

**"Exploring Citizen and Stakeholder Perceptions of the Adapted Place  
Standard Tool for Climate Change and Health in the Euroregion Meuse-  
Rhine: A qualitative study"**

**Master Thesis**

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## Abstract

**Background:** Climate change represents one of the most significant wicked challenges to ever exist. Cross-border cooperation like One Health is necessary to address its interconnected health and environmental implications. To overcome environmental and socioeconomic impacts, it is essential to motivate citizens to participate. One promising method for encouraging cross-border citizen participation on health and climate issues is the adapted Place Standard Tool (aPST), which provides a simple structure to facilitate conversations using 14 themes. The purpose of this study was to explore: (1) 'How do citizens and stakeholders perceive the adapted Place Standard Tool in fostering cross-border participation on climate change and health issues in the Euroregion Meuse-Rhine?'; (2) 'What are the key barriers and enablers to citizen participation in climate change and health through the adapted Place Standard Tool in the Euroregion Meuse-Rhine?' The Public Value Theory was used as a guiding framework to understand the dynamics between citizen values, institutional structures, and operational capabilities.

**Methods:** This study adopted a qualitative approach. Individual semi-structured interviews were conducted with 12 participants, including citizens and professionals across the Meuse-Rhine region. To improve transparency and rigor, the study used the (COREQ) checklist. A thematic analysis was used to capture new perspectives on the tool's perception, while the Public Value Theory informed the analysis of barriers and enablers. Reflexivity was embedded throughout to critically reflect on researcher influence on data interpretation.

**Results:** Five major themes were identified: 1) The Role of Policies, Laws and Community Attitudes in Citizen Participation in Climate Change; 2) The aPST as a Conversation Starter, Not Just a Survey; 3) Accessibility and equity of the aPST; 4) From Tokenism to Meaningful Participation; 5) Visions for aPST in Citizen Participation; Barriers identified included: fragmented cross-border coordination, language and accessibility challenges, lack of transparency and trust in how participation influences decisions. Enablers identified included: supportive local authorities, motivated citizens, as well as the tool's ability to raise awareness and foster meaningful dialogue.

**Conclusion:** The aPST fosters awareness and engagement, but it faces real challenges in creating sustained cross border participation due to administrative and political fragmentation, cultural differences, and accessibility problems. To create meaningful impact, citizens need to receive feedback on how their voices shape decision-making.

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## Introduction

Climate change represents one of the most significant wicked challenges to ever exist. Since the average temperature has increased starting in 1975 by approximately 0.5, scientists concluded that this is the start of a human-induced catastrophe of greenhouse gases (NASA Earth Observatory, 2022). Its impact is a huge threat to the environment, leading to natural disasters such as floods, droughts, storms, etc (Ebi & Hess, 2021). Worldwide today climate change has also direct implications on health outcomes. These include excessive heat-related illnesses, vector and waterborne diseases, increased exposure to environmental toxins, an exacerbated amount of cardiovascular and respiratory diseases due to poor air quality, and mental health stress among others (Luber & Prudent, 2009).

This problem knows no borders, affecting populations across countries regardless of political or geographical boundaries. In order to effectively address the issue of climate change and health, there is a need for a comprehensive strategy that includes the cooperation not only of stakeholders but also citizens that can make their voices heard. An appropriate lens to look at this problem through is the concept of One Health, which is an unifying approach that recognizes that the health of humans, animals (both domestic and wild), plants and the wider ecosystem are both interdependent and linked (Brown et al., 2024). Thus, transdisciplinary collaboration is crucial to take into account all aspects of health for people, animals and the environment (Bronzwaer et al., 2022).

As this is a wicked problem, it is particularly challenging to be solved solely by institutions and governments as there are different stakeholders' interests and gaps in knowledge (Hodgkinson et al., 2021). Thus, addressing this necessitates input from citizens who are affected by such problems the most. According to a qualitative study by Geuijen et al. (2016), there is a need for a paradigm shift in how collective action can be cultivated against wicked problems and to involve the voices of 'all affected interests'. Nonetheless, citizen collaboration, especially in diverse groups can come with some challenges, such as issues of representation and inclusion, knowledge and capacity gaps and power imbalances (Fung, 2015). By integrating One Health principles along with cross-border initiatives, a different range of stakeholders and citizens' voices will not only tackle the interconnected health and environmental impacts of climate change, but also socio-economic and cultural divides (Kurowska-Pysz et al., 2018). This is relevant especially in Euroregions, which are areas located on the borders of or more states and have the purpose to ensure that the border is no longer an obstacle but can be used as a resource for development.

One region that could highly profit from this collaboration is the Euroregion Meuse-Rhine, an area covering five partner regions (Region Aachen Zweckverband in Germany; the Province of Limburg in the Netherlands; the Province of Liège; and the German Speaking Community in Belgium;) and a population of 3.9 million (WHO, 2022). Events throughout the years such as COVID-19 and the flood crisis from July 2021 highlight the urgent need for a new approach on cross-border management, particularly in the area of climate change (ITEM, 2021). Thus, an approach worth looking at is 'The Adapted Place Standard Tool (PST)', which offers an insightful way to address these challenges. The framework was constructed to provide a simple structure to facilitate conversations about a place using 14 themes (Ni, 2022). Using this tool with a climate lens will make both citizens and stakeholders understand better the role this issue plays in their environment and living area.

Despite the fact that the problem of climate change is highly discussed and urgent, including numerous studies available on it, a large gap still remains in the context of cross-border citizen and stakeholder participation, especially in areas such as the Euroregion Meuse-Rhine. Evidence available currently lacks the perception of citizens and enablers and barriers in such regards (OECD, 2022). Moreover, there is a need for exploring how different tools provide an in-depth evaluation of citizens' perspectives, such as the Adapted PST. The findings that this study will offer will hold societal implications by supporting policymakers, professionals, local authorities and citizens for refining tools to meet the needs of the citizens of the cross-border region Meuse-Rhine. This will be especially relevant in a region rich in linguistic, cultural, political and national diversity. In the area of science, this study will contribute to expanding the limited research on cross-border tools. Thus, this study aims to answer the following research questions:

1. "How do citizens and stakeholders perceive the adapted Place Standard Tool in fostering cross-border participation on climate change and health issues in the Euroregion Meuse-Rhine?"
2. "What are the key barriers and enablers to citizen participation in climate change and health through the adapted Place Standard Tool in the Euroregion Meuse-Rhine?"

## **Theoretical framework**

To comprehensively explore how the Adapted Place Standard Tool (PST) fosters cross-border citizen participation in climate change and health issues within the Euroregion Meuse-Rhine, the Public Value Theory will be used as a guiding theoretical framework. Developed by Mark Moore, this model will offer an in-depth understanding of the dynamics and linkages between governance, resources, and public perception in shaping participation outcomes (Moore, 1995).

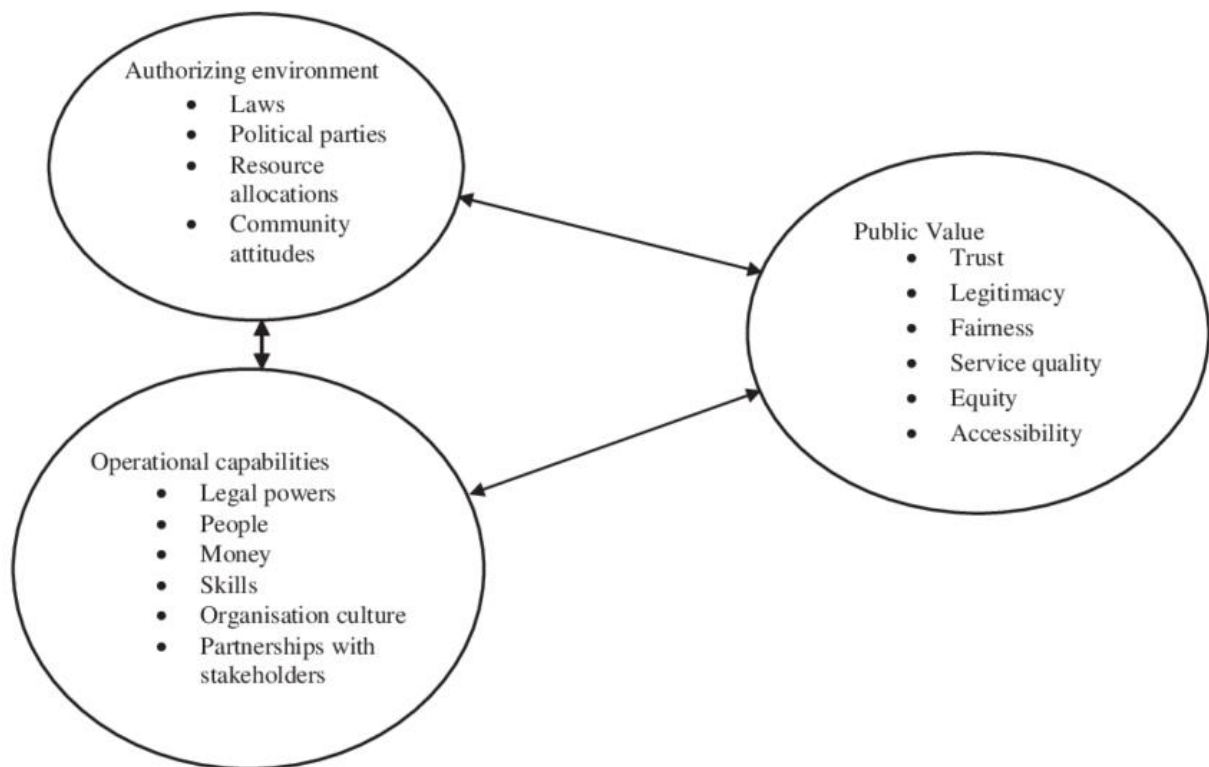
Moore (1994) defines public values as what citizens value as a collective customer in a wider society. Thus, public values aim to promote getting involved in broader societal impacts, in a wider society in order to achieve trust in public institutions. Furthermore, the concept of Public Value (PV) is also associated with broader societal impacts, highlighting ideas such as "public interest," "common good" or "common welfare" (Samaratunge & Wijewardena, 2009). At its core, it explores the operationalization and principles of public value by focusing on the role of public engagement (Yotawut, 2018). While the theory encompasses broader notions such as public value as contributions to the public sphere; and the notion of public value as addition of value through organizational actions (Hartley et al., 2016), this study focuses specifically on the heuristic framework of the strategic triangle. Therefore, this framework consists of three key components: the public value, the authorizing environment, and operational capabilities, that must align to achieve public value (Moore, 1995).

Firstly, the authorizing environment refers to the systems and processes that provide support, legitimacy and resources for public initiatives (Peloso, n.d.). In this context, this will analyze existing laws, policies, resource allocations and community attitudes.

Secondly, operational capabilities focus more on the 'how?' and specifically 'How much do you know about these and how will you go about demonstrating that you will demonstrate success?' (Peloso, n.d.). In the context of this research, the focus will be on the capacity, skills and legal powers of the stakeholders involved, such as citizens, authorities and organizations.

Finally, public value represents the ultimate outcome and societal benefit derived from public initiatives, such as trust, equity, accessibility, or improved quality of life (Moore, 1995). It is directly interlinked with the other two dimensions and it highlights 'what is the likely effort necessary to deliver on the public value?' (Peloso, n.d.).

Figure 1. The Strategic Triangle Framework of Public Value Theory



(Moore, 1995)

This theoretical framework can serve as a foundation to various research fields. One previous study by Bryson et al. (2014) demonstrated how the framework can be applied in examining public-private partnerships. The study showed how the alignment of the authorizing environment, operational capabilities, and public value proposition can result in successful collaborations, especially in addressing societal challenges like climate change and health. It is worth mentioning that while the Public Value Theory provides a multifaceted and governance-oriented lens, its usability is under researched, especially in health and climate-related contexts.

Thus, by analyzing these dimensions and their alignment, this framework can help us identify barriers and enablers to effective citizen participation, providing us with actionable insights into how the PST contributes to achieving public value in cross-border contexts. This framework is relevant in the context of the aPST utilization in citizens' cross-border participation because it focuses on the intersection of governance, stakeholder collaboration, and societal outcomes. As a result, it offers a holistic view on how public institutions, operational capabilities, and community engagement come together to achieve shared goals.

## **Methods**

### **3.1 Design**

In order to answer the research questions, this study adopted a qualitative approach to evaluate the adapted Place Standard Tool (PST) in climate change citizens and stakeholders participation in cross-border contexts. Individual semi-structured interviews were conducted to gain an in-depth understanding of participant experiences and perceptions. The Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist was used as a guideline to ensure transparency in the qualitative research process.

### **3.2 Participants & Sampling**

Participants were recruited using purposive sampling to ensure relevant citizens and stakeholders selection. The selection took place through researchers' networks and social media. Participants come from diverse socioeconomic, cultural, and geographic backgrounds within the Meuse-Rhine region.

#### **3.2.1 Inclusion Criteria**

The following was used to select relevant participants for the background information and conduct interviews: (a) participants who live only in the Meuse-Rhine Euroregion (b) stakeholders such as public health professionals, researchers, local authorities, and climate experts; (c) language: data sources and interviews conducted in English; (d) participants who have been previously involved in the roll-out of the adapted PST;

#### **3.2.2 Exclusion Criteria**

Participants were excluded if (a) they were not from the Meuse-Rhine Euroregion; (b) participants below the age of 18; (c) participants who could not participate in an interview in English;

### **3.3 Data Collection**

The data was collected via semi-structured interviews to allow flexibility but also enable exploring deeper insights into citizens' and stakeholders' perspectives. Semi-structured interviews gave an opportunity for comparison answers between participants. The questions throughout the interview were structured to capture deep insights into both the citizens' and stakeholders' perceptions of the Adapted PST, personal experiences with participation in climate change and related health initiatives, identified barriers and facilitators to participation in climate change and successful or unsuccessful experiences in cross-border collaboration. Interviews were also conducted in English and were audio-recorded with prior consent.

### **3.4 Procedure**

Interviews were conducted over a one-month period. Each participant was invited to share their perceptions and experiences followed by the structured semi-interview questions organised based on the Public Value Theory.

### **3.5 Data Analysis**

All interviews were transcribed manually. Subsequently, the transcripts were coded based on a thematic analysis. According to Braun and Clarke (2006), a thematic analysis is particularly useful in analyzing qualitative data, as it provides a flexible approach to



apply sensitizing concepts from the Public Value Theory to guide interpretation, as well as to identify themes that emerged from the data.

For the first research question, *"How do citizens and stakeholders perceive the adapted Place Standard Tool in fostering cross-border participation on climate change and health issues in the Euroregion Meuse-Rhine?"*, a thematic inductive analysis was conducted.

This approach was chosen to investigate fresh perspectives from participants' experiences without enforcing pre existing classifications.

The analysis followed these steps: (1) Collecting and familiarization with the data: collecting data through interviews with citizens and stakeholders and becoming acquainted with the transcripts; (2) Coding: identification and generation of initial codes throughout the transcripts; (3) Theme Development: organizing codes together to develop specific themes, to create a broader and deeper understanding of how the PST is perceived; (4) Refining themes: ensuring themes are accurately representing by the data, as well as clearly describing what each theme represents; (5) Synthetisation: finally, interpreting the findings to answer the first research question.

For the second research question *"What are the key barriers and enablers to citizen participation in climate change and health through the adapted Place Standard Tool in the Euroregion Meuse-Rhine?"*, the analysis was guided by sensitizing concepts from the Public Value Theory's strategic triangle. In this context, this helped in framing and interpreting the data while keeping an open mind to new insights. In order to analyze qualitative data softwares such as ATLAS.ti will be used.

### **3.6 Ethical Considerations**

Participants received detailed information about the study's purpose, procedures, and confidentiality measures. Written consent was obtained before participation. Personal data was removed from transcripts and stored confidently and safely. Moreover, cultural sensitivity was respected.

### **3.7 Reflexivity**

This study incorporates reflexivity throughout the data collection and analysis to ensure transparency and that participants' voices are accurately represented.

Reflexivity represents a crucial aspect, especially in qualitative research, as it allows researchers to critically examine how their positionality, values, and assumptions influence the research process and outcomes (Olmos-Vega et al., 2022). In the context of this study, my background in public health and health management, innovation and policy at Maastricht University may shape the way I approach the research. Moreover, I personally believe that involvement of citizens is crucial in research. I firmly believe that people's voices should be heard, especially in topics like climate change and health, where everyone's experience matters. I am also particularly interested when it comes to accessibility and equity, which means I put a lot of focus into whether all groups, including marginalized populations, are fairly included and represented. My previous experiences in public health give me a solid foundation in understanding the complexities of crossorder participation but also carry potential biases with focusing more on particular areas.

## Results

This section elucidates the participants' perspectives' on the adapted Place Standard Tool and citizen participation in climate change in the Euroregion. The general perspectives of participants will be described in the following five themes: 1) The Role of Policies, Laws and Community Attitudes in Citizen Participation in Climate Change, 2) The aPST as a Conversation Starter, Not Just a Survey and 3) Accessibility and equity of the aPST and 4) From Tokenism to Meaningful Participation and 5) Visions for aPST. These themes to some extent align with theoretical concepts of the Public Value Theory. Yet, it was not always possible to separate them. Instead, specific themes were developed that integrate several categories within each dimension of the framework: (1) Authorizing Environment, (2) Operational Capabilities, and (3) Public Value.

### **4. 1 Participants' Characteristics and Demographics**

For this study, interviews were conducted with twelve respondents (see table 1), representing both professionals/stakeholders and engaged citizens, out of which seven were students, two epidemiologists, two researchers, one social welfare worker, one historian, one public health professional, one environmental law expert and one policy advisor. Participants provided various perspectives on the adapted Place Standard Tool and citizens' participation in the Meuse-Rhine Euroregion. Several participants included multiple expertise and professions. Participants were based in different parts of the Euroregion, including: Netherlands, Belgium and Germany. (see table 1), the majority of the participants (66.7%) were from the Netherlands. Belgium was underrepresented with only one participant, which may possibly lead to a stronger Dutch representation in the study.

Table 1. Participants' demographics and background

		N=12	%
Occupation	Student	7	58.3%
	Epidemiologist	2	16.667%
	Researcher	2	16.667%
	Social Welfare Worker	1	8.333%
	Historian	1	8.333%
	Public Health Professional	1	8.333%
	Environmental Law Expert	1	8.333%
	Policy Advisor	1	8.333%
Country	Netherlands	8	66.7%
	Belgium	1	8.333%

	Germany	3	25%
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## **Theme 1: The Role of Policies, Laws and Community Attitudes in Citizen Participation in Climate Change**

This theme captures both the formal and informal structures of the authorizing environment within the Public Value Theory, including laws, political parties, resource allocation and community attitudes. These include the perceived willingness of public authorities to support citizen participation in climate and health initiatives.

The following sub themes were identified when participants were asked whether the current policies and laws support or hinder citizens' participation in climate change activities:

### *Subtheme 1.1: "The laws of the national systems don't allow more cooperation"*

Overall participants expressed mixed opinions on whether current laws and policies support citizen participation, though the perspective where the system hinders participation clearly outweighed the other. One expert says:

*"One aspect that stands against more cooperation is the national laws. Besides the motivation of local people to cooperate, they're not allowed (...) They don't have in mind the reality of this cross-border movement."* (Participant 1, expert). Similarly, a citizen remarked *"I don't see there is a focus on this point at all. So, it's probably ignored or they do it on purpose (...) So, it's more hindered."* (Participant 7, citizen). This shows that formal rules don't ensure citizen engagement, instead political will behind those in charge are crucial. Likewise, a different expert emphasised that the system takes into account only professional opinions: *"I think the system in the Netherlands is based on diplomas. So, if you have a high diploma your input is maybe seen as more valid compared to someone who's not an expert... So, I think the system hinders participation."* (Participant 8, expert). This suggests that often citizens without qualifications might struggle to feel taken seriously by authorities.

Participants also underlined that there is a fragmented approach of the current political environment where "everyone minds their own business and (...) they don't have the manpower" (Participant 7, citizen). One expert added that some communities may face severe resource shortages: "We have no money" or "We have two very scarce things we can't do at all" (Participant 10, expert). Contrastingly, some participants reflected on current laws to be more supporting or opportunistic. For instance, in Maastricht one participant noted: *"I don't think we're being hindered, we had a lot of actions that were supported but most of these come from the citizens themselves and they are supported."* (Participant 3, citizen). Similarly, in Kerkrade, an expert explained: *"It's actually a requirement for every project we set up that we need to have looked at participation."* (Participant 5, expert). These opinions demonstrate how different levels of participation can occur and how meaningful engagement improves public trust.

### *Subtheme: 1.2 Community attitudes and engagement*

Citizen participation is greatly influenced by community beliefs and political identity regarding climate change. One citizen remarked: *"I feel like climate change is seen as something very left, which as a reply, people that are very right leaning or people that are centralists, they do not want to do anything with it."* (Participant 9, citizen). Other participants underlined a generational gap, with the younger generation being more active: *"The younger generation would consider more eco-friendly, climate-friendly behaviour. The older generation, they don't really think about that."* (Participant 11, citizen); *"When it comes to Dutch people, people my age, I think they show great care and initiative."* (Participant 4, citizen).

The discrepancy in climate participation between urban and rural areas was also brought up. One citizen noted: *"In bigger cities there's more awareness...whereas in more rural towns and areas, it's a bit less. Usually, in bigger cities where there are universities, people tend to collaborate a bit more."* (Participant 9, citizen). This was confirmed by a citizen living in the rural area: *"In my rural region, people here often see climate change as something distant, as a topic for policymakers, not something that concerns them directly."* (Participant 7, citizen).

Additionally, historical and cultural factors were seen to shape the community attitudes to citizen participation. One participant reflected: *"In South Limburg, people have a history of fitting into hierarchies, they're not used to speaking out (...) policy makers and researchers aren't used to actively listening or engaging with citizens."* (Participant 8, expert). This theme demonstrates how fragmented and highly politicised citizen participation is in climate initiatives within the Euroregion Meuse-Rhine.

## **Theme 2: The aPST as a Conversation Starter, Not Just a Survey**

The tool was characterized by participants as more than just a survey, it was a useful conversation starter that promoted participation, and facilitated meaningful discussions. Three major sub themes surfaced:

### *Subtheme 2.1: Enhancing Engagement through Meaningful Interaction*

Participants pointed out that the aPST encouraged dialogue rather than just collecting answers: *"I think it is useful as a conversation starter or as a guide to have a discussion with others, more than it is a survey."* (Participant 10, expert). Moreover, prepared participants could dive deeper into specific topics using it: *"People could do some homework and think about stuff already...So, it did give us the opportunity to talk about it in a focused way with specific topics to discuss."* (Participant 5, expert)

Additionally, participants appreciated seeing different perspectives, and how sometimes hearing their family member's broadened their own: *"It's also funny to see because my son participated in the same event and his focus on our living area from the climate change perspective is different from mine. It's useful to see it also with such a tool to rethink many things."* (Participant 7, citizen). An expert underlined the same thing: *"When discussing water availability at a session in Kerkrade, an older lady said, 'I wouldn't know what to do with water tap points because I don't carry a bottle with me and young people do that all the time.' I never realized if you don't have a bottle, having*

*tap water is meaningless. That's a good example of how hearing someone else's perspective can enrich the way you look at things and help make decisions that work for everyone.*" (Participant 8, expert). However, too many perspectives could also feel overwhelming: *"I could maybe change my mind because there are so many ways of understanding the question and thinking about the environment."* (Participant 8, expert).

#### *Subtheme 2.2: the aPST as an informative tool*

People praised the presence of clear explanations and examples within the tool. As one participant noted: *"It's not just a questionnaire, it also contains explanations and examples"* (Participant 1, expert). Likewise, a different participant who used the online tool noted: *"I thought it was really nice that they explained what public services were and what they meant with public services in this specific question."* (Participant 9, citizen). It is worth noting that the majority of participants who highlighted the aPST's function as a conversation starter had used the tool in group sessions.

#### *Subtheme 2.3: Impact - Skepticism About the Use of Input - "Just Data Analytics"*

Some participants had doubts regarding the true impact of their contributions, even while they acknowledged the aPST's usefulness as a conversation starter. *One participant stressed out: "I think the only thing you get out of this is just data analytics. Personally, I don't learn anything from it, I just share what I know."* (Participant 4, citizen). This skepticism also included concerns about how well the tool would promote citizen participation: *"I don't really understand how it can foster collaboration, except it can be the start of something. It can be the start of making people aware."* (Participant 8, expert)

### **Theme 3: Accessibility and equity of the aPST**

This theme focuses on how the aPST was perceived in terms of accessibility, usability and degree of inclusiveness.

#### *Subtheme 3.1: Perceived Ease of Use*

Participants had mixed experiences regarding the usability of the aPST, nine out of twelve participants thought it was easy to use: *"It was easy to use it. The questions were easy to understand and the scale was pretty straightforward."* (Participant 4, citizen); *"For me it is easy, it's easily understandable"* (Participant 7, citizen). One professional that took part in the live session confirmed: *"It's easy. So, I think it's easy for me to explain and also easy to use."* (Participant 1, expert).

Others appreciated the visual design as a facilitator of the user experience: *"Very nice visuals and arrows and pictures."* (Participant 6, citizen), whilst others pointed out visual barriers: *"I did it on my phone, so for example words were cut in half"* (Participant 9, citizen); *"The font size is already smaller compared to the questionnaire, which is like such a small thing, but I don't read that then, cause then you have to focus your eyes, it's just a bit annoying"* (Participant 2, citizen).

Four others stated how complex they found the tool to be: *"Some things are more tricky than others...So if it just doesn't fit your life, it's of course hard to answer"* (Participant

10, expert). Furthermore, another participant pointed out that the tool's suitability might change based on the setting: *"I think the tool also has its own limits, like the question for drinking water facilities, and I don't see the need for installing them in rural areas. It applies better to the urban area."* (Participant 7, citizen). Similarly, one participant found it hard to answer: *"I think sometimes it can be difficult (...) it becomes very intuitive."* (Participant 2, citizen). Other participants found it difficult due to personal factors, such as low attention spans: *"I am very bad with questionnaires and I get distracted quite easily from them, sometimes I would have problems filling the whole thing in one go."* (Participant 8, expert).

### *Subtheme 3.2: Length, Vagueness, and Time Burden*

Several participants described the tool as being too lengthy or text-heavy: *"There was sometimes a lot of text on the screen (...) if people have trouble with reading that might be an issue."* (Participant 9, citizen); *"It becomes quite a lengthy questionnaire which even if you wanna fill in the open ended questions can easily take like 20 minutes or so."* (Participant 2, citizen). One participant highlighted the experience of her child: *"His impression was also that it was too long."* (Participant 7, citizen). Most of the participants questioned whether the average citizen would be willing to dedicate the required time: *"I only find it quite time consuming, because I'm very interested in the topic, I'm willing to take the time to complete it, but I'm not sure if a normal citizen living in a neighborhood would bother to do it."* (Participant 7, citizen). The absence of a visible progress indicator was also noted: *"I don't really remember seeing it but I kept thinking 'when is the last thing?'. I usually like to see where I am".* (Participant 9, citizen); *"I had the impression that there was no progress bar. I'd rather know the total expectation than know how far I am."* (Participant 7, citizen). Additionally, some of the questions were perceived as too vague: *"Some questions sometimes didn't make much sense."* (Participant 12, citizen); *"Sometimes you just honestly don't know the answer to the question (...) I also sometimes struggle picturing where I live in my head. Just your imagination holding you back"* (Participant 2, citizen).

### *Subtheme 3.3: Reaching Hard-to-Engage Target Groups*

Participants stressed that it is still difficult to reach particular target groups that are frequently left out of citizen participation. One of them, especially given the tool's online nature, is the elderly: *"It could be an issue for elderly people or people who are not highly trained and might struggle with this"* (Participant 5, expert). Others suggested that providing paper-based options or face-to-face interactions might be more effective for this demographic (Participants 9, citizen; Participant 11, citizen).

It was also noted that those with low socioeconomic status (SES) or poor literacy levels might be excluded: *"Sometimes it's not as easy, so, if it's not someone who isn't as intelligent (...) you have to help."* (Participant 3, citizen). One participant observed that such tools usually draw more educated people: *"The higher educated people that fill in these types of things"* (Participant 2, citizen). Furthermore, individuals dealing with poverty may put their immediate survival requirements ahead of sustainability: *"If you are poor, sustainability is not high on your agenda(...) they worry about 'Can I get food on the table for my children?'. They don't care about sustainability."* (Participant 3, citizen). Although typically educated, young couples with kids were also identified as a

hard-to-reach group: *They might be probably well educated and are able to give a good input but they are busy with their kids or work.*" (Participant 1, expert).

In addition, due to linguistic challenges, migrants were also identified as a restricted group: *"The immigrants from Arabia from the last 10 years haven't taken part in it because we don't have access to them. That's the standard problem of citizen participation. Some groups of the society you don't get."* (Participant 1, expert).

Lastly, participants emphasized the significance of taking into account those with neurodiverse conditions: *"Yes I've been to university but I have a few issues like ADHD (...) sometimes it's not as easy."* (Participant 3, citizen); and those with dyslexia or visual impairments: *"I think people with dyslexia might struggle just because of the layout right now."* (Participants 9, citizen).

#### **Theme 4: From Tokenism to Meaningful Participation**

This theme explores the transition from checkbox, shallow forms of citizen participation to engagement procedures that are more transparent and meaningful.

##### *Subtheme 4.1: "Citizen participation – A check in the box"*

Participants criticized approaches where citizen input is collected but not meaningfully integrated into decision-making processes: *"I don't believe in top down, never had, never will, it has to come bottom up."* (Participant 3, citizen). Several participants reflected that meaningful participation does not imply a big group of people: *"It's better to have a diverse small group of people who are very much engaged."* (Participant 8, expert). Another participant criticised procedures in which citizens are involved: *"People need to be informed, they have to be able to make informed decisions and not just like a check (...) now it's more like a check in the box (...) I think the system could be a bit more aware of the fact that citizens' participation can really enrich professionals' work."* (Participant 8, expert).

##### *Subtheme 4.2: The Importance of Feedback and Trust*

In order to foster trust, the importance of giving citizens feedback was seen as important: *"Citizen participation in my opinion is more than just giving input. It is also more bidirectional because here it's just you fill out the survey, you give your opinion, and you send it to the cloud, and then you don't know what happens with it."* (Participant 8, expert). Moreover, the lack of feedback was identified as a key factor in undermining citizens' trust in institutions: *"We can have good intentions, but they just think something like—'I don't care, you're the government. You may have screwed us over in the past.' Which is regrettable, because governments change, people change, but that mistrust stays."* (Participant 5, expert); *"It's very, very important, especially for marginalized groups, to have professionals and non-professionals stay connected, especially marginalized people, they have lost all trust in the government, in the healthcare system, they don't trust anyone, they have very bad experiences."* (Participant 9, citizen).

### *Subtheme 4.3: The Hidden Health Dimension*

Participants expressed appreciation regarding the tool's lack of focus on health, which might facilitate discussions without putting blame: *"This whole idea is about health, because it tackles health in all policies, but the health aspect is actually not really mentioned in the tool itself. Sometimes when you mention health, people start to distance themselves because it can be a delicate topic or associated with blame, but if you talk about their neighborhood, they engage more openly, and you can still uncover a lot of health-related factors indirectly"* (Participant 10, expert).

### *Subtheme 4.4: "The tool is not a wonder medicine"*

Despite acknowledging the aPST's potential to promote citizen involvement, participants stated that it does not lead to miracles: *"The tool is not a wonder medicine, it doesn't solve everything."* (Participant 7, citizen). Participant 4 also highlighted the importance of realistic expectations: *"Yeah, I think we can make a real difference using the aPST, not a significant one."* (Participant 4, citizen)

## **Theme 5: Visions for aPST in Citizen Participation**

Participants underlined that improving citizen participation can be achieved by making the tool more fun, simple to use, as well as showing people why their voice matters. It was also believed that bringing people together and starting with younger generations were crucial tactics:

### *Subtheme 5.1: "Make it Fun, Make it Simple"*

Participants offered a variety of recommendations, highlighting the value of simplicity and enjoyment: *"Nowadays it has to be fun."* (Participant 3, citizen); *"It would be more encouraging for people to take part if the tool is made in a gamified way, with some visual impact (...)gamification makes things more interactive and probably makes it feel less burdensome when answering questions."* (Participant 7, citizen). Additionally, making the tool simpler was also mentioned: *"Simple explanations are not just about accessibility but also about respect,If I can explain it to a child of four, anyone can understand it"* (Participant 3, citizen). However, one participant noted that simplifying it too much could result in the loss of important content: *"If you make the questions too easy, it doesn't have substance anymore"* (Participant 1, expert).

### *Subtheme 5.2: "Show Them Why Their Voice Matters"*

Participants emphasized that individuals must comprehend the impact of their involvement: *"Show them why it is impactful, because if they don't have the motivation then its very likely they will do half of the study and then that's it"* (Participant 11, citizen); *"I think if you would put down 'this is why your voice is valuable', 'this is how we're using it', they know that their answers are going to be used for some decisions. "* (Participant 9, citizen); *"Just tell them that: 'We are looking for your opinion', 'Let's do this all together right now!'"*(Participant 6). Furthermore, offering people more choices makes them feel more empowered: *"I feel like if you give people choices they might be more inclined to be like 'Oh i feel like i'm listened to cause my voice matters.'"* (Participant 9, citizen)



### *Subtheme 5.3: Bringing people together*

Participants emphasized the importance of hosted events, especially local ones, particularly in cross-border areas: "If you bring them together, carnival is a great way of bringing them together, something festive, something cultural, make them eat and drink together." (Participant 3, citizen). Additionally, reaching more people can be facilitated by using places such as supermarkets, libraries, schools, etc: "*I think hosted events in bordering regions can actually bring other people from different countries to contribute in a more effective way.*" (Participant 4, citizen); "*Take the tool to libraries or supermarkets, sit with them, give them a voucher.*" (Participant 8, expert).

### *Subtheme 5.4: "Start Young"*

One long-term option was to start with the younger generation: "Start young—don't start with me. People listen to their children. Schools. Classes (...) So where do you start? Children." (Participant 3, citizen)

## **Discussion**

This study explores the expert and citizen's perspectives on the adapted Place Standard Tool and participation in climate change in the Euregio Meuse-Rhine, the following two research questions were aimed to be answered: 1) "How do citizens and stakeholders perceive the adapted Place Standard Tool in fostering cross-border participation on climate change and health issues in the Euroregion Meuse-Rhine?" and 2) "What are the key barriers and enablers to citizen participation in climate change and health through the adapted Place Standard Tool in the Euroregion Meuse-Rhine?"

Overall, the aPST was widely perceived by citizens and stakeholders as a promising tool that fosters citizen participation and raises local awareness about the environment, climate and health concerns. It also provided a wide range of perspectives of the environment and gave the opportunity to have a deepened look regarding specific environmental issues. Although the aPST encourages participation, in a cross-border context, it may struggle to fully engage citizens in participating due to differences in administrative systems, cultural norms, settings and accessibility problems. While the aPST, can represent the start of something, it might not create sustained impact without providing transparency on how participation influences decision-making.

### **5. 1 Public Value Theory and Participation**

The Public Value Theory served as a useful and multilayered lense to explore how the aPST fosters citizen participation in a cross-border region. These dimensions reinforce each other, creating a complex dynamic that requires multifaceted solutions. Several barriers and enablers were identified and classified throughout the Public Value Theory's strategic triangle, nevertheless, it should be noted that these categories are not exclusive of one another and that many of the topics covered cover several different angles:

First, within the authorizing environment, one major barrier identified was a fragmented, such as lack of coordination between the three countries and lack of human and financial

resources across the Euroregion. However, when backed by dedicated local authorities and motivated citizens, the authorizing environment can also facilitate participation. Furthermore, there is a misalignment between legal structures and the willingness to foster citizen participation. Unfortunately, local laws often fail to encourage active citizen involvement. This suggests that policies are not designed to enforce participation, but rather afford the flexibility and resources that allow citizens to pursue participation on their own. This theory raises an important question: How can we involve as many people as possible without making it too hard or too demanding?

Second, when it comes to operational capabilities, particularly how the tool is delivered and used, the tool's language obstacles and overall complexity were pointed out as barriers. The tool was perceived to be excessively long, ambiguous, and time-consuming. An enabler identified was that the aPST was acknowledged for its usefulness, particularly its provision of helpful information, explanations and raising awareness of health and climate issues.

Lastly, from the perspective of public value dimension, one major barrier was the accessibility of the tool as it may not be fully user-friendly for people with ADHD, dyslexia, or elderly. Moreover, the tool does not fully reach marginalized groups, such as low socioeconomic status communities and migrants. On the other hand, the tool can greatly facilitate involvement by providing transparency around how results would be used. This can increase trust and give participation greater significance.

## **5.2 Comparison of the study findings to current knowledge**

Prior research investigating the PST has also demonstrated how it raised awareness among communities about disparities and accessibility problems (Powell et al., 2023). Similarly to Powell et al. 2023, this study demonstrates that the aPST promotes engagement and increased awareness by giving citizens the opportunity to reflect on their environment. However, this study identified the main barriers that might hinder fair accessibility of the tool. Moreover, accessibility issues around the tool were also raised in earlier studies (Carpiano et al., 2022; Place Standard Scotland, 2020), but this study provides more context by showing how these problems become more complex in a cross-border setting. Prior single-country evaluations of the PST did not adequately account for the additional levels of complexity introduced by the differences in administrative systems, cultural norms, and languages across the three nations that make up the Euregio Meuse-Rhine.

## **5.3 Strengths and limitations**

This study has several strengths and limitations, which were classified into three main areas:

### **5.3.1 Theoretical Framework**

The application of the Public Value Theory served as a strength. The theory's capacity to connect citizen-centered values, such as trust and accessibility, with institutional and operational circumstances, demonstrates how successful participation requires alignment across these domains. The results demonstrated that while implementation problems (operational capabilities) had a direct impact on how inclusive the tool was viewed,

strong community support and local authority involvement (authorizing environment) enhanced trust and willingness to participate (public value). The framework also revealed some challenges. The three dimensions of the Public Value Theory are deeply interconnected and difficult to separate one from the other. Every dimension influences and depends on the others.

### 5.3.2 Methodological Procedure

The study included a representative sample of participants, both experts and citizens, incorporating a wide range of perspectives on citizen participation and the aPST, also from those who were not knowledgeable about health or climate issues. Multiple perspectives were captured as the sample was diverse in terms of age, gender, and professional backgrounds. However, it is worth noting that the sample's socioeconomic status and educational background were not entirely representative. Marginalized groups were underrepresented. This restriction draws attention to possible weaknesses in the study's capacity to adequately identify barriers for this target group.

### 5.3.3 Data Analysis

The data analysis process was rigorous and the theme identification allowed for a deep analysis and interpretation. Additionally, manual transcription of the interviews allowed for a strong familiarity with the data. Nonetheless, qualitative data involves a certain degree of subjectivity which might represent a potential weakness of the study.

## 5.4 Future research

Future research should actively focus on reaching and targeting more individuals from marginalised groups, such as low SES and low literacy people. In order to test the aPST in real-life setting and cross-border citizen participation, it needs to be assessed beyond those groups who have an education background. This can also be done to see whether sampling the tool increases its accessibility specifically for hard to reach target groups. Moreover, future research should examine adaptations to the Public Value Theory framework to better represent the complexity of cross-border participation and to pinpoint other factors affecting participation. To gain a deeper knowledge of the dynamics of participation, it is also exploring how the use of other theoretical frameworks may also be used. Moreover, it can be beneficial to employ in the future a mixed-method approach, as it could provide stronger evidence on the tool's long-term impact.

## 5.5 Practical implications

Participation procedures must be straightforward, easy to understand, and considerate of people's time and effort. Building feedback loops that demonstrate to citizens how their input is used is essential because it can boost sustained engagement and trust. To reduce obstacles to participation, policymakers should focus on harmonizing administrative procedures across national systems. In order to effectively engage various communities, policies should also guarantee money and support for inclusive participation, particularly for marginalized groups.

## **5.6 Conclusion**

The aPST raises awareness and encourages citizens to participate in their community. However, it may struggle to fully engage citizens in participating due to differences in administrative systems, cultural norms, settings and history and accessibility problems. Participants must be shown how their opinions affect choices and why their voice counts in order to have a long-lasting effect.

## Appendices

### Interview Guide

1. Before we start, could you please provide an introduction about yourself?
2. Have you ever participated in any climate or health-related activities? Can you share your experience?
3. How do you see citizens getting involved in climate and health issues in your region?
4. What about border regions like the Euroregion Meuse-Rhine?

#### 1. Authorizing Environment:

1. Sometimes, local or national policies and regulations can either support or make it harder for citizens to get involved in climate and health issues. In your experience, do the current policies or rules in your region make it easier or harder for people to participate in these kinds of decisions? Can you give an example?
2. What do you think about working with neighboring countries on climate and health issues?

#### 2. Operational Capabilities:

1. Since you're already familiar with the aPST:
  - a. How would you describe your experience using it?
  - b. Was it easy or difficult to use? Why?
2. Do you think the aPST makes it easier for people to participate, or are there still some barriers?
3. Did you feel that the aPST helped you express your opinions or feel included in decision-making?
4. Do you think the aPST helps bring together different perspectives from people across borders? Why or why not?

#### 3. Public Value:

1. What would make it easier for more people or communities to take part in climate and health discussions using the aPST?
2. Why do you think it's important for both citizens and professionals/stakeholders to be involved in these discussions?
3. From your view, how could this kind of participation—through tools like the aPST—make a real difference in your region?

#### Closing Question:

Is there anything else you'd like to share about your experience with the aPST or citizen participation in climate and health issues?

Table 2. COREQ Checklist

Domain	Topic	Question	Response
Domain 1: Research Team and Reflexivity			
Personal characteristics			
1	Interviewer/facilitator	Who conducted the interviews or focus groups?	Andreea Sima
2	Credentials	What were the researcher's credentials (e.g., PhD, MD)?	MSc
3	Occupation	What was their occupation at the time of the study?	Master's student at Maastricht University in Health Policy, Innovation & Management.
4	Gender	What was the interviewer's gender?	Female
5	Experience and training	What experience or training did the researcher have in conducting qualitative research?	I have experience conducting qualitative research through my previous academic knowledge acquired from studies and research papers.
6	Relationship established	Was a relationship established with participants before the study?	No prior relationship was established with participants before the study.
7	Participant knowledge of the interviewer	What did participants know about the researcher (e.g., personal goals, reasons for doing the research)?	Participants were informed about the purpose of the study, my role as a researcher, and the relevance of their contributions to understanding citizen participation in climate change and health policies.
8	Interviewer characteristics	What characteristics were reported about the interviewer (e.g., bias, assumptions, reasons for conducting the research)?	Characteristics such as the academic interest in citizen participation in climate change and health policies, as well as previous background were reported about the interviewer. While it was strived to reach neutrality, prior

			experience in European Public Health and research in health policy, governance and decision-making may have influenced the framing of questions or my interpretation of themes. Thus, to reduce bias, a structured interview guide was followed. This included broad questions which allowed diverse perspectives.
Domain 2: Study Design			
Theoretical Framework			
9	Methodological approach	What qualitative approach was used (e.g., phenomenology, grounded theory, ethnography)?	Content analysis
10	Theoretical framework	What theories were used to guide the study?	The study is guided by Public Value Theory (Moore, 1995), focusing on governance, public participation, and operational capabilities.
Participant Selection			
11	Sampling	How were participants selected (e.g., purposive, convenience)?	Purposive sampling
12	Method of approach	How were participants contacted (e.g., in person, by email, telephone)?	Participants will be recruited via researcher networks
13	Sample size	How many participants took part?	Approximately 10-15 participants, including citizens and stakeholders from diverse backgrounds in the Meuse-Rhine Euroregion
14	Non-participation	How many people refused to participate or dropped out? Reasons?	N/A
Setting			

15	Setting of data collection	Where was the data collected (e.g., home, workplace)?	Interviews will be conducted online or in-person, based on participant preference.
16	Presence of non-participants	Were others present during the interviews/focus groups?	Only the interviewer, the participant and the supervisor will be present.
17	Description of sample	What were the key characteristics of the sample (e.g., demographics, role, experience)?	Participants will include various citizens from the Meuse-Rhine Euroregion, such as: policymakers, local authorities, students and experts in climate change and health.
Data Collection			
18	Interview guide	Were questions, prompts, or guides used? If so, were they pilot tested?	Semi-structured interview guide designed to explore perceptions of the adapted PST and participation in climate change-related health initiatives. They were pilot tested.
19	Repeat interviews	Were repeat interviews carried out? If so, how many?	Not planned but may be conducted if necessary.
20	Audio/visual recording	Were interviews recorded? If so, how?	Interviews will be audio-recorded with prior consent.
21	Field notes	Were field notes made during and/or after the interviews?	Researchers will take notes during and after interviews.
22	Duration	What was the average length of each interview or focus group?	Interviews will last approximately 30-60 minutes.
23	Data saturation	Was data saturation discussed or considered?	Data collection will continue until thematic saturation is reached.
24	Transcripts returned	Were transcripts returned to participants for comment/correction?	Participants will not receive transcripts for review.
Domain 3: Analysis and Findings			
Data Analysis			
25	Number of data coders	How many researchers coded the data?	One primary researcher conducted the initial coding, with supervisor oversight.



26	Description of the coding tree	Was a coding framework described?	A coding framework was developed based on predefined categories from the theoretical framework and refined during analysis.
27	Derivation of themes	Were themes derived from the data (inductive) or pre-existing concepts (deductive)?	Themes were derived through a combination of inductive (emerging from data) and deductive (based on existing literature) approaches.
28	Software	What software, if any, was used to manage the data?	Atlas.ti or manually
29	Participant checking	Did participants provide feedback on the findings?	Participants did not provide formal feedback on findings.
Reporting			
30	Quotations presented	Were participant quotations used to illustrate the findings? Were they identified (e.g., participant number)?	Direct quotations from participants were used to support key themes and were anonymized for confidentiality.
31	Data and findings consistency	Was there consistency between the data presented and the study findings?	The study will ensure consistency between the data and findings by systematically analyzing responses and linking them to themes.
32	Clarity of major themes	Were major themes clearly presented in the findings?	Major themes will be clearly presented and structured according to the research objectives.

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