Under review

(Grant Agreement 10109392)

# Deliverable D2.3 - *Innovative mechanisms and approaches for citizen engagement in climate change adaptation*

## *WP2 – Co-Design and Co-Creation of Innovative/Improved Tools/Actions for Local Communities Engagement*

Version V.1.0 | June 2025

HORIZON-MISS-2021-CLIMA-02-05 - Local engagement of citizens in the co-creation of societal transformational change for climate resilience

This project has received funding from the European Union's Horizon Europe Research and Innovation Actions under grant agreement No 101093921

## Document History

| | |
|---|---|
| Deliverable Title | Innovative mechanisms and approaches for citizen engagement in climate change adaptation |
| Brief Description | Deliverable D2.3 presents the co-evaluation of innovative citizen engagement approaches in climate change adaptation through in-person activities with diverse citizen target groups across four European pilot regions, introducing a practical toolkit, i.e., the Citizen Engagement Mechanisms Card Deck to support the enhancement and scalability of citizen engagement mechanisms in adaptation strategies. |
| WP number | WP2 |
| Lead Beneficiary | European Citizen Science Association |
| Author(s) | François Jost (ECSA), Anna Verones (ECSA), Nefertari Nachtigall (ECSA), Marta Ellena (CMCC), Lucia Moreno (IBE), Judith Bielsa (IBE), Mathilda Englund (SEI HQ), Karin André (SEI HQ), Åsa Gerger Swartling (SEI HQ), Rosie Witton (SEI-Ox), Sukaina Bharwani (SEI-Ox), Eulalia Baulenas (BSC), Sam Pickard (BSC). |
| Deliverable Due Date | 31/06/2025 |
| Actual Delivery Date | 11/06/2025 |
| Nature of the Deliverable | **R - Report** |
| Dissemination Level | **PU - Public** |

| Date | Ver. | Contributers | Comment |
|---|---|---|---|
| 05/05/2025 | V.0.1 | François Jost | First Draft |
| 21/05/2025 | V.0.2 | Marta Ellena, Lucia Moreno, Judith Bielsa, Mathilda Englund, Anna Verones, Enora Bruley, François Jost | Second Draft |
| 03/06/2025 | | Dmitry Erokhin, Nadejda Komendantova, Marina | Internal Review |

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|---|---|---|---|
| | | Mattera, Francesca Santaniello | |
| 16/06/2025 | V.1.0 | François Jost (ECSA) | Final version |

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## Partners short names / Legal name

| | |
|---|---|
| APRE | Agenzia per la Promozione della Ricerca Europea |
| ATC | Athens Technology Center S.A. |
| BSC - CNS | Barcelona Supercomputing Center - Centro Nacional De Supercomputacion |
| FONDAZIONE CIMA | Centro Internazionale di Monitoraggio Ambientale - Fondazione CIMA |
| FONDAZIONE CMCC | Fondazione Centro Euro-Mediterraneo sui Cambiamenti Climatici |
| ECSA | Verein der Europäischen Bürgerwissenschaften - ECSA e.V. |
| IBE | Fundación Ibercivis |
| ICLEI EURO | ICLEI European Secretariat GMBH (ICLEI EUROPASEKRETARIAT GMBH) |
| IIASA | Internationales Institut für angewandte Systemanalyse |
| SEI HQ | Stiftelsen The Stockholm Environment Institute |
| SEI OX | Stockholm Environment Institute, Oxford Office Limited |
| SEI TAL | Sihtasutus Stockholmi Keskkonnainstituudi Tallinna Keskus |
| UNIGE | Universite de Geneve |

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# 1. Executive summary

The deliverable D2.3 of the Adaptation AGORA project, titled “Innovative mechanisms and approaches for citizen engagement in climate change adaptation” presents a comprehensive analysis of innovative mechanisms for engaging citizens and stakeholders in climate adaptation processes. Recognising the urgent need to enhance community participation in climate resilience initiatives, this report contributes to achieving the objectives of Task 2.3 within Work Package 2 (WP2), dedicated to the co-design and co-creation of effective tools and actions for local community engagement.

The central objective of this deliverable is the joint evaluation of innovative citizen engagement mechanisms, conducted through face-to-face focus groups and co-creation workshops within four European pilot regions: Dresden (Germany), Malmö (Sweden), Rome (Italy), and Zaragoza (Spain). The evaluation process specifically involved diverse target groups, including youth actively engaged in climate action, working populations, multicultural communities, and people experiencing vulnerabilities (particularly susceptible to climate impacts).

The methodology adopted builds upon the robust foundation established in earlier phases of the project, beginning with a systematic mapping of citizen engagement initiatives in the EU and citizen engagement methods (“hereinafter referred to as “CE methods”). These engagements provided a critical contextual understanding that informed the design and implementation of later co-creation processes.

A significant innovation introduced in this deliverable is the “Citizen Engagement Mechanisms Card Deck” - an intuitive visual toolkit developed to enable citizens to evaluate and select preferred engagement mechanisms in relation to specific soft adaptation solutions they co-designed. This approach addressed barriers such as unfamiliarity with formal participatory processes, fostering inclusivity and equity in citizen participation.

The key findings highlight several barriers to effective citizen engagement, notably institutional challenges such as siloed governance structures, bureaucratic complexities, resource limitations, and varying levels of stakeholder motivation. Conversely, the report identifies crucial enablers including transparent communication strategies, flexible and inclusive co-production processes, targeted capacity-building, strong institutional support, and mechanisms that foster sustained citizen motivation and engagement.

The overall recommendations derived from the study are two-fold. Firstly, to improve the co-production process designs by adopting flexible and context-responsive mechanisms, clearly defining stakeholder roles, and ensuring iterative feedback. Secondly, to enhance the stakeholder

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and citizen capacities through targeted education, training programmes, and effective communication that clearly demonstrate the benefits and the impacts of participation.

Ultimately, the insights from Deliverable D2.3 serve as a critical foundation for developing scalable and inclusive climate adaptation strategies across Europe. The identified best practices and recommendations aim to inform policymakers, practitioners, and community leaders in strengthening local adaptive capacities and fostering meaningful, sustainable citizen engagement in the face of climate change.

# 2. Introduction

## 2.1. Project background

This deliverable forms part of the Adaptation AGORA project – A Gathering place to cO-design and co-cReate Adaptation, funded by the European Union's Horizon Europe initiative within the Mission on Adaptation to Climate Change. Adaptation AGORA's overarching goal is to foster European climate resilience through innovative mechanisms and inclusive approaches that engage citizens and stakeholders actively in transformative adaptation processes. The project is structured around innovative, problem-oriented climate adaptation solutions co-designed and co-created (see Glossary of "co-" terms developed within Adaptation AGORA in Annex 1) through the active engagement of a diverse range of stakeholders, including citizens, civil society organisations, academics, experts, policymakers, and entrepreneurs. Recognising that no universal adaptation strategy exists, Adaptation AGORA engages stakeholders to develop and implement tailored, context-specific solutions that address unique regional challenges.

Adaptation AGORA operates in four key pilot regions (Dresden, Malmö, Rome, and Zaragoza), see Figure 1, serving as practical arenas to test and implement co-production processes, allowing for comparative learning and ensuring relevance and scalability of adaptation solutions. Through activities such as structured focus groups and co-creation workshops, the project systematically evaluates innovative citizen engagement mechanisms and fosters the co-design, co-development, and co-implementation of climate adaptation solutions.

Ultimately, Adaptation AGORA aims to deliver a roadmap for transformational change, highlighting effective policy instruments and collaborative decision-making processes that integrate diverse types of knowledge and facilitate widespread adoption of successful climate adaptation initiatives across Europe.

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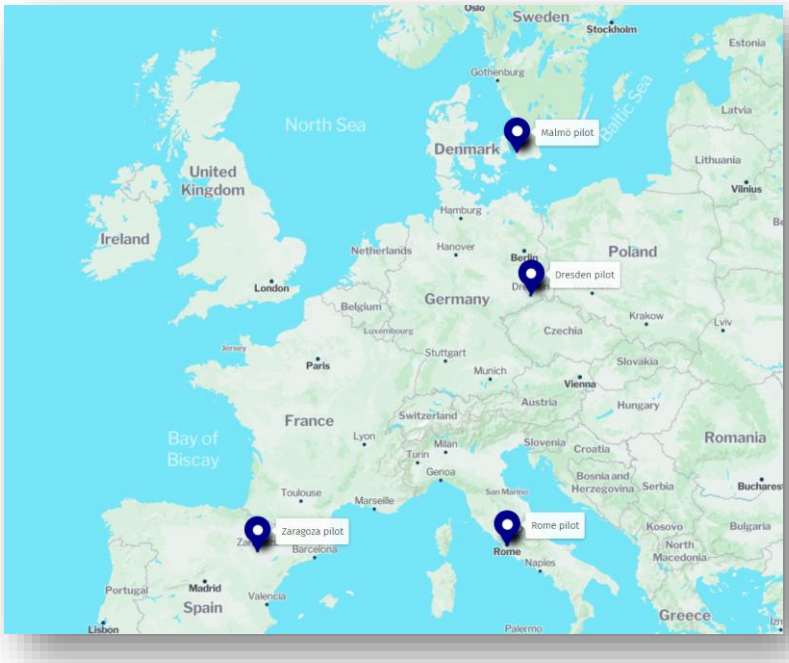


Figure 1: Adaptation AGORA pilot regions

## 2.2. Aim

This deliverable contributes to the objectives of Task 2.3 of the Adaptation AGORA project (namely, to co-evaluate innovative mechanisms and approaches for stakeholder and citizen engagement in climate adaptation), in alignment with WP2's overarching goal to co-create innovative engagement approaches in support of the EU Mission on Adaptation.

The deliverable draws upon face-to-face focus groups and co-creation workshops conducted in the four pilot regions (Dresden, Malmö, Rome, and Zaragoza) to gather empirical insights on the effectiveness, inclusivity, and scalability of diverse engagement mechanisms. These activities engaged key societal groups including youth actively engaged in climate action, working populations, and multicultural communities among others.

The evaluation of the facilitation techniques used during these in-person activities with citizens and stakeholders across pilots builds on the pathways to impact of the Adaptation AGORA evaluation framework developed in Task 3.2, including relevant knowledge and action, just representation and participation, mutual learning, and improved collaboration.

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Ultimately, the work conducted under Task 2.3 and presented in this deliverable contributes to strengthening local adaptive capacity and supports the creation of inclusive, evidence-based approaches to scale up citizen participation in adaptation across Europe.

# 3. Background and rationale

## 3.1. The importance of citizen engagement in climate adaptation

Citizen engagement has become increasingly central to climate change initiatives, reflecting broader societal shifts towards inclusive and participatory governance. Effective citizen engagement not only ensures democratic legitimacy but also enhances the practicality, relevance, and sustainability of climate adaptation measures.

Recent literature underscores citizen engagement as pivotal in capturing localized knowledge and perspectives, significantly contributing to developing context-specific, effective solutions. Citizen science initiatives exemplify how public participation can bridge crucial data gaps and empower communities by involving citizens in direct climate monitoring and adaptation actions. For instance, Bonney et al. (2014) emphasize the role of citizen science in generating valuable ecological and environmental data, which enhances community-based decision-making and adaptation strategies. The European Environment Agency (EEA, 021) highlighted the growing relevance of citizen science in addressing complex environmental challenges through increased public participation and knowledge co-production. Moreover, citizen engagement is critical in fostering greater public acceptance, ownership, and active participation in climate-related decisions, which translates into more sustainable outcomes (Burton & Mustelin, 2013; Wehbe et al., 2024).

The Adaptation AGORA project explicitly recognizes the diversity and complexity of citizen groups, from youth and working populations (including healthcare workers) to people with multicultural background and vulnerable communities. Each group brings unique insights and needs to the adaptation processes, thereby requiring tailored, equitable, and inclusive engagement approaches. Equity in adaptation highlights the importance of fairly distributing adaptation resources and ensuring the representation of marginalized groups and people experiencing vulnerability, who are often disproportionately affected by climate impacts (Thomas et al., 2020). Inclusive practices enhance the legitimacy, relevance, and acceptability of adaptation measures by integrating diverse local knowledge systems and addressing the specific needs of people experiencing vulnerability (Mustonen et al., 2022; Pham & Saner, 2021; Schlosberg et al., 2017).

To engage marginalized groups and people experiencing vulnerability effectively, specific considerations and targeted practices are necessary. Participatory approaches should actively seek

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representation from these groups, ensuring their voices influence decision-making processes (Paavola & Adger, 2006; Nightingale et al., 2020). Tailored communication and culturally sensitive methodologies are critical in creating inclusive environments that promote meaningful participation and empowerment. Additionally, dedicated capacity-building measures, such as education, training, and resource allocation, help overcome structural barriers and enhance community resilience, contributing to equitable adaptation outcomes (Paas, 2016; Cintron-Rodriguez et al., 2021). Studies such as Lioubimtseva et al. (2024) and Pham & Saner (2021) reinforce the value of inclusive engagement in securing adaptation measures that are equitable and widely supported. Recent findings by Eriksen et al. (2021) further emphasize its role in promoting social justice. This process also strengthens social capital and promotes civic action towards broader sustainability goals (Adger, 2010; Shi et al., 2016).

Further, the adoption of innovative CE methods (e.g., community dialogues, workshops, deliberative polling, and digital platforms) has been pivotal in addressing practical barriers and facilitating inclusive participation. Methods such as mini-publics, citizen assemblies, and interactive methods like visual communication and online engagement platforms have been particularly emphasized in the literature for their effectiveness in achieving higher levels of participation and inclusivity (Fung, 2006; Germann et al., 2022; Česnulaitytė, 2024; Frenkiel & Delorme, 2025).

Overall, citizen engagement's central role in climate adaptation lies in its capacity to integrate diverse knowledge systems, democratize the adaptation process, enhance local resilience, and ensure that adaptation strategies are genuinely reflective of and responsive to community needs and priorities. As highlighted by the EU Mission on Adaptation to Climate Change (Wehbe et al., 2024), early and meaningful citizen inclusion not only supports more just and locally grounded adaptation planning but is also crucial in enhancing trust between communities and institutions. This trust, when established from the outset, contributes to greater public awareness and ownership, which can at the same time improve the effectiveness and continuity of implemented adaptation actions over time, by fostering accountability and sustained community involvement.

## 3.2. Role of stakeholders in climate adaptation

In WP2, stakeholders are broadly defined as individuals and organizations that can contribute to or are affected by climate adaptation efforts, including a wide array of local actors. These stakeholders include, but are not limited to, government agencies, decision-makers, civil society organizations, private companies, and academic institutions. Stakeholders from these various sectors play crucial roles in climate change processes in general, and in climate adaptation in particular. In Adaptation AGORA, especially in WP2, stakeholders are seen as active contributors in shaping adaptation strategies and evaluating engagement methodologies, rather than passive recipients of top-down measures. This approach enhances the relevance and impact of adaptation measures while

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promoting stakeholder empowerment and social justice, leading to more sustainable outcomes (see Deliverable D4.1; Newig et al., 2023; Wamsler, 2017).

Government agencies often act as key facilitators, setting policies, regulations, and providing necessary frameworks and resources to support adaptation measures (Measham et al., 2011; Rogers et al., 2023). They are essential in mobilizing financial resources, coordinating activities, and integrating climate adaptation into broader development and planning strategies.

Conversely, civil society organizations contribute by advocating community interests, ensuring equitable representation, and facilitating grassroots participation, thus reinforcing local capacities and ownership of adaptation actions (Sovacool et al., 2020; Stepanova, 2024; Thorsen et al., 2024).

The private sector, including businesses and industries, holds significant potential for driving innovation, investment, and implementation of practical adaptation solutions (Tall et al., 2021; UNIDO, 2024). Their engagement is critical not only due to their resource mobilization capabilities but also their role in scaling effective technological and market-based interventions (Averchenkova et al., 2016; OECD, 2023).

Academia supports adaptation efforts through research and the generation of evidence-based knowledge, fostering innovation and enabling data-driven decision-making. Academics also play an essential role in monitoring, evaluation, and knowledge dissemination, providing continuous learning and feedback loops critical to effective adaptation practices (André et al., 2021; Leal Filho et al., 2023; Rickards et al., 2023).

Cross-sector collaboration and network-building among these diverse stakeholder groups have increasingly been recognized as vital for effective climate adaptation (Wehbe et al., 2024). Effective adaptation often requires integrating multiple perspectives, resources, and expertise to address complex, interdependent issues. Multi-stakeholder networks and collaborative governance structures foster coordinated efforts, shared learning, and robust decision-making, leading to more comprehensive and resilient adaptation outcomes (Baird et al., 2016; Cinner et al., 2018). Therefore, building and sustaining such collaborative networks is essential for addressing climate adaptation challenges effectively and equitably.

### 3.3. Barriers and enablers to citizen and stakeholder engagement

Effective citizen and stakeholder engagement faces numerous barriers that can impede successful climate adaptation. Common barriers identified in recent literature include limited financial and human resources, institutional siloing, and power imbalances among participants (Arnstein, 1969; Cvitanovic et al., 2019; Buylova et al., 2025). Institutional siloing, wherein departments or sectors operate independently without sufficient collaboration, often hinders cohesive and comprehensive

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adaptation strategies (Reed, 2008; Oberlack, 2017). Furthermore, a lack of prioritization and political commitment to adaptation initiatives significantly restricts sustained stakeholder involvement, diminishing the potential for meaningful change (Biesbroek, 2021; Aili et al., 2024).

Conversely, enabling factors are critical in overcoming these barriers and ensuring successful engagement outcomes. Targeted communication strategies tailored to the specific needs and characteristics of different stakeholder groups are essential to facilitate clear understanding and active participation (Hodson et al., 2020; Bostrom et al., 2013; Pinna et al., 2024). Institutional support, characterized by clear leadership, dedicated resources, and coordinated inter-departmental efforts, significantly enhances the effectiveness of adaptation measures, among others (Brullo et al., 2024; Dale et al., 2019; Jost et al., 2020). Tailored engagement processes that consider the local socio-cultural context and specific stakeholder needs further ensure meaningful involvement and ownership of adaptation measures (Pham & Saner, 2021).

Capacity development measures, including education and training programs, strengthen stakeholders' abilities to engage effectively and sustain long-term adaptation efforts (Climate-ADAPT, 2019; UNFCCC, 2021). Finally, effective follow-up strategies, which include ongoing communication and iterative feedback loops, help maintain stakeholder interest and demonstrate tangible impacts, reinforcing continuous and productive engagement (André et al., 2023). For a more comprehensive description and analysis of the barriers and enablers to citizen and stakeholder engagement process, please refer to Deliverable D4.1.

# 4. Area of study: 4 pilot regions

The four pilot regions represent diverse geographical, socio-economic, and climatic contexts across Europe, each facing distinct but interconnected climate adaptation challenges. This section provides an overview of each city's urban profile, economic structure, climate vulnerabilities, and ongoing adaptation efforts. This context is key to better understand if and how local conditions can shape citizen engagement strategies in climate adaptation.

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## 4.1. Dresden: city profile and climate adaptation overview

**General overview**

Dresden, the capital of the free state of Saxony in Eastern Germany, boasts a population of approximately 575,634 residents as of 2022. Situated along the Elbe River, the city is renowned for its rich cultural heritage, baroque architecture, and extensive green spaces, earning it the nickname "Florence on the Elbe". Dresden's strategic location near the borders of the Czech Republic and Poland enhances its significance as a cultural and economic hub in Central Europe (DresdenCity).

**Urban characteristics**

The city's urban landscape is a blend of historical and modern elements. Dresden is one of Germany's greenest cities, with over 60% of its area comprising forests, parks, and green spaces, including the expansive Dresden Heath (German: *Dresdner Heide*) and the Elbe meadows. The city's commitment to preserving its natural environment is evident in its urban planning and development strategies (IOER).

**Economy**

The largest sector in Dresden consists of professional and business services industries, accounting for 28.53% of employees in the city. A prime example is professional, scientific, and technical services, providing 15.71% of the city's employment. Similarly, it shows a large presence in education and health services (23.57%), in industries such as educational services (7.03%) (Metroverse).

Dresden's economy is diverse and robust, characterized by a mix of traditional industries and cutting-edge technologies. Key economic sectors include:

- **Semiconductor and microelectronics**: Dresden is a central player in "Silicon Saxony," Europe's largest microelectronics cluster, hosting companies like GlobalFoundries and Infineon Technologies.
- **Mechanical and electrical engineering**: the city is home to major employers such as Volkswagen's Transparent Factory and Siemens.
- **Pharmaceuticals and biotechnology**: institutions like GlaxoSmithKline's vaccine production facility contribute significantly to the local economy.
- **Research and development**: Dresden boasts a high density of research institutes and is supported by the presence of the renowned TU Dresden (Technical University).

The city's unemployment rate stands at approximately 5%, reflecting strong job opportunities and economic stability (HappyCityIndex)

**Climate and environmental context**

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Dresden experiences an oceanic climate with continental influences, leading to warm summers and relatively cold winters. The city's location along the Elbe River and its tributaries heightens the risk during episodes of heavy rainfall making it susceptible to flooding, as evidenced by significant flood events in 2002 and 2013. Additionally, densely built-up areas in Dresden are experiencing the urban heat island effect, which leads to elevated temperatures, posing risks to public health and increasing energy consumption (SmartCityDresden). Lastly, the city is being affected by more frequent and intense extreme weather events, such as storms and prolonged heatwaves, as a result of ongoing climate change.

**Adaptation and sustainability efforts**

Dresden is actively implementing strategies to enhance its climate resilience:

- **Climate neutrality goals**: as part of the EU's 100 climate-neutral cities initiative, Dresden aims to achieve climate neutrality by 2030 (NetZeroCities).
- **Early warning systems**: the city employs sensor technology and simulations to forecast severe weather events, enabling timely warnings for residents and civil protection agencies (SmartCityDresden).
- **KLIPS project**: an AI-based platform, KLIPS, is being developed to identify and simulate urban heat islands, informing urban planning and mitigation strategies (Topos magazine).
- **Community engagement**: initiatives like the "Wärmewendedialog" (heat transition dialogue) facilitate public participation in discussions on sustainable heat supply planning (NetZeroCities).
- **Nature-Based Solutions**: Projects promoting community gardening and urban green spaces aim to reduce heat stress and enhance biodiversity (Oppla).

Through these comprehensive strategies, Dresden exemplifies a city actively working towards environmental sustainability, balancing its rich historical legacy with forward-thinking climate action.

## 4.2. Malmö: city profile and climate adaptation overview

**General overview**

Malmö is Sweden's third-largest city, with a population of approximately 357,000 residents. Located in the southern Skåne region, it plays a vital role in the transnational Öresund region, connected to Copenhagen via the iconic Öresund bridge. This geographic position fosters regional integration, cross-border mobility, and economic synergy with Denmark.

Malmö is also the fastest-growing city in Sweden, with its population projected to increase by 40,000 by 2034. A defining feature is its multicultural composition, home to 187 nationalities, with

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one-third of residents born outside of Sweden. It is also a young city, with nearly half of its population under the age of 35. These demographic dynamics shape Malmö's social fabric and are central to its approaches to inclusive urban planning, economic vitality, and community-based climate adaptation.

**Urban characteristics**

A thriving industrial centre until the 1970s regression, Malmö has since then transformed into a knowledge- and service-based economy, emphasizing sustainable urban development. Urban planning prioritizes mixed-use spaces, bicycle mobility, inclusive housing, and green public areas. Districts like Augustenborg and Hyllie illustrate Malmö's integrated approach to climate-conscious planning.

**Economy**

Malmö boasts a diverse and resilient economy. The largest sector in Malmö consists of professional and business services industries, accounting for 27% of employees in the city. A prime example is professional, scientific, and technical services, providing 16.96% of the city's employment. Similarly, it shows a large presence in education and health services (23.31%), in industries such as educational services (7.33%) (Metroverse).

- **Education and research**: Malmö University supports innovation and attracts a large student community.
- **Logistics and services**: strategically located near continental Europe, Malmö is a key logistics node.
- **Creative and green industries**: the city fosters start-ups and green tech through incubators and public-private partnerships.
- **Health and public services**: public sector employment plays a significant role in economic stability.

**Climate and environmental context**

With an oceanic climate, Malmö experiences cool summers and relatively mild winters. However, its coastal and very flat geography makes it particularly vulnerable to sea-level rise, coastal erosion, and intense rainfall. The city is also experiencing more frequent and intense heatwaves, which disproportionately impact elderly residents and other people experiencing vulnerability. Much of Malmö's infrastructure is aging and was not designed to withstand the extremes of modern climate conditions, making it less resilient to events such as heavy rainfall or prolonged heat. Additionally, socioeconomic inequalities across different neighbourhoods further limit the adaptive capacity of certain communities, increasing their exposure and sensitivity to climate-related risks.

**Adaptation and sustainability efforts**

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Malmö, regarded as one of Sweden's leading cities in climate adaptation, has also committed to becoming climate-neutral by 2030. The key actions include:

- **Environmental programme 2021–2030**: is structured around 12 strategic goals grouped into three themes: reducing climate impact, ensuring a healthy living environment, and protecting nature. These include targets such as cutting territorial and consumption-based emissions, achieving 100% renewable energy, enhancing climate resilience, promoting sustainable mobility, increasing biodiversity, and improving resource efficiency. The programme aligns with national objectives and Agenda 2030, guiding Malmö's transition toward an adapted and climate-smart, inclusive city.
- **Green infrastructure**: expansion of parks, permeable surfaces, and green roofs (VästraHamnen).
- **Eco-city projects**: Augustenborg eco-city integrates sustainable stormwater systems and renewable energy.
- **Urban heat mitigation**: tree planting and urban shading strategies (TreeStrategy).

## 4.3. Rome: city profile and climate adaptation overview

**General overview**

Rome, Italy's capital and largest city, boasts a rich history spanning over 2,500 years. As of 2025, the city's population is estimated at approximately 4.3 million, making it the most populous city in Italy (Deliverable D2.1). Situated in the central-western portion of the Italian Peninsula, Rome is renowned for its historical landmarks, including the Colosseum, the Roman Forum, and the Vatican City, an independent city-state enclaved within Rome (World Population Review).

**Urban characteristics**

Rome's urban landscape is a blend of ancient architecture and modern development. The city has experienced significant urban sprawl, with suburban expansion often outpacing population growth. This dispersed urban development has led to challenges in sustainable land use and increased pressure on infrastructure and natural resources (Deliverable D2.1).

**Economy**

Rome's economy is diverse, encompassing sectors such as tourism, government services and administration, technology, and agriculture (being one of the largest agricultural municipalities in Europe). The city's GDP was estimated at $187.7 billion in 2023. Tourism plays a vital role, with millions visiting annually to explore its historical and cultural sites (C40 Cities; Deliverable D2.1).

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**Climate and environmental context**

Rome experiences a Mediterranean climate, characterized by hot, dry summers and mild, wet winters. However, climate change has led to increased temperatures and reduced rainfall. In 2022, Rome recorded temperatures 2.7°C above the average, marking one of the hottest years in over five decades. These changes have heightened the city's vulnerability to heatwaves, droughts, and other extreme weather events (Reuters; Deliverable D2.1).

**Climate change challenges**

Rome is increasingly facing several climate-related challenges that impact its population, infrastructure, and environment. One of the most pressing issues is the growing frequency and intensity of heatwaves. In addition, the city's historical site and aging infrastructure is often unable to manage the effects of heavy rainfall, resulting in urban flooding that disrupts daily life and public transportation services. Finally, reduced precipitation over recent years has contributed to prolonged periods of drought, which have in turn led to water shortages that affect both agricultural productivity and the availability of water for general use (Deliverable D2.1).

**Adaptation and sustainability efforts**

Rome has initiated several strategies to combat climate change and enhance urban resilience:

- **Climate adaptation strategy**: The city has developed a comprehensive adaptation strategy focusing on risk and vulnerability assessment, sustainable urban planning, and public awareness (Comune di Roma).
- **Green infrastructure projects**: Initiatives include planting 600,000 trees, developing new parks along the Tiber River, and creating green spaces to mitigate urban heat islands. (MedCities).
- **Sustainable mobility campaigns**: Programs like “Rome Plays Sustainably” promote the use of public transport, cycling, and walking, especially during major events, to reduce traffic congestion and air pollution (Eurocities).
- **Participation in international networks**: Rome is a member of the C40 Cities Climate Leadership Group, collaborating with other global cities to share best practices and implement effective climate actions (C40 Cities).

## 4.4. Zaragoza: city profile & climate adaptation overview

**General overview**

Zaragoza is the capital of the autonomous region of Aragón in northeastern Spain and the country’s fifth-largest city, with approximately 700,000 inhabitants. Located in the Ebro valley, the city sits

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strategically between Madrid, Barcelona, Valencia, and Bilbao, making it a vital hub for transportation, commerce, and logistics.

**Urban characteristics**

The urban fabric of Zaragoza is a mix of historic and modern. Its compact, heritage-rich city centre features a number of landmarks, while surrounding districts have undergone considerable expansion, especially in the logistics and residential sectors. The city continues to grow with well-developed public services and green urban development in newer neighbourhoods.

**Economy**

The largest sector in Zaragoza consists of education and health services industries, accounting for 21.91% of employees in the city. A prime example is hospitals, providing 12.31% of the city's employment. Similarly, it shows a large presence in financial activities (14.6%), in industries such as real estate (7.54%) (Metroverse).

Zaragoza boasts a diversified economy. It is home to PLAZA (Plataforma Logística de Zaragoza), one of Europe's largest logistics platforms. Key sectors include:

- **Logistics & transportation**: with strong road, rail, and air infrastructure.
- **Automotive industry**: anchored by major manufacturers like Stellantis.
- **Agro-industry & renewable energy**: supporting rural and regional sustainability.
- **Service sector**: Expanding in education, administration, tourism, and health.

**Climate and environmental context**

Zaragoza has a semi-arid climate with Mediterranean influences. Summers are hot and dry (often above 35°C), while winters are relatively mild. Annual rainfall is low and unevenly distributed, increasing vulnerability to drought and heatwaves. The urban heat island effect is especially significant in older and densely built-up areas. These issues are compounded by social disparities, such as limited green areas in lower-income neighbourhoods.

**Adaptation and sustainability efforts**

Zaragoza is a leading city in local climate adaptation:

- **ECAZ 3.0 strategy**: Aims for a 40% reduction in emissions by 2030 (ZaragozaCity).
- **Sustainable Energy and Climate Action Plan** (SECAP): Targets 55% reduction for key sectors.
- **Green infrastructure**: Projects like "Bosque de los Zaragozanos" involve planting one tree per resident (ZaragozaCity).
- **Urban renaturalization**: Recovery of the Huerva River, greener schoolyards ("Patios por el Clima") (CadenaSer).
- **Low emission zone (ZBE)**: Implementation begins in 2025 to reduce vehicle pollution (CadenaSer).

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# 5. Methodology

This deliverable builds on a qualitative research design grounded in participatory (multi-site) action research principles. It synthesises findings from a range of co-creation activities carried out in the four Adaptation AGORA pilot cities. Rather than presenting a comparative or standardised data analysis, this deliverable is based on a thematic, qualitative synthesis of rich empirical materials collected locally. The synthesis is guided by key thematic axes relevant to soft adaptation and citizen engagement: participants lived experiences with climate impacts, their preferences and priorities for adaptation measures, and the barriers and enablers shaping their participation. Findings from these in-situ activities were aggregated and analysed to extract cross-cutting themes, recurrent patterns, and pilot-specific innovations. This process enabled the identification of both shared adaptation needs and place-specific solutions informed by cultural, institutional, and socioeconomic contexts.

Importantly, the deliverable also reflects on the co-production process itself. This is particularly evident in the discussion section, which draws lessons on inclusivity, feasibility, and the relevance of soft solutions from the bottom up. The method thus combines empirical description with reflexive evaluation.

## 5.1. Citizen and stakeholder engagement

During the initial phase, partners focused on systematically mapping and engaging citizens and stakeholders across the four pilot regions. The objective was to establish robust connections and expand local engagement networks while ensuring replicability and comparability of stakeholder engagement methods and the assessment of innovative citizen engagement mechanisms in climate adaptation across diverse local contexts.

With the goal of identifying, building, and maintaining strong connections for citizen and stakeholder engagement in local communities, each pilot undertook a series of coordinated activities. These efforts were guided by a co-developed stakeholder engagement protocol and later tailored to each region’s context.

The citizen and stakeholder engagement process followed the Tandem framework, developed as part of the SEI Initiative on Climate Services and further refined by Bharwani et al. (2024). Tandem is a practical and non-prescriptive guide for co-producing climate services, designed to produce

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relevant and usable knowledge that has a lasting impact on adaptation science, policy, and practice. More specifically, Tandem is structured around four iterative phases each divided into three elements: 1) scope and review risks, vulnerability, and impacts (scope risks, assess vulnerabilities and impacts, , identify and engage stakeholders, and engage stakeholders), 2) co-explore (co-explore challenges, define goals, understand governance context, and identify information needs), 3) co-design (co-design solutions, co-explore and identify solutions, and appraise solutions), and 4) integrate new knowledge and partners (monitor outcomes, evaluate progress and integrate learning). See Figure 2 below for an overview.

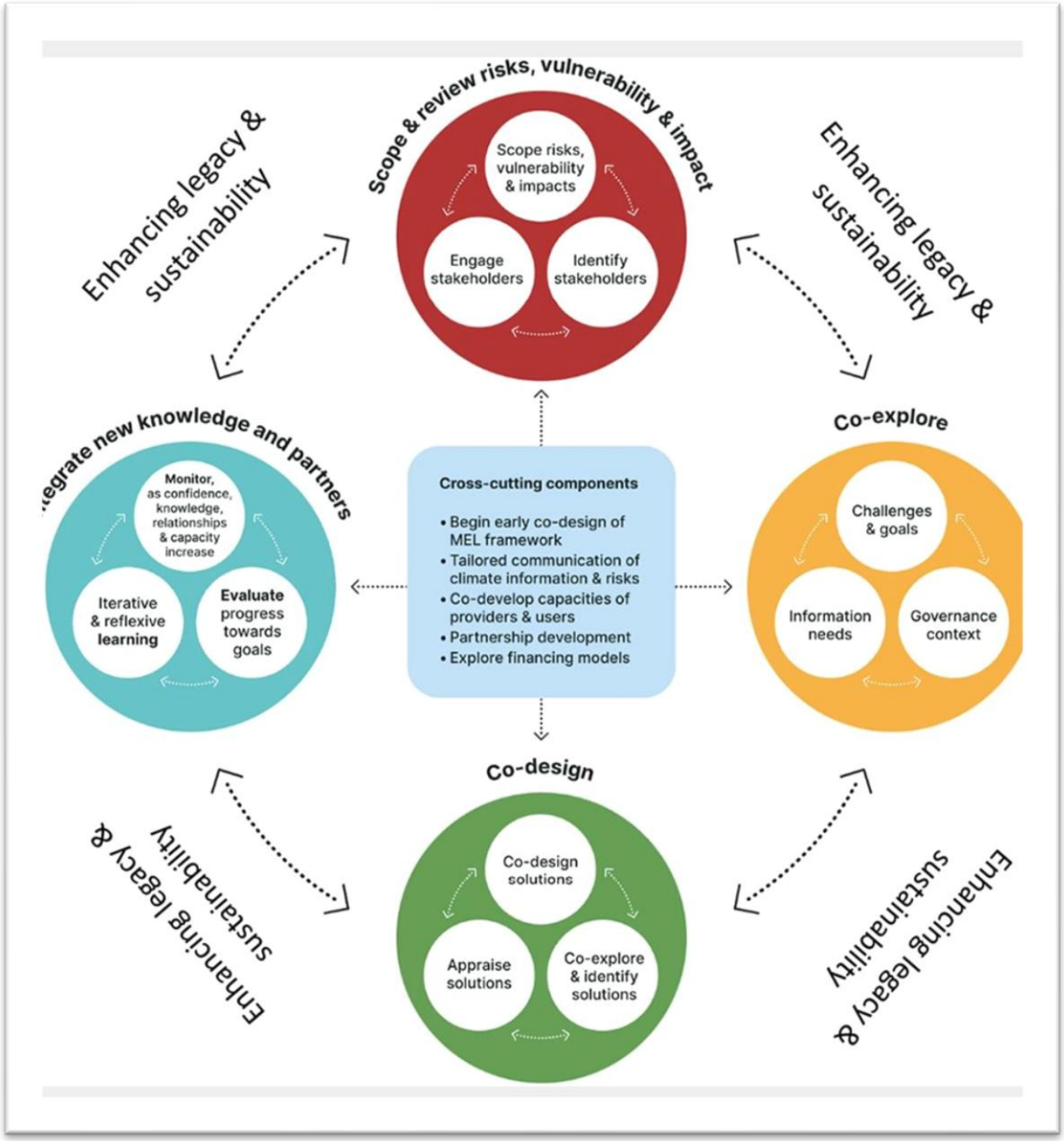


Figure 2: The updated Tandem framework for co-designing climate services

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## 5.2. Establishing shared engagement foundations

At the beginning of the project, namely during the kick-off-meeting, the internal partners involved in WP2 carried out a parallel session where the main highlights and key points of the work package were discussed along with the potential barriers and solutions and the next actions. During this first WP2 in-person meeting, a strong emphasis was placed on the pilots' local engagement activities (inception workshops, focus groups and co-creation workshops) to take place first for task T2.1 and later in parallel for tasks T2.3 and T2.4. The following potential barriers relevant to citizen and stakeholder engagement were identified:

1. Meetings fatigue
2. Different ways to approach citizen groups and other associations / stakeholders
3. Lack of comparability / very case specific
4. Limited synergies among Pilots

During the same session, potential solutions were brainstormed to prevent and overcome these, namely:

- Barrier 1: Communicate with involved partner institutions about these events and avoid repetition or extra meetings.
- Barrier 2: Co-define with the responsible of each Pilot (Pilot leaders) protocols on how to approach stakeholders and citizen groups (have a similar and replicable structure, which can later be applied by other regions = ensuring replicability)
- Barrier 3: Start with common climate impacts (i.e., heat waves issues and floods). Have common target groups (3) for focus groups (most vulnerable group, youth engaged in climate action, workers).
- Barrier 4: Align different Pilot projects' steps to move and adapt accordingly

Subsequent WP2 monthly meetings enabled us to more effectively co-define with involved partners the three target groups for T2.3 and T2.4, namely:

- **Engaged youth** (between 15 and 24 or 18-24 depending on the age of consent in each country where Pilot activities are being held) who are engaged in climate change issues. To

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understand which challenges they are facing in relation to adaptation, what motivates them to get involved and how the project can benefit from their engagement.

- **Working population** (between 25 and 62 who might be either affected or interested but whose opportunities to engage are shaped by their professional and personal responsibilities. To better understand the challenges they face in their daily working lives, where and how they want to get involved (whether within the workplace or in other settings), and what enabling conditions should be in place to support their participation.
- **Multicultural communities** (or multi-ethnic minorities), to capture diverse perceptions shaped by distinct socio-cultural backgrounds and communities, and alternative (even unconventional) experiences from their countries of origin. Given the increased migration over the last two decades, mainly in urban areas (European Commission, 2024; Ritchie et al., 2024), their inclusion responds to the growing cultural diversity in European cities where climate risks and socio-economic vulnerabilities often intersect. Similarly to the below group with citizens experiencing vulnerability, their participation ensures more inclusive, representative, and socially just adaptation policies that reflect the needs and realities of underrepresented groups.
- **Citizens experiencing vulnerability** (e.g., elderly people, people with disabilities and people with limited resources who are particularly vulnerable to extreme weather events) to assess how the project can take their urgent needs into account, for example by involving them in decision-making processes.

Thereafter, among the involved project partners, it was decided to co-develop a common engagement protocol on how to approach citizen groups and other stakeholders, to prevent different ways of approaching them, thus ensuring methodological coherence and fostering consistency (this common process could also later be applied by other regions, ensuring replicability). To ensure comparability among the pilot cases, most partners also decided to focus on common climate-related hazards (i.e., temperature-related hazards such as heatwaves and hydrological hazards, e.g., precipitation extremes such as water scarcity and heavy rainfall events) and have at least three common citizen target groups (youth engaged in climate action, working population, and the multicultural communities).

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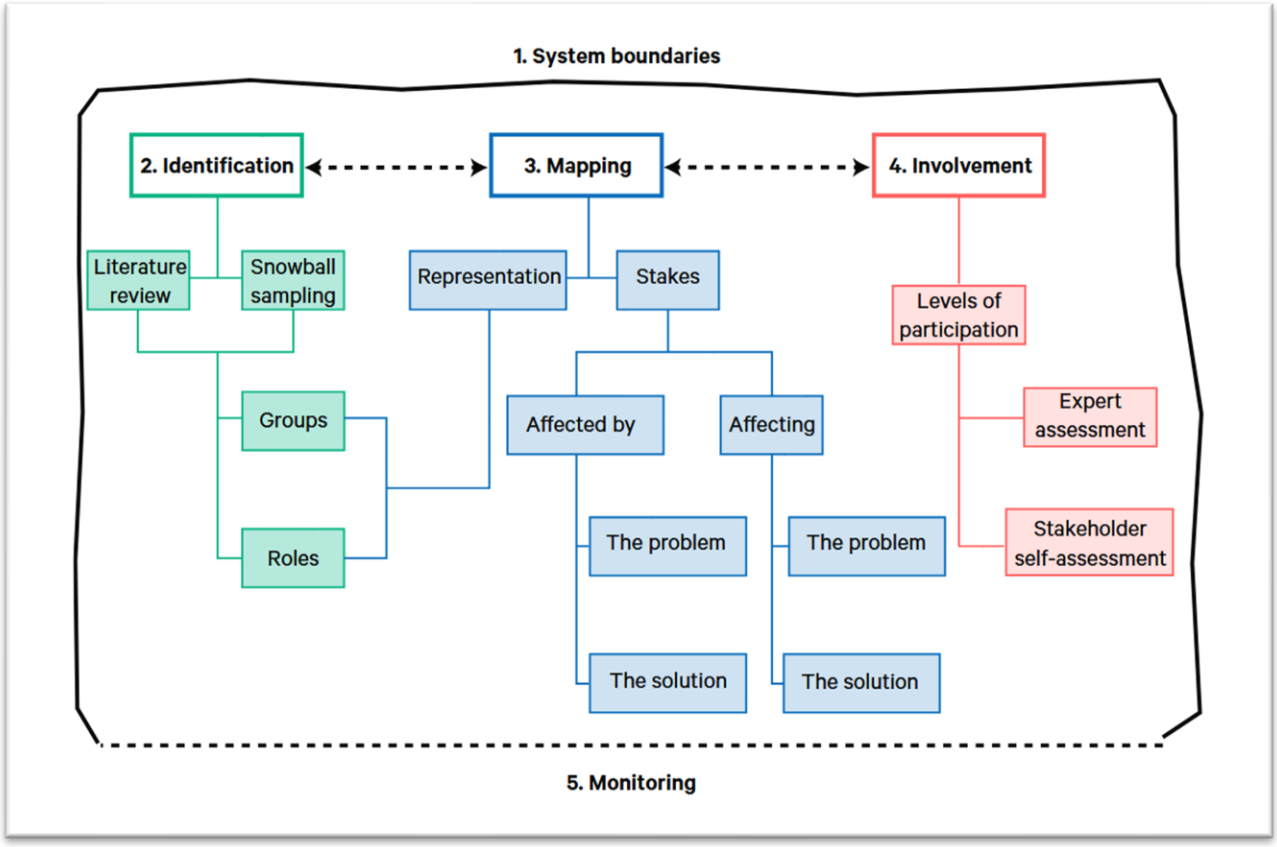


Figure 3: MapStakes' five steps (Barquet et al., 2022)

This protocol for mapping and engaging citizens and stakeholders was developed drawing inspiration from the MapStakes tool (see Figure 3; Barquet et al., 2022) and the initial steps of the online Guidelines from the Tandem framework (Daniels et al., 2019). It was then adapted to meet the specific needs and focus of Adaptation AGORA, particularly its emphasis on soft adaptation strategies and local governance contexts, in line with more recent refinements proposed by Bharwani et al. (2024) and the adaptation by Parviainen et al. (2025).

## 5.3. Mapping and mobilising stakeholders

The initial "Scope, Identify and Engage" phase focused on creating the foundation for the later co-evaluation and co-creation activities. It began with defining the conceptual boundaries for each pilot and involved an extensive review of existing literature to pinpoint local vulnerabilities and adaptation needs. This phase aimed to gain an initial understanding of local risks, vulnerabilities, and the broader decision-making context, providing an essential baseline to tailor further engagement strategies effectively.

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Each pilot refined its system boundaries along five key dimensions:

- Temporal (focus on present conditions),
- Jurisdictional (local/regional level with support from national institutions),
- Institutional (involving public, private, and civil society actors),
- Sectoral (e.g., health, education, transportation, urban planning), and
- Conceptual (centred on citizen engagement and soft climate adaptation).

Stakeholders were systematically mapped using an adapted representation matrix to capture roles, affiliations, and relevance to pilot-specific adaptation challenges, and included local communities, academic and research institutions, local government representatives, civil society organizations, the private sector, and media. The stakeholder identification was dynamic and iterative, as new actors were also brought in through snowball sampling, bilateral meetings, and participation in local events. Across the four pilots, more than 600 stakeholders were identified.

The initial engagement took place via tailored communication channels, including email, phone, and joining existing communities (e.g., Telegram channels) and was followed by online and in-person meetings. A strong emphasis was placed on understanding stakeholders' preferred communication formats and desired levels of involvement. Particular attention was paid to building trust and clarifying the project's objectives, often through individual calls or preparatory informational sessions. This step was foundational for deeper co-exploration of vulnerabilities, interactions between stakeholders and governance gaps, and stakeholder expectations, thereby setting the stage for inclusive and well-informed co-production processes. Notably, this shared approach allowed for early identification of engagement challenges and opportunities while building the conditions for a continuous and transparent long-term stakeholder involvement.

## 5.4. Co-explore context phase

Building on the work carried out during the first phase, the co-explore phase served as a bridge between the stakeholder mapping and the participatory design, selection and evaluation of citizen engagement mechanisms. This phase aimed to deepen understanding of the social, economic, institutional, and climatic contexts in the four pilot regions through iterative, inclusive, and context-sensitive engagement.

The process started by working with both online and in-person in-depth bilateral meetings, which allowed for iterative refinement of stakeholders' interests, further identification of relevant actors (through snowball sampling), and deeper discussions on previous local citizen engagement activities

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relevant to the topic of climate adaptation. In Spain, for instance, a dedicated brainstorming session was held to generate thematic focus for subsequent activities. This iterative approach enabled each pilot to tailor its engagement efforts while maintaining a shared methodological core.

This was followed by inception workshops, conducted in each of the four pilot regions, and involving mainly local government representatives, academic and research institutions, civil society organizations (with focus on citizen target groups), and related private sectors. These workshops focused on collaboratively identifying and understanding local climate vulnerabilities, including the exposure to climate hazards, the sensitivity (most affected sectors) and the gap's element in their adaptive capacity, as well as any additional needs.

The workshops adopted inclusive and participatory formats such as world café sessions, role-playing, participatory drawing, and interactive discussions. These formats were selected to foster peer-to-peer learning, reduce power asymmetries, and break down communication barriers, thereby encouraging inclusive participation across the wide range of stakeholders.

To enable deeper co-exploration, the workshops also incorporated a variety of structured and visual tools. These included problem tree analysis (Dresden, see Figure 4), SWOT analysis (Spain), brainstorming sessions, and prioritization exercises, as well as breakout group discussions and open feedback rounds. Participants were often divided into break out groups addressing topics such as the impacts of heatwaves, urban flooding, social vulnerability, and adaptation gaps. This setup fostered interdisciplinary dialogue and cross-sectoral exchange by exposing participants to different knowledge domains and lived experiences. For instance, one session invited groups to co-explore the underlying reasons why certain citizen groups are more vulnerable to extreme weather events, promoting shared understanding of social and environmental determinants of vulnerability.

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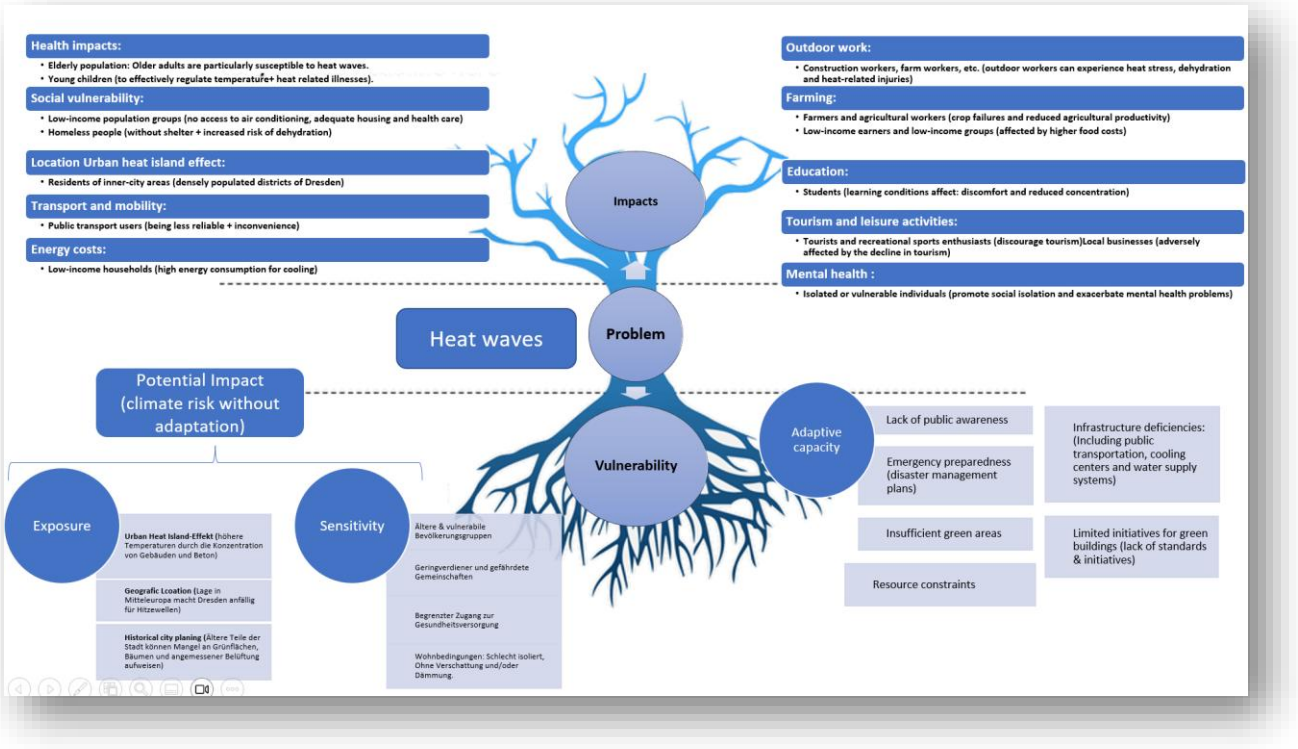


Figure 4: Problem tree analysis from the inception workshop in Dresden, Germany

These multi-method participatory workshops not only provided insights into local vulnerabilities and adaptation capacity gaps but also contributed to better understanding the (specific) needs to enhance the engagement in climate adaptation for particular citizen groups. For more information about the inception workshops please refer to the Milestone MS8 report “Events with citizens, stakeholders and decision-makers” and the Deliverable D2.1 “Vulnerability pitfalls and gaps in adaptive capacity of citizens and stakeholders in key pilots” of the Adaptation AGORA project.

### 5.5. Co-produce solution phase (focus groups, brainstorming sessions and final co-creation workshops)

The third stage of this methodological process was characterized by continuous feedback loops and active collaboration through iterative ongoing engagement activities. After the inception workshops, targeted follow-up activities took place across pilot regions. These were targeted at widening (in the case of Spain) or deepening the engagement process, particularly through additional stakeholder meetings or a second workshop (e.g., in Dresden and the Matarraña region in Spain). These sessions served to collaboratively refine upcoming citizen focus groups. Key aspects

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discussed included strategies for organizing and effectively communicating the focus groups, ensuring diverse and inclusive participation beyond the "usual suspects" and reaching individuals not affiliated with civil society organizations for the (at least three) target groups. In contrast, for the pilot related to the City of Rome, the inception workshop was a key event for identifying key individuals who could support the selection of people to be invited to the focus groups. Location and timing for the events were also part of the discussions with stakeholders, including the scheduling of activities during periods of heightened relevance like heatwaves or heavy rainfall events, and ways to reduce participation barriers, especially for working population and people experiencing vulnerabilities.

### 5.5.1. Adaptation AGORA General Assembly: co-designing and evaluating citizen engagement methods

Following the inception workshops and subsequent stakeholder meetings, the Adaptation AGORA General Assembly in June 2024 also featured a structured work session involving all consortium partners. This collaborative design workshop aimed to translate strategic concepts into practical activities and facilitation techniques suitable for the upcoming focus groups with citizens. To support this objective, participants were divided into three thematic groups, where they deliberated together to identify effective approaches, each focusing on key components of Tasks 2.3 (on the co-creation of soft adaptation solutions) and 2.4 (on the co-evaluation of engagement mechanisms).

- **Group 1** focused on how to structure the **co-evaluation of engagement mechanisms** (Task 2.3) for the focus groups, selecting a subset of CE methods from the broader list identified in WP1. Discussions revolved around how many methods could realistically be assessed within the 2-hour sessions. They also discussed whether citizens should engage with and evaluate tested methods or hypothetically compare various approaches, and how to ensure citizen familiarity with them to enable effective co-evaluation. As a result, there was broad support for focusing first on co-creating adaptation solutions (Task 2.4) with citizens and then working backwards to discuss which engagement methods would best support those solutions. The group also raised the idea of leveraging other events or workshops (before the focus groups) to ask citizens or stakeholders how it would be better to engage with them (e.g., ECSA conference, see below). Additionally, participants highlighted the need for a clear visual representation to better illustrate these methodologies. The group remained divided on whether to apply standardized approaches across all pilots or allow for contextual adaptations.

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- **Group 2** explored how to most effectively **support citizens in co-creating and co-designing soft adaptation solutions** (Task 2.4), particularly by using locally relevant problems previously identified during the inception workshops. Key concerns included ensuring participants' understanding of the issues and making space for creativity and collaboration despite limited time and resources.
- **Group 3** examined the **synergy and sequence between the two goals of co-creation and co-evaluation**. For integrating the dual objectives within the focus group activities, the group recommended a flexible "back-and-forth" approach, allowing insights and experiences from the co-creation process to inform the evaluation of methods. This dynamic design would respond to the unique context and flow of each focus group, enhancing adaptability and relevance. Firstly, identifying citizen-relevant vulnerabilities and concerns to be used to co-create soft adaptation solutions. Secondly, participants would assess the most suitable engagement mechanisms to support those solutions. To structure these discussions, two guiding questions were proposed for all focus groups:
  - What issue of concern is important to you with regard to climate adaptation?
  - What is the most preferred engagement form for taking action towards this issue?

The final plenary brought all findings together, highlighting the importance of balancing realism with inclusivity and ensuring that both goals could be meaningfully addressed in each focus group session. This exercise not only aligned practical engagement planning across pilots but also reinforced the importance of methodological coherence, feasibility, and continuity, ensuring that citizen engagement in Adaptation AGORA is both grounded and scalable.

### 5.5.2. Further refinement and confirmation of focus group format at the ECSA 2024 conference

In the following months, the proposed formats and objectives for the focus groups were further discussed during WP2 internal meetings with pilot regions' leaders and partners. During the European Citizen Science Association (ECSA) 2024 Conference in Vienna (3-6 April 2024), a dedicated session titled "Workshop on Citizen Engagement Methodologies for Climate Adaptation: Insights from the AGORA Project" was held, supported by pilot leaders (and focus groups facilitators). This session aimed to incorporate the key learnings from the Adaptation AGORA General Assembly work session and to test the proposed sequence, namely the feasibility and logic of starting with a co-creation exercise on soft adaptation solutions (based on participants' identified concerns) and then transitioning to the co-evaluation of engagement mechanisms. The goal was to assess how this two-step approach would fit both in terms of content and time. Specifically, this workshop provided a platform for peer-validation, stress-testing and feedback from a broad community of citizen science experts, academics, and practitioners who specialize in engagement methodologies, to critically review this focus group structure, objectives, and implementation logic.

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In addition, two facilitation techniques were piloted to support citizen engagement in climate adaptation: the "Nominal Group Technique", a structured brainstorming and ranking process (Hugé & Mukherjee, 2018), and the "Pair and Share", where participants first discussed an issue in pairs before sharing and refining their ideas in a larger group (a simplified form of the "Think-Pair-Share" and "1-2-4-All"). These formats were tested in two parallel group settings and followed by structured feedback by participants (and follow-up feedback from project partners' facilitators). The "Pair and Share" approach was generally more positively received, citing its ease of use, greater opportunity for reflection, and familiarity, especially beneficial for some citizens who might be less used to technical discussions. Nonetheless, several participants (and facilitators) suggested that a combination of both methods could be ideal, with "Nominal Group Technique" serving as a creative starting point and "Pair and Share" offering a more reflective, structured follow-up.

The first version of the "Citizen Engagement Mechanisms Card Deck" format, developed to help citizens co-evaluate suitable engagement methodologies in climate adaptation, was also discussed during the workshop and validated as a practical, visual, and adaptable tool. Participants reviewed and engaged with it through the "Nominal Group Technique" and the "Pair and Share" methods, confirming its usefulness while also suggesting refinements to improve clarity and accessibility (simplifying the cards); detailed feedback on these aspects will be presented in the following section.

The workshop generated several key insights and refinements to strengthen the Adaptation AGORA focus group design. It confirmed the value of the sequential approach, reinforcing the feasibility of combining co-creation and co-evaluation in a single focus group session, given the conditions, and provided feedback for fine-tuning facilitation strategies. Moreover, facilitators emphasized the importance of clarity and simplification, noting that complex terminology and too many categories could lead to confusion among participants. To address this, clearer language and more distinct, streamlined categories were recommended. As the ECSA 2024 workshop was shorter than the planned focus groups (1.5 hours versus 2.5 to 3 hours), facilitators agreed that more time should be allocated to the initial co-design phase, allowing participants to better connect with the problem before moving on to evaluate engagement approaches.

## 5.6. The Citizen Engagement Mechanisms Card Deck: a practical toolkit for co-evaluating climate adaptation engagement strategies

Within Task 2.3, the "Citizen Engagement Mechanisms Card Deck" emerged as an innovative and practical toolkit to facilitate the co-evaluation of engagement strategies by citizens themselves. The approach was developed in response to a recurring challenge: citizens are often unfamiliar with

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formal participation mechanisms, making it difficult for them to meaningfully evaluate or choose among theoretical engagement models. To address this, we adopted a strategy that linked engagement mechanisms to soft adaptation solutions co-designed by citizens. The result was a tangible, accessible toolkit, namely the Citizen Engagement Mechanisms Card Deck, which would thus support informed, comparative, and contextual decision-making across diverse citizen target groups (Figure 5).


Figure 5: Example of citizen engagement card “Community gardens and shared spaces”

### 5.6.1. Background and rationale

The Cards Pack toolkit is rooted in a broader evaluation of citizen engagement initiatives and mechanisms throughout the project, particularly during the implementation of WP1 and WP2. WP1's extensive mapping and analysis of over 60 citizen engagement initiatives across Europe (D1.1) and its in-depth methodological review (D1.2) of innovative methods like civic hackathons, participatory arts, community advisory boards, and citizen science provided the basis for identifying adaptable, inclusive, and scalable engagement methods.

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The core idea behind the Citizen Engagement Mechanisms Card Deck was to translate conceptual (abstract) engagement options into an intuitive, user-friendly approach that would align with the soft climate adaptation solutions that the same citizens had explored and co-created just minutes before. The rationale for developing this approach is that citizens' potential inexperience with formal participation mechanisms often results in passive or superficial participation, weakening the benefits of their contribution to the co-evaluation process. Tangible, visual methods, such as those included in the Citizen Engagement Mechanisms Card Deck, significantly enhance understanding and active involvement. Visualization techniques are repeatedly highlighted as powerful methods for deepening citizen participation (Restrepo-Mieth et al., 2023, Dale et al., 2021). This approach makes complex information more relatable, thus lowering the entry barrier for meaningful participation.

Moreover, engagement tools need to be inclusive and sensitive to varying levels of literacy, technical knowledge, and cultural diversity within communities. The Citizen Engagement Mechanisms Card Deck is deliberately designed to be clear and graphic, ensuring broad approachability and thereby enhancing equity in participation, fostering the involvement of marginalized groups who often are more vulnerable to climate impacts and typically less engaged in formal participation processes (Pandey, 2023).

Localized, community-based climate actions have been shown to be more responsive, flexible, and effective at achieving meaningful adaptation outcomes (EEA, 2024). The engagement approaches were deliberately paired with soft adaptation solutions, not only to enhance the practical relevance of engagement activities but also to ensure that citizens immediately see the benefits and practical applications of their participation. This fostered better understanding and sustained involvement in the co-evaluation process. This participatory approach increases the legitimacy, acceptability, and ownership of adaptation measures (Khatibi et al., 2021).

This innovative and accessible approach specifically addresses barriers to participation such as limited familiarity with formal procedures, low citizen motivation, and perceived irrelevance of technical climate solutions (Revez et al., 2019; The Engage2020 Consortium, 2014). By translating abstract methods into tangible scenarios and visual cards, we sought to directly mitigate these barriers. Moreover, the overall approach of integrating citizens' local knowledge, co-creating solutions, and tailoring engagement methods to specific local target group needs & interests significantly contributes to building localized climate resilience.

The final four adaptation categories were **"Learn about adaptation and build your skills", "Engage as community", "Communication and feedback mechanisms", and "Prepare for an emergency"**, each associated with concrete CE methods and validated through participatory processes. They were designed with the objective of encompassing key dimensions of citizen engagement in climate adaptation. These categories align with five of the six priority areas of the United Nations Framework Convention on Climate Change's Action for Climate Empowerment (ACE), namely

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education, training, public awareness, public participation, public access to information, and international cooperation (UNESCO & UNFCCC, 2016). More specifically:

- "Learn about adaptation and build your skills" corresponds to public awareness and capacity building.
- "Engage as community" reflects community engagement and participation.
- "Communication and feedback mechanisms" focuses on facilitating two-way communication between policymakers and the public.
- "Prepare for an emergency" encompasses aspects of community resilience and early warning systems.

While there may be overlaps (e.g., communication is integral to both learning and community engagement) these intersections are intentional, reflecting the interconnected nature of effective climate adaptation strategies.

### 5.6.2. Validation and feedback from the ECSA 2024 Conference

During the ECSA 2024 workshop (described in section 4.5.2.), the Citizen Engagement Mechanisms Card Deck was tested and validated. While noting some overlaps between the original categories (seven instead of the final four) that occasionally complicated decision-making, participants appreciated the structured comparison enabled by the visual cards. As there were calls for fewer and clearer categories and more intuitive language for broader accessibility, improvements were made based on the provided feedback. Moreover, some facilitators emphasized the importance of leaving space for open brainstorming, suggesting that while the visual cards are useful, they should complement rather than constrain citizen discussions. The latter was then addressed by allowing a first phase of open engagement mechanisms or "empty cards" as mentioned below.

### 5.6.3. Categories and their suitable engagement methods

Each of the four soft adaptation categories below were composed by five engagement mechanisms or approaches for citizen engagement that are suitable for that category. Within each of which there are a number of suitable engagement methods (mapped and described in WP1' In-depth methodological review (D1.2, Appendix 1: Glossary of methods/innovative mechanisms for CE), and resumed in a matrix table in Annex 7):

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## 1. "Learn (about adaptation and build your skills)"

**Public awareness and capacity building:** This category focuses on educating people about climate impacts and teaching them how to adapt. It includes activities such as workshops, participating in cultural events, and training in sustainable practices, disaster preparedness, and other relevant skills.

*1.- Community narratives and cultural events:* encourage citizens to share their personal experiences, stories, and observations on climate change impacts and adaptation efforts through artistic performances and storytelling sessions at cultural events, festivals, and local celebrations. By including climate adaptation topics in events, more people can be reached, encouraging them to care for the environment, and spark their creativity and involvement in efforts to adapt to climate change. (Suitable engagement methods: participatory arts, informal conversation spaces).

*2.- Training workshops and mobile skill-building:* organize mobile education units that travel to communities with multimedia resources, educational materials, and trained staff to conduct interactive training workshops and skill-building sessions. These sessions, personalised to different age groups and interests, can focus on specific climate adaptation techniques and practices such as sustainable agriculture, water management, and disaster preparedness. (Suitable engagement methods: training sessions, workshops, gamification, webinars and live streams, interactive content).

*3.- Multi spaces learning for climate adaptation:* this approach uses both in-person and online strategies to reach a broader audience and help more people learn about climate adaptation. Interactive demonstrations and exhibits in public spaces in addition to online courses and webinars, offer both hands-on and remote learning opportunities. This dual-channel approach ensures broad access to climate adaptation information, catering to different learning preferences and schedules, reaching a more diverse audience. (Suitable engagement methods: field data collection, research or experimental method, participatory research, gamification, webinars and live streams, experiential and immersive education).

*4.- Hands-on climate education:* integrate climate adaptation education through practical, hands-on field demonstrations and exercises (e.g., in schools, and youth or local programs). Citizens can engage directly in field activities like demonstration plots to learn important techniques such as soil conservation and irrigation techniques, solar shading or temporal flood barriers. These hands-on activities outside the usual classroom help people learn deeply about adapting to climate extreme events and become skilled promoters for protecting the environment. (Suitable engagement methods: field data collection, research or experimental method, personalised communication, participatory research, experiential and immersive education).

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*5.- Citizen learning circles and mentorship program:* implement participatory learning circles and mentorship initiatives within communities to foster knowledge exchange and collective problem-solving on climate adaptation. These programs facilitate informal gatherings where community members can discuss climate adaptation topics, share experiences, and learn from one another. Experienced practitioners or community leaders can mentor and support individuals new to climate adaptation practices, while peer learning networks encourage collaboration among participants with similar interests and experiences. (Suitable engagement methods: personalised communication, informal conversation spaces, meetings).

## 2. "Engage as community"

**Community engagement and participation:** this category involves fostering community engagement and participation in various activities aimed to address climate adaptation. It emphasizes community collaboration, empowerment, and collective action to build resilience and adapt to environmental challenges.

*1.- Citizen science and participatory monitoring:* engage citizens in citizen science and participatory monitoring project and mapping to collect data and identify climate vulnerabilities, assets, and adaptation options collaboratively. This helps people understand more about science, which helps them find better ways to adapt locally and make decisions by involving the community. (Suitable engagement methods: participatory research, personalised communication, online platforms, civic hackathons, mobile apps, gamification, field data collection).

*2.- Community advisory boards and task forces:* establish community advisory boards or task forces comprised of residents, community leaders, and subject matter experts to provide input, guidance, and oversight on climate adaptation planning and implementation efforts. The advisory bodies ensure that local perspectives are integrated into decision-making processes. (Suitable engagement methods: meetings, personalised communication, participatory research, focus groups).

*3.- Peer support & intergenerational programs:* establish peer support groups or buddy systems where individuals facing similar climate-related challenges can connect, share experiences, and provide emotional support to one another. These groups offer a safe space for expressing concerns, seeking advice, and finding solidarity in difficult times. Moreover, by bringing together people from different generations, these programs foster mutual respect and allow valuable skills and traditions to be passed across generations. (Suitable engagement methods: informal conversation spaces, personalised communication, meetings, focus groups).

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*4.- Community-led action groups:* establish community-led action groups or task forces focused on implementing specific climate adaptation projects or initiatives. These groups can mobilize volunteers, coordinate activities, and oversee the implementation of adaptation measures, such as shoreline cleanups, tree planting campaigns, or tree irrigation programs. (Suitable engagement methods: civic hackathons, gamification, workshops, training sessions, meetings).

*5.- Community gardens and shared spaces:* develop community gardens, shared green spaces, or communal facilities where residents can come together to cultivate plants, share resources, and engage in collective activities. These spaces promote social interaction, cooperation, and collaboration while enhancing community resilience through food security and biodiversity conservation. (Suitable engagement methods: experiential and immersive education, personalised communication, informal conversation spaces).

## 3. "Communication and feedback mechanisms"

This category focuses on facilitating communication between policymakers and the public to ensure that climate plans are inclusive and responsive to community needs. It includes establishing channels for feedback, hosting public forums, and creating online platforms for citizen engagement.

*1.- Online platforms and surveys:* create online platforms, such as websites, forums, or social media groups, where citizens can share their perspectives, ask questions, and provide feedback on climate adaptation efforts. Conduct surveys and polls to gather input from a diverse range of community members on their priorities and preferences. (Suitable engagement methods: online platforms, webinars and live streams, online forums, (online) surveys).

*2.- Community liaison officers:* appoint community liaison officers or representatives who act as intermediaries between residents and policymakers, facilitating communication, fostering trust, and ensuring that citizen voices are heard in decision-making processes. These officers serve as advocates for community interests and concerns. (Suitable engagement methods: meetings, interviews, personalised communication, informal conversation spaces).

*3.- Community dialogue and feedback exchange:* facilitate stakeholder dialogues, focus groups, and community engagement events to engage diverse groups of individuals, including residents, businesses, government agencies, and community organizations, in discussions about climate adaptation priorities, trade-offs, and decision-making processes. Organize listening sessions, mobile outreach campaigns, and structured facilitation to gather insights and feedback on climate adaptation from residents. Utilize multimedia tools to ensure inclusive participation and effective communication between policymakers and

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communities, promoting dialogue, understanding, and collaboration in decision-making processes and consensus-building regarding climate adaptation. (Suitable engagement methods: focus groups, meetings, workshops, interactive content).

*4.- Public hearings and consultation events:* hold public hearings, consultation events, and town hall meetings to solicit feedback, input, and concerns from the broader community on climate adaptation plans, policies, and projects. These events provide opportunities for residents to voice their opinions, ask questions, and engage directly with decision-makers. (Here, differently to participatory decision-making, the ultimate decision-making authority typically remains with policymakers and officials. While residents' feedback is solicited and considered, they do not have direct control over the design or implementation of climate adaptation projects or strategies). (Suitable engagement methods: public hearings, meetings).

*5.- Participatory decision-making processes:* implement participatory decision-making processes that involve citizens in co-designing and co-implementing climate adaptation projects and strategies. Empower community members to contribute ideas, shape priorities, and collaborate with policymakers in finding innovative solutions to local challenges. It focuses on participatory decision-making processes where citizens are actively involved in co-designing and co-implementing climate adaptation projects and strategies. This approach empowers community members to contribute ideas, shape priorities, and collaborate with policymakers in finding innovative solutions to local challenges. In this scenario, citizens have a greater level of influence and agency in shaping the direction and outcomes of climate adaptation efforts. (Suitable engagement methods: participatory research, webinars & live streams, focus groups, online platforms, workshops, surveys).

## 4. “Prepare for an emergency”

**Community resilience and early warning systems:** this category emphasizes the establishment of early warning systems and community resilience measures to prepare for and respond to climate-related hazards. It includes initiatives such as setting up warning systems, coordinating response efforts, and implementing local adaptation strategies.

*1.- Participatory risk assessment workshops:* organize participatory risk assessment workshops where community members can identify and prioritize climate-related hazards affecting their area. Through interactive exercises, discussions, and participatory mapping exercises, residents contribute local knowledge, observations, and experiences to inform the development of early warning systems, identify hazard-prone areas, evacuation routes, safe shelters, and critical infrastructure. Utilize mapping tools and visualization techniques to effectively communicate risk information and empower residents to take proactive

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measures to mitigate hazards. (Suitable engagement methods: workshops, field data collection, participatory research).

*2.- Community health assessments:* conduct community health assessments to identify health risks associated with climate-related disasters, such as heatwaves, and waterborne diseases. Integrate health considerations into early warning systems to protect vulnerable populations and mitigate health impacts. (Suitable engagement methods: surveys, workshops, focus groups, research or experimental method).

*3.- Household preparedness campaigns:* launch household preparedness campaigns to empower individuals and families to take proactive measures to prepare for climate-related emergencies. Provide educational materials, checklists, and resources to help residents create emergency kits, develop family communication plans, and secure their homes. (Suitable engagement methods: training sessions, gamification, webinars & live streams, meetings, personalised communication, informal conversation spaces).

*4.- Localized alert systems:* implement localized alert systems that utilize various communication channels, such as mobile app alarms, text messages, phone calls, sirens, and community radio stations, to disseminate timely warnings to residents. Involve community members in designing and testing alert systems to ensure accessibility and effectiveness. Or ensuring a chain of communication (in case there could be several "intermediators"). (Suitable engagement methods: workshops, focus groups, mobile apps, online platforms, interactive content).

*5.- Community disaster committees:* form community disaster committees or task forces comprised of representatives from different sectors, including residents, local leaders, emergency responders, and civil society organizations. These committees of "trained volunteers" can oversee the development and implementation of community-led early warning systems and assist with emergency communication, evacuation support, and community outreach during disasters. (Suitable engagement methods: training sessions, informal conversation spaces, personalised communication, meetings, field data collection, online platforms).

## 5.7. Application in the Adaptation AGORA Pilots

In the pilot focus groups (and the final co-creation workshop in Rome), the cards were introduced as a second step, for the co-evaluation process, that is, after citizens had identified and co-designed adaptation solutions, related to the areas where they wanted to be engaged and/or tailored to their lived experiences and needs (e.g., heat-related risks, access to information, inclusive infrastructure). During this second step, after participants selected their preferred soft adaptation solution, they

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were first invited to independently brainstorm innovative ideas on how they would like to be engaged, using “white cards” (i.e., empty canvas) to freely capture these initial suggestions. This initial brainstorming aimed to foster creativity and allow participants to articulate unique, personalized engagement methods without being constrained by predefined options.

Following this open ideation phase, participants shared their individual ideas with each break out group, encouraging mutual reflection and discussion about the distinctive engagement approaches that were proposed. This served both to enrich the collective imagination and to prepare participants for the more structured evaluation.

Thereafter, facilitators introduced the Citizen Engagement Mechanisms Card Deck to help evaluate which engagement mechanisms within the suitable category, they would most prefer or find feasible. Each of the 20 cards presented a citizen engagement mechanism (e.g., storytelling, mobile apps, participatory research), and included the corresponding soft adaptation category, type of engagement mechanism, descriptive image illustrating the engagement mechanism, and a clear, concise description written in accessible language.

Facilitators initially identified the most suitable soft adaptation category from the four available based on the participants' co-created adaptation solution. In cases where the participants' co-created adaptation solution could clearly align with one specific category, facilitators proceeded by selecting the five citizen engagement mechanisms cards specifically associated with that category. Alternatively, if the solution bridged multiple categories or did not distinctly fit into a single category, facilitators thoughtfully chose a mix of the top 5 engagement mechanism cards (from the most suitable categories) that they felt best aligned with the citizen’s co-created solution.

Subsequently, the facilitators clearly explained the engagement approach presented on the cards to ensure participants understood their scope and practical implications. Participants were then given time for individual reflection, enabling them to rank or prioritize these mechanisms according to personal preferences and suitability to their collectively co-created soft adaptation solution. They were asked to select among the set of five the two engagement cards they most preferred (most engaging or most suitable for their target group) and the two cards least engaging for them. During this individual reflection, participants also considered critical factors such as inclusivity, motivational potential, feasibility, and barriers.

Afterward, participants reconvened for structured group discussions, employing participatory formats such as the “Think-Pair-Share” or the “Nominal Group Technique”, depending on the facilitators' choice. In this collaborative phase, participants discussed and articulated their preferences, highlighting why certain engagement mechanisms resonated more strongly than others. They addressed aspects of inclusivity, practicality, motivational appeal, and overall feasibility, and deliberated on potential improvements to less favoured approaches, suggesting adaptations that could foster wider and more effective citizen participation.

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## 5.8. Preparatory activities for focus groups: expert facilitation, protocol development, and coordination across pilots

The focus groups were preceded by a structured series of preparatory activities aimed at ensuring methodological coherence, quality, and comparability across diverse contexts. These activities were designed to translate the dual objectives of Tasks 2.3 and 2.4 into practice, using shared methodologies, a common protocol, and trained facilitators.

### 5.8.1. Expert-led facilitation training

Shortly after the ECSA 2024 workshop, two internal training sessions on facilitation techniques were conducted in mid-April. These online sessions, led by a professional facilitator with strong expertise in advancing collaborative group processes and participatory methods, were specifically tailored for (and provided to) the pilot region leaders and future facilitators of the focus groups. These sessions covered the fundamentals of group facilitation, including dealing with power dynamics, fostering equitable participation, managing group energy, and ensuring inclusive decision-making. A major focus was on integrating active listening techniques, designing participatory environments, and applying structured participatory formats aligned with the focus groups' objectives. The second half of the training introduced a variety of participation formats, particularly those deemed most suitable for the focus group structure.

### 5.8.2. Finalisation of the focus group protocol

Building on both the expert training and the lessons learned from the previous events, a final focus group protocol was co-developed by all pilot leaders (see Annex 2). Developed collaboratively with the pilot leaders, the protocol ensured a standardised structure and minimum requirements across pilots while allowing for contextual adaptation and flexibility. It defined a session structure composed of three main parts: an introduction (project and topic, incl. ice breaker), a co-creation phase (Step 1), and a co-evaluation phase (Step 2). During this second step, participants were first invited to independently brainstorm innovative ideas on how they would like to be engaged, using "white cards" to capture these suggestions. This was done before introducing the "Citizen Engagement Mechanisms Card Deck", an innovative visual method containing a selection of the top five picture cards (out of the 20 available) with the engagement approaches most relevant to the soft adaptation solution co-created by citizens in Step 1 (more details in Section 4.6 (Citizen Engagement Mechanisms Card Deck) and Annex 3). This sequencing ensured that participants could first express their own preferences without being influenced by the suggested options, and only

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afterward compare and reflect on the structured set of methods in light of their co-created solution. Moreover, three additional focus group protocols with a focus on different target groups were made available open-access on the Adaptation AGORA website (multicultural communities, workers population, and engaged youth), with the aim of supporting further projects in stakeholder engagement and facilitation processes.

### 5.8.3. Participation formats and tools

A key decision made jointly by all pilot leaders was the selection of two common participation formats specifically for the focus groups targeting the working population. This decision was made to enhance comparability across pilot regions. Based on the pilot testing at the ECSA 2024 workshop and facilitators feedback, the "Nominal Group Technique" was selected for Step 1 (co-creation), as it ensures structured and equitable brainstorming, while "Think-Pair-Share" ("1-2-4-All" and similar to the "Pair and Share" but including an initial step for individual reflection) and the "HOW" (an adapted and simplified version of the "Nine Whys"), in the case of the Rome pilot, were chosen for Step 2 (co-evaluation), allowing reflective, intimate, and later a group-based discussion of engagement preferences.

### 5.8.4. Reporting and evaluation tools

To maintain transparency and capture rich insights, a reporting template for facilitators was provided (see Annex 4). This included a breakdown of participation formats used, qualitative insights from both steps of the session, and observed preferences and barriers regarding engagement methods. Facilitators were also invited to administer a participant feedback survey at the end of each focus group. The survey, aligned with the Adaptation AGORA evaluation framework, included a Likert-scale (to quantify participants' subjective attitudes and make their responses comparable) and open-ended questions on the session's relevance, inclusivity, and knowledge outcomes (See Annex 5). Furthermore, an evaluation protocol (also aligned with the Adaptation AGORA evaluation framework) was provided to facilitators to guide their observation in assessing how well different methods (participation formats) performed during the focus groups.

The Adaptation AGORA evaluation framework provides a semi-structured approach for evaluating citizen and stakeholder engagement and enables reflection around how the knowledge co-production process evolved so far, what outcomes and impacts are emerging, in what ways it can improve, and what strengths and weaknesses can be identified. It is structured around activities (actions to transform inputs to outputs and outcomes), outcomes (short-term or medium-term effects), and impacts (long-term effects). It builds on four pathways to impact: relevant knowledge and action, just participation, mutual learning, and sustained relationships (see Figure 6 for an overview). To evaluate progress, each activity and outcome is defined by an evaluative rubric. The

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rubrics are structured as detailed Likert scales explaining different levels of achievement – unacceptable, acceptable, and optimal. For more information, see Deliverable D3.2.


Figure 6: Overview of the four pathways to impact of the Adaptation AGORA evaluation framework

Finally, to ensure ongoing support, an internal coordination meeting was held with all pilot region leads after the first two focus group sessions were conducted. This allowed the core team to gather immediate feedback and provide tailored suggestions to improve upcoming sessions.

## 5.9. Brainstorming sessions post focus groups

Once the focus groups were completed across the four pilot regions, the project moved forward into the next phase of engagement. Facilitators and pilot leaders documented the focus groups outcomes in detailed reports, which served as the foundation for a series of brainstorming sessions designed to shape the content and structure of the final co-creation workshops.

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The four brainstorming sessions were designed as a collective exercise among project leaders and facilitators, to frame and integrate proposal ideas for the final co-creation workshops. Using a shared Miro board (see Figure 7), participants synthesized outcomes from the focus groups and local stakeholder priorities to identify, cluster, and prioritize themes that could guide the content and structure of the workshops. The process began with open-ended identification of key adaptation challenges, urgent needs, and promising engagement avenues based on citizen inputs. These ideas were then discussed, voted on, and developed into proposals for potential workshop topics and engagement strategies. Particular care was given to maintaining coherence with both the overarching project task 2.3 and 2.4 objectives and the local specific goals of each pilot.

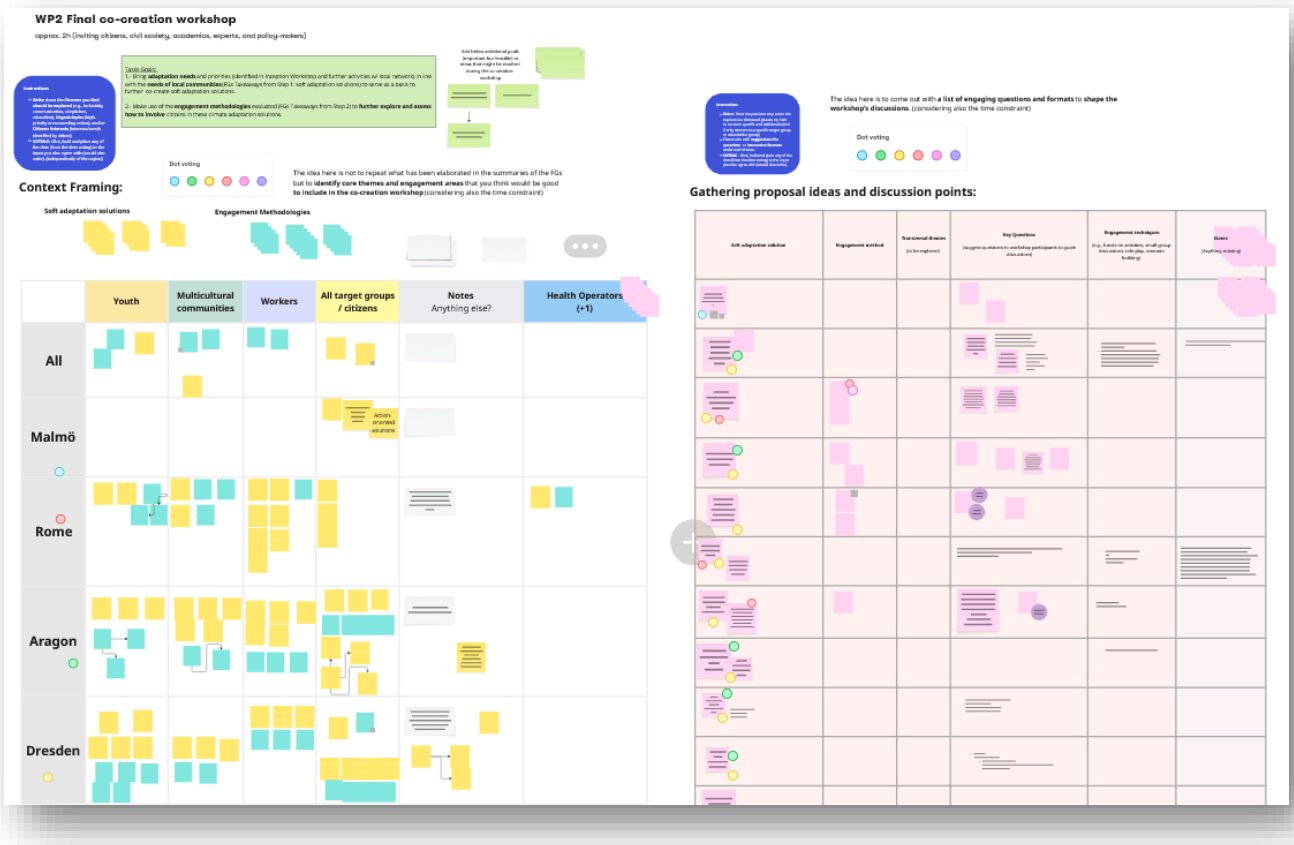


Figure 7: Miro board - Internal brainstorming session for final co-creation workshops

Throughout this phase, the process was collaborative and adaptive to refine and finalise the workshop designs. These brainstorming sessions, and the activities in preparation to the focus groups, served not only as strategic planning exercises but also exemplify the Adaptation AGORA's iterative engagement approach, evolving through the integration of local insights, shared reflections, and joint decision-making across partners.

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### 5.9.1. Co-creation workshops

The final co-creation workshops were designed as participatory spaces with the primary methodological function to reintroduce and evaluate the adaptation solutions and engagement mechanisms generated during earlier stages (by citizen target groups in the focus groups) and refining them through diverse stakeholder input.

Each workshop followed a similar structure, provided as a guidance document to all pilot regions (see Annex 6), while remaining flexible to local context. Typically, the events began with a short introduction and presentations from institutional or academic representatives to frame the discussion and share insights from previous activities (Figure 8).

Figure 8: Initial frontal presentation during the final-co-creation workshop in Rome

This was followed by interactive group activities focused on the adaptation solutions that had emerged during the project's focus groups. The core methodology of the workshops was rooted in

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participatory facilitation techniques. One of the most widely used and appreciated was the "Think-Pair-Share" method, which enabled participants to reflect individually, exchange thoughts in pairs or small groups, and then share insights with the larger group. In some workshops (i.e., Rome and Zaragoza) this method was integrated with thematic discussion prompts that guided participants in evaluating adaptation measures based on criteria such as feasibility, leadership responsibility, and communication versus education priorities.

To deepen the co-creation process, many workshops incorporated techniques for group decision-making and prioritization. For example, in Zaragoza, a voting exercise allowed participants to visually prioritize adaptation measures by allocating stickers to their preferred options, encouraging consensus-building. In Dresden and Malmö, the methodology included thematic working groups or breakout tables, e.g., dedicated to a specific adaptation theme. In Rome, two infographics were designed, each intended for use in a specific phase of the process, in order to ensure: (i) a clear overview of the adaptation measures identified across all local structured events; and (ii) an assessment of which of these prioritized measures could be considered most effective, based on a tailor-made matrix evaluating both their feasibility and their potential real-world impact in the local context (Figure 9).


Figure 9: Presenting the impact and feasibility matrix in the final-co-creation workshop in Rome

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These focused discussions enabled participants to build on previously co-developed ideas and explore operational pathways for bringing them into practice. Facilitators played a central role in ensuring the clarity and flow of the conversation, presenting relevant focus group findings.

The workshops concluded with a plenary session or general discussion format (e.g., panel or fishbowl), where group representatives shared insights and the wider audience provided feedback (see Figure 10). Importantly, the workshops did not stand alone but re-engaged key individuals and groups who had already contributed in earlier phases (from before the inception workshops to the focus groups) including citizens from the defined target groups and stakeholders from local authorities. This ensured a continuity of participation and reflection, strengthening trust, familiarity, and the legitimacy of the process. Across all locations, participants were encouraged to view themselves as ongoing agents in the adaptation process. Some of these have been even structured not as one-off consultations, but as strategic handover points, empowering stakeholders to carry forward the adaptation solutions and network established by the Adaptation AGORA pilots. In this way, the co-creation workshops played a pivotal methodological role, not only in consolidating project outcomes, but in seeking to establish a durable basis for local citizen and stakeholder-led climate adaptation.


Figure 10: Plenary session of final-co-creation workshop in Dresden pilot

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# 6. Results

This chapter presents the core findings from the co-evaluation of citizen engagement mechanisms across the four pilot regions. It brings together insights gathered from focus groups conducted for each different citizen target group, including engaged youth, working population, multicultural communities, and disproportionately affected groups. The results are structured by target group and focus on the context and facilitation techniques applied, innovative engagement proposals co-developed with participants, and a detailed assessment of the most and least favoured engagement mechanisms. Key evaluation criteria, challenges, and suggested improvements are also discussed, providing a comprehensive overview of how citizens envision and prioritize effective engagement in local climate adaptation processes. Finally, reflections on the methods, values, and outcomes of the engagement processes themselves are presented. These draw on the Adaptation AGORA evaluation framework to assess how the facilitation techniques and overall activities within the focus groups contributed to meaningful participation, focusing on aspects such as relevant knowledge and action, just representation, mutual learning, and improved collaboration.

## 6.1. Engaged youth

### 6.1.1. Target group context & applied facilitation techniques

The “engaged youth” target group represents a critical demographic, as both current and future stakeholders in climate governance, they bring not only heightened awareness and concern for environmental issues, but also a strong desire to act, innovate, and co-create practical solutions (Ingaruca, 2022). This group included students and youth activists aged 15 to 24 years for the pilot in Malmö and 18 to 24 for the pilots in Dresden, Rome, and Zaragoza, each with varying levels of prior engagement in climate-related initiatives.

Across pilots, they voiced a unique mix of urgency and frustration, particularly at perceived generational inequities and governance inaction, but also a strong sense of hope and determination to contribute meaningfully to local adaptation efforts.

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This group's role in the project was not only to provide input into climate adaptation measures relevant to their lives, but also to co-evaluate how best to involve young people in adaptation planning and implementation. Their ideas and feedback were mainly crucial for identifying mechanisms that might resonate with other citizens (target groups).

Table 1: Summary table of focus groups with engaged youth

| Target group | Pilot region | Location | Date | Participants |
|---|---|---|---|---|
| Engaged youth | Sweden | Environmental Dept., City of Malmö | July 8, 2024 (2:00–3:15 PM) | 18 youths (15-19 years old) |
| | | Environmental Dept., City of Malmö | July 11, 2024 (9.00 AM - 12.00 PM) | 3 youth (all female aged 15-16) |
| | Spain | University of Zaragoza | June 12, 2024 (10:30 AM–1:00 PM) | 6 youth (2 females, 4 males; students and activists) |
| | Germany | Bürgerlabor, Dresden | May 30, 2024 (5:00 PM) | 4 youth (18–24 years old) |
| | Italy | WWF Italia ETS, Rome | (9:00 AM–12:45 PM) | 7 (4 men, 3 women; university students, young professionals) |

## Facilitation techniques

For the activity of co-evaluating citizen engagement mechanisms, facilitators employed slightly different participatory techniques, adapted to their inclinations given the local context, specific demographic and personal experience.

In Rome, the facilitation format followed a structured "Think-Pair-Share" + "HOW" approach. Participants first reflected individually on how they would like to be engaged in implementing the

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soft adaptation measures they had previously co-created. They then prioritized one engagement approach from a set of five tailored cards and discussed it in pairs, focusing on how the approach could be realistically applied, improved, and adapted by local institutions. This was done using the "HOW" questioning technique, prompting participants to explore the implementation process in depth. Finally, in a plenary session, groups shared their insights and proposed concrete engagement strategies. The format encouraged deep analysis, creative proposals, and empathy for the practical constraints of decision-makers.

In Malmö, after the introductory session, the facilitators continued with a drawing exercise with participants mapping their daily activities and discussing in groups how heatwaves affected these. Participants were then introduced to five options through visual cards within a category. They individually ranked these and engaged in group dialogue to assess their relevance and inclusivity. The most favoured approach was further discussed with suggestions on how to improve it. The method emphasized low-threshold, practical engagement, supported by inclusive communication and facilitated discussion.

The facilitation format used in both Zaragoza and Dresden followed a dynamic and participatory structure rooted in the "Think-Pair-Share" model and included several steps. First, participants engaged in an individual reflection, writing on blank cards how they personally would like to be engaged in climate adaptation efforts, grounding their responses in the soft solution they had co-created earlier.

Thereafter, facilitators selected and distributed the five citizen engagement mechanisms cards that corresponded best with their selected soft adaptation solution, ensuring relevance. Each participant then individually reviewed the cards and selected the preferred approaches, and the least favoured ones. This led into a paired role-play dialogue, where each person alternated roles between a municipal representative and a citizen. They explored and recorded the reasoning behind their choices using guiding questions related to the advantages, disadvantages, and potential improvements of the selected mechanisms. This simulation added depth, encouraging participants to articulate and justify their decisions as if presenting them in a formal consultation process. Finally, in a shared plenary discussion, participants reconvened to present their reflections, offering insights into their dialogue and emerging ideas. The session concluded with a visual vote where participants held up their preferred engagement card, to highlight their top citizen engagement choice.

### 6.1.2. Locally innovative engagement proposals

Before being introduced to structured engagement mechanisms, youth in some pilot regions proposed a wide range of innovative, locally tailored, and peer-oriented strategies to engage themselves (and others in their target group) in climate adaptation. These ideas were developed

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during individual or small group reflections using either open prompts or blank cards and encouraging creative thinking to propose citizen engagement approaches grounded in their own experiences and cultural settings.

The youth centred their proposals on the use of informal, relatable, and emotionally resonant storytelling to foster public awareness. They suggested community awareness campaigns that draw from successful real-world examples, such as the recovery of the ozone layer, as a way to communicate the power of coordinated societal and policy action. The idea was to use familiar narratives that showcase collective impact, making abstract climate processes tangible (and hopeful) to citizens.

In **Dresden**, the engaged youth generated a wide range of potential engagement activities aimed at empowering their peers to actively participate in climate adaptation. Their suggestions were focused on hands-on involvement, skill-building, and collaboration envisioning youth not merely as recipients of information, but as active drivers of engagement. They proposed to co-design and lead public awareness campaigns through posters, speeches, and school events. They emphasized the importance of direct collaboration between municipal authorities and schools (including the use of mailing lists and networks within educational settings) to facilitate better communication and visibility for adaptation actions, e.g., to reach youth for participation and/or to support schools with adaptation experts/training.

Moreover, the group expressed a particular interest in citizen science and technical innovation as vehicles for engagement. They proposed student-led initiatives to monitor water levels, build rainwater storage systems, and co-create sensor-based data collection tools in cooperation with local universities. These ideas were anchored in a desire for skill-building and practical contribution, with participants suggesting the development of extracurricular learning modules (e.g., “Ganztagsangebot”, as part of the “all-day activity offers” common in local schools) that blend environmental education with project-based teamwork. Pointing to a desire among the engaged youth to be more actively included (also as co-producers) in climate adaptation solutions.

### 6.1.3. Most favoured engagement mechanisms

In **Dresden**, youth participants clearly favoured engagement approaches that combined hands-on climate education (from the “Learn about adaptation and build your skills” category) with community-led action groups (from the “Engage as community” category), reflecting their strong interest in practical involvement and local impact. These approaches were selected not only for their educational value but also for their capacity to foster collaboration and community empowerment.

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**Hands-on climate education**, which include field data collection, research or experimental method, personalised communication, participatory research, and experiential and immersive education as suitable engagement methods, was highly appreciated for its ability to provide tangible skills while contributing directly to climate adaptation at the local level. Youth participants emphasized formats such as data collection, participatory research, and field-based environmental monitoring as particularly valuable. These mechanisms were seen as offering meaningful learning experiences that go beyond theory, enabling young people to engage in a direct and applied manner and in a more natural (informal) atmosphere.

In addition, the youth strongly supported the concept of **community-led action groups**, which include civic hackathons, gamification, workshops, training sessions, and meetings as suitable engagement methods, which they saw as key to enabling youth agency and sustained engagement. Participants valued the collaborative, problem-solving (positive) dynamic of these formats, which encouraged them to work together (with friends) to address concrete climate issues in their communities.

In **Malmö**, when assessing the five engagement mechanisms of the "Prepare for emergency" category (most suitable for their adaptation solution) the engaged youth unanimously identified the **localized alert systems** (which include workshops and focus groups (for the design), mobile apps, online platforms, and interactive content as suitable engagement methods) as the most effective engagement approach for climate adaptation, particularly in response to heatwaves. They emphasized the practical and protective value of early warning systems that deliver clear, actionable information.

In addition, they proposed embedding the "Prepare for emergency" (**Community resilience & early warning systems**) category within a **broader risk management cycle** for heatwaves using the five engagement cards. Starting with a community health assessment to understand potential impacts (most affected sectors), followed by risk analysis to promote cross-group information sharing. Next, they highlighted the need for household preparedness, ensuring people know how to act in a crisis. Early warning systems came after, with a focus on making them accessible to diverse groups, using multiple languages and accessible communication channels like radio. Finally, they stressed the importance of community disaster committees to support people during emergencies, proposing the involvement of volunteers, including those from online platforms, existing organizations, international programs, or even individuals in unemployment or community service.

In **Rome**, the youth focus group identified a strong preference for engagement approaches that combined practical education with community-based learning structures. Two specific mechanisms, out of the five engagement cards of the "Learn about adaptation and build your skills" category (most suitable for their co-created soft adaptation solution), emerged as the most favoured: (i) training workshops and mobile skill-building, and (ii) citizen learning circles and mentorship programs.

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The approach of **training workshops and mobile skill-building**, which include training sessions, workshops, gamification, webinars and live streams, and interactive content as suitable engagement methods, was favoured for its potential to deliver interactive, hands-on education beyond traditional classroom settings. Youth participants emphasized the importance of informal learning opportunities facilitated in collaboration with NGOs and associations experienced in participatory and horizontal educational formats. They proposed embedding mandatory weekly hours of civic and environmental education into school curricula to institutionalize climate awareness. They also recommended providing incentives for educators (such as certification and salary bonuses) to promote innovative teaching methods. Additionally, the participants proposed the organization of local bioblitzes, community-driven events that involve citizens in biodiversity monitoring, to be supported by municipal institutions. These would serve both as educational tools and as avenues for voluntary engagement. To ensure consistent educator preparedness, youth also suggested online update courses on climate change and funding schemes for the purchase of educational equipment.

Complementing these more formal training strategies, the engaged youth also proposed the establishment of **citizen learning circles and mentorship programs**, which include personalised communication, meetings and informal conversation spaces as suitable engagement methods. A key idea presented was the development of a "Climate University Network", designed to foster interdisciplinary collaboration across university departments to address pressing environmental issues. This would include organizing annual climate hackathons, supported by university departments and experts, where students receive preliminary training and then work in teams to develop innovative proposals. These proposals would be evaluated by a commission comprising experts and representatives from relevant organizations, with the most promising project selected for further development and funding applications at the European level. To incentivize participation, the group proposed that students receive official certification or internship credits. The network would also serve as a platform for scaling up collaborative engagement activities between institutions.

In **Zaragoza**, youth participants clearly identified Training workshops and mobile skill-building (from the "Learn about adaptation and build your skills" category) and participatory decision-making processes (from the "Communication and feedback mechanisms" category) as their most favoured engagement approaches for supporting climate adaptation efforts.

**Training workshops and mobile skill-building**, which include training sessions, workshops, gamification, webinars and live streams, and interactive content as suitable engagement methods, were praised for their high level of interactivity, adaptability, and accessibility, e.g., through entertaining formats, enabling clear and compelling presentation of scientific data and progressive learning from local experts. Participants emphasized the method's potential for engaging a broad and diverse youth audience, highlighting its suitability for deployment across various community spaces as an effective way to communicate climate adaptation concepts.

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**Participatory decision-making processes**, which include participatory research, focus groups, online platforms, webinars and live streams, workshops, and surveys as suitable engagement methods, were highlighted for their capacity to bring climate policies closer to citizens. Participants especially appreciated the transparency and accountability of this approach, recognizing that visible adoption of citizen proposals significantly motivates continued participation. They highlighted how active involvement through this approach not only enhances motivation but also deepens the participants' sense of democratic involvement (i.e., reinforcing their sense of agency and empowerment), providing a clear and direct channel of communication between youth and government entities.

### 6.1.4. Key evaluation criteria

While the specifics varied across local contexts, certain shared themes in their evaluation criteria emerged, particularly around practicality, accessibility, and the capacity for tangible impact.

In **Dresden**, the engaged youth identified criteria linked to tangible community impact, skill development, and collaborative learning. Hands-on educational formats were evaluated favourably for offering practical knowledge acquisition and the opportunity to see immediate effects of participation. Youth also valued engagement approaches that promoted social cohesion and collective action, especially through community-led initiatives like action groups and hackathons. These formats were preferred not only for their outcomes but also for fostering a sense of empowerment and peer learning.

In **Malmö**, youth participants' evaluation centred on criteria such as practicality and trustworthiness. Engagement approaches like localized alert systems were explicitly favoured due to their clarity, ease of use, and ability to provide protective benefits. Participants stressed the importance of tailored communication, calling for multilingual content and appropriate outreach strategies to accommodate different needs. A recurring criterion was credibility with the preference for trustworthy sources of information, with mobile apps being widely rejected due to concerns about trust and reliability. None used the existing national early warning platform.

In **Rome**, youth emphasized the need for educational approaches to be both practical and institutionalized. Key criteria included experiential learning, with participants valuing hands-on educational formats that moved beyond traditional lectures to offer immersive environmental experiences. The potential for institutional integration and sustainability was also considered, to embed climate education within school curricula and incentivize educators through certification and structured programs. Additionally, collaborative and community-centred formats were a preferred criteria i.e., involving local NGOs and their informal networks given their potential to enhance motivation and maintain engagement over time.

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Finally, youth in **Zaragoza** prioritized engagement methods that were interactive, inclusive, and visibly impactful. A key criterion was interactivity, favouring approaches like mobile skill-building and workshops that offer active involvement rather than passive information delivery. They particularly valued methods offering engaging communication strategies, clear accountability, and direct visibility of their contributions (direct impact), which significantly enhanced their motivation and sense of empowerment. Participants also emphasized the importance of relatability, accessibility, and adaptability to various demographic and cultural contexts, ensuring broader participation and tangible influence on local climate policies

The evaluation criteria across most regions showed a strong preference for approaches that were experiential, participatory, and contextually relevant. The engaged youth consistently looked for engagement mechanisms that could offer practical benefits, foster ownership, and be realistically implemented (with noticeable results) within their daily lives (and institutional environments).

### 6.1.5. Least favoured engagement mechanisms

Across the four pilot regions, the engaged youth identified several engagement mechanisms that were deemed less engaging to them, primarily due to perceived lack of interactivity, limited impact, or mismatch with their social and communication preferences.

In **Dresden**, while acknowledging their potential, participants expressed several concerns on two specific engagement approaches below that limited their overall appeal. **Community gardens and shared spaces**, though recognized for their democratic and community-based approach, were seen as less accessible and practical for the youth involved. Participants noted that while the approach had proven useful in other contexts, it might entail a significant level of responsibility, which not all young participants were ready or willing to take on. Concerns were also raised about the lack of regular participation, the potential absence of a suitable location nearby, and a general disconnect between the concept and participants' immediate needs or environments. There was uncertainty about who exactly should be involved and where such efforts should take place, highlighting the need for clearer structure and relevance to the participants' local realities.

**Multi spaces learning for climate adaptation** was also among the least favoured mechanisms. Participants found this approach to be too reliant on online content, which they viewed as less interactive and potentially disengaging. They preferred in-person activities where engagement could happen in a more tangible and collaborative manner. Suggestions for improvement included shifting the focus from online to on-site participation and integrating the approach into school or university settings through small, manageable tasks assigned to individuals. This would enable joint projects while maintaining a practical, accessible structure

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In **Malmö**, while participants did not explicitly identify an engagement mechanism card as least engaging, some concerns were raised about the effectiveness and scalability of certain engagement formats. A specific issue was the significant time commitment required for hands-on activities, which could limit participation. There were also doubts about the practical impact of knowledge dissemination, particularly when activities did not easily extend beyond the individual. Although no single method was rejected, the lack of clarity around expected outcomes and long-term engagement posed barriers to full endorsement.

In **Rome**, the focus of discussions centred strongly on enhancing dynamic, experiential education, peer-learning and awareness-raising activities. This emphasis implicitly suggested that more passive or lecture-based formats might have been seen as less engaging or impactful, even though this was not directly stated.

In **Zaragoza**, youth participants identified **community narratives and cultural events** as one of the least effective engagement mechanisms. They criticized its overly passive nature, noting that it strongly depended on pre-existing individual interest and thus struggled to engage disinterested or resistant audiences. They highlighted how, despite its broad appeal, the approach lacked interactivity and reciprocity, making it less attractive for active youth involvement. The participants also had reservations about **public hearings and consultation events**, recognizing their potential to facilitate exposure to diverse viewpoints and promote mutual understanding, yet stressing the practical challenges involved. They pointed out significant barriers such as the complexity of managing polarized opinions and the critical necessity for neutral, highly skilled moderation to prevent conflicts, especially when existing community structures were overlooked. Similarly, community dialogue and feedback exchange were positively acknowledged for fostering interpersonal communication and enhancing participants' sense of being heard. However, it was viewed as potentially problematic if inadequately moderated, due to the risk of generating polarized opinion clusters and heightened tensions.

### 6.1.6. Challenges and suggested improvements

Within the four pilot regions, engaged youth participants identified a number of specific challenges in relation to proposed engagement mechanisms, accompanied by concrete suggestions for improvement.

In **Dresden**, youth participants identified several challenges tied to the practical implementation and accessibility of engagement mechanisms, particularly when these required a high degree of planning, coordination, or existing structures. While hands-on approaches were broadly appreciated, some approaches (such as training workshops and community-led action groups) were considered time-intensive or dependent on pre-existing networks, limiting participation for those

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without such affiliations. Certain formats also came with a high inhibition threshold, making it difficult for less confident or less connected individuals to get involved.

To overcome these barriers, participants proposed embedding engagement opportunities within educational settings, but in ways that respect institutional constraints. Recognizing that school curricula are fixed and cannot be easily altered, they recommended that municipalities act as facilitators by working through schools and universities as distribution channels. In this way, engagement efforts could be incorporated into the school's educational activities through pre-structured tasks and clearly communicated formats, ensuring an easier way to reach students without overburdening educators or compromising academic plans (in a way that complements their operational frameworks).

In **Malmö**, besides the concerns regarding the time demands and scalability of hands-on educational methods as abovementioned, youth participants also raised issues related to the limited broader participation. A key suggestion to overcome these limitations was to merge approaches, combining digital tools like social media with more accessible and trustworthy channels such as radio, public transport information screens, and face-to-face outreach, to increase impact while maintaining accessibility. More specifically, participants suggested the following channels for improving inclusivity and accessibility of warnings. For elderly, face-to-face outreach and radio broadcasts were preferred. For young people, SMS and social media platforms were suggested as the most effective. Participants also stressed the importance of using multiple languages, including English and Arabic, to ensure non-Swedish speakers are reached. Other communication channels identified as effective included TV newscasts, weather forecasts, and digital screens in public transport, which are considered harder to ignore. In contrast, mobile apps were rejected as untrustworthy and thus ineffective, with none of the participants reporting use of the official national meteorological warning app.

In **Rome**, no major obstacles were recorded during the co-evaluation phase, but participants actively proposed refinements to improve implementation, such as embedding engagement formats (i.e., the training workshops and mobile skills development) into formal education systems via legislative mandates, with certification incentives for teachers and public funding for resources. In addition, to the favoured engagement mechanisms (and its potential improvements) participants proposed an integrated approach to climate education through hands-on community projects and awareness-raising activities. For example, by building insect hotels (i.e., bug hotels) in urban parks through school-led workshops, supported by informative signage. Public funding was deemed crucial, particularly with oversight from the Ministries of Environment and Labor for activities targeting older populations.

To enhance engagement, the group proposed educational excursions, including guided outdoor activities blended with lessons, aimed at fostering environmental awareness and sense of local connection. For older youth, community service actions such as clean-up efforts in public spaces

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were proposed to combine learning with civic engagement. For adults, this group suggested mandatory training focused on economic transition and environmental responsibility, supported through a combination of municipal funding and public-private co-financing arrangements.

Across the board, a key concern among participants in **Zaragoza** was the potential for polarization and ineffective moderation, particularly evident in public hearings and consultation events, and community dialogue and feedback exchange methodologies. The complexity of managing diverse opinions and avoiding polarized clusters was stressed on several occasions, emphasizing the need for skilled and neutral facilitation. It was suggested that moderators ought to be specifically trained in conflict resolution and inclusive dialogue techniques to maintain balanced discussions. Additionally, participants underlined the importance of recognizing existing community structures and self-organized groups, particularly in rural settings, to prevent conflicts and enhance the validity of engagement efforts.

Community narratives and cultural event approaches presented different challenges, notably their overly passive nature, lack of reciprocity, and vulnerability to rejection from disinterested audiences. Participants proposed addressing these barriers by making such events more interactive, reciprocal, and multidisciplinary, along with providing specialized training to facilitators to better engage diverse audiences.

For the preferred mechanisms (training workshops and mobile skill-building and participatory decision-making processes) participants recommended tailoring content closely to audience interests, such as economic impacts of climate change, to ensure broader relevance and participation. They stressed the importance of clear communication regarding policy adoption and accountability in decision-making processes, noting that transparency about outcomes was critical to maintaining motivation and trust among young participants.

Beyond the two prioritized approaches, youth participants expressed a strong desire for more creative and informal engagement formats. They suggested using humour and entertainment (such as stand-up comedy performances and magic shows) to attract attention, improve receptiveness, and reduce resistance to climate-related messaging. Public talks held in relaxed, informal settings like bars and cafés (like “science and beer” events) were suggested to make climate discussions more approachable and socially engaging.

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## 6.2. Working population

### 6.2.1. Target group context & applied facilitation techniques

The working population represents a key segment in climate adaptation planning, both as a group directly affected by the impacts of climate change (i.e., in the workplace) and as a potential driver of change within their institutions or businesses. Workers (as other target groups) are increasingly exposed to climate-related stressors such as heatwaves, disruptions to commuting infrastructure, and productivity challenges. This target group is highly diverse, encompassing a wide range of sectors, employment types, and socio-economic conditions (from public servants and healthcare professionals to farmers, construction workers, transport operators, and service industry employees). This diversity implies varying degrees of exposure to climate risks, different workplace environments (indoor vs. outdoor), and unequal access to resources, decision-making processes, and adaptation opportunities. At the same time, across the board, their ability to contribute to and shape adaptation strategies is often constrained by their rigid working schedules, institutional hierarchies, and limited time and access to participatory processes.

Focus groups with working populations included a diverse mix of employees: healthcare professionals in hospitals (Dresden), municipal and outdoor workers (Malmö), professionals from diverse sectors including education, consultancy, and environmental arts (Zaragoza), commuting workers and female employees in service and administrative roles (Rome). Their involvement was key to capturing practical insights, workplace-specific vulnerabilities, and concrete, experience-based proposals for adaptation.

Table 2: Summary table of focus groups with working population

| Specific target group | Pilot region | Location | Date | Participants |
|---|---|---|---|---|
| Workers | Zaragoza | LAAAB, Zaragoza | June 17, 2024 (4:30–6:30 PM) | 6 (5 women, 1 man; artist, consultant, teacher) |
| Workers | Malmö | Spånehusvägen, Malmö | July 25, 2024 (1:30–3:00 PM) | 3 workers (2 women, 1 man; school, gym, summer camp) |

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| | | | | |
|---|---|---|---|---|
| Outdoor Workers | Malmö | Malmöhusvägen, Malmö | Sept. 10, 2024 (12:30–4:00 PM) | 12 workers (5 men, 7 women; park management) |
| Healthcare Workers 1 | Dresden | Dresden City Hospital (Friedrichstadt) | Oct. 2, 2024 (12:00–2:30 PM) | 5 nursing staff from different departments of the Dresden City Hospital |
| Healthcare Workers 2 | Dresden | Dresden City Hospital (Friedrichstadt) | Sept. 17, 2024 (12:00–2:30 PM) | 5 nursing staff from different departments of the Dresden City Hospital |
| Workers and Commuters | Rome | Uni Roma3, Ex Mattatoio, Rome | (5:00–8:00 PM) | 7 women (varied occupations, mostly commuters) |
| Healthcare Professionals | Rome | Dept. of Epidemiology, ASL Roma 1, Rome | (5:00–7:30 PM) | 5 healthcare experts (epidemiology, pediatrics, public health) |

The focus groups in Malmö took place in situ, during the participants' working hours. This approach minimized disruption to their routines, respected their time constraints, and ensured an increased participation by embedding their engagement in these activities directly into the workplace.

In the first focus group of the Rome pilot, several participants were commuting workers who travel across different neighbourhoods and even municipalities, reflecting the city's broad regional labour dynamics. Their experiences and contributions brought into focus the challenges faced by workers who are mobile across urban and peri-urban zones, for example workers relying on public transport under conditions of heat stress and traffic congestion.

## Facilitation techniques

To enhance comparability across the four pilot regions, the focus groups targeting the working population were conducted using a harmonised facilitation structure. Following the feedback from the ECSA 2024 conference, a refined structure was agreed upon by all pilot leaders and facilitators, applying the "Nominal Group Technique" during the co-creation of soft adaptation solutions,

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followed by a "Think-Pair-Share" method during the co-evaluation of citizen engagement mechanisms exercise. Only minor local adaptations were made to ensure a practical fit. The section below describes how this common format was applied and locally tailored in each pilot region. To accommodate the unique needs of each group, focus groups were tailored (location, topic and time wise) to ensure accessibility, relevance, and low disruption to work routines.

In Rome and Zaragoza, the co-evaluation activities followed the same structured "Think-Pair-Share" facilitation method. Participants began individually, writing down how they would prefer to be engaged. They then reviewed five citizen engagement mechanisms cards and, also in pairs, discussed and prioritized two preferred options, considering relevance, feasibility, and inclusivity. The sessions concluded with a plenary round where groups shared their insights and reached consensus on the most suitable approaches for the working population. This format allowed participants to build on each other's ideas, ensuring a balance between personal reflection and collaborative prioritization. In addition to the main session, an extra focus group in Rome was held with healthcare professionals, complementing this target group. Using a structured "1-2-4-All" + "HOW" method, participants first reflected individually and then explored preferred engagement formats in pairs and small groups. This session further enriched the evaluation by highlighting the intersecting needs of institutional professionals and people experiencing vulnerability, also by considering the worker experiences within the health sector for the case of Rome.

In Dresden, a similarly structured Pair and Share method was adapted in the two focus groups carried out with the hospital's nursing staff. After a short introduction, participants first engaged in pair discussions where they reflected on how they would prefer to be involved in implementing the co-created heat protection measures. Ideas were sketched and written on cards. Facilitators then introduced to the pair, the five most context-relevant engagement mechanisms, which participants further assessed in pairs. The session concluded with a plenary discussion where all participants shared their reflexions and preferences.

The facilitation method in Malmö's co-evaluation activity involved a structured yet accessible process: participants first individually reviewed and ranked the five citizen engagement mechanisms cards related to emergency preparedness. This was followed by a round of individual reflections shared aloud, and a facilitated group discussion to compare perspectives. The format balanced both personal thinking time with open dialogue.

### 6.2.2. Locally innovative engagement proposals

During the two focus groups with the working population (nursing staff) in Dresden, participants were invited to openly reflect and propose how they and their peers might engage in adaptation processes.

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In one group, participants imagined taking on roles such as proactive contact persons, responsible for collecting and sharing adaptation-related ideas within their teams and with project coordinators. This flexible role was seen as manageable and low-threshold, allowing each staff member to engage in ways that matched their capacities and professional identities.

Another idea revolved around forming a collective voice, as a collaborative structure, through which staff could share concerns or priorities in a representative group. While participants were generally open to contribute, they underscored their need to have clearly defined, relatable, actionable tasks. Abstract engagement, they noted, felt unapproachable or burdensome, particularly given the time constraints and workload typical in care settings.

In the second group, participants proposed a series of formal, staff-led mechanisms for institutional engagement. One standout idea was the development of a "staff agreement" on heat stress, initiated through the staff council and involving broad participation via digital surveys. This agreement would formalize procedures around heat-related risks and embed staff engagement into decision-making processes. Participants also recommended training initiatives, suggesting, e.g., practical short learning modules, and online training delivered by health professionals.

Together, these open proposals reflect a strong preference for institutionally supported, staff-driven formats that are inclusive, actionable, and designed to improve everyday working conditions.

### 6.2.3. Most favoured engagement mechanisms

The **first** focus group with healthcare workers (nurses) in **Dresden** prioritized **participatory decision-making processes** (which includes participatory research, focus groups, online platforms, webinars and live streams, workshops, and surveys as suitable engagement methods) as their most favoured engagement mechanism. This approach was valued for its capacity to involve staff across different departments and levels of experience in shaping institutional strategies for managing heat-related challenges. Workers appreciated the opportunity to contribute insights from their daily practice, to ensure that the proposed adaptation measures in hospital operations are effective and relevant to their department, reflecting their local conditions (tailoring solutions to their specific needs). **Training workshops and mobile skill-building** (which includes training sessions, workshops, gamification, webinars and live streams, and interactive content as suitable engagement methods) were also positively evaluated, particularly for their flexibility and potential to support professional development through targeted education on heat stress management. Workers highlighted the importance of combining these engagement formats with structured internal communication, such as surveys and feedback loops.

In the **second** focus group of workers in Dresden, participants clearly identified **"household" preparedness campaigns** (which includes training sessions, meetings, gamification, webinars and

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live streams, personalised communication, and informal conversation spaces as suitable engagement methods) as their most favoured engagement approach for climate adaptation. This approach, for which the specific departments in the hospital were interpreted as the "household", was unanimously preferred across all discussion groups for its practical relevance, personal relatability, and low threshold for participation. Participants appreciated that the campaign format offered tasks they could identify with and carry out in their daily routines, making it easier to involve others and promote climate resilience through simple, concrete actions. The authenticity and direct applicability of this approach were key to its widespread acceptance**. Training workshops and mobile skill-building** were favoured by several healthcare workers also in this focus group. While some participants were open to engaging as learners, other expressed enthusiasm for sharing their expertise as facilitators, though some highlighted the need for background knowledge and well-prepared materials before taking on any active role.

Based on the rankings provided by participants during the co-evaluation of engagement mechanisms, the two most favoured citizen engagement approaches by outdoor workers in **Malmö**, within the "Prepare for emergency" category, were community disaster committees and localized alert systems. **Community disaster committees** (which includes training sessions, informal conversation spaces, personalised communication, meetings, field data collection, and online platforms as suitable engagement methods) were highlighted as a practical and applicable method, particularly valued for their role in real crisis situations. Participants emphasized their relevance during extreme events such as heatwaves, where the presence of organized community volunteers would be essential to ensure collective safety. **Localized alert systems** (which include workshops and focus groups (for the design), mobile apps, online platforms, and interactive content as suitable engagement methods) were also positively received in this target group, primarily due to their broad reach and low participation threshold. Participants noted that this approach allows individuals to benefit passively, receiving crucial information without the need for active engagement, making it especially suitable for reaching large and diverse audiences. Nonetheless, the feasibility of citizen-led implementation was questioned, suggesting that the operational responsibility for such systems would likely need to rest with institutional actors rather than the public.

In **Rome**, when assessing the five citizen engagement mechanisms from the "Communication and feedback mechanisms" category (most suitable for their co-created soft adaptation solution), the **first** focus group with workers identified **public hearings and consultation events** (which includes public hearings and meetings as suitable engagement methods) as the most favoured engagement approach, consistently prioritized across all small participants' groups. They also chose **participatory decision-making processes** (which includes participatory research, focus groups, online platforms, webinars and live streams, workshops, and surveys as suitable engagement methods), but agreed on giving precedence to public hearings. These formats were valued for their ability to foster direct exchange between citizens and institutions, particularly around climate adaptation issues affecting

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work and commuting conditions. While the potential of online platforms to reach a broader audience was acknowledged, these were viewed primarily as supplementary tools rather than substitutes for physical gatherings. Participants preferred in-person formats, as they valued the "quality" of direct interaction and the opportunities for deeper engagement from face-to-face meetings. In this way, it is important to start with smaller meetings and then gradually extend participation (including through online channels). This phased, blended approach was seen as more effective for fostering genuine dialogue and sustained involvement.

In the **second** focus group with healthcare workers in Rome, participants co-evaluated the engagement mechanisms from the "Learn about adaptation and build your skills" category. While a first group initially explored a mix of **community narratives and cultural events** and **hands-on climate education**, there was later a clear convergence on the preference for **citizen learning circles and mentorship programs**. This mechanism was highly appreciated for its emphasis on co-creation and bottom-up processes, combining reflective dialogue and participatory learning. The first group framed the co-created process as "from narratives to mentorship", beginning with shared stories and progressing toward applied measures. The second group emphasized the value of digital formats (such as webinars and online platforms) to support scalability and accessibility, ensuring wider and more equitable reach. Among participants there was consensus on the relevance of this engagement mechanism for its long-term and equity-driven impact.

Workers in **Zaragoza** co-evaluated a mix of five engagement mechanisms from the "Learn about adaptation and build your skills" and "Engage as community" categories, considered most suitable for supporting their previously co-created soft adaptation solutions which focused on energy governance, addressing energy poverty, and democratizing access to nature. Among the most favoured approaches assessed, the **hands-on climate education** (which includes field data collection, research or experimental method, personalised communication, participatory research, and experiential and immersive education as suitable engagement methods) was largely appreciated for its interactive nature and the ability to engage citizens in peer-supported, practical learning environments tailored to different community settings such as neighbourhood associations or rural areas. This approach was seen as effective when combining local action with expert guidance, helping to ensure participants do not feel isolated in their efforts. Also highly valued was **community narratives and cultural events** (which includes participatory arts, and informal conversation spaces as suitable engagement methods), which, when tied to artistic and festive expressions, were recognised as powerful tools for raising awareness and motivating participation through humour, entertainment, and public celebrations. A third favoured approach was **community advisory boards and task forces** (which includes meetings, personalised communication, participatory research, and focus groups as suitable engagement methods), endorsed for their potential to provide structured, citizen-informed oversight of climate policies, while ensuring that messaging remains socially relevant and connected to local concerns. These

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methods were preferred for being interactive, socially grounded, and capable of influencing policy (see Figure 11).

Figure 11: Focus group with workers in Zaragoza discussing the "Community advisory boards and task forces" mechanism

### 6.2.4. Key evaluation criteria

While each regional context brought specific needs and preferences, across the working population shared evaluation criteria became apparent, particularly around practicality, institutional relevance, and the ability to deliver visible, workplace-oriented outcomes.

In **Dresden**, healthcare workers evaluated engagement mechanisms based on their alignment with institutional structures and professional roles. Key criteria included the ability to integrate staff insights into policy-making processes, ensuring that adaptation measures were both relevant and feasible within hospital workflows. Engagement mechanisms were favoured when they supported professional development, were adaptable to shift schedules, and could be scaled or standardized across departments. Participants also valued approaches that were personally relatable, easy to implement, and allowed for small, concrete actions to be embedded into daily routines. Inclusivity

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and authenticity were key, with a clear preference for engagement approaches that enabled broad staff participation without requiring extensive time or expertise.

In **Malmö**, where participants worked in outdoor settings, evaluation criteria focused on clarity, time efficiency, and accessibility. They favoured approaches that offered real-time, low-effort communication suited to extreme weather conditions, valuing formats that were simple to understand, usable regardless of educational background or language proficiency, and that minimized the need for active interaction during high-stress periods. This included both passive formats (e.g., localized alert systems) and community-based initiatives (e.g., disaster committees) that offered clear coordination and practical action. Practicality was deemed key, with approaches needing to fit within physically demanding work routines and private schedules (e.g., school pick-ups and drop-offs).

In **Rome**, workers assessed engagement mechanisms based on their ability to facilitate direct dialogue with institutions and ensure responsiveness to citizen concerns. They valued formats that enabled clear communication around issues like heat stress, transport challenges, and working conditions (e.g., limited remote working, imposed time of entrance at work who increase traffic flows). Preference was given to approaches that built on trusted, existing community structures (i.e., neighbourhood representatives), supporting continuity over the introduction of new roles. Simplicity and in-person accessibility were key, with digital tools considered useful only as complements to face-to-face interaction.

In **Zaragoza**, workers prioritized engagement approaches based on their ability to combine practical education with continuity. They valued approaches that provided clear, actionable knowledge on workplace-related climate adaptation, while also enabling ongoing participation through structured, long-term formats (e.g., ensuring sustained dialogue and policy feedback loops). Enhancing relatability, inclusiveness, and broad accessibility across diverse working populations were key criteria why culturally embedded approaches (such as community events and local networks) were favoured.

Across regions, the working population consistently prioritised engagement approaches that were pragmatic, context-specific, and tied to real decision-making structures. Criteria such as direct impact, workplace adaptability, and institutional legitimacy shaped how approaches were selected and assessed. While modes of delivery varied, workers shared a clear preference for approaches that respected their time, acknowledged their expertise, and offered tangible improvements to their everyday professional environments.

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### 6.2.5. Least favoured engagement mechanisms

Across the four pilot regions, workers highlighted several engagement mechanisms as less effective or less preferred, based on their relevance, accessibility, and potential to drive meaningful change in workplace and community settings.

Among healthcare workers from the **first** event in **Dresden**, community disaster committees and household preparedness campaigns were the least favoured engagement mechanisms. **Community disaster committees** were seen as overly bureaucratic and at risk of being influenced by vested interests or top-down decision-making (less ownership of decisions). Participants expressed concern that such committees might not reflect frontline realities or include relevant voices from within hospital departments. They also worried that these structures might add unnecessary complexity to already strained work environments.

**Household preparedness campaigns** were similarly viewed as lacking coordination and depending too heavily on individual motivation and departmental knowledge. Participants felt this format did not offer the necessary supervision or collaborative structure to ensure consistent quality or participation. Some suggested it might work better if integrated into digital formats with clear checklists and practical guidance.

In the **second** Dresden workers focus group, **community disaster committees** again emerged as the least favoured approach. Participants described them as too time-consuming, requiring specialised knowledge, and difficult to reconcile with limited availability. While some expressed interest in participating in specific, concrete actions (e.g., during heatwaves), there was broad resistance to formal committee structures due to time, complexity, and unclear expectations.

**Community liaison officers** also received mixed feedback, with some participants identifying the role as impractical due to its placement between staff levels and the communication and conflict resolution skills it would require. Concerns included a lack of clarity about responsibilities and the risk that these officers may not be fully trusted or able to convey input effectively between workers and decision-makers.

In **Malmö**, participants generally felt that the proposed engagement mechanisms placed an excessive burden on citizens. They expressed confidence in professionals to manage many of these responsibilities (as with other existing Swedish governance practices) without the need to rely heavily on citizen involvement. Some suggesting these might be better suited to countries where individuals more often take personal responsibility for crisis preparedness (e.g., USA). Concerns were also raised about the need for highly motivated “champions” to lead these initiatives, noting that not everyone is inclined or sufficiently interested in climate adaptation to take on such roles.

Based on the comparative analysis of participant rankings during the co-evaluation of engagement mechanisms, the two least favoured engagement approaches were clearly identified. **Participatory**

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**risk assessment workshops** were ranked lowest expressing concerns about whether citizens possess the necessary knowledge or capacity to identify climate-related risks in their area, suggesting that organized groups such as tenants' associations might be more appropriate actors for such tasks. While some acknowledged the approach as proactive, the actual appeal and participation potential was questioned, anticipating low levels of citizen engagement, perceiving it as too theoretical compared to other more actionable options.

**Household preparedness campaigns** were also among the least favoured, some viewed it as potentially problematic, fearing it could lead to hoarding behaviour. Its effectiveness in reaching and engaging citizens was also a concern, especially families with limited time availability, suggesting that only retired individuals might have the capacity to participate.

In **Rome**, the focus group did not explicitly reject any mechanism, but reflections during the discussion suggested a preference for in-person formats over online tools, with a cautionary note on participatory processes lacking true decision-making power. Participants were critical of approaches that presented engagement as inclusive but in practice resulted in limited impact, especially if citizen input was not visibly integrated into policymaking.

In **Zaragoza**, workers did not favour **training workshops and mobile skill-building** and **citizen learning circles and mentoring programmes**. These mechanisms were perceived as overly demanding or impractical within the context of their daily routines. Workers expressed a need for more structured support and clearer facilitation, noting that these approaches often lacked the participatory energy or cultural relevance required to engage communities effectively. The preference leaned toward more collective, sustained formats such as advisory councils and community-based cultural activities that felt more accessible and socially embedded.

Overall, across the pilot regions, the least favoured engagement mechanisms shared key shortcomings: they often placed excessive responsibility on individuals, lacked institutional support, or failed to offer clear pathways to impact. Workers expressed a strong preference for engagement strategies that are structured, professionally supported, and contextually realistic.

### 6.2.6. Challenges and suggested improvements

While previously identified as one of the least favoured engagement mechanisms due to its complexity, time demands, and lack of clarity, participants in **Dresden**, from both focus groups, still offered several suggestions to improve the feasibility and appeal of **community disaster committees**. These recommendations included making participation more realistic by releasing staff from regular duties or allocating dedicated training time, such as offering one day off per month for engagement activities, to ensure that their involvement does not come at the expense of their personal time. Additionally, participants suggested simplifying committee structures, reducing

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bureaucratic barriers, and enabling wider individual responsibility, rather than relying on centralized leadership. Finally, they also proposed implementing practical, task-based training to enhance readiness and clarify the expectations for the caregivers involved.

While the earlier discussion highlighted concerns about the lack of coordination and over-reliance on individual motivation in **household preparedness campaigns**, participants proposed several ways to improve the success of this approach. They suggested integrating these campaigns into a more structured, team-based approach with greater supervision, to support consistency and shared responsibility. To leverage the method's strengths, participants emphasized its practical relevance, low entry threshold, and the potential for individuals to personally identify with the topic and easily involve others. Maintaining a relatable and authentic format, grounded in everyday needs and experiences, was also seen as key to fostering wider engagement and meaningful participation.

The worries of the **community liaison officer** role, related to their challenging position between staff levels and high interpersonal demands, acknowledged earlier, were the reason why this engagement mechanism was not favoured. Nonetheless, participants also offered specific recommendations to overcome the above. They suggested providing conflict management and communication training, particularly for individuals who may lack confidence in public engagement or struggle with clarity and enthusiasm. Furthermore, they emphasized the importance of selecting individuals who are authentic, trusted, and approachable, as these qualities were seen as essential for building credibility and fostering trust between communities and decision-makers.

Finally, some participants also expressed reluctance to lead or organize **training workshops and mobile skill-building** activities due to a lack of expertise. Therefore, they suggested to address this, by preparing and providing them with materials in advance and offering a training course beforehand to equip facilitators and participants with the necessary background knowledge. These measures were seen as important for building confidence and ensuring a more effective and inclusive learning environment.

In **Malmö**, working participants raised concerns about the feasibility of some engagement mechanisms within the Swedish context. As previously mentioned, they perceived over-reliance on citizens to take responsibility for crisis preparedness, as they felt these tasks should remain with trained professionals. While there was recognition that some citizens volunteered during past crises (e.g., the 2018 wildfires), the rarity of such events in Sweden led many to question the relevance of citizen-led preparedness strategies. In this sense, suggestions for improvement included ensuring that operational responsibility remains with tenants' associations or local authorities rather than shifting it onto the general public. While community disaster committees were ranked as practical in real crisis scenarios, concerns were raised regarding the time commitment required for a sustained involvement. Participants noted that this approach might be met with reluctance unless accompanied by appropriate incentives or compensation. Additionally, participants recommended improving the credibility and accuracy of early warning systems, noting distrust in current weather

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alerts and underuse of the national meteorological warning app. Overall, participants called for a more balanced approach, where citizens can engage meaningfully in well-supported roles, but without bearing disproportionate responsibility for preparedness in a country where institutional frameworks are already well-established.

In **Rome**, participants mentioned some challenges regarding participatory decision-making processes, given their perceived lack of influence on actual outcomes. Drawing from past experiences, some participants highlighted that even when participatory mechanisms are in place, citizen input is not always reflected in final decisions. As a result, it was suggested that unless there is a clear mechanism for feedback integration, such formats should be referred to simply as "participatory" rather than "decisional" to avoid creating false expectations. Additionally, participants emphasized the importance of relying on existing district and neighbourhood representatives, rather than creating new liaison roles, to ensure continuity, trust, and sustained engagement within local communities. This perspective was particularly strong among those with experience in local representation and urban consultation efforts. Moreover, beyond the suggested improvements in the assessed approaches discussed above, participants acknowledged the importance in improving the links between citizens and institutions. For this, the role of community liaison officers was discussed where participants suggested to prioritize existing district and neighbourhood representatives over introducing new figures. These established representatives were seen as more effective due to their continuity, local presence, and established trust within the community. Participants emphasized that reinforcing and supporting these existing structures would foster more sustained and authentic engagement.

In **Zaragoza**, workers identified both internal and external challenges to effective engagement. Internally, a lack of participation among community members was noted, often stemming from limited awareness or motivation. Externally, resource constraints and bureaucratic delays were cited as barriers to implementing proposed approaches. To improve participation, workers suggested tailoring content to reflect local concerns, and emphasized the need for trained facilitators who could deliver content in engaging, practical ways. The use of cultural formats, like music festivals and artistic events, was also proposed to help draw in diverse audiences and reduce resistance to participation.

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## 6.3. Multicultural communities

### 6.3.1. Target group context & applied facilitation techniques

The multicultural communities target group encompassed population from a wide range of cultural, linguistic, and social contexts. Often underrepresented in climate adaptation planning, these communities face systemic exclusion, frequently struggling with limited access to institutional information, language and trust barriers, socio-economic challenges, and minimal representation in decision-making processes. However, their diverse life experiences and traditional knowledge also represent a valuable resource for climate resilience. Therefore, they were purposefully selected as target group. Focus groups in Rome, Zaragoza, Malmö, and Dresden brought together diverse participants from Latin America, Africa, Asia, and Eastern Europe, reflecting the richness and heterogeneity of urban multicultural populations across Europe. Participants from this target group offered not only insights into the barriers they face but also contributed rich, culturally grounded perspectives and innovative suggestions.

Table 3: Summary table of focus groups with multicultural communities

| Target group | Pilot region | Location | Date | Participants |
|---|---|---|---|---|
| Multicultural Communities | Italy | CSV Lazio ETS, Rome | (2:00–5:30 PM) | 6 (5 women, 1 man; Cameroon, Congo, Peru, French Antilles, Philippines) |
| | Germany | Zukunftsgestalten Office, Dresden | Sept. 15, 2024 (2:00–5:10 PM) | 8 migrants (Argentina, Brazil, 2 Colombians, Cuba, India, Nigeria, Peru) |
| | Spain | LAAAB, Zaragoza | June 24, 2024 (4:30–6:30 PM) | 6 (5 Venezuelans, 1 Chilean; cultural, philosophical backgrounds) |
| | Sweden | Malmö City Library | Sept. 10, 2024 (5:00–7:00 PM) | 4 migrants (Kurdistan/Iraq, Afghanistan, Peru, China) |

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| | | | | |
|---|---|---|---|---|
| | | (Språkfika), Malmö | | |

## Facilitation techniques

In **Dresden**, the focus group was held in collaboration with diaspora associations and took place in a community space that fosters intercultural exchange, environmental awareness, and sustainable urban development, creating a welcoming environment for open dialogue. Facilitators began the co-evaluation phase with a short plenary input on the importance of inclusive climate participation and the underrepresentation of migrants in adaptation planning. Participants then worked in pairs to reflect on how they would like to engage, using blank cards to draw or describe their ideas visually. After this exploratory phase, the five citizen engagement mechanisms cards were introduced by the facilitators. Participants then compared these new options with using a visual diagram, selecting two approaches they would actively engage in and two they would likely not. These reflections were discussed in pairs before being shared in a plenary discussion and collectively exploring reasoning.

In **Malmö**, the facilitation was embedded within a Språkfika (language café), creating a familiar and informal environment for participation. Facilitators introduced the five citizen engagement mechanisms cards from the Information category, which participants reviewed and discussed in a conversational circle. Despite some language barriers, the session allowed for open dialogue around opportunities and challenges while offering space for participants to contribute both local reflections and personal experiences from other countries, highlighting the value of diverse perspectives in climate engagement.

In **Rome**, similarly as with the engaged youth, facilitators employed a structured “1-2-4-All” + “HOW” technique. The co-evaluation process began with individual reflection, where participants wrote down how they would like to be engaged in the implementation of the adaptation solution. The facilitator then distributed five citizen engagement mechanisms cards, carefully selected and explained based on the solution chosen in the previous activity. Participants individually reviewed and prioritized the method they felt was most suitable for their target group. This was followed by pair discussions using the “HOW” method, in which participants collaboratively explored how their preferred mechanism could be realistically implemented, emphasizing practicality, institutional feasibility, and cultural relevance. Groups of four then deepened this analysis, and finally, participants reconvened in plenary to share their reflections and collectively identify the most relevant mechanisms.

In **Zaragoza**, facilitators applied a structured co-evaluation format combining individual reflection, card-based prioritization, and role-playing dynamics to foster empathy and inclusivity. With a similar

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starting point as in the Rome pilot, participants began with an individual reflection on how they would personally like to engage. Thereafter, the facilitator distributed five citizen engagement mechanisms cards, ensuring participants read and understood each option. Participants then selected two preferred mechanisms and justified their choices in writing, also noting the disadvantages of the other options. In pairs, they engaged in a role-play exercise (alternating between citizen and municipal representative roles) to discuss and document the reasoning behind their selections. This was followed by a plenary session where participants shared insights and collectively highlighted their most preferred mechanisms. The session was conducted bilingually and supported by printed prompts, ensuring accessibility for participants.

The common preference across most pilot regions of the "Think-Pair-Share" (or the similar 1-2-4-All) facilitation format (adapted for each pilot), demonstrated its suitability in combining small-group co-creation, multilingual paired support, and incremental participation structures to ensure accessibility and comfort for all participants. Bilingual facilitation and printed prompts in the Spanish pilot enhanced clarity and inclusion, while the German pilot's use of visual diagrams and multilingual flexibility (German, English, and Spanish, see Figure 12) created a low-threshold environment for sharing cultural perspectives and fostering collaborative and inclusive engagement in these diverse community settings.

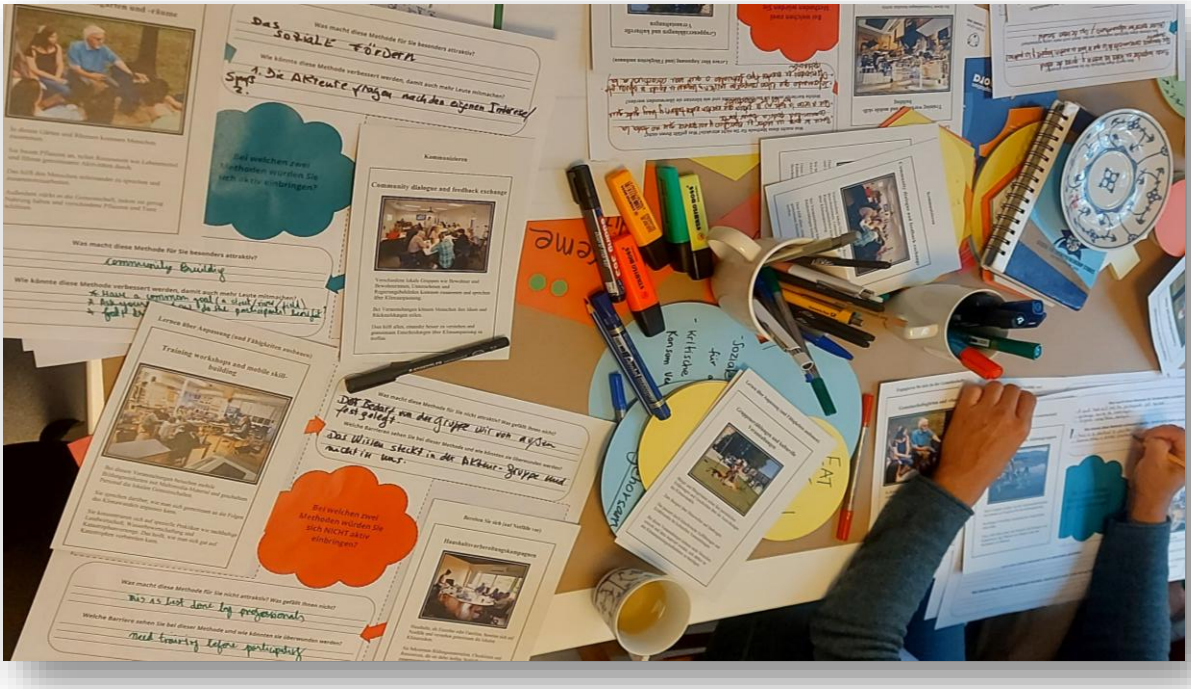


Figure 12: Use of visual diagrams, working in three (German, English, and Spanish) accessible languages by participants

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### 6.3.2. Locally innovative engagement proposals

Before being introduced to structured engagement mechanisms, citizens with multicultural backgrounds across three pilot cities (Malmö, Zaragoza, and Dresden) were invited to reflect freely on how they and others in their communities would most meaningfully engage in climate adaptation. Their proposals revealed a strong emphasis on practical demonstration, accessible communication, and low-barrier forms of participation. As participants in the Rome pilot began their co-evaluation activities directly with the Citizen Engagement Mechanisms Cards, without a preceding open reflection phase, they are not included in this section.

In Malmö, the introduction of school programs for sustainability was proposed, highlighting the importance of embedding climate adaptation into everyday educational environments, particularly those with high cultural diversity.

In Zaragoza, participants proposed the use of art and culture as innovative tools for climate engagement, recognising their power to foster emotional connection and a sense of belonging. Artistic expressions were seen as inclusive and accessible formats to raise awareness, spark dialogue, and promote participation across diverse communities. Cultural events and storytelling were suggested not only as means of communication but also as platforms to share personal experiences of climate change, enhancing empathy and collective understanding.

In Dresden, participants imagined several engagement formats that resonated with their lived realities and social dynamics. One commonly suggested approach was personal conversations and informal knowledge sharing, including the use of public signage (e.g., public transport infrastructure) and social media to spread accessible, multilingual information. Participants also emphasized campaigns to raise awareness and build solidarity around visible, everyday adaptation practices. A standout example was community gardening, which was described not only as an adaptation strategy but also as an engagement tool (sharing composting or creative irrigation techniques) to spark interest and imitation among neighbours. Participants also proposed using their own cultural experiences and social practices, through informal education, storytelling, and mutual support, as a form of intercultural exchange, helping build adaptive capacity across diverse communities.

### 6.3.3. Most favoured engagement mechanisms

In **Dresden**, participants favoured the engagement approaches, coming from a mix of the “engage as community” and “communication” categories, based on their practicality, inclusiveness, and

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cultural relevance. These approaches included **community gardens and shared spaces** (which includes experiential and immersive education, personalised communication, and informal conversation spaces as suitable engagement methods), which was seen as both educational and socially engaging. Participants appreciated the opportunity to produce food themselves, noting that this tangible activity fostered motivation to learn and supported social interaction within the community. **Community dialogue and feedback exchange** (which includes focus groups, meetings, workshops, and interactive content as suitable engagement methods), were also highly valued for their potential to bring together people from diverse sectors around shared goals, offering a space for inclusion and mutual understanding.

In **Malmö**, after assessing engagement mechanisms from the "Learn about adaptation and build your skills" category, participants emphasized the importance of **hands-on climate education** (which includes field data collection, research or experimental method, personalised communication, participatory research, and experiential and immersive education as suitable engagement methods), recognizing its ability to generate multiple co-benefits beyond climate awareness. Favoured engagement formats were those that encouraged social connection, outdoor interaction, and cultural integration. Hands-on approaches were appreciated not only for their practical and participatory nature but also for their capacity to build community cohesion and personal investment in adaptation solutions. It was further suggested introducing school programs for sustainability, inspired by international models, where environmental homework fosters intergenerational learning within families. It was also proposed linking safety, health, and adaptation, i.e., through integrating swimming lessons into climate education, in a way that was both relevant and engaging. Participants also underlined the value of a combination of approaches (similar to the "**multi spaces learning for climate adaptation**" engagement mechanism), from shared discussions with practical exercises, to hybrid approaches including digital tools, where smartphone-accessible training materials were seen as useful complements (not replacements) for in-person learning and dialogue. This combined approach would deepen understanding and embed climate adaptation more naturally into daily life.

In **Rome**, participants from multicultural backgrounds highlighted a preference for community-based and culturally sensitive approaches that facilitated direct participation when assessing the engagement mechanisms from the "Learn about adaptation and build your skills" category. Among the most favoured were **training workshops and mobile skill-building** (which include training sessions, workshops, gamification, webinars and live streams, and interactive content as suitable engagement methods) in combination with **community narratives and cultural events** (which include participatory arts, and informal conversation spaces as suitable engagement methods). They reimagined these through the lens of cultural accessibility by proposing mobile units linked to public events, for example through outdoor games or open-air film screenings, as interactive spaces for informal climate education. They emphasized using these mobile units to foster spontaneous social encounters and community dialogue in familiar settings.

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In addition, they favoured **hands-on climate education** (which include field data collection, research or experimental method, personalised communication, participatory research, and experiential and immersive education as suitable engagement methods) shifted into practical, school-based formats. Participants here proposed experiential education through field trips and environmental art workshops focused on thematic engagement. These approaches were adapted to prioritize direct, sensory, and memorable learning (particularly for younger groups) offering environmental education that is both accessible and rooted in everyday community spaces. Across both groups, participants clearly favoured mechanisms that made climate knowledge tangible, enjoyable, and grounded in direct interaction and active participation.

In **Zaragoza**, participants favoured participatory decision-making processes (from the "Communication" category) and community narratives and cultural events (from the "Learn about adaptation and build your skills" category) as key engagement approaches. **Participatory decision-making processes** (which include participatory research, focus groups, online platforms, webinars and live streams, workshops, and surveys as suitable engagement methods), were valued for its potential to bring discussions closer to the local level, making climate adaptation more accessible and relevant to everyday experiences. Participants stressed the need for inclusive, small-scale discussions that enable meaningful involvement and empower diverse voices. **Community narratives and cultural events** (which include participatory arts and informal conversation spaces as suitable engagement methods) were embraced for their emotional resonance and capacity to communicate through shared stories and creative expression. These formats were appreciated not only for raising awareness but also for cultivating empathy and solidarity, particularly when combining artistic elements with climate messaging to connect on a personal level.

### 6.3.4. Key evaluation criteria

Across all four pilot regions, multicultural participants evaluated engagement approaches through a lens of cultural relevance, accessibility, interactivity, and tangible benefits.

In **Dresden**, the evaluation of engagement mechanisms was rooted in their ability to promote community cohesion, cultural exchange, and practical utility. Participants favoured approaches that offered visible outcomes and those that encouraged skill-sharing and collaborative action. A critical criterion was inclusivity, particularly through the use of multilingual communication, flexible entry points for participation, and the representation of diverse community voices, with engagement seen as most effective when supported by follow-up mechanisms (reinforcing their involvement).

In **Malmö**, clarity of purpose, practical usefulness, and time efficiency were central evaluation criteria. Participants looked for approaches that could be integrated into daily life, were easy to access, and supported in-person connection. Scalability and the capacity to share acquired

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knowledge within and beyond the participant group were also mentioned. There was also a recognition of the need to blend digital accessibility with human interaction, ensuring that engagement was not restricted to tech-savvy individuals.

In **Rome**, participants valued methods that encouraged direct interaction and participation, particularly those that promoted community cohesion and educational engagement. Practicality was a key criterion, especially for school-based and event-driven formats that enabled open dialogue and informal learning. Activities were considered most effective when they supported collective experiences and had a clear, relatable environmental focus.

In **Zaragoza**, participants evaluated engagement mechanisms based on their emotional resonance, cultural accessibility, and ability to foster genuine participation. Approaches were preferred when they enabled meaningful dialogue at the local level and connected with participants' lived experiences. Artistic and narrative-based formats were especially valued for their power to engage through sentiment and storytelling. The capacity of approaches to promote involvement while overcoming information overload was also considered.

### 6.3.5. Least favoured engagement mechanisms

Across the four pilot regions, participants from multicultural communities expressed varying levels of scepticism or disengagement toward several citizen engagement mechanisms co-evaluated through the cards, particularly when these formats were perceived as overly passive, inaccessible, or disconnected from community realities.

In **Dresden**, three mechanisms emerged as least favoured based on participants' concerns: **training workshops and mobile skill-building**, **household preparedness campaigns**, and aspects of **community narratives and cultural events**. Training workshops were seen as overly top-down, with externally set agendas that limited genuine community involvement. Participants felt these approaches often lacked relevance for broader audiences and did not sufficiently allow participants to question, shape, or discuss the issues collaboratively. Household preparedness campaigns were perceived as better suited to professionals, with implementation requiring high individual effort and often being limited in scale and scope (often reaching only small groups) and are further hindered by barriers such as language, which restrict broader participation. They also struggle to achieve impact i.e., hard to overcome people's resistance to change. Cultural storytelling, while appreciated for its social potential, was criticized when the climate message risked being overshadowed by the entertainment aspect. Large group sizes and language barriers further limited participation in these cultural events, particularly for those less confident in public settings.

In **Malmö**, while no mechanism was explicitly rejected, uncertainty about how to evaluate the impact of various engagement formats was expressed. This highlighted a broader concern: without

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clear goals and evaluation criteria, even seemingly effective approaches could fall short. Challenges related to scalability, time demands, and the difficulty of spreading acquired knowledge were flagged as potential barriers, particularly for methods requiring significant commitment, such as experiential learning or in-person discussions.

In **Rome**, there were no specific mechanisms explicitly marked as least favoured. However, the collective emphasis was placed on interactive, practical, and culturally grounded activities, denoting that passive (or more abstract) approaches may have been seen as less relevant or engaging, even if not directly discussed.

In **Zaragoza**, participants expressed reservations about several engagement mechanisms they felt lacked interactivity or local relevance. **Household preparedness campaigns** were viewed as too individualised and disconnected from community realities, particularly for groups facing structural or linguistic barriers. While participants recognised the potential of **multi-spatial learning for climate change adaptation** approach, they felt it lacked emotional resonance and clear messaging, which limited its appeal. The approach was perceived as abstract and less relatable to their everyday experiences. Similarly, public consultation events were seen as overly formal and often symbolic, with limited opportunity for meaningful input.

### 6.3.6. Challenges and suggested improvements

In **Dresden**, multicultural community participants identified several suggestions for improving the effectiveness, inclusivity, and relevance of several practical challenges mentioned in the section above regarding the least favoured co-evaluated engagement mechanisms. For **training workshops and mobile skill-building**, a key barrier was their low visibility and limited appeal. Participants felt that many community members were unaware of these opportunities or uncertain about how to access them. To address this, they recommended not only making these more appealing but also improving outreach and promotion, using tools such as banners, posters, and social media, and linking workshops to festival-style events or other popular gatherings. These strategies were seen as ways to attract more diverse participants and make the workshops feel more inviting and socially engaging.

Regarding **household preparedness campaigns**, participants noted that these often felt too individualised and disconnected from people's everyday routines, especially for groups unfamiliar with institutional systems or formal emergency frameworks. To improve participation, it was suggested to align campaign content more closely with the healthcare system, making preparedness feel more relevant by embedding it in health-related messaging and service environments. Providing basic training or professional guidance was also proposed to help individuals feel more confident in taking part. Additionally, the use of multilingual communication to expand outreach,

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using posters and social media, and emphasizing the benefits of participation (at the personal and community levels) could help overcome reluctance and boost engagement. The limited access given language barriers was a recurring concern, and participants suggested addressing these was essential to broadening the reach and inclusiveness of these campaigns.

For **community narratives and cultural events**, participants highlighted two main concerns: first, that the climate change message was sometimes overshadowed by the cultural content, and second, that language barriers and large group sizes made it difficult for some individuals to engage meaningfully. To strengthen their impact, participants recommended offering these events in multiple languages, and creating more structured moments for dialogue, where the climate focus remains visible and relevant within the broader cultural narrative. This balance was seen as crucial to ensuring the educational goals are not lost within the entertainment component.

In relation to **community dialogue and feedback exchange**, while actually favoured by participants, they pointed out that this approach risked being too dependent on individual motivation and self-organization. To overcome this, they proposed involving local leaders, community representatives, and partners to help coordinate and sustain participation. This could enhance trust, ensure local / cultural sensitivity, making dialogues feel more embedded in the community's social fabric.

Moreover, in Dresden, several cross-cutting improvements were recommended across all mechanisms. One key suggestion was to provide support across all engagement types to ensure accessibility for non-native speakers. Aside from multilingual materials and the use of accessible language, participants also emphasized the importance of tangible, hands-on activities to encourage learning-by-doing and increase motivation through visible results. Clarifying the personal relevance and community benefits of engagement, particularly in preparedness and educational formats, was considered essential for (gaining interest and) increasing engagement. Another recommendation was to create simple, entry-level roles and offer basic training, particularly for methods perceived as technical or expert-driven, to help participants feel more confident and included. Finally, participants stressed that co-creation and flexibility should be central to engagement design, allowing activities to adapt to local needs and reflect the lived experiences of diverse communities.

In **Malmö**, participants reflected on the importance of ensuring that engagement mechanisms are not only meaningful but also strategically planned and measurable. One key challenge discussed was the uncertainty around how to evaluate the actual impact of the activities. A participant questioned whether the objectives, intended audience, and expected outcomes of the engagement approaches had been clearly defined, suggesting that without this clarity, it is difficult to determine which approaches are most effective. To address this, it was proposed to integrate monitoring and evaluation tools into engagement processes from the outset, helping track success and guide improvements over time. Another practical concern was the difficulty of transferring knowledge gained through participation to a broader audience. While the experiential nature of hands-on education was appreciated, it was noted that the time-intensive nature of these approaches limits

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how widely they can be implemented. Participants emphasized the need for complementary outreach strategies to ensure that the benefits of engagement extend beyond those directly involved and can contribute to a wider cultural shift in climate awareness.

In **Rome**, one key challenge identified was the need for engagement activities to be anchored in everyday community life rather than being disconnected from local routines. To address this, participants suggested reconfiguring existing approaches into formats that naturally fit within familiar public settings and educational contexts. Their suggestions placed strong emphasis on using face-to-face interaction and shared community experiences as foundational elements for fostering meaningful participation.

Among the challenges affecting the effectiveness of the assessed engagement mechanisms identified by participants in **Zaragoza**, one major barrier highlighted was the effective communication. Given the current environment of information overload, it becomes more complicated to disseminate and receive climate-related messages in a clear way. Additionally, participants emphasized the difficulty of aligning public administration practices with evolving cultural attitudes, noting significant institutional resistance to change as a key barrier.

To address these challenges, participants recommended employing emotional and authentic messaging to enhance public engagement and foster deeper participation. Leveraging Information and Communication Technologies (ICT) was suggested as a valuable tool for broader and more inclusive dissemination of messages, enabling engagement across diverse community groups. Participants particularly emphasized bridging generational participation gaps by actively addressing youth interests, their critical perspectives towards democracy, and their high motivation for political engagement. Tailoring engagement approaches to better suit youth preferences and capabilities was seen as crucial to enhance effectiveness.

Further suggestions included integrating art and cultural approaches, recognized as innovative and appealing communication strategies, into mechanisms such as **community narratives and cultural events**. They recommended emphasizing local-level discussions within **participatory decision-making processes** to increase their effectiveness and relevance. Lastly, participants advocated for prioritizing quality participation through improved education on engagement mechanisms and favoured the use of smaller, focused groups to ensure active, meaningful, and inclusive participation.

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## 6.4. Additional focus groups with people experiencing vulnerability

Table 4: Summary table of focus groups with people experiencing vulnerability

| Target group | Pilot region | Location | Date | Participants |
|---|---|---|---|---|
| Elderly Citizens | Germany | Neue Volkshaus Cotta, Dresden | Sept. 24, 2024 (9:30 AM–12:30 PM) | 6 elderly (62+ years old) |
| People with Chronic Diseases/Disabilities | Germany | Bürgerlabor, Dresden | May 27, 2024 (5:30 PM) | 4 citizens (with chronic diseases/disabilities) |

### 6.4.1. People with disabilities and chronic diseases target group: context & applied facilitation techniques

People with disabilities and chronic illnesses represent a key target group in the context of climate adaptation. They are often among those most affected by climate impacts such as heatwaves, yet simultaneously face structural, physical, and communicative barriers to participation in adaptation planning and civic engagement. Factors such as mobility limitations, reliance on specific infrastructure, and inaccessible information systems make them particularly vulnerable. However, their lived experience also provides essential insights into designing inclusive, barrier-free solutions that are often overlooked in mainstream planning.

The Adaptation AGORA project recognized the importance of including them in the co-evaluation activities to ensure that the engagement approaches are not only inclusive but also effective for this target group. In that sense, a dedicated focus group in Dresden was held with individuals managing long-term health conditions and/or disabilities, including participants with reduced mobility and chronic diseases. Their participation brought essential insights into the everyday barriers they face and the kinds of engagement formats that would genuinely empower their involvement in adaptation planning. The facilitation drew on conversational techniques with clear prompts and a guided discussion format. While it did not follow a formal “Think-Pair-Share” sequence due to the

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small group size, the session preserved the core principle of structured reflection leading to open dialogue.

### 6.4.2. Locally innovative engagement proposals

Participants with disabilities and chronic illnesses proposed a range of inclusive, flexible, and empowerment-oriented engagement ideas. They expressed interest in contributing through survey participation and online platforms, recognizing these as accessible and low-threshold formats for those with limited mobility, while also appreciating that such low-effort forms help manage expectations in case their input does not lead to tangible outcomes. The idea of citizens' consultation hours was also introduced, regular opportunities for direct dialogue with local authorities or adaptation project teams, structured around listening to their concerns and insights. Participants mentioned also the option of involving them in workshops or working groups where their input could influence tangible outcomes.

Participants also expressed willingness to act as public representatives, proposing to become the "face" of a campaign that raises awareness of inclusive climate adaptation. They envisioned playing a visible role in advocating for accessibility and visibility in the solution process. This included collaborating with urban planners, ensuring that infrastructure decisions consider diverse physical and cognitive needs, and participating in open events or discussion rounds that promote transparency and build trust. These proposals reflect a strong desire not just to be consulted, but to actively shape conversations and decisions from positions of lived experience and equal partnership.

### 6.4.3. Most favoured engagement mechanisms and key evaluation criteria

As the co-created soft adaptation solution developed by this focus group included an accessible mapping app for water and cool spaces alongside the development of a barrier-free, inclusive, and positively framed awareness campaign, the most suitable category for participants to co-evaluate was the "Communication and feedback mechanisms".

From the five assessed engagement cards, participants strongly preferred **participatory decision-making processes** as the most relevant and effective engagement approach for climate adaptation, which include participatory research, webinars and live streams, focus groups, online platforms, workshops, and surveys as the most suitable engagement mechanisms. All participants unanimously supported this approach due to its potential to allow communities to collaboratively develop

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solutions in a transparent and inclusive manner. Engagement mechanisms under this category (e.g., participatory research, focus groups, workshops, online platforms, and surveys) were seen as effective tools for creating spaces where all voices could be heard and considered in shaping local adaptation strategies.

In addition to participatory processes, participants also recognised the value of **online platforms and surveys**, which include online platforms, webinars and live streams, online forums, and (online) surveys as the most suitable engagement methods, mainly for their low-effort access and ability to collect a broad range of inputs quickly. Although not the primary choice, these were appreciated for offering inclusive opportunities for those who may have limitations in mobility or availability. However, their potential to exclude individuals without internet access or to reflect only already-interested segments was acknowledged.

The **evaluation criteria** applied by participants emphasized inclusivity, transparency, practicality, and sustainability as essential criteria for their effective engagement.

They valued structured yet open processes that allow for collective input from the outset, ensuring all voices are heard and avoiding tokenistic involvement. Neutral and competent facilitation (ideally through an independent body) was seen as key to ensuring equity and credibility. While online platforms and surveys were appreciated for their accessibility and low effort, concerns about digital exclusion and limited representativity led to calls for publicly shared feedback to build trust. An important evaluation criterion was also the engagement formats, i.e., need to be frequent, locally grounded, and communicated inclusively, due to concerns about limited impact, reliance on individuals, and selective participation in other mechanisms.

### 6.4.4. Least favoured engagement mechanisms

Participants identified several engagement mechanisms from the “Communication and feedback mechanisms” category that were less favoured due to concerns over inclusivity, transparency, and actual impact. The least favoured engagement mechanisms were overall those perceived as top-down, passive, or lacking in transparency, as well as those that might (unintentionally) exclude certain groups.

**Public hearings and consultation events** were viewed with scepticism, stating that these events often lacked inclusive decision-making processes. There was a widespread perception that such consultations presented outcomes as already decided, leaving little room for citizen input to be seriously considered. As a result, these formats were seen as largely symbolic (i.e., of a tokenistic nature), with feedback typically only reflecting the views of the most vocal participants, rather than the broader public.

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**Community liaison officers** also received limited support. While participants acknowledged the potential of this role, they noted several limitations. There was concern that relying on a single individual to speak on behalf of diverse community needs could compromise representation accuracy and inclusivity. Participants felt that a lone liaison may not be able to bridge communication gaps adequately between groups.

### 6.4.5. Challenges and suggested improvements

Participants identified key challenges and offered targeted improvements for engagement mechanisms assessed during the co-evaluation phase. As noted above, **public hearings and consultation events** were criticized for their tokenistic nature, with participants perceiving decisions as predetermined and input from (less vocal) citizens rarely integrated in a meaningful way. To address these concerns, participants recommended meaningfully integrating feedback from the public into decision-making processes and clearly communicating how citizen contributions have shaped outcomes.

Regarding **community liaison officers**, participants highlighted significant barriers related to representation and trust given their reliance on a single individual (see above). The need to find highly skilled, trustworthy mediators was identified as a barrier to successful implementation. Thus, participants stressed the importance of employing multiple liaison officers who are skilled, trusted, and capable of effectively bridging gaps between stakeholders. Increasing transparency in larger meetings was proposed as a solution to ensure community expectations and goals were clearly communicated and properly reflected.

**Community dialogue and feedback exchange** approaches, while appreciated for bringing varied perspectives together, were seen as susceptible to selective outcomes and limited representativeness, potentially leading to cherry-picking of ideas. Participants suggested increasing the frequency and local grounding of these dialogues to encourage broader, more consistent participation and mitigate selective representation. Additionally, leveraging on social media and newsletters, was proposed as an effective strategy to disseminate outcomes and encourage ongoing dialogue (to update the community on progress and gather feedback).

Additionally, participants recommended adopting hybrid event formats and offering multiple dates and venues to improve accessibility, ensuring a wider demographic and geographic participation.

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### 6.4.6. Senior citizens target group: context & applied facilitation techniques

Senior citizens are among the groups most vulnerable to the impacts of climate change, particularly during extreme heat events. Age-related changes in thermoregulation, mobility, chronic health conditions, and social isolation significantly increase their sensitivity to heatwaves. At the same time, their life experience (potential resilience strategies) and local knowledge can contribute meaningfully to climate adaptation planning.

In Dresden, a dedicated focus group with seniors was held at a neighbourhood and cultural centre, where local seniors meet frequently and took place as part of their weekly meeting event series. Participants, aged 62 and older, included most exclusively active retirees. Rather than following a structured engagement mechanism like the "Think-Pair-Share" or using the visual card deck to assess engagement mechanisms, the facilitation was deliberately adapted on the spot, to suit the group's rhythm and preferences, placing emphasis on open dialogue and comfort. As participants voiced a strong preference for verbal discussion over written exercises, this session was carried as a guided open discussion complemented by informal sharing and personal storytelling.

### 6.4.7. Locally innovative engagement proposals

Without formally evaluating the citizen engagement mechanisms cards, participants shared ideas through informal dialogue, reflecting their lived experiences and communication preferences. Building on the open discussion format previously described, the key insights that emerged during the senior citizens focus group in Dresden are presented below.

Participants highlighted a strong preference for unstructured, discussion-based engagement formats, noting that open dialogue fostered more creative and meaningful contributions than task-based format (e.g., that include very structured or writing tasks), as proved even during the focus group event (as noted above). They also proposed neighbourhood gatherings, courtyard events, and informal peer-to-peer communication, as engagement mechanisms rooted in their everyday community life. These settings were seen as familiar and approachable, particularly for seniors who may be willing to avoid formal institutions or feel socially isolated. Participants emphasized that their closest social network, such as family members and caregivers should also be part of engagement efforts, supporting them especially during extreme weather events.

Seniors also underlined the importance of non-digital, analogue communication methods. Radio and TV was cited as a particularly effective channel, trusted, widely used, and capable of delivering humorous, friendly reminders about hydration and heat protection without sounding patronizing.

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Complementing this, printed and digital material (i.e., posters and public signage especially in public infrastructure such as trams, buses and stops), were proposed as accessible tools to reach broader senior audiences. Across their contributions, seniors conveyed a clear message: engagement must be culturally resonant, low-threshold, and adapted to the rhythms of their daily lives. Communication ought to rely more on personal contact, familiar communication channels, and a tone of mutual respect rather than an instructional or authoritarian one.

Elderly participants evaluated engagement mechanisms based on their accessibility, familiarity, and respect for autonomy. Trusted, non-digital communication channels like radio and printed materials were preferred for their passive and unobtrusive nature. Participants valued approaches that encouraged action subtly (through humour or storytelling) rather than through directive messaging. They favoured local, conversational formats that fostered inclusion and reflected their everyday social environments.

## 6.5. Facilitating meaningful engagement: Reflections on methods, engagement approaches, and evaluation (evaluation framework)

This section examines how the engagement methods and the facilitation techniques used in the Adaptation AGORA focus groups shaped the quality of citizen participation across the four pilot regions. The focus groups followed a shared general structure developed collaboratively by project partners (as described in the methodology chapter and the focus groups protocols). Within these, different facilitation formats (e.g., “Think-Pair-Share”, “Nominal Group Technique”, “1-2-4-All”, “HOW”, the Sociocratic “Participatory Proposal Writing”) including context-specific adaptations were selected based on earlier training and testing and adjusted to suit the needs of different target groups. The Adaptation AGORA evaluation framework provided a basis for reflecting on the inclusiveness and effectiveness of these approaches. This section summarises the insights from participant feedback and facilitator observations.

To structure the analysis of feedback gathered during the focus groups, we will proceed here by discussing outcomes across the four dimensions (pathways to impact) of the Adaptation AGORA evaluation framework: relevant knowledge and action, just representation and participation, mutual learning, and improved collaboration.

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### 6.5.1. Relevant knowledge and action

In Rome, Zaragoza, and Dresden, participants evaluated this dimension through surveys using a Likert scale, with particularly strong outcomes in Zaragoza (see Figure 13), suggesting that participants there found the engagement activities particularly well-aligned with their local context and adaptation needs. In Malmö, although participant scoring was not used, the facilitator's internal assessment reported strong alignment with this category, particularly noting how each target group was able to relate their input to ongoing heat-related risks.

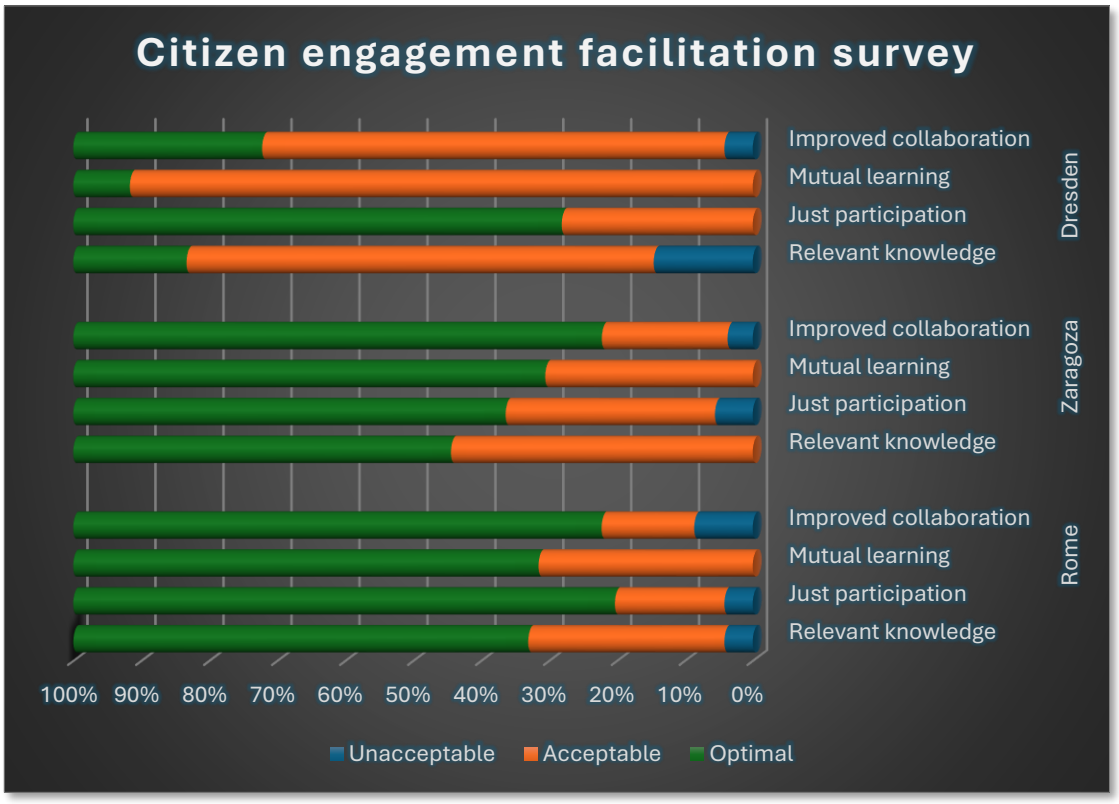


Figure 13: Citizen engagement facilitation according to the four dimensions of the Adaptation AGORA evaluation framework

However, not all participants felt that the workshop was relevant to their personal or professional activities in the same manner. While replies to this had a high score, it was slightly lower than the overall average for all other questions. This suggests that while the sessions were generally well-received, some participants felt that the discussions or outcomes didn't fully connect to their personal lives or work situations. This feedback highlights the need to make climate adaptation topics feel more relevant to people's everyday experiences or professional roles, especially for

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younger participants (see Figure 14, how remarkably the replies in blue partly agreeing with this statement, from the youth in the right, largely surpass the ones completely agreeing with it, compared to the average in the far left).

### 6.5.2. Just representation and participation

This category shows the most variation. Dresden's strong performance is likely linked to the tailored inclusion strategies engaging a demographically diverse group used for seniors, people with disabilities, and healthcare workers. The facilitation approach there involved specific techniques to reduce barriers to participation (e.g., the extensive use of rounds to moderate discussions among participants, adapting formats to physical accessibility and cognitive needs), and choosing familiar venues and timing. In Zaragoza and Rome, while access and engagement were generally good, the lower scores suggest that either some barriers for participation were encountered or that participants had a skewed perception given their participation within a specific target group. In Malmö, the internal evaluation also highlighted success in this category, observing high levels of active participation across all target groups, with special mention of the multicultural communities' comfort and openness during discussions. This was attributed to the use of culturally resonant examples, use of local facilitators with community ties, and a structured yet informal group atmosphere. However, participant feedback suggests that inclusion was not uniformly experienced. In the multicultural focus group, language barriers limited the ability of some participants to fully articulate their views, which led to less detailed input compared to other groups. In addition, a young participant expressed feeling shy and that their views were thus not fully respected within the youth group, pointing to the need for greater attention to equitable dialogue. This highlights the challenge of balancing structure and flexibility within the engagement protocol, especially across such diverse participant profiles.

### 6.5.3. Mutual learning

While participants reported high satisfaction with the engagement activities, mutual learning-related outcomes scored significantly lower for the engaged youth, more specifically for the questions '*I have learned something new*' and '*I have identified new knowledge needs*' (see the replies partly agreeing with these statements surpassing the ones completely agreeing with these in Figure 14). This suggests that there is a margin of improvement regarding how activities and focus group events overall also provide participants with new or unexpected knowledge. Moreover, this might also reflect that participants came in already well-informed, particularly given their profile as 'engaged youth' in climate issues. This shows that adding more educational elements in

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future activities targeting young people might be favourable. This is especially true when considering their expressed interest in skill-building and actionable, project-based learning formats (as it will become evident in the coming sections).

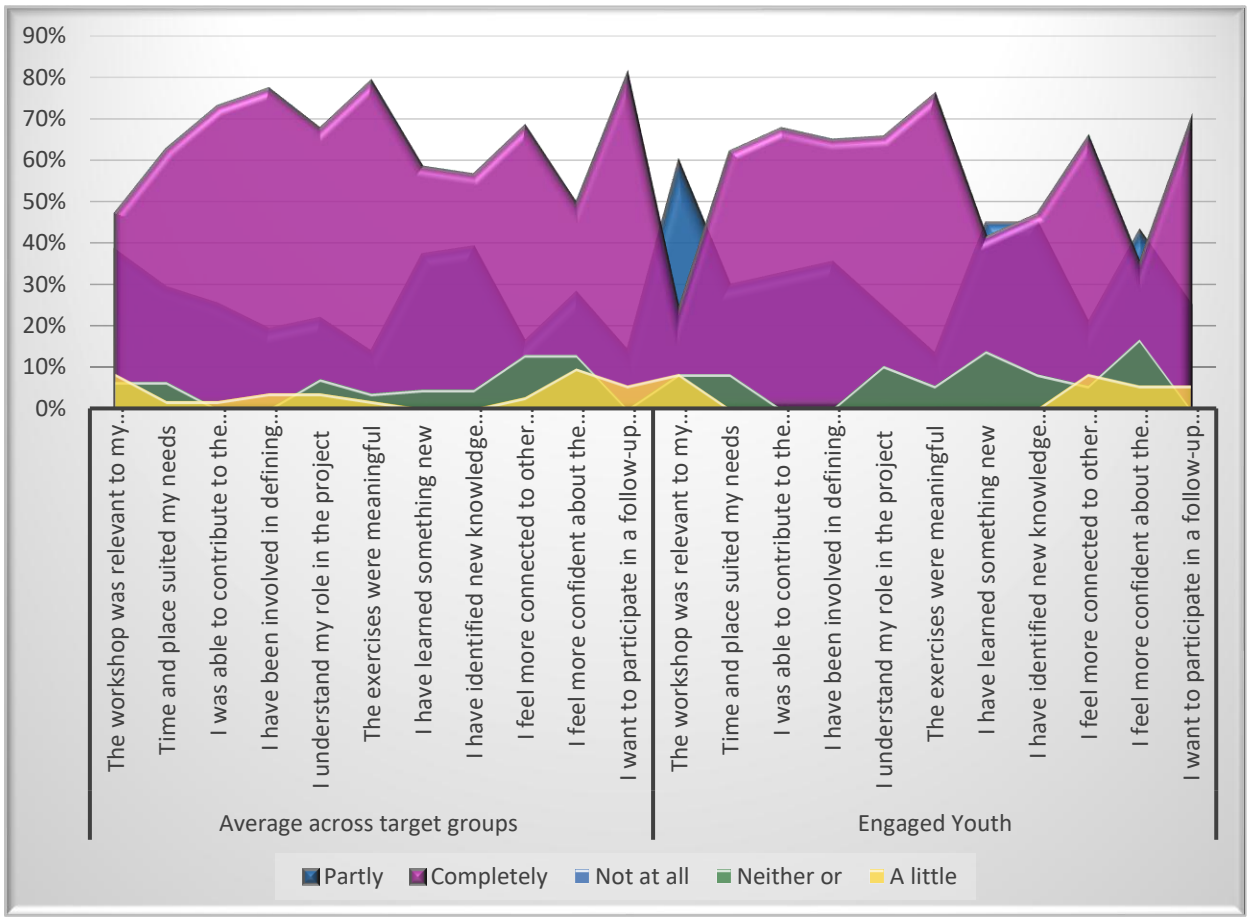


Figure 14: Comparison between average facilitation outcomes across target groups and the engaged youth (this illustrates how the overwhelming majority of replies completely or partly agreeing with these statements)

Finally, while participants often benefit from such participatory processes, e.g., a stronger sense of ownership over local issues, enhanced understanding of scientific concepts, and empowerment to engage in collective action, the facilitation of these events was primarily focused on discussion and evaluating engagement mechanisms, rather than on expanding participants' knowledge. This reflects a deliberate design choice made early in WP2 (in collaboration with partners in WP1 and the Adaptation AGORA consortium) whereby the focus groups were intended as spaces for co-creation and co-evaluation, not as formal educational sessions.

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### 6.5.4. Improved Collaboration

Most evaluation criteria were rated very highly by participants across all pilot regions and groups. However, when asked whether they "felt more confident about the potential for collaborative solutions", participants gave slightly lower scores, still positive, but not as strong as for other statements. This pattern was especially evident among the engaged youth, where the score for this question was noticeably lower than for other target groups (see Figure 14).

While not conclusive, this may suggest that occasional gaps remain between the engagement experience itself (from the focus group participation and solutions provided) and expectations about follow-up or institutional action. For example, a participant in Dresden inquired whether the solutions co-created would be taken forward by the city ("*What happens to the solutions we created? Will they be implemented from the city? Will the suggestions be implemented in any way or what did we do them for?*") indicating a desire for transparency around the next steps and follow-up on the solutions. Additionally, feedback from Malmö's youth group suggested continuity in the engagement with citizens (in schools with more young people and in elderly care homes), while in the group from multicultural communities, the one-off nature of the focus group activity was noted as a limitation, suggesting that continuous engagement could help strengthen the outcomes.

A potential reason for participants' hesitation may lie in the expectation gap between the facilitation methods experienced during the sessions, encouraging inclusive and meaningful dialogue, and the perceived lack of institutional pathways to act on the proposals generated.

The rich discussions sessions (from the co-creation of solutions to the co-evaluation of engagement mechanisms) may have raised expectations about participants' agency in shaping actual policies, however, they may not have fully convinced participants about whether that experience would translate into sustained, collaborative impact. Furthermore, youth participants also highlighted the need for visible policy and feedback from institutions, suggesting that without tangible signals of uptake or commitment, their collaborative confidence remains guarded. This finding has important methodological implications: while facilitation can effectively build trust within the session, it must be complemented by well-framed post-engagement pathways that ensure continuity. Future engagement processes should include clear next steps and (when possible) institutional commitments, such as clearly indicating how outcomes could be integrated into action plans, and ensuring the provision of regular updates, to sustain momentum and reinforce participants' confidence in the relevance and impact of their contributions.

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### 6.5.5. Reflections on the citizen engagement process and its evaluation

The way in which the focus groups were implemented across the pilot regions showed that a structured yet adaptable facilitation approach was effective in supporting participant engagement. The sequence of "co-create first, then co-evaluate," combined with the above-mentioned facilitation techniques provided a useful format for exploring locally relevant issues before reflecting on engagement practices. Facilitator training sessions helped prepare facilitators to work in an inclusive manner with different group dynamics and adjust methods to suit specific participant needs and support meaningful contributions. This was reflected in generally positive feedback, especially regarding mutual learning and just representation and participation.

Together with this, the application of the Adaptation AGORA evaluation framework added significant value by providing a practical and coherent approach for assessing the quality and inclusiveness of the citizen engagement process. The framework allowed for a systematic reflection across the four key dimensions. The user-friendly rubrics and adaptable criteria for each dimension, made the assessment process both more accessible and structured. It helped facilitators and participants to reflect on their engagement experience in a clear and organised way. The framework proved useful not only for collecting structured feedback but also for encouraging iterative learning and supporting transparency within the climate adaptation engagement process.

### 6.5.6. Additional feedback from participants

Based on responses to the survey question "Which mode of engagement did you prefer?" (amongst the three main phases of the focus group sessions, namely experiences exchange or storytelling sessions, co-creation of soft adaptation solutions, and co-evaluation of engagement mechanisms), participants across all pilot regions showed a clear preference for co-creation of soft adaptation solutions. This was especially true among youth in Rome and Dresden, workers and multicultural communities in Zaragoza, and health professionals in Rome. This method was valued for its clear action-oriented format which supported in developing and refining ideas together. In contrast, experience exchange or storytelling sessions received more mixed feedback. These were well received by some people experiencing vulnerabilities, such as older participants or people with disabilities and chronic diseases, who valued sharing their own experiences and open discussion formats. However, they were less preferred by youth and professionals, who perceived them as less productive and tended to favour more outcome-oriented activities.

The co-evaluation of engagement mechanisms was well appreciated, particularly by youth groups, who found value in learning about different participatory mechanisms and approaches and reflect

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on their usefulness. These insights reinforce the importance of designing engagement formats that are both purposeful and co-creative, while also acknowledging that storytelling can serve as a valuable entry point for some groups and an accessible way for them to relate to problems both personally and socially.

Regarding the facilitation techniques used specifically within the focus groups, participants across the focus groups, in response to the survey question “Which facilitation methods did you prefer? (“Open discussion” / “Think-Pair-Share” / “Nominal Group Technique” / others)”, favoured the “Think-Pair-Share” technique. This approach was praised for enabling individual reflection before group discussion and was particularly effective for youth and workers. In Rome particularly, “Think-Pair-Share” combined with the “How” method was consistently appreciated for supporting stepwise synthesis, while the “Nominal Group Technique” stood out for its clarity and balance. The “Nominal Group Technique” was also appreciated especially by youth and health professionals for its fairness, structure, and ability to encourage broad participation. These findings suggest that facilitation methods allowing progressive engagement, moving from individual to group reflection, are most effective in ensuring inclusive and focused outcomes. Finally, open (or plenary) discussions were particularly praised by seniors and multicultural groups, or as one senior participant put it: “in discussions, ideas come up, it’s like brainstorming”.

When asked for improvements for future events, some participants identified suggestions regarding more time for idea development, a stronger outreach and communication, greater diversity, and better follow-up. Some participants from the youth and multicultural groups proposed longer sessions or the use of pre-workshop materials to support preparation. Some participants expressed a desire for broader representation, e.g., “I would like to see more people involved, to gain different perspectives and include those who are less familiar with the issues discussed” and “I would like to see more participation / a higher number of participants, which would allow for more exchange”. Here, it is important to note that the focus groups were intentionally designed to engage a specific target group and limited number of participants per session, with the idea of creating a safe space for focused and deeper dialogue within relatively homogeneous groups. Finally, across all regions, some participants expressed curiosity or a shared uncertainty about what would happen with their contributions, if these would lead to visible, concrete action, with a few asking for “Concrete actions and that they do not remain on paper” or “What happens to the solutions we created?”. This suggests an opportunity to further strengthen communication, clarify next steps, and ensure that follow-up mechanisms are visible to citizens in general and participants in particular, helping to keep the link between participation and action.

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# 7. Discussions and recommendations

## 7.1. Engagement mechanisms: Findings across target groups and pilot regions

### 7.1.1. Top 5 most preferred engagement mechanisms

**Training workshops and mobile skill-building (category: learn about adaptation and build your skills - public awareness and capacity building)**

Most favoured on five occasions across the pilot regions: This mechanism was most favoured in Rome by both the engaged youth and the multicultural communities, in Zaragoza by the youth group, and twice in Dresden by healthcare workers (in both focus groups).

In Rome, participants from both target groups appreciated the mechanism's interactive and adaptable format, noting its accessibility and potential to engage wider audiences through mobile units, public spaces, and community events. It was recognised as a practical approach to community-based education that could be tailored to local cultural contexts.

In Zaragoza, youth participants viewed this mechanism as an effective and engaging way to share knowledge, particularly in hands-on formats relevant to climate adaptation and energy poverty.

In Dresden, healthcare workers across focus groups highlighted the value of training workshops within hospital settings, pointing to their role in supporting on-site staff learning and raising awareness about heat-related health risks.

This engagement approach was preferred for several reasons. It was seen as inclusive and especially well-suited for reaching underrepresented groups, as well as individuals with varying educational backgrounds who benefit from applied, non-technical formats. This approach could be adapted to different community and institutional settings, and it supported peer learning and collaboration with local experts and practitioners. It offers flexibility for integration into schools, neighbourhoods, or public events, and can be adapted to specific community needs or different contexts (e.g., caregivers).

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**Participatory decision-making processes (category: communication and feedback mechanisms)**

Most favoured on five occasions across the pilot regions. In Zaragoza, both youth and multicultural groups appreciated participatory decision-making as a democratic and transparent engagement format. It was particularly valued for its ability to integrate citizen input visibly into climate adaptation policies, which participants felt was essential for motivating long-term involvement and reinforcing their sense of agency.

In Dresden, this approach was endorsed by healthcare professionals and people with disabilities and chronic diseases, who found it valuable for fostering inclusive, department-level dialogue. It was considered a practical way for tailoring heat protection and adaptation strategies to local institutional realities.

In Rome, the working population highlighted the importance of this approach for facilitating structured, in-person exchanges on adaptation challenges affecting commuting and workplace environments.

This engagement approach was preferred for its capacity to support transparent and inclusive governance through structured dialogue. It was also seen as empowering for a diverse range of citizens, allowing them to contribute to shape adaptation responses in realistic, context-sensitive ways. Additionally, it was deemed to enhance the legitimacy of policy decisions by grounding them in their lived experience.

**Hands-on climate education (category: learn about adaptation and build your skills - public awareness and capacity building)**

Most favoured on three occasions across the pilot regions. In Dresden, engaged youth strongly prioritised it for its capacity to combine learning and peer collaboration through practical activities such as fieldwork, citizen science, and nature-based projects. It was especially appreciated in informal or extracurricular contexts, where the focus on active participation made climate education more engaging and tangible.

In Malmö, participants with multicultural backgrounds valued this approach for its wide range of co-benefits. They highlighted its ability to foster inclusion, promote outdoor learning, and allow for intergenerational exchange.

In Zaragoza, workers indicated that experiential learning opportunities within neighbourhood settings could be particularly effective. They considered this approach is well-suited for promoting collective action and strengthening local networks (e.g., neighbourhood associations).

This engagement approach was preferred because it offers practical and memorable learning experiences that are grounded in real-life situations and involve direct participation. It was particularly well-received by youth and newcomers, who appreciated the visible and tangible

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outcomes of their involvement. Beyond advancing long-term skill development, this mechanism was also seen as a way to strengthen social cohesion (both within a specific citizen group and/or at the community level). It encourages civic engagement and environmental responsibility across age groups and cultural backgrounds.

These findings are consistent with ongoing research that highlights the potential of citizen science to support more participatory forms of governance (as a form of democratic innovation). Contributory approaches, where citizens are involved in structured data collection, may also help lay the groundwork for broader civic involvement and dialogue. When combined with inclusive communication and decision-making formats, such approaches can contribute to building scientific understanding, trust, and constructive public exchange (Bedessem et al., 2023).

**Localised alert systems (category: prepare for emergency - community resilience and early warning systems)**

Favoured primarily in Malmö by both the engaged youth and the working population target groups, this engagement approach was appreciated for its practicality and protective function in relation to heatwave preparedness. It was considered effective due to its low participation threshold and immediate applicability, offering a way to reach broad segments of the population without requiring high levels of time commitment or technical involvement.

Participants emphasised the importance of tailoring alerts to the specific needs of different groups, including youth, the elderly, and newcomers. Accessible communication was seen as a key feature of this approach, with strong support for combining digital tools with analogue formats to ensure messages could reach as many people as possible. Suggestions included using mobile apps, SMS, TV and radio for general alerts, while also ensuring that non-digital channels were available particularly for elderly groups (not only through TV and radio but also via printed materials at pharmacies, bus stops, grocery stores, and trusted intermediaries like civil society organizations and caregivers). The use of multilingual and visually clear formats was also seen as essential for reaching multicultural communities and outdoor workers.

This engagement mechanism was valued for its inclusive reach across different literacy levels and social groups. By combining multiple communication channels, it provides a flexible model that can be adapted to diverse contexts while maintaining a focus on clarity, accessibility, and protective action. Participants recognised it as an approach that could support public awareness and preparedness without requiring intensive personal involvement, making it a useful complement to more participatory formats.

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**Community narratives and cultural events (category: learn about adaptation and build your skills - public awareness and capacity building)**

Most favoured in Rome and twice in Zaragoza (by both the multicultural and working population groups), this mechanism was appreciated for its ability to connect climate adaptation themes to everyday experiences through culturally familiar formats. In Rome, multicultural participants reinterpreted this engagement approach by suggesting open-air film screenings and interactive street games as creative and inclusive tools for informal climate education and community interaction. These adaptations were seen as effective in reaching diverse audiences, particularly in public spaces where formal communication might otherwise be less engaging.

In Zaragoza, both multicultural communities and workers highlighted the value of emotional resonance in communication, pointing to storytelling and artistic expression as meaningful ways to build empathy and promote inclusion. When well-designed, these events were considered successful in encouraging participation by linking climate-related messages to cultural identity and shared experience.

This approach was favoured for its capacity to harness creativity, emotion, and collective identity to foster engagement. It proved accessible across language and literacy barriers, particularly in informal or community-based settings. By encouraging reflection and dialogue through art, humour, and relatable storytelling, it offered a flexible entry point into climate adaptation discussions for a wide range of participants.

**Notable mention: Community gardens and shared spaces (category: engage as community - community engagement and participation)**

This engagement approach (considered close in its thematic approach to community narratives and cultural events) was most favoured by the multicultural group in Dresden, where participants highlighted its practicality, cultural relevance, and social value. Community gardens were described as inclusive and tangible spaces that support peer learning, intercultural exchange, and visible connections to climate adaptation efforts. The hands-on, place-based nature of this approach was seen as particularly effective in fostering informal education, mutual support, and participation across generational and linguistic differences. In that sense, this approach also aligned with preferences expressed by engaged youth in Dresden, who advocated for experiential, community-based formats such as environmental monitoring and collaborative local projects.

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### 7.1.2. Top 5 least preferred engagement mechanisms

**Public hearings and consultation events (category: communication and feedback mechanisms)**

Identified as one of the least favoured engagement mechanisms in both Zaragoza and Dresden, these engagement mechanisms were perceived as passive and ineffective formats. In Zaragoza, engaged youth criticised these events for lacking meaningful dialogue and interactivity. While acknowledging the value of exposing individuals to diverse viewpoints, they expressed concerns that such formats often allowed only a few vocal individuals to dominate the discussion, limiting the potential for broader, more balanced participation. The setting was described as formal and distant, making it difficult for many participants to engage comfortably or feel that their contributions carried weight.

In Dresden, participants from the group of people with disabilities and chronic illnesses expressed similar reservations. The approach was viewed as largely symbolic, with limited evidence that citizen input actually influenced outcomes. There was a shared sense of scepticism about the real impact of participation in these settings, and frustration over the lack of transparency or follow-up regarding how feedback was used in decision-making processes.

This engagement mechanism was generally seen as poorly suited to inclusive and empowering participation. Its format fails to accommodate quieter voices or create the conditions for trust-building, leading to a perception that these engagement mechanisms often serve as procedural checkboxes rather than opportunities for genuine dialogue and collaboration.

**Community liaison officers (category: communication and feedback mechanisms)**

Identified among working populations and participants with disabilities in Dresden as one of the least favoured engagement mechanisms, this mechanism raised concerns related to its clarity, practicality, and effectiveness. Participants were not confident to rely on a single intermediary to represent the perspectives and needs of diverse community members. In both groups, the role of a community liaison officer was seen as difficult to define in terms of clear responsibilities, and participants questioned whether such a role could genuinely reflect the range of views within their communities.

There were also concerns about the interpersonal demands associated with the role, including the advanced communication, mediation, and negotiation skills it would require, qualities that may not always be present or easily identifiable in practice. Some feared that liaison officers might be perceived as middlemen lacking real influence over decision-making processes, leading to mistrust or disengagement rather than stronger community ties. The lack of institutional clarity and support

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for such a role added to the scepticism, particularly among people experiencing vulnerabilities who already face barriers to participation.

In the specific context of Dresden and the broader former East Germany, these perceptions may also be rooted in deeper historical experiences of state surveillance and institutional control. During the German Democratic Republic era, institutions like the Stasi systematically undermined public trust through tactics such as “Zersetzung”, a psychological warfare strategy designed to destabilize individuals and suppress dissent. Research by Lichter et al. (2021) has shown that areas with higher densities of Stasi informants still exhibit lower levels of interpersonal and institutional trust decades after reunification. In this light, proposals involving appointed intermediaries, particularly those positioned between citizens and authorities, may inadvertently echo past dynamics of top-down control, contributing to lingering scepticism and reluctance to delegate representation to a single figure.

**Household preparedness campaigns (category: prepare for emergency - community resilience and early warning systems)**

Household preparedness campaigns emerged as one of the least favoured engagement mechanisms across several pilot regions, particularly among working populations in Malmö and Dresden, as well as multicultural communities in both Dresden and Zaragoza. Participants across these groups raised concerns about the format’s individualised nature and its reliance on personal motivation, capacity, and individual knowledge, factors that many felt undermined its inclusiveness and effectiveness.

In Malmö, members of the working population expressed scepticism about the campaign’s practicality, suggesting that it might only be suitable for retired individuals with more available time. Similarly, in Dresden, working participants viewed the approach as lacking coordination and overly dependent on individual initiative or departmental / individual knowledge. Some participants suggested the approach could be improved by integrating it into digital platforms, offering practical tools such as checklists and clear guidance to support engagement in a more manageable way.

Multicultural communities in Dresden and Zaragoza similarly found the approach inaccessible, citing language and structural barriers, limited scalability, and weak links to community realities. Across all contexts, the approach was perceived as isolating and low in impact when implemented without institutional support or a collaborative framework. Participants agreed that while personal preparedness is important, the approach was too demanding when positioned as an individual responsibility and would be more effective if embedded within community structures or supported by public institutions through coordinated and inclusive outreach.

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**Community disaster committees (category: prepare for emergency - community resilience and early warning systems)**

Least favoured in the two focus groups for workers in Dresden, this engagement mechanism was met with strong reservations among healthcare professionals. The approach was perceived as overly bureaucratic and difficult to align with the realities of fast-paced, high-pressure work environments. Participants described community disaster committees as time-consuming and heavily dependent on specialised knowledge and institutional support, resources that were often limited or unavailable in their everyday settings.

The approach was also viewed as too complex for volunteer-based participation. Participants expressed doubts about its feasibility without formal roles, clear incentives, or designated leadership to ensure ownership and follow-through. In both working groups, the format appeared detached from the practical conditions on the ground, lacking the flexibility required to adapt to different organisational contexts and operational constraints.

**Training Workshops and Mobile Skill-Building (category: learn about adaptation and build your skills - public awareness and capacity building)**

Although this approach was one of the most favoured engagement mechanisms overall (particularly in Rome, Zaragoza (youth), and both healthcare-focused groups in Dresden) it was also among the least favoured in two specific contexts: the worker population in Zaragoza and the multicultural group in Dresden. These contrasting responses highlight that the effectiveness of training workshops and mobile skill-building formats depends significantly on how well they are adapted to the specific needs and realities of the target group.

In Zaragoza, members of the working population viewed these sessions as impractical, especially when they lacked cultural resonance or were not facilitated in a way that connected with participants' daily routines and responsibilities. Time constraints and limited relevance to their immediate context reduced the method's appeal. In Dresden, multicultural participants criticised the same format for being too top-down, often guided by externally set agendas that left little room for local ownership or active input. When workshops were perceived as formal, disconnected from lived experiences, or not adapted to participants' linguistic and cultural backgrounds, they were seen as inaccessible and unengaging.

These critiques contrast with the positive reception the approach received for example in both healthcare-focused groups in Dresden, where the workshops were imagined more clearly aligned with professional needs and integrated into institutional settings. This highlights that the success of training and skill-building formats is strongly dependent on contextual tailoring and the quality of facilitation. Without participatory design and cultural or situational relevance, even broadly effective approaches risk disengagement, particularly among busy or culturally diverse audiences.

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### 7.1.3. Reflections on favoured engagement mechanisms and their implications for citizen engagement methods

The cumulative analysis of results across all focus groups confirms a striking pattern: citizens consistently favour engagement mechanisms that emphasise co-creation, practical learning, and direct participation over more traditional or passive forms of engagement. These preferences align with the core principles and findings of the WP1 findings (see Deliverable D1.2), which identify inclusive, participatory, empowering, action-oriented, and context-relevant practices as key to effective citizen engagement in climate adaptation

A more detailed review reveals that participants across target groups favoured engagement mechanisms that involve active learning, personal contribution, and visible outcomes. For that reason, citizen engagement methods (CE methods) like training sessions, workshops, and interactive content stand out because they allow citizens not only to learn but to immediately apply knowledge and contribute to practical outputs.

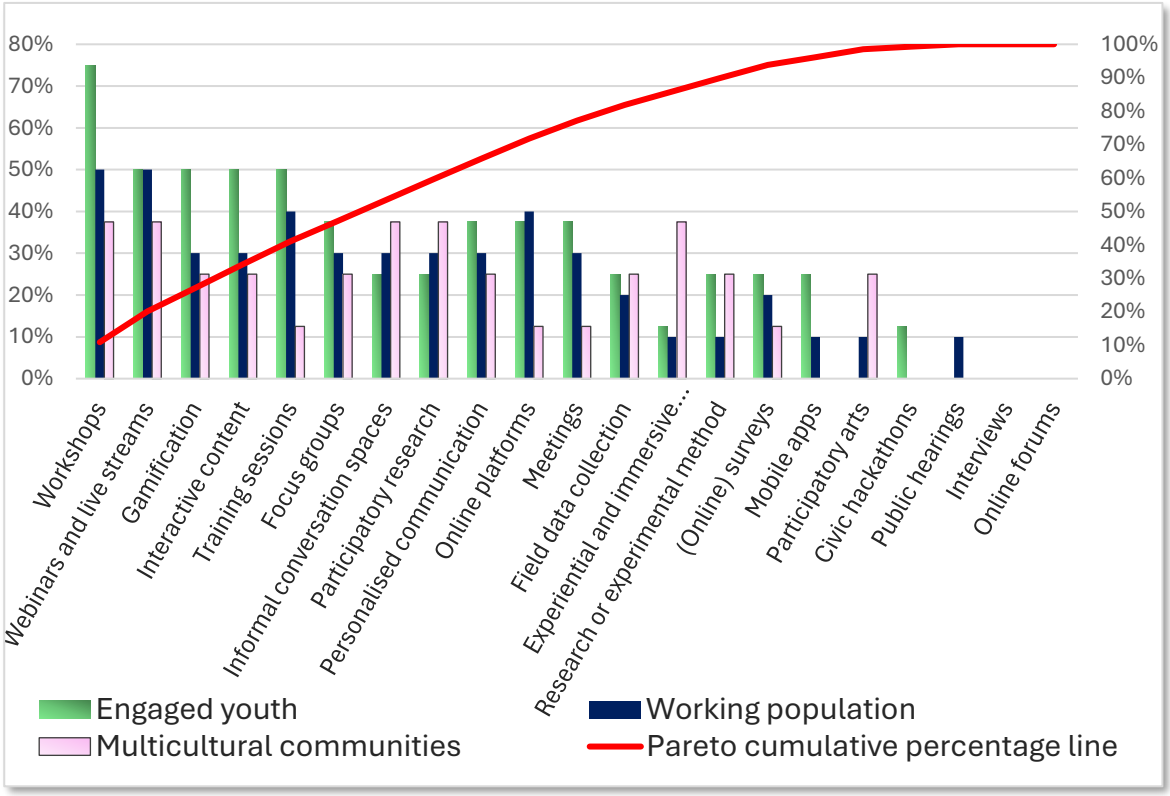


Figure 15: Suitable CE methods falling within the most favoured engagement mechanisms across target groups

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When looking more in depth, seven CE methods alone, namely workshops, webinars and live streams, gamification, interactive content, training sessions, focus groups, and informal conversation spaces, account for over half (53%) of all of the suitable CE methods identified for the 28 top engagement mechanisms selected across the 14 assessed focus groups, out of a total of 21 available CE methods (see pareto cumulative percentage line in Figure 15). Using these same seven CE methods, only two engagement mechanisms, namely public hearings and consultation events, and hands-on climate education, are not covered (with at least one suitable CE method). Nonetheless, all participants from the 14 focus groups across the pilot regions can be engaged through at least one of these methods within their two most favoured engagement mechanisms. All of which clearly points out a significant opportunity: Focusing future citizen engagement activities around a core and adaptable set of methods will not only simplify planning but also allow for more flexible and context-sensitive designs. This is particularly valuable when working with diverse groups, such as multicultural communities, youth, and people experiencing vulnerability, where different levels of experience, education, and access need to be accommodated.

In addition, the prominence of “webinars and live streams” and “gamification” as suitable CE methods shows that digital tools can meaningfully complement traditional in-person methods, especially when accessibility and interactivity are prioritised. This hybrid dimension also addresses some of the engagement challenges previously identified in Adaptation AGORA’s project (and highlighted in the WP1 Deliverable D1.2), where reaching wider and more diverse audiences was seen as a key challenge.

The convergence of citizen preferences around a core set of CE methods reflects that successful engagement in climate adaptation is not necessarily about inventing new tools but about adapting and refining existing participatory methods to make them inclusive, action-oriented, and meaningful. This insight reinforces the purpose behind the development and use of the Citizen Engagement Mechanisms Card Deck which aims to make participatory engagement methods more accessible and relatable for citizens. Results indicate that it helped participants co-evaluate and select engagement strategies connected to locally co-created adaptation solutions, addressing challenges such as unfamiliarity with technical concepts and encouraging more active involvement compared to traditional engagement approaches. As Hügel and Davies (2020) point out, even as the importance of public participation in adaptation is widely recognised, (including the exponential growth in participatory adaptation research since 2000), there is often a lack of clarity about what constitutes meaningful engagement in practice. Without clearly articulated rationales and evaluative criteria, participatory methods (no matter how promising) risk limited systemic impact.

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## 7.2. Emerging engagement approaches: Target group-led innovations for climate engagement

After agreeing on potential soft adaptation solutions (see Deliverable D2.4), across all target groups and pilot regions, citizens wished to move beyond passive roles, coming up with ways they would like to be engaged in shaping their communities' adaptation pathways.

For the engaged youth groups, innovative proposals highlighted the importance of emotional connection and active participation. Youth in Zaragoza suggested storytelling campaigns to present climate adaptation through hopeful and relatable narratives, aiming to encourage broader public engagement. Meanwhile, youth in Dresden proposed hands-on initiatives combining citizen science, technical innovation, and school partnerships, emphasizing skills development / capacity-building and real-world application. These ideas reflected an interest in formats that support creativity and practical learning within everyday environments such as schools and community spaces, while also fostering long-term personal development. To support this, a focus on effective communication in citizen science not only enhances understanding but also strengthens sustained motivation and participation, especially when citizens are engaged not only in data collection but also in shaping research agendas and outcomes, as highlighted by Duerinckx et al. (2021) in a survey with more than a hundred scientists.

The working population, particularly hospital staff in Dresden, generated proposals rooted in their professional realities and institutional structures. Their ideas balanced formal mechanisms with flexible, accessible engagement opportunities. Suggestions ranged from appointing contact persons to gathering staff-wide input through digital surveys, to co-developing formal agreements on heat stress management. They also encouraged educational initiatives through the creation of short, practice-oriented training formats, operational guidelines based on shared experience, and collaboration across hospitals to enhance institutional learning. Collaboration across hospitals was also proposed, indicating a recognition of the need for networks to support resilience beyond individual workplaces.

Participants from multicultural communities emphasized culturally resonant, accessible, and inclusive engagement strategies. Across Malmö, Zaragoza, and Dresden, proposals included informal educational activities, cultural and artistic events, community gardening, and multilingual communication. These approaches aimed to integrate climate adaptation into existing community practices and spaces, supporting empathetic forms of learning and mobilisation.

Among participants with disabilities and chronic diseases, proposals placed a clear emphasis on accessibility and empowerment. Participants advocated for regular consultation hours with decision-makers and expressed a readiness to act as public representatives for inclusive adaptation. Their suggestions demonstrated a desire not just for barrier-free participation but for meaningful

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leadership opportunities that could ensure that adaptation planning reflects the lived experiences of marginalised groups.

Looking across all target groups, several cross-cutting patterns become apparent. Citizens consistently called for engagement strategies that are accessible and inclusive (across all groups), e.g., with elderly favouring radio and signage (non-digital communication), and multicultural groups drawing attention to multilingual outreach and culturally resonant activities. Informality and peer-led engagement were preferred by youth, seniors, and multicultural groups, such as youth suggesting peer oriented hands-on activities (i.e., citizen science initiatives), or seniors and multicultural communities proposing informal peer-to-peer dialogues and neighbourhood-level interactions. A third cross-cutting pattern is the clear demand for empowerment and active roles for citizens in the adaptation process. Rather than simply being consulted or informed, some workers, for example, proposed proactive roles like “idea collectors” and staff agreements to shape institutional practices, some youth groups envisioned themselves as co-producers of knowledge through citizen science and awareness campaigns, and participants with disabilities expressed willingness to act as public representatives for inclusive adaptation. Their locally innovative proposals make clear that effective citizen engagement in climate adaptation must be culturally sensitive, action-oriented, and designed to empower citizens as co-creators of adaptive change, not simply as consultees.

## 7.3. Refining engagement: Challenges and suggestions from citizens across target groups

### 7.3.1. Engagement challenges

Participants across different pilot regions and target groups highlighted several significant barriers impacting the effectiveness of citizen engagement mechanisms. Communication barriers stood out prominently across regions, with participants from multicultural backgrounds stressing the difficulties of clearly disseminating climate-related information amid prevalent information overloads.

Another concern often raised by participants was the challenge of managing diverse opinions and perspectives in settings such as public hearings and community dialogues. This often leads to polarization and ineffective moderation, resulting in imbalanced discussions and limited inclusivity. Specifically, youth participants in Zaragoza indicated the need for skilled, neutral moderators trained explicitly in conflict resolution and inclusive dialogue to ensure broad and constructive participation.

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Similarly, participants with disabilities and chronic illnesses in Dresden, also pointed to an important challenge: representatives or contact persons are not always equipped with the necessary skills, or trust of the community to effectively bridge communication gaps between stakeholders. Additional barriers included tokenistic approaches in public hearings, with citizens perceiving predetermined decisions that rarely incorporated genuine community input.

Institutional resistance to change was also identified as a challenge, with some participants noting that public administration practices did not always keep pace with evolving cultural attitudes, leading to occasional misalignment between community needs and administrative responses. Persistent trust challenges can stem not only from public misunderstanding, but also from ingrained institutional habits that may overlook the cultural assumptions embedded in scientific approaches, often imposing narrow technical framings on public issues (Wynne, 2006).

This observation underscores the importance for institutions to develop reflexive capacity, namely, the ability of (municipal) institutions to incorporate diverse knowledge and adjust their usual ways of thinking and working through inclusive participation processes (Fila et al., 2024).

These findings are in line with the outcomes described in the Adaptation AGORA deliverable D4.1, where institutional and governance barriers were among the most critical hurdles, encompassing internal issues such as bureaucratic processes, inadequate coordination, and lack of capacity and resources. Moreover, stakeholder fatigue, scepticism, and motivational barriers further impeded meaningful engagement. Outcomes there also pointed out that participants frequently cited a lack of transparency regarding how citizen contributions were incorporated into decisions as a demotivating factor.

Overcoming barriers to inclusive engagement requires clarity of intent and awareness. Research highlights that inclusive participation is most effective when those designing and implementing engagement processes explicitly define their goals and reflect on who should participate and why. This includes recognising differing desires for involvement and building participation formats that lower structural and psychological barriers. In this sense, it is important that before the engagement process to carry out an (inclusive) assessment focused on the local stakeholders and that engagement process designs include trust-based communication and context-sensitive facilitation in order to enhance inclusive engagement (Rohr et al., 2017).

### 7.3.2. Suggestions from participants

Participants provided detailed and context-specific recommendations aimed at overcoming the identified challenges. Engaged youth groups recommended embedding engagement activities within educational institutions. Youth from Zaragoza and Malmö emphasized using multi-channel

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communication strategies, combining digital tools with accessible, non-digital methods to enhance inclusivity.

Working populations recommended structured yet flexible engagement roles such as “idea collectors” within teams to facilitate information flow between project coordinators and staff. Formal staff agreements on issues like heat stress were suggested, using comprehensive digital surveys to gather broad staff input and ensure collaborative decision-making. Workers also recommended practical training sessions to ensure workplace-based improvements. Moreover, multicultural communities proposed using emotionally resonant, culturally tailored formats, such as arts, storytelling, and community gardening, to engage diverse groups effectively. Participants highlighted multilingual communication, structured dialogue events, and smaller, focused discussion groups as effective strategies to ensure genuine participation and overcome language barriers.

Participants with disabilities and chronic illnesses stressed the importance of actively integrating public feedback into decision-making, with clear communication on how contributions influenced outcomes. They recommended frequent local dialogues and hybrid event formats to maximize accessibility and participation. Whereas senior participants proposed leveraging familiar, non-digital communication channels like radio broadcasts and community gatherings, emphasizing informal peer-to-peer communication rooted in daily life contexts. They underscored the importance of culturally respectful and humorous communication to subtly motivate and engage citizens.

The feedback from stakeholders during the engagement activities at the early stage of the project, supported some of these recommendations highlighting the importance of developing robust, long-term engagement frameworks characterized by continuous communication, regular meetings, and dedicated budgets for citizen participation. The use of existing local structures (e.g., in neighbourhoods) was recommended as an effective approach for enhancing citizen involvement, particularly in tangible, community-focused projects.

Overall, participants across groups consistently advocated for practical, inclusive, culturally sensitive, and contextually grounded engagement strategies, integrated into everyday community and institutional structures. They emphasized that successful citizen engagement requires addressing motivational barriers through transparent communication, structured feedback, and consistent institutional support, ensuring citizens feel genuinely heard and influential in shaping climate adaptation measures.

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## 7.4. Target group-specific similarities and notable differences

### 7.4.1. Engaged youth

#### A) Snapshot distinctions by pilot region

| Region | Preferences and rationale |
|---|---|
| **Rome** | Favoured **structured approaches** to climate education, with an emphasis on integration into formal systems (e.g., climate education in school curricula, certified teacher training). Youth preferred **applied learning formats** such as training workshops, mentorship programmes, and mobile skill-building, valuing the experiential education delivered through flexible but more formal channels in practical ways. |
| **Zaragoza** | Prioritised **interactivity, transparency, and democratic influence**. Participatory decision-making was seen as empowering when citizen input visibly influenced policy. Creative public engagement (e.g., climate comedy) and clear feedback loops were key to trust-building. |
| **Dresden** | Highlighted **citizen science and informal institutional cooperation**. Youth wanted to act as "co-producers" of knowledge (through sensor monitoring, posters, campaigns) within school settings. Emphasis was placed on low-threshold, voluntary activities supported by municipal institutions. |
| **Malmö** | Focused on **emergency preparedness and practical utility**. Youth prioritised early-warning systems and real-time communication as tools for adaptation to heatwaves. There was notable scepticism toward mobile apps and a call for "low-effort, high-impact" approaches such as public signage and multi-language broadcasts. |

#### B) Similarities in preferred engagement mechanisms across regions

Across all four pilot regions, engaged youth demonstrated a clear and consistent preference for engagement formats that were experiential, participatory, and rooted in tangible action. These preferences were reflected in their interest in practical and hands-on approaches, particularly in Rome, Zaragoza, and Dresden, where young participants favoured training workshops, citizen science, learning in the field, and hackathons. These activities helped them build useful skills while actively supporting local climate adaptation. Another similarity was the preference for interactive and collaborative (group-based) mechanisms. Youth were eager to work in teams, engage in peer learning activities, and participate in decision-making processes. This was clear in Zaragoza and

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Dresden, where participants valued formats that let them help create solutions collectively. Educational activities remained central, but youth clearly leaned toward informal approaches. Instead of traditional classroom lessons, participants preferred formats that were part of the community life, and/or tied to school projects. Rome and Malmö showed a preference for blended learning settings that foster engagement in more flexible and dynamic ways. Finally, all regions showed a clear interest in being involved in their communities. Youth valued engagement approaches that contributed to raising public awareness, influencing policy, or promoting social equity. For example, Zaragoza youth valued being part of decision-making processes that could clearly influence local policies, while in Rome, they also supported mentorship programmes and university-based climate networks that gave them a role in shaping institutions.

### C) Key shared evaluation criteria

Participants across all pilot regions applied similar criteria when evaluating the engagement mechanisms (exposing a potential shared set of expectations). First, it was important that the engagement felt connected to everyday life. Engagement approaches were expected to connect with their real-world contexts, including their educational environments, peer networks, or everyday behaviours. This was evident in the feedback from Rome and Dresden, where youth sought opportunities embedded within existing school structures, and from Malmö, where practical actions related to daily preparedness were favoured.

Youth also placed high importance on tangible outcomes. In Zaragoza and Dresden, for instance, participants assessed engagement mechanisms based on their capacity to produce visible, measurable change, whether through the impact on policy, contributions to community well-being, or personal skill development. The desire for real-world results was a unifying factor in their evaluations. Finally, inclusivity and accessibility were critical considerations. Participants across the regions expected engagement approaches to be adaptable to a range of backgrounds, communication styles, and learning needs. In both Rome and Malmö, mechanisms were positively assessed when they were perceived as approachable, non-elitist, and capable of reaching a broad and diverse audience.

### D) Comparative reflections for engaged youth

Youth engagement priorities in the four pilot regions were strongly influenced by each country's institutions, systems, and ways of governing. As presented below, the way how youth envisioned (feasible) participation differed greatly.

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### Governance cultures and institutional expectations

Youth in Rome and Dresden supported engagement through formal institutions, though in different ways. Roman youth pushed for top-down, national-level reforms, including collaboration with ministries and integration of civic and environmental education into formal school curricula. In contrast, Dresden's youth proposed municipal partnerships with schools and co-designed engagement activities, showing a more decentralised approach and strong requirement for local institutional reaction. In Zaragoza, youth prioritised participatory democracy and open decision-making, advocating for feedback loops and public accountability. Malmö's youth, on the other hand, valued decentralised, risk-oriented tools, favouring public service channels (e.g., transport displays, radio) over participatory approaches, reflecting a strong welfare system and high trust in institutions. Participatory decision-making was not rejected, but it was seen as less essential than reliable public communication and risk preparedness.

### Roles of institutions and perceived feasibility

In Rome and Malmö, institutions were seen as the main responsible for carrying out engagement activities, either as educators or protectors. The feasibility was dependent on the institutions' capacity and the assumption that public authorities hold responsibility for guiding or informing adaptation. In Zaragoza and Dresden, youth sought a more collaborative relationship, combining community creativity with institutional support. The feasibility in these regions was more tied to administrative flexibility, openness to youth co-production, and the presence of local facilitators or educators with responsive school environments lowering the barrier entry points.

### Education as a structuring framework

Education was seen as the central platform for youth engagement across regions but with different approaches. In Rome, schools were seen as formal sites for participation in civic or community activities (supported by legislation and resources). Dresden emphasized voluntary, practical learning within schools, often linked to local institutions and extracurricular programs. Zaragoza focused on fostering dialogue and creative outreach through informal education and public spaces.

### Digital and communication infrastructure

The use of digital tools also reflected national contrasts. Although all regions discussed the use of a mix of visual and in-person mechanisms, Malmö youth was wary of using mobile apps due to trust concerns, and preferred broadcast and non-verbal formats instead. Other pilots envisaged the integration of digital elements as complements to in-person learning or community-based

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initiatives, for example, linking digital tools to (sensor-based) citizen science and school projects, suggesting different levels of trust in digital systems.

**Administrative and structural constraints**

What was considered possible depended heavily on national policies, how education is managed (i.e., their autonomy), and how responsive institutions are. In Rome, feasibility depended on legal reforms and systemic change; in Dresden, on alignment with school logistics and voluntary programs; in Zaragoza, on support from trusted facilitators and inclusive moderation; and in Malmö, on using scalable and efficient public infrastructure.

### 7.4.2. Working population

#### A) Snapshot distinctions by pilot region

| Region | Preferences and rationale |
|---|---|
| **Rome** | Strong preference for **public hearings and consultation events** to ensure direct dialogue with institutions. In-person formats were essential, while digital tools were considered supplementary. Workers prioritised visibility of impact and continuity through existing community structures. |
| **Zaragoza** | Favoured **hands-on climate education**, **community cultural events**, and **advisory boards**, valuing cultural embeddedness, collective experience, and peer-supported learning. Less enthusiastic about individualistic approaches like mentoring. |
| **Dresden** | Healthcare workers prioritised **preparedness campaigns** and **participatory decision-making** within institutional frameworks. The focus was on concrete, daily-life tasks, such as climate-proofing uniforms or operational guidelines. Credibility and feasibility within shift-based work was key. |
| **Malmö** | Outdoor workers preferred **community disaster committees** and **localised alert systems**, as passive and low-effort mechanisms suitable for extreme events. However, there was scepticism about citizen-led structures due to high institutional confidence and existing Swedish governance frameworks. |

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### B) Similarities in preferred engagement mechanisms across regions

Across all four pilot regions, participants from the working population shared a consistent preference for engagement mechanisms that were pragmatic, low-threshold, and compatible with the realities of working life. Time-efficiency was a common concern, and participants in all pilots gravitated toward formats that could be integrated into their daily routines without major disruption. In Dresden and Malmö, in-situ activities located within the workplace or community settings were well received, while in Rome, blended and hybrid formats were preferred for their flexibility. In Zaragoza, embedded consultation mechanisms that aligned with existing work structures were viewed as particularly feasible.

Workers across regions also showed a clear preference for engagement approaches that offered tangible and actionable outcomes. In Dresden, this was evident in the support for workplace-based heat protection campaigns, while in Rome, participants valued opportunities to provide feedback on adaptation measures relevant to their work environment. In Malmö, the preference leaned toward real-time communication tools such as alerts, which were seen as directly applicable and useful.

A notable cross-cutting theme was the emphasis on institutional credibility. Participants valued formats that were connected to decision-making or policy influence, and which demonstrated a clear link between engagement and follow-up action. This included participatory decision-making processes, staff-led campaigns, and advisory boards, which received positive feedback in Rome, Zaragoza, and Dresden.

### C) Key shared evaluation criteria

Across the pilot regions, working populations applied a consistent set of criteria when evaluating engagement approaches, reflecting shared expectations shaped by the demands of their professional routines and organisational contexts. One of the most prominent considerations was practicality. Engagement mechanisms were expected to be time-responsive and compatible with daily work schedules. This was particularly evident in Malmö and Dresden, where participants favoured approaches that could be implemented without requiring significant advance preparation or specialised training.

Another common evaluation criterion was the relevance and impact of engagement on workplace realities. Engagement approaches were valued when they led to concrete improvements in working conditions, internal procedures, or preparedness for climate-related events. Participants in several regions noted that effective engagement should not only raise awareness but also support meaningful change within their work environments.

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Structured communication and clear feedback mechanisms were also viewed as important. Participants appreciated formats that offered clarity and coordination, especially when they were linked to established institutional structures, such as staff councils, internal surveys, or municipal partners. These links helped reinforce the credibility of the process and provided participants with a clearer understanding of how their input would be used.

Finally, inclusivity and trust played a key role in how engagement mechanisms were assessed. Workers across Rome, Dresden, and Malmö emphasised the need for formats that involved staff at all levels, rather than focusing solely on the most outspoken or experienced individuals. Engagement approaches that made space for a wider range of voices were more likely to be seen as fair, effective, and worth participating in.

## D) Comparative reflections for the working population

The engagement priorities of working populations were closely shaped by their region's governance models, sectoral conditions, and the roles that public institutions are expected to play in climate adaptation. While preferences for clarity, practicality, and visible outcomes were widely shared, key differences emerged in how workers understood their responsibilities and the feasibility of participation.

### Institutional trust and responsibility

Institutional trust strongly influenced how workers across regions defined their role in climate action. In Malmö, similarly as with the engaged youth, workers placed high confidence in the capacity of state institutions and public services to manage emergency preparedness independently. As a result, they preferred passive, broad-reach formats (i.e., localised alert systems or public signage) and were less inclined toward participatory or citizen-led approaches, which were often seen as less necessary or overly burdensome given the existing public systems.

In contrast, workers in Zaragoza and Dresden preferred engagement approaches that involved collaboration between institutions and local actors. Rather than expecting public authorities to lead alone, participants saw value in shared efforts with community groups or staff groups. This was evident in the emphasis on advisory boards, staff-led agreements, and participatory formats that enable a shared sense of ownership over local adaptation measures. While trust in institutions was present, it was linked to the idea that effective engagement should include ongoing dialogue and cooperation.

Rome presented a more formal approach to participation, where workers expected engagement to take place through structured consultations, public hearings, or trusted intermediaries such as neighbourhood representatives. This indicates a general trust in institutional channels, where

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visibility, continuity, and legitimacy are often associated with established processes. However, some participants showed frustration over the limited responsiveness of these formats, indicating a gap between expectations and follow-through.

**Labour structures and sectoral realities**

The type of work and how their workplaces or work sectors (like healthcare, outdoor work, or education) are structured played a significant role in determining engagement feasibility. In Dresden, where the focus was primarily on the healthcare sector, proposals were shaped by the need to align with existing workplace routines and internal procedures. Engagement was feasible only when embedded into professional structures (e.g., departmental preparedness campaigns or staff communication systems) that respected time constraints and existing roles and responsibilities among the wider institutions. These formats were particularly valued when they could lead to tangible improvements in workplace conditions and had the potential to be scaled across departments, supporting broad organisational adoption.

A similar logic emerged with healthcare professionals in Rome, highlighting both structural and cultural barriers to integrating climate adaptation into health sector routines. Participants noted that institutional awareness of climate-related health risks is growing, but adaptation efforts are often seen as administrative obligations rather than strategic priorities. As a result, professionals stressed the importance of sector-specific trainings and flexible implementation. Narrative-based approaches were favoured, such as storytelling and experience sharing, which can help transform abstract knowledge into context-relevant action.

In Malmö, the working population consisting of outdoor professionals, emphasised the need for low-effort, high-impact formats that could be seamlessly integrated into their daily routines. The physical demands and time pressures of their roles made participatory approaches (such as citizen-led or committee-based formats) less appealing. Their preference for passive tools, like alert systems or signage, reflected not only practical considerations but also a broader confidence in their public infrastructure. This underscores a preference for institutional self-sufficiency over co-production or shared decision-making. In this context, engagement was seen as most effective when delivered by professional systems, reducing the perceived need for participatory governance.

By contrast, Zaragoza's community-linked workers (with participants often operating in education, social work, or cultural sectors) favoured participatory and creative approaches. Cultural events, small-scale climate education, and locally based advisory activities were seen as natural extensions of their professional roles and community involvement. This reflects a bottom-up model of participation, where engagement is rooted in culturally embedded civic practices. Participation was understood not as an additional responsibility, but as something already integrated into daily work and social relationships, being familiar, embedded, and community-driven rather than externally imposed.

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**Perceptions of feasibility and engagement design**

Across all regions, workers were pragmatic in their evaluation of what engagement could realistically achieve. Feasibility was shaped by available time, perceived impact, and the degree to which formats aligned with existing responsibilities. In Rome and Dresden, participants highlighted the value of institutional coordination to support well-organized and lasting engagement, while also emphasizing the need for clear roles and reliable communication. In Zaragoza, feasibility was linked to the ability to build on existing networks and trusted facilitators, reducing the need for formal recruitment or top-down mobilisation. However, participants also raised concerns about limited resources and bureaucratic hurdles, which sometimes hindered the implementation of engagement strategies despite strong local interest. In Malmö, feasibility depended on whether engagement could be embedded into existing public service infrastructure with minimal added burden.

### 7.4.3. Multicultural communities

#### A) Snapshot distinctions by pilot region

| Region | Preferences and rationale |
|---|---|
| **Rome** | Preferred **mobile units and open-air activities** that facilitate spontaneous encounters and learning in familiar community settings (e.g., games, film screenings). Institutional partnership (e.g., universities, municipalities) was appreciated, but only if formats remained informal. |
| **Zaragoza** | Favoured **artistic engagement and storytelling**, valuing emotionally resonant formats. Participants supported participatory decision-making processes when they were local and facilitated meaningful input. |
| **Dresden** | Focused on **community gardening and informal knowledge exchange**. Preferred formats were deeply embedded in community practices. There was a clear emphasis on tangible actions and peer-led approaches. |
| **Malmö** | Highlighted **school-based programs** and **intergenerational learning**. **Hands-on environmental education** was favoured when integrated into everyday spaces (e.g. schools, homes). Blended learning was welcomed, but focus is still on personal interaction and connections to everyday life. |

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### B) Similarities in preferred engagement mechanisms across regions

Across all four pilot regions, participants from multicultural backgrounds showed a clear and consistent preference for engagement approaches that were culturally relevant, accessible, and rooted in everyday life. One recurring theme was the importance of mechanisms that felt culturally grounded and emotionally relatable. Formats that connected with participants' identities, traditions, or shared experiences (e.g., involving storytelling, art, food, or music) were often seen as more engaging and meaningful than more formal or abstract approaches.

Participants also responded positively to practical and visually engaging formats. Hands-on activities such as field visits, environmental workshops, or experiential learning exercises were appreciated for their ability to simplify complex concepts and make learning more memorable. These approaches were particularly valued when they conveyed information in a concrete, relatable way and allowed participants to connect climate adaptation to their daily lives.

Another key preference was for accessibility and inclusiveness. Participants consistently emphasised the value of multilingual communication, the use of familiar venues such as schools, bars, or neighbourhood spaces, and formats that did not require specialised knowledge or prior familiarity with climate issues. This helped ensure that engagement was approachable and relevant, particularly for those with different educational backgrounds or language skills.

Finally, participants across the regions tended to favour interactive, community-based formats over individualised or top-down approaches. Dialogue-driven approaches, group-based activities, and opportunities for peer learning were seen as more effective in building trust, encouraging participation, and fostering a sense of solidarity. These preferences underline the importance of designing engagement processes that are not only inclusive but also adapted to the social and cultural realities of diverse communities.

### C) Key shared evaluation criteria

Participants from this target group applied a consistent set of criteria when assessing the engagement mechanisms, shaped by their lived experiences, linguistic needs, and community contexts. A key factor was cultural relevance and familiarity. Engagement mechanisms were more positively received when they aligned with local customs, collective practices, and everyday environments. Participants appreciated when their cultural identities were recognised as strengths and when engagement activities reflected their values and social norms.

Tangible outcomes and visibility were also important in the evaluation of engagement mechanisms. Participants valued formats that produced clear, concrete results, such as environmental improvements, shared outputs like community art projects, or visible contributions to shared

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spaces. These outcomes helped reinforce a sense of contribution and ownership, making the engagement process feel purposeful and rewarding.

Another widely shared criterion was the presence of opportunities for local leadership and voice. Participants expressed a strong preference for approaches that enabled them to take active roles rather than simply respond to questions or attend one-off consultations. Trusted community roles, storytelling platforms, and peer-led facilitation were seen as effective ways to ensure participation felt meaningful and empowering.

Finally, language accessibility and communication clarity were seen as essential. Across all pilots, participants emphasised the importance of multilingual content, intuitive formats, and the use of visual aids to ensure broader understanding. These shared criteria reflect a clear demand for inclusive, accessible, and culturally grounded engagement mechanisms that allow participants to contribute actively and see the impact of their involvement.

## D) Comparative reflections for multicultural communities

Participants from multicultural communities across pilots preferred engagement formats that were accessible, informal, and culturally grounded. While they all highlighted inclusivity, low-threshold participation, and relevance to everyday life, the ways in which these values were interpreted might have hinted to potential differences in their (regional) governance cultures, levels of institutional trust, and different approaches to communication and urban infrastructure.

### Public spaces and urban infrastructure

Across all regions, participants generally favoured engagement formats that took place in everyday community settings, e.g., neighbourhood gardens, schools, or local bars, rather than in formal institutional venues. These informal or semi-formal spaces were seen as more welcoming, more familiar, and more effective at building trust and better suited to encouraging interaction. This preference was especially evident in Rome and Zaragoza, where participants highlighted activities like mobile educational units, outdoor games, storytelling events, and artistic expression as effective approaches to connect across cultures and support community participation.

In Dresden, public spaces like community gardens and diaspora associations were valued for their ability to support intercultural exchange, peer-led dialogue, and visible, hands-on contributions. Civil society organisations in these spaces often act as a bridge between diverse community groups and public authorities, to build trust and encourage participation. In Malmö, although trust in institutions was high, participants still favoured engagement formats that were part of their everyday environments (e.g., schools or local services) and that included efforts to address language and technology accessibility.

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**Blended communication and inclusivity**

Views on digital tools varied across regions, reflecting different expectations around communication and accessibility. In Malmö, participants recognized the value of digital technology as a complement to in-person engagement, particularly within structured education programmes or intergenerational learning. However, there was some hesitation around relying solely on digital formats, as mobile apps or digital-only channels, due to concerns about language barriers and unequal access. Instead, participants emphasized the continued importance of low-barrier, analogue formats such as signage, radio announcements, or small-group meetings, a preference also seen in Rome and Zaragoza. In Dresden, multilingual and informal communication mechanisms, often facilitated by civil society organisations (or community leaders), played an important role in encouraging participation and building trust, suggesting that inclusivity depended not only on language accessibility but also on familiarity and relationship (trust) building.

**Purpose of engagement and perceived feasibility**

Different understandings of the purpose of engagement shaped participants' preferences across regions. In Zaragoza and Rome, engagement was often associated with opportunities for expression, recognition, and civic inclusion (as a form of empowerment and building empathy), which was reflected in the use of culturally expressive formats, storytelling, and public-facing activities. In Malmö and Dresden, engagement was more strongly linked to practical outcomes (functionality), with participants focusing on measurable impact, institutional support, and alignment with broader adaptation planning efforts.

Therefore, feasibility was linked to different structural conditions. In Malmö and Dresden, engagement was considered most practical when connected to existing institutional infrastructures, such as schools or associations, that provided continuity and administrative support. In Rome and Zaragoza, it was more associated with the presence of trusted local actors, cultural relevance, and the ability to mobilise people through informal channels.

# 8. Conclusions

This deliverable set out to jointly evaluate innovative mechanisms and approaches for citizen engagement in climate change adaptation, with a particular focus on soft adaptation solutions. The report showcased how citizens from diverse target groups across four European pilot regions

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perceive, prioritise, and interact with different engagement formats. These insights were complemented by a participatory evaluation of the Citizen Engagement Mechanisms Card Deck to explore preferences and expectations around inclusive and effective citizen engagement processes.

This deliverable builds directly on several previous Adaptation AGORA outputs, illustrating the project's interdisciplinary logic and the continuity between work packages as outlined in the Grant Agreement. Deliverable D1.2 was used as a base for the design of activities and Task 2.3 in general, by providing evidence-based methodological guidance and actionable recommendations for citizen engagement in climate adaptation. Deliverable D2.1 provided updated, participatory assessments into local vulnerability and adaptive capacity gaps, which helped frame the soft adaptation solutions and context-sensitive co-evaluation activities. Moreover, Deliverables D2.3 and D2.4 were developed in parallel and in close synergy, with D2.4 generating the co-created soft adaptation solutions that served as the foundation for the co-evaluation activities conducted in D2.3. Deliverable D3.2 provided the foundational evaluation framework that D2.3 operationalised across focus groups by applying its four impact pathways to guide a structured citizen engagement evaluation.

The findings confirm that engagement preferences and perceived suitability of engagement mechanisms are shaped by contextual factors such as socio-demographic characteristics, professional structures, and levels of trust in institutions. While overall feedback was positive across regions, results show that "one-size-fits-all approaches" are insufficient. Instead, citizen engagement must be context-sensitive and culturally grounded to be inclusive and effective.

The co-evaluation of engagement approaches revealed that while citizen preferences varied across contexts, many valued practical, low-threshold, and experiential (hands-on) formats (such as interactive workshops, informal dialogue spaces, and participatory or citizen science initiatives), that foster trust, agency, and mutual learning; while others preferred solutions (such as localized alert systems and signage) that are more passive and dependent on infrastructure delivered by trusted public institutions. These results align with conclusions from other Adaptation AGORA work packages (e.g., WP4), which identified flexibility in process design, inclusive collaboration, and institutional support as key enablers of co-production in adaptation planning.

The use of the Citizen Engagement Mechanisms Card Deck proved valuable in facilitating this co-evaluation, offering an accessible and adaptable tool to reflect on and choose among participatory approaches tailored to soft adaptation solutions. The tool directly addressed some of the common barriers noted during the process, such as unfamiliarity with formal participatory formats and challenges linked to language, time, or trust.

Despite promising results, several structural and process-related barriers remain. These include institutional silos, unequal access to engagement opportunities (especially for minorities or marginalised groups and citizens experiencing vulnerability), and the risk of engagement fatigue. Tackling these issues requires a coordinated response that builds long-term institutional capacity,

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supports cross-sector collaboration, and ensures meaningful feedback loops between citizens and decision-makers.

Three priority areas emerge for enhancing citizen engagement in climate adaptation. Firstly, the adaptation of engagement strategies to local contexts and group needs. Effective engagement must consider the structural conditions and lived realities of different groups. The D2.3 findings reinforce that citizens are more willing and able to participate when engagement is culturally grounded, accessible, and linked to existing community structures and routines.

Secondly, the strengthening of citizen agency and perceived relevance. Participants are more likely to engage when they understand the tangible benefits of their involvement. As recommended in deliverable D4.1, this involves ensuring clear communication about how citizen input is used, along with developing practical ways to integrate that input into relevant decision-making processes.

Thirdly, the sustained investment in engagement infrastructure. Transferability and upscaling require that cities and regions move beyond one-off participation formats to institutionalise engagement processes within broader governance frameworks. Governance structures ought to be inclusive and transparent in order to support long-term strategies that build resilience.

The outcomes of this task will be fed back into WP3 to further populate the AGORA Community Hub (Task 3.3) and will inform the development of the Adaptation AGORA Digital Handbook (Task 6.2), ensuring that future resources are grounded in citizen-validated engagement practices.

Finally, the lessons from this deliverable provide a transferable evidence base on citizen engagement strategies for cities and communities across Europe. By ensuring that citizen engagement is based in lived (local) experience, and by supporting inclusive participation practices, municipalities and adaptation practitioners can enhance climate resilience in ways that are locally meaningful, socially just, and democratically robust.

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# 10. Annexes

## Annex 1: Glossary

Within Adaptation AGORA, a common Glossary is being developed by WP3 so that all key terms related to climate change adaptation are used to refer to the same concepts, and these are applied in all activities ranging from face-to-face events within the Pilot regions to all the digital tools. While this final document will be presented at the end of the project, the main concepts used throughout have been agreed upon and are a core part of the Glossary, so have been included in this document within Annex 1 to provide an overarching framework for reference.

| Term | Definition |
|---|---|
| Co-creation | Collaboratively creating outputs like tools or policy recommendations. A process that can add value and increase innovative potential through intentional experience design |
| Co-definition | To articulate the implicit and explicit meaning of a particular term together with one or more people, in this case climate change adaptation strategies, policies or actions. |

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| | |
|---|---|
| Co-design | To create ways in which challenges can be addressed together with one or more people, implementing different methodologies and/or approaches such as lateral thinking to propose innovative solutions to current pressing climate change related issues. It may also include devising effective and sustainable problem-solving techniques and strategies directly applicable to the challenges that need to be addressed. |
| Co-development | To determine the best manner to satisfy the requirements for an expected output together with one or more people or organizations. This includes evaluating baseline requirements and consider all potential alternatives to solve a particular climate risk or impact challenge. |
| Co-exploration | Explore the perspectives of key actors within co-production processes to assess the challenges and opportunities faced, and describe this idea to capture the process through which boundaries might be actively subverted through sustained engagement between the origins of multiple, diverse perspectives. |
| Co-evaluation | To validate potential solutions or partial solutions to a particular challenge or issue jointly with one or more people. This implies considering available information, processes and how adequate the solution is in meeting the needs and expectations of stakeholders. |
| Co-production | “Iterative and collaborative processes involving diverse types of expertise, knowledge and actors to produce context-specific knowledge and pathways towards a sustainable future” (Norström, et al., 2020:183). |

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## Annex 2: Focus group protocol

**FOCUS GROUP PROTOCOL**

**Duration: advised 3h** (minimum 2,5h = approx. 90mins for Intro & Step 1 + minimum 60mins for step 2 + 5min Evaluation).

**When:** until end of summer 2024

**Number of participants per focus group:** 6-10

**Composition of the focus group:**

- *at least* 3 focus groups (FGs), one for each target group: Please **try to have a representative sample** of the **"population"** (any given (3 or more) target group):
    - **young people (15-24 or 18-24 yo depending on the country regulations) engaged** in climate change issues (preferably in adaptation). We want to understand what motivates them drives them to get involved and how we can benefit from this. **Reach them through their interest in climate issues, NOT in their role as students** (not from one class or faculty) as we try to have a more diverse and representative "population" of interested youth.
    - **working population (between 25 and 60) (affected and interested but with limited time available: work & family**) To better understand where and how they want to get involved and what framework conditions should be in place to make this possible.
    - **multicultural communities** (selected as common denominator for 1 FG in each pilot)

**Facilitator responsibilities** (from: FacilitatorToolKit it also incl. techniques & guides for supporting FGs!)

- Intervene if the discussion starts to fragment;
- Identify and intervene in dysfunctional behavior;
- Prevent dominance and include everyone;
- Summarize discussions and conversations;
- Bring closure to the meeting with an end result or action.

**Common participation format:** To allow for comparability between **pilot regions focus groups targeting working population will be carried out using the same participation formats.** Following the feedback from participants obtained during the "test focus group" caried out in ECSA's 2024 conference (and given that it allowed facilitators from most pilot regions to make use of these

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participation formats), the participation **format selected for Step 1 is the Nominal Group Technique and the format for Step 2 is the Think-Pair-Share** (similar to the pair & share used but it includes at first some space for individual reflection)

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## FOCUS GROUP SUBDIVISION

**Focus Group intro:** (15mins approx)

1. Start with a **very short** Presentation of AGORA + Focus Group goals (for both AGORA & **participants** – clarify their role / to manage expectations)
2. Include a very **short** clarification of crucial terms (so all know the meanings) and describe a **specific** climate adaptation **issue of concern** (e.g., heatwaves, heavy rainfalls and floods)

Please throughout FG: **feel free and try to adapt the wording** (e.g. "soft adaptation solutions")**/ ease the language** as you see fit for better understanding.

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**Step 1: Co-creation and co-design of Soft Adaptation Solution:** (minimum 70 mins, but 90-110mins when needed)

e.g., it is desirable to allocate more time to share personal experiences of participants in FGs with ppl with disabilities and mental illness)

**Main objective (needed outcome)**:

Participants to identify where (and design/describe in more detail how) **they can see themselves** "helping"/supporting in adaptation (being **part of the solution**) or highlight the needs they have to be better prepared/adapted.

The **participation format and order** to be applied in this 1st section **is flexible.**

(Although **presenting a simplified list** of 4 soft adaptation categories to participants **before the co-design is advised**, as it is more conductive to reach the objective, facilitators can try without and see if this is a good avenue or not (if not, then please change it for the next FG).

- Participants **share personal experience** related to the climate adaptation issue (e.g., last/worst heatwave) fostering empathy and understanding the issue (Ask: What made it worse? what helped a bit?) (approx. 20min, up to 40min depending on the target group).
- **Mention adaptation gaps** (**previously identified** and prioritized **by stakeholders**) -> specific issues or solutions that participants might select to focus on this Step 1. **Alternatively:** identify, in advance, one (or two) issue(s) of concern **as starting point** for the focus group

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("This could be **deduced from** two aspects. (1) Results emerging from the identification of necessary adaptive capacity gaps, from the inception workshop. (2) Contextualization of local adaptation/environmental plans (e.g., national, regional, local adaptation strategy, or any guidelines on heat emergency plans, etc.)".

- Participants decide which specific issue they want to focus on.

- Use **selected (1) participation format (**minimum 45-60mins):

    - Facilitate the **co-creation and co-design discussion** inviting participants to explain their reasoning behind their decisions. (FOCUS ON the SOFT Adaptation solutions). In short, after participants **understand the issue** (previous bullets), they should **gather proposal ideas (brainstorm**) and synthesize and **consolidate ideas** (make a decision) using the participation format you have selected.
    - **Encourage** open dialogue, active listening, and respectful exchange of ideas among participants. Please remember to **take notes** of the discussion (see input needs in step 1 in the "Facilitators outline for reporting" document).

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**Step 2: Co-evaluating 5 engagement mechanisms per soft adaptation solution** (minimum 60 mins)

**Main objective (needed outcome)**: Participants to evaluate citizen engagement mechanisms **they would like/ be more prone to be part of**.

(Participants to use the solution they just co-created (outcome of Step 1, probably just 1 because of time) to see **how they want to be engaged in it** (co-evaluating the options).

1. Introduction:
    - Provide participants with an overview of the **selected participation format**.
    - Explain the purpose of the activity, emphasizing that **participants will be identifying and then prioritizing and discussing EMs** (related to the selected soft adaptation solution). Please, **remind them** that they should assess the options, keeping in mind **their own preferences** (and collectively as part of their target group).
2. Engagement Mechanisms:
    - Ask participants how **they would like to be engaged** in their co-created soft solution (**open, allowing for innovative input**). (1st round of brainstorming innovative ways participants would like to be engaged (before getting the 5 picture cards, to avoid bounding them with only the 5 EMs from the picture cards). Thus having "white cards" where they can write their innovative engagement method and carry out then the same steps of co-evaluation (as with the 5 picture cards).
    - Then, **based on** the focus group's soft adaptation **solution previously selected** and discussed in **Step1,** (either the 5 picture cards from the selected category, or a mix in case the solution falls in-between) the **facilitator** distributes the picture cards to participants, ensuring that each participant reads the set of cards.

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- **Clearly explain** each of the EMs to participants (make sure they understand and clarify doubts throughout the exercise).
- (in case the solution did not clearly fall into a category, and a mix of EMs is preferred, in an open round, **identify the 5 engagement mechanisms (EMs**) (5 picture cards) to be part of the exercise).

3.1 Individual reflecting (pre-sorting) activity:

- Allow participants additional **time to individually read** the EMs again (encouraging participants to **think about their preferences** while **reflecting on their reasoning and considerations** for their choices). They are to **prioritize or sort the cards** according to their preferred methods to be engaged for this soft adaptation solution (which ones do they prefer, why, why not), and considering main criticalities (external and internal issues, barriers and opportunities)

**3.2** Use **selected participation format (of your preference):**

- Facilitate the **co-evaluation discussion** inviting participants to explain their reasoning behind their prioritization decisions, highlighting the aspects they considered most important for each EM.
- **Encourage** open dialogue, active listening, and respectful exchange of ideas among participants.

Please remember to **take notes** of the discussion and **prepare** this co-evaluation **activity so that input needs** for step 2 from the "Facilitators outline for reporting" document **are filled** (can be also partially through participants e.g., post-its).

---

**Feedback / reflection from Focus Group** (5mins approx.)

- Summarize the key findings and include a reflection session where participants discuss any common issues, or areas of consensus that emerged during the activity.

Allocate time for participants to fill the survey

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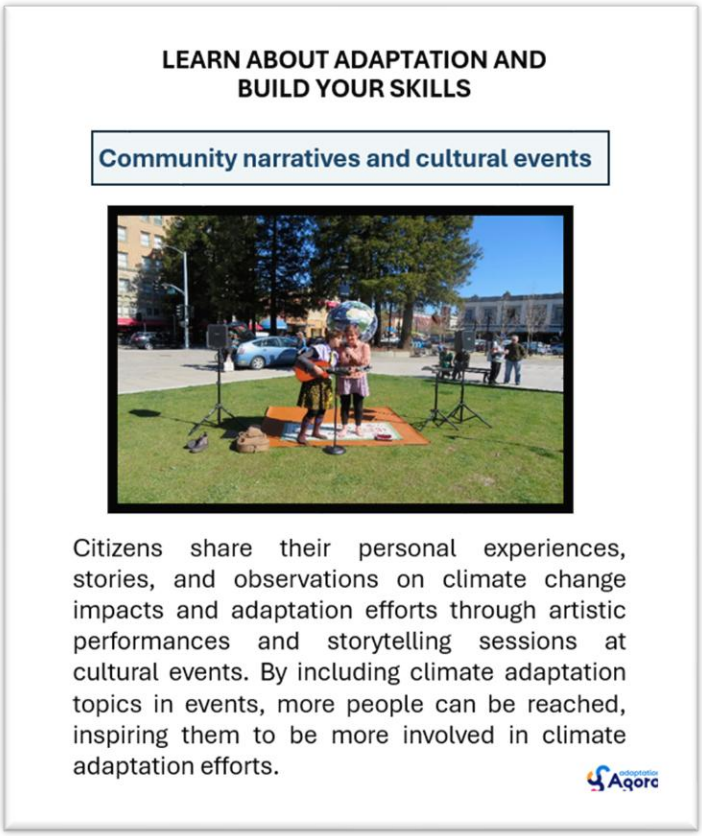
## Annex 3: The Citizen Engagement Mechanisms Card Deck

**1. "Learn about adaptation and build your skills" corresponding to public awareness and capacity building.**

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**LEARN ABOUT ADAPTATION AND BUILD YOUR SKILLS**

**Training workshops and mobile skill-building**

Conduct training workshops e.g,. by sending out mobile education "units" with multimedia material, and trained staff to visit communities, giving fun and educational activities to different ages and interests. Bringing experts, leaders, and locals to talk about how to adapt to climate together and can focus on specific practices like sustainable agriculture, water management, and disaster preparedness.

**LEARN ABOUT ADAPTATION AND BUILD YOUR SKILLS**

**Hands-on climate education**

Let people learn by actually doing things through hands-on field demonstrations and practical exercises, through schools, and youth or local programs. For example, participants could try out different ways to take care of the soil and watering techniques, solar shading or temporal flood barriers.

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**LEARN ABOUT ADAPTATION AND BUILD YOUR SKILLS**

**Multi spaces learning for climate adaptation**


Have in-person and online strategies to teach people about climate adaptation, including exhibits in public spaces and online courses and webinars. Offering both methods ensures broad access to climate adaptation information, catering to different learning preferences and schedules, reaching a more diverse audience.

**LEARN ABOUT ADAPTATION AND BUILD YOUR SKILLS**

**Citizen learning circles and mentorship program**

Start small groups where people in the community can learn together and help each other with climate adaptation. These groups let people talk about climate issues, share stories, and learn from each other in a relaxed setting. Experienced people can teach and support those who are new to dealing with climate adaptation. Also, groups can help people with similar interests work together.

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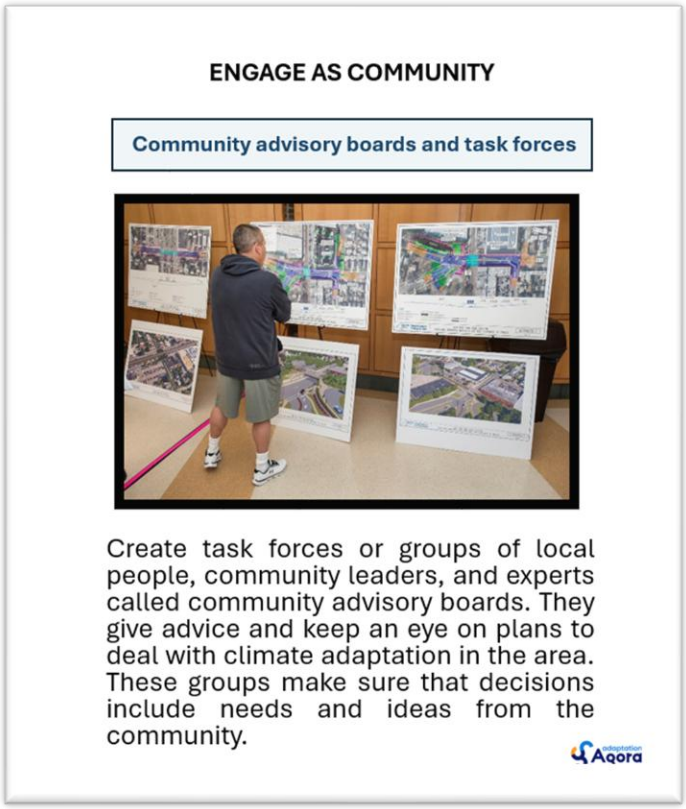
**2. "Engage as community" reflecting community engagement and participation.**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**ENGAGE AS COMMUNITY**

**Peer support & intergenerational programs**

Create peer support groups or buddy systems where people facing similar climate problems can meet, share stories, and help each other feel better. These groups are safe places to talk about worries, get advice, and support each other when things are tough. Also, set up programs where people of different ages can come together to learn from each other and work on climate adaptation issues. These programs help different generations respect each other, learn new things, and pass on important skills and traditions.

**ENGAGE AS COMMUNITY**

**Community-led action groups**

Create teams led by the community to work on climate adaptation projects. These teams can get volunteers together, organize activities, and make sure projects like cleaning up shorelines, planting trees, or watering trees get done.

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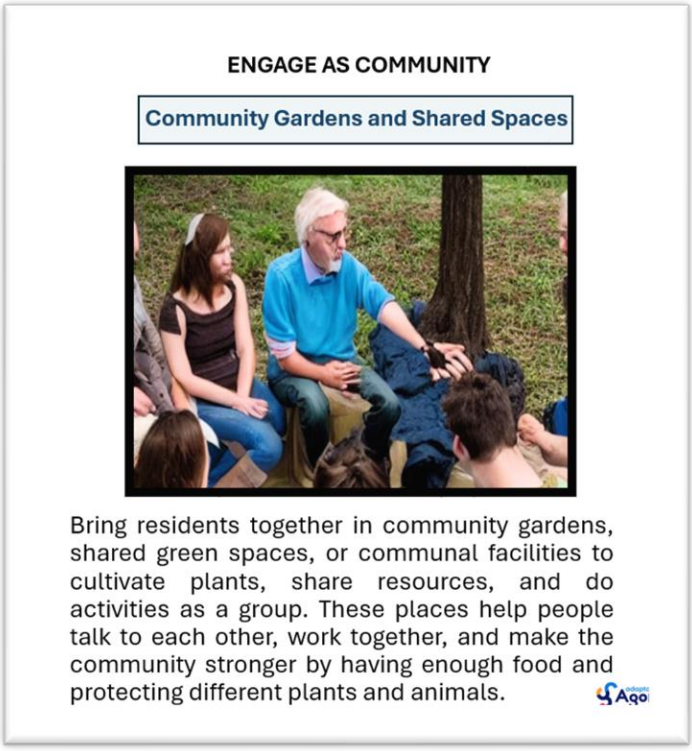
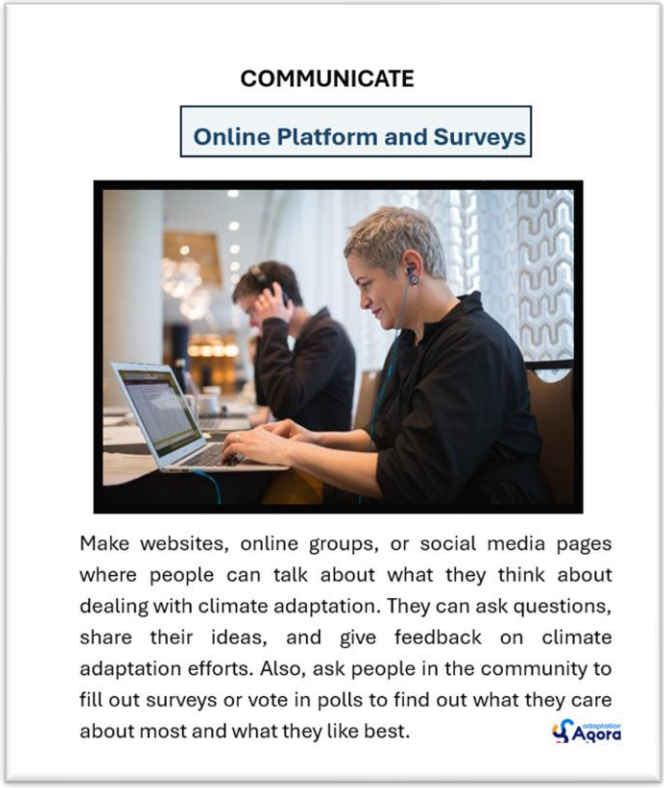



**3. "Communication and feedback mechanisms" focusing on facilitating two-way communication between policymakers and the public.**

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COMMUNICATE

**Public Hearings and Consultation Events**

Arrange town hall meetings and consultation events where anyone in the community can come and talk about climate adaptation plans, policies, and projects. People can share their ideas, ask questions, and talk to the people making decisions about it.

COMMUNICATE

**Community liaison officers**

Choose people from the community to be the intermediaries between for residents and decision-makers. They help communication, build trust, and make sure that what people in the community say gets listened to. These representatives speak up for what the community wants and worries about.

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COMMUNICATE

**Community dialogue and feedback exchange**

Bring together different local groups like residents, businesses, and government agencies to talk about climate adaptation. Organize events where people can share their ideas and feedback. This helps everyone understand each other better and make decisions together about dealing with climate adaptation.

COMMUNICATE

**Participatory Decision-Making Processes**

Let everyone in the community help design and work on projects and plans to deal with climate adaptation. This means people can share their ideas, help decide what's most important, and work with leaders to find new ways to solve problems in the area.

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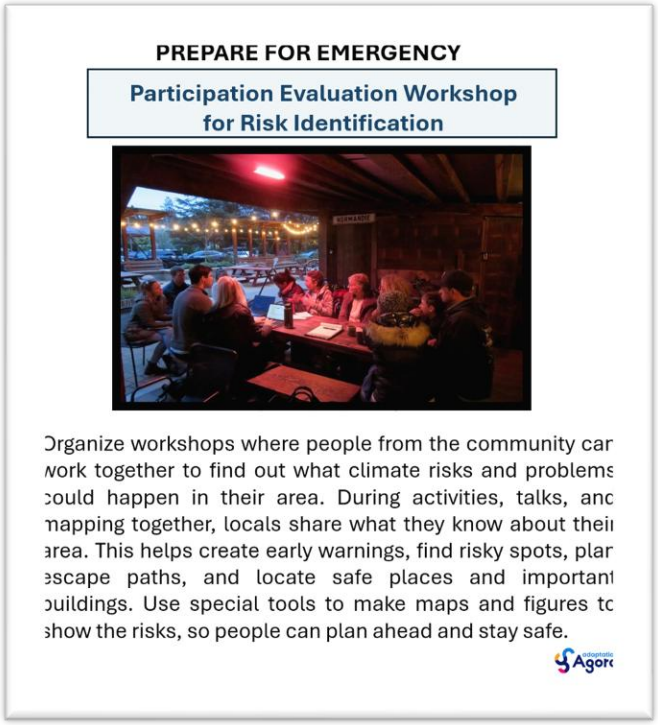
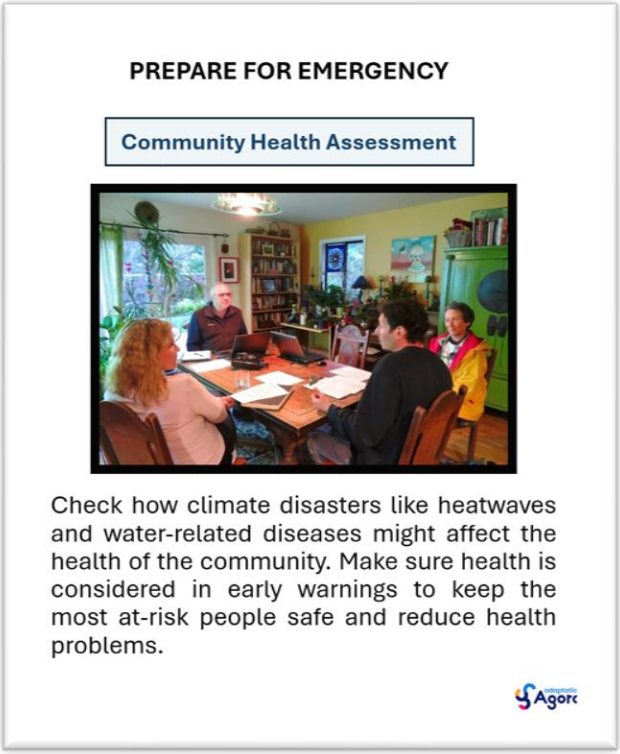
4. **“Prepare for an emergency” encompassing aspects of community resilience and early warning systems.**

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**PREPARE FOR EMERGENCY**

**Household preparedness campaigns**

Start community programs to help households (individuals and families) get ready for climate emergencies and understand local risks together. Offer educational materials, checklists, and resources to help people make emergency kits. Also, involve everyone in finding out and ranking local dangers so that everyone is prepared.

**PREPARE FOR EMERGENCY**

**Localized alert system**

Implement local alert systems that use different ways to tell people quickly about dangers, like apps, texts, phone calls, sirens, and community radio stations. Get people from the community to help plan and test the warning systems to make sure everyone can understand them and they work well.

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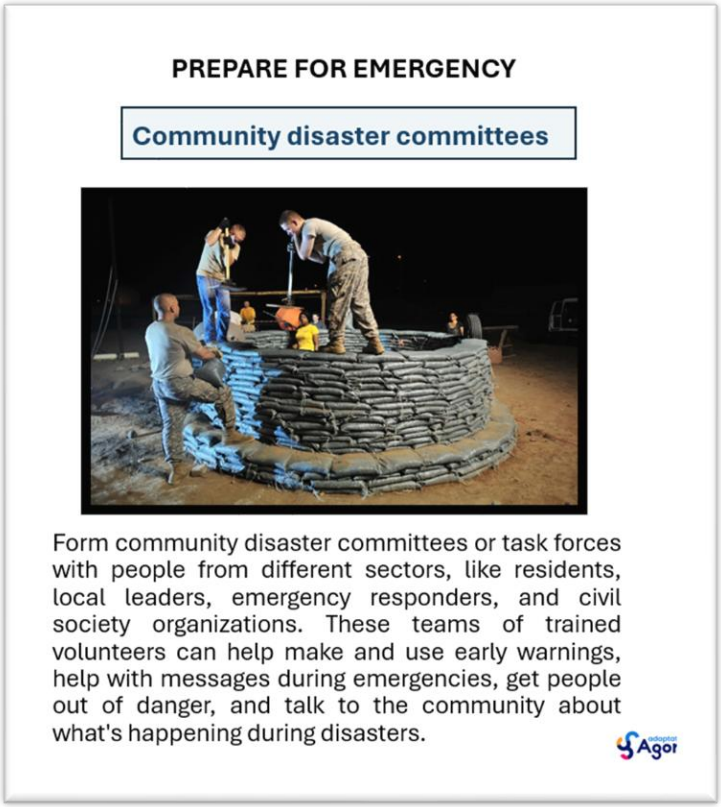


## Annex 4: Reporting template for facilitators

### Facilitators outline for reporting

Focus Group target group & rationale (includes: context and objectives)
(…)
Date, Time and Location
(…)
Number of participants, including from which Target Group
(…)
Agenda (including participation formats selected)
(…)
Executive summary
(…)

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**Key takeaways from step 1:** Co-creation and co-design of Soft Adaptation Solution

Provide detailed insights into the main ideas and solutions proposed by participants during the co-creation and co-design process.

- What were the most innovative or **promising soft adaptation solutions identified** by participants? (describe the different **options and final co-created solution**)
- What were the key **considerations and requirements**? (please provide detailed discussion)
- **How did** participants **weigh the pros and cons of different solutions**? (please provide detailed discussion)

**Key takeaways from step 2:** Co-evaluating engagement mechanisms for soft adaptation solution

Explore participants' preferences and insights regarding 5 engagement mechanisms for soft adaptation solutions, starting with "open" engagement ideas.

- Did participants propose any **open mechanisms** for engagement? If yes, **please describe them**.
- When confronted with the other 5 engagement mechanisms, **which** ones did they **prefer**? (did they prefer them over their own open mechanisms?)
- What were the **main reasons behind** participants' preferences for certain approaches?
    - Did participants identify any specific external or internal **barriers or challenges** that may hinder their engagement in these engagement mechanisms? (please provide detailed discussion)
    - Did participants identify any specific **opportunities** that may ease their engagement in these engagement mechanisms? (please provide detailed discussion)
- Why did participants **choose not to engage** in certain mechanisms?
    - How could these **non-chosen** mechanisms **be improved** to encourage participation?
- Which were the **suggestions for tailoring (improving)** engagement mechanisms to better **reflect their needs** and to **ensure more** participation?

**Participants' survey:** please collect and add send the survey replies.

**Participant reflections: Include here direct quotes** of participant feedback and reflections on the co-creation and co-design process, as well as their experiences with the engagement mechanisms. (To provide qualitative insights into the participants' perspectives and to add depth to the reporting).

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## Annex 5: Focus group participants' survey

### Survey of Focus Group on topic……date ../..

1. To what extent do you agree with the following statements?

| Questions (and their respective AGORA assessment framework pathway to impact) | | Not at all | A little | Neither or | Partly | Completely |
|---|---|---|---|---|---|---|
| 1 | The workshop was relevant to my personal or professional activities | ☐ | ☐ | ☐ | ☐ | ☐ |
| 1 | Time and place suited my needs | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2 | I was able to contribute to the discussions | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2 | I have been involved in defining local adaptation solutions for the project | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2 | I understand my role in the project | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2 | The exercises were meaningful | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3 | I have learned something new | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3 | I have identified new knowledge needs | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4 | I feel more connected to other participants in this issue | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4 | I feel more confident about the potential for collaborative solutions | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4 | I want to participate in a follow-up workshop | ☐ | ☐ | ☐ | ☐ | ☐ |

2. In which adaptation solutions would you really like to participate? How?

_____

_____

_____

_____

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3. Today's meeting has been intentionally divided into 3 sections, which mode(s) of involvement did you prefer?

| e.g., Storytelling session | Step 1. (Selected participation format) | Step 2. (Selected participation format) |
|---|---|---|
| ☐ | ☐ | ☐ |

If possible, provide some reasons why it was the best mode of involvement:

_____

_____

_____

4. What can be improved for the next opportunity?

_____

_____

_____

## Annex 6: Guidance agenda for the final co-creation workshops

**Final co-creation workshop agenda draft**

(To serve as a guidance for pilots that might find it useful, not to be followed verbatim)

1. **Introduction**
   - Welcome / warm-up activity.

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- Overview of the process so far, workshop's agenda and aims.

2. **Activity 1: Group exercise** (best way to cover more in-depth several topics/solutions in the limited time and with many participants)

**Introduction**: (e.g.,: 15 minutes)

- Introduction to the activity: purpose & explain process
- Present topics:
    1. Communicating climate adaptation (e.g., co-creation of communication strategies / Tailored communication and inclusive strategies)
    2. Pilot selected topic 2 (e.g., Participatory planning: (heat) resilience action plan in city / in workplaces, local adaptation plan, educational campaigns, etc..)
    3. Pilot selected topic 3
    4. (depending on number of participants & interest of Pilot) selected topic 4
    5. (depending on number of participants & interest of Pilot) selected topic 5
- Clarify questions
- Divide in # of groups

**Group activity 1:** (e.g,: 40 minutes)

Per group, Facilitator: Shortly introduces how the idea emerged during FGs + engagement methods preferred

(This can be also shown in infographics / plain language text, so that participants can more easily consider these when discussing)

Here group discussion should **focus on how to bring forward the solution** (further co-creating it among participants)

(use the specific facilitation method for this group discussion which you think works best / feel more comfortable with).

**For this, facilitator can use guiding questions such as:**

- **How to get to the solutions**? (e.g., What type of participatory engagement sessions / working with target groups co-designing communication strategies?, What types of educational programs would best / feasible?, How can schools or community spaces become hubs for climate adaptation education?, What tools (e.g., apps, workshops, digital platforms) can help us co-create and implement solutions collaboratively?)

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- **How to engage citizens** and **which stakeholders are needed** to implement the solution? *(How to conduct engagement (events) with citizens /which are the training needs for stakeholders? and who can support implementing the events / or training?)*

While facilitating the discussion, the facilitator can provide **more input on the engagement methods** preferred (in the FGs) for this specific topic/solution (giving more details on the FG discussions around it) helping participants use this as a basis to see how this can be implemented.

**Facilitator in each group should**:

- **Ensure flow** of conversation (see example of guiding questions above) & documentation (taking note, record discussion)
- Ensure **inclusive participation** (e.g., through "code of conduct", equal speaking time for all participants in the group).

3. **Activity 2: General discussion (e.g., panel discussion, fishbowl)** (e.g.,: 50 minutes)
   - **Group reports**: Each group representative (1-2, selected during the group exercise) shares key points from the discussion in small groups.
   - **Feedback** from audience (Q&A / Open discussion)
4. **Closing remarks & next steps**

IN SHORT, the main idea is that the **activities help further developing the solutions** (e.g., the ones selected out of the FGs), this time **with input** also from **other stakeholders**.

When **discussing each of the topics** (solutions), **present the engagement methodologies** (preferred in the FGs for that given solution), so that participants can discuss more **in-depth how stakeholders can engage citizens** for that solution.

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## Annex 7: Matrix of engagement mechanisms and their most suitable CE methods (see D1.2)

| | Engagement Mechanisms | Total most suitable CE methods | Meetings | Informal conversation spaces | Focus groups | Workshops | Participatory research | Field data collection | Online platforms | Training sessions | Surveys |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Learn about adaptation and build your skills | Community narratives and cultural events | 2 | | ✓ | | | | | | | |
| | Training workshops and mobile skill-building | 3 | | | | ✓ | | | | ✓ | |
| | Multi spaces learning for climate adaptation | 4 | | | | | ✓ | ✓ | | | |
| | Hands-on climate education | 4 | | | | | ✓ | ✓ | | | |
| | Citizen learning circles and mentorship program | 2 | ✓ | ✓ | | | | | | | |
| Engage as community | Citizen science and participatory monitoring | 5 | | | | | ✓ | ✓ | ✓ | | |
| | Engage as community - Community advisory boards and task forces | 3 | ✓ | | ✓ | | ✓ | | | | |
| | Engage as community - Peer support & intergenerational programs | 3 | ✓ | ✓ | ✓ | | | | | | |
| | Engage as community - Community-led action groups | 4 | ✓ | | | ✓ | | | | ✓ | |
| | Engage as community - Community gardens and shared spaces | 2 | | ✓ | | | | | | | |
| Communicate | Online platforms and surveys | 3 | | | | | | | ✓ | | ✓ |
| | Community liaison officers | 3 | ✓ | ✓ | | | | | | | |
| | Community dialogue and feedback exchange | 4 | ✓ | | ✓ | ✓ | | | | | |
| | Public hearings and consultation events | 2 | ✓ | | | | | | | | |
| | Participatory decision-making processes | 5 | | | ✓ | ✓ | ✓ | | ✓ | | ✓ |
| Prepare for emergency | Participatory risk assessment workshops | 3 | | | | ✓ | ✓ | ✓ | | | |
| | Community health assessments | 4 | | | ✓ | ✓ | | | | | ✓ |
| | Household preparedness campaigns | 3 | ✓ | ✓ | | | | | | ✓ | |
| | Localized alert systems | 5 | | | ✓ | ✓ | | | ✓ | | |
| | Community disaster committees | 5 | ✓ | ✓ | | | | ✓ | ✓ | ✓ | |

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| | Engagement Mechanisms | Total most suitable CE methods | Interactive content | Research or experimental method | Experiential and immersive education | Civic hackathons | Mobile apps | Online forums | Participatory arts | Interviews | Public hearings |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Learn about adaptation and build your skills | Community narratives and cultural events | 2 | | | | | | | ✓ | | |
| | Training workshops and mobile skill-building | 3 | ✓ | | | | | | | | |
| | Multi spaces learning for climate adaptation | 4 | | ✓ | ✓ | | | | | | |
| | Hands-on climate education | 4 | | ✓ | ✓ | | | | | | |
| | Citizen learning circles and mentorship program | 2 | | | | | | | | | |
| Engage as community | Citizen science and participatory monitoring | 5 | | | | ✓ | ✓ | | | | |
| | Engage as community - Community advisory boards and task forces | 3 | | | | | | | | | |
| | Engage as community - Peer support & intergenerational programs | 3 | | | | | | | | | |
| | Engage as community - Community-led action groups | 4 | | | | ✓ | | | | | |
| | Engage as community - Community gardens and shared spaces | 2 | | | ✓ | | | | | | |
| Communicate | Online platforms and surveys | 3 | | | | | | ✓ | | | |
| | Community liaison officers | 3 | | | | | | | | ✓ | |
| | Community dialogue and feedback exchange | 4 | ✓ | | | | | | | | |
| | Public hearings and consultation events | 2 | | | | | | | | | ✓ |
| | Participatory decision-making processes | 5 | | | | | | | | | |
| Prepare for emergency | Participatory risk assessment workshops | 3 | | | | | | | | | |
| | Community health assessments | 4 | | ✓ | | | | | | | |
| | Household preparedness campaigns | 3 | | | | | | | | | |
| | Localized alert systems | 5 | ✓ | | | | ✓ | | | | |
| | Community disaster committees | 5 | | | | | | | | | |

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