising where they get involved by reflecting on their values, needs, desires and local realities. Putting forward clear benefits/values around how such processes will contribute foremost to improving their living conditions (directly and/or indirectly) is pivotal to ensuring their participation. This in turn will also help to further narrow down and ensure the

engagement with the proper target audience. Tying the process to a tangible product that can be co-created with the target audience and - even more importantly - that holds a tangible impact, increases the chances of a more effective engagement with citizens.

- **HOW DO WE WANT TO IMPLEMENT OUR VISION?** There is always the risk of a vision not coming to life mainly because of the lack of a good implementation process. Accordingly, it is highly recommendable to think and pin down the organisational details around the implementation of such ideas. Where, when and what resources we might need are some of the most frequent aspects that could guide one's procedural thinking. Feel free to aim big, and then start levelling by doing a reality check and then once again increase the ambition as certain details are achieved. Make this process as collaborative as possible with your implementing team and don't forget to document it for the newcomers. A good level of preparation is equally important to a properly defined vision.
- **WHO IS DOING WHAT?** Closely related to the previous foundational points, a good citizen science initiative and/or any process that seeks to involve people will require the involvement of many people on the side of the organising team with a unique position and value to the process. This is especially true if the implementation involves multiple locations. A good definition and overview of roles and responsibilities will increase the chances of a good collaboration and successful partnership.
- **CAN WE BE FLEXIBLE?** A good degree of preparation is key, however, sometimes flexibility will be required and conditional to the success of an initiative. This is a horizontal aspect that can influence and be required by almost all elements of the process (from vision to implementation and monitoring/evaluation of our successes). This is especially important if the planning is outlined for a longer period of time and a bit further away in time from the implementation period (planning from the outset). Being flexible also allows for a better response to barriers (mitigating/leveraging) and opportunities (exploiting/accelerating), identified on the way and not thought of during the planning stage.
- **CAN WE CO-SHAPE THE PROCESS WITH OUR TARGET AUDIENCE?** Collaborating and co-creating the process with the internal team is important, however, equally important is to enable the co-shaping of the process with the target audience also. This would require moving away from considering our audience as passive subjects of research to more active participants that hold great potential to improve the participatory processes by bringing their day-to-day experiences. Enabling individuals to thrive in such co-owned processes helps to ensure the success and longevity of the initiative at hand.
- **WHICH PARTNERSHIPS DO WE NEED TO FORGE AND/OR LEVERAGE?** Driving participatory processes does not need to happen in one's own bubble and/or doing things from scratch. Most of the time it is actually very helpful to build bridges with other organisations and initiatives that are operating on the ground. This could include municipalities, companies, universities, other citizen driven initiatives etc. This is especially helpful in those instances where one does not have much experience with driving such processes or engaging with citizens. Connecting with such partners would allow to leverage and build



upon their experience as well as network and outreach. A diversity of partners/collaborators would help reaching out a diverse group of citizens (i.e., from different socio-economic backgrounds). Similarly, it can be helpful to anchor participatory processes to broader activities such as conferences and similar. Nonetheless, it is important to ensure an open and clear communication as well as agree on the reciprocal benefits for a more effective and transparent collaboration.

- **CAN WE BUILD A GOOD COMMUNICATION STRATEGY?** At the risk of pointing out the basics and something we encounter in our day-to-day lives - which, however, is also potentially largely overseen - is that a good communication strategy is rather pivotal for the effectiveness of citizen engagement initiatives. The latter requires careful consideration throughout all stages of an initiative, including before, during and after a direct engagement with the target audience. Among others, for exemplifying purposes, the 'before' stage would involve communicating the initiative and the benefits for the audience to engage as well as bringing partners on-board to support the initiative, including here providing a good overview of how people can be engaged (organisational details). Depending on how the initiative has been designed, the 'during' stage involves ensuring a fair and respectful communication between the target audience, foremost within themselves, and then with the organisers. Some of the important elements of the 'after' stage are keeping participants informed about next steps, maintaining their interest and potentially creating a sense of community. Communication is the most depended on the context, therefore, we will leave the rest to your creativity and imagination.

## 4. The impact of the CSLs on participants

To gather a **more comprehensive understanding of the impact of the CSLs on those who took part**, the project prepared a short questionnaire (13 questions) to be shared with the CSLs participants (see [\*\*Appendix B\*\*](#)). This consisted of a **mixture of qualitative multiple choice and open answer questions**. The CSLs implementing partners in the eight PSLifestyle countries distributed the questionnaire to CSLs participants in early 2023.

The questionnaire aimed **to evaluate the impact of the CSLs on participants in terms of their perceptions and attitudes towards sustainability, willingness to make lifestyle changes, views on social cohesion/sense of community, and thoughts on the links between environmental sustainability and health**. It aimed to measure changes in attitudes and views, rather than actual behaviour change, given the limited time period for evaluation.

**This section of the report analyses the answers to the survey across the eight countries, drawing out common themes and reflections.** It should be noted that countries did not receive responses from all participants and received uneven numbers of responses, hence, the survey is not considered representative. The numbers of responses received are as seen in **Error! Reference source not found..**



Table 3 – Lab participation survey responses per country

Lab participation survey responses per country			
<b>Estonia</b>	5 respondents	<b>Italy</b>	20 respondents
<b>Finland</b>	6 respondents	<b>Portugal</b>	14 respondents
<b>Germany</b>	23 respondents	<b>Slovenia</b>	32 respondents
<b>Greece</b>	13 respondents	<b>Türkiye</b>	36 respondents

Additionally, it should be noted that **the survey focused on a qualitative analysis of topics which can be quite subjective – the aim was to gather an insight into the types of impact of participation in a CSL on the participants, rather than a decisive impact assessment.** Despite these limitations, the answers provide interesting insights into citizens’ views and the impact of the CSLs on them.

**In most cases, the survey was shared after CSLs meeting 4** (in Estonia, it was shared again after CSLs meeting 5 as no responses were received the first time). **The majority of respondents took part in one or two CSLs meetings.** More details on the responses received per country are included in [Appendix C](#), which provides a two-page overview for each of the eight countries. [Appendix B](#) provides the survey in full as shared with CSLs participants.

### Views on sustainability & sense of community

When looking at views on the current state of the environment, **respondents in most project countries either disagreed or strongly disagreed with the statement that “collectively, we are doing enough to address climate change in my country”.** Across project countries, respondents agreed that **governments should bear the main responsibility for ensuring a healthy and sustainable environment.** Interestingly, in Germany and Portugal, respondents replied that citizens should also bear a responsibility. **In half of the project countries, respondents believed that industry has some responsibility** for a healthy and sustainable environment.

One participant in Germany for instance stated that “It has become even clearer to me how important community/exchange of experiences/mutual support is for sustainable lifestyles. At the same time, I also became aware of how small these communities still are in Germany and worldwide.”

In terms of the sense of community, **100% of respondents in six of the project countries answered that it is either “important” or “very important” for communities to work together and support each other to make difficult lifestyle changes.** Respondents believe that communities need to work together across a variety of levels (local, regional, national, or global) in order to make this happen. Local level was the first choice in all project countries aside from Italy (where national level was the first choice).

In terms of why the labs were influential, one participant in Italy stated that “Having a direct relationship with other people committed to the same values strengthens the confidence that it is possible to change society, increases satisfaction, and prompts more committed action”.

On the more personal level, across all project countries, **almost 100% of respondents replied that they felt either a “major” or “moderate” sense of responsibility towards their own community.** In all project countries, **the majority of respondents feel this responsibility at the local level, with the second most common answer being global.** Respondents across all project countries also felt some – if less – responsibility at the national and regional levels, with the exception of Germany, where none of the respondents felt a responsibility at the national level.

The **impact of the CSLs on the sense of community or sense of responsibility towards respondents’ communities was mixed.** Many respondents replied that the labs didn’t influence them, or only influenced them a bit – although in some cases they indicated that this was because they already felt this sense of community. However, in each country some respondents came away with an increase sense of community and a greater sense of responsibility towards their community.

In Slovenia one respondent noted that “you are not alone, people want change, there are many of us”.

Finally, looking towards the future, **respondents’ levels of optimism varied across project countries.** Türkiye had the largest share of respondents who are either “pessimistic” or “very pessimistic” about their future (almost 40%). Respondents in Estonia and Slovenia were largely optimistic about their future (approx. 80%). Other project countries had larger shares of respondents who were “neither pessimistic nor optimistic” (45% in Germany and Italy, 57% in Portugal, 70% in Greece).

### **Benefits to health & wellbeing**

**The majority of respondents believe that their health would benefit as a result of a range of sustainability-oriented actions.** Specifically, a large majority of respondents in most project countries answered that their health would benefit “moderately” or “a lot” as a result of reducing the consumption of products of animal origin (meat & dairy). The picture is more mixed in Portugal, and small numbers of respondents in Estonia, Germany, Greece, Italy, Slovenia, and Türkiye replied that their health wouldn’t improve at all. **Around 50%**

of respondents across project countries also believed that their health would improve “a lot” as a result of **cooking their own food**, increasing to 70% in Greece and Portugal.

**An even greater majority of respondents across all project countries believe that their health would improve as a result of walking or biking when feasible**. Only in Germany and Slovenia did a few respondents reply, “not at all”. In most project countries, a large majority of respondents (on average 70-80%, with 90% in Türkiye) also replied that their health would benefit “a lot” from having more green spaces in their towns/suburbs.

The outlook is **more varied when looking at the benefits of the greater use of renewable/green energy in houses/neighbourhoods**, although most respondents continued to reply that their health would improve “a lot” as a result of this measure (over 70% in Türkiye, Finland and Italy). Respondents in Germany were less convinced, with over 20% answering that their health would improve “a little bit”, and 12% answering that it wouldn’t improve at all.

When asked what other actions respondents thought would benefit the environment as well as their health and wellbeing, an interesting answer that came up across four of the countries surveyed (Estonia, Italy, Portugal, Slovenia) related to **changing our ways of work – for instance having fewer sit-down meetings and instead meeting outside, changing to “smart” or “agile” working, green jobs, remote working, and a four-day week**.

One respondent in Italy noted that “I believe we need to rethink the hectic pace of our society”, highlighting that it wasn’t compatible with preparing healthy food, being able to engage in active travel, etc.

Another common answer was the **need to reduce consumption and consumerism, increase circular economy and recycling, and abolish or reduce the use of plastic**. Respondents often highlighted the need to increase public transport options and/or increase the use of electric vehicles. Several respondents in Slovenia highlighted the **equity dimensions** of these changes, for instance the need to provide free public transport, lower prices for vegetarian options in restaurants, etc. Education and awareness-raising were also cited as important elements by respondents in several countries.

### **Motivation to make sustainable changes**

In most project countries, **over 80% of respondents think that individuals have a major or a moderate impact on the environment with their habits and lifestyles**. One of the aims of the PSLifestyle CSLs was to motivate individuals to make sustainable changes. **Many lab participants had in fact already made changes towards sustainable behaviours prior to taking part in the labs, providing some insights as to why they might have been interested to participate**. One of the most common changes respondents reported

concerned dietary habits, with respondents either vegan or vegetarian, or having reduced their meat consumption, as well as buying organic, local products, paying attention to waste and increasing home cooking. Respondents in many project countries have also changed their travel habits, for instance reducing flying, using more public transport, walking and cycling, and travelling locally. Respondents also mentioned that they are buying less (for instance fewer clothes), buying second-hand, and buying locally, and many are careful of their energy expenditure at home. Many respondents in Portugal and Türkiye in particular noted that they are careful of their water consumption.

One respondent in Italy noted that “What I can relate to being environmentally friendly I do. So many structural changes unfortunately I cannot afford financially”.

In all project countries aside from Germany, **the experience of taking part in the PSLifestyle CSLs motivated the majority of participants to make (more) lifestyle changes.**

**Lifestyle changes respondents are thinking of making** (or have already made since first participating in a CSL, in case they took part in several iterations) were **similar to the changes that some respondents had already made.** Respondents for instance mentioned they were considering **becoming vegan, or reducing their consumption of meat and animal products, and would seek to eat more local produce.** Reducing consumption more generally (e.g., of clothes, but also energy, water, etc.) was also mentioned across several project countries, as was making changes such as **installing solar panels, choosing an electric car and a more efficient heating system.** Many respondents highlighted their **desire to use their cars less and increase their use of public transport or active travel** (cycling, walking), although one respondent in Germany noted that “I would strive for more walking or taking the bus, but again find it difficult not only for myself but also to motivate my family”. Respondents also noted the **aim to reduce flying by plane.** Several respondents highlighted the need to raise awareness amongst friends, family, and colleagues, and one respondent in Germany noted that it was necessary “to become politically active, because not so much can be achieved by going from vegetarian to vegan or reducing 20 square metres of living space to 10 square metres.”

One participant in Italy highlighted that “It motivated me by understanding that even with my limited possibilities something can be done”.

Looking at **what was motivating about the experience of taking part in the CSLs,** respondents often highlighted that **sharing with others and exchanging ideas and experiences** (and comparing) with people who share similar interests and concerns was rewarding and **provided a sense of being part of a common movement.** Many also noted that **learning new information,** such as the impact of their carbon footprint, as well as concrete actions that can be taken, was motivational.

However, one participant in Germany noted that “Discussions are always enriching, but all participants were from the same bubble, which is why it was more a mutual confirmation and reinforcement of the already prevailing opinion. That's not necessarily bad, but it brings few new perspectives”.

Finally, when asked **whether they had gained anything from the experience of joining the CSLs and whether they would like to share any last reflections**, respondents were overall **quite optimistic**, mentioning that they had **appreciated learning new knowledge and exchanging with other participants**. Respondents in Germany and Portugal mentioned that they would value exchanging with other European countries, and respondents also suggested to expand the labs to other communities, for instance in Italy several respondents suggested to reach out to children and teenagers. Several respondents, for instance in Finland, mentioned they **would like to take part in similar initiatives again**.

In Türkiye one respondent suggested that the labs “should be disseminated to people who have no idea about this subject and regardless of their level of education”.

## 5. Insights on sustainable lifestyles and behaviour from the PSLifestyle CSLs

In the context of the development of the PSL Tool for sustainable living, the project partners explored sustainable lifestyle options and citizens behaviour in four main consumption domains (see Error! Reference source not found.) through the implementation of CSLs. In this section we look at the **overarching insights found across the whole CSL process**. The content we collected from each of the CSLs was diverse but for this section of the report we have taken an **analytical lens to highlight key trends we saw across the process**. For more detailed overviews of the content and insights from individual meetings, please refer to “[D1.6 Specifications of the PSLifestyle Application and Dataset – Version 1](#)”<sup>10</sup>, “[D1.7 Designing the PSL Tool Specifications of the PSLifestyle Application and Dataset](#)”<sup>11</sup>, and “[D1.8 Specification of the PSLifestyle application and dataset](#)”<sup>12</sup> deliverables.

This content gathered from participants in the CSL discussions is viewed through the **COM-B framework of behavioural insights**, which maps behaviours and related determinants through exploring **Capabilities**,

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<sup>10</sup> Manchandia, D. (2022). Specifications of the PSLifestyle Application and Dataset – Version 1. PSLifestyle project.

<sup>11</sup> Meo, B., & Mager, F. (2022). Designing the PSL Tool – 102. Specifications of the PSLifestyle application and dataset – Version 2. PSLifestyle project.

<sup>12</sup> Xhelili, A., & Kessler, A. (2023). Designing the PSL Tool – 103. Specifications of the PSLifestyle application and dataset – Version 3. PSLifestyle project.

**Opportunities and Motivations experienced by an individual in order to take up a behaviour<sup>13</sup>.** In this case the desired behaviours would be the range of PSL Tool actions which participants explored in the lab meetings, with an ultimate aim of reduced carbon footprint in each of the four domains.

*“Capability is defined as the individual's psychological and physical capacity to engage in the activity concerned. It includes having the necessary knowledge and skills. Motivation is defined as all those brain processes that energize and direct behaviour, not just goals and conscious decision-making. It includes habitual processes, emotional responding, as well as analytical decision-making. Opportunity is defined as all the factors that lie outside the individual that make the behaviour possible or prompt it.” Mitchie et al., 2011<sup>14</sup>*

The following sections report a cross-country analysis of the insights collected during three rounds of CSLs. The **analysis of the combined data is structured around challenges and opportunities for citizen action** - understood as **contributing to or hindering motivations, opportunities and capabilities in the context of the COM-B model** - within each lifestyle domain and topic area and aims at inspiring thinking around future action and research.

Citizens feedback on sustainable living options collected during the CSLs were categorised based on **four different lifestyle domains from Sitra’s work on 1.5-degree lifestyles<sup>15</sup>**: housing, food, transport and general consumption.

*Table 4 – Overview of the four PSLifestyle domains used to structure the following analysis*

PSLifestyle domains	
<p><b>Housing</b></p> <p>The housing domain covers accommodation and supply utilities; e.g. construction, maintenance, energy use and water use.</p>	<p><b>Food</b></p> <p>This domain covers individual and household behaviour related to the intake and/or waste of all foodstuffs and beverages consumed at home and outside the home.</p>

<sup>13</sup> Michie, Susan, et al. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. National Library of Medicine. USA, 2011.

<sup>14</sup> Michie, Susan, et al. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. National Library of Medicine. USA, 2011.

<sup>15</sup> Lettenmeier, Michael, et al. (2019). 1.5 Degree Lifestyles: Targets and options for reducing lifestyle carbon footprints, a summary. Finland, 2019.

Mobility	General consumption
The mobility domain covers the use of private and public owned transport for commuting, leisure and other personal purposes, e.g. cars, motorbikes, public transport, air travel, bicycles.	The consumption domain covers other lifestyle areas and consumption habits not included in the domains above and connected to consumption of goods and leisure activities.

This section provides an overarching analysis **across all three CSL iterations and all project countries, highlighting the main high-level learnings from the PSLifestyle CSL process.**

## 5.1 Housing

### Capability

A **lack of information on energy use and efficiency** represented a challenge for households across project countries. However, the workshops showed **awareness of energy use, as well as smart houses and energy systems**, and **concrete ideas on how to lower energy use in the context of housing** in all project countries, apart from Germany.

Awareness of reducing water consumption and/or collecting rainwater was additionally discussed in Italy, Portugal, and Türkiye. Awareness and concrete ideas for change on this topic can be seen as an opportunity for individuals to reduce energy consumption in housing, when supported by associated opportunities and motivations.

### Opportunity

Actions related to energy efficiency in housing were considered difficult to be implemented mostly for reasons rooted in opportunity. **Financial factors** were one aspect, according to citizens in Italy, Estonia, Finland and Portugal. **Renting a flat, rather than owning one, was indicated as a challenge for renovation and/or switching to green energy.** In this context, high costs and/or availability of facilities (e.g. recycling/composting) and **space available** were also seen as a barrier to the uptake of more sustainable options particularly for those renting accommodation.

Moreover, **participants felt limited in implementing a change when a shared/common decision with other people is required.** This is the case for people living in blocks of flats and for actions such as starting to produce community energy.

### Motivation

In terms of motivations, in the housing domain these related mostly to **finances, comfort level and sufficient levels of trust to enable a sharing culture**.

**Expectations for comfort level** can also be identified as a challenge for uptake in housing energy reduction, especially in Germany, since lowering the temperature by a couple of degrees during winter was not seen as an enjoyable solution. In Türkiye this wasn't seen as a big issue, it was just said that there would then be a need to wear thicker clothes.

**Relations with strangers or neighbours represents a concern for some citizens** when it comes to actions such as “consider sharing your living space with more people “(Türkiye) or “where possible, share a washing machine with your neighbours” (Germany), which participants highlighted **may generate a feeling of lack of safety and distrust**.

A motivating factor for reducing energy consumption in Greece and Slovenia is the **possibility to reduce the energy bill**. The rising prices are bringing this factor into play, which can be seen as an opportunity. It was highlighted by participants that there would be a possibility to connect the housing-related SEAs with cost-saving benefits.

## 5.2 Food

### Capability

In the food domain, specific factors related to capability were: **knowledge, understanding and specific cooking skills**.

Among the opportunities identified in the food domain, participants mentioned **implementing healthier and more sustainable diets in their daily life by consuming organic, local and seasonal food, and the possibility of saving food and money**. For example, **using plant-based alternatives to milk was seen as one of the easier changes to make**, with little impact on everyday life.

However, **uncertainties arose around the meaning and credibility of labels, lack of knowledge on the sustainability of plant-based proteins, and skills to cook tasty vegetarian meals**, can be seen as a challenge for achieving a more sustainable consumption of food. Participants raised a lack of knowledge and information sharing from local authorities and institutions, for example on food waste, organic food and vegan diets (Finland, Germany and Italy). Additionally, some participants raised a concern that **cooking with leftovers was seen as difficult, with some preferring to reduce portion sizes in the first place**. In one country it was also raised that **there can also be a gendered element** to the ease of switching to e.g. a vegetarian diet – this could be something to challenge and create new opportunities going forward.



Another way to strive for a more sustainable food consumption is for **people to grow food themselves**, as mentioned in countries such as Estonia, Slovenia and Portugal. Some participants noted that they also believed that “homegrown tastes better”. However, this again requires a certain level of knowledge and skill.

### Opportunity

**High prices are recognised as one of the main barriers when buying organic/sustainable food.** Participants across project countries (especially in Finland, Germany, Italy and Türkiye) identified limitations and barriers to the implementation of some actions in the food domain due to economic reasons (e.g. high costs of organic food). Italian participants mentioned a **lack of public subsidies and policies, meaning low access to sustainable food alternatives** e.g. “organic food is not well publicized and not always available in the shops”. On the other hand, some participants mentioned that, **rising costs of meat can make the vegetarian diet look more appealing.**

In terms of buying more local, the need for support from institutions to encourage short supply chains is highlighted in Türkiye and Portugal. This can be seen as a challenge since it makes it difficult for individuals to consume more sustainably.

### Motivation

Feelings like **concern and scepticism** were expressed by many when talking about **sustainable food labelling**, pointing out the **need for more clarity and trust.**

In some cases, there was social and cultural resistance to some of the suggested actions, **e.g. food traditions in Italy and Türkiye make harder for citizens to let go of meat, cheese, wine and coffee.** Similarly, the health perspective can also be seen as a challenge for achieving more sustainable food consumption, including **cultural norms, confusion and potential misinformation around nutritional values and health impacts.** For example, in Slovenia meat is seen as healthy, and in Estonia, participants believe that non-processed meat is healthier than processed meat alternatives.

## 5.3 Mobility

### Capability

In terms of capability for sustainable mobility **behaviours, information and awareness** came to the fore.

For personal transport, participants raised a **lack of information** on e.g., biofuels and different types of electric cars, as well as available subsidies. The wish for **more information about the options and sustainability of the options** e.g., public transport connections available and environmental benefits from

sharing vehicles or switching to new cars, can indicate that better information is an opportunity to help people to make better choices.

Another opportunity to help people make better choices is the **sharing of resources and information**, related to both the local availability of sustainable options and the environmental impact of such options (e.g., public transport connections available and environmental benefits from sharing vehicles or switching to new cars).

### Opportunity

Participants in several countries complained about **the high costs of public transport services**, especially for long-distance travel **in comparison with the lower prices of flying**. Financial incentives were mentioned by participants (above all in Germany and Slovenia) as opportunity to enhance the use of public transport in people's everyday life.

Next to the financial aspect, **inconvenience, unreliability, and lack of alternative modes of transport** were identified as challenges.

Finland, Greece, Slovenia, and Portugal identified in **improved infrastructure, resulting in reliable and safe connections, as a good way to make public transport and biking more attractive**. In fact, many felt they spend too much time commuting or moving around, beside the lack of infrastructures connecting urban and rural areas. For cycling in particular, safety and lack of infrastructure were cited as challenges.

Other **barriers** mentioned by participants are connected to **people's individual contexts** (health conditions and job situations) or **social contexts** (lack of information and awareness). Two big factors for many participants were **convenience and security/safety**, and the need for facilities (e.g. showers or secure parking) to support switches to active travel.

### Motivation

Some participants raised **motivational side-benefits of active or public travel, such as no need to search for car parking, positive health impacts and the ability to do other things** while travelling on public transport.

## 5.4 Consumption

### Capability

Participants pointed out the **lack of infrastructures and services that help people reduce their consumption**, highlighting thus the presence of concrete development opportunities. Additionally, some were unsure how to tell if a service is really sustainable, in the presence of **greenwashing** by some companies.

### Opportunity

**Limited purchasing power** was highlighted by Portugal and Germany as a challenge for more sustainable consumption. If more sustainable options have a higher cost, this can result in e.g., more fast fashion. In the case of electronics, some pointed out that **purchasing new products can be necessary due to new features and/or the person's profession**.

An additional opportunity to reduce general consumption identified in almost all project countries was the **acquisition of second-hand items**. Circular products and services were also discussed, with requests for more local shops (Slovenia), more repair services (Slovenia and Finland), good charity organizations (Türkiye), and bulk purchasing options (Portugal) raised as concrete ideas and opportunities for developing new infrastructures and services.

**COVID-19 was mentioned as a key factor influencing consumers' view on their actual needs**. Reducing the need for buying new, repairing, using until end-of-life, and repurposing, is also seen as highly relevant. The high awareness on this topic and the effort participants are already making to **extend the products lifespan** can be seen as opportunities for reducing general consumption.

### **Motivation**

Several aspects raised in the workshops can be pointed out as opportunities for reducing general consumption. One aspect is the **concept of "minimalism"** where less is bought, and superfluous items are donated. The concept was highlighted in almost every country. In terms of challenges identified in the general consumption domain, **comments and perspectives on the lower quality of second-hand products** instead of new ones are relevant to highlight.

Moreover, as for the food-related actions, citizens in different countries **expressed distrust** when thinking about more general consumption practices like "Crowdfund and invest in sustainable solutions", "Establish a magazine shelf in your apartment building", or "Use responsible service providers" (especially in Italy and Finland). The cultural resistance also was included in the barriers to the uptake of sustainable actions in the Consumer Goods domain (e.g.: "Kon Mari your home" & "Buy only what's necessary" in Italy).

## **5.5 Cross-cutting challenges and opportunities for sustainable lifestyles and behaviours**

Based on citizens insights on different domains reported above, some cross-cutting themes are identified, several being both challenges and opportunities for living more sustainable lifestyles.

### **Finances**

First of all, the **financial aspects** can be highlighted. **Investments** in renovating, paying for smart home applications, the higher price of organic and local produced food, and quality products that have a longer lifespan, can be seen as a challenge. **Participants expressed that they felt helpless to make more sustainable choices in a variety of areas despite wanting to do so, due to their financial resources limiting their options.** On the other hand, it was also recognised that reducing consumption of electricity and producing one's own food can result in saving money, and participants from Italy expressed that **sustainable choices are often less expensive than usually believed**, so this can become a motivation.

Citizens in several countries think more information on the cost-saving benefits of sustainable lifestyles is needed, and it would help increase the social acceptance of those changes considered more radical.

In several project countries the **necessity of incentives or government investment support** for sustainable behaviours were discussed. The impact of public procurement was also raised, with the question of whether the cheapest option should always win.

### **Social and cultural resistance**

A number of issues were raised which fall under the category of **social and cultural resistance – broadly meaning barriers to behaviours which are related to social factors, rather than technical aspects or skills.** For example, **inconvenience and expectations of comfort level** were identified as one part of this theme. Examples are the need for more planning in terms of transport, lowering temperature and not using the most updated electronical equipment.

The **role of community in supporting or hindering changed behaviours** came to the fore throughout CSL discussions. In some cases, European citizens felt discomfort and distrust when considering actions which require sharing time, spaces, and items with others (especially if strangers), for example for actions such as “consider sharing your living space with more people “and “where possible, share a washing machine with your neighbours”. From a different perspective, many participants highlighted the impact **that support from others around them could have on the likelihood that they would take up an action.** For example, those already exhibiting several environmental behaviours may be willing to support others to take these up (e.g., setting up a kitchen garden), or neighbours could take bigger actions together as a joint endeavour (e.g., tree planting).

**The impact of behaviours on others around an individual was also raised as a potential barrier.** For hosting and being a guest, this was particularly evident – **people did not want to seem unsociable** if they didn't provide a large amount of food for guests, or to be seen as a burden if they had a diet which didn't contain meat, which would require the hosts preparing a vegan option. We also noted reluctance to change traditional diets as an example of cultural resistance in some project countries.

### **Information and understanding**

**Gaps in knowledge and skills** were also expressed in relation to each of the domains. Examples include: not knowing what the most sustainable option is; how to cook more sustainable meals; needing specific information on how to repair something; and being unsure of how to navigate public transport systems. Understanding sustainability was seen as complex and abstract and difficult to be connected to specific behaviours. This also indicates that there is **potential in focusing on educating and learning about sustainability through information, ideas, and examples**. In Slovenia and Türkiye, the importance of awareness raising was emphasised, with participants wanting the media/local government/individuals to share stories/information on sustainable practices.

### **Responsibility – government or individual?**

Finally, the **need for better infrastructures and access to sustainable choices** is a cross-cutting theme. By seeing this as a factor that has to be changed on a higher level than the individual, this relates to the discussion on responsibility. Overall, **the government's responsibility, the shared responsibility and the individual responsibility were highlighted in different ways in the CSLs**. In Slovenia the responsibility of the individual to make changes as a consumer was felt to be more dominant than the other project countries, but CSLs in Slovenia, Estonia, Italy, and Türkiye mentioned at least one aspect where the individual was seen as solely responsible.

In some of the countries (Italy, Greece, Slovenia, and Türkiye) the **role of a system change to support individuals' sustainable choices** was highlighted, showing that a shared responsibility is needed. This was recognised in Germany where it was mentioned that the individuals have the ability to also affect the agenda local political, if they get involved. Additionally in Germany the question of social justice and responsibility was raised.

Finally, it was pointed out in all the project countries, that **the government and/or organizations have the responsibility to inform about, enable and encourage citizens' sustainable behaviour**. For Portugal and Türkiye, most of the responsibility was seen to lie at the government/organizations, and in Greece and Slovenia there was exasperation that the need for action was shifted onto the individual from other actors in the system. The emphasis on the government/organisations' responsibility was overall high.

### **Maintaining motivation and adapting to circumstance**

Many participants reported **feelings of disappointment, guilt, frustration and/or helplessness when they received results in relation to the 1.5-degree target**, especially when they felt they had already taken all individual actions possible within their personal circumstances (in some cases at risk of burn-out). Doubts about whether the 1.5 degree is achievable at all were raised in Greece and Estonia. These expressions can be seen as challenges for the individuals to be motivated to engage and influence a change at any level.

Almost all actions have both an argument for being convenient, and an opposing argument for being challenging to adopt as a behaviour. In the end it depends on the individual's capabilities, opportunities, and motivations, as to whether they are willing and able to take up the behaviour. We see the limits of individual action through many of the context-specific barriers raised by participants. For example, family or work constraints on time, and the related impact on what is possible regarding mobility and food-related behaviours. Motivations for making specific choices are almost always bound with other motivations (and related convenience levels), and the extent to which the sustainable lifestyle factors match or exceed the others varies per action and per individual. For example, **health or wellbeing, social, family or community, time or financial motivations could all factor more heavily into a choice**. Further research is needed on the links between these motivations and the messaging around them. In one lab it was raised that **the way an action is framed makes a big difference** – e.g., 'being creative with exploring your local surroundings' would be much more appealing than simply 'stay at home this weekend'.

We also see **cultural differences** across the lab discussions and reactions to specific types of actions (e.g. related to traditional hosting customs or food practices). While an action may be seen as easy for a majority of participants in one location, in another part of Europe it could be seen as at odds with local culture to many. This only further highlights the **need to adapt actions to the local circumstances – both in terms of infrastructure and support, but also to the socio-economic and cultural context**.

## 6. Participants' impressions on the PSL Tool in a nutshell

As highlighted throughout this report, a large focus of the **exchanges with the CSLs participants** was the PSL Tool, in **both content and also technical elements** (functions and features). Throughout the meetings, we have received substantial and very valuable feedback which has been utilised to further develop the PSL Tool. **Participants' impressions on the PSL Tool** have been largely outlined in **three summary reports** which have been produced after each lab iteration.

1. [Designing the PSL Tool – 101](#)<sup>16</sup>
2. [Designing the PSL Tool – 102](#)<sup>17</sup>
3. Designing the PSL Tool – 103<sup>18</sup> *(the link to the report will be provided as soon as it is available online)*

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<sup>16</sup> Manchandia, Dushyant (2022). Designing the PSL Tool – 101. Specifications of the PSLifestyle application and dataset – Version 1. PSLifestyle project.

<sup>17</sup> Meo, B., & Mager, F. (2022). Designing the PSL Tool – 102. Specifications of the PSLifestyle application and dataset – Version 2. PSLifestyle project.

<sup>18</sup> Xhelili, A., & Kessler, A. (2023). Designing the PSL Tool – 103. Specifications of the PSLifestyle application and dataset – Version 3. PSLifestyle project.

In this report, we will provide a **short overview of some of the more macro-level feedback that we have received by the CSLs participants, as a taste and enticement for our readers to go back to the more descriptive reports as seen above.** Overall, CSLs participants acknowledged largely the potential of the PSL Tool for increasing people's understanding of and monitoring of the environmental impact of their lifestyle patterns, while empowering them to enhance the uptake of more sustainable lifestyle patterns, across some main living areas such as housing, transport, food, and general consumption. Nonetheless, as highlighted, improvements of both technical and content elements were also pointed out.

- **1.5-degree limit to global warming.** One of the most recurring feedback items received by CSLs participants was on the discrepancy or the large gap between their lifestyle's carbon footprint and the ambition or the goal of 1.5-degree lifestyles that we would need to reach by 2050 to mitigate the worst impacts of climate change<sup>19</sup>. Participants across all project countries found the target rather ambitious and almost unreachable, unless the changes in lifestyles are rather drastic. Nonetheless, they acknowledged that the recommendations within the PSL Tool aim to rectify this by outlining a more step by step approach to changing lifestyles, without the need for big jumps. Naturally, such goals/targets are not defined by the PSL Tool nor the project, however, utilised and embedded in our approaches. Hence, the feedback is rather indirect, but still with high relevance when it comes to engaging people.
- **Carbon footprint methodology and figures.** The carbon footprint calculation figures were at the centre of the participants' feedback also, especially among those who were a bit more informed on the topic of sustainable lifestyles and respective hotspots. On the one hand, participants were keen for the PSL Tool to reach an optimal correctness when it comes to the calculation of their carbon footprint results, a process that required a bit more tweaking of the calculation methodology and the backend software formulas. On the other, participants were keen for all actions that are part of the PSL Tool as recommended solutions to become more sustainable, to contribute towards reducing one's carbon footprint, as opposed to the initial PSL Tool versions where some of these actions did not have such respective value.
- **Understanding, comprehensiveness, and relevance.** Looking at the more content related elements, throughout all meetings participants have exchanged and shared their suggestions for improving the content of the lifestyle test (both questions and response options) as well as the actions that are recommended to help reducing the user's carbon footprint. These suggestions were of a linguistic nature, but also digging deeper into the relevance of the questions/response options and actions for their

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<sup>19</sup> IPCC (2022). Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press. In Press.

countries by either further contextualising the descriptions and/or removing/adding new questions/options and actions.

- **Skip function.** An important element of the PSL Tool is the skip function that allows users to skip including an action as part of their lifestyle change plan. When deciding to skip, the user will be prompted to indicate the reasons and thereby allowing some more insights on the potential barriers towards more sustainable lifestyles. Due to its importance, a good amount of focus was placed on it. Overall, participants found value to it, however, some more changes were suggested such as adding options that relate to their willingness and/or agency (ability) to perform certain actions and highlighting the value of such a function for the user. and highlighting a bit more the value of such a function for the Such feedback will be considered in the upcoming PSL Tool version.
- **Designing an attractive and easy-to-use PSL Tool.** It is well known that user interface and ease of use can impact quite a lot the uptake of a digital solutions. As such, the CSLs participants provided valuable feedback and suggestions on how the PSL Tool should/could be designed, ease of “moving” from one stage to the other (overall journey) and best ways/forms of presenting information. For example, this covered the presentation of the carbon footprint results, the visibility of certain functions, the length of the action descriptions and many further points. Such feedback has resulted in some major impacts on how the PSL Tool, and its user journey within, looks.
- **Engagement features and user journey.** Similarly to the user interface and ease of use, the overall user experience, which can be enhanced with engagement and interactive features, is equally important for the success of digital solutions. This is especially for the PSL Tool which requires the long-term engagement of its users, complemented by a good degree of interaction from their end. The CSL participants indicated that such elements should be further included into the PSL Tool, which resulted in adding features such as the possibility to share results in social media and/or developing entertaining personas/profiles<sup>20</sup> which can help a person to find similarities with other PSL users. Moreover, we added the help card which allows people to further share their feedback on the type of features/support they might need, which will then be planned to be embedded in upcoming PSL Tool versions.

## 7. What does this mean for the future? An outlook

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<sup>20</sup> MyProfile is a feature of the PSL Tool capturing forms of motivation profiles which are presented to the users once they finish their lifestyle test. The profiles summarise key characteristics of user groups, creating similarities, depending on their answers to the lifestyle test.



The transition towards more sustainable lifestyles and carbon neutral societies is more urgent than ever. There is a record of multiple efforts, driven by different actors, to increase people's awareness and guide them towards more sustainable patterns, across all living areas. The benefits have been multi-fold with the sustainability topic gaining an increasing traction, especially among younger generations. Nonetheless, we also record that **the uptake or share of sustainable lifestyles hasn't reached the desired levels. People are informed; however, this does not always translate into action.** Accordingly, solutions are needed to further contribute towards closing the gap between awareness/information and action. In this vein, **relying on behavioural insights as well as coming closer and considering people's values, needs, wants from a very local and individual perspective**, as opposed to designing solutions in abstract/top-down manner, could help. Such approaches and further engaging people in the **co-creation of solutions they will be targeted with**, could ensure their effectiveness as well as higher acceptance. This is exactly the purpose of the PSLifestyle project and its citizen science labs, to go down to the local and individual level and understand a lot more about people's contexts (both personal and infrastructural) and co-create an action driven tool that will help them to reflect on one's living patterns and engage in changing those towards more sustainable ones. Without a doubt, one can say that **more of such approaches/processes are needed to move forward and come closer to mainstreaming sustainability** and related patterns.

The conversations with European citizens through the CSLs indicated that **Europeans recognise the shared responsibility of all stakeholders towards sustainability transitions.** European citizens are keen on doing their part, however, simultaneously, highlight that **a good share of such responsibility, including bearing of costs, should be more on the key decision makers' field, due to their role and influence in designing systems.** Accordingly, cautiousness should be paid not to overwhelm people by placing or tilting a large share of such responsibility towards them. Moreover, additional heed is ideally paid to differentiate on the role different social groups can play and/or the type of support they might need to come closer to sustainability principles based on their socio-economic conditions and their contribution towards unsustainable practices and related consequences. In parallel, as we have seen throughout the CSLs, **system lock-ins should be considered and rectified to ensure potential desire for change at the individual level is not stagnated due to reduced agency in influencing parts of living patterns.**

Building on our main human trait as social beings, **there is strength in capitalising on joint and/or community driven initiatives.** Recorded in practice and confirmed in the CSLs, **it is important for people to see how other people are behaving and/or for certain actions to be undertaken as part of a social group.** This increases their motivation and inspiration to participate and/or adopt lifestyle changes, especially for those ones that could be slightly more difficult to integrate than others. Accordingly, **creating synergies and platforms for citizen collaborations, with a clear value for their participation** could support further increasing people's involvement. Projects such as PSLifestyle are great examples of such platforms and one can only recommend the further development of such initiatives.

Reiterating the importance of the aforementioned actions, accelerating the sustainability agenda and meeting respective targets **might also require the consideration of bolder and more disruptive pathways**. For example, there is still untapped potential in **exploring the impact of more structural system changes** that favour sustainable options over their counterparts. This could be through innovative policies focused on choice editing and provisioning systems for reducing/limiting the portfolio of unsustainable products and services and expanding access to sustainable solutions. Undoubtedly, **a more cautious and experimental approach is required for such disruptive pathways**, including the potential of exploring their implementation in a gradual approach. **Designing and implementing such disruptive solutions in a collaborative manner with all stakeholders**, including citizens, will only contribute to their **transparency as well as credibility**. Self-evident is the deduction that driving such initiatives forward should be conditioned on **the principle of just transition, where no one will be left behind**. A holistic approach with regards to the challenges and benefits for everyone will only help to better outline such means and the arguments for their rollout and acceptance.

The journey towards sustainable development and lifestyles is a perpetual one in which we as a community of changemakers have a lot more to achieve. **There is no one-size-fits-all solution and therefore it is important to learn from our processes, improve them and explore different pathways that would allow the vision of more sustainable lifestyles not to remain a vision, but to be made a reality.**

## 8. References

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## 9. Appendices

### Appendix A: Copy of CSL reporting template



#### CSLs Meeting Reporting Template

Date	
Place	
Format (in-person, online)	
Organising partner(s)	
Report writer	

#### SUMMARY OF THE CSLs MEETING

In this section, please provide a summary of the CSLs meeting and related discussions. In here, we want to capture the mood of the meeting, the topics exchanged, overarching outcomes and your overall impressions. Please be as elaborate as possible.

- *Please refer to the notes and transcriptions of each session while writing this section.*

### SUMMARY OF PARTICIPANTS’ DEMOGRAPHICS

In this section, please provide a summary of participants demographic characteristics.  
*(please add space as needed)*

### KEY ACTION POINTS

Please provide a brief overview of the action points stemming from the meeting and please indicate, if possible, the responsible organisation and person for each item. Please add new rows as necessary.

Action point(s)	Follow up by

### ORGANISATIONAL LEARNINGS

Please provide a brief description of the key learnings related to the planning and implementation of the CSLs meeting: what went well, what needs to be improved for the upcoming meetings etc. Also please reflect on the support that was provided to you and to what extent it was useful to you. If you have collected such organisational feedback from participants, please feel free to highlight it in this section. Please add new rows as necessary.

Learnings

## CHECKLIST OF RETURNING MATERIALS

This is a guiding list indicating all the materials and resources that need to be shared after the conclusion of the CSLs meeting to complete the reporting process.

Material	Provides	Not provided
Agenda		
Participants' list		
Consent forms		
Photos taken during the meeting		
Photos of the filled-out facilitation materials		
Transcriptions of the input in the facilitation materials		
Summary of the feedback results		

## Appendix B: PSLifestyle questionnaire for CSL evaluation

You are receiving this questionnaire because you took part in a living lab organised by the **PSLifestyle project**. Thank you for your valuable contribution to our project, and for helping people across Europe build more sustainable lifestyles!

This short questionnaire will help us to evaluate the living labs **(HOW?)** and feed into our scientific research **(WHAT SCIENTIFIC RESEARCH ARE WE DOING?)**. There are no right or wrong answers! We are very grateful to you for taking the time.

The questionnaire is anonymous. The information will be stored in our internal project archives until the end of the project (March 2025) in compliance with the EU General Data Protection Regulation. An analysis of questionnaire responses will feed into a report on the process of the living labs, which will be publicly available.

Many thanks in advance!

### PSL living lab questionnaire

1. To what extent do you agree with the statement 'Collectively, we are doing enough to address climate change in my country'

(Please tick **one box only**)

Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree	Do not know
*	*	*	*	*	*

2. According to you, how big is the impact individuals have on the environment with their habits and lifestyles?

(Please tick **one box** only)

No impact	Minor Impact	Neutral impact	Moderate Impact	Major impact	Do not know
*	*	*	*	*	*

3. Who should have the main responsibility for making sure we have a healthy and sustainable environment?

(Please select **one option**)

Industries	Governments	Individual citizens	Environmental groups/civil society	Do not know
*	*	*	*	*

4. a) How much do you think your health would benefit as a result of the following points?

(Please tick **only one** box in each row)

	Not at all	A little bit	Moderately	A lot	Do not know
a) Reducing the consumption of products of animal origin (meat & dairy)	*	*	*	*	*
b) Walking or biking places when feasible	*	*	*	*	*
c) Greater use of renewable/green energy in your house/your neighbourhood	*	*	*	*	*
d) More green spaces in your town/suburb	*	*	*	*	*
e) Cooking your own food	*	*	*	*	*

4. b) Can you think of any other actions that would benefit the environment as well your health and wellbeing? If so, could you describe them?

5. During your lifetime, have you already made any lifestyle changes towards sustainable behaviours (for example, paying attention to energy expenditure, cycling, reducing plane

travel, buying second-hand, reducing the consumption of products of animal origin, etc.)? If yes, which changes have you made?

6. a) Has participating in the PSLifestyle Living Labs motivated you to make any (more) lifestyle changes?

Yes	No	Undecided
*	*	*

6. b) If you answered “yes” or “undecided”, which lifestyle changes are you thinking about making? Have you already made some changes since you first participated in a living lab?

7. If the PSLifestyle living lab inspired you to make lifestyle changes (or to think about making lifestyle changes), can you describe what you found motivational about the experience of taking part in the lab? (for instance, the fact of discussing with other people, of learning new information, etc.)

8. a) After taking part in the PSLifestyle living lab, how important do you think it is for communities to work together and support each other to make difficult lifestyle changes?

Not important	Slightly important	Important	Very important	Do not know
*	*	*	*	*

8 b) If “slightly important”, “important”, or “very important”, at which level do communities need to work together? (you can choose more than one answer)



Local	Regional	National	Global	Do not know
*	*	*	*	*

**9. a) Do you feel a sense of responsibility towards your own community?**

Not at all	A Small Responsibility	Moderate Responsibility	Major Responsibility	Do not know
*	*	*	*	*

**9. b) If “small”, “moderate” or “major” responsibility, at which level do you feel this sense of responsibility? (you can choose more than one answer)**

Local	Regional	National	Global	Do not know
*	*	*	*	*

**10. Did taking part in the PSLifestyle living labs influence your sense of community and/or your sense of responsibility towards your community (as described in question 8 and 9)? If yes, can you explain why?**

**11. After taking part in the PSLifestyle living lab, how optimistic are you about your future?**

Very pessimistic	Pessimistic	Neither pessimistic nor optimistic	Optimistic	Very Optimistic	Do not know
*	*	*	*	*	*

**12. How many PSLifestyle living lab meetings have you attended?**

1	2	3	4
*	*	*	*

**13. Do you think you have gained anything from the experience of taking part in the PSLifestyle living labs, and if yes, what? Do you have any final reflections on your living lab experience that you would like to share with us?**

**THANK YOU ONCE AGAIN FOR YOUR FEEDBACK!**

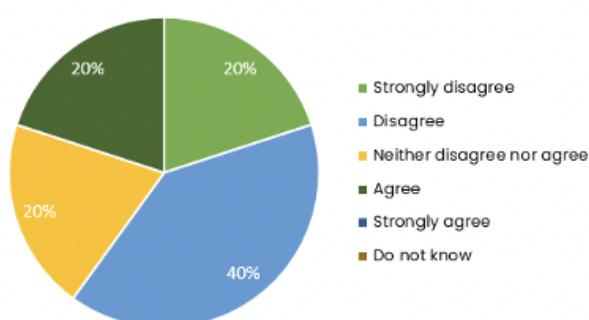
**We hope to keep in touch and to see you again at our next lab iteration soon!**

## Appendix C: Country summaries of the survey results

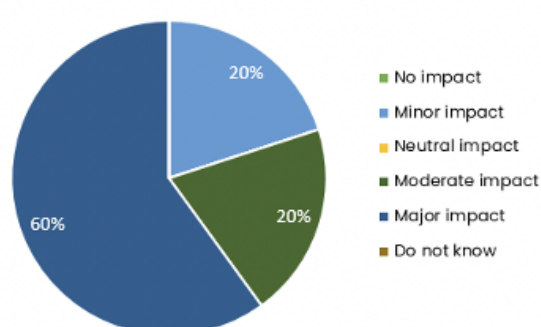
**Country: Estonia**

**Number of respondents: 5**

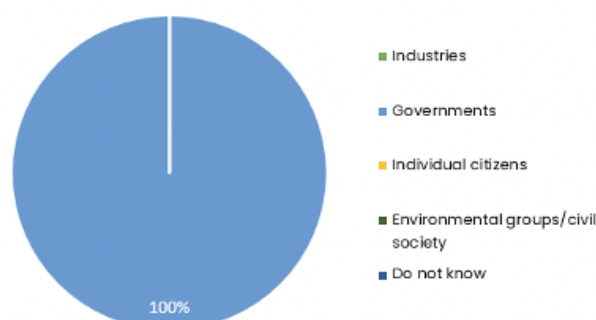
**To what extent do you agree with the statement  
'Collectively, we are doing enough to address climate  
change in my country'**



**According to you, how big is the impact individuals  
have on the environment with their habits and  
lifestyles?**

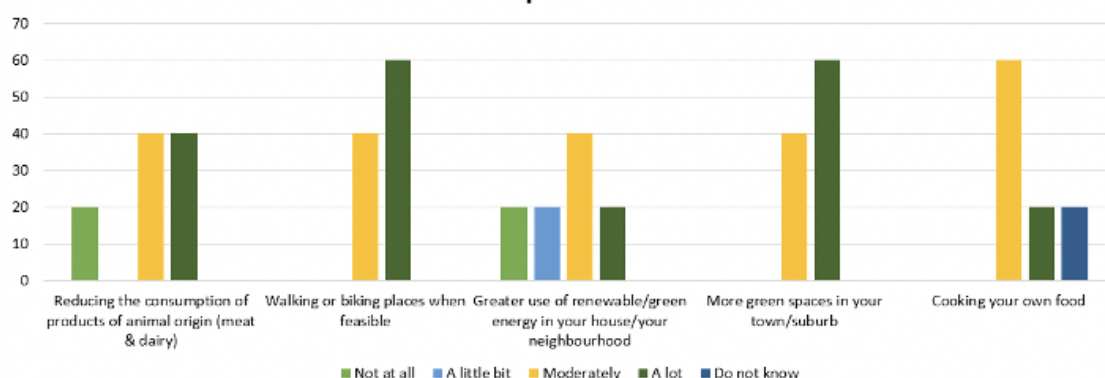


**Who should have the main responsibility for making sure we  
have a healthy and sustainable environment?**



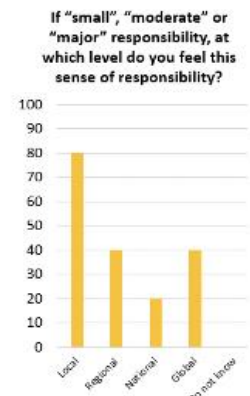
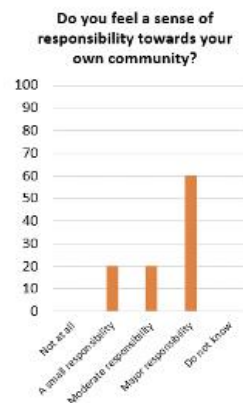
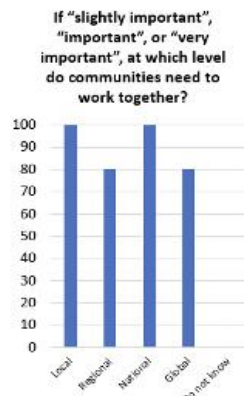
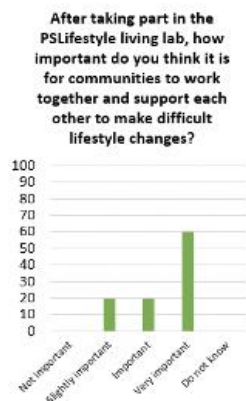
*"Above all, raising awareness. Education. Teaching environmental protection and ecology in universities in every discipline, so that there is an understanding of how we affect the environment in all our activities. In addition, of course, all those smaller activities as reducing mowing, reducing the use of blowers, reducing noise levels, reducing and slowing down car traffic, reducing light pollution. Leave more greenery in the city (for example grass block pavers for parking spaces), preserve already existing greenery, especially large trees; using more permeable pavers instead of asphalt, concrete or regular pavers, etc. etc."*

**How much do you think your health would benefit as a result of the following  
points?**



**Country: Estonia**

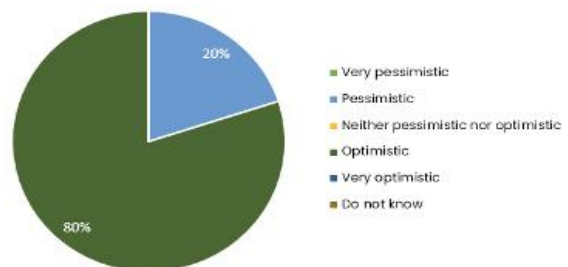
**Number of respondents: 5**



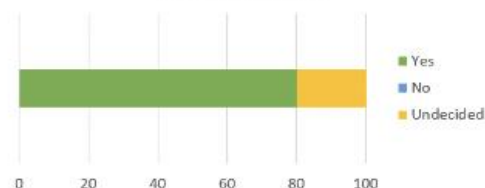
*"I wanted to be more conscious about my food footprint and I decided to eat more local produces and avoid produces that are transported from far."*

*"Next significant change would be becoming vegan, or at least reducing consumption of meat and animal products significantly."*

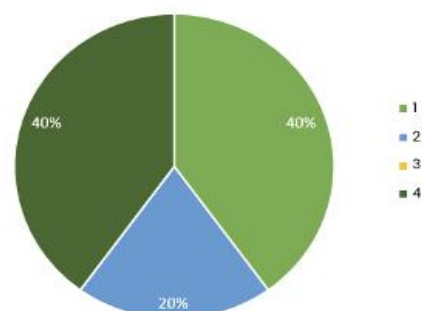
**After taking part in the PSLifestyle living lab, how optimistic are you about your future?**



**Has participating in the PSLifestyle Living Labs motivated you to make any (more) lifestyle changes?**



**How many PSLifestyle living lab meetings have you attended?**

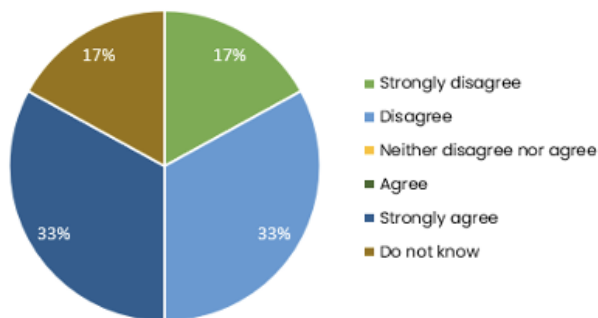


*"I have given up my car, shopping packaging-free as much as possible, buying less stuff, buying more local food. Instead of traveling to other countries I hike locally."*

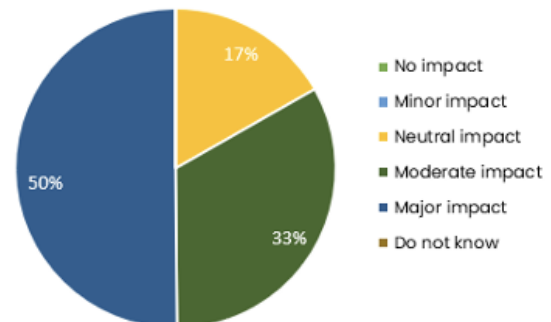
Country: Finland

Number of respondents: 6

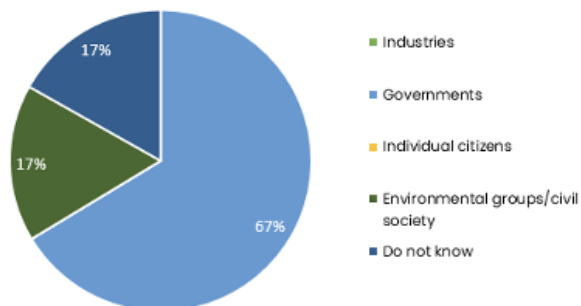
To what extent do you agree with the statement  
'Collectively, we are doing enough to address climate  
change in my country'



According to you, how big is the impact individuals  
have on the environment with their habits and  
lifestyles?



Who should have the main responsibility for making sure we  
have a healthy and sustainable environment?



*"I feel that I am part of a community."*

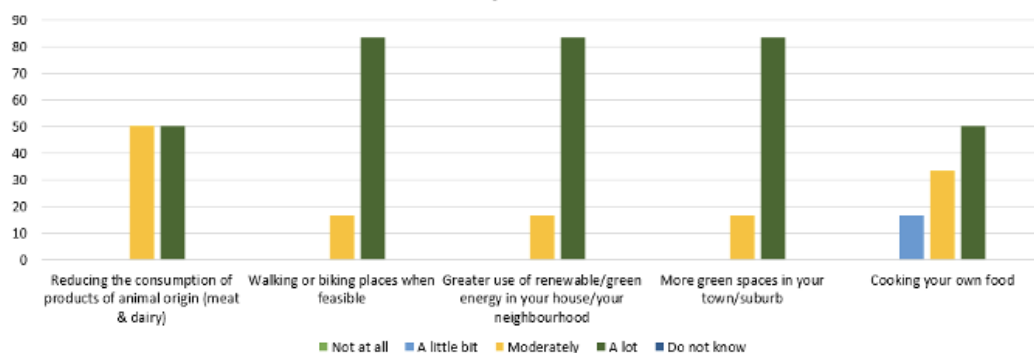
*"We have one earth."*

*"Change starts within oneself."*

*"It was good to meet other people who find  
same things important."*

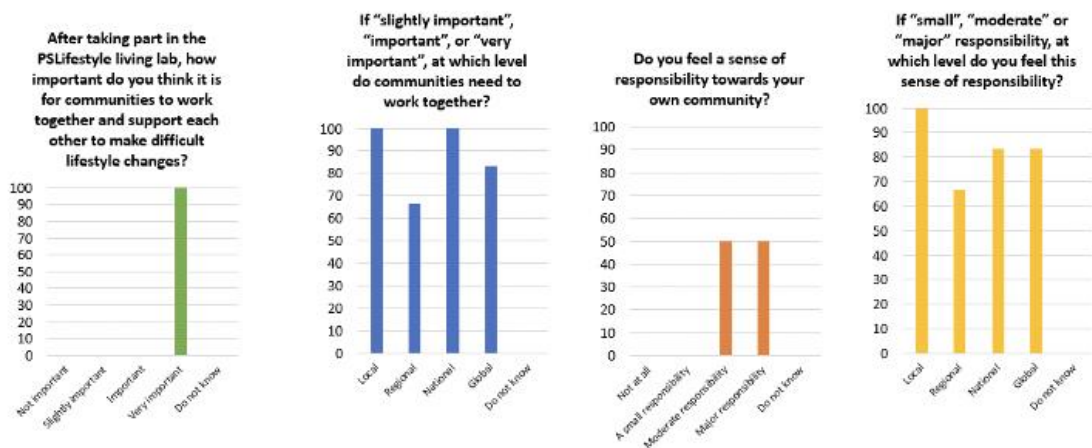
*"I feel that my decisions have an impact."*

How much do you think your health would benefit as a result of the following  
points?



Country: Finland

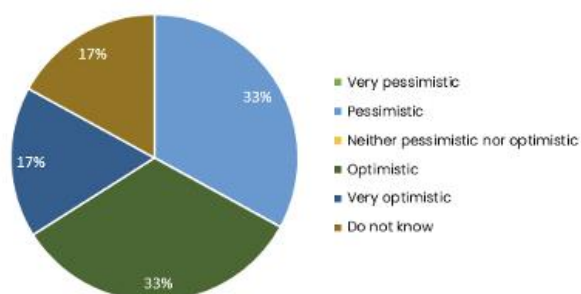
Number of respondents: 6



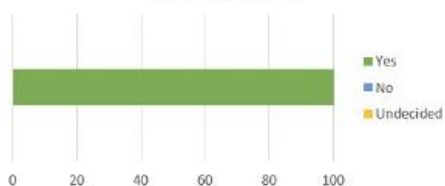
After taking part in the PSLifestyle living lab, how optimistic are you about your future?

"I would like to take part again."

"It provided new information and planning."

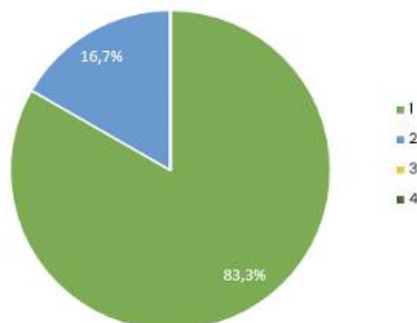


Has participating in the PSLifestyle Living Labs motivated you to make any (more) lifestyle changes?



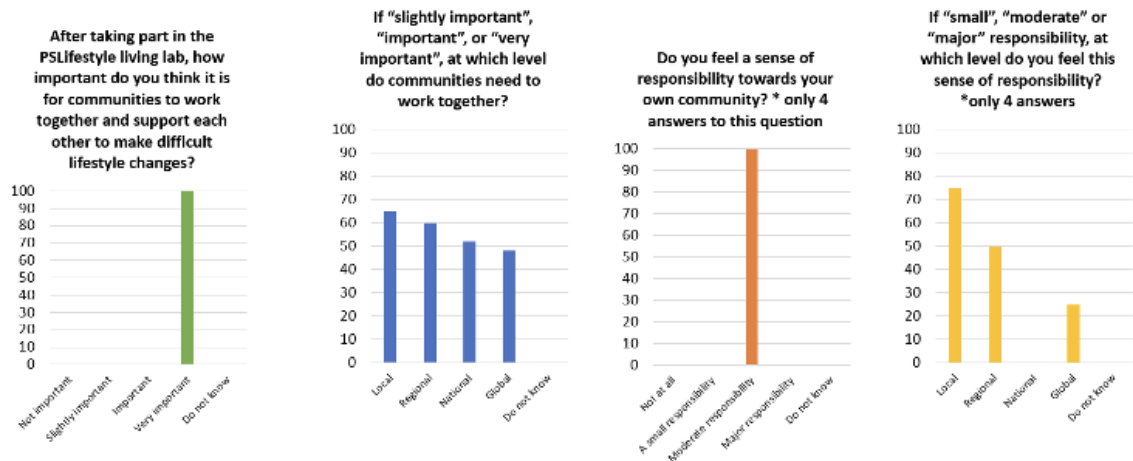
Specifically, participants were motivated to: pay attention to energy expenditure, cycle when feasible, reduce plane travel, buy second hand, reduce animal products, reduce take out, use different environmental metrics.

How many PSLifestyle living lab meetings have you attended?



**Country: Germany**

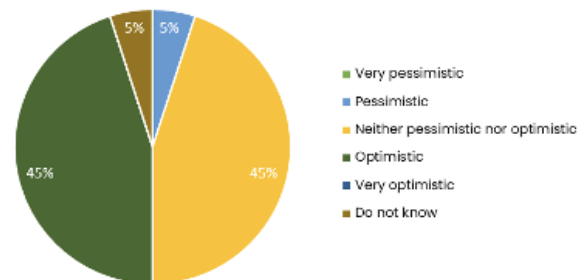
**Number of respondents: 23**



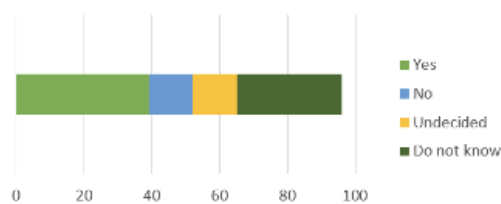
*"Reducing clothing, checking at the moment of shopping to see if I don't already have a similar item in my wardrobe, walking or cycling trips."*

*"Getting from A to B with your own physical strength (on foot or by bike). Gardening. Face-to-face meetings instead of social media etc. (No electricity is needed)."*

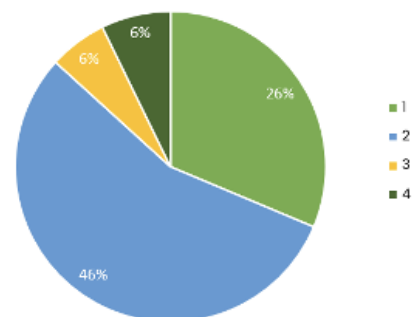
**After taking part in the PSLifestyle living lab, how optimistic are you about your future?**



**Has participating in the PSLifestyle Living Labs motivated you to make any (more) lifestyle changes?**



**How many PSLifestyle living lab meetings have you attended?**



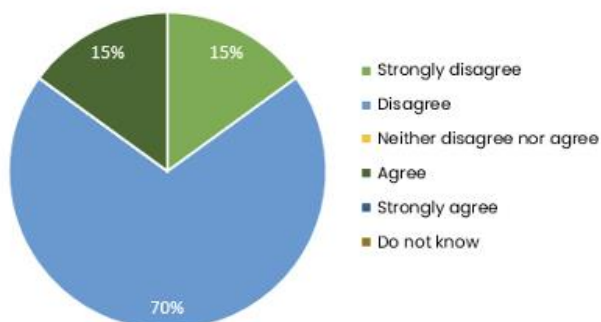
*"To become politically active, because not so much can be achieved by going from vegetarian to vegan or reducing 20 square meters of living space to 10 square meters."*



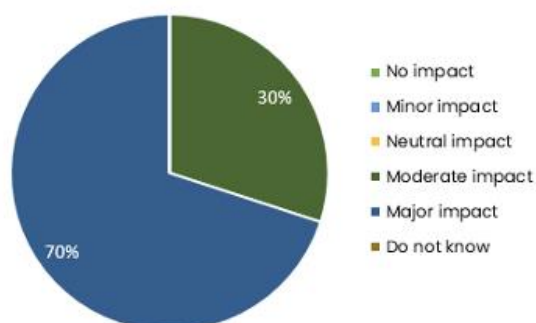
Country: Greece

Number of respondents: 13

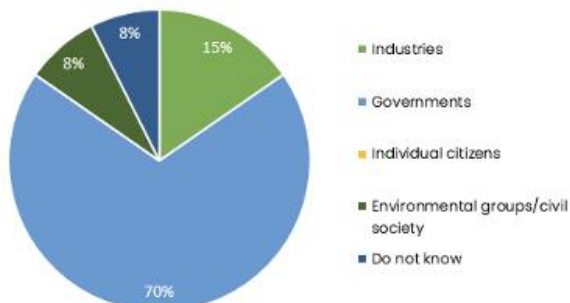
To what extent do you agree with the statement  
'Collectively, we are doing enough to address climate  
change in my country'



According to you, how big is the impact individuals  
have on the environment with their habits and  
lifestyles?



Who should have the main responsibility for making sure we  
have a healthy and sustainable environment?

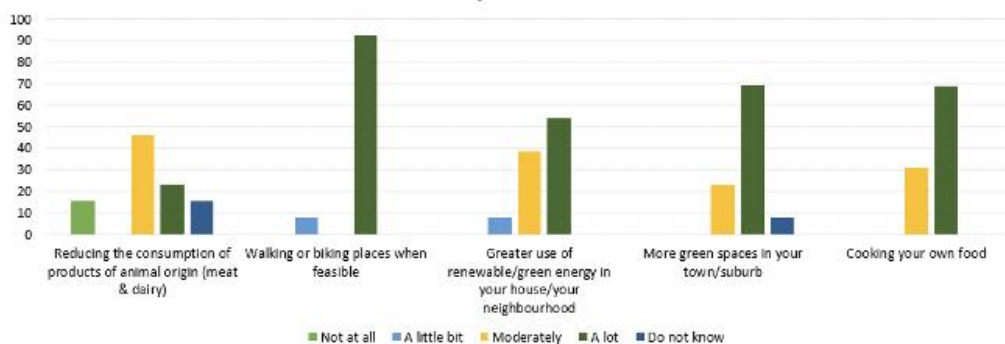


"I gained in information and in that it reminded  
me that there are people who are interested in  
environmental issues beyond political  
expediency."

"It raised concerns and suggested solutions  
that I had not even thought of."

"I learned new information and chatted with  
other people."

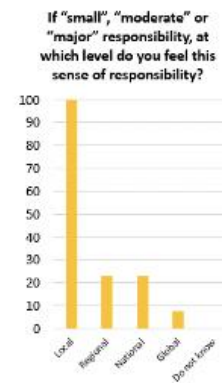
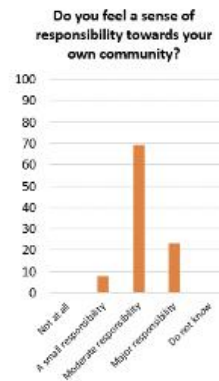
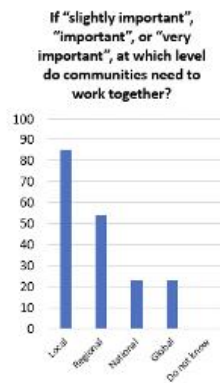
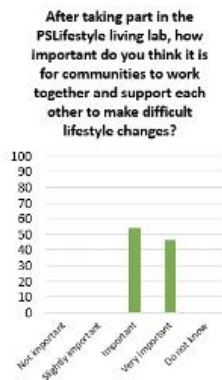
How much do you think your health would benefit as a result of the following  
points?





Country: Greece

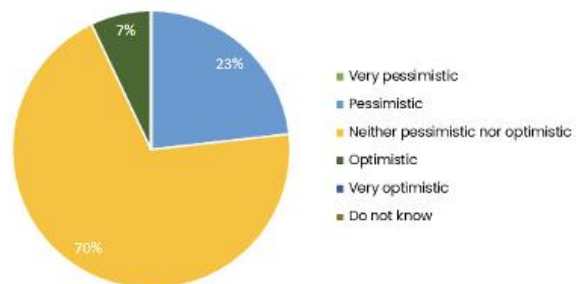
Number of respondents: 13



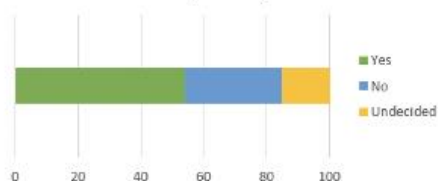
*"Use public transport to the greatest extent possible."*

*"Second-hand purchase, frequent commuting by bicycle, reducing consumption of luxury products."*

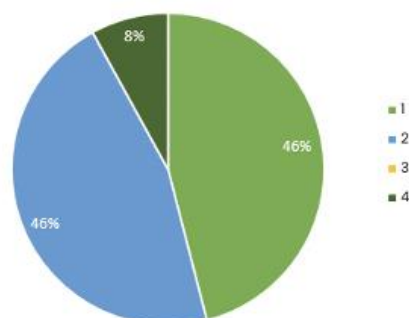
After taking part in the PSLifestyle living lab, how optimistic are you about your future?



Has participating in the PSLifestyle Living Labs motivated you to make any (more) lifestyle changes?



How many PSLifestyle living lab meetings have you attended?



*"Consumption reduction of products of animal origin, recycling."*

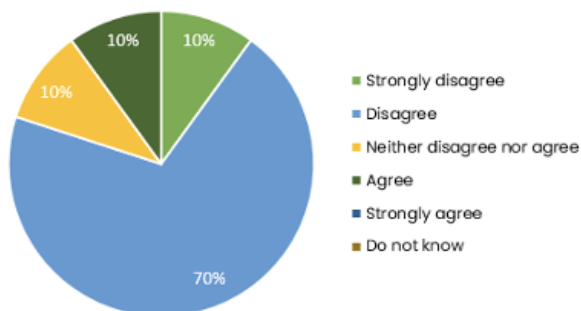
*a Bicycle, second-hand purchase, reduction of animal consumption."*

*a change their habits in a way to protect nature."*

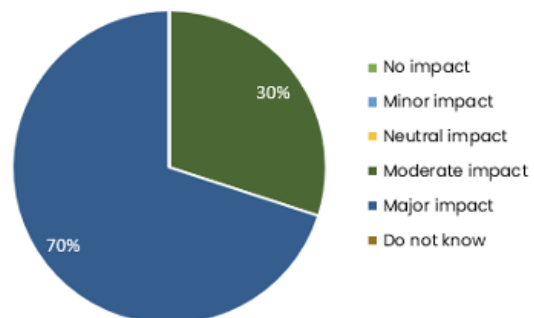
**Country: Italy**

**Number of respondents: 20**

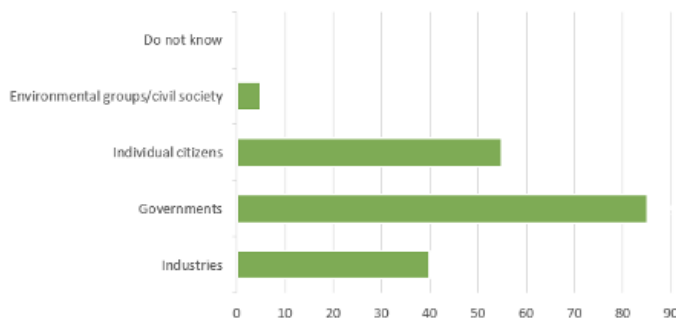
**To what extent do you agree with the statement  
'Collectively, we are doing enough to address climate  
change in my country'**



**According to you, how big is the impact individuals  
have on the environment with their habits and  
lifestyles?**



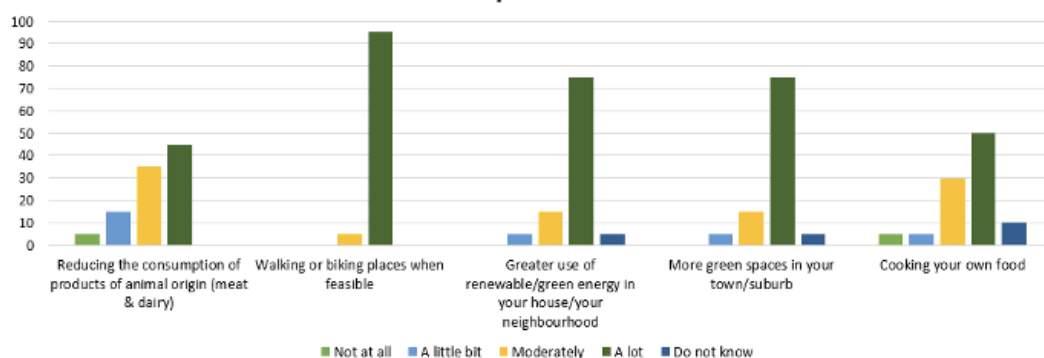
**Who should have the main responsibility for making sure we  
have a healthy and sustainable environment?**



*"I think these workshops should be done across the board with teenagers who will have to inherit the helm. Too many of them in our society are still distant from these topics."*

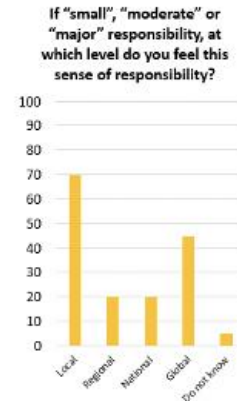
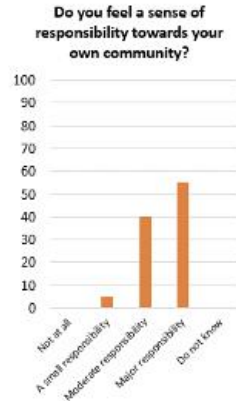
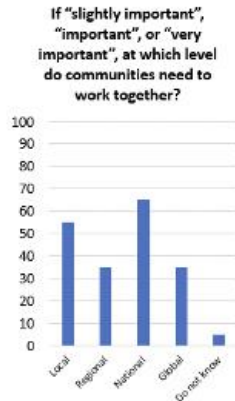
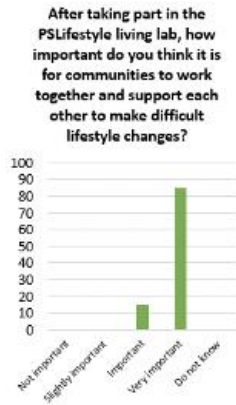
*"It motivated me by understanding that even with my limited possibilities something can be done."*

**How much do you think your health would benefit as a result of the following  
points?**



**Country: Italy**

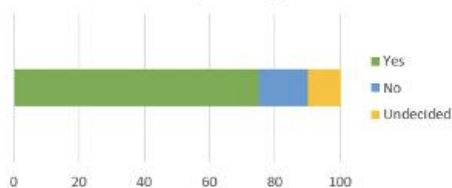
**Number of respondents: 20**



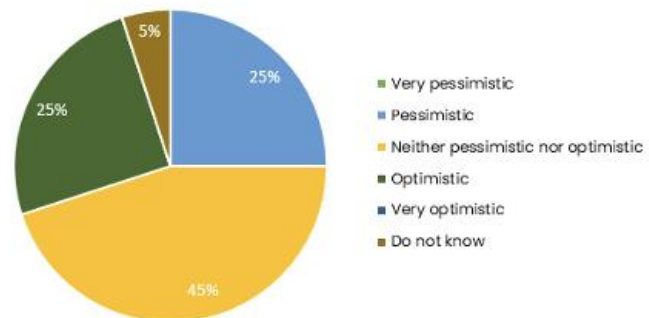
*Incentives, including economic incentives, to support citizens' economic transition (e.g., purchase of electric cars / solar panels at subsidized prices)."*

*"So many structural changes unfortunately I cannot afford financially."*

**Has participating in the PSLifestyle Living Labs motivated you to make any (more) lifestyle changes?**



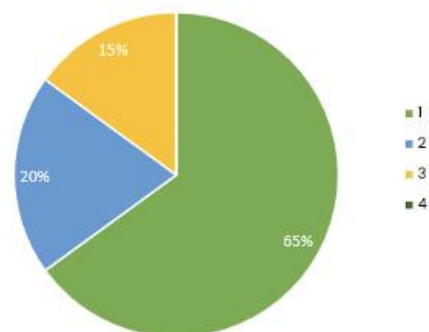
**After taking part in the PSLifestyle living lab, how optimistic are you about your future?**



*"More social relations; sharing is the basis of any dialogue and/or collective problem."*

*"Increase infrastructure for soft mobility, especially bike lanes."*

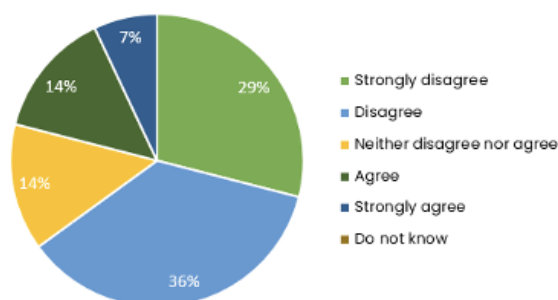
**How many PSLifestyle living lab meetings have you attended?**



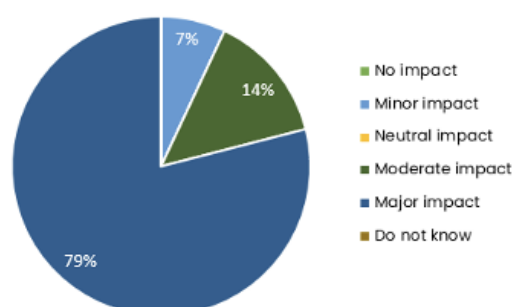
Country: Portugal

Number of respondents: 14

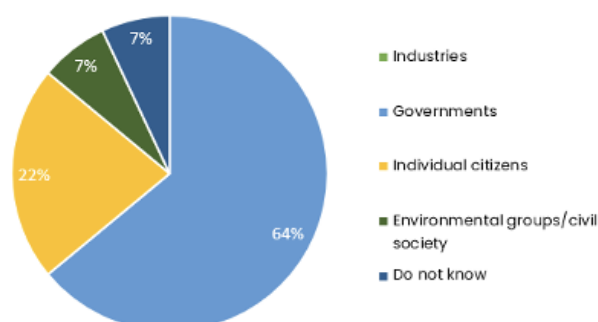
To what extent do you agree with the statement  
'Collectively, we are doing enough to address climate  
change in my country'



According to you, how big is the impact individuals  
have on the environment with their habits and  
lifestyles?



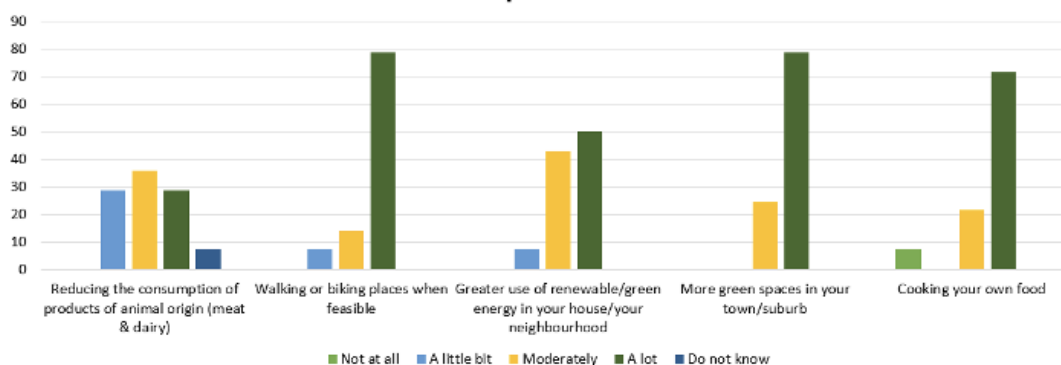
Who should have the main responsibility for making sure we  
have a healthy and sustainable environment?



*"It's all about learning new information and  
realize the impact of our actions on the  
environment and the climate. Also from learning  
new things, our mindset changes and that is the  
point in the first place."*

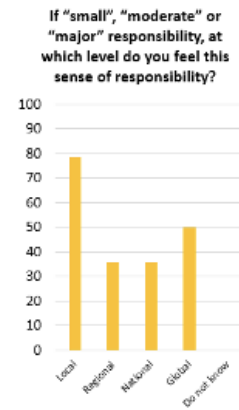
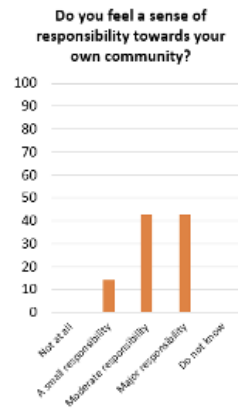
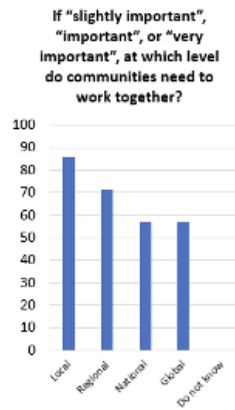
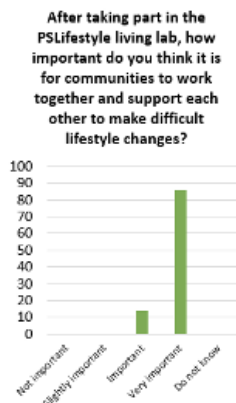
*"By taking part in this lab, my sense of  
community and responsibility got influenced in a  
good way, because I saw how many people feel  
the same way like me about the environment. So  
that gave me hope and boost me so I can be  
more responsible."*

How much do you think your health would benefit as a result of the following  
points?



Country: Portugal

Number of respondents: 14

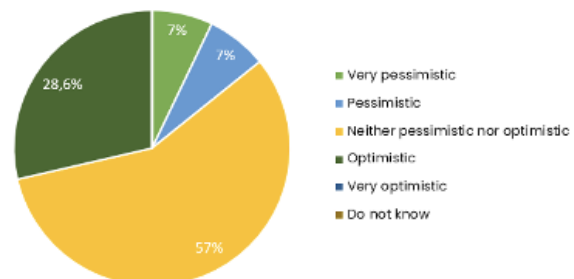


"I do lifestyle changes everyday - shortage of resources implies reusing and upcycling what is available.

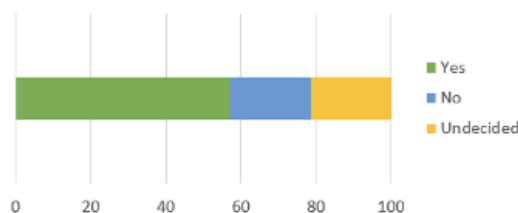
I want to be more careful about the energy and to walk even more and to buy only second hand if possible."

"I gained hope and learned new information and I want to participate again in a living lab."

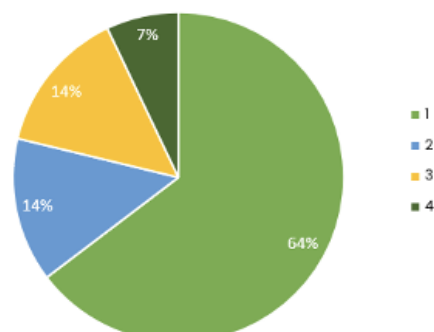
After taking part in the PSLifestyle living lab, how optimistic are you about your future?



Has participating in the PSLifestyle Living Labs motivated you to make any (more) lifestyle changes?



How many PSLifestyle living lab meetings have you attended?

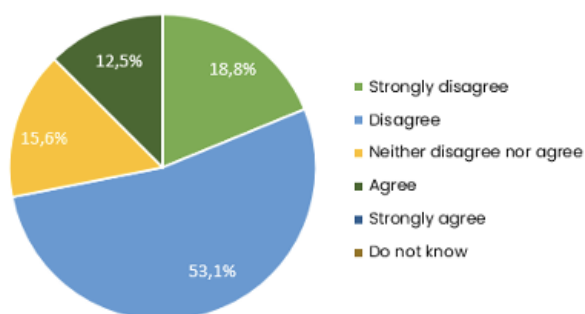


"We reap what we have sown, especially in more local scales it is easier to organize ourselves and thus have a more direct acknowledgment of our responsibilities."

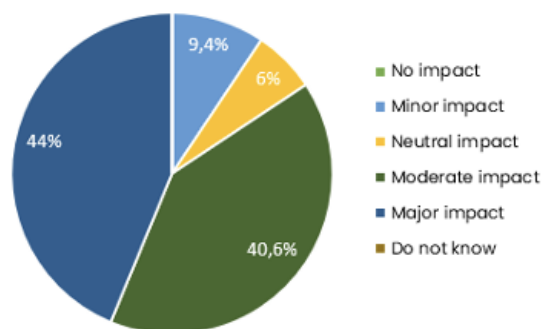
Country: Slovenia

Number of respondents: 32

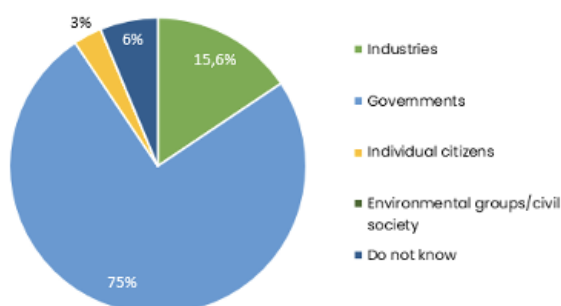
To what extent do you agree with the statement  
'Collectively, we are doing enough to address climate  
change in my country'



According to you, how big is the impact individuals  
have on the environment with their habits and  
lifestyles?



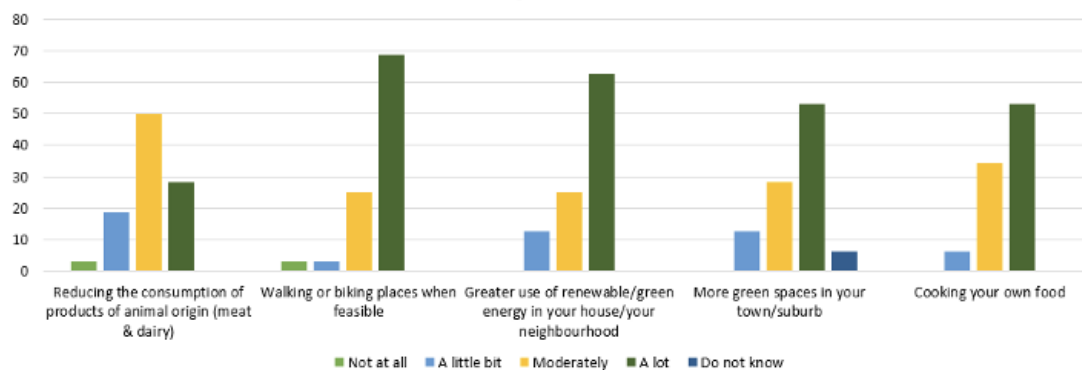
Who should have the main responsibility for making sure we  
have a healthy and sustainable environment?



*"Less is more. With less, we put less strain on natural resources, we create less waste, we feel better mentally, and we free ourselves. If we learn to live with less, we also become more independent and resilient."*

*"Because we came from different backgrounds and were different ages, I noticed that there were also differences in outlook between the generations."*

How much do you think your health would benefit as a result of the following  
points?

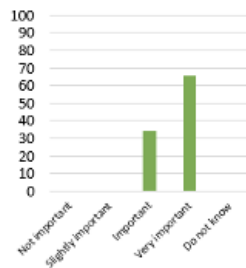




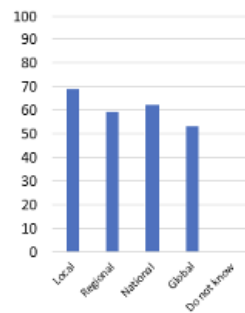
Country: Slovenia

Number of respondents: 32

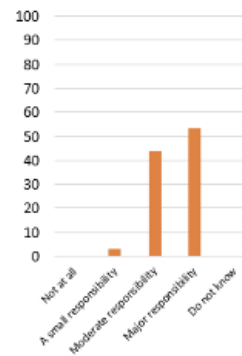
After taking part in the PSLifestyle living lab, how important do you think it is for communities to work together and support each other to make difficult lifestyle changes?



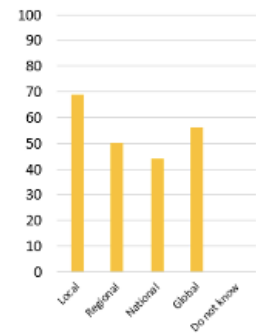
If "slightly important", "important", or "very important", at which level do communities need to work together?



Do you feel a sense of responsibility towards your own community?



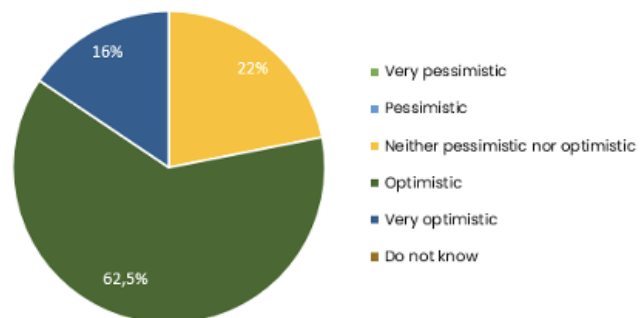
If "small", "moderate" or "major" responsibility, at which level do you feel this sense of responsibility?



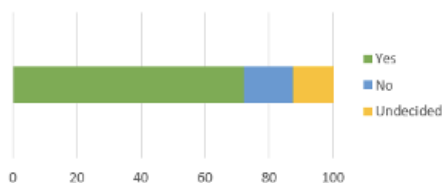
After taking part in the PSLifestyle living lab, how optimistic are you about your future?

"I would like to participate more in community sustainability practices, e.g. working in a community garden, etc."

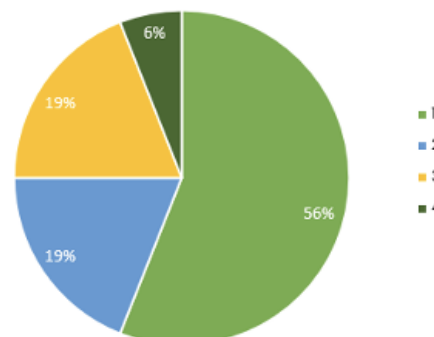
"What motivated me the most was the discussion with others and also the table where we wrote our plans for change."



Has participating in the PSLifestyle Living Labs motivated you to make any (more) lifestyle changes?



How many PSLifestyle living lab meetings have you attended?

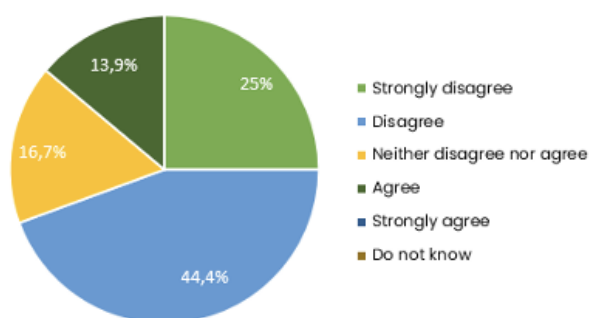


"My sense of responsibility towards the community has increased because together we can do more."

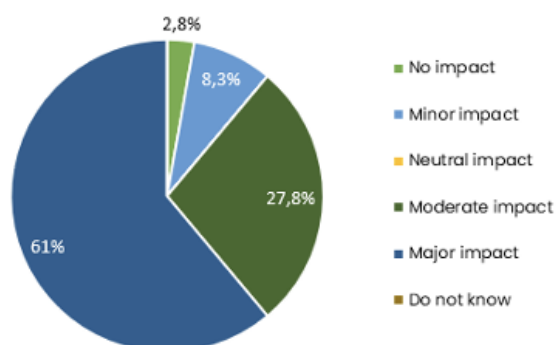
Country: Türkiye

Number of respondents: 36

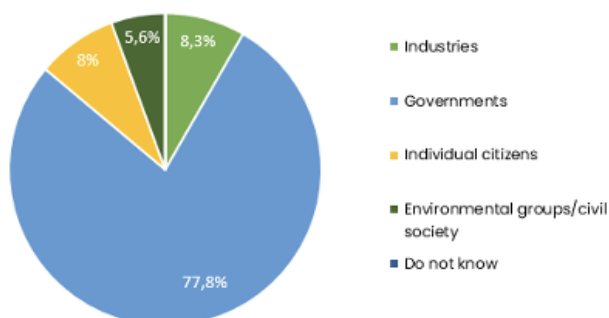
To what extent do you agree with the statement  
'Collectively, we are doing enough to address climate  
change in my country'



According to you, how big is the impact individuals  
have on the environment with their habits and  
lifestyles?



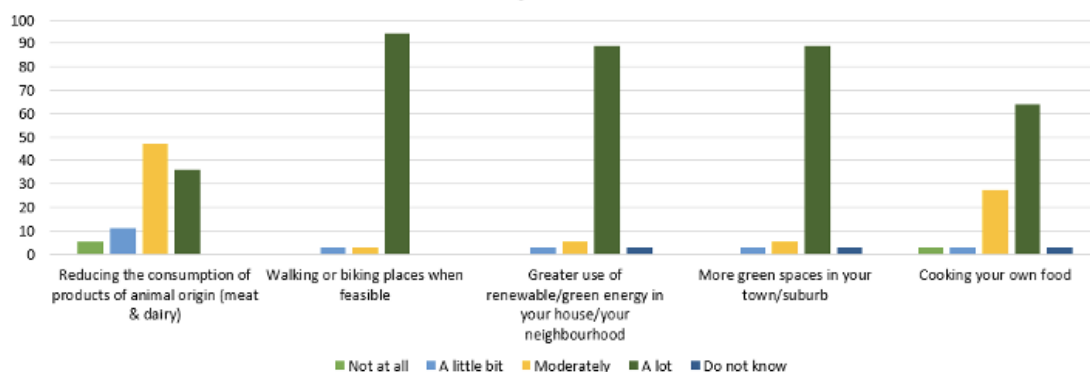
Who should have the main responsibility for making sure we  
have a healthy and sustainable environment?



*"I have gained experiences such as awareness of the most fundamental problems of our time and acting consciously. I try to be a part of the solution when I can. I have started to make a distinction for the domains in my life that I can and cannot change. I also have more hope thanks to this project."*

*"I believe that this lab work, which was carried out with people with a certain level of education, should be disseminated to people who have no idea about this subject and regardless of their level of education."*

How much do you think your health would benefit as a result of the following  
points?

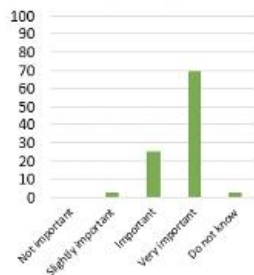




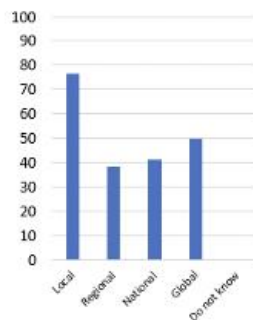
Country: Türkiye

Number of respondents: 36

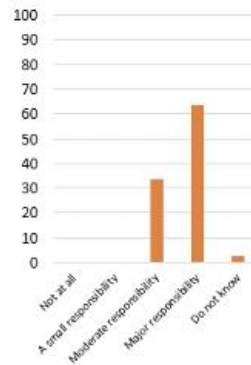
After taking part in the PSLifestyle living lab, how important do you think it is for communities to work together and support each other to make difficult lifestyle changes?



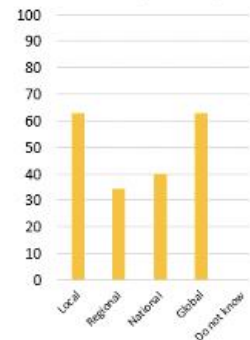
If "slightly important", "important", or "very important", at which level do communities need to work together?



Do you feel a sense of responsibility towards your own community?



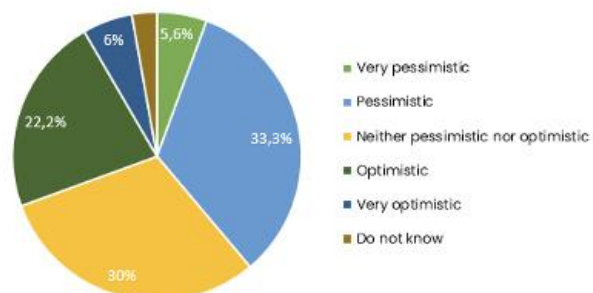
If "small", "moderate" or "major" responsibility, at which level do you feel this sense of responsibility?



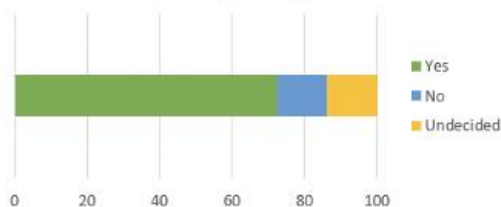
"I have understood more clearly the importance of protecting the ecosystem and natural resources for future generations to live in a healthy world. The outcomes of the labs should be disseminated more widely."

"I think that acting with a sense of community can contribute to solving some of the problems on a local scale."

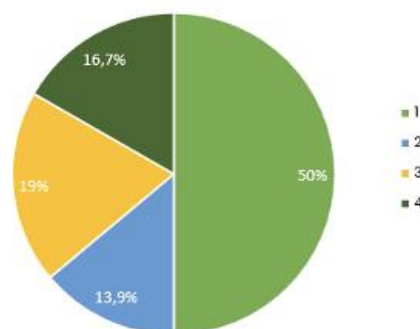
After taking part in the PSLifestyle living lab, how optimistic are you about your future?



Has participating in the PSLifestyle Living Labs motivated you to make any (more) lifestyle changes?



How many PSLifestyle living lab meetings have you attended?



"These works should be repeated frequently on a small or large scale and people should be provided with the capacity and awareness-raising that will enable them to change their habits in a way to protect nature."

## Project partners

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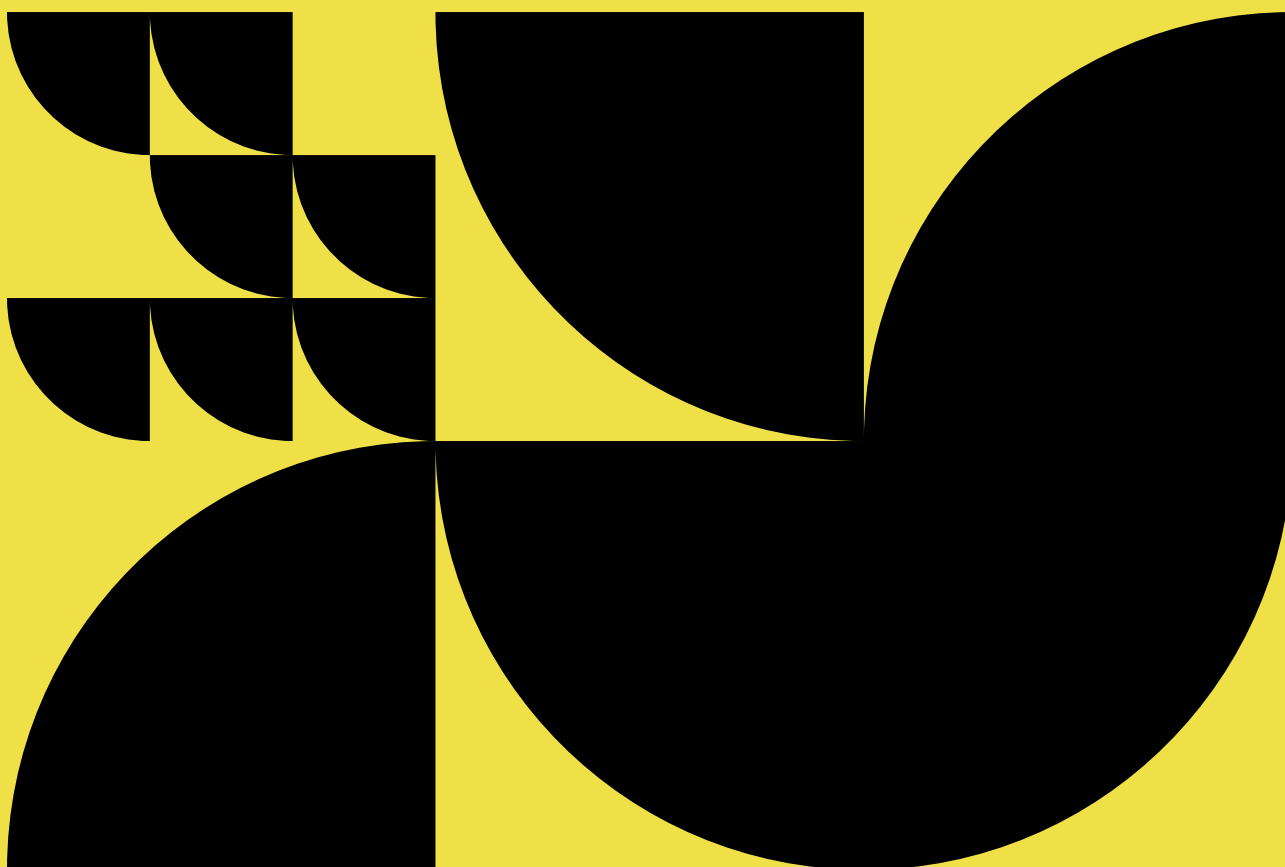
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