Local Community Participation in the Covenant of Mayors and Klimaatverbond: A cross-case study in the Netherlands

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Executive Summary

In the last couple of years there have been many different Protocols, Accords and Agreements to combat climate change, being the Paris Agreement the last global effort to unite countries for this common cause. However, regardless of these pledges, efforts, and commitments, they are not enough to keep the average rise of global temperature under 2 degrees Celsius compared to pre-industrial levels. At the COP21, cities were recognized as key actors in the fight against climate change because of their ability to combine national with local level approaches. In a multi-level system, the increased interconnectedness and competencies among these actors allow the subnational actors to increase their representativeness in central policy processes. The emergence of city climate networks, which are thought to be governing global and local climate action, reflects this multi-level nature and its dynamics. The increased interconnectedness and polycentric governance have allowed local communities to engage in climate mitigation and adaptation policy processes, considered to be a key factor for the success of global, regional and local climate actions.

Extensive literature has proven that engaging communities in climate actions and fostering citizens to adopt sustainable energy behaviours remain a challenge. Civil servants often do not know how to engage non-active citizens. Based on the idea that climate networks are expected to increase the governance capacity of cities by engaging them in multiple governance activities, such as providing information and networking opportunities to multiple stakeholders, it becomes important to understand if climate networks influence citizen participation processes for the better. While this seems to be necessary, not much research exists on this field of research. Consequently, this research's objective is to determine the influence that city climate networks have on citizen participation processes in local governments in the Netherlands. The networks to study in this research are: the Covenant of Mayors (CoM) for Climate and Energy and Klimaatverbond ("Climate Alliance" in English).

The main research question of this study is therefore: ***How do four selected municipalities in the Netherlands that are members of the Covenant of Mayors and/or Klimaatverbond organize citizen participation in comparison to non-members?***

To answer this research question, a cross-case study analysis was performed involving four Dutch cities: two cities members of the Covenant of Mayors and Klimaatverbond (Alkmaar and Breda), one city member of the Klimaatverbond (Middelburg), and one city non-member to neither of these networks (Westland). The selection of these cities was based on their membership to the CoM and Klimaatverbond, and their size. Dutch cities between 40,000-100,000 inhabitants were selected due to the limited research focus that they receive. To get an international comparative perspective, the City of Bruges was studied. Data was collected from semi-structured interviews (16), climate policy documents and academic literature. To analyse these data, a framework was created based on the multi-level governance system theory, and descriptive categories for citizen participation processes, so that differences in participatory processes among the case studies and influence of city climate networks could be identified. These categories were: initiator's capacity (in this case the municipality), the purpose of the participation process, type of stakeholder, methods for citizen participation and stage of involvement.

With regard to the influence of city networks, the results show that in the Dutch cases, the membership of municipalities to the Covenant of Mayors and Klimaatverbond does not influence participatory processes, neither climate change policies and actions. This is because neither of these networks is widely adopted and implemented by their Dutch members, therefore losing importance in the climate governance of the Netherlands. This can be attributed to the fact that Dutch

municipalities have adhered to these networks based on an objective that limits internal implementation of it (i.e. confirm the climate goals against the international community). Other networks have taken a more important role in supporting municipalities in the creation and implementation of climate policies and actions. These networks are the National Programme: Regional Energy Strategy (NPRES) and EU funded projects such as Horizon 2020 and Interreg 2 Seas project. These networks have influenced participation by making more funds available to implement climate action and enabling collaboration among its members.

With this first result, the answer to the main research question is given in general terms, without considering membership to the Covenant of Mayors and Klimaatverbond. In the four Dutch cases, public participation occurs at the "inform" and "consult" level of public engagement, and in Breda, "involve" is present through the active collaboration and intermediation of the energy cooperative BRES with the municipality to implement climate policies and actions. Even though, Alkmaar, Breda and Middelburg have local energy cooperatives, these have not been called or invited to make inputs to the local climate policy, or his inputs are not taken-up by the municipality. Therefore, with regards to the "partnership" and "citizen control" levels, municipalities are still away from reaching these in terms of policy making. Documents describing a plan for participation were barely found in the Dutch cases, even though this is considered to be important for the success of the participation process. Even though the municipalities were found to have some experience and knowledge on citizen participation, all of them find it difficult to reach non-interested citizens because of lack of information on how to approach them. Furthermore, there was little sign of monitoring and evaluation of climate actions and the participatory processes, therefore citizens inputs during these activities are not ensured to be considered or taken-up in climate policies by the civil servants and City Council.

Additionally, it was also found that energy cooperatives play an important role in sharing information and increasing awareness on climate action, act as an intermediary between different stakeholders and citizens, implementing their own sustainable energy projects and collaborating with the municipality to implement the climate policies of the city (this being the case of the City of Breda and BRES). Finally, in all Dutch cases, it was encountered that citizens lacked time, financial resources, knowledge and social cohesiveness to implement climate actions at their homes. This, undoubtedly, influences the impact and implementation of local climate actions.

When comparing the CoM activity of the two Dutch case studies against Bruges's, differences were evident. In one hand, in the Dutch cases the network was used as an isolated project within the municipality with no person responsible for the functioning of it. In neither of the two cases, it was found that the network had actually permeated in the municipal organization. On the other hand, in Bruges, the Covenant of Mayors has been taken up by the civil servants, diffusing in to the municipal tasks and different departments in the municipality. This has greatly influenced the city as, despite having a short climate policy history, has been able to catch up the climate leader cities in Belgium in a structured and methodologically manner.

From these results, three recommendations are given. To the Covenant of Mayors, they need to strengthen its supporting network in the Netherlands, as, in the sample analysed in this study, it is not working. New actors can be included or to renew the commitment of the current ones. To the Klimaatverbond, they should research the ways that municipalities can reach and engage non-active citizens into the energy transition. This would create more interest in the network from the current and new possible members. And finally, to the City Council and civil servants, it is recommended for them to draft a participation plan in which the objectives, phases, stakeholders and monitoring practices are included. In this way, participatory processes are clearer to the civil servants and citizens. The outcome of the process can greatly be benefited.

Acknowledgements

This thesis marks the end of a two-year journey that led me through the majestic and exciting world of the energy transition. I have learned many and countless lessons during these two years. I learned about perseverance and resilience, friendship and solitude. Pursuing this master thesis in the Netherlands, and specially at TU Delft has been a memorable, satisfying experience. Despite all the difficult times, I am incredibly happy and grateful to have finished my masters the way I did.

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Abbreviations

CoM	Covenant of Mayors
EU	European Union
GHG	Greenhouse gases
TCN	Transnational climate networks
SECAP	Sustainable Energy and Climate Action Plan
NPRES	National Programme: Regional Energy Strategy
RVA	Climate Change Risk and Vulnerability Assessment

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1. INTRODUCTION

The unrestricted emissions of greenhouse gases (GHG) have posed the biggest challenge that human race has yet to face: climate change. The Kyoto Protocol treaty was adopted in December 1997 by 192 countries that committed to limit and decrease their GHG emissions in accordance to each country's goal (United Nations Climate Change, 2021). In 2009, the Copenhagen Accord was drafted for countries to further pledge GHG emission reductions or mitigation actions (United Nations, 2015). In December 2015, all nations signed the Paris Agreement at the COP21, signalling the last and most ambitious effort to combat climate change (United Nations Climate Change, 2021).

However, in spite of these pledges, efforts and commitments, these are not enough to keep the average rise of global temperature under 2 degrees Celsius compared to pre-industrial levels (United Nations Environment Programme, 2015). CO_2 emissions from energy use and industry grew 2% in 2018, according to the United Nations Environmental Programme (UNEP) (United Nations Environment Programme, 2019). Moreover, the same study found that GHG emissions will not peak in the next few years, meaning that for every year of postponed peaking, more substantive and faster cuts will be necessary to keep the global temperature rise under 2 degree Celsius (United Nations Environment Programme, 2019).

Non-state and subnational actors, such as industry, cities and regions play a critical role to help achieve the global climate goals. At the COP21, cities were recognized as key actors in the fight against climate change, and as leaders in cooperation and innovation in the energy transition (Kern, 2019; Pablo-Romero et al., 2015). Cities' leading potential lies in the ability to combine national with local level approaches, which takes into consideration these features and integrate technical and social interests at the local level (Palermo et al., 2020). This results in a multi-level governance system with blurred boundaries between different actors and policy arenas, allowing new actors to become active at different levels and follow multi-level strategies (Kern & Bulkeley, 2009). Actors in the multilevel network exert influence on information, expertise, financial resources, organization and legitimacy. The increased interconnectedness and competencies among these actors allow the subnational actors to increase their representativeness in central policy processes. The emergence of city climate networks reflects this multi-level nature and its dynamics (Kern & Bulkeley, 2009).

City climate networks (i.e., Covenant of Mayors, C40, ICLEI, Klimaatverbond) can help cities play this role by supporting them in the transition to low carbon systems and climate action, through the implementation of measures and mobilization of actors (Palermo et al., 2020). These initiatives are defined as international institutions that take an important place in the global climate governance (Betsill & Bulkeley, 2004) by helping cities in taking the lead in climate action and transition to low-carbon economies (Busch et al., 2018). In these initiatives, cities engage in multiple governance activities, such as providing information and networking opportunities to multiple stakeholders, and encouraging the adoption of standards and commitments to decrease GHG emissions (Hale & Roger, 2014).

Because of this increased interconnectedness, local communities now are able to engage in climate mitigation and adaptation policy processes. The importance of citizen participation at the local level has expanded in the last years. Several authors have argued that climate measures enacted by local governments are highly dependent on the public acceptance and citizens' active participation (Christoforidis et al., 2013; Coelho et al., 2018; Hoppe et al., 2016; Palermo et al., 2020; Rivas et al., 2021; Scherhaufer, 2021). However, engaging local communities to climate actions and fostering citizens to adopt sustainable energy behaviours remain a challenge for different reasons: limited time

and budget resources (Scherhaufer, 2021), legal and organizational challenges (van der Schoor & Scholtens, 2015) and low local government support (Hoppe et al., 2016).

To summarise, in this multi-level governance system, city climate networks are thought to be an important place where global climate governance takes place. Moreover, cities have been catalogued to be relevant actors in climate action due to the increased decentralization of tasks from the central government, and inaction of the latter to set ambitions and take action. And citizen participation is recognized as a key factor for the success of global, regional and local climate actions.

1.1. PROBLEM DEFINITION

It is extensively argued in the literature, that success of city networks heavily depends on public acceptance and citizen's active participation, and the role that its underlying structure plays in to influence and stimulate action on the ground. (Christoforidis et al., 2013; Coelho et al., 2018; Kern & Bulkeley, 2009; Palermo et al., 2020; Rivas et al., 2021; Scherhaufer, 2021). Commitment is required by the local communities, as well as the ability of cities to find and exploit available instruments to mobilize the finance and governance capacity required to reach the objectives (Christoforidis et al., 2013). However, engaging communities to climate actions and fostering citizens to adopt sustainable energy behaviours remain a challenge (Doukas et al., 2012; Marinakis et al., 2017). For instance, civil servants are aware of the need and importance to engage the most part of the citizenship, however, they lack the knowledge and experience to engage not only the active citizen in climate and energy actions, but also the passive ones. Based on the idea that climate networks increase the governance capacity of cities by engaging them in multiple governance activities, such as providing information and networking opportunities to multiple stakeholders, it becomes important to understand if climate networks influence citizen participation processes for the better. While this seems to be necessary, not much research exists on this field of research.

Therefore, this research is meant to contribute to a deeper understanding of citizen participation in climate policy under the scope of the Covenant of Mayors and Klimaatverbond in cities. The Covenant of Mayors is a transnational climate network initiated in 2008 by the European Union and has more than 10,700 city members, and the Klimaatverbond is the Dutch national climate network established in 1992 and comprises 3 waterboards, 9 provinces and 162 municipalities. It is aimed to understand the influence that these networks have in local participation processes. Additionally, this study can provide the laying groundwork for further research on the adoption and implementation of the network in local governments. This will be done by analysing the Covenant of Mayors and the Klimaatverbond under the context of the Netherlands.

1.2. RESEARCH OBJECTIVES

The importance that local community's engagement has on the effectiveness of local climate action, and its capacity to unlock long-lasting adaptive and transformational change, coupled with the premise that climate networks support cities in taking the lead in climate action and transition to low-carbon economies, makes it important to understand how cities, that are signatories of the Covenant of Mayors and Klimaatverbond, organize citizen participation and whether being signatory of these networks influences citizen participation processes in local governments. The importance is two-fold: first, climate networks are recognized as projects that can bridge the global GHG emissions gap to achieve the 2030's target; and second, citizen active participation is proven to positively influence the outcomes of local climate initiatives. Thus, the objectives of this master thesis are:

- Describe how the Covenant of Mayors and Klimaatverbond are organized in the Netherlands.

- Determine why local governments become members of the Covenant of Mayors and Klimaatverbond.
- Analyse how the Covenant of Mayors influences citizen participation in local climate plans of its signatory cities in the Netherlands.
- Describe the role of the Klimaatverbond association, as a supporter of the Covenant of Mayors and Dutch national network, in influencing citizen participation processes in its members in the Netherlands.
- Analyse if and how citizen participation influences from the bottom-up the Covenant of Mayors and Klimaatverbond activities and mandates, and is integrated in these networks.

The research is guided by academic literature and empirical studies related to citizen participation and governance of transnational climate networks. This is a qualitative study that aims to contribute to a deeper understanding of citizen participation under the scope of the Covenant of Mayors and Klimaatverbond in cities in the Netherlands. This study lays the groundwork for further research on the influence of climate networks and validation of the proposition that these networks govern local climate policy.

1.3. RESEARCH QUESTIONS AND SUB-QUESTIONS

The main research question of this study is the following:

How do four selected municipalities in the Netherlands that are members of the Covenant of Mayors and/or Klimaatverbond organize citizen participation in comparison to non-members?

By answering this question, it is aimed to understand if the Covenant of Mayors for Climate & Energy and Klimaatverbond have a positive impact on citizen participation in local climate policy and actions. Therefore, it becomes important to understand how Dutch municipalities organize citizen participation in order to answer this question and analyse the differences that may exist between the cases.

The following research questions are used to guide the research study:

RQ1: How does citizen participation contribute to local climate action?
RQ2: What categories are suitable to describe citizen participation processes?
RQ3: Why do cities join the Covenant of Mayors or Klimaatverbond in the Netherlands?
RQ4: How do the Covenant of Mayors and Klimaatverbond influence citizen participation in selected cities in the Netherlands?
RQ5: What policy recommendations can be given to signatory and non-signatory cities of the Covenant of Mayors and Klimaatverbond to engage citizens in climate action plans?

1.4. RESEARCH APPROACH

This thesis project aims to provide further understanding on the influence that city climate networks have on citizen participation in Dutch local governments. Thus, exploratory research is identified to be most suitable, as it will help to understand how cities signatories of city networks organize citizen participation processes in their local climate action plans, in comparison to non-signatory cities. The exploratory approach of this thesis sets the underlying nature of the research, however, a qualitative cross-case study analysis, will be used to answer the main research question. By using a cross-case study analysis, an in-depth exploration of similarities and differences across cases can be had (Khan & VanWynsberghe, 2008).

The city networks selected in this thesis are the Covenant of Mayors for Climate & Energy and the Dutch Klimaatverbond ("Climate Alliance", in English). For the case studies, four Dutch municipalities were selected: Alkmaar, Breda, Middelburg and Westland. The reasons for choosing these networks and cities are provided in Section 4.

In order to answer the research questions, qualitative sources of data are required. This data is gathered from academic and grey literature and semi-structured interviews. Within Section 2, answer to RQ1 is given by means of academic and grey literature analysis (desk research). By answering this question, it is aimed to further put in evidence the relevance of this study. In Section 3, categories to describe citizen participation processes are presented to answer RQ2. These categories are inspired by the work of Broer (2020), Wilcox (1994) and Brody et al. (2003). Answer to RQ3 and RQ4 will be provided in Section 7, based upon the description of the case studies in Section 6. The analysis of the information is based on the elaboration of a theoretical framework that includes multi-level governance system theory and the categories presented in Section 3. Finally, RQ5 and the main research question, will be answer in Section 8. The research flow diagram in Appendix A. Research flow diagram.

The exploratory research approach does not intend to give a conclusive answer, but rather to generate more understanding on the topic. This approach will provide the laying basis for future studies to be conducted on this topic (Business Research Methodology, n.d.; Saunders et al., 2012). Unsurprisingly, the selected approach has its limitations: the interpretation of information strongly lies on the researcher's judgement, which is subjected to biases (Business Research Methodology, n.d.).

1.5. Complex Systems Engineering & Management perspective

This thesis studies a complex system that fits the criteria of a Complex System in Engineering and Management. The study's technical component is the acceleration of the energy transition and reduction of GHG emissions in cities member and non-member of climate networks. The institutional component is the multi-level system in which these climate networks are embedded. And the social and economic component is the engagement of citizens or local communities in the energy transition and local climate actions. A systematic and scientific approach is adopted by means of theoretical framework based on the integration of multi-level governance system theory and categories for the description of citizen participation processes. For these reasons, this study exemplifies a Complex Systems Engineering and Management thesis.

1.6. Outline

This structure of this thesis is as follows: Section 2 presents the theoretical background of this research. The section outlines the literature needed to fully explain the topic and answer the main research question. Section 3 develops operational categories for citizen participation. This section provides the framework to understand participatory processes in the case studies. Section 4 presents the methodology followed in this research. In this section, the research approach, methods, case selection, data collection and analysis will be presented. Section 5 presents the descriptions of the climate networks analysed in this thesis. Section 6 presents contextual descriptions and in-depth description of the participation processes of the case studies selected. Section 7 presents results and discussion. Finally, in Section 8 conclusions of the thesis will be given, including limitations, pathways for future research and recommendations.

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2. LITERATURE REVIEW

2.1. CITIES AND THEIR NEW ROLE IN CLIMATE CHANGE

In the last couple of years, cities have gained attention as key players to combat climate change. This is not only because cities are accountable for 78% of world's energy consumption and 60% of GHG emissions produced, but also because adaptation and mitigation actions in cities can be successfully implemented (Palermo et al., 2020; United Nations, n.d.). Therefore, activities taken directly by cities can have a large impact in tackling climate change. For instance, cities have invested and implemented energy efficiency standards for buildings and clean transportation systems, and have diminished the release of GHG by introducing advanced solid waste management (Fuhr et al., 2018).

This shifted importance to cities needs different level of approaches and engagement in governance. Local governance, defined by Williams et al. (2020), are the "*political and institutional processes through which decisions are taken and implemented in a subnational geographic level*" (i.e., cities). This decentralization of power, from central to local governments, advocates a multi-level system of governance in which local climate actions have sufficient space to grow and networks emerge for the diffusion of best practices and collective action (this multi-level governance system will further discussed in Section 2.2.1) (Di Gregorio et al., 2019).

Under this line of reasoning, Palermo et al. (2020) argue that the potential of cities lies in the combination of both national and local level approaches to take into consideration features of both realms, and integrate technical and social interests. Moreover, Williams et al. (2020) and Fuhr et al. (2018) complement this argument by stating that local governance of cities is better placed to coordinate and develop location-based responses to climate change by enabling participatory decision making and involving local communities.

2.1.1. Local governance modes

There are several ways in which cities can implement and achieve their climate action plans. According to Bulkeley & Kern (2006) there are four modes of governing: self-governing, governing by provision, governing by authority and governing through enabling. Each of the previous modes is different in terms of the governing capacity to stand.

In *self-governing* the implementation of climate action plans occurs in parts in which the local government has the power to make its own decisions and can directly control their own energy consumption, for instance, municipal buildings. Additionally, under this mode of governance municipalities play an important exemplary role to persuade others to start action on their own (Bulkeley & Kern, 2006).

In *governing by provision,* cities have the control to supply greener and more sustainable utilities: energy, transport, water and waste service. They are able to manage the infrastructure development, influencing practices of public consumption and waste to limit emissions of GHG.

Governing by authority means that local governments have a degree of authority over the actors and their responses towards their planning and regulating roles in relation to urban planning, transport and waste. Finally, in *governing through enabling* local governments enable other actors, at the community level (e.g. citizens or businesses), to act for public purpose. This means that local governments get involved in the promotional activities, public-private partnerships, financing and shaping of policy goals to encourage actions by other sectors (Bulkeley & Kern, 2006). Nonetheless of the governing mode, it is important to identify trends and the use of specific governing styles to understand how climate action is governed locally and the challenges that may be encountered.

2.1.2. Local government capacity in climate action

Governance capacity is defined as the capacity of local governments to *"formulate and execute effective policies*" and consists of three components: decision-making, implementation and accountability (Vringer et al., 2021). These three components take into consideration not only the fact that local governments are actors who create and implement policies, but also that actors are inside a network of other stakeholders and governments (Vringer et al., 2021).

Decision-making capacity is defined as the capacity that cities have to take well-informed decisions merging the policy agenda of the central government and interests of the local debate. In this sense, it comprises the ability to include new information and balance different interests (Vringer et al., 2021). According to Perry & Kingdon (1985), municipalities are able to take good decisions when the administrative agenda, political debate and the societal actuality and relevance are synchronised. Nevertheless, policy priorities and political and societal urgency rarely occurs (Vringer et al., 2021). For the energy transition, this mismatch may lead to not achieving the GHG emissions. To achieve local climate actions, a sense of emergency is required, in combination with a local government that has a high decision capacity to prioritise energy transition in their policy agenda (Vringer et al., 2021).

Implementation capacity is defined as the capacity that local governments have to satisfactorily perform their tasks. This is related to the required experience, knowledge, funds and civil service capacity to perform their tasks and implement new projects (Vringer et al., 2021). The greater decentralization of power from the central to local governments, have made municipalities gradually more responsible for implementing new laws and policy domains that were led before by the national government, including policies for the energy transition. On a local level, these responsibilities require financial resources, availability of staff, knowledge and experience (Hoppe et al., 2016; Vringer et al., 2021).

Having enough financial resources would allow hiring and training of staff, enabling them to spend more time on climate related projects by outsourcing other tasks. Moreover, more financial resources would allow the deployment of subsidy schemes that support the uptake of low carbon options in local households and industries, in addition to implement more sustainable solutions within the city (e.g. solar energy in municipal buildings) (Hoppe et al., 2016).

The availability of staff is of great importance regarding the work processes and load that precede the delivery of climate policy instruments and climate action. Nevertheless, experience, expertise and motivation of the local staff is also important to push and implement climate actions in cities (Hoppe et al., 2016).

Lastly, accountability capacity is defined as how accountable and transparent a local government can be about their policy (Vringer et al., 2021). This accountability does not only rest on cities but on to higher government levels, citizens and other stakeholders. In the energy transition, progression on sustainability goals is frequently not tracked or made public, undermining the perceived legitimacy of it (Vringer et al., 2021). Legitimacy requires transparency, which in turn requires monitoring and a communication strategy of the progress made. The energy transition and implementation of local climate actions, has a high social and economic impact that requires high cooperation within the local administration staff, which should be equally responsible for the energy transition to avoid obstruction and delay (Vringer et al., 2021).

2.2. MULTI-LEVEL GOVERNANCE AND TRANSNATIONAL CLIMATE NETWORKS IN EUROPEAN CITIES

Starting in 1986 with the Single European Act, the European Union has developed into a system of multiple layers or spheres of governance, counting European, national and subnational policy arenas (Ishtiaque, 2021; Kern & Bulkeley, 2009). The definition of multi-level governance can be understood as "*shifting competencies between local, regional, national and supranational governmental institutions"* (Kern & Bulkeley, 2009). It cannot take only into account the traditional approaches of public regulations (central government, for instance), but also the whole variety of institutions and actions that can provide order (partnership of public and private actors or non-state actors). Authority has not only moved upwards to European establishments, but it has also dispersed across several territorial levels and among a variety of public and private actors. It includes the allocation of authority to the sub-national level from the national level, as many European countries have been progressively decentralized and local competencies extended (Kern & Bulkeley, 2009). This authority displacement can be seen as threefold: (1) upwards to international actors, where local and regional authorities influence EU decision-making through their national government or directly at the European level; (2) downward to local actors, where EU's financial and legal instruments impact local governments; and (3) outward to private and civil actors; where towns and cities co-operate transnationally, exchanging experiences and mutually developing solutions to problems. This implies that these different actors are mutually dependent through entwined cross-level decision-making activities (Ishtiaque, 2021; Kern & Bulkeley, 2009).

The resultant governance landscape has blurred boundaries between different actors and policy arenas, allowing new actors to be more active at different levels and follow multi-level strategies (Kern & Bulkeley, 2009). Actors in the multilevel network exert influence on information, expertise, financial resources, organization and legitimacy. The increased interconnectedness and competencies among these actors allow the subnational actors to increase their representativeness in central policy processes. For example, due to this interconnection, local communities and citizens can engage in climate policy processes (Ishtiaque, 2021). The emergence of transnational climate networks in Europe reflects this multi-level nature of European governance and its dynamics (Kern & Bulkeley, 2009).

2.2.1. Transnational climate networks

Transnational climate networks[1] are defined by Busch et al. (2018) as transnational institutions that give room for cities to exchange on topics linked to the governance of climate change. For Kern & Bulkeley (2009), these networks have three defining characteristics: (1) joining or leaving the network is decided autonomously by the member city; (2) TCNs are characterized as a form of self-governance because of their polycentric set-up; and (3) its members directly implement the decisions and goals taken within the network. Moreover, Busch & Anderberg (2015), identify two additional characteristics: (4) TCNs are composed of more than two city members; and (5), TCNs have certain degree of institutionalisation and formalisation, which means that cities obtain access to rights and, in most cases, obligations (in this case, goals that they need to accomplish). TCNs are therefore vital components of the structure of the multi-level governance of Europe and its dynamics, connecting different city members to the supranational, national and regional levels. Figure 1 shows how transnational climate networks' polycentricity connects the members that are at different governance levels.

[1] As the case studies in this thesis are cities, transnational climate networks here are referred to networks whose members are cities.

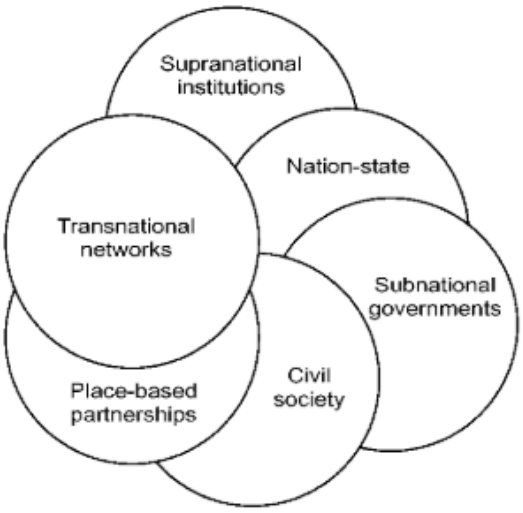

***Figure 1**. Polycentric multilevel governance of TCNs. Sourced from* (Bulkeley et al., 2003)

In this multi-level governance system, TCNs are interesting means to upscale "local experiments", which can be defined as *"expanding, adapting and sustaining successful climate policies, programs or projects in different cities over time to reach higher audiences"* (Kern, 2019). There are four types of upscaling in climate city networks: (1) horizontal, (2) vertical, (3) hierarchical, and (4) embedded (Kern, 2019).

Horizontal upscaling is defined as the transfer of experiences, knowledge and learning among and between leading cities in climate policies (Kern, 2019). This type of upscaling is based on bilateral city to city or networks among them (Fuhr et al., 2018). It gains support from long-term networking that provides the basis of more ways of cooperation; project networking of a limited number of leading cities; and multilateral networking, mainly "(trans)national city network". Leading cities have participated in at least one of the following TCNs: ICLEI, Energy Cities and Climate Alliance(Kern, 2019).

In *vertical upscaling*, authority and competences are shifted upwards to the EU and downwards to the subnational authorities. This type of upscaling needs that TCNs and associations represent and lobby their members at the regional, national and EU levels to promote initiatives ranging from the development of new organisations, such as regional and local energy agencies, to strategies and access financial resources. Taking not only leading cities, that have the resources to represent themselves directly to higher levels, but also smaller towns and cities into consideration, requires a strong focus on regional and national associations that may represent towns and cities in a territory. At the national level, regional and national networks of cities, such as Klimaatverbond in the Netherlands, may be more important than TCNs (Kern, 2019).

Hierarchical upscaling are climate initiatives at the regional, national and European levels that force non-leading cities in climate issues to reach standards and goals set by the EU and its member states. In this type of upscaling, it is required a strong government with the power and authority to set binding standards and harmonize policies. The relation between the different levels of the government is organized top-down. In climate action, hierarchical governance is not well developed due to the fact that local climate policy is still a voluntary task (Kern, 2019).

Lastly, *embedded upscaling* links the different governing authorities at different levels, offers new possibilities for learning and experimentation to all size of cities, and polycentricity becomes embedded in the governance system. Examples of embedded upscaling are the German *Kommunalrichtlinie (KRL)* and the Covenant of Mayors. The embeddedness of climate initiatives in multi-level governance systems is most visible in the CoM, as this network varies significantly from traditional city climate networks. It is based on tight cooperation between the EU Commission, major European city networks, and gets the support from 230 national and regional authorities (Covenant

Coordinators) and more than 217 national and regional city networks and associations, local and regional energy agencies (Covenant Supporters). Due to this characteristic, the CoM has developed into a "*meta-network"*, a network that has other networks and associations as members (Kern, 2019). For instance, the climate association of the Netherlands, Klimaatverbond, is also a Supporter of the Covenant of Mayors. The emergence of these embedded networks brings advantages to the EU Commissions, because all relevant networks and cities have one voice to speak to the EU to seek for funds and cooperate toward the same climate goal.

2.2.1.1. Structure

Transnational climate networks are characterized by the structure described by Kern & Bulkeley (2009): (1) TCNs are composed of an international secretariat and national or sectoral co-ordinators; (2) a Board or Presidency; and (3) member cities. The secretariat consists of a managing director or secretary and the corresponding staff. Its roles are related to the internal governing of the network, for instance the day-to-day work and external relations. Furthermore, in the growth of TCNs, sub-networks have emerged that specialize in a specific territory (a country) or a specific policy area. The Presidency or the Board of the TCN, is responsible for the general decision-making of the network, shaping and guiding the TCN. Additionally, the Board campaigns and represents the members in the international energy and climate agenda. The board members normally are powerful representatives of the most active cities, for instance city mayors. The third component in the TCN structure are the city members. The representative or the person in charge of the TCN in the local governments participate in meetings organized by the TCN, frequently contact the secretariat and build the needed bridges between the relevant local and national policy actors . (Covenant of Mayors for Climate & Energy Europe, n.d.-c; Kern & Bulkeley, 2009). When a city joins the TCN, they can have different advantages, which are made possible by the functions of the transnational climate network. Figure 2 shows the structure of a transnational climate network.

2.2.1.2. Functions

Several authors that support the investigation of the functions of TCNs have been put forward. Bulkeley et al. (2003), presented four different functions: (1) *dissemination of knowledge* and best practices amongst members and other agencies; (2) *lobbying* higher levels of the multi-level governance system to influence political decisions that may affect their members; (3) *acting as implementation agencies* for European policies; and (4) *creating and promoting policy initiatives* throughout the multi-level governance system. Andonova et al. (2009) suggest three functions for TCNs: (a) *information sharing* channelled to steer constituent towards the network's goal; (b) *capacity building and implementation* to enable action by providing resources (finance, labour, expertise, technology or monitoring) and working from the bottom-up, creating and involving actors in different forms of cooperation; (c) *rule-setting* to set norms and rules intended to guide and constrain members.

Departing from theoretical research of the TCNs functions, Busch et al. (2018) studied these networks under the context of German cities. They surveyed staff from 136 cities that were members of at least one TCN. They identify five functions: (i) *enabling internal mobilization*, which includes raising awareness in the local population and local politics; (ii) *formulating emission reduction goals* to members by enabling benchmarking; (iii) *institutionalising climate trajectories* by integrating climate change policies into local institutions; (iv) *enabling direct exchange* of ideas between cities and networking of the municipality staff to start regional and international cooperation with other city members; and (v) *offering project support* from the network for the implementation of climate activities within the local government. Table 1 presents an overview of these functions.

***Table 1**. Overview of TCNs functions*

Functions	Bulkeley et al. (2003)	Andonova et al. (2009)	Busch et al. (2018)
1	Dissemination of knowledge	Information sharing	Enabling direct exchange
2	Lobbying	Capacity building and implementation	Enabling internal mobilization
3	Implementation agency	Rule-setting	Formulating emission reduction goals
4	Policy initiation		Institutionalising climate trajectories
5			Offering project support

According to Bulkeley et al. (2003), the fulfilment of these functions is dependent on the structure and capacity of the network, co-operation and competition between networks and governments, and the internal management of the network.

Many TCNs have their own resources, head office, staff and budget to realize their objectives. As they operate in multiple countries, they are normally supported by national sub-networks that influence the nature and capacity of transnational climate networks (see Figure 2). For instance, the creation of national sub-networks allows transnational co-operation by addressing the language barrier (Bulkeley et al., 2003). Additionally, the impact and influence of a TCN on municipalities is critically dependent on the intermediation between the TCN and broader local policy networks that focus on climate change (Kern & Bulkeley, 2009). Thus, the importance of national sub-networks that play the role of the needed "intermediary" actor. If this intermediary actor can influence the local policy network, there would be a higher chance that the TCN's initiatives and goals are picked-up and implemented within the city. Therefore, the membership of a city in a TCN is not the only critical factor for the success of it, but the relationship between the intermediary actor and local policy network is equally important. Political support at the local level and the presence of the intermediary actor have a decisive influence on changes on the ground, and provide the way by which the network can assess its progress nationally. If this national sub-network is missing or is marginalized, it becomes almost impossible for the TCN to stimulate action on the ground (Kern & Bulkeley, 2009).

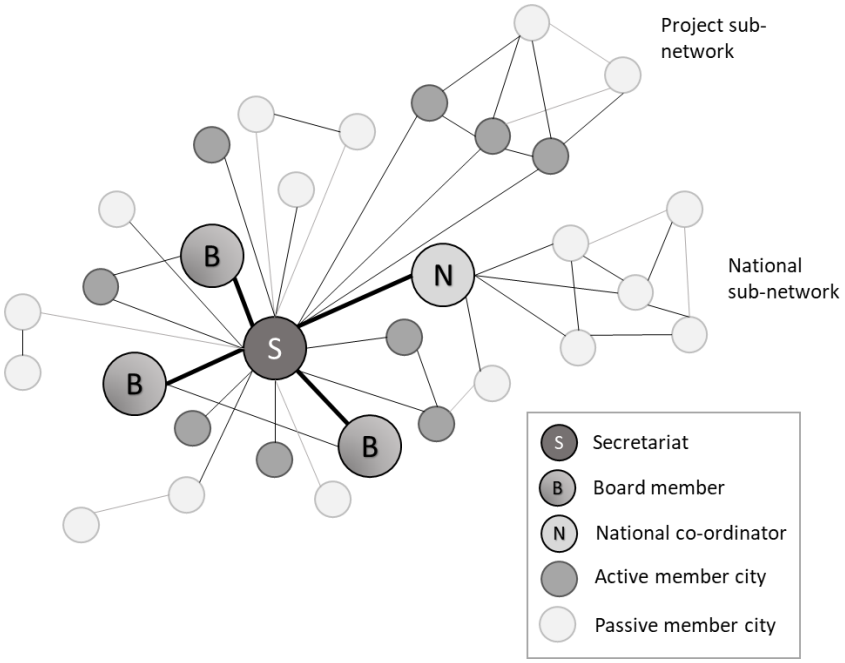

***Figure 2.** Structure of transnational climate networks. Adapted from* (Kern & Bulkeley, 2009)

2.2.1.3. Actors

One of the characteristics of transnational climate initiatives is that it involves different kind of state and non-state actors. Therefore, TCNs can by identified by the type of its constituents. According to Andonova et al. (2009), there are three types of actors involved. In the first place, TCNs can be established by and for public actors such as sub-units of a government, local governments, or units of intergovernmental organizations that can act almost independently of national decisions. This kind of TCN is called *public transnational climate network*. In climate action, ICLEI-Local Governments for Sustainability is an example of a public transnational climate network. This is a global network of more than 2500 local and regional governments committed to sustainable urban development (Andonova et al., 2009; ICLEI-Local Governments for Sustainability, n.d.). Additionally, the Covenant of Mayors for Climate & Energy is also a public transnational climate network.

The second type of TCN is *private transnational climate network*. These networks are established and managed by non-state actors, i.e. private companies. These private networks are founded on voluntary alliance between autonomous actors from one or multiple sector, who commit to bring into line their behaviour in ways that support private and public climate goals. Private companies are particularly interested in these networks because they can identify common goals, reduce the transaction cost of achieving them, and can be privileged of public recognition for their voluntary action (Andonova et al., 2009). An example of this kind of networks is RE100, which is a global initiative that brings together the world's most influential businesses (included in the Fortune 1000 ranking) to achieve 100% renewable electricity in their operation in the year 2050 (RE100, n.d.-a, n.d.-b).

The last type is the *hybrid transnational climate network*. This type of network results from the collaboration between public and private actors. They establish TCNs with a set of governance objectives that merge the public and private objectives. An example of a hybrid networks is the Chicago Climate Exchange, a voluntary cap-and-trade system that includes NGOs, universities, state and local governments and private companies (Andonova et al., 2009).

2.2.1.4. Local community involvement

As already said, under the multi-level governance system TCNs, actors in this multi-level network can exert influence on the basis of information, expertise, financial resources, and legitimacy. The increased interconnectedness and competencies among the actors open the representativeness of previously peripheral actors (subnational and non-state actors) into the central policy agenda. For instance, because of interconnectedness, local communities now are able to engage in climate mitigation and adaptation policy processes (Ishtiaque, 2021).

Transnational climate networks are seen as a means to achieve legitimate action, operationalize sustainable development through a system of networks, and enable "open" decision-making processes. The European Union's motivation for the creation of TCNs is due to the perceived ability of these networks to connect with "grassroots" communities, bringing the EU, as an institution, closer to communities and people. In 2001, in the White Paper on Governance, the EU proposes to open up the policy making process to get more citizens and other organizations involved in the policy creation process, promoting higher levels of accountability, openness and responsibility (Bulkeley et al., 2003; Commission of the European Communities, 2001).

2.3. CITIZEN PARTICIPATION IN CLIMATE ACTION

Citizen[2] participation in local climate actions is generally defined as the process on which individuals, groups and organizations are given the chance to take part in decision-making processes that affect them, or on which they have substantive interest (Richard & David, 2018).

Citizen participation at the local level has expanded in the last thirty years. This expansion can be explained by two reasons: first, local governments have deliberately tried to offer participatory mechanisms for the expression of citizens' interests, needs and opinions; secondly, public discontent and disappointment to local government actions have prompted them to engage directly in projects to provide services by and for themselves (Brazeau-Béliveau & Cloutier, 2021).

According to Dilling et al. (2019), citizens need to be actively involved in planning their future and not be passive audience in programs crafted by others. This process would create an authentic dialogue that local governments can use to understand what society interests and values are. Therefore, the importance of local governments to create appropriate strategies to allow a durable decision-making, information sharing, meaningful public participation and access of the public to decision-making processes (Richard & David, 2018; Scherhaufer, 2021). In this line, several authors have argued that measures adopted by local governments are heavily dependent on the public acceptance and citizens' active participation (Christoforidis et al., 2013; Coelho et al., 2018; Hoppe et al., 2016; Palermo et al., 2020; Rivas et al., 2021; Scherhaufer, 2021).

However, engaging local communities to climate actions and fostering citizens to adopt sustainable energy behaviours remain a challenge due to: limited time and budget resources (Scherhaufer, 2021), legal and organizational challenges (van der Schoor & Scholtens, 2015) and low local government support (Hoppe et al., 2016). According to Scherhaufer (2021), that investigated citizens' participation in four climate change assessments, participation of local communities is rare, and if it occurs, it is in specific and clearly defined parts of the climate assessment process. In line with these insights, Richard & David (2018) found that local stakeholder participation efforts fail to fully embrace and implement participation. They further argue that local citizen participation happens at initial stages of policies processes, when an environmental or societal problem is being defined.

2.3.1. Contributions and benefits of citizen participation in climate actions

Extensive research has highlighted the importance that citizen participation has for the development of climate actions in local governments and the communities (Berka & Creamer, 2018; Cohen, 2012; Haggett & Aitken, 2015; McNamara & Buggy, 2017; Pina et al., 2017). In this section, RQ1 will be answered: *How does citizen participation contribute to local climate action?*

According to McNamara & Buggy (2017), local citizen active engagement contributes to the design and implementation of effective local climate actions plans. Their active role in local climate actions helps in the diagnosis, identification, prioritisation, development and implementation of climate strategies that are relevant and appropriate to the local context and changes that occur in local governments. This contribution builds on the citizens' knowledge and understanding of the particularities of the city to determine potential solutions. Thus, taking into account local knowledge and citizen decision-making processes, more effective, accepted and sustainable local action plans can be enabled (Berka & Creamer, 2018; Fischer, 2021; Haggett & Aitken, 2015; McNamara & Buggy, 2017).

[2] The terms "Local communities" and "citizens" will be used interchangeably in this text.

Moreover, citizen participation has a positive impact on local support for renewable energy technologies (Berka & Creamer, 2018). More specifically, energy projects that stem from community networks are less likely to trigger opposition towards its development. This suggests that the effect of citizen participation on public support for renewable energy manifests itself in higher overall deployment rates, higher climate action activities (Berka & Creamer, 2018). This engagement not only benefits the design and implementation of climate action plans, but the community itself.

Haggett & Aitken (2015) have argued that when communities engage actively in climate actions or energy projects, social, financial and environmental benefits arise. Social benefits gained by communities include capacity building, increased community spirit, cohesion and greater empowerment. Additionally, financial benefits from community engagements in energy projects include the creation of financial stream revenues, which can help community projects more resilient, and guarantee an income that is independent on public-sector grants or subsidies (Haggett & Aitken, 2015). Finally, more citizen participation tends to grow a common sense of responsibility in terms of protecting the local environment and population into the realm of "conscious awareness" and day-to-day practices (Haggett & Aitken, 2015).

Active citizen participation facilitates the development of knowledge and skills within the community. According to Brazeau-Béliveau & Cloutier (2021), citizens that take part in community projects can acquire knowledge from activism, meaning that they are likely to learn about local issues and collective decision-making. This active learning becomes then a tool for future engagement in community projects. Furthermore, Bakker et al. (2012) and Berka & Creamer (2018) argue that participation contributes to the development of civil skills, including organisational management and leadership, project management, problem-solving, teamwork, community consultation and engagement and communication.

When interpersonal interaction in collective action processes takes place, the emergence of networks and improved quality of the network among citizens start to arise (Berka & Creamer, 2018). This is known as *social capital.* According to (Berka & Creamer, 2018), social capital facilitates the collective articulation of shared visions and values, fosters the perception of shared identity within the community, and upturns the accessibility of information and knowledge among citizens, making this a key element for citizens to understand current local challenges and build capacity at the local level (McNamara & Buggy, 2017). When a strong social capital is low or non-existent in local communities, information is less likely to be transferred to others and skills are not communicated or passed on (McNamara & Buggy, 2017). This becomes important for the success local climate action plans and further engagement of citizens.

Additional benefits from citizen participation includes greater empowerment in climate issues (Berka & Creamer, 2018; Brazeau-Béliveau & Cloutier, 2021; Haggett & Aitken, 2015). An empowered community is one in which its participants feel that there are being listened and are actively involved in processes that affect them, prompting them to initiate action to make their wanted changes (Berka & Creamer, 2018). Empowerment, however, is developed through the continuous and repetitive cycles of citizen actions, therefore, to achieve empowerment goals, engagement must not be limited to inform citizens of new climate policies but it must create the appropriate safe space in which opportunities for citizens to control programs and designs can arise (Feldman & Westphal, 1999).

Citizen participation at the local level could change pre-conceived preferences of participants, in effect, citizens' engagement can unlock the required long-lasting adaptive and transformative change behaviour to tackle current environmental problem (Richard & David, 2018). As the World Bank stated in 2014: *"Under the right conditions, citizen engagement can help governments achieve improved development results"* (World Bank Group, 2014). Therefore, it becomes important to understand

current mechanisms used by cities to engage local communities in climate actions to improve results and achieve long-lasting changes.

2.3.2. Typologies of citizen participation

Citizen participation is a concept that has attracted the attention of many academics who have created different typologies to characterize citizen participation. These typologies are based on the empowerment of citizens, type of communication and the objective for citizen participation activities. Given the breath of academic information available on this topic, this sub-section is not comprehensive, but is aimed at explaining the main attributes of each typology.

Citizen participation based on the *empowerment* or *power* of citizens focuses mainly on the extent to which citizens or other stakeholders are empowered to influence or to make the final decision. Under this typology, the work of Arnstein (2019), published in 1969, and Davidson's (1998) stands out. Arnstein offers a categorisation of interaction between community and government based on citizen power. It is based on the conception that empowered citizens improve decision making procedure, acceptability of the decisions and legitimacy (Ange Ker Rault, 2008). To illustrate her point, Arnstein (2019) created a typology of eight levels of participation that are arranged in a ladder formation, with each rung corresponding to the extent of citizen's power in influencing or making the final end product or decision. This typology is widely known as the "*ladder of participation*". The bottom part of the ladder is where the citizens exert the less power in the final decisions, in contrast to the top part of the ladder, where citizens have full control over these decisions.

The bottom rungs of the ladder are (1) "manipulation" and (2) "therapy". These two rungs describe the category of "non-participation". In this category, the real objective is not to enable citizens to participate in conducting programs, but to allow power-holders or authorities to enforce their views on the participants. Rungs (3) "informing", (4) "consultation" and (5) "placation" refer to the category of "tokenism". When these offer by power-holders, citizens may hear and be heard, however, they lack the power to verify that their views and opinions are actually taken into account by the authorities. Rung (5) is a higher level of tokenism in which citizens can advise, but the power-holders still have the power to decide. In rung (6) "partnership", citizens are enabled to negotiate and engage with power-holders. Going up in the ladder, in rungs (7) "delegated power and (8) "citizen control", citizens have majority of the decision making process or full managerial power (Arnstein, 2019). Figure 3 represents the ladder of citizen participation with each different rung and the different categories.

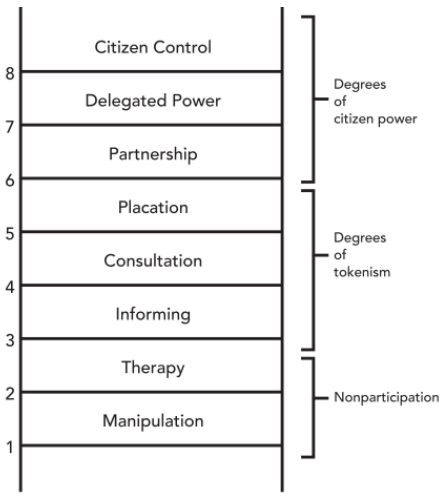

Figure 3. Ladder of citizen participation based on empowerment. Sourced from (Arnstein, 2019)

Davidson (1998), Wheel of Participation (see Figure 4) offers a non-linear model that differentiates techniques and objectives under four quadrants: information, consultation, participation and empowerment. The wheel encourages dialogue and partnership between the different stakeholders, promoting a positive and responsive approach. For each of the quadrants, three categories are divided. *Information* is divided in: "minimal communication", where the initiators decides on all matters without consulting local communities; "limited information", where the public is told what the initiator wants to tell them without considering what is interesting for the public; and "good quality information", where the initiator provides the information that the public wants or needs. *Consultation* is divided in: "limited consultation", where the initiator provides limited information and the responsibility is given to the public to respond; "customer care", is when the initiator sets a customer-oriented service; and "genuine consultation", is when the initiator discusses the topic with the local communities before taking action. *Participation* is divided in: "effective advisory body" in which citizens are invited to draw up proposals alongside the initiator; "partnership" is when action is taken by both the citizens and initiator; "limited decentralised decision making" is when the initiator allows the local communities to make their own decisions on some of the issues, for instance the best place where to install solar panels. The last quadrant, *Empowerment*, is composed of: "delegated control", which is when the initiator delegates limited decision-making powers to the citizens in particular areas of the project, similar to "partnership"; "independent control" is when the initiator/local government is obliged to provide a service but decides to do it by enabling citizen groups to provide the service on behalf of the initiator; finally "entrusted control" is decentralising substantial decision-making powers to citizens. The main difference between this typology and Arnstein's is that the wheel of participation promotes the appropriate level of citizen engagement, without implying that the aim of a participatory process is always to climb to the top of the ladder (Davidson, 1998).

Figure 4. *The Wheel of citizen participation. Sourced from* (Dooris & Heritage, 2013).

According to Ange Ker Rault (2008), this approach for citizen participation (*empowerment* or *power*) fails to offer an adequate framework to tackle the appropriateness of participation in complex societal problems taking into account other factors. For instance, the purpose of participation, the problem to solve, the type of stakeholders participating and the type of information.

The above gap of theoretical approach and reality of decision, is partly bridge by considering the dimension of *communication* and the flow of it between the initiators[3] of the participative process and citizens. Rowe & Frewer (2005) created a typology that is characterized by the *flow of information* between the initiator and citizens. The descriptors are three: public communication, public consultation and public participation.

In public communication, the information flows one-way from the initiator to citizens. Here, involvement of local communities is not required, as their feedback is not needed. In the situations when citizens want to provide information, there are no mechanisms specified to receive their insights (Rowe & Frewer, 2005). In public consultation, citizens can provide information (e.g. opinions) to the initiators, following a process started by the initiator itself. Even though the information not only travels one-way, no formal dialogue exists between citizens and the initiators (Rowe & Frewer, 2005). Lastly, public participation is a two-way engagement between citizens and local governments, where information is exchanged among the two parties. There is some degree of dialogue, where the information transfer serves to transform or modify opinions in the members of both parties (Rowe & Frewer, 2005). Figure 5, shows schematically the flow of information in each of these types of public engagement.

	Flow of information	
Communication:		
Initiator	→	Citizens
Consultation:		
Initiator	←	Citizens
Participation:		
Initiator	↔	Citizens

Figure 5. *Types of citizen participation based on communication flow. Adapted from Rowe & Frewer (2005)*

For Glass (1979) and Dorcey et al. (1994), citizen participation is initiated by setting the *objective* with respect to the issue at stake from the initiator's perspective. This is done during the design of the participative process in order to avoid misunderstandings between the initiators and the citizens. These two typologies are compiled by Ange Ker Rault (2008), who distinguishes six objectives for citizen participation: (1) *information exchange* to inform the citizens about a certain initiative from the initiator; (2) *education* to let the public know about the background to a decision or policy; (3) *support building* to create the conditions for the implementation of the proposed plan and resolution of conflicts; (4) *representative input* to gather information and perspectives of the citizen community to supplement other sources of information when developing a policy; (5) *decision-making supplement* to test ideas and look for advice from citizens on proposed plans, asking for additional proposals; and finally, involve citizens to (6) *define issues* regarding a policy area.

2.3.3. Operationalization of citizen participation

To better understand the influence of the Covenant of Mayors and Klimaatverbond in signatory cities, operationalization of the citizen participation processes in the case studies is needed. In this way, the different aspects of the participatory processes come to light and expose the differences that may exist between signatory and non-signatory cities. This part of the thesis is based on the works of Wilcox (1994) and Brody et al. (2003), who provide comprehensive frameworks for citizen operationalization.

[3] In this thesis, the "initiator" is the party that commissions the engagement activity. In this case, the local government. However, it is recognized that local communities can as well initiate participatory processes.

Wilcox (1994) introduced a theoretical model, aimed at participation process managers, for organizing participation based on the "*ladder of participation*" by Arnstein (2019). The central ideas of Wilcox's theoretical model are: (1) there are different levels of citizen participation suitable for different circumstances; (2) there is not a single "community" in the participation process but many stakeholders with different interests to consider; (3) participation takes time; and (4) the initiator mush be clear about its role in the process. All the issues mentioned above influence the level of participation sought in the process.

Wilcox's (1994) participatory framework considers three dimensions: (1) the phase or stage of participation, (2) the level or purpose of participation and (3). the stakeholders involved in the process. Participation is a process in which the initiator has to think about what they want to achieve, consider the options at hand and the work that has to be done for it to happen. Wilcox then proposes a continuum of four phases for which the participatory process must go through (first dimension):

- **Initiation:** The phase at which the participatory process is triggered. There are different factors that may trigger citizen participation: an authority promoting a project, legislation, government promoting a community-based project, citizen's own project, etc.
- **Preparation:** The period when the participatory process is planned. The first contacts are made and an approach is agreed. This is an important step in the participation process, as the most intractable problem in participation processes is not the lack of knowledge of the public, but the lack of preparation, i.e. goals, the process, how to do it, what methods, etc.
- **Participation:** The phase in which citizen participation actually happens. Different methods for participation are used to take into account the interests of the stakeholders.
- **Continuation:** This phase involves reporting, monitoring and the follow-up activities of the participation process. The next steps are thought and this will depend on the level of participation achieved.

The second dimension is the level or purpose of participation. This third dimension makes reference to the type of participation presented in Section 2.3.2. that describes the different levels of citizen participation. Wilcox (1994) argues that the level of participation is dependent on the circumstances: "*different levels are appropriate in different circumstances".* During a participatory process, some stakeholders will want to be more involved than other, or simply, others will wish not to be involved. Therefore, it becomes important to identify the different stakeholders involved and their interests. Identifying the stakeholders involved and negotiating the level of engagement is the second dimension of the framework (Wilcox, 1994). Before starting the participation process, it is important to identify the role that the initiator plays, as this influences citizens' attitudes towards the participatory process.

Next to Wilcox's framework, Brody et al. (2003) presented a framework based on six critical choices that the initiators must make when designing participation programs. This framework is founded on the analysis of the legal requirements for citizen participation in the states of Florida and Washington in the United States. The six critical choices are: (1) Program Administration; (2) Objectives; (3) Stage; (4) Type of stakeholders; (5) Techniques; and (6) Information. *Program Administration* refers to the choices that the initiator must make pertaining to the level of resources and local government capacity committed to the participation process. This includes decisions regarding staff members to manage the process or an external consultancy firm, for instance; additionally, the money and time deserved for the design, implementation and subsequent monitoring of the participatory process. Setting the right *objectives* is an essential component of a citizen participation process. This will help in determining the level of citizen engagement needed. *Stage* of the planning process is about deciding when citizens first become involved in the work program (i.e. a specific project).

The fourth critical choice is the *type of stakeholders* to involve. Here, the number and the type of stakeholders to target for participation is decided. This is an important part of the whole process as contributions made by specific stakeholders can influence the success or failure of the participatory process. Specifically targeting stakeholders based on their contribution leads to "*a higher degree of citizen participation and added planning capacity (in the form of resources and knowledge)"*, which in the end strengthen the quality of the participation process. The fifth choice presented by Brody et al. (2003) is related to the *techniques* or methods for obtaining citizen input. The techniques used affect the degree of success in reaching wide citizen participation. As can be noted, the techniques used are dependent on the purpose of the participatory process and level of engagement that is pursued by the initiator, who can use a variety of techniques to accomplish the objective. Finally, the sixth choice that the initiator must make, according to (Brody et al., 2003), is the type of *information* given to citizens. As Brody et al. present it, information is power, and the way that it is disseminated is vital for the citizens that participate in the process, as information enables them to make better decisions. To this end, information should be widely accessible and highly integrated in all the stages of the process (Brody et al., 2003).

2.4. CONCLUSION

In conclusion, the current climate change debate occurs between an interplay of different developments:

1. Increasing awareness among supranational, national and sub-national actors to respond to climate change.
2. In the multi-level governance system, the emergence of TCNs with the capacity to upscale climate action to enable collaboration between the different governance layers (global, national and sub-national levels).
3. To include all size of cities into climate action, regional and national networks of cities, such as Klimaatverbond in the Netherlands, may still be more important than TCNs at the local level.
4. The development of a "*meta-network"*, a network with other networks and associations as members, for instance, the Covenant of Mayors.
5. The increasing role of cities to create mitigation and adaptions actions to respond to climate change.
6. Local response to climate change is influenced by the governing capacity of local governments.
7. The greater importance given to citizen participation for the development of climate actions in local governments and the communities. The success of local climate efforts is dependent on the level of participation of citizens.

It becomes clear that TCNs and climate associations of cities can impact local government's response to climate change and the importance they give to citizen participation, however, it remains blurry in what way these two city networks influence citizen participation in local climate action plans (see Figure 6). In Section 3, a theoretical framework will be presented to relate and put together the concepts presented in this section. The goal of the framework is to enable the analysis of the influence of TCNs climate associations on citizen engagement in selected municipalities in the Netherlands.

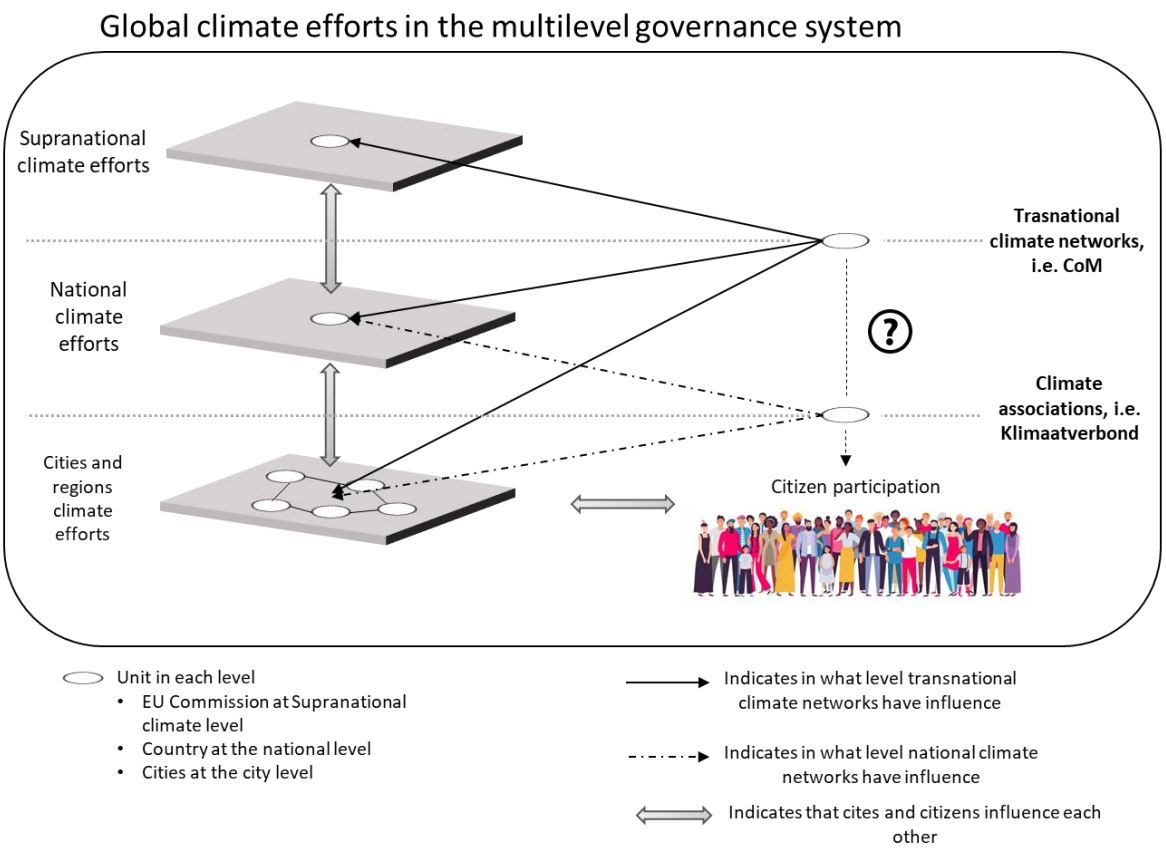

***Figure 6**. Preliminary theoretical framework*

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3. THEORETICAL FRAMEWORK

In this section, the theoretical framework to relate the influence of transnational and national climate networks on citizen participation is going to be presented and explained. It is based on developing categories to describe citizen participation processes. By the end of this section, RQ2 will be answered: *What categories are suitable to describe citizen participation processes?*

3.1. CITIZEN PARTICIPATION: THE ACTION ARENA

As presented above, the frameworks presented by Wilcox (1994) and Brody et al. (2003) provide guidelines to initiators to organize citizen participation processes. It becomes clear that these two frameworks overlap in different aspects: the stage of participation, the type of stakeholders involved and the purpose of participation. In this sub-section, both frameworks will be consolidated to create a single one. In this process, it is aimed to take into account the best attributes of the two frameworks. This work was inspired by the framework presented by Broer (2020).

When applied to the case studies, the results of the framework will help to identify the influence of the Covenant of Mayors and Klimaatverbond when organizing citizen participation processes in signatory cities, as differences between the case studies will come to light. Even though this framework is used in this research for the topic of local climate action, it can be used for any other topic.

To operationalize participation, the following five categories have been identified (Figure 7). As previously said, these categories are the result of the frameworks presented by Wilcox (1994) and Brody et al. (2003). The *information* category explained Brody et al. (2003) is not included. The reason for this is because the type of information is dependent on the stage of the participatory process, type of stakeholder and the method used for citizen participation, categories that are included in Figure 7, therefore, classifying information as an independent category ignores the fact that this is an attribute that is intrinsic and evolves in the whole process.

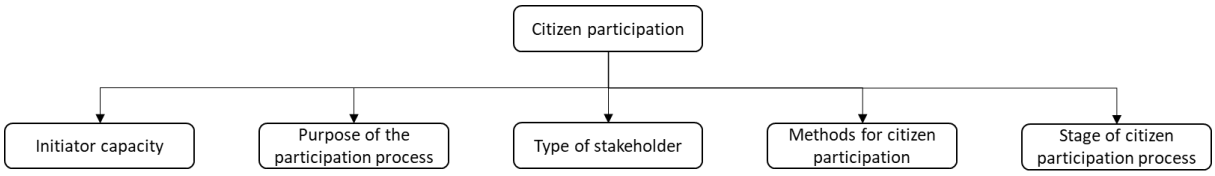

Figure 7. *Categories to operationalize citizen participation*

Initiator capacity

This category is related to the resources that the local government has available and commits for the participatory process. In Section 2.1.2 this is described as decision-making, implementation and accountability capacity. For decision-making capacity, this is defined as the ability of the local government to take well-informed decisions by incorporating new information and balancing different interests (Vringer et al., 2021). Vringer et al. (2021) defines implementation capacity as the capacity that local governments have to satisfactorily perform their tasks and implement new projects. In local governments, these obligations require financial resources, availability of staff, knowledge and experience (Hoppe et al., 2016; Vringer et al., 2021). Lastly, accountability capacity is defined as how accountable and transparent a local government can be about their policy. This includes the ability of the local government to appropriately communicate the purpose of the participatory process and

monitor its progress to citizens or the actor that is participating. Figure 8 presents schematically these different components.

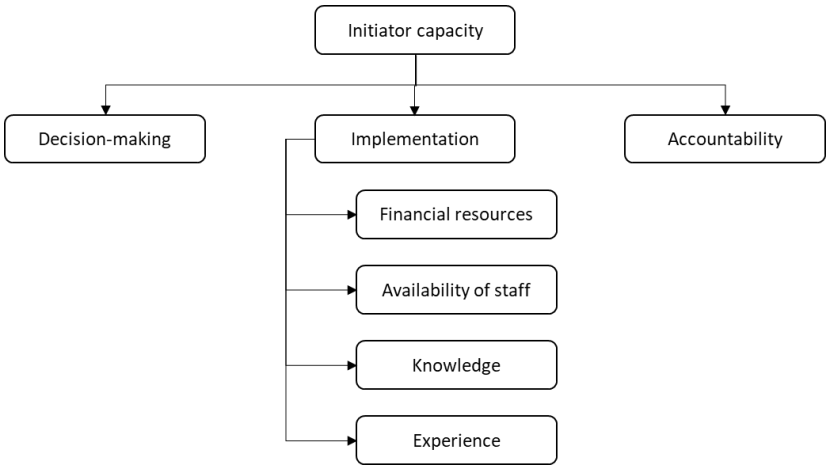

Figure 8. *Initiator capacity components*

Purpose of the participation process

A broad understanding of the citizen participation process requires the consideration of the motives, intentions and purposes of the local government (the initiator in this case) and citizens to start the participatory process. Stating the right objectives is an important component of a citizen participation activity. For Wilcox (1994), the fact that the initiator is not clear about what they want to achieve in the process is the most intractable problem. If objectives are not defined and clearly transmitted to other stakeholders, the process will likely lead to frustration, conflict and disillusion (Wilcox, 1994). The following objectives that local governments and citizens seek are based on Section 2.3.1, Section 2.3.3 and other academic sources.

For the *local government* or public sector, Head (2007) argues that the most common objective of initiating a citizen participation process is that it can gain better informed decision-making through the facilitation of deeper involvement of stakeholders, who share their knowledge and understanding on the topic, in this case, local climate plans. Additional objectives pursued by local governments to initiate a citizen participation process are:

- Exchange information with and educate citizens about the background of a decision or policy (Ange Ker Rault, 2008).
- Improving the quality of the outcome of the project or programme (Wilcox, 1994).
- Increase the ownership and acceptability of the outcome by broadening the base of responsibility to include the local government and citizens in the outcome of certain a plan (Head, 2007; Wilcox, 1994).
- To comply with legal requirements of public participation (Brody et al., 2003).
- Achieve a higher level of trust and increase support for the local government's plans (Ange Ker Rault, 2008; Head, 2007).

As has already been argued, *citizen* participation has been strongly encouraged. Through their participation, citizen groups hope to pursue different objectives:

- Greater voice and influence for the interests they represent in projects or programmes (Ange Ker Rault, 2008; Head, 2007)

- Opportunities to obtain revenue growth from provision and participation of services. For instance, citizen that participate in Energy Cooperatives (Head, 2007).
- Development of social capital and civil skills, including organisational management and leadership, project management, problem-solving, teamwork, community consultation and engagement and communication (Bakker et al., 2012; Berka & Creamer, 2018).

These two different types of objectives (of the public body and citizens) do not have to be mutually exclusive. According to Glass (1979) a satisfactory participation process need both the interests of the public body and citizens to be considered, and a balance between these interests need to be found for a successful outcome. Moreover, it is important to consider whether they are realistic or not. The definition of the objective is also important as it influences which stakeholders benefit from the process, influencing therefore the level of engagement pursued and commitment of participants (Wilcox, 1994). Figure 9 shows schematically the different purposes or objective for initiating a participatory process. As said before, in a participatory process, both type of interests must be taken into account when designing and planning to meet the interests of local government (initiator) and citizens.

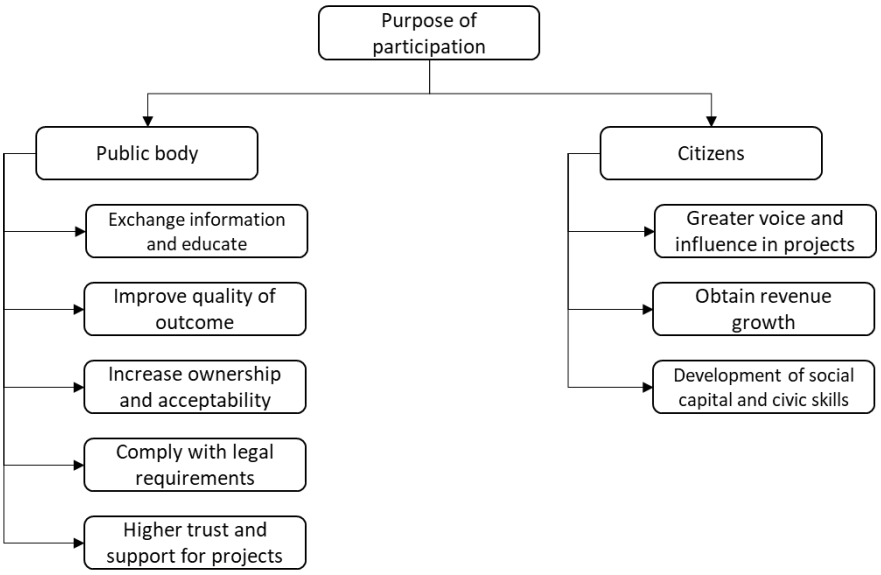

***Figure 9**. Purpose of participation*

Type of stakeholder

It is important for the initiator to define how many and which type of stakeholder to target for the participation process because this contributes to the success or failure a citizen engagement effort. During this identification process, the initiator needs to recognize the contributions that each of the stakeholder makes in the development of the policy and target these stakeholders with tailored approaches. When this targeting occurs, it leads to higher participation and increased capacity, in terms of resources and knowledge, which in the end can reinforce the quality of the participation process (Brody et al., 2003).

Not only is important to identify what the stakeholder can contribute to the participation process, but also what their interests are. Some stakeholders may want or demand to be more involved than others, or other may not want to be involved at all. Therefore, it becomes important for the initiator to identify the different interests and determine the level of participation appropriate for them (Wilcox, 1994). Additionally, by identifying the stakeholders, their interests and contributions, a more comprehensive participatory plan can be designed, one in which the different stakeholders are invited

to the participatory stage according to their attributes. In this way, stakeholders' interest to participate remain high and their inputs are more relevant and fruitful for the policy-making process.

Within the local climate action arena, there are different types of stakeholders that the initiator can identify and involve in the participatory process: (1) businesses; (2) development groups (e.g. housing associations); (3) citizens (active or non-active citizens in local climate action); (4) local officers; and (5) national bodies; and (6) international bodies (e.g. European Union agencies). Within the citizens groups, two sub-groups can be identified: (i) active citizens that include the ones that create or are part of neighbourhood or local cooperatives, or have an active role in increasing awareness of climate action (e.g. energy coaches); and (ii) non-active citizens that are in the outer sphere of action. Figure 10 presents schematically the different types of stakeholders to take into considerations in citizen participatory processes in local climate action.

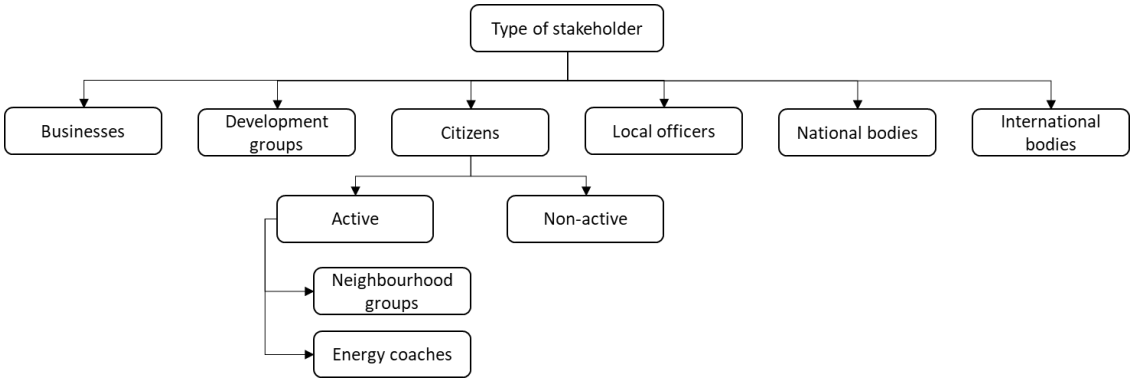

***Figure 10**. Type of stakeholders in local climate action*

Methods for citizen participation

The number and diversity of citizen participation methods are large and growing. Rowe & Frewer (2005) listed more than 100 methods gathered from literature and technical reports. Each of these methods used by the initiator of the process can affect the degree of success in reaching broader public engagement, constituting an important factor that contributes to the chance that the participation process affects the policy making process and implementation (Brody et al., 2003). Thus, it becomes important to categorize the different methods for engaging citizens. This categorization is based on the objectives of the participatory process and level of participation sought (Brody et al., 2003), which are defined during the *preparation* phase of Wilcox (1994).

Section 2.3.2 presented the different typologies of citizen participation according to the empowerment of citizens (Arnstein, 2019), flow of information (Rowe & Frewer, 2005) and objectives of the participation process (Dorcey et al., 1994; Glass, 1979). Each of these typologies can determine the level of citizen engagement by their own, however, there are different setbacks in each. By solely basing citizen participation on power, the "*ladder of participation*" elaborated by Arnstein (2019) falls short in explaining the temporal and procedural character of participation. It eludes the fact that informed decision making takes information, time and some degree of consensus. Focusing only on power in decision-making does not offer an appropriate framework to define the suitability of participation in complex policy making processes (Ange Ker Rault, 2008). Rowe & Frewer's (2005) flow of information typology setback is that it is focused on an ideal target. This typology considers a state where communication is free of power issues. It assumes that all participants have an equal chance to criticize and present policies, that there is no hierarchy amongst the actors in the process, and that the local authorities and other experts are all willing to allow an open and unconstrained deliberation

of policies (Ange Ker Rault, 2008). Finally, the compiled objectives based on Dorcey et al. (1994) and Glass (1979) fail to provide full empowerment to citizens in the policy making process.

In this thesis, the following categories are presented with the aim to circumvent the setbacks previously presented. The goal is to include put together these different typologies (power, information and objectives) and create a comprehensive set of categories. The categories are: *inform, consult, involve, partnership* and *citizen control*. In the following paragraphs, the explanation of each category if given as well as the methods used for each category.

In the *inform* category, the aim is to provide the citizens with information in order to assist them in understanding the problem, alternatives, opportunities and solutions (IAP2 International Federation, 2018). Information flow is one-way and there is no involvement of the citizens as public feedback is not specifically sought. The initiator does not provide mechanisms for the citizens to give feedback or information on the policy and there is no power for negotiation between the initiator and citizens (Arnstein, 2019; Rowe & Frewer, 2005). The methods for informing citizens are: information broadcast through different means (newspapers, television, radio or leaflets, websites), public hearing and meetings or hotlines (Arnstein, 2019; IAP2 International Federation, 2018; Rowe & Frewer, 2005).

Consultation is where information is given from citizens to the initiators of the participatory process, however no formal dialogue exists. The information obtained is feedback from the local communities on the analysis, alternatives and/or decisions made by the initiators. The initiator offers the citizens choices on what they are doing, but citizen do not have the space to develop their ideas or participate in making plans. According to Arnstein (2019), what citizens achieve in this category is that they have "participated in participation", and what the initiators achieves is the evidence that they have made participation "possible" to citizens. In the end, citizens are restricted in choice and role in solutions. The most used methods for consultation are: surveys or opinion polls, consultation documents, focus groups or citizen panels for consultation or public meetings (Arnstein, 2019; IAP2 International Federation, 2018; Rowe & Frewer, 2005).

Involvement of citizens in participatory processes is where the initiators works directly with the citizens along the process to ensure that citizens' opinions, concerns and proposals are understood by the initiator and considered in the policy making process. In this category, it is ensured that the opinions and concerns from citizens are reflected in the development of alternatives. The participatory methods to involve citizens are workshops (IAP2 International Federation, 2018).

The next category is *partnership*. This is where power is redistributed among the initiator and the citizens. The initiator partner with the citizens in the planning and decision-making of the policy through policy boards or planning committees. The goal is to develop alternatives and identify the preferred solution jointly. This partnership works most effectively when citizen leaders are present and are accountable of the outcome of the policy-making process (Arnstein, 2019; IAP2 International Federation, 2018). It is important to note that responsibility is shared between the initiator and the citizens. The methods used for partnership are: citizen advisory committees, consensus-building and public meetings where participatory decision-making is made possible

Finally, *citizen control* category is where the final decision is in the hands of the citizens. Citizens demand a high degree of power to guarantee that they govern the program, are in full charge of policy and managerial aspects and are able to convey the conditions under which external stakeholders can influence the final outcome. In this category, the local government act as an enabler of the community-based initiatives. This is the most empowering stance for citizen participation (Arnstein, 2019; IAP2 International Federation, 2018; Wilcox, 1994). According to (Arnstein, 2019)

neighbourhood corporation is the model most used. Appendix B. Citizen participation methods. shows the main characteristics of the methods previously presented for each category.

Figure 11 shows schematically the different methods for citizen participation according to their category. As said before, the category or level of participation depend and is determined by the objective of the citizen participation process.

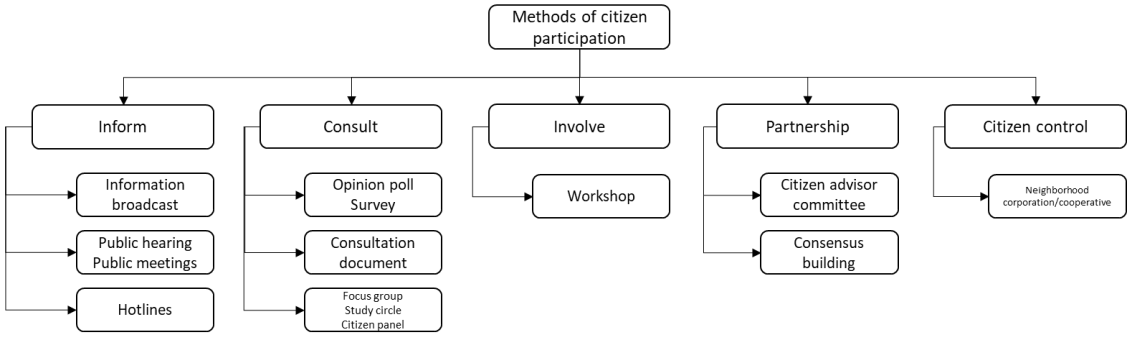

Figure 11. *Methods for citizen participation*

Stage of citizen participation process

Deciding when citizens first become involved in the implementation of climate plans in municipalities, is another key decision that the initiator has to make. In principle, scholars believe that to ensure meaningful citizen involvement, it must occur early in the process to ensure that community knowledge, expertise and preferences are integrated in the climate policies (Brody et al., 2003). However, when citizen participation occurs at the early stage of the process, the proposal and information brought by the initiator tend to be presented in general or abstract terms, and may not be specific enough to trigger high quality answers from citizens, that needs better information to be presented. However, when participation begins at a later stage, it may come too late to make significant impact on the final plan, although being capable of eliciting clear and focused answers from the participants. Finally, participation that begins at the end of the development and evaluation of climate plan proposals, may generate an adversarial and reactionary atmosphere that reduce support for the implementation of the climate plan (Brody et al., 2003).

When talking about the stages that a participation process goes through, the work of Wilcox (1994) best describes this situation by identifying four stages: initiation, preparation, participation and continuation. The participatory process should go through each of these phases to have greater chances of success, being for “preparation” the most important one (see Section 2.3.3). However, these stages do not indicate at which stage in the participatory process can citizens be involved. For this, Brody et al. (2003) identifies three phases: *preplanning*, *planning* and *post planning* phases. In the *preplanning* phase, the scope or development of the project is designed, and the initiator may decide to involve citizens by face-to-face meetings. In the *planning* phase the development and evaluation of the project is executed, and citizens may be engaged to evaluate alternative proposals. In the phase, *post planning*, the citizens may be engaged to hear the finalized proposed project.

For a structured and planned participatory process, both stage processes need to be present. Initially, the initiator has to plan and lead the participatory through different stages to identify the spark that that started it, prepare the participation (to define objectives, methods, stakeholders, etc.), initiate the participation activities, and ensure the monitoring and that the output are taken forward. Moreover, it is important to define when in the participation stage, citizens are involved, as it depends

on the interests of both parties. Figure 12 shows the different stages through which a participation process goes through.

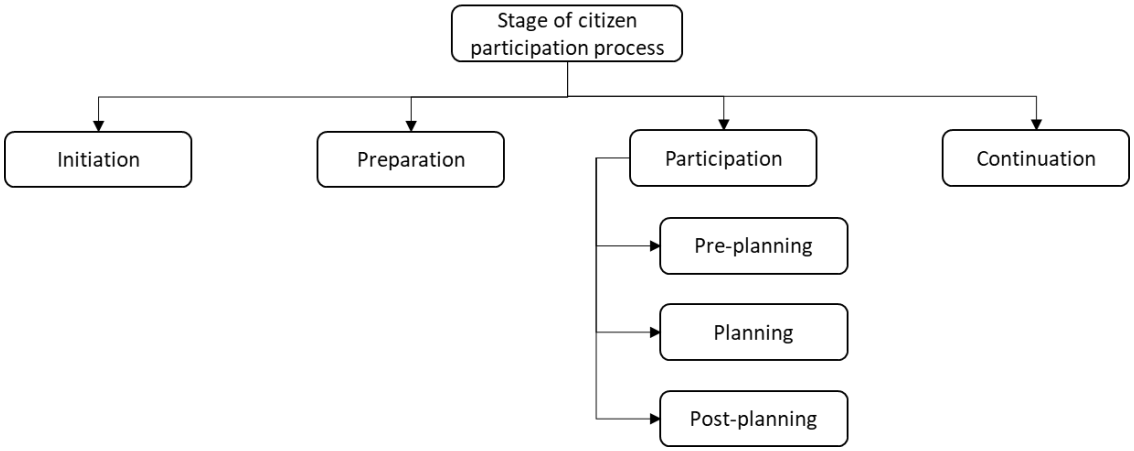

Figure 12. *Stage of citizen participation process*

3.2. CONCLUSION

In this section, a framework on how to organize citizen participation processes has been developed through the creation of categories: *initiator capacity, purpose, stage of involvement, methods for citizen participation and the type of stakeholder involved*. These categories that describe participatory processes are combined with the preliminary theoretical framework presented in Figure 6, with the aim to answer how TCNs influence local citizen participation processes in Dutch municipalities. The functions describe in Section 2.2.1.2 and the multi-level governance of TCN are key to analyse the influence on organizing citizen participation. In Section 4 the methodology of this research is presented and further explanation on how to use this framework (see Figure 13) to analyse the results will be given.

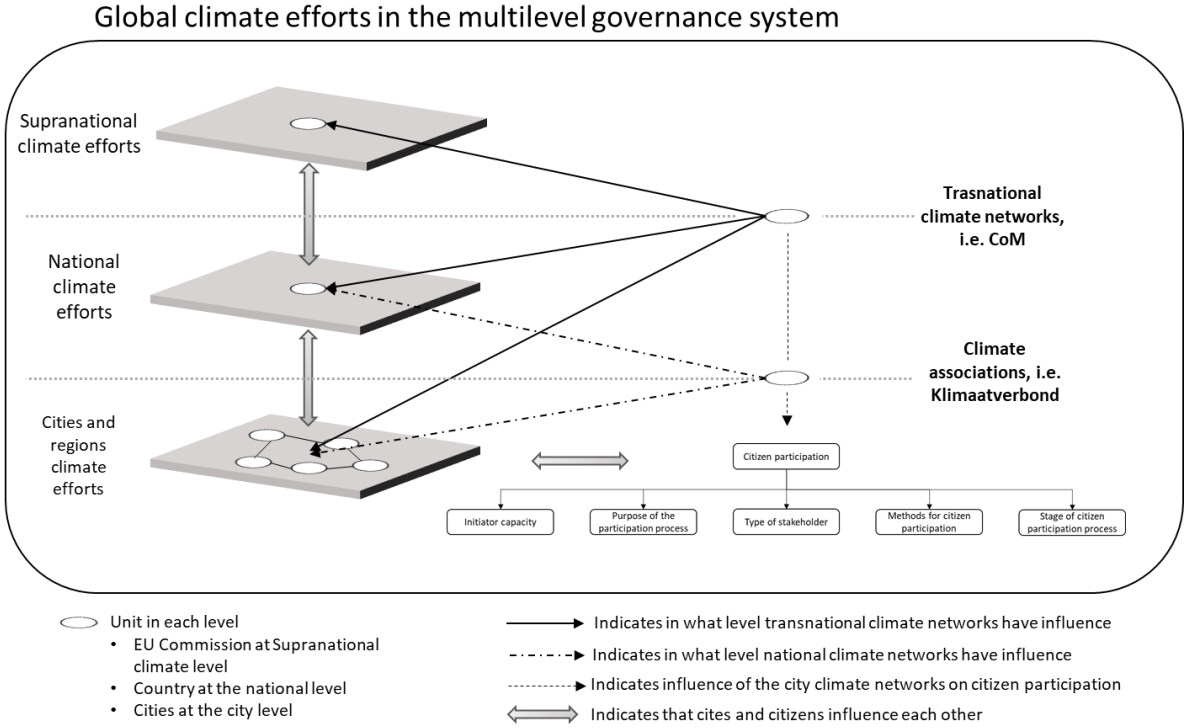

Figure 13. *Theoretical framework*

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4. METHODOLOGY

In this study, a multi-case research design is chosen because with this approach, an in-depth exploration of similarities and differences across cases can be had (Khan & VanWynsberghe, 2008). In this way, a comparison between the signatory and non-signatory cities of the Covenant of Mayors or Klimaatverbond is made, therefore, the influence of these city networks on citizen participation can be identified.

This section describes the research approach taken in this study, the data acquisition methods, the way that data is going to be analysed and the reasons for choosing the case studies of this thesis (both the networks and cities chosen).

4.1. CASE STUDIES

The case study approach is used in this thesis to get an in-depth understanding on how municipalities organise citizen participation in local climate policy, and identify if transnational or national climate network (CoM and Klimaatverbond, respectively) influence citizen participation efforts in the selected signatory cities, in comparison to non-signatories. This research approach allows an empirical inquiry about a phenomenon set within the real-world context when the boundaries of the phenomenon and context are not clearly distinguished (Yin, 1984). It aims to produce "invaluable" and deep understanding of the phenomenon (Yin, 2012).

The case study research method allows an all-encompassing research strategy that is required to study local climate action in the present research. The case study method copes with the distinctive situation in which there are many more variables of interests than data points, resulting in the reliance on multiple sources of evidence, with data needing to converge in a single point, resulting again from prior development of theoretical propositions to guide data collection and analysis (Yin, 1984).

Furthermore, in this research, a cross-case study method is pursued to understand the differences of cities that are members of a TCN when engaging citizens in local climate plans against cities that are not. Cross-case analysis is a research method that enables the comparison of commonalities and differences in events, activities and processes (Khan & VanWynsberghe, 2008). Additionally, it enables the delineation of the mix of factors that may contribute to the result of the phenomena, seek and build an explanation on why a case is different or the same as other, helps in articulate concepts, hypothesis, or theories constructed (Khan & VanWynsberghe, 2008).

4.1.1. Case study selection

In this research, two different choices are made. The first one is the cities to be studied, and the second one is the climate city networks of study. First, the process and reasons for selecting the cities are presented, followed by the explanation of the reasons why the Covenant of Mayors and Klimaatverbond are selected.

4.1.1.1. Case study selection: Cities

As this research is focused on the development of climate city networks within the Netherlands, four cities within the country are selected to be studied: two signatories of the CoM and Klimaatverbond and two non-signatories of either of these city networks. The selection is done in different steps:

1. The first step is to determine which Dutch cities are signatories of the CoM and which are not. In this step, only thirty-five cities in the Netherlands are found to be signatory of the CoM.

2. The second step is to identify, from this initial list, which cities had submitted a climate action plan to the Covenant. In this step, the initial list of thirty-five cities is narrowed down to twenty-two cities. It is done with the purpose of selecting cities that have an initial commitment to the Covenant.

3. The third step is to determine which of these twenty-two cities are also members of the national climate city network, Klimaatverbond. The result of this step leads to a list of seventeen cities that are members to both the Covenant of Mayors (with a climate action plan submitted) and the Klimaatverbond.

4. The fourth step is selecting the cities based on population, between 40,000 – 100,000 inhabitants. This range is selected due the little academic attention that is given to small and medium-sized cities as the academic literature appears to be paying higher attention to the role of frontrunner and large-sized cities (Hoppe et al., 2016). From this initial process, the municipalities of Alkmaar and Heerhugowaard are selected. These two represent the cities that are signatories of the Covenant of Mayors and Klimaatverbond.

5. Finally, and to able to cross-analyse these two cities, another two cities that do not belong to either of the above-mentioned city networks are selected based on size similarity. From this step, the municipalities of Westland and Middelburg are chosen[4].

During the development of this thesis work, the municipality of Heerhugowaard was substituted by the municipality of Breda. The reason behind this change was because no answers from the civil servants of the municipality were gotten regarding the request for an interview, therefore, sufficient qualitative data would not have been enough to produce in-depth insights. Even though, Breda does not satisfy the size condition for the municipalities (the city has more than 100,000 inhabitants), this case study can provide another perspective on how they use the CoM and Klimaatverbond and these networks influence citizen participation. This “another perspective” is based on the assumption that larger cities have better local governance capacity to address local climate action. Furthermore, it is recognized that the number of cases studies is too small for geographical generalization of the results, however, the aim of this thesis is to gain in-depth knowledge on a small-N case study, therefore a large-N case study is not pursued. Even though it was decided to focus on municipalities within the Netherlands, the municipality of Bruges, in the province of West Flanders in Belgium, was also chosen for exploratory and validation motives. There are different reasons for this choice. First, in Belgium, the CoM is more widely adopted by the municipalities, totalling 524 cities members of the CoM. Additionally, the network in the country is more developed, with 23 coordinators and 25 supporters helping municipalities to implement the CoM within their organization (Covenant of Mayors for Climate & Energy Europe, n.d.-a). Finally, and according to the website of the City of Bruges, the city seems to have adopted the CoM to guide local climate policy and action, for instance, in June 2020, the City signed the new commitment to the Covenant for the years 2020-2030. Therefore, Bruges is chosen to search for additional insights that would possibly contrast, explain and validate those found in the Dutch municipalities.

In conclusion, the selected cities for the study are: Alkmaar, Breda, Middelburg and Westland in the Netherlands. For additional insights and exploratory reasons, the city of Bruges in Belgium is also selected to study.

[4] During the selection process, it was initially thought that Middelburg did not belong to the Klimaatverbond. However, during the interviews and data gathering step, it was found that the city actually was a member of the Klimaatverbond, but was not included in the members list available on the Klimaatverbond website.

4.1.1.2. Case study selection: City climate networks

As said before, in this section, the reasons about why the CoM and Klimaatverbond are selected as the city networks to study in this research are going to be presented.

The Covenant of Mayors for Climate & Energy is chosen as one of the case study networks for different reasons. The first one is because the CoM is a bottom-up movement that brings together municipalities of all sizes that voluntarily commit to implementing climate and energy goals through an integrated approach to climate change. It is the largest city network comprising both small and large cities. The number of city members of this network is 10,670 by June 2021, aggregating more than 300 million inhabitants in more than 61 countries (Covenant of Mayors for Climate & Energy Europe, n.d.-b). The second reason is because the CoM satisfies the characteristics of a transnational climate network described in Section 2.2.1, where member cities are autonomous to decide to join or leave the network, they have a polycentric set-up, and its members directly implement the decisions and goals taken within the network. The third reason is because this network specifically focuses and acknowledges the role of citizens in climate action and encourages its members to include local communities in this issue to also successfully implement the initiative in the city. There, it is assumed that the CoM influences participatory processes in local governments.

Moreover, Klimaatverbond is selected because it is a national climate association consisting of municipalities, provinces and water boards, with the aim to actively work and impact policy at the local, regional, national and international level (Klimaatverbond Nederland, n.d.-b). This makes Klimaatverbond to satisfy the characteristics of a climate network, however, in this case, only within the Dutch territory (a national climate network). Thus, by selecting Klimaatverbond it is aimed to explore the differences between a transnational and national climate network in terms of their influence in local climate action, and the interactions and dynamics between these two networks. This is based on the argument of Kern (2019), who argues that national climate networks may be more important than TCNs in climate action because of the high representativeness of small and medium cities to the national and regional governments.

4.2. DATA COLLECTION

This research approach is exploratory by nature; therefore, qualitative methods are the most suited to answer the main research question and sub-questions posed in this thesis. The main qualitative data selection methods used in this thesis for data collection are: municipal document analysis and semi-structured interviews. These two qualitative data selection methods are used in combination as a means of triangulation, which is understood as the combination of methodologies in the study. By triangulating data, it is attempted to give a convergence of evidence that increases credibility. When information is examined through different methods, the findings can be corroborated across the data sets reducing potential biases that can exist (Bowen, 2009).

In the following sections, the description and explanation of why these two methods are used are going to be given.

4.2.1. Document analysis method

Document analysis method is a systematic way to review and evaluate documents. It is a qualitative method that requires data to be examined and interpreted in order to generate meaning, gain understanding and develop empirical knowledge. Document analysis methodology is normally used in combination with other qualitative research methods (in this case, semi-structured interviews) as a means of triangulation (Bowen, 2009). Documentation can serve different purposes: (1) they provide

background and context for a specific phenomenon; (2) they let additional questions that need to be asked and situations that need to be observed as part of the research; (3) they provide complementary research data; (4) they provide means to track change and development within the phenomenon; and lastly (5), they can be analysed to verify findings and corroborate evidence from other sources (Bowen, 2009).

In this study, documentation search is done for municipal climate policy documents, CoM and Klimaatverbond documentation. Additional information regarding local energy cooperatives and interdepartmental work are also searched. While there is information available in each municipal climate document, many documents were found to have different titles and intentions. For instance, municipalities use the terms Plan, Programme or Vision to describe their climate documents. It is important therefore to define each of these terms to elucidate the level of detail and climate policy progress in each of the municipalities. Boehnke et al. (2019) propose definitions for each of these terms (see Table 2).

In conclusion, in this study, municipal climate policy documents are collected and categorized using the definitions presented in Table 2.

Table 2. *Definitions of municipal climate documents. Adapted from* (Boehnke et al., 2019)

Action plan	Document with detailed information about GHG emissions, reduction baseline and target, budget needed, stakeholders to engage, plan for implementation and monitoring strategy.
Sustainability strategy	Document with the municipal strategy for sustainability but falls short in more than one items of an action plan.
Sustainability vision or program	Document with a general breakdown of targets by sectors to achieve climate goals. Might include milestones, sectoral GHG emissions and energy consumption. Outlines an overall strategy to achieve the targets (not detailed).

4.2.2. Semi-structured interviews

In addition to collecting documents, semi-structured interviews are performed to municipal civil servants, energy leaders within the municipalities, representatives from the CoM office in Brussels, a representative of the Rijkswaterstaat which is the CoM Coordinator in the Netherlands, and a representative of the Klimaatverbond which is the CoM Supporter in the country. With the semi-structured interviews, the purpose is to explore non-documented information and obtain first-hand data on this topic, reflecting the theoretical concepts found in the academic literature and grey documentation. Interviewees from the municipalities (the civil servants) are selected and approached based on their work in relation to the implementation of climate projects within the municipality, or based on their involvement in citizen participation processes regarding the energy transition. Interviewees characterized as “Energy Leaders”, are citizens that voluntarily participate in climate projects within the municipality, namely active citizens within the energy transition. In this case, citizens that are volunteer workers in an energy cooperative or energy coaches are targeted for interviews. Personnel from the CoM, Rijkswaterstaat and Klimaatverbond are interviewed because they are part of the structure of the Covenant, therefore a deeper analysis about how the CoM’s operation in the country is and influence citizen participation can be gotten. In total 16 people are interviewed.

All interviewees were contacted by email to arrange an interview. The preparation of the email was consistent for all interviewees and outlined the goal of the interview and the topic of this research, namely, the influence of the CoM and Klimaatverbond in citizen participation processes. Interviews were conducted between April 2021 and June 2021 and generally lasted for one hour. All interviews were conducted online by using Microsoft Teams licensed by Delft University of Technology.

The interview questions were prepared in advance and were combined in a questionnaire, which indicated the purpose of the interview and an introduction of the research. To reflect the theoretical framework developed in Section 3 in the questionnaire, questions to explore the local governance capacity and citizen participation processes in the municipalities are included, so that the differences between signatory and non-signatory cities are identified. For each interviewee profile, a questionnaire was prepared, meaning that five questionnaires were created (see Appendix C. Interview questions for the Covenant of Mayors to Appendix F. Interview questions Civil Servant). For the case of civil servants and energy leaders, two question lists were created for each of these two profiles: one for cities member of a city network and the second for a non-member city. All participants from the same profile, were asked the same questions from the questionnaire to allow comparability between respondents. Due to the nature of the semi-structured interviews, each respondent had room to further elaborate their answers if they preferred to do so. All interviews were recorded using the built-in tool of Microsoft Teams, transcribed and coded using ATLAS.ti Scientific Software Development GmbH (Atlas.ti Qualitative Data Analysis, n.d.). Table 3 shows the list of the people interviewed for this research.

***Table 3**. List of interviews conducted*

	Organization	**Municipality**	**Title**	**Date of interview**	**Code**
1	Energy cooperative AlkmaarEnergie	Alkmaar	Board member energy cooperative AlkmaarEnergie	12/05/2021	R1
2	Municipality of Alkmaar	Alkmaar	Adviseur Duurzaamheid	18/05/2021	R2
3	Municipality of Alkmaar	Alkmaar	Programmamanager EU project	03/06/2021	R3
4	Municipality of Alkmaar	Alkmaar	Program assistant EU project and sustainability	03/06/2021	R4
5	Municipality of Breda	Breda	Adviseur energietransitie	01/06/2021	R5
6	Energy cooperative Bres Breda	Breda	Board member energy cooperative Bres Breda	03/06/2021	R6
7	Municipality of Bruges	Bruges	Projectcoördinator EU project	27/05/2021	R7
8	Covenant of Mayors	-	Overall Office coordinator	11/05/2021	R8
9	Covenant of Mayors	-	Reporting, monitoring & evaluation	30/04/2021	R9
10	Klimaatverbond	-	Inhoudelijk medewerker	28/04/2021 and 17/06/2021	R10
11	Energy cooperative Zeeuwind	Middelburg	Staff member	20/05/2021	R11
12	Municipality of Middelburg	Middelburg	Projectleider EU project	17/05/2021	R12
13	Rijkswaterstaat	-	Programma-adviseur	04/05/2021	R13
14	Municipality of Westland	Westland	Energy coach	11/05/2021	R14

15	Municipality of Westland	Westland	Beleidsmedewerker	10/05/2021	R15
16	Municipality of Westland	Westland	Directeur	21/05/2021	R16

It must be noted that for the municipality of Bruges only an interview with the civil servant was conducted. As previously explained, the reason is because with this municipality the aim is to search for additional insights that would possibly contrast and validate those found in the Dutch municipalities. Additionally, two different interviews were conducted with the person of Klimaatverbond because from the first interview not enough information was gathered to analyse the influence of Klimaatverbond in citizen participation processes in its city members. In the first interview, its role as supporter of the CoM was only investigated with questions focused on the activities done under CoM. In the second interview, its role as a national climate network was further explored to identify the actions and support that the Klimaatverbond brings to its members.

To follow the ethical standards of research and because of privacy issues, a data ethics and storage plan was made in accordance with the Delft University of Technology guidelines. Because of this, all the names of the participants that have been interviewed are anonymized, and only their job position are mentioned. However, all interviewees were told explicitly that the transcripts and other data would be made public upon the publication of the study.

4.3. DATA ANALYSIS

As already explained, the data analysed in this thesis come from climate documentation and interviews. For the analyses of this qualitative data, the following assumptions are made about the interpretation of the information.

1. Single interviews with (normally) one civil servant per municipality are trustworthy source of information.
2. Climate documents from municipalities through the years are actual representations of the work municipalities have done.
3. Translations of climate documents are accurate. Google Translate was the tool used to translate the climate documents from the Dutch language to English.
4. The triangulation of interviews and climate documents are good descriptors of how the CoM and Klimaatverbond operate in the Netherlands and their influence in citizen participation processes.

In the following sections, the framework for the analysis within the case studies and between the case studies are presented.

4.3.1. Data analysis within case studies

To evaluate the influence that city networks have on citizen participation processes in local governments, the qualitative data were systematized in different categories to describe how citizen engagement is organized locally. By organizing concepts in descriptive categories, it allows for an evaluation of their interrelationships by means of analytical steps. This enables the explanation of the object of study. Coding strategies exist to achieve this type of analysis, as it enables the organization and grouping of similarly coded data into categories (Broer, 2020; Saldana, 2016). Codes are key words that symbolically assign an attribute for a portion of a document or interview. When codifying, things are arranged in a systematic order to make a classification. When codes are applied and reapplied to qualitative data, the process allows data to be “segregated, grouped, regrouped and relinked in order to consolidate meaning and explanation” (Saldana, 2016).

The codes used for analysing the qualitative data reflect the categories and sub-categories developed in the theoretical framework of Section 3.1: “initiator capacity”, “purpose of the participation process”, “stage of involvement”, “methods for citizen participation” and “type of stakeholder”. Within each of these categories, codes are again created to give meaning and explanation to each category. Appendix G. Code for public participation presents the codebook for describing the citizen participation process in each of the case studies. These data are later reflected upon critically over repeated cycles of interpretation built upon the theoretical background presented in the previous sections.

4.3.2. Data analysis between case studies

After analysing and reflecting for each of the case studies, the differences between them can be studied to determine the influence city networks have on citizen participation. The case studies are organized according to their membership to the CoM and/or Klimaatverbond (this is the independent variable of analysis). Subsequently, groups of cities are created based on their membership to these climate networks: 2 cities members of the CoM (Alkmaar and Breda), 1 city of the Klimaatverbond (Middelburg) and 1 city that is not member of either of these climate networks (Westland). These groups are then compared against the different categories for citizen participation (the dependent variable of analysis) described in Section 3. Then these data are reflected upon critically through repeated cycles of interpretation based on the theoretical background and framework to identify general trends and differences. When the analysis is done by identifying the similarities and differences across cases, it becomes a cross-case analysis (Marie-Hélène Paré, n.d.).

4.4. DATA VALIDATION AND RELIABILITY

Within the present study, different strategies are put in practice to validate the results obtained: the creation of a code-book based on theory, triangulation of data from semi-structure interviews and document analysis to validate the information gotten from these different source, and analysis of an extra case-study to reflect on the results gotten (the case of Bruges) and add an international perspective to this study. To achieve high reliability, therefore the ability for another researcher to repeat this research, the analysis process and scope of the study is explained with detail, and the code-books for data analysis are created and presented. Moreover, and because of the methodology adopted to perform the interviews, multiple respondents are allowed, so that complete information can be obtained.

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5. CLIMATE NETWORKS DESCRIPTION

In this section, the description of the Covenant of Mayors and Klimaatverbond are presented. A brief history, the organization, signatories and citizen participation actions promoted by each network are described. Additionally, for the CoM the current situation of the network in the Netherlands is also explained; and for the Klimaatverbond, its role as supporter of the CoM is explained.

5.1. COVENANT OF MAYORS FOR CLIMATE & ENERGY

The Covenant of Mayors is a bottom-up, open initiative to every local or regional government that voluntarily commits to fight climate change. It was launched in 2008 by the European Commission after the acceptance of the 2007 EU Climate and Energy Package. It aims to provide signatory cities with harmonised data compilation, methodological and reporting framework, to make their GHG emissions reductions into reality (Christoforidis et al., 2013; Rivas et al., 2018).

The CoM has had different objectives along the years, which are constantly renew to provide momentum to the initiative and adapt to new landscape conditions. When it was launched in 2008, the target was set to the year 2020. Under the "*2020 targets"*, the local authorities' commitments were to achieve and surpass by 2020 at least a 20% reduction of the GHG emissions compared to a baseline year. In 2014, the European Commission launched a separate initiative called Mayors Adapt, which was grounded on the same principles as the Covenant of Mayors. Mayors Adapt focused on adaptation strategies to climate change by leading local authorities to demonstrate their commitment in adaptation (Rivas et al., 2018). It supported cities in the development and implementation of local adaptation strategies.

In October 2015, the Covenant of Mayors and Mayors Adapt were merged by the European Commission. The Covenant of Mayors for Climate & Energy was launched, stepping up the initial GHG emission reduction and integrating adaptation strategies to climate change. It entered into the "*2030 targets"*. The CoM was still based on two pillars: (1) mitigation (at least 40% GHG emission reduction target by 2030); and (2) adaptation to climate change (Rivas et al., 2018).

In April 2021, and in an effort to step-up the climate ambitions of the CoM and commitment to deliver tangible action, new "*2050 targets"* were set to encourage new and current signatories to sign up to a "*fairer and climate-neutral"* commitment. In this new commitment, local authorities pledge to achieve carbon neutrality by 2050 while having access to affordable, secure and sustainable energy. Additionally, and as a mid-term goal, municipalities also commit to decrease at least 55% the GHG emissions by 2030, replacing the 2015 goals of 40%, going in line with the European Green Deal (R8, personal communication, 2021) An additional pillar was added to mitigation and adaptation, which is to tackle energy poverty to ensure a just energy transition. In this renewed commitment, signatories should have more actions towards the engagement of citizens, businesses and government at all levels (Covenant of Mayors for Climate & Energy Europe, 2021b).

The procedure for the cities that are willing to join is relatively easy, however the implications of signing the CoM are not always clear and might bring a substantial increase in the load of work needed by each signatory (Christoforidis et al., 2013). Initially, the applicant city demonstrates its commitment via a formal decision by the Municipal Council. Following this initial commitment, the city has two years to prepare and submit the Sustainable Energy and Climate Action Plan (SECAP). The SECAP is the official document that shows how a city will reach this commitment in terms of GHG emissions reduction in its geographical area (town, city or region). The development of the SECAP is based on

the findings from the Baseline Emission Inventory (BEI) and Climate Change Risk and Vulnerability Assessment (RVA). The BEI helps the local governments to develop an overview of its GHG emissions, and set the needed strategies to reach its reduction targets. Likewise, the RVA helps local governments to identify the most important climate hazards and vulnerabilities that may affect the city, helping the local authorities to develop an adaptation strategy. Jointly, with these two assessments, the SECAP defines concrete actions for mitigation and adaptation actions against climate change (Rivas et al., 2018). Additionally, the SECAP includes the key actions foreseen in the short and long term with the priority areas to act. It must deal with organizational and financial characteristics, from allocation of stakeholders and engagement of citizens, to budget estimation and probable financial resources and means of monitoring and evaluation of the plan (Christoforidis et al., 2013).

After submitting the SECAP (which is subject to the approval by the Joint Research Centre), the local government then implements it. Finally, the city must submit an implementation report every two years to monitor the implementation of the SECAP, and ensure that the signatory city is on the right track to meet its targets or propose appropriate adaptations (Christoforidis et al., 2013). Figure 14 shows the step-by-step procedure of the tasks that the signatory cities need to do under the CoM framework.

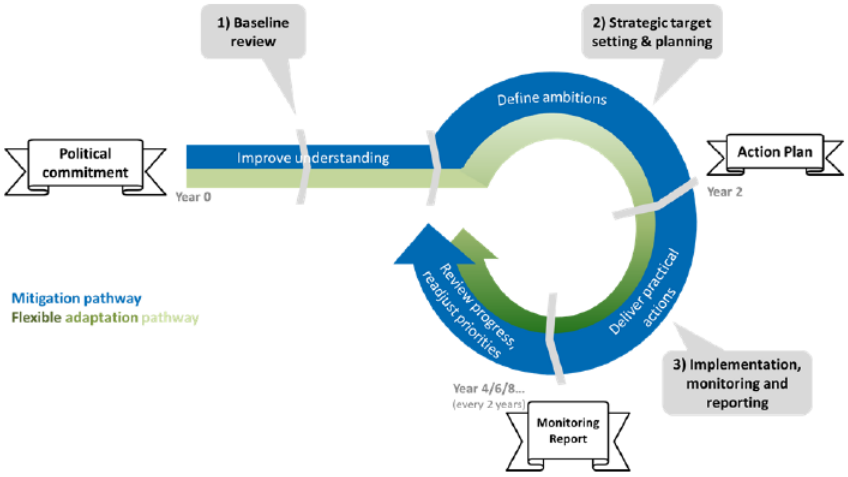

Figure 14*. Step-by-step procedure for signatory cities. Sourced from* (Covenant of Mayors for Climate & Energy Europe, n.d.-d)

By reflecting on these steps, it can be argued that by adhering to the initiative, the signatory city needs to invest the adequate and sufficient resources and time to implement and monitor the climate action in the SECAP. To help to tackle this, the CoM released in July 2016 an integrated monitoring and reporting framework with guidance. The goal of this framework is to support new signatories in their energy and climate planning, and to support them in tracking the progress of the implementation of their commitments. It provided the joining cities with a SECAP template and comprehensive reporting guidelines that were developed with practitioners from local and regional authorities and other stakeholders (Bertoldi et al., 2020). In general terms, signatories are supported by the Covenant of Mayors office, Covenant Coordinators and Supporters that provide local and tailored assistance. These stakeholders will be further explained in Section 5.1.1**.** Additionally, members benefit from international networking opportunities and capacity-building events (Covenant of Mayors for Climate & Energy Europe, 2021a).

The Covenant is seen by the signatory cities not only as a climate and energy initiative, by also as a way of developing local sustainable measures that enables the city to reached better socioeconomic development and urban planning. For instance, emission reduction, energy saving and climate

mitigation and adaptation are achieved by a new organisation of the local authority emerges and increased awareness among the public. The SECAPs are used additionally as an instrument in the design of the urban environment (Rivas et al., 2015).

5.1.1. Organization

Significant human and financial resources are needed to develop and implement a local climate plan. For smaller or less experienced municipalities this can be more challenging than larger ones, as sometimes, smaller cities lack the necessary knowledge, skills and resources to fulfil the requirements (Hoppe et al., 2016). Therefore, when local governments adhere to the CoM, they are supported by a number of entities: the Covenant of Mayors office in Brussels, the European Commission, the Joint Research Centre, the Covenant Coordinators (ministries, regions, provinces, etc.) at the national level, and the Covenant Supporters (energy agencies, association of local authorities, NGOs, etc.) at the national level.

5.1.1.1. *Covenant of Mayors Office*

The Office of the Covenant of Mayors was funded by the European Commission, and is responsible for the overall coordination and implementation of the initiative. Within the Office, there is a Helpdesk that assists the Covenant Community in the aspects linked to their participation in the initiative. Its help varies from the registration process to the development of the SECAP by local governments. The Office is managed by a consortium of European networks and associations that embody local and regional entities, composed by Energy Cities, the Council of European Municipalities and Regions (CEMR), Climate Alliance, Eurocities, the European Federation of Agencies and Regions for Energy and Environment (FEDARENE) and the Local Government for Sustainability network (ICLEI). Additionally, it works tightly with the European Commission's Directorates for Climate Action and Energy and the Joint Research Centre. Even though there are many networks involved in the coordination of the CoM office, they are a small team managing the whole network, so there is not much capacity to support more than 10,000 cities (R8, personal communication, 2021). The Office's role is to (Covenant of Mayors for Climate & Energy Europe, 2021a):

- Assist local governments in joining the CoM during the adhesion and registration process.
- Build and increase local government's capacity through the guidance of webinars workshops and documentation. This capacity building is centred around mitigation, adaptation, energy poverty, multi-level governance, financing and funding instrument).
- Support communication activities.
- Connect signatory cities with the Covenant Coordinators and Supporters.
- Link with the Joint Research Centre for the evaluation of SECAPs.
- Facilitate networking activities within the CoM community.

5.1.1.2. *European Commission*

The role of the European Commission is to mobilize the required financial resources through different programmes, as well as build up political support at the European level. Additionally, the European Commission has created additional financial opportunities for the whole CoM community (Covenant of Mayors for Climate & Energy Europe, 2021a).

5.1.1.3. *Joint Research Centre*

To provide technical support to the signatory cities, the Joint Research Centre helps them in providing an evaluation of the SECAPs and custom recommendations for its improvement. Additionally, the Joint Research Centre elaborates technical guidance documents for the signatories. This stakeholder plays

a relevant role as it helps to inform and support the definition of European policies on climate and energy by collecting information through the evaluation of the signatories' SECAPs (Covenant of Mayors for Climate & Energy Europe, 2021a).

5.1.1.4. *Covenant Coordinators*

The Covenant Coordinators are public authorities that provide strategic guidance, technical and financial support to signatory cities or cities that want to be part of the initiative. There are two types of coordinators: (1) Covenant Territorial Coordinator, which are decentralised authorities, such as regions, provinces or groups of local authorities, (2) and Covenant National Coordinators, which are national public bodies, for instance, national energy agencies or ministries (Covenant of Mayors for Climate & Energy Europe, 2021a). Coordinators in each of the countries are important allies to support the signatories in meeting their commitments, therefore increasing the impact of the initiative. For instance, and according to Christoforidis et al. (2013), the involvement of these Coordinators as a supporting body in the CoM framework has allowed cities to prepare and submit the SECAP within the two years, and to have citizens informed about the importance of climate change.

According to the Covenant of Mayors own documentation (Covenant of Mayors for Climate & Energy Europe, 2020, 2021a) and Melica et al. (2018), the tasks of the coordinators are:

- Provide technical and strategic assistance for the development, implementation and monitoring of the SECAPs. For instance, help in the identification and involvement of stakeholders and the choice of the most suitable approaches to engage them in the SECAP activities. Additionally, in some cases, coordinators take over the responsibility to draft the SECAP for their signatories or to finance the drafting.
- Provide financial help to signatories via direct support (grants, subsidies or any other financing scheme) and technical support via the allocation of human resources or dedicated offices.
- Support experience and knowledge-sharing between current and potential members.
- Work in partnership with supporters and other coordinators to promote the CoM within the regional context. For instance, a tangible success of the coordinators is the increased number of municipalities that join the CoM through the organization of workshops, events, conferences, etc. The awareness-raising campaign and promotion is directed towards politicians, municipal civil servants, citizens and other stakeholders.
- Participate in the CoM activities and organize by themselves events to promote the CoM regionally.
- Report the CoM office, minimum one time per year, the activities done to support signatories and participation in the strategic implementation of the CoM.

5.1.1.5. *Covenant Supporters*

Covenant supporters are local and regional agencies, associations of local and regional authorities, networks and NGOs that have the capacity to promote the CoM and to support and mobilise members in reaching their climate and energy objectives. They use their communication, advocacy and networking activities to promote the CoM and support their signatory cities (Covenant of Mayors for Climate & Energy Europe, 2021a).

They can provide tailored advice to signatories by using the knowledge they have about the regulatory, legislative, and financial framework under which they operate. The different tasks that they perform under the CoM are (Covenant of Mayors for Climate & Energy Europe, 2021a):

- Support and advise the CoM signatories.

- Facilitate exchange of experiences, knowledge, best practices, tools and resources among the signatory cities.
- Foster joint action and promote a coordinated approach with coordinators and other supporters of the CoM in the region.
- Accompany the activities of their supported members on sustainable energy and climate.
- Report the CoM office, minimum one time per year, the activities done to support signatories and participation in the strategic implementation of the CoM.

An overview of the Covenant of Mayors community until June 2021 is shown in Table 4.

***Table 4**. Overview by number of the CoM community* (Covenant of Mayors for Climate & Energy Europe, n.d.-b)

Covenant actor	Number
Signatory cities	10,707
Coordinators	230
Supporters	217

5.1.2. Signatories

The Covenant of Mayors is open to all local authorities that are democratically constituted by elected representatives, independent of their size and in whatever stage of implementation of climate and energy policies. Small and medium cities that are close to each other, can also join as a group of signatories under certain conditions (Covenant of Mayors for Climate & Energy Europe, n.d.-a). The number of signatory cities have been increasing steadily after its conception in 2008. Figure 15 shows the number of active signatories from 2008 to 2021. “Active signatories” means cities that meet their planning deadlines described in their commitments.

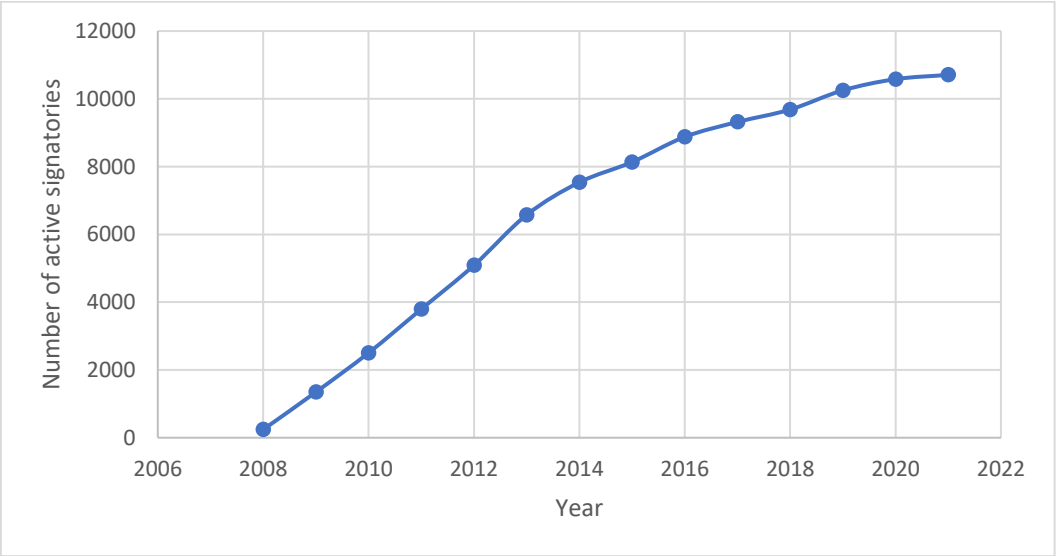

***Figure 15.** Number of active signatories of the Covenant of Mayors. Adapted from* (Covenant of Mayors for Climate & Energy Europe, n.d.-b)

The total number of 10.707 active signatories cover more than 307 million inhabitants in 60 countries. The signatory cities are mainly small and medium size municipalities (less than 50.000 inhabitants cities) representing 89% of the total number of signatory members. However, most of the inhabitants

that are represented in the CoM live in large urban centres, i.e. with population greater than 250.000 inhabitants (Bertoldi et al., 2020). Analysing the number of SECAPs submitted by signatories, 71,1% of them have done so, and 23,7% have submitted a monitoring report of their progress and results (Covenant of Mayors for Climate & Energy Europe, n.d.-b).

The number of signatory cities is not evenly distributed over the countries, as 71,5% of all signatory cities of the CoM are located in Italy (45,6%) and Spain (25,9%). In third place comes Belgium, country whose signatory cities represent 4.9% of the total signatory cities (Covenant of Mayors for Climate & Energy Europe, n.d.-b). Appendix H. Signatory cities by country of the Covenant of Mayors shows the list of all signatory cities by country with their respective number of Coordinators and Supporters of the CoM. One of the reasons that may explain this uneven distribution of signatory cities across Europe, might the extensive network of Coordinators and Supporters that the CoM has in each of these countries. This highly contrasts with the Dutch case, that only has 0,32% of all CoM signatory cities.

5.1.3. Citizen participation

The way that the Covenant of Mayors promotes citizen participation is the requirement of the initiative to include in the SECAP the measures and actions envisioned to involve stakeholders and citizens. The initiative recognizes that to develop successful mitigation and adaptation planning, multiple stakeholders are required, and it should be carried out in the first step of the process until the end. The SECAP has to describe how citizen and stakeholders are involved during its elaboration, implementation and follow-up. The CoM recognizes four levels of engagement: (1) information and education; (2) information and feedback; (3) Involvement and consultation; and (4) extended involvement. To make a successful SECAP, the CoM "highly" recommends to seek the highest level of participation of stakeholders and citizens in the process (Rivas et al., 2018). Additionally, the CoM encourages the creation of an advisory group to ensure that city specificities and problems are understood, local community expectations are met, and to ensure uptake of the main outcome and their inclusion into the decision-making process and SECAP (Rivas et al., 2018)

Additionally, a clear communication strategy is required to be included in the SECAP to give visibility to the commitments of the stakeholders and acknowledge the results achieved. Communication is not only external but also internal to the local authority to improve collaboration between the different departments of the municipality. Communication with all parties (e.g. civil society, private sector and public authorities) increases agreement about city mitigation and adaptation needs, and enables a transparent evaluation of the progress of the climate goals (Rivas et al., 2018). When helping municipalities in increasing citizen participation, the CoM provides them with case studies (a communication tool) of leading cities, so that the process and outcomes are shared and replicated. Moreover, capacity building activities (i.e. workshops) are organized among members so that they can share experiences and get inspiration to apply in their local governments (R8, personal communication, 2021). was studied for exploratory motives to search for additional insights that would possibly contrast with those found in the Dutch municipalities

Lastly, and under the new political commitment of the CoM, the initiative is giving more importance to citizen participation, as they are convinced that beyond the management of public transport, public building, etc., the cities are the best place to change behaviour in citizens by facilitation (R8, personal communication, 2021).

5.1.4. The Covenant of Mayors in the Netherlands

In the Netherlands, the Covenant of Mayors does not have a high penetration rate and is not as widely used as in other countries, as only thirty-five municipalities are signatories of the CoM, and no new

local authorities have signed up since 2018, showing the low momentum the CoM has in the country (R8, personal communication, 2021). Not only the number of local governments that are part of the CoM is low, but the commitment of current signatories to the network is not significant. For instance, only 57% of the Dutch municipalities have submitted a SECAP to the CoM, and from that value, just 25% had them approved by the CoM office. Regarding monitoring reports, just 25% of the signatory cities have submitted it at least once. One of the reasons of the poor involvement of the Dutch cities in the CoM, is that they do not see the added value of the CoM in comparison to the additional work load that it carries. For instance, the CoM means a "lot of communication and a lot of monitoring" but the signatories have not seen "real assistance or anything that could provide the signatories with extra capacity" (R13, personal communication, 2021).

Moreover, many of the benefits of the CoM are already being provided to the municipalities by the central government or there are already local initiatives that support them (R8, personal communication, 2021). For instance, since the early 1990s, the central government has been developing climate policies and supporting local climate action, putting in place strategies and methods that replace the purpose of the CoM (R9, personal communication, 2021), e.g. the hypothecated intergovernmental subsidy scheme (VOGM) of 1993.

Additionally, the CoM supporting network in the Netherlands is weak. It is composed of one national coordinator, which is the Directorate-General for Public Works and Water Management (known as the "Rijkswaterstaat" in Dutch), and one supporter which is the Klimaatverbond. In contrast, Italy (the leading country in terms of signatory cities in the CoM) has 105 coordinators and 33 supporters; and Spain has 35 and 20, respectively (Covenant of Mayors for Climate & Energy Europe, n.d.-b).

The Rijkswaterstaat is part of the Ministry of Infrastructure and Water Management of the Netherlands, and is responsible for the design, construction, management and maintenance of the main infrastructure facilities in the Netherlands (Rijkswaterstaat, n.d.). For instance, one of the tasks of the Rijkswaterstaat is to provide the municipalities with the Klimaatmonitor ("Climate monitor" in English), which is a platform that presents the trends in the energy transition, and local governments of the Netherlands can use to monitor their progress and policies (R13, personal communication, 2021). As stated in Section 5.1.1.4, the role of the Rijkswaterstaat under the Covenant of Mayors would have been to support signatory cities with technical, strategic and financial assistance for the development and implementation of the SECAPs, and to facilitate the transfer of knowledge and experiences between members. In the first years, the Rijkswaterstaat provided the signatory cities a Klimaatmonitor platform that was compatible with the CoM format of monitoring (R13, personal communication, 2021). However, these activities are not currently performed by the Rijkswaterstaat, as its role has been rather passive, having been "a few years back" since the last time that they actively participated in a CoM's related activities (R8, R13, personal communication, 2021). The low activity of the network in the Netherlands, has caused a negative cycle in which the signatory cities do not seek support from the Rijkswaterstaat, and the latter consequently does not provide more proactive support to the cities, to the point that currently the agency does not "feel" to have the role of coordinator anymore (R13, personal communication, 2021). For instance, this is demonstrated by the number of people in the Rijkswaterstaat working for the CoM, as there is only one person to support eleven signatories in the country (R13, personal communication, 2021). Finally, the communication of Rijkswaterstaat with the Klimaatverbond is minimum as well. From time to time, they share information and support each other on tasks. For instance, sending questionnaires to cities.

The description of the Klimaatverbond and its work under the CoM will be presented in the next section.

5.2. KLIMAATVERBOND

Klimaatverbond was established in November 1992 with the goal of "promoting a healthy environment" in Dutch municipalities (Klimaatverbond Nederland, n.d.-a). It was founded by active municipalities who wanted to take action in climate issues, as most of the climate initiatives at the time were focused on the national level and not on the local, where they are in the end implemented (R10, personal communication, 2021). It is a network of municipalities, provinces and water boards that work together in order to anchor, implement and visualize effective local climate policy (Gemeente Middelburg, 2015). Over the years, the role of the association has increasingly focused on supporting its members and partners on the creation of local climate policy for the reduction of CO_2 emissions and adaptation to heat (R10, personal communication, 2020).

The association supports its members, and non-members as well, in exploring, researching and analysing policy with the aim to optimize current climate policies (Klimaatverbond Nederland, n.d.-a; R10, personal communication, 2021). They do it by looking several years ahead to identify what is needed in the field, which are the obstacles and opportunities, and in conjunction with its members and other organizations, convert these issues into concrete projects to identify solutions and share the knowledge gained. Moreover, the Klimaatverbond represents its members, based on the knowledge gained with research, against the central government to promote and lobby for policies and gain subsidies. For instance, the association is trying to put a cooling project for the build environment on the policy agenda of the Ministry (R10, personal communication, 2021). Furthermore, Klimaatverbond helps municipalities to form new partnerships among them and other regional, national and European actors with the aim of sharing knowledge and experiences (R10, personal communication, 2021).

The procedure for cities to join the network is relatively easy. It is based on the City Council or Executive Board decision. As soon as the decision to join is made, the municipality sends a letter to the Klimaatverbond stating the details of the contact and responsible person within the municipality and other information (Gemeente Middelburg, 2015; R10, personal communication, 2021). From this point, the municipality can start receiving newsletters, to participate in the general members' meeting, lobby groups, projects and masterclasses (Gemeente Middelburg, 2015, R10, personal communication, 2021). The membership is based on an annual contribution that depends on the size of the municipality in terms of inhabitants (R10, personal communication, 2021).

5.2.1. Organization

The Klimaatverbond is composed of an Executive Board of aldermen and deputies of different cities who are in charge of setting the outlines of the association. In the central office, eleven people work on the development of the projects and support the municipalities. The team is composed of a general director and "content policy" employees. Additionally, there is a second circle of eleven independent contractors that support the Klimaatverbond's staff with specific projects that run at certain periods of the year (R10, personal communication, 2021).

The Klimaatverbond works together with the central, regional and local level to achieve its goal. Additionally, it has an ongoing collaboration at the European level with the Climate Alliance, Energy Cities and Covenant of Mayors, being the supporter of the latter. Due to the increased responsibilities at the local level, the association and its members are constantly searching for new collaborations, either local or internationally (Klimaatverbond Nederland, 2020a).

In terms of finances, the association does not have enough financial resources. It is financially vulnerable as the fixed income (from membership fees) accounts for one quarter of the revenues

needed for its own projects, making them highly dependent on project-based funds (Klimaatverbond Nederland, 2020a).

5.2.2. Signatories

The Klimaatverbond is open to all Dutch regional and local authorities that are democratically constituted by elected representatives, independent of their size. By the end of 2020, there were 174 members: 3 waterboards, 9 provinces and 162 municipalities (Klimaatverbond Nederland, 2020b). Even though the association is based on a paid membership to become a member, the Klimaatverbond also work with non-members to support them in their climate policy (R10, personal communication, 2021). The 162 municipality members cover 59.0% of the total population of the Netherlands (more than 10 million inhabitants). Small and medium cities (less than 50.000 inhabitants) represent 58.3% of the members of the Klimaatverbond and 16.1% of the total population of the country. However, the number of active members in the network is "20-30" municipalities (R10, personal communication, 2021). Regarding the water boards, it has been difficult for the association to get them really involved in the activities as they are "quite a different type of organization" that would need a tailored work to help them (R10, personal communication, 2021).

5.2.3. Citizen participation

For citizen participation in municipalities, Klimaatverbond does not have a direct influence on the participatory processes due to the lack of capacity (staff and money-wise) that they have. However, they support citizen participation processes by means of general projects and research about participation to increase awareness and knowledge in municipalities about the importance that it has when implementing climate actions (R10, personal communication, 2021). For instance, the association did research on social Energy Service Companies (ESCOs) and how they could be implemented at the neighbourhood level, designed in a way that CO_2 neutrality could be realized for residents (Klimaatverbond Nederland, 2020a). By doing this study, Klimaatverbond helped municipalities in designing neighbourhood plans and apply for subsidies to the central government (R10, personal communication, 2021).

Additionally, Klimaatverbond organizes webinars about citizen participation and is in the process of creating a national platform for knowledge sharing aimed at municipalities, energy cooperatives and citizen initiatives (R10, personals communication, 2021).

5.2.4. Klimaatverbond as the Covenant of Mayors supporter

As said before, the Klimaatverbond is the supporter in the Netherlands for the Covenant of Mayors, however, this role towards the signatory members (described in Section 5.1.1.5) is not being fulfilled nowadays (R10 personal communication, 2021). The current project between the CoM and the Klimaatverbond is about knowledge sharing and instrument development of a CO_2 pricing system, with the idea to link it to the monitoring instruments of the Covenant of Mayors (Klimaatverbond Nederland, 2020a; R8, personal communication, 2021).

As equally expressed by the Rijkswaterstaat employee, the main reason for the lack of support of the Klimaatverbond in the CoM network, is because the CoM does not "really fit with the local situations" of the municipalities (R10, personal communication, 2021). Cities in the Netherlands "already know and do many things", so for them, it does not really make sense to become a member of the CoM (R10, personal communication, 2021). Instead, the Klimaatverbond is supporting the CoM in creating new instruments for the functioning of the initiative that could have a great impact in the whole network.

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6. CASE STUDY DESCRIPTIONS

In this section the case descriptions are presented. Before that, a description of the Dutch climate policy is given to present the contextual and institutional setting of the country.

This section is devoted to lay the ground for Section 7, in which the results and discussion are presented.

6.1. THE NETHERLANDS

Climate policy has a long history in the Netherlands. The country is situated in a river delta that is highly susceptible to floods, making it one of the countries in Europe most vulnerable to climate change with a history marked by important floods due to extreme precipitations. It is therefore, that climate change has been framed as an urgent environmental problem. In response to this, the country has developed many governmental bodies and authorities relevant to the governing of climate change (Hoppe et al., 2016; van Bommel & Kuindersma, 2008).

The Netherlands is described as a decentralized state with a three-tier administrative structures: in the higher level sits the national government, in the middle the provinces and in the lower are the municipalities. The country is said to be "decentralized" because responsibilities are delegated from the higher to lower tiers, therefore, these levels have certain degree of autonomy. However, both the national and provincial governments have supervisory tasks over their respective lower levels (van Bommel & Kuindersma, 2008). The Netherlands has a decision-making culture focused on consensus. In policy making, the central government not only asks provinces and municipalities, but other stakeholders are also informally incorporated in the decision-making process (van Bommel & Kuindersma, 2008).

Regarding climate policy, the Netherlands has a rich history. The country was one of the first to develop a national climate policy in the early 1990s to support local climate action, local capacity building and local climate policy making (Hoppe et al., 2016; van Bommel & Kuindersma, 2008). In 1992, the Rio de Janeiro Declaration (Agenda 21) was signed by the Netherlands, signalling the start of discussions on GHG emissions in the country. This Declaration stated the important role of local governments in climate policy due to its direct relationship with the citizenry. In 1993, the country set up a hypothecated intergovernmental subsidy scheme (VOGM) to support municipalities in the implementation of the Agenda 21. Following the country's commitment to the Kyoto protocol of 1997, the country kept supporting climate change issues by means of additional and improved intergovernmental support schemes, which also gave more discretionary authority to local governments to independently prioritise policy targets (Hoppe et al., 2016; Hoppe & Coenen, 2011).

In 2015, the Netherlands signed the Paris Climate Agreement to limit global warming to less than 2 degrees Celsius above pre-industrial levels. To achieve this goal, the country presented in June 2019 the Dutch National Climate Agreement. In this document, the government's central goal is to reduce GHG emissions by 49% compared to 1990 levels based on national cost effectiveness carbon emission reduction measures, however, and depending on the European policy, the goal is to reduce GHG emissions by 55% compared to 1990 levels (Government of the Netherlands, 2019). To implement the measures from National Climate Agreement, thirty energy regions in the country are working on a Regional Energy Strategy, the NPRES. Under the NPRES, each region is investigating where and how best to generate sustainable wind and solar energy on land, and also, which heat sources can be used so that neighbourhoods can replace natural gas to more sustainable heat sources (Nationaal

Programma Regionale Energie Strategie, n.d.). Public authorities work with social partners, network managers (for heating, electricity and gas), business community and where possible, residents to develop regionally energy choices. In the Climate Agreement, public participation is recognized as an important factor to achieve the national target. It is therefore that the national government is developing a "comprehensive" national public participation approach to create greater awareness among citizens, and to encourage them to change their behaviour. This approach has two elements: public campaign and networking approach. Within each NPRES, participatory processes lead to qualitatively more informed choices and decisions that contribute to successful implementation. Within each energy region, public authorities need to ensure effective and timely provision of information to citizens and enable them to effectively contribute to formulating the strategy, however, each region is responsible for determining which type of facilitation is given to citizens and other stakeholders (Government of the Netherlands, 2019). The Dutch National Climate Agreement and the Regional Energy Strategy are clear examples of the decentralization of climate policy in the Netherlands, where more responsibilities are transferred from the central to provincial and municipal governments.

Local environmental policy in the Netherlands has changed over the years (Hoppe & Coenen, 2011). As a first point, the issues that local governments work on have broadened embracing sustainable development. Second, the instruments that local authorities use to enable sustainable and climate policy have also broadened. The local authorities are not limited to conventional limiting/licensing instruments but are using others such as information provision, environmental management and subsidy schemes. Third, the discretionary power of local governments has changed as they now have more decision-making power to determine what environmental goals to pursue and how to accomplish them. Fourth, other decentral and functional governments are also involved, so that local authorities are no longer the only implementing agencies of environmental policy. Finally, the trend of the national government in 1980s to place environmental and climate policy in provincial and municipal bodies is stronger than ever (Hoppe & Coenen, 2011).

In the following sections, the description of the case studies in the Netherlands will be given.

6.1.1. Municipality of Alkmaar

Alkmaar is a city that is located at the central-north part of the North-Holland province. The municipality has 109,897 residents and a surface area of 117.35 km^2 (CBS, 2021b), making this the 9th largest city of the province. Economically, the municipality is specialized in financial services and care activities (Rabobank, 2018a), industries that have a low energy use and CO_2 emissions, however, and due to the merging of the municipalities of Graft-de Rijp and Schermer in 2015 to Alkmaar (Overheid.nl, 2014), agriculture plays an important role in the local economy (Rabobank, 2018a). In the year 2013, the city and its neighbouring municipalities (Bergen, Castricum, Heerhugowaard, Heiloo, Langedijk and Uitgeest) created an strategic partnership named "Regio Alkmaar", with the purpose of working together in different subjects, such as living, working and education (Plaatsengids.nl, n.d.).

In 2016, the city published the "Duurzaamheidsprogramma Alkmaar 2016-2020" ("Alkmaar sustainability program 2016-2020", in English), which formulated the short-term program of the municipality aimed at making the city, rural area and the region of Alkmaar more sustainable. The municipality and region ambitions by 2020, at least on paper, were to reduce the CO_2 emissions by 20%, produce 20% more sustainable energy and save 20% the use of fossil fuels (Gemeente Alkmaar, 2016). However, and equally said in the program, this did not provide an implementation plan, but rather a framework within which the projects could be started. This posed the risk of setting goals that could not be verified and therefore not achieved. In 2019, this proved to be right. The municipality

commissioned an audit of the 2016-2020 program and found that the objectives were not achieved and the "20% goals" turned out to be "too ambitious" (Gemeente Alkmaar, 2020).

Last year, in 2020, the municipality published the new sustainable program for the period of 2020-2024 named "Innovatief en duurzaam: Programma Duurzaam Alkmaar 2020-2024" ("Innovative and sustainable: Sustainable Alkmaar 2020-2024 program", in English). In this new program, the main sustainable goal for 2024 is to emit 25% less CO_2 gases in comparison to 1990 levels, in line with the national target of the Dutch Climate Agreement (Gemeente Alkmaar, 2020). Additionally, it sets the target to achieve climate neutrality by the year 2050. To accomplish this, the municipality will focus on CO_2 emission reduction in electricity generation, built environment, mobility, industry and agriculture, through energy conservation, sustainable electricity generation and innovation. In this new plan, the lessons and experiences from the last program were taken into account. For instance, setting verifiable goals for each part of the implementation program (Gemeente Alkmaar, 2020).

In contrast to the previous plan ("Duurzaamheidsprogramma Alkmaar 2016-2020"), cooperation and communication with all the stakeholders play an indispensable role for the success of it. Cooperation is sought by making ties with local, regional, provincial, national and European stakeholders to collect knowledge, experience and insights from different platforms. With the local partners, the municipality organizes periodic consultations (at least twice a year) with the main stakeholders to discuss the topics of the 2020-2024 program. At the regional level, strong cooperation is pursued for the creation and implementation of the Regional Energy Strategy. At the European level, cooperation is strengthened in the municipality through the participation in the Horizon 2020 program of the European Union, under which the municipality received a EU subsidy, worth € 1.5 million, to execute the POCITYF project with the goal to accelerate climate innovation and sustainability in the city (Gemeente Alkmaar, 2020; R4, personal communication, 2021).

AlkmaarEnergie

AlkmaarEnergie is an energy cooperative started by residents of Alkmaar in October 2013 (AlkmaarEnergie, n.d.-a). Its goal is to generate as much sustainable energy as possible in the municipality to reach a sustainable and energy-neutral city. Its initiatives are done within their own community, so the money stays in the economy of Alkmaar. Most of its projects are the generation of renewable energy from solar panels and wind turbines in which individual citizens, or a collective of them, can invest together in these projects (AlkmaarEnergie, n.d.-b).

The cooperative only counts 10 volunteers that are in charge of implementing renewable energy projects in the municipality, among other tasks. The implementation of these projects entails many different procedures ("lease contracts", legal procedures, crowdfunding, etc.) that lengthens the time of implementation. The volunteers in the cooperative work on the projects on their own time (off working hours), which makes the process slower (R1, personal communication, 2021). Additionally, the cooperative does not always have the knowledge and experience to implement the projects timely For instance, they can handle one project at a time, but if they were to implement two solar roof projects, they would not have the capacity to do it (R1, personal communication, 2021).

6.1.1.1. *Participation in city networks*

Alkmaar is member of the Covenant of Mayors since 2015, pushed by a highly motivated City Council that considers climate action a priority (R3, personal communication, 2021). Under this initiative the city drafted and submitted the "Duurzaamheidsprogramma Alkmaar 2016-2020" as the SECAP, to officially become a member of the network, however, after this point not much work has been done for the initiative. This can be demonstrated by the fact that neither of the three civil servants, nor the energy leader interviewed, knew about the Covenant or work that had initially been done for it (R2,

R3, R4, personal communication, 2021). Additionally, no recent official communication from the city, regarding the membership to the CoM, could be found. Currently, the municipality does not communicate with the CoM local network (Klimaatverbond nor the Rijkswaterstaat) to work on the initiative, however, they do for the NPRES (R3, R4, personal communication, 2021).

Even though the CoM is not currently used, it helped the municipality to start working on a sustainable program since 2016, prompting them to have clearer objectives, baselines and strategy to reach their sustainability goals. Concerning the CoM's influence on citizen participation process in Alkmaar, the only factor that could be identified and may be attributed to the membership of the initiative, is that the municipality has identified the citizens as important stakeholder since the first sustainable visions made by the municipality. This was included due to the guidelines of the SECAP.

Even though Alkmaar does not use the CoM, they work with the European Commission by being part of the POCITYF project, which is a project to help historical cities to become "greener, smarter and more liveable" (Pocityf, 2021). It based on three ambitions: demonstration, replication and share of knowledge (R4, personal communication, 2021). The city sees this project as a means to become more sustainable by sharing high climate ambitions for CO_2 emissions reduction (R3, personal communication, 2021). The POCITYF project supports the municipality with financial resources (€ 1.5 million) and by creating a strong local network (R4, personal communication, 2021). The strengthening of the local network is done by sharing knowledge internally but also with other cities in Europe. For instance, in POCITYF, Alkmaar is connected to Evora (in Portugal) and with six other follower cities with whom they share experiences and knowledge about what strategies work and to seek for funding. This project not only connects Alkmaar to these other 7 cities, but with other Horizon 2020 programmes. For instance, Alkmaar met with other Dutch cities to understand and talk about new legislation and help the national Dutch government to improve the legislation (R3, personal communication, 2021). Regarding citizen participation, POCITYF encourages Alkmaar to involve citizens on the "highest level of the participation ladder", which are "advising, co-creation and making decisions together" (R4, personal communication, 2021). For instance, under POCITYF, the civil servants will participate in the European Week of Regions and Cities to share knowledge about citizen participation strategies that have good or no impact (R3, personal communication, 2021).

Finally, the participation of the municipality in the local climate network, Klimaatverbond, is minimum. Neither the municipality nor AlkmaarEnergie are aware of the current work with the network. However, the energy leaders acknowledged that the influence of these networks (including the CoM) is done on the "background", as they "do the lobby to the politics and make sure that the Energy Corporations, so citizen participation, are part of the guidelines and new regulations" (R1, personal communication, 2021)

6.1.1.2. *Citizen participation*

Initiator capacity

As explained in Section 2.1.2 and 3.1, the governance capacity of the municipality is divided in three: decision-making, implementation and accountability capacity. For decision-making capacity, the municipality has had the ability to mildly incorporate new information and put forward the interests of the local debate. In one hand, the Aldermen and civil servants know that the "whole society is changing and is getting more aware of the things that have to change" regarding climate action (R3, personal communication, 2021). Additionally, it can be seen, from the latest sustainability program and participation in the POCITYF project, that the city's prioritization of climate action is high on the agenda. On the other hand, the ambition of the municipality is not aligned with the ambition of the citizens, represented by AlkmaarEnergie (R1, personal communication, 2021). For instance, when installing solar roofs, the municipality looks for their own criteria and does not consider the collective

criteria of the citizens (R1, personal communication, 2021). Finally, and expressed by one civil servant, the City Council could do much more to push climate action. This is, according to the person, evident by the few number of people that are working on this issue and financial resources available (R2, personal communication, 2021).

Regarding implementation capacity, the bigger problem the municipality of Alkmaar has is financing climate actions in the city. As explained before, the decentralization of tasks from the central to regional and local governments has put pressure on the financing programs at the local level, to the point that financial resources are not always available to climate action, as population wellness scales higher in priority for the City Council (R2, personal communication, 2021). This is one of the reasons why the Municipality decided to join the POCITYF project, to secure and get funding for climate projects (€ 1.5 million awarded). Regarding the availability of staff, there are 5 people working in the sustainability department of the municipality. Nevertheless, and to make-up for the few people, the civil servants can find additional staff capacity within the POCITYF project and support themselves with the network they belong to. For instance, and already explained, Alkmaar shares experiences and knowledge with other municipalities, helping them in creating solutions and strategies much faster (R2, personal communication, 2021). Still, all the civil servants interviewed agreed that more personnel should be made available in the coming years to reach the climate goals (R2, R3, R4, personal communication, 2021).

Lastly, it can be said that the municipality has the capacity to make information available to citizens and other stakeholders about the outlook of sustainability policies in the city. This has been done through the elaboration of the sustainability strategy for 2020-2024, a website, a participatory platform in which stakeholders can know and discuss the future projects, and evening meetings. Additional to these, the Municipality created a guideline for participation in environmental and climate projects, delineating the different steps that all participatory process should follow (Gemeente Alkmaar, 2019). However, and according to one civil servant, during the evening meetings, it is "not always clear" in what aspects the citizens can or cannot participate (R1, personal communication, 2021).

Purpose of the participation process

Purpose of participation is divided in: the purpose of the municipality and the purpose of the citizens to initiate a participatory process. For the municipality, the purpose to engage citizens comes from an obligation to comply with a new environmental law. From this, a citizen participation vision had to be done by the municipality (Gemeente Alkmaar, 2019; R4, personal communication, 2021). Even though they were obliged to initiate participatory processes in the city, the breadth of the participation was up to the City Council to decide. In this regard, the municipality's goal of participation is based on five dimensions of the participation ladder: inform, consult, advise, co-produce and participation in decision (Gemeente Alkmaar, 2019; R4, personal communication, 2021). These three dimensions showcases the will of the municipality to increase acceptability, ownership, trust and support of climate projects amongst citizens.

For AlkmaarEnergie, representing the citizens in the participation process, the purpose to participate in climate plans is to have a greater voice and influence in projects (R1, personal communication, 2021). For instance, AlkmaarEnergie gained a "motion" that "gives them the opportunity to create the solar roofs" on the municipality's real estate (R1, personal communication, 2021). By doing this kind of projects, the energy cooperative is also able to sell their sustainable energy to generate "a little bit" of cash flows that stays in the community (R1, personal communication, 2021). Finally, the third purpose of AlkmaarEnergie is to develop social and civic skills within the society. This is done by sharing knowledge with citizens through presentations made to people from Alkmaar about how to make their own houses more sustainable, or about a new sustainability law. By doing this, they aim to make citizens in Alkmaar more aware of the need of sustainable energy (R1, personal communication, 2021).

Type of stakeholders

For citizen participation initiatives in Alkmaar, there are different stakeholders involved. Initially, and under the POCITYF programme, the municipality works with two housing associations that have drafted a participation strategy to include citizens into decision-making processes, so that this participation strategy can be turned into a handbook that the civil servants of Alkmaar can use (R3, personal communication, 2021). Moreover, the external support from other cities under working under POCITYF play a role in knowledge building and capacity. Additionally, and to enable citizens to see how sustainable technologies work, a private company is creating an "experience centre" so that the local community knows how to implement these technologies in their homes (R3, personal communication, 2021). Moreover, the municipality itself plays an important role in citizen participation within the city. As said before, the Aldermen and civil servants have placed citizen participation as a priority in the new sustainability strategy for 2020-2024, allowing the creation of a participatory vision for the city. These stakeholders play the role of enabling citizen participation through the creation of participatory plans, knowledge building and diffusion of information.

Regarding local communities, these can be divided into active and non-active citizens. The active citizens are considered the ones that are members of AlkmaarEnergie, for instance. The cooperative has around 500 members, but only a few of them (around 10 people) work as volunteers in the cooperative to implement the different collective projects to generate sustainable energy. In the energy cooperative, from the 500 members, there are citizens that play a passive role as they do not participate much in the activities (R1, personal communication, 2021). This reason behind this is because "sometimes people are afraid" because they do not have "any knowledge" about sustainable energy (R1, personal communication, 2021). Moreover, and according to a civil servant, the citizens that participate in the local climate meetings or are active in local climate action are the "usual suspects", mostly men with 50 years or older, prompting the question of: does the citizen participation process in Alkmaar succeed or fail if only the same people participate? (R2, personal communication, 2021).

Methods of citizen participation

There are multiple methods that the municipality uses to engage citizens. For informing citizens, many of the methods are focused on increasing awareness and behavioural change of inhabitants. The target groups for the communication strategy are divided in external (residents and entrepreneurs) and internal groups (civil servants and partners of the municipality). The communication strategy is to accomplish by different means: online and social media (newspaper and magazines to show the sustainable initiatives that are happening and what they mean for the municipality), printed media (same information than online media but targeted towards less digitally skilled groups of people), evening meetings with citizens and home visits from energy coaches (Gemeente Alkmaar, 2019, 2020). Moreover, the municipality has made available energy coaches (who are independent from AlkmaarEnergie) in districts, and a "sustainability bus" that rides through the neighbourhoods to inform citizens about sustainability and climate issues (R4, personal communication, 2021).

Going up in Alkmaar's ladder of participation, for consultation and advising, the city has an interactive platform on the municipal website, so that the municipality, citizens and other stakeholders can discuss climate and environmental initiative together. With the conclusions of the "debate", an advice is given to the municipality (Gemeente Alkmaar, 2019; R4, personal comunication, 2021). Even though the municipality is working on participatory processes, the level of co-creation is not yet achieved, however they are starting in the process. For instance, the municipality wants to create a peer-to-peer

energy trading platform, and they will partner with AlkmaarEnergie to define the criteria of the project.

By analysing this information against the typologies presented in Section 3.1, it can be argued that the municipality of Alkmaar has informed and consulted citizens about the local climate action plans, with mild involvement of them into climate initiatives and the policy making process. Partnerships and citizen control of climate policy in Westland is yet to be started (R2, personal communication, 2021).

Stages of citizen participation process

The initiation stage of a participatory process is characterized by the trigger event that prompted participation. In this case, the municipality decided to give more importance to citizen participation due to the increased social pressure on climate change issues and because of legislation. In September 2015, the regulation for public participation in Alkmaar was released (Overheid.nl, 2015). Moreover, in the preparation stage, the municipality of Alkmaar has created the "Participatie in Alkmaar: Leidraad voor participatie bij ruimtelijke initiatieven" ("Participation in Alkmaar: Guideline for participation in spatial initiatives" in English) guideline to organize citizen participation processes in the city (Gemeente Alkmaar, 2019). In this document, the purpose, the role of the initiator, the explanation of the participatory process and the methods to engage citizens are described. For instance, and following the theory presented in Section 2.3.3, the municipality effectively lays the steps that must be follow for participation (Appendix I. Steps for citizen participation process in Alkmaar). By doing this, the municipality decides on "the level and form of the participation to be used", so that it is determined how the participation will look like (Gemeente Alkmaar, n.d.). In the "participation" stage, the municipality uses different methods, described before, to involve citizen in climate action, and AlkmaarEnergie have enough capacity to run local climate actions. For the "continuation" stage, the municipality asks for a report of the participation process indicating the choices that have been made and an evaluation of the process, however, it is not clear how the monitoring part works. According to one civil servant, the municipality can, for instance, know how many people show up to the evening meetings, nevertheless, they do not know how effective the engagement was (R2, personal communication, 2021).

6.1.2. Municipality of Breda

The municipality of Breda is a city in the southern part of the Netherlands, located in the province of North Brabant. The municipality has a population of 184,069 inhabitants and a surface area of 128.68 km^2 (CBS, 2021b). The city is considered to be the employment and facilities centre of the province.

In 2008, in the climate memorandum "Steek positieve energie in het klimaat" ("Put positive energy in the climate" in English), the overarching climate goal of the municipality was set: to be CO_2 neutral by 2044 (Gemeente Breda, 2009), which is a more ambitions target than the one of the central government. To get to this point, the municipality has gone through different steps starting in 2002, when the municipality presented the first environmental vision called "Milieuvisie 2015", with a philosophy set mainly on protection of the environment (Gemeente Breda, 2016a). In 2008, the first detailed sustainability and environmental policy document with concrete goals and a plan on how to achieve these, was presented. In this document, the target for 2015 was to achieve a CO_2 reduction of 25% compared to 2006 and 45% in 2020 (Gemeente Breda, 2009), being in line with the national goals at the time. Collaboration with other stakeholders (individuals and organizations) was defined as a key aspect to achieve these goals, based on a strong communication strategy to increase awareness and prompt the stakeholders into implementing energy-saving measures.

In 2016, the municipality released, the "Duurzaamheidvisie 2030" ("Sustainability vision 2030", in English) to show how the city was going to shape sustainability in the coming years. In this vision, the

sustainability goals are divided into 15 dimensions that include “Energy and climate mitigation” and “Climate adaptation”. This document presents a review of results achieved, goals for the coming years and the process on how the municipality is going to achieve these goals. When analysing these documents, it becomes apparent that collaboration and citizen participation have been taking, along the years, a more prominent role in the policy discussion of the city. This has triggered a change in the style of governance of the municipality, shifting from governing by authority to governing through enabling, where facilitation of businesses or citizens’ own initiatives are achieved by increasing awareness and establishing better communication channels (Gemeente Breda, 2016b). Even though the city has been working to decrease CO_2 emissions since 2002, in 2017 the target was not achieved and was missed by 9.7% (the target was to emit 761 kilotons of CO_2 and 835 were emitted) (Gemeente Breda, n.d.-a).

Currently, the municipality is working on the “Breda 2040 Environmental Vision” to update the “Sustainability Vision 2030”. The purpose to renew the commitment is to include the new insights and changes in the local context, for instance, the new “Environment Act” of the Netherlands (Gemeente Breda, n.d.-c). Moreover, there is a strong work in the development of the “Heat Transition Vision” that would need to be finished by the end of 2021. In this vision, the municipality is deciding which districts or areas will be the first to be made natural gas-free until 2030 (Gemeente Breda, n.d.-a). To make these “visions” to happen, the municipality will focus on strengthening the social network in the neighbourhoods through communication, strong cooperation and sharing of responsibilities. Here, the BRES energy cooperative is playing and will further play an important role. Additionally, since 2017 the municipality started working on the European Interreg 2 Seas project to encourage private homeowners to make their homes more sustainable by making information options more accessible. The premise of the project is to work with the Triple-A, that stands for the Adoption of methods to reduce CO_2 emissions, by improving Access and increasing Awareness of the necessity to become more sustainable (Gemeente Breda, n.d.-d).

In terms of budgeting, the municipality has allocated, from 2021, € 18 million to sustainability and climate projects until 2024, while housing and mobility projects have € 34,46 million and € 57,38 million, respectively (Gemeente Breda, n.d.-a). These funds for sustainability and climate projects are not to be diminished, however, it raises the question if these are still enough to achieve climate neutrality in 2044, taking into account that expenditure should be risen instead of trending downwards year by year, which is currently the case. Moreover, and equally important, it shows the level of interest and ambitions that the municipality has in terms of climate change, that if ranked, by the amount of money allocated, it would take the third position after the two other themes named above.

BRES: Bresdase Energie Coöperatie

BRES is the energy cooperative of Breda with around 250 members. It has the goal to make Breda fossil-free through the use of renewable energy such as sun, wind and geothermal heat. They strive to give more control to its members over the energy supply, by informing and encouraging them to initiate their own projects. Its team is composed of 16 people, all volunteers, that perform different tasks (BRES: Bredase Energie Coöperatie, n.d.-c).

The cooperative has participated in a number of projects. For instance, BRES has made possible two wind parks near Breda, in which more than 340 members are participating in the project as stakeholders (BRES: Bredase Energie Coöperatie, n.d.-b). In solar energy projects, the energy cooperative supports the citizens in installing the solar panels on the roofs of their own houses. They provide knowledge and stimulate the development of the collective generation of solar energy (BRES: Bredase Energie Coöperatie, n.d.-a). Additionally, the energy cooperative, with their own energy

coaches, does awareness activities in the city neighbourhoods to incentivize citizens to make their houses more sustainable (R6, personal communication, 2021).

Its communication with the municipality is coordinated by one person from BRES, who has direct and easy contact with the civil servants (R6, personal communication, 2021). The cooperative advises and helps the municipality in reaching the city's goals, and represents the citizens before the civil servants, placing themselves as the "chain" between these two actors (R6, personal communication, 2021).

6.1.2.1. *Participation in city networks*

The city of Breda is an active member of the Covenant of Mayors since February 2009, one year after the first climate policy document was presented. From the four Dutch cases in this research, Breda has been relatively more active in the initiative than its counterparts. Civil servants have attended conferences organized by the CoM and have also created the reports that are required from the network (R5, personal communication, 2021). However, nowadays, the initiative is not used due to different reasons, having been 2018 the last year in which the municipality participated in an CoM activity. First, the person that was in charge of the network left the municipality, and no person has taken up the task (R5, personal communication, 2021), leading to think that the CoM was an isolated activity within the municipality and did not cover or influence the different departments of it, which ideally should occur. The second reason is because of the participation of the city in Interreg 2 Seas project, which has been the focus of the municipality (R5, personal communication, 2021), therefore, not much time and interest is allocated to work on the Covenant of Mayors.

According to the civil servant interviewed, the purpose of the municipality to join the CoM was to confirm the climate goals against the international community and to exchange experiences and visions from other municipalities across Europe, to reflect with others and "pick-up" ideas from different stakeholders (R5, personal communication, 2021). When comparing the year that Breda released its first climate policy document (in 2008) against their adhesion year (2009), the first argument can be confirmed. More than confirming their ambitions, the Covenant helped the municipality in further developing the climate plans and the creation of intermediary goals (R5, personal communication, 2015).

Finally, Breda's participation in the Klimaatverbond is minimum. The civil servant interviewed has participated in different meetings and conferences organized by the network, however, there is not an ongoing project with another city. Nevertheless, in February 2021, the Alderman Greetje Bos was appointed as a new member of the general board of the Climate Alliance (Klimaatverbond Nederland, 2021). The results of this appointment are still to be seen, as it would be expected greater activity from the civil servants under the Klimaatverbond in terms of knowledge building or exchange of experiences with other municipalities.

6.1.2.2. *Citizen participation*

Initiator's capacity

The municipality has demonstrated to have the capacity to make well informed decisions through the incorporation of social interests and policy agenda of the central government. In 2008, Breda set a more ambitious target than the central government, showing early on a sense of urgency in the matter. Since then, the municipality has updated their climate and sustainability plan to include new insights and changes in the local context. Moreover, and by engaging citizens, they have been able, most of the times, to include local knowledge and desires into climate policy. Even though the municipality has put effort and set high ambitions in climate action, there is a sense of lack of awareness from the Council and Aldermen of the municipality regarding the actions that need to be

done. For instance, if they want to achieve climate neutrality by 2044, the municipality has to double or triple the budget for the coming years, something that is not apparent from the budget allocated to climate (Gemeente Breda, n.d.-a; R5, personal communication, 2021)

In terms of implementation capacity, the team at the municipality that is working on the energy transition has "about 8 to 10 colleagues", not all of them working full time (R5, personal communication, 2021). However, in the municipality it is acknowledged that the staff has to grow to reach the goals, as currently they do not have enough time to add new tasks to their jobs (R5, personal communication, 2021). In the meantime, they have a strong collaboration with BRES to reach citizens in their neighbourhoods and operate the "Greenhopper", which is a movable information centre, funded by the EU Interreg Triple-A project, used to inform and educate citizens in their neighbourhoods (R5, R6, personal communication, 2021). In terms of financial resources, the municipality is heavily dependent on external sources, for instance, the national government and the European Union. These resources are mostly needed to expand the working force and implement new projects, for instance, as previously said, they would need to double or triple the budget in the coming years to make neighbourhoods more sustainable (R5, personal communication, 2021). In terms of experienced and motivated civil servants, it can be argued that internally the municipality has pushed to the City Council different initiatives for climate action, as they have "some very idealistic colleagues" who adopt the climate goals (R6, personal communication, 2021)

Finally, in terms of accountability, the municipality shows to be transparent about their climate policy, as the information can easily be found on the internet. However, this public information and high ambitions may contrast with the budget available and what is actually done in the field. The budget allocated for the next years is decreasing, opposite to the need to increase it; and, while participation and citizen engagement is highly promoted by the municipality, this is not the case always. For instance, and expressed by the energy leader, it is not always clear if the advice given by the citizens is taken up in the policy documents and there is not a stability in climate policy as "every four years you got a new policy direction that say they are not going to invest in sustainability anymore" (R6, personal communication, 2021). However, this last point is likely to happen worldwide, therefore it is a struggle that the energy transition suffers everywhere.

Purpose of participation

Initially, the municipality started participatory processes because they want to have higher trust and support for their projects and to increase ownership. They do not want to enforce them upon citizens but to enable them to do it themselves (R5, personal communication, 2021). It includes a phase in which they educate and increase awareness of citizens so that they know what they can do to reach the climate neutrality together with the municipality (Gemeente Breda, 2016b). From the citizens' side, they want to participate because they want to be involved in the decision-making process, so that they feel they are part of the energy transition, increasing the ownership of their own actions (R6, personal communication, 2021).

Type of stakeholders

Initially, the Mayor and Aldermen are the ones that take the final decisions regarding climate policy and initiatives in the city. The City Council is motivated and see the need to adopt more sustainable solutions, however, and as explained before, climate may not be the top priority of the city and they are not yet prepared to take into full consideration citizens' opinions and feedback into policies. Next to them lie the civil servants, who have a higher motivation regarding climate issues than the City Council, as the goals and initiatives proposed by the municipality have come mainly from them (R5, personal communication, 2021). From the local communities' side, BRES play an important role, as

they are the chain between the citizen and the municipality. They present ideas that benefit the citizens and help the municipality in achieving the climate goals with strong cooperation (R6, personal communication, 2021). External companies (i.e. consultancy firms), play a role by supporting the municipality in the policy making process, however, this may hinder the participatory process if the municipality does not also take into consideration people's opinion, but just the recommendation of the consultancy firm. From the national bodies, the central government is expected to play a greater role in financing the transition to climate neutrality in the city, as currently, the municipality is still expecting to receive funds from the Dutch government (R5, personal communication, 2021). Finally, and through the participation in the Interreg 2 Seas project, the municipality receives support from the European Union and other stakeholders to gain build knowledge and support for citizen participation processes.

It is important to say that within Breda there is a certain cohesiveness between the different stakeholders. There is a strong collaboration between the municipality and BRES, which has proved to be effective in engaging more citizens into the energy transition. Through a subsidy scheme given by the municipality to BRES, the number of citizens that BRES has reached has increased from "50 to 100 advices" at home to more than 100 in 2018, and in 2019 they did not have enough capacity to attend the requests (R5, personal communication, 2021). Even though they did not have enough staff to suffice the demand, this way of working has been effective.

Methods for citizen participation

The municipality has two main methods to engage citizens in the energy transition based on the work of the Interreg 2 Seas project. The first one is the creation of a web portal platform (WoonwijsBreda) on which citizens can find useful information for them to start working on making their own houses more sustainable. The second method is the Greenhopper, which is a sustainable and mobile information centre of the municipality in which people go and visit to seek for advice and see renewable technologies, i.e. solar panels and heat pumps (Gemeente Breda, n.d.-b; R5, personal communication, 2021). This last method has proved to be successful, as in the last one and a half year, more than 2.000 people have visited the information centre (R5, personal communication, 2021). This does not mean that 2.000 people have installed renewable energy sources at the homes, but that they are more aware about the need of it. Currently, there are plans to have a second Greenhopper in the city. In terms of policy input from citizens, there is a citizen working group that discusses and give giveback to the civil servants about the sustainable energy projects in the city (R5, personal communication, 2021). However, it is yet to be known if the feedback provided will be used by the municipality, as according to the energy leader, the municipality does not implement the citizen's advice (R6, personal communication, 2021). According to the interviewee from BRES, the energy cooperative was not involved in the creation of the climate policy documents of the municipality Nevertheless, BRES advises the municipality in what they can do and need to reach their climate goals (R6, personal communication, 2021).

Moreover, BRES also implement different methods to engage citizens into the energy transition. For instance, they cooperate with the municipality in the Greenhopper by having one representative in the information centre, organizes general evening meetings and give personalized advice to citizens from their energy coaches (R5, R6, personal communication, 2021). Moreover, there are "kitchen table talks" at the citizens' homes, in which different people meet to share experiences and receive advice from an energy coach from BRES to install solar panels, for instance (R5, R6, personal communication, 2021). Even though the municipality and BRES have different methods to reach citizens, they still struggle to engage the non-active citizens into making investments in renewable energy. In the end, the energy cooperative BRES plays an important role in supporting the municipality

to implement the climate policies, by having a close collaboration. Therefore, there is involvement of the citizens, through BRES, in the implementation of climate actions in the city.

By analysing this information against the typologies presented in Section 3.1, it can be argued that the municipality of Breda has strongly focused its citizen engagement process in increasing the means of communication and awareness of citizens. Additionally, there are some projects in which citizens are consulted. Even though, citizens are not involved in the creation of the climate policies of the city, they are involved, through BRES, in the implementation of it. The levels of "partnership" and "citizen control" are yet to be reached, even though in the municipality committed to these levels in the "Sustainability vision 2030" document.

Stages of citizen participation process

By analysing the different climate documents, citizen engagement through communication strategies first appeared in the "Put positive energy in the climate" document driven by the need from the municipality to seek cooperation from different stakeholders to achieve the goals.

Regarding climate action, the municipality has created a detailed plan for every sustainability vision created. In these plans the goals, steps, stakeholders and budget are included. However, citizen participation planning is missing, as only guidelines and general information is given, e.g. who to reach and the purpose, but the approach and strategy are not given. The current participation plan is to broaden the number of citizens that are reached, however, it just encompasses strategies aimed to increase awareness among citizens. For instance, for the heating transition, the municipality plans to increase the capacity of the Greenhopper (by having a second one) and educate citizens in each of the neighbourhoods before actually making any change in that area (R5, personal communication, 2021). However, this plan falls short in breadth, as no further strategy is envisioned to engage citizens higher in the level of participation. Nevertheless, there is an internal work to estimate and prepare for the future demands that are required to achieve the climate goals. For instance, and as said before, the civil servants already know the additional staff capacity needed to achieve the goals.

In the participation stage, the different methods to engage citizens have been previously described, however the municipality and BRES are finding it difficult to engage citizens, as the demands to the public might be too big for them, as citizen may not have the time and knowledge to make an appropriate input (R5, personal communication, 2021). Finally, in continuation, the city does not have means to monitor participation and the influence that it has on climate policies. This is one of the next steps that they need to think of (R5, personal communication, 2021).

6.1.3. Municipality of Middelburg

Middelburg is the capital city of the Zeeland province. It is located in the west part of the Netherlands, close to the Belgium border. The municipality has 48,977 inhabitants and a surface area of 53.04 km^2 (CBS, 2021a), which makes it the second largest city by population in the province. The main industries in the municipality are business services (consulting and research) and trade companies (CBS, 2021c), industries that do not generate large GHG emissions.

For the period from 2019 to 2025, the municipality drafted the fourth environmental vision named "Middelburgse Visie Milieu 2010-2025" ("Middelburg Environment Vision 2019-2025", in English). In this document, the main goal is to achieve a healthy, sustainable society and living environment, and sustainable development of the municipality (Gemeente Middelburg, 2019). Climate change policy was embedded in a broader policy agenda. One of the fifteen focal points on the Environment vision is "Climate and Energy", in which short-term goals (before 2025) and long terms goals (before 2050) are presented. Short-term goals include the limit of energy consumption, use of energy from renewable resources and use fossil fuel resources as efficiently as possible. For the long-term goal, and in line with the Dutch Climate Agreement, the municipality wants to be energy neutral by 2050

(Gemeente Middelburg, n.d.-b, 2019). For the short term, the city is working on installing solar panels on roofs and improve the efficiency of homes. For instance, the program "Nul-op-de-meter" ("Zero-on-the-meter") that was finalized in June 2021 (Overheid.nl, 2018). This is a program in which the municipality provided € 21,000 in subsidies to make 43 private homes energy neutral (Impuls Zeeland, n.d.).

To make the built environment more sustainable, the municipality is drafting the "TransitieVisie Warmte" ("Heat Transition Vision") to indicate how and when the districts will be free from using natural gas (Gemeente Middelburg, n.d.-b). To get this Vision ready by 2022, the city is working as full partner of the SHIFFT project, an Interreg 2 Seas project from the European Union, which objective is to stimulate the adoption of low-carbon heating technologies through the full inclusion of communities for the creation of the low-carbon heating strategies (Delft University of Technology, n.d.; Gemeente Middelburg, n.d.-b).

Zeeuwind cooperative

Zeeuwind is an energy cooperative of 2700 members that operates in all the thirteen municipalities of the province of Zeeland. Founded in 1987, this energy cooperative is one of the largest in the Netherlands. Its goal is the promotion of the sun, wind and other sustainable energy resources among Zeeland residents, companies, associations and foundations (Zeeuwind, n.d.-b). Additional to promotion, Zeeuwind also operates and develops their own wind and solar parks for the generation of clean energy.

The main pillars of their operation are: first, generation of wind and solar energy; second, innovation in sustainable energy (for instance, initiatives to reduce CO_2 emissions, supply of heat in neighbourhoods with heat networks and the production to green hydrogen); third, making homes more sustainable by playing an active role in the development of sustainable private housing; and fourth, cross-sectoral partnerships and connections by having a close link and encouraging residents, companies and governments (Zeeuwind, n.d.-a).

6.1.3.1. *Participation in city networks*

The municipality is not a member of the Covenant of Mayors but it is of Klimaatverbond. For the Covenant of Mayors, the civil servant and energy leader interviewed did not know about the initiative, having been the first they heard about it during the interview. However, this does not mean that they ignore the benefits of being in a network, as they are aware of the knowledge exchange that can take place among different cities and other stakeholders (private companies, NGOs, etc.). For instance, the civil servants use the network of the SHIFFT project and NPRES to gain and share knowledge and experiences about what works and does not regarding climate action (R12, personal communication, 2021).

Middelburg is member of the Klimaatverbond since 2015, however, they have not done any project with them so far. They have only attended webinars and online events (R12, personal communication, 2021). The reason for the city to adhere to the Klimaatverbond was because it went in line with the objective of the city to become energy neutral by 2050. They were expecting to work together with other municipalities on projects, exchanging information to implement and visualize effective local climate policy (Gemeente Middelburg, 2015). However, this has not been accomplished under this national network. From the side of Zeeuwind, they do not work with the Klimaatverbond, and has not had any previous contact, to the point that the person did not know about what the network does (R11, personal communication, 2021).

6.1.3.2. *Citizen participation*

Initiator's capacity

Starting with decision-making capacity in Middelburg, the city has aligned its climate ambitions to the ones of the central governments: to be climate neutral by 2050. However, this ambition was set in the Dutch Climate agreement of 2019, therefore, it is a required goal that they need to achieve. This puts in evidence a lack of urgency and ambitions to achieve climate neutrality by 2050, leading to a low decision-capacity to prioritise the energy transition into the policy agenda. For instance, there is scepticism in the local community over the implementation of sustainable energy, as put it in words of the energy leader interviewed, "the PV installations do not have a chance in the City Council at this moment" (R11, personal communication, 2021). In terms of citizen participation, the municipality "realises that it is necessary to engage the citizens to achieve this goal" (referring to the goal of being climate neutral by 2050) (R12, personal communication, 2021). Even though they are aware of the need to include citizens, in practice this is apparently not happening. For instance, and for the sustainability strategy of Middelburg, the citizens did not hear much about it and were not given the position to give input into it (R11, personal communication, 2021). This prevents to make well-informed decisions that combined the central, regional and local interests in climate action.

Like many other Dutch municipalities, the city of Middelburg was subject to severe budget cuts in recent years. This had an impact in many areas and the municipality's staff has been significantly reduced (Gemeente Middelburg, n.d.-a). One of the areas that these cuts impacted was climate policy, with only three people "really working on energy transition projects, as their main focus" (R12, personal communication, 2021). The climate policy, when it was first approved in 2012, had an approved budget of € 150.000, however, and after several cutbacks, the budget is now € 50.000, for the coming years (Gemeente Middelburg, n.d.-a). Nevertheless, there are current plans of increasing the climate budget in phase in the coming years, with the purpose of strengthening the staff in the field of environment and climate (Gemeente Middelburg, n.d.-a). For instance, the participation in the SHIFFT project enables them to have an additional source of income for the "work that has to be done" (R12, personal communication, 2021). In response to the lack of personnel, the municipality supports itself very much in a consultancy company, that is helping the municipality to write the heat transition vision and plan (R12, personal communication, 2021). Additionally, the municipality is actively working together with Zeeland's stakeholders. For instance, "Energiek Zeeland Platform", Zeeuwind, neighbouring municipalities and the Regional Energy Strategy members. Moreover, the municipality supports its work in the city with "area managers", whose responsibility is the communication between the different areas of the city and the municipality, so that the civil servants know what the citizens need in their neighbourhoods. As a general point, the available staff is not sufficient for the tasks that they have, that is why the municipality is trying to support itself in other actors.

In terms of accountability, it can be argued that the municipality has low capacity to make the climate plans and actions visible and transparent to all stakeholders. There is not a clear plan on how they are going to reach the climate goal in 2050 as it has not been prioritized by the municipality (R11, R12, personal communication, 2021). This makes it difficult for the local community to participate in the local climate discussion and provide inputs to the municipality. Moreover, misunderstanding and misinformation on the future plans can arise, hindering again citizen participation. As stated by the civil servant, information still needs to be given in a clearer way and must be easier for the citizen to be found (R11, R12, personal communication, 2021). Second, and according to the energy leader, the politicians at the local level, do not take responsibility about citizen participation and "place the debates/arguments to the citizens themselves" waiting to see what will happen (R11, personal communication, 2021).

Purpose of participation

First, the municipality wants to educate the local community about the sustainable heating technologies and other sustainable solutions, so that they can convince inhabitants to invest in renewable energy or more sustainable buildings and isolation (R12, personal communication, 2021). This increases ownership and acceptability into sustainable projects. Moreover, the municipality realises that it is necessary to involve citizens to reach climate neutrality by 2050, or to improve the outcome of this goal (R12, personal communication, 2021). From the citizens' side, represented by Zeeuwind, they want to have greater voice and influence in projects and gain the capacity to build new renewable energy facilities and provide revenue growth to its members (R11, personal communication, 2021)

Type of stakeholder

Initially, the municipality plays the role of informing citizens about their climate plans and the different sustainable technologies that can be installed at home. Within the municipality, it is worth mentioning that the politicians play an important in the climate discussion of the city and citizen participation. In Middelburg, politicians are not taking the responsibility of citizen participation and acceptance in the energy transition to push change within the city, that right now has been affected by obstruction from the municipality (R11, personal communication, 2021). Moreover, a consultancy firm, i.e. Overmorgen, is helping the municipality to create the heat transition vision and plan. The firm brings the information, research and data to the municipality, so that the latter can provide feedback and validate their results. Additionally, housing associations play their role in citizen participation in the city, as there some cases in which they do not want to have participatory processes to prevent "rumours" and avoid resistance to change from the residents (changes will happen due to the heating transition) (R11, personal communication, 2021).

From the side of the citizens, the City of Middelburg has created groups of inhabitants in different areas of the city to represent the interests of the citizens in that area to the municipality (R12, personal communication, 2021). These groups, called boards, are therefore the link between the municipality and the inhabitants. Some of these boards are more active than others, depending on the socio-economic level of the area they represent and how connected to it the representatives feel (R11, R12, personal communication, 2021). When referring to Zeeuwind, they have an important role in the city. Most importantly, they install collective renewable energy projects and contribute to the regional energy strategy with the aim to give citizens greater voice and influence in climate action, alongside with providing revenue growth to its members. Additionally, they organize information sessions to inhabitants so that they become more educated in climate issues (R11, personal communication, 2021). In some case, they play the role of intermediary between the municipality, housing associations and citizens to educate the latter and inform about future plans in housing (R11, personal communication, 2021). In general terms, citizens in the city do not actively participate in climate action due to lack of information and desire, therefore, it becomes important to understand the stance that citizens want to take regarding climate action: do they want to participate? What is the type of participation that they want? (R11, personal communication, 2021).

Methods for citizen participation

From the side of the municipality, they have set different citizen boards and "area managers" that serve as the link of the municipality with the citizens in certain areas to communicate the municipality of "all kinds of problems that people face in their area" (R12, personal communication, 2021). These area managers organize evening meetings to set the dialogue (R12, personal communication, 2021). Moreover, the municipality has set up a platform called "doemee.middelburgers.nl" with the purpose

to centralize information from the municipality and get input from the inhabitants on certain topics and projects (doemee.middelburguers, n.d.-b). This website is not dedicated to only climate issues but others are included as well, e.g. social issues. The kind of information that can be found in this website are: general description of the projects and its progress, the participatory process for the project and its progress, minutes of the evening meetings and polls. This information is freely available. However, and demonstrated and confirmed by the civil servant interviewed, the website is not widely used by the citizens (R12, personal communication, 2021). For instance, for the call to action for the creation of the vision of Middelburg for 2050, only 24 people participated (doemee.middelburguers, n.d.-a). Furthermore, for the heat transition vision, the municipality organized a focus group to get input and feedback on the plans. During these workshops, citizens are welcome to provide and share initiatives (R12, personal communication, 2021). Additionally, the online "Energiek Zeeland Platform" ("Energetic Zeeland Platform"), which has been active since 2020, provides home owners with advice for the built environment. There is also an offline counter to inform private home owners about the energy transition and the options that they have to start by themselves (Gemeente Middelburg, n.d.-b).

By analysing this information against the typologies presented in Section 3.1, it can be argued that the municipality of Middelburg has mostly informed and consulted citizens about the local climate action. In the case of the doemee.middelburger.nl platform, even though the citizens have had the chance to give inputs to the vision of the city for 2050 and the municipality creates different scenarios taking into consideration citizens' inputs, the final decisions is made by the City Council (doemee.middelburguers, n.d.-a).

Stages of citizen participation process

To initiate participatory processes, the municipality realises that it is necessary to engage the citizens to achieve climate neutrality by 2050 (R12, personal communication, 2021). This fosters the participatory processes within the municipality. In terms of preparation, the municipality does not have a vision or plan for participation. Right now, for the municipality the topic is "quite new" and they are learning while doing. An initial step is the "doemee.middelburgers.nl platform", in which citizens have been able to participate during the pre-planning and planning phase of the environmental vision, and in the future will be invited in the post-planning phase. In the participation stage, the inhabitants of Middelburg have not had strong participation, however, the municipality has set different methods to lead them into participation, but as argued by the energy leader, it is still not clear in what ways the municipality wants the citizens to participate. Finally, in continuation, the city does not have means to monitor participation and the influence that it is having in the final policies or activities. This is one of the next steps that they need to think of (R12, personal communication, 2021).

6.1.4. Municipality of Westland

The municipality of Westland is located in the west of the Netherlands in the province of South Holland. It is part of the metropolitan area of the Randstad, an area characterized of high industry activity. It has a population of 110,375 people and a surface area of 90.74 km^2. Horticulture and the wholesale and transport activities that derive from it, account for almost a third of the business activity and employment in the city (Rabobank, 2018b), making it the most important industry sector in the municipality, and an essential partner for the energy transition. However, it also means that 90% of their GHG emissions come from horticulture, whereas the built environment only represents the 10%. This contrasts other municipalities, where the built environment represents the largest GHG emissions (R15, personal communication, 2021).

By the end of 2019, the municipality published its "Westlandse Energie Opgave" ("Westland Energy Task"), which presents the vision, goals and strategy of the municipality. This document takes the

national CO_2 emissions target as the main goal: to achieve 95% less CO_2 emissions by 2050 in comparison to 1990. To achieve this target, the municipality is focusing first on sustainable heating technologies for the greenhouse horticulture sector, and second, on companies and citizens (Gemeente Westland, 2019). For both the short and long-term the municipality will mainly act as enabler and facilitator, within its "statutory duties and limits". Commitment to sustainable energy is expressed, but does not include specified goals. In the short-term, the municipality will further enable the development of Westland's heating system, concentrating on the legal tasks for its implementation. Additionally, and to fully exploit the large amount of geothermal energy the city has underground, they will enable and facilitate the research needed to harvest this type of clean energy. Moreover, and currently being done, Westland will inform its citizens, companies and organizations about the climate plans and initiatives towards sustainable heating (Gemeente Westland, 2019).

For the long-term period, the municipality will keep its enabler and facilitator role for the development of sustainable heating (geothermal energy and residual heat network). Additionally, they will focus on the generation of solar energy on roofs and water basins (wind energy is not considered due to lack of space) (Gemeente Westland, n.d.).

The passive role of the municipality in the short-and long-term climate goals can also be seen in its climate investment approach. Westland has taken a careful approach by not making large expenditures and investments due to the many uncertainties in the current phase of the energy transition and the unclear definition of the municipality's role (Gemeente Westland, 2019). In consequence, the municipality will act as an information partner for the residents.

Additionally, and contrasting with the other municipalities, Westland does not have an active local or regional energy cooperative led by citizens. In October 2019, the cooperative named "Venenwijk Energie(k) Anders UA" was established by the local neighbourhood of "Venenwijk" in Westland. The goal of this energy cooperative was to create a proposal to collectively switch to a natural gas-free heating solution in the neighbourhood. A feasibility study was commended to an external consultancy firm (i.e. Arcadis) in order to arrive at the technical and financial solution to achieve this goal. However, in March 2020, the results of the study proved that a collective solution would be financially inviable. Due to this, the energy cooperative is currently inactive until further developments in the heating transition opens new opportunities to Venenwijk Energie(k) Anders UA (Neighbourhood Association de Venen, 2020).

6.1.4.1. *Participation in city networks*

The municipality does not belong to either of the two networks analysed in this study (CoM and Klimaatverbond). For the Covenant of Mayors, one of the two the civil servants interviewed was aware of the existence of the CoM. In this case, Westland decided not to join the initiative because the City Council would be more interested in being connected to an "economic platform that promotes greenhouses" (R15, personal communication, 2021). This leads to argue that the City Council is merely looking for funding for its largest economic activity, and that "climate, climate adaptation, water management are not really their main concern" (R15, personal communication, 2021).

For the Klimaatverbond, the civil servant interviewed knows about the existence of the network. The municipality decided not to join the network due to lack of time, personnel and finance, the last one being the annual fee that members have to pay. In terms of interaction with the network, no communication has happened. The municipality has not attended to webinars or any other activity, however, from "time to time" the civil servant reads the network's publications (R15, personal communication, 2021).

6.1.4.2. *Citizen participation*

Initiator's capacity

Regarding decision-making capacity, the municipality of Westland, is still not able to make informed decisions combining the policy agenda of the Netherlands and what the local citizens need. This is demonstrated by the Municipality's need to develop even further their policies and "facts" about their climate plans while approaching citizens, and present them with the information they need to make a joint decision (R15, personal communication, 2021). Currently, the municipality approaches citizens to share the climate plans and new initiatives, but once they are being questioned, they do not have enough information to answer these questions, therefore, the citizens' input is lost. Additionally, and due to the increasing importance of citizen participation, the municipality "is not used to it yet", meaning that what they are doing now is "trial and error" with regard of: what kind of participation? In what state of the policy development does citizen participation work? (R15, personal communication, 2021). These questions show a lack of knowledge about citizen participation processes, which diminishes the decision-making capacity of the municipality and the chance of effective local community engagement.

Regarding implementation capacity, and as previously explained, the municipality of Westland is taking a passive approach when funding climate projects. There are different reasons for this: (1), the Covid-19 pandemic has taken a lot of attention from the public and local government (Gemeente Westland, 2019; R15, personal communication, 2021); (2) the municipality has taken a careful approach by not making large expenditures and investments due to the many uncertainties in the current phase of the energy transition and the unclear definition of the municipality's role (Gemeente Westland, 2019); and most importantly (3) climate action is not one of the main issues of the City Council of Westland (R15, personal communication, 2021). When talking about the staff available for dealing with the energy transition within the municipality as civil servants, there are ten people (not all full time) focusing on mitigation and adaptation strategies for the built environment, greenhouses and companies. The municipality has a strong collaboration and regular contacts with other municipalities of South Holland for the creation of the NPRES, acknowledging that the energy transition and climate action solely by the municipality cannot be achieved (R15, personal communication, 2021). Regarding knowledge and experience about citizen participation processes, the civil servants of Westland do not fully know how to start and implement a participatory process. Additionally, the municipality has yet to draft a climate action plan or strategy document.

Lastly, in accountability capacity, there is lack of transparency to citizens with regard to what the municipality wants regarding climate action. They do not have enough information about the current and future plans. For instance, and expressed by one of the respondents, the person could not find a "rudimentary element" about how the municipality wants to go further in the coming months about climate action (R14, personal communication, 2021). As previously stated, the municipality does not have an action plan or strategy document delineating the future steps to take for the local climate action.

Purpose of the participation process

Directly retrieving a purpose from the municipality to initiate a participatory process is not possible as there is not a formal climate action plan or strategy. Nevertheless, from the "Westland Energy Task" and interviews, Westland's aim for participation is to enable citizens to create their own projects, to facilitate the transfer of knowledge between stakeholders and to increase acceptability of climate policy among citizens. However, their role is rather passive as citizen participation and climate action is not the top priority of the City Council (R15, personal communication, 2021). For instance, the municipality provided funding to a small group of citizens that wanted to research the transition from gas to hydropower, showing a supporter and enabler role (R15, personal communication, 2021). From

the citizens' side, they want to have greater voice and influence in the projects, but this is not the case. There exists frustration within the local community because the government "is not aiming at participation of the citizens". For instance, citizens are eager to install solar panels, but large companies in the agricultural sector are prioritized by the municipality to develop these projects (R14, personal communication, 2021).

Type of stakeholder

There are different types of stakeholders in citizen participation in Westland: professional businesses and private citizens. According to the civil servant, businesses are normally more interested to participate in climate action than citizens (R15, personal communication, 2021). Professional businesses are mainly horticulture and housing associations. Greenhouse owners are a very particular stakeholder that "see for themselves" (R15, personal communication, 2021). Right now, the big discussion in the city is to substitute natural gas for other renewable energy sources, therefore, greenhouse owners constantly contact the Municipality to initiate the projects themselves and be active players in the local climate plans (R15, personal communication, 2021). Additionally, the housing associations want to be involved because of the great emphasis in heat networks development in the country, therefore, lots of communication between them and the civil servants take place. (Gemeente Westland, 2019; R15, personal communication, 2021).

In contrast, private citizens are much more difficult to reach for the municipality. Private citizens can be divided in active and non-active citizens, with the non-active citizens being the most common (R14; R15, personal communication, 2021) and the most difficult to involve. According to the civil servant, non-active citizens do not show the same interest that professional companies do, therefore, it is "hard" for the municipality to "get them to participate (R15, personal communication, 2021). Additionally, non-active citizens do not have the same knowledge and information that businesses have, hindering their commitments to change and implementation of more sustainable housing. Moreover, this lack of knowledge prevents them to take a more active role, with the civil servants arguing that private citizens usually wait the city to start acting (R15, personal communication, 2021). The reason for this lack of involvement from the non-active citizens is because they are not aware of the "bigger picture, of what's going on" and that is the reason why it is necessary to have more information, so that "citizens can take carefully several steps for the road" (R14, personal communication, 2021).

Methods of citizen participation

The municipality organizes evening meetings in the neighbourhoods of the city to share their climate plans. Before the Covid-19 pandemic, around 100 people would attend the meetings, however, this is not a high number taking into consideration that the population of Westland is of about 110,000 inhabitants. Additionally, the people that normally attend these meetings are the same people every time (R15, personal communication, 2021). Moreover, and with the aim to get citizens' opinions, communicate their climate plans and teach them how to become more sustainable at home, the municipality has set online questionnaires, has posted information on social media (Facebook mainly), and has created a dedicated website and a service point in Rotterdam in which recommendations and tips for energy savings measures at home can be taken and implemented with the help of the energy coaches, who are citizens that volunteer in this job (R14; R15, personal communication, 2021). The energy coach strategy was initiated by the municipality to communicate and inform people what they can do "if they really want to change". It is a good working strategy because the information they communicate is not abstract to the general citizen, and they trust more another citizen than the local or central government (R15, personal communication, 2021).

By analysing this information against the typologies presented in Section 3.1, it can be argued that the municipality of Westland has informed and consulted citizens about the local climate action plans, with no strong involvement of them into the policy making process. Partnerships and citizen control of climate policy in Westland is yet "quite far" from realizing (R15, personal communication, 2021). Additionally, and as presented before, there is not an active citizen energy cooperative acts as an intermediary between local communities and the local government.

Stages of citizen participation process

In this regard, the city has initiated a participatory process due to an increased focus from the central, provincial and local government on participation (R15, personal communication, 2021). This can be said to be spark of the participatory process in the city. In the preparation stage, the municipality does not have a plan, and does not know what is best phase to engage citizens. Participation is done by the different methods explained above. During the pre-planning and planning phase, it was demonstrated that the lack of information from the municipality's side is preventing citizens to have meaningful participation. Finally, in "continuation", the municipality has set a basic monitoring strategy that is based on calling by phone 300 citizens, done by an "special Bureau of Consultancy" to gather data about the citizen's knowledge on the energy transition, City Council's strategy, and own knowledge on sustainable strategies for their homes (R15, personal communication, 2021).

6.2. BELGIUM

In this section, a description of the municipality of Bruges is given, as well as its participation in the Covenant of Mayors and the citizen participation process that happens in the city. A description of the Belgium contextual climate policy is not given as the Bruges case is not the main scope of the research, as it serves to explore additional insights that would possibly contrast with those found in the Dutch municipalities. However, it is acknowledged that contextual factors in the country influence the adoption and implementation of climate policies.

6.2.1. The Covenant of Mayors in Belgium

The Covenant of Mayors is highly embedded in Belgium governance system. It is composed of 524 signatory cities, 23 coordinators and 25 supporters (Covenant of Mayors for Climate & Energy Europe, n.d.-a). By having a large network, information can be exchanged easily amongst members. For instance, the Government of Flanders (a coordinator of the CoM) has set a dedicated Belgium Covenant of Mayors website, that supports cities and municipalities in drawing up the BEI or the monitoring emissions inventory. This is done by sharing CO_2 emissions data. Additionally, the website provides with information to signatory cities, or cities that are willing to be member. The information is about climate adaptation strategies, how to seek funding for climate projects and practical examples. This clearly shows the practical job of a coordinator of the CoM, facilitating information and standardizing reports.

6.2.2. City of Bruges

Bruges is the capital and largest city of the province of West Flanders of Belgium, in the northwest of the country. With 118,709 inhabitants by May 2021, it is the fifth largest city of the country (IBZ: Federale Overheidsdienst Binnenlandse Zaken, 2021). In terms of climate action, the city started late but has been recovering the lost ground.

In the General Policy Program from 2013-2018, the City of Bruges endorsed its ambitions to make Bruges a sustainable, clear and safe city, by providing an answer to the problem of climate change

with a strong sustainable climate and energy policy. To reinforce its commitment, the city joined the Covenant of Mayors in 2015, guiding the city to reduce their CO_2 emissions until being climate neutral in 2050. For this purpose, the municipality created, by outsourcing, their first climate plan ("Energy Plan 2015-2020") that included a complete analysis of the CO_2 emission baseline for 2011, as well as the global vision and strategy for the medium (2030) and long term (2050), a concrete action plan with the 35 climate measures for the period 2015-2020, and the corresponding participatory process. This plan covered 7 themes: heating in buildings, mobility, solar and wind energy, sustainable entrepreneurship, sustainable food, adaptation, and city as an example (Stad Brugge, 2015). The intermediary goals described were: 20% CO_2 reduction by 2020 and 40% by 2030. In 2021, the municipality presented the results of the Energy Plan 2015-2020. Compared to the year 2011, its official baseline year, the municipality did not meet the target of 20% CO_2 reductions, achieving an 8% reduction from 2011 to 2018 (last year of known data) (Stad Brugge, 2021), however corrections and strategies were thought and included in the Energy Plan 2020-2030. In 2019, the city started participating in the Interreg 2 Seas project (same project that Middelburg is also part, i.e. the SHIFFT project) to determine how the city can support and accelerate the heat transition in the city.

In June 2020, the municipality signed the renewed Covenant of Mayors, prompting the city to create a new climate plan for 2020-2030 that will be ready by September 2020. The people are central in the elaboration of this plan as the municipality is aware that to achieve the goals, support from all citizens is needed. To engage the local communities, the municipality started the "Zorgen voor morgen, begin(t) vandaag" ("Caring for tomorrow, start(s) today", in English) to communicate, increase awareness and build a support base to implement sustainable solutions.

In terms of budgeting, the municipality has allocated, from 2021 to 2024, € 34 million to sustainability and climate projects (Stad Brugge, 2019). It is acknowledged by the municipality that to achieve climate neutrality in 2050, the current efforts need to be maintained and further increased, which is evident in the increasing budget that the municipality is allocating to sustainability and climate issues until 2024. It shows a high level of interest and ambitions that the municipality has in climate change.

6.2.2.1. *Participation in city networks*

Before diving into the participation of Bruges in the Covenant of Mayors, an explanation of the network in Belgium will be given. It is important to say that, even though interviews with the coordinator that supports Bruges (Province of West-Flanders) and a supporter were sought, these could not be made as the intended interviewees did not respond when reached out.

The city of Bruges is an active member of the Covenant of Mayors since 2014 motivated by the need to be climate neutral in 2050, to be able to participate in European subsidy projects and to share experiences with other cities and countries (R7, personal communication, 2021). From this commitment, the guidelines and requirements from the CoM were used as the basis for the creation of the Energy Plan 2015-2020. The goals of the CoM are taken up by the municipality, and the submission of the SECAP are used to create comprehensive energy plans with an inventory of CO_2 emissions, global visions and strategy for 2030 and 2050, the strategies to achieve the goals and the participation trajectory. Reports and monitoring documents about the implementation of the Energy Plan are constantly submitted by the municipality to qualitatively evaluate the plan and propose corrective strategies for the next one.

In June 2020, the municipality renewed its commitment to the CoM. As part of this commitment, Bruges has to present a new Energy Plan for the period 2020-2030, which is planned to be finished in September 2021, with immediate implementation. In contrast to the one from 2015-2020, this new plan will include mitigation and adaptation strategies for climate change. For the elaboration of this

new plan, the municipality has appointed a consultancy firm to draw it up, however, working groups within the municipality and involvement of stakeholders and "small groups" of citizens are also part of this process (R7, personal communication, 2021). Lessons learned from the previous energy plan will be implemented, for instance, setting objectives that are ambitious but attainable (Stad Brugge, 2021).

Within the municipality, there is one contact point that is in charge of the CoM. This person does not have constant communication with the CoM office but only when there are technical issues with the online platform (R7, personal communication, 2021). This indicates the autonomy and responsibility of the municipality to work under the CoM, validating that the purpose for the initial commitment was indeed to use the initiative as a means to reach carbon neutrality.

Even though the target of the previous plan (to reduce 20% CO_2 emissions by 2020) was not achieved, the municipality has greatly benefited from the methodological process that the CoM provides. For instance, the city is one of the leaders in CO_2 reduction in Belgium (Stad Brugge, 2021), taking into account that their first energy plan was created in 2014. Moreover, a highly embedded and working network eases knowledge and information transfer between members and eases the added load of the CoM.

6.2.2.2. *Citizen participation*

Initiator's capacity

In terms of decision-making capacity, the municipality has placed climate change high on its agenda. In the process, they take into account local stakeholders' opinions and the policy agenda of the government. Additionally, with detailed baseline conditions, plans of action, budgeting and monitoring, the municipality is able to make an informed decision for today and in the coming years. This is not only present in climate action, but in other social and environmental themes. The city released a Policy Program for 2019-2024, and Multi-year plan for 2020-2025 to showcase the policy objectives and options, finances of the plan and explanation of each of the policies.

In terms of implementation capacity, the greatest capacity issue in the municipality is the number of people that are working in the climate department, which are "7-8" people working full time (R7, personal communication, 2021). Therefore, to reach and "convince" citizens to engage in climate action, more personnel is needed. However, the municipality counts with high enthusiast and motivated civil servants that do not want to wait "for the other" to take action in climate change (Stad Brugge, 2015). For the creation of the new energy plan, the municipality hired a consultancy firm to create the plan with strong support from the municipality's staff. Finance resources, according to the civil servant, is not a big problem as the inhabitants are the ones that will be making the investment and renovation (R7, personal communication, 2021). That is why a strong communication and awareness strategy to citizens is needed to realize the goals.

For accountability capacity, Bruges demonstrates a high level of transparency in climate action. The evaluation of the energy plan of 2015-2020 shows to the public the progress made in reducing CO_2 emissions and if the goals were achieved. "FutureProofedCities" is the platform used by the municipality to measure the status of all the actions included in the climate plan. This monitoring is done on a regular basis, calculating each action's effect on CO_2 emissions in the city (Stad Brugge, n.d.-b) Moreover, on the different official websites, information is widely available about the current and future plans of the city.

Purpose of the participation process

The municipality's objective to engage in participatory processes is because they want to improve the quality of content and vision of climate plans, and to increase the shared responsibility of climate

action in the city with citizens (Stad Brugge, 2015). Form the side of the citizens, they want to be taken seriously. This can be done by giving them space to action and the right information at the right time to make sound investments (Stad Brugge, 2015). By analysing the purpose of these two actors, a strong alignment for future action can be identified. The municipality is placing most of the investment's responsibility on the residents, which in turn may be willing to do them if they have the right information.

Type of stakeholder

Initially, the civil servants have been the initiators of the engagement activities with the citizens. They are highly motivated people that want to "roll up their sleeves" to make Bruges climate neutral (Stad Brugge, 2015). However, they demand from the City Council clear ambitions and increased awareness and motivation from other colleagues (Stad Brugge, 2015). Moreover, citizens in Bruges have asked for more involvement, real commitment from the City Council and better information to make investment decisions in their houses. Bruges has multiple, different energy cooperatives. The first one is "CoopStroom", which is a citizen-led energy cooperative that is committed to finance and produce green energy in the region, by installing solar panels for businesses, local authorities, associations and schools and having electric shared cars for other companies to use (CoopStroom, n.d.). The second energy cooperative, "Brugge Geeft Energie", is a business-led cooperative whose goal is to make business parks energy positive and CO_2 neutral (Brugge Geeft Energie, n.d.). Lastly, the European Union, through different projects (Interreg 2 Seas and the Covenant of Mayors) is also part of the climate action in Bruges.

Methods of citizen participation

The municipality has different strategies to engage citizen in climate action, based on increasing awareness and communication and build a citizen support base. For the creation of the new Energy plan 2020-2030, the municipality launched the campaign "Zorgen voor morgen begin(t) vandaag" to engage citizen into the development of this plan and climate action. A website was set to give citizens the chance to participate or demand information about the plan, becoming then "ambassadors" of it (R7, personal communication, 2021). Additionally, the municipality performed a survey among 400 citizens to provide input to the elaboration of the climate plans of the city (R7, personal communication, 2021). Moreover, information about how citizens can reduce CO_2 emissions by themselves is available, showing 10 concrete sustainable actions. Additionally, the municipality adopted from the Netherlands the initiative "Buurtkracht" to use "the power of the neighbourhood" to increase energetic renovations in the zone (R7, personal communication, 2021). Buurtkracht originated in the Netherlands to empower citizens in their neighbourhoods to participate in improving the livelihood of their own neighbourhood (buurkracht, n.d.). To use the strength of the neighbourhood, citizens in Bruges share information and receive guidance from a civil servant to draw-up a "tailor-made" neighbourhood plan (Stad Brugge, n.d.-a; R7, personal communication, 2021). Once the civil servant receives a request from a neighbourhood, then the work of the municipality is to do "neighbourhood safaris" in which the barriers for renovating the houses, problems and issues of the area, and the interests of the people are taken into account to draft this local plan (R7, personal communication, 2021). Before the pandemic, "Energy parties" were organized at people's homes, where citizens could share experiences and receive tips from an energy advisor (R7, personal communication, 2021). This strategy, and according to the civil servant, has prompted neighbourhoods to persuade and try to convince people from other neighbourhoods to implement sustainable solutions, clearly showing the bottom-up process of participation in Buurtkracht (R7, personal communication, 2021).

Analysing these different methods, it can be argued that the municipality has a strong emphasis on informing and consulting citizens about the local climate action and how they can become more sustainable. Involvement of citizens is met partially, as the municipality receives and understands people's opinions and concerns, however, it is not ensured that this input is reflected in the development of the energy plans. "Partnership" and "citizen control" levels of engagement could not be found in the city. It is important to notice, and according to these data, that the City of Bruges has a more structured and active citizen participation process with its inhabitants, than the other cities studied in this research.

Stages of citizen participation process

Participatory processes in Bruges have been promoted by the municipality because of the ambition of becoming energy neutral in 2050, and the city recognizes that citizens and other stakeholders are key to achieving this goal and to draw up the energy plan 2020-2030. In the preparation phase, the municipality has drafted a plan to engage citizens under the theme of "Care of Tomorrow, start today", in which three phases are distinguished: (1) launch of the campaign to draw citizens' attention and call for active participation; (2) discussions between the municipality and stakeholders around the 7 themes of the energy plan; and (3) actual participation of citizens and other stakeholders in the implementation of the plan (Stad Brugge, n.d.-c). This means that citizens are involved by the municipality in the pre-planning, planning and post-planning phases of the policy making process. During participation phase, the municipality enacts the different methods described above. Finally, in the continuation phase, Bruges has the FutureProofedCities platform to monitor the outcomes of the local climate actions led by citizens or other stakeholders.

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7. RESULTS AND REFLECTION

In this section, the results of the study are presented in different ways. First, an overview of the activities of the Covenant of Mayors and Klimaatverbond in signatory cities is presented. Second, an overview of the citizen participation processes in the case studies is presented and compared (being the cross-case analysis) , followed by a discussion of the results. Finally, a general discussion on the influence that the Covenant of Mayors and Klimaatverbond have on citizen participation process is given. In this section, question RQ3 and RQ4 are answered.

RQ3: Why do cities join the Covenant of Mayors and Klimaatverbond in the Netherlands?
RQ4: How does the Covenant of Mayors and Klimaatverbond influence citizen participation in selected cities in the Netherlands?

7.1. RESULTS ON CITY CLIMATE NETWORKS: COVENANT OF MAYORS AND KLIMAATVERBOND

Covenant of Mayor for Climate & Energy

In the Netherlands, it was found that the Covenant of Mayors is a network that is hardly used by its members. In the two Dutch city cases, it was found that once the adhesion to the network was granted, there was not much work done afterwards. For the case of Alkmaar, the civil servants were not aware of the existence of the network, either any activity done in the city under the CoM. In the case of Breda, one civil servant was particularly motivated to work under this framework, however, once this civil servant stopped working at the municipality, the Covenant of Mayors was left out from the daily tasks within the municipality. This shows that the network was used as an isolated project within the municipality with no person responsible for the functioning of it. In neither of these two cases, it was found that the network had actually permeated in the municipal organization.

Furthermore, for these two cities, the reason to join the Covenant of Mayors can be tracked down to confirm the climate goals against the international community. In both cities, the political commitment to join the network was signed when they already had drafted their climate actions and set their climate ambitions. Therefore, the initiative in these cases failed to influence internal processes by giving additional governance capacity to cities or enabling internal mobilization of resources. The reasons for the lack of action for the Covenant within the municipalities are: (1) the network did not fit the Dutch context; (2) lack of political commitment; and (3) lack of capacity to implement the initiative. The CoM not fitting the Dutch context arises from the fact that the country is not new to climate action and policy, therefore, national and regional initiatives are already in place to support local governments in creating and implementing climate actions, enable knowledge sharing and cooperation among municipalities (i.e. the VGOM and NPRES). Because of this, Dutch municipalities may not see the added value of adhering to the CoM, even less, when the required work to implement the network is high. Lack of political commitment can be explained by the reasons that the municipalities had when adhering to the climate network. As explained before, these do not go further than confirming the climate goals of the municipality against the international community. Finally, lack of capacity to implement the initiative is explained by the fact that neither of these two cities had the sufficient personnel, money and time to implement the network (i.e. creation of the BEI and SECAP and monitoring every two years).

The Covenant of Mayors at the national level has minimum momentum, for example, since 2018 no new municipalities have become a member. Additionally, the supporting national network is non-

existent at the moment. The Rijkswaterstaat (the coordinator of the network) does not feel to have the role of coordinator anymore and the Klimaatverbond (the supporter) has weak ties with the initiative. In the Rijkswaterstaat there is currently one person in charge of supporting 11 cities. With regard to the Klimaatverbond, there is not a project to support signatory cities in the implementation of the CoM, however, they are collaborating with the initiative in a CO_2 pricing project that is aimed to be included in the SECAP and monitoring reports of the CoM.

When comparing the Dutch case against Bruges in Belgium, the differences are big. Bruges became a member of the Covenant in 2014 motivated by the need to be climate neutral by 2050, to be able to participate in European subsidy projects and to share experiences with other cities and countries. From this commitment, the initiative has been used as the basis and guideline to reach its climate goals. The climate plan of 2015-2020 was drawn-up taking into consideration the CoM's SECAP recommendations, therefore, objectives, plan and stakeholders of interest were made clear since the beginning. Even though the municipality did not reach its climate goal for 2020, the CoM has proven to be key for the progress that Bruges has made in climate action. Different reasons can be attributed to this: (1) one person responsible for the CoM within the municipality (submission of reports and technical issues with the online platform); and (2) the CoM has widely spread within the different departments of the municipality. In 2020, the municipality signed a renewed committed to the CoM. For this, a new climate plan is being drafted for the period 2020-2030, in which there is wide participation from different departments in the municipality, with the aim to cover multiple sustainability themes.

At the national level in Belgium, there seems to be high support from national bodies to the CoM. This can be seen by the website that the Government of Flanders set up to share information about CO_2 emissions of different signatory cities to help them in drafting the BEI.

Klimaatverbond

The Klimaatverbond in this research has two functions: (1) supporter of the CoM (which has already been described before); and (2) a national city climate network.

As a national climate network, the Klimaatverbond supports its members, and non-members, in exploring, researching and analysing policy with the aim to optimize current climate policies. However, the main difference with the CoM is that the network does not set a goal for its members. The climate network has worked on projects to improve the policy for the cooling of the built environment, and to place it in the agenda of the Ministry. Additionally, the Klimaatverbond does general projects and research on citizen participation to increase awareness and knowledge in municipalities about the importance that it has when implementing climate actions (R10, personal communication, 2021). For instance, the association did research on social Energy Service Companies (ESCOs) and how they could be implemented at the neighbourhood level, designed in a way that CO_2 neutrality could be realized for residents (Klimaatverbond Nederland, 2020a). Additionally, this national network did a study on the inclusiveness of the energy transition in the Netherlands to analyse how non-westerns immigrants are engaged in climate actions. Even though the network does different knowledge building activities and projects, the knowledge and insights are not utilized by its members. In the three case studies analysed, they did not show active participation in the network. Breda and Middelburg have passively participated in the network by attending to webinars, and Alkmaar has not had any participation with the network. For the case of Middelburg, the municipality decided to join the network because it went in line with the purpose of becoming climate neutral by 2050, however the municipality has not had any joint project with them, they have only participated in online meetings. For Alkmaar and Breda, a reason for joining could not be gotten from the interviews.

When analysing the interactions and dynamics between these two networks, it can be argued that these networks complement and help each other. For instance, they are working together on an instrument to develop a CO_2 pricing system, with the idea to link it to the monitoring instruments of the Covenant of Mayors (Klimaatverbond Nederland, 2020a; R8, personal communication, 2021). Additionally, it was not found that these networks were competing against each other to get more members joining. One of the reasons that explains this, is because the reach and objectives of each of these networks are different, so they do not exclude each other if a city joins both of them. This is supported by the fact that the very nature of being a supporter of the CoM arises from the fact to complement and support the CoM at the national level.

7.2. RESULTS ON CITIZEN PARTICIPATION

In Table 5, the overview of the results on the citizen participation processes are presented. From these results, a conclusion about which municipality is more effective in engaging citizens cannot be given as none of the municipalities have monitoring tools in place. Instead, results on how ready the municipality is to start participatory processes is explained based on the categories given in Section 3.

In all five case studies it was found that participatory processes were in place, allowing citizens to be informed and consulted about sustainable energy technologies and the local climate policy. The way in which these different municipalities reached their citizens was also similar. To inform citizens, the local governments relied on online platforms, printed media (to reach non-technology skilful citizens), information centres of sustainability, evening meetings and coaching. However, the way in which these methods are implemented differs. For the online platforms, and depending on their focus on climate and energy topics, two different categories can be distinguished: dedicated (in Alkmaar, Breda, Westland and Bruges) and non-dedicate (in Middelburg). In the case of information centres, another two categories were identified: movable (in Alkmaar and Breda) and non-movable (in Middelburg and Westland), being the former the most effective one, as in the case of Breda, more than 2.000 citizens have been reached in their neighbourhoods in the last year and a half. A movable information centre one that can be moved from neighbourhood to neighbourhood in cities, and a non-movable information centre is one that stays permanently at one place. The municipality of Bruges does not have an information centre. Additionally, personalized group meetings in neighbourhoods have been set in Alkmaar, Breda and Bruges, in which energy coaches and advisors talk to a group of citizens to increase awareness about the need to take action and how to do it. For consultation, three methods were identified: online platforms (in Alkmaar and Middelburg), citizen focus groups (in Breda, Middelburg and Bruges) and online questionnaires (in Westland and Bruges). Under the first two methods, citizens have the chance to express their comments in an open manner, with no restriction, in contrast to questionnaires, in which the input from the citizen is limited by the questions asked. It is important to stress that only in one of the five municipalities (Breda) the “involve” level was identified. This is because the energy cooperative BRES actively collaborates with the municipality to implement the climate policies and actions of the city. However, none of the energy cooperatives in Alkmaar, Breda and Middelburg have been called or invited to make inputs to the local climate policy.

It was found in general that the Dutch municipalities lack sufficient budget and staff for creating and implementing climate change policy (social issues demands the most funding). In the cases of Middelburg and Westland, these cities are the ones with the least budget allocated to climate action. However, this should not be surprising since climate change has not been prioritized by the Council of the cities (in Middelburg the City Council has obstructed climate projects). For the cases of Alkmaar and Breda, these two municipalities have some financial resources to invest in climate actions, however, these will not be enough for the coming years. All four cases depend strongly on external

Table 5. *Background information of citizen participation processes in five cities*

	Alkmaar	**Breda**	**Middelburg**	**Westland**	**Bruges**
Size	109.000	184.000	49.000	110.000	118.700
Participation in city climate networks. Limited to the case studies					
Covenant of Mayors	Member	Member	Not member	Not member	Member
Klimaatverbond	Member	Member	Member	Not member	Not member
Activity in climate networks					
Covenant of Mayors	Not used	Currently not used	N/A	N/A	Active use
Klimaatverbond	Not used	Minimum use. Participation in conferences. Alderman in the general board	Minimum use. Participation in conferences. Alderman in the general board	N/A	N/A
Climate goals	No CO2 emissions by 2050	No CO2 emissions by 2044	No CO2 emissions by 2050	Reduction of 95% CO2 emissions by 2050 (1990 baseline year)	No CO2 emissions by 2050
Initiator capacity					
Decision-making	Mild capacity to incorporate the interests of the local debate. City Council aware of climate action. However, not always open to consider citizens' opinions	High Capacity to set higher climate ambitions than the central government. However, the City Council seems to not be aware of the actions to reach the goals	Low urgency in climate action. Scepticism in local communities over the implementation of sustainable energy.	Low decision-making capacity. Low urgency in climate action. Unable to use citizens' input.	High decision-making capacity. High level of information to make well-informed decisions. Includes local stakeholders' and central government interests.
Implementation					
Financial resources	Some capacity to finance climate change policy. Heavily dependent on external sources	Some capacity to finance climate change policy. Heavily dependent on external sources	Limited capacity to finance climate change policy. Heavily dependent on external sources and cooperation.	Limited capacity to finance climate change policy. Municipality taking a passive approach	Capacity to finance climate change policy.

	Alkmaar	Breda	Middelburg	Westland	Bruges
Availability of staff	5 civil servants working in the sustainability department. Strong collaboration with other stakeholders	8-10 civil servants working on the energy transition. Not enough staff for new tasks. Strong collaboration with BRES. Little outsourcing	3 civil servants really working on energy transition projects. Tasks outsourced and strong collaboration with other stakeholders	10 civil servants working on climate policy. Not all working full time	7-8 civil servants working full time
Knowledge	High internal knowledge. Strong knowledge on citizen participation	Some internal knowledge. Little outsourcing. Strong support from the Interreg 2 Seas project	Some internal knowledge. Knowledge on participation is low. A lot of knowledge is outsourced.	Some knowledge about future climate plans and participatory process	Some internal knowledge. A lot of outsourcing
Experience	High expertise	High expertise	Some expertise. They are "learning by doing"	Low expertise. Municipality is "not used to it yet". Working by "trial and error"	Some expertise. High learning curve.
Accountability	Some degree of transparency with information available to citizens and other stakeholders. Somehow detailed climate plan.	High degree of transparency with information available to citizens and other stakeholders. Detailed climate plan.	Low transparency. No clear climate plan to achieve the climate goal. Information not easy to be found. Aldermen not taking responsibility	Low transparency to citizens due to lack of information.	High level of transparency. Monitoring and evaluation of results is done for climate actions. Information is widely available.
Purpose of participation					
Public body	- Comply with environmental law - Increase acceptability and ownership - Achieve higher support for projects	- Higher trust and support for projects - Exchange information and educate	- Share information and educate - Increase ownership and accountability - Improve quality of outcome	- Increase ownership and acceptability	- Improve quality of outcomes - Increase responsibility and ownership of climate action
Citizens	- Greater voice and influence in climate projects	- Greater voice and influence in the decision-making process	- Greater voice and influence in projects - Obtain revenue growth	- Greater voice and influence in projects	- Greater voice and influence in projects

	Alkmaar	Breda	Middelburg	Westland	Bruges
Type of stakeholders					
	- Housing corporation - Active and motivated civil servants - European agencies - Other local governments - Energy cooperative: AlkmaarEnergie - Citizens	- Motivated City Council and civil servants - European agencies -Other local governments - Universities - Energy cooperative: BRES - Consultancy firms - Citizens	- Housing associations - Energy cooperative: Zeeuwind - City Council and civil servants - European agencies - Other local governments - Universities - Citizens	- Greenhouse owners - Housing corporation - Passive City Council - Civil servants - Citizens	- Highly motivated civil servants - City Council - Energy cooperatives: CoopStroom and Brugge Geeft Energie -European Union agencies - Citizens
Methods for citizen participation					
Inform	- Online platform dedicated to climate issues - Social media - Printed media - Evening meetings - Energy coaches - Mobile information centre	- Online platform dedicated to climate issues (WoonwijsBreda) - Mobile information centre (Greenhopper) - Kitchen table talks in neighbourhoods	- Online platform (doemee.middelburgers and Energiek Zeeland Platform) - Evening meetings - Information centre	- Online platform dedicated to climate issues - Social media - Information centre - Evening meetings - Energy coaches	- Online platform dedicated to climate issues - Guidance from civil servants - Energy parties in neighbourhoods
Consult	- Online platform dedicated to climate issues	- Citizen focus group.	- Online platform (doemee.middelburgers) non-dedicate to climate issues - Focus groups	- Online questionnaires	- Neighbourhood citizen focus groups
Involve	N/A	- Energy cooperative involved in the implementation of climate policy. No involvement in the creation of the climate plan and policy.	N/A	N/A	N/A
Partnership	N/A	N/A	N/A	N/A	N/A
Citizen control	N/A	N/A	N/A	N/A	N/A

	Alkmaar	Breda	Middelburg	Westland	Bruges
Stage of involvement					
Initiation	Increased social pressure Legislation	Seek cooperation from stakeholders to achieve goals	Seek cooperation from stakeholders to achieve goals	Increased social pressure for participation	Seek cooperation from stakeholders to achieve goals
Preparation	- Sustainability strategy developed -Plan for participatory process developed	- Sustainability vision - No plan for participatory process developed	- Sustainability vision developed - No plan for participatory process developed	- Sustainability strategy - No plan for participatory process developed	- Action plan developed - Plan for participatory process developed
Participation	Substantial participation to run local climate action (via AlkmaarEnergie)	Substantial participation to run local climate action (via BRES). More than 2.000 people reached. Difficult to reach non-active citizens.	Limited presence to run climate actions (via Zeeuwind). City Council and housing associations have obstructed climate projects and participatory processes	Low citizen participation. No energy cooperative in Westland. High participation by greenhouse owners	Substantial participation of citizens (via energy cooperatives)
Continuation	Based on reports from the participatory activity. No monitoring strategy in place. Not clear path to take up inputs from citizens	No means to monitor citizen participation and its influence in climate policy. It is not ensured that citizens' opinions are taken up	No means to monitor citizen participation and its influence in climate policy	Municipality calls 300 citizens to gather information about citizens' knowledge in the local climate action. No further action is done to use this data.	Monitoring of climate action is done through an online platform

financing (European Union or central government subsidies). In terms of staff, none of the five cities have enough capacity to attend current and future climate projects, being Breda the one with the greatest number of civil servants. Due to this, the Dutch and Belgium cities tend to outsource some of their tasks to consultancy firms or to strongly collaborate with the energy cooperative of the city (this is the case of Breda that cooperate with BRES to run the movable information centre). The latter form of collaboration has been proven to be effective in reaching citizens and creating bonds with among citizens and municipality However, and even though outsourcing projects to consultancy firms helps to relieve pressure from the civil servants, important know-how that could have stayed in the municipality may be lost. Additionally, in all Dutch cases, it was encountered that citizens lacked time, financial resources, knowledge and social cohesiveness to implement climate actions at their homes and participate in public decision making, indicating low social capacity in all four cities. This, undoubtedly, influences the impact and implementation of local climate actions.

Nonetheless, climate ambitions have been set relatively high, following the Dutch Climate Act of 2019. For the case of Alkmaar, Breda and Bruges, the municipalities count with highly motivated civil servants that have pushed the City Council from the inside to set climate action as a higher priority (in Breda, the climate goal is to be CO_2 neutral by 2044, six years before the national objective), in the contrary to Middelburg and Westland. To reach these goals, the municipalities have to draw-up their local climate plans. Differences in the breadth of the plans are evident among the five cases. Following the definitions of Table 2, Breda and Middelburg have only written sustainability visions, Alkmaar and Westland have drawn-up a sustainability strategy and Bruges is the only city with a climate action plan. Interestingly to notice, is that Bruges is the only city within this study that has adopted the Covenant of Mayors within its organization. When analysing these climate documents, all municipalities have outlined the importance of citizen participation, however, once again, noticeable differences come to light. Only Alkmaar and Bruges have proposed a plan for citizen participation, delineating the different steps of the participatory steps, important stakeholders, decisions and deliverables. The other three cities have only outlined the methods to reach out to citizens. Even though the municipalities were found to have some experience and knowledge on citizen participation (some municipalities more than others), all of them find it difficult to reach non-interested citizens, expressing during the interviews lack of information on how to make them participate. Furthermore, there was little sign of serious monitoring and evaluation of the climate actions and the participatory processes, being Bruges the only city to have in place a monitoring strategy to measure the impact of climate actions on CO_2 and an evaluation of its climate policy.

These analyses reveal the following results. First, it was found that the membership of the Dutch municipalities to climate networks (Covenant of Mayors and Klimaatverbond) does not influence participatory processes, neither climate change policies and actions. This is because, in the first place, these networks are not implemented and used by its members in the country. This can be attributed to the fact that Dutch municipalities have adhered to these networks based on an objective that limits internal implementation of the networks (i.e. confirm the climate goals against the international community). Second, the Covenant of Mayors, when implemented and diffused in to the municipal tasks, greatly influences the governing capacity of the organization, having an indirect influence on the participatory processes. This was evident in the case of Bruges, that despite having a short climate policy history, has been able to catch up the climate leader cities in Belgium in a structured and methodologically manner. Third, the biggest problems that Dutch municipalities are having now to implement climate policies are lack of financial resources and staff. Neither of the municipalities have enough resources for the current situation, exacerbating the fact that budget and people have to increase in the coming years. Fourth, strong collaboration with other stakeholders (e.g. local governments) is sought by the municipalities to increase governance capacity. Fifth, in the five cases studies, public engagement only occurs at the inform and consultation level. Involvement could only be found in Breda with its energy cooperative BRES that actively collaborates with the municipality to

implement the city's climate plans. However, none of the energy cooperatives in Alkmaar, Breda and Middelburg have been called or invited to make inputs to the local climate policy. Therefore, with regards to the "partnership" and "citizen control" levels, municipalities are still away from these. Sixth, knowledge on participatory processes in the five case studies was found to be lacking (in some cases more than others). Citizen participation plans, which are key to successful participation, are lacking and most of the work is done by "trial and error". Alkmaar has the most complete participation plan, followed by Bruges. Seventh, Energy cooperatives play an important role in sharing information and increase awareness about climate action, act as an intermediary between different stakeholders (e.g. housing associations) and citizens, and implementing their own sustainable energy projects, however, and as said before, they have not yet been invited to make inputs to the climate policy of the city, or its inputs are not ensured to be taken-up by the municipality. Furthermore, in all Dutch cases, it was encountered that citizens lacked time, financial resources, knowledge and social cohesiveness to implement climate actions at their homes, indicating low social capacity in all four cities.

The CoM and Klimaatverbond have lost importance among the Dutch cities and in the Dutch climate governance in general. In Dutch cities, the NPRES and EU funded projects (i.e. Horizon 2020 and Interreg 2 Seas) have taken a more important role and have proven to be more influential than the CoM and Klimaatverbond in supporting local governments in climate action and enacting participation processes. In one hand, for the NPRES this can be explained by the urgency the program has at the national level to be implemented. Additionally, the fact that the actors in the NPRES share common challenges (e.g. financial, technical and institutional) within regions, prompts them to strongly collaborate within the NPRES. On the other hand, the EU funded projects offer municipalities more direct access to funding than the CoM and Klimaatverbond, making them more interesting for municipalities to join as it alleviates the financing problems that municipalities face. The presence of these newer networks makes it more difficult for the CoM and Klimaatverbond to be widely adopted in the Netherlands, as there might be a competition for the time and funds that civil servants and municipalities can spend to implement these initiatives. Therefore, it can be urged that the municipality's preference to choose either of these networks narrows down to the one that offers the most immediate benefits (access to financial resources is the most important and valuable for municipalities).

The Covenant of Mayors, based on Bruges membership to this network, has proven to fare well in disseminating best practices and influencing decision-making processes, going in line with the theory. However, and taking the Dutch cases, it has come to light the complexity and challenges to implement this transnational climate network in municipalities. Lack of capacity and political commitment, and misalignment with the local context prevents implementation in the Netherlands. Therefore, it seems that different factors have to align to improve adoption of the CoM in signatory cities.

Finally, when comparing the municipalities and their activity in climate networks (either joining a city climate network or an EU funded project, i.e. Alkmaar, Breda and Middelburg) against municipalities that do not participate in either of these projects (i.e. Westland), it shows that the former municipalities are more active in citizen participation and climate action than the latter. This is not surprising because from the start, these municipalities already show greater commitment and ambitions when they decide to participate in these activities, plus the added benefits of joining these networks and projects (e.g. cooperation, knowledge sharing, and access to finance).

7.3. REFLECTION

This section reflects on the study's results, methodology and scientific contribution of it.

7.3.1. Results

Betsill & Bulkeley (2004) and Busch et al. (2018) have argued that transnational climate networks are important sites for the governance of global environmental issues, as they support cities in taking the lead in climate action and transition to low-carbon economies. However, based on the results of this study, this premise holds only 25% of the times for the Covenant of Mayors and none of the times for the Klimaatverbond in the Netherlands. This posits doubts on the validity of Betsill & Bulkeley (2004) and Busch et al. (2018) premise and opens the door for more research and questions on how city members are implementing city climate networks and what other tools they are using to reduce their GHG emissions. It is acknowledged that the results of this research are not to be generalized as the sample studied is not representative and only covers one country. However, it sheds light on some important points that are worth discussing about the implementation of these initiatives.

First of all, one of the reasons for the little adoption of the Covenant of Mayors in the Netherlands is because the supporting network of the CoM in the country is not functioning, validating the premise of Bulkeley et al. (2003) and Kern & Bulkeley (2009), who argue that for a well working city climate network, national structure must be in place. The Rijkswaterstaat barely considers himself as having the role of coordinator and the Klimaatverbond does not have the enough governing capacity to support the network in the country. The case of Klimaatverbond is interesting but concerning. According to Bulkeley et al. (2003) and Kern (2019), city climate networks at the national level may be more important than transnational climate networks, and even more important to small to medium cities and towns, as this national networks compensate the inadequate capacity of small local government. However, in this research, it was proved that these premises do not hold for the Klimaatverbond as the network is barely used by any of the case studies of this thesis (neither for the largest and smallest cities in this research). However, additional research is suggested on smaller cities to determine if the Klimaatverbond have greater influence.

As a second point, this study found that the most common reason for cities to join the Covenant of Mayors was to confirm the climate goals against the international community (branding for the city). When compared against the different functions presented by Bulkeley et al. (2003), Andonova et al. (2009) and Busch et al. (2018), these authors do not take this reason into discussion. However, it can be argued from this research that public confirmation of climate ambitions should be an important consideration that determines the commitment to implement the climate network in the organization of the municipality. Even though this is a valid reason to join the Covenant of Mayors, this cannot be the only one. If so, it prevents further action and influence of the network within the municipality, making the network to function as an isolated project in the city. When looking at the case of Bruges, that joined the CoM to set and reach GHG reduction goals, the CoM has positively influenced climate governance within the municipality. The network is diffused and taken up by the municipality triggered by real commitment from the City Council and civil servants.

When talking about the influence of city climate networks on citizen participation, this research reassures what is argued by Bulkeley et al. (2003). They argue that it is not obvious how, in these networks, people “at the very grassroots” are empowered to participate in local policy making or influence policy making at the EU level. On paper, the CoM have different recommendations and requirements to engage citizens, and the Klimaatverbond supports its members with knowledge building. However, in this study, actual influence of city networks on participation could not be proved in the Dutch case. Based on the interview with the civil servant of Bruges, the influence of the citizens at the EU level is minimum. This is because for the citizens, the EU Commission is a distant organization that they do not fully understand. For instance, the civil servant in Bruges does not use the name of the Covenant of Mayors to promote municipality’s activities. This goes in the opposite direction to what Christoforidis et al. (2013) argue, who say that the success of the CoM is heavily dependent on

how much citizens are informed about the network (even though that study is specifically on the CoM, in this thesis it is argued that it can be true for other city climate network based on the common benefits that they provide). However, this argument does not hold to be true based on the results of the present study. First, the Bruges case contradicts it as the city is a good example of how the CoM could be implemented and it does not rely on citizens' knowledge about the CoM; and second, because other factors are considered to be more important for the success of the network (i.e. reason for the city to join the network and local governing capacity).

Finally, it was found in this thesis that engaging local communities to climate actions and fostering citizens to adopt sustainable energy behaviours remain a challenge. This is because of limited time (both from the civil servants or citizens) (Scherhaufer, 2021), organizational challenges (not enough know-how) (van der Schoor & Scholtens, 2015), and low local support (obstruction from municipalities) (Hoppe et al., 2016).

Based on these reflections, I believe that at this moment in time, it is more important to understand how these city networks are being implemented, why the success in the process, and how many actual members are using it than evaluating the benefits and outputs of these networks. Many academic articles have evaluated transnational climate networks on their overall reduction of GHG emissions based on the initiative's size, which is good because it creates expectations among the public on strategies to further reduce GHG emissions, but if just 25% of the signatory members are actually using and implementing these networks, then these expectations are based on the wrong basis.

7.3.2. Methodology

For being able to answer the research questions proposed in this study, different categories that describe citizen participation processes were presented. By doing this, the influence of the city climate networks on different dimensions of participation processes could be identified.

The categories developed in the theoretical framework proved useful to analyse this. One of the advantages of using this methodology is that citizen participation processes could be described taking into account the different dimensions that enable and characterise participation. While using this framework, some categories proved to be more valuable to others. For instance, the categories of capacity of the initiator, the methods for participation, and the stage of citizen participation process.

However, some drawbacks were identified and are presented here to further improve this framework. Initially, and in line with the argument of Broer (2020), further differentiation between the purpose and stance of participation of the initiator should have been made. During the research, it was found that the stance that the municipality was taking for participation was key to the actions and methods that they enacted. Identifying the purpose did not seem to be enough to completely understand the "why" of the municipality's actions. However, this should not only include purpose and stance of the initiator but also of citizens. In line with this, the governance capacity of the initiator (in this case, the municipality) was only considered in this framework, however, it should also have included local communities' own capacity (social capacity). For instance, the knowledge, available financial resources, time, cohesiveness of the social network are important characteristics that can define if climate actions have greater or less chance of being taken-up by the citizens. Moreover, sometimes the category "type of stakeholder" seemed to limit the description of the most important stakeholders and it did not enable insights about how these stakeholders were influencing each other in participatory processes. Even though these seem to be important drawbacks, it can be argued that these did not affect the results of this research but the breadth of the explanatory reasons.

Under the light of this reflection, it would interesting to use the Institutional Analysis and Development (IAD) framework of Ostrom (2010), jointly with the framework proposed in this

research. This could help in analysing deeply the interrelations among different stakeholders and the different formal and informal rules that affect the action arena (participatory processes).

7.3.3. Scientific contribution

This research has shed light on the influence that city climate networks have on citizen participation processes in the Netherlands. During this research path, the implementation of these climate networks in Dutch municipalities was also studied, to help determine the enablers and barriers for the adoption and diffusion of city network's guideline within the municipalities.

Before this work, and based on the current knowledge of the author, a theoretical framework to describe the influence that city climate networks have on local citizen participation processes had not been developed. Even though, the categories developed here are inspired on Broer's work (2020), he applied them on a very specific neighbourhood in the Netherlands. Therefore, this is the first time that these categories are used to explain citizen participation in higher level in the European climate governance system.

Based on the above results and reflections, this thesis work can open a new perspective on the effectiveness of transnational and national climate networks led by cities to reduce GHG emissions. In the literature it is argued that they are an important site for the governance of global environmental issues, as they support cities in taking the lead in climate action and transition to low-carbon economies. However, in this study it was proven that this is not the case for the Dutch case. In the country, other governing bodies and institutions are used by municipalities to reduce GHG emissions, e.g. the NPRES and Horizon 2020 and Interreg 2 Seas projects. Moreover, this study shows the complexity to successfully implement these climate networks (i.e. lack of knowledge and funds, political commitment and misalignment to the local context), a field of research that has been overlooked or underestimated in the academic literature. Therefore, from this study arises the following question: Do transnational climate networks, today, have the importance in climate governance, as they did in the 2000s? It becomes important to revaluate the relevance of transnational climate networks in the global climate governance.

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8. CONCLUSIONS AND RECOMMENDATIONS

There is growing academic literature on the increasing role that cities are playing to combat climate change. In the European case, this is led by a decentralization process that have given away major tasks to local governments, and by the perceived lack of climate ambitions of central governments. This decentralization has blurred the boundaries between stakeholders at different governance levels (central, regional and local governments), creating a multi-level governance system, that gives space to transnational and national climate networks to arise. These networks are defined to play an important role in motivating cities to adopt climate policies and implement them. Several authors have argued that measures adopted by local governments are heavily dependent on the public acceptance and citizens' active participation.

In this thesis, a comparative case study was performed to explore the influence that the city networks Covenant of Mayors and the Klimaatverbond have on citizen participation processes in local governments. Four Dutch cities were chosen as the main case studies: Alkmaar, Breda, Middelburg and Westland. A fifth city in Belgium (the city of Bruges) was researched for exploratory purposes to search for additional insights that would possibly contrast with those found in the Dutch municipalities. During this path, it was also investigated how cities implement these city networks.

The following research question was formulated:

How do four selected municipalities in the Netherlands that are members of the Covenant of Mayors and/or Klimaatverbond organize citizen participation in comparison to non-members?

In order to answer this research question, answers to the five sub-questions must be given first. Answer to RQ5 will be given in a different section of this Section.

RQ1: How does citizen participation contribute to local climate action?

As pointed in Section 2.3 citizen participation in local climate action contributes to the design and implementation of effective local climate action plans. Their active role in local climate actions helps in the diagnosis, identification, prioritisation, development and implementation of climate strategies that are relevant and appropriate to the local context of cities. This contribution builds on the citizens' knowledge and understanding of the particularities of the city to determine potential solutions. Thus, taking into account local knowledge and citizen decision-making processes, more effective, accepted and sustainable local action plans can be enabled. Furthermore, citizen participation has a positive impact on local support for renewable energy technologies. More specifically, energy projects that stem from community cooperatives, are less likely to trigger opposition towards its development.

RQ2: What categories are suitable to describe citizen participation processes?

To analyse citizen participation processes in the case studies, different categories were identified. These categories were based on the work of Brody et al. (2003), Broer (2020) and Wilcox (1994), and are used to describe the citizen participation process from different angles. These are: initiator's capacity, purpose of participation, type of stakeholders, methods for participation and stage of citizen participation. Within each of the categories, sub-categories were created to further specification and detail. Section 3 presents the categories and their explanation. By using these categories, it would be able to determine if the participatory process was a success of failure in terms of its initial objective, and the levers that explain the outcome.

RQ3: Why do cities join the Covenant of Mayors and Klimaatverbond in the Netherlands?

While in the academic and grey literature, it is argued that the main reasons for cities to join city climate networks is to mobilize internal capacity and share knowledge and experiences within the network (see Section 2.2.1.2), in this study it was found that the reason for Dutch municipalities to join the Covenant of Mayors is to confirm the climate goals against the international community. It could not be found that these Dutch municipalities were actively working with the framework provided by the Covenant of Mayors, or with other stakeholders in the network. Even though the city members had submitted their SECAP to the Covenant of Mayors, there was no indication that these were drawn-up using the guidelines provided by the initiative. Nevertheless, this contrasts with the purpose of Belgium to become part of the Covenant of Mayors, as they are concretely using the network to set and reach their climate goals. Different contextual factors (e.g. climate policy history, government structure or the presence of internal collaboration) define this difference between the two countries, although this deserves more dedicated research.

For the case of the Klimaatverbond, I was unable to find the reasons for the membership of Alkmaar and Breda both from grey literature and the interviews. For the case of Middelburg, they decided to join the network to support the city in reaching their climate goals. For neither of the three cases a strong participation was found, instead, it was limited to participation in webinars.

Further studies in other contexts would be needed to provide an answer on why cities join these climate network and when and under what circumstances city climate networks succeed in its implementation.

RQ4: How do the Covenant of Mayors and Klimaatverbond influence citizen participation in selected cities in the Netherlands?

On paper, the Covenant of Mayors increases awareness about the need to initiate participatory processes in its members. It is done with different strategies. First, in the SECAP, there has to be a description of how citizen and other stakeholders are involved during its elaboration, implementation and follow-up. This means that citizen participation is encouraged in the climate action plan of the city. Moreover, the Covenant of Mayors promotes the creation of an advisory group to ensure that city specificities and problems are understood, local community expectations are met, and to ensure uptake of the main outcome and their inclusion into the decision-making process and SECAP. Moreover, the Covenant requires clear communication of goals and results to the different stakeholders to enable a transparent evaluation of the progress of the climate goals. This influences citizens' knowledge about what they have to do and what still needs to be done to reach the targets. Furthermore, case studies of leading cities are shared within this city network, so that success citizen participation processes and replicated. Finally, capacity building activities (i.e. workshops) are organized among members so that they can share experiences.

However, in reality, it was found that in the Netherlands, the membership of municipalities to the Covenant of Mayors does not influence participatory processes, neither climate change policies and actions. This can be attributed to the fact that Dutch municipalities have adhered to this network based on an objective that limits internal implementation of the networks (i.e. confirm the climate goals against the international community). However, it was found that in Bruges that the Covenant of Mayors, indirectly influences participation by adding governing capacity to the municipality.

For the Klimaatverbond it is same story. On paper, the association influences participatory processes in its members by means of projects and research about participation. This is done with the aim to increase awareness and knowledge in municipalities about the importance that participation has on

climate actions' implementation. These activities help municipalities in designing neighbourhood plans and to apply for subsidies from the central government. Additionally, Klimaatverbond organizes webinars about citizen participation and is in the process of creating a national platform for knowledge sharing aimed at municipalities, energy cooperatives and citizen initiatives.

However, in reality, and under this study, no relation was found between membership of the Klimaatverbond and citizen participation processes in municipalities. The reason to this is because this national network is barely used by its members. In the interviews, it was outlined that neither the civil servants nor the energy cooperatives have worked in a project with the Klimaatverbond.

Even though the CoM and Klimaatverbond have shown no influence on citizen participation processes in Dutch cities, other, newer networks have positively influenced participation, such as the NPRES and EU funded programs (i.e. Horizon 2020 and Interreg 2 Seas projects). These new networks have taken a more important role than the CoM and Klimaatverbond due to higher urgency for implementation (i.e. NPRES) and easier access to funds (i.e. EU funded programs). These networks have influenced participation by making more funds available to implement climate action and enabling collaboration among its members. It can be argued that these newer initiatives and programmes (i.e. NPRES and EU funded projects) are taking over the local and regional climate governance of the Netherlands.

RQ5: What policy recommendations can be given to signatory and non-signatory cities of the Covenant of Mayors and Klimaatverbond to engage citizens in climate action plans?

In terms of policy, and independently of the case, municipalities should be encouraged to draw-up participation plans in which the objectives, phases, stakeholders and monitoring practices are included. This is because in most of the cases, no participation plan was found. In this way, participatory processes are clearer to the civil servants and citizens, increasing accountability and trust in the process. The outcome of the process can greatly be benefited.

Main research question: ***How do four Dutch municipalities in the Netherlands that are members of the Covenant of Mayors and/or Klimaatverbond organize citizen participation in comparison to non-members?***

As explained in RQ4, there is no indication that in Netherlands the membership of municipalities to the Covenant of Mayors and Klimaatverbond highly influences citizen participatory processes. Therefore, the answer to the main research question is going to be given with no differentiation on membership to a climate network.

In the four Dutch cases, public participation only occurs at the inform and consultation level with different methods. To inform citizens, the local governments relied on online platforms, printed media, information centres, evening meetings and coaching. However, there are difference in the way in which these methods are implemented. For the online platforms, two different categories can be distinguished: dedicated (in Alkmaar, Breda, Westland and Bruges) and non-dedicate to climate change (in Middelburg). In the case of information centres, another two categories were identified: movable (in Alkmaar and Breda) and non-movable (in Middelburg and Westland). A movable information centre one that can be moved from neighbourhood to neighbourhood in cities, and a non-movable information centre is one that stays permanently at one place. Additionally, personalized group meetings in neighbourhoods have been set in Alkmaar and Breda, in which energy coaches and advisors work to increase awareness of climate action among citizens. For consultation, three methods were identified: online platforms (in Alkmaar and Middelburg), citizen focus groups (in Breda and Middelburg) and online questionnaires (in Westland). Involvement and collaboration of citizens in the elaboration of climate policies could not be found because in neither of the cases, citizens'

inputs were ensured to be considered or taken up in climate policies. Even though, Alkmaar, Breda and Middelburg have local energy cooperatives (AlkmaarEnergie in Alkmaar, BRES in Breda and Zeeuwind in Middelburg, which is a regional energy cooperative that also operates in the city), these have not been called upon or invited to make inputs to the local climate policy or his inputs are not taken-up by the municipality. However, citizens' involvement in the implementation of climate actions could be found in Breda. In the city, the energy cooperative BRES closely collaborates with the municipality to implement and engage citizens in climate policy and action. They do it by helping the municipality in running the information centre and making awareness campaigns with their own energy coaches. Finally, with regards to the "partnership" and "citizen control" levels, municipalities are still away from reaching these.

When climate documents were analysed, it was found that all municipalities have outlined the importance of citizen participation, however noticeable differences came to light. Only Alkmaar has proposed a plan for citizen participation, delineating the different steps of the participatory steps, important stakeholders, decisions and deliverables. The other three cities have only outlined the methods to reach out to citizens. Even though the municipalities were found to have some experience and knowledge on citizen participation (some municipalities more than others), all of them find it difficult to reach non-interested citizens, expressing during the interviews lack of information on how to make them participate. Furthermore, there was little sign of serious monitoring and evaluation of the climate actions and the participatory processes as there is a lack of financial resources, personnel and knowledge on how to do it, therefore citizens inputs during these activities are not ensured to be considered or taken-up in climate policies by the civil servants and City Council.

Additionally, it was also found that Energy cooperatives led by citizens, play an important role in sharing information and increasing awareness about climate action, act as an intermediary between different stakeholders (e.g. housing associations) and citizens, and implementing their own sustainable energy projects. Moreover, energy cooperative can also play the role of implementing agent of climate policies in municipalities, supporting the local government and alleviating their capacity challenges. Finally, in all Dutch cases, it was encountered that citizens lacked time, financial resources, knowledge and social cohesiveness to implement climate actions at their homes, indicating low social capacity in all four cities. This, undoubtedly, influences the impact and implementation of local climate actions.

8.1. LIMITATIONS

For exploratory reasons and to search for additional insights that would possibly contrast with those found in the Dutch municipalities, it was decided to study the city of Bruges in Belgium. However, this comparison between the Dutch and Belgium cities could not be perform one-to-one. For the case of the CoM in Belgium, only the civil servant in the city was interviewed and not a coordinator and supporter, as was done with the Dutch cases. Those actors were contacted multiple times, but did not respond to emails, not allowing me to have deeper understanding on the Belgium case and provide better recommendations to the CoM in the Netherlands.

Additionally, few academic literature was found for national climate networks and, in particular, for the Klimaatverbond. This limited the study in the sense that missing information about the functions of this type of networks and working structure were collected from only one sources of information, i.e. the interview with the Klimaatverbond.

Moreover, access to the latest climate documents of the municipalities was not always possible. In some case studies, the climate plans were being drawn-up or updated. This prevented me to obtain the latest insights and actions of the municipality in terms of ambitions, breadth of the climate policy,

and citizen participation strategies. Even though, drafts of the publications were open access, these documents lack the information needed to have a complete picture. In these cases, I relied upon the previous climate documents and interviews to put all the pieces together.

My research was largely based on semi-structured interviews to different actors in the energy transition in the Netherlands. Despite being a powerful method to gather in-depth and contextual information that could otherwise not be found in the literature, it is subjected to disadvantages. First, information is conditioned to the subject and his/her experiences, who may not be completely objective to the real situation. Along this research, efforts were made to choose and use methods consistently and rigorously to limit the influence of such bias. As a second point, and to get the complete picture of citizen participation and implementation of city networks within the municipality, I would have needed to perform more interviews within the organization, a task that was not possible due to the limited time to do this research. To minimize any valuable information loss, it was assured with the interviewee, before starting the interview, if the person was suitable for the purpose of this study before. Additionally, at the end of the interview, it was also asked if the person thought that I should speak with someone else. As a third point, not the same interviewees (in terms of job positions and type of stakeholders) could be interviewed for the four Dutch cities. This could generate different perspectives on the same issues according to each respondent context and functions. To minimize this, it was asked at the end of the interview if the person thought that another person would be more suited for this research.

Another limitation that I found during the development of this work, was my reliance on translation in climate documents and interviews performed in English. Translation of the climate documents were done using Google Translate. Even though the tool was extremely useful, information can always be lost or distortion from its original meaning. Regarding the interviews, and even though people in Netherlands have a good spoken English, information and better description of the situation may have been lost. For example, during my interviews, the interviewee sometimes struggled to find the correct word, and I could notice some hesitance while his/her explanation.

8.2. SUGGESTIONS FOR FUTURE RESEARCH

8.2.1. On the methodology

Based on the reflection of Section 7.3.2, it is suggested to do additional research on smaller cities to determine if the Klimaatverbond have greater influence on cities of this size. In the results, it was demonstrated that in Dutch cities, this national network does not have much influence in the governing capacity of cities, however, in the literature it is argued that small cities and towns are represented to higher levels (national and EU level) and are given guidance on climate issues. Additionally, further research can be focused on working in improving the theoretical framework used in this research. In Section 7.3.2, some recommendations and area for improvement were given.

8.2.2. On city climate networks

Building upon the results gotten in this research, it is suggested to focus future research on understanding the implementation process of these networks in a successful and failed case study. For instance, why cities adhere to these initiatives, the influence that the quality of the supporting network has on the performance of the initiative or how the initiative permeates within the organization and how it affects the outcome. This would allow to identify the reasons why these city climate networks succeed or fail to be adopted and used by its members, and come up with best

practices or solutions. This would be valuable to the Covenant of Mayors in Europe as well as the Global Covenant of Mayors.

Further elaborating on this idea, I suggest additional research on the quantification of members that have successfully implemented and adopted the mandates of climate city networks. This would help in understanding the actual number of members that are using it, allowing researchers to better assess the impact that these initiatives have on reducing GHG emissions. From this, better signals about the progress and the potential of current strategies to reduce GHG emissions can be given to policy makers at all levels, prompting changes and improvement to economic and social incentives to accelerate the energy transition. Moreover, I suggest investigating the implementation of city networks in other regions, for instance, South America or Africa, areas that may have less governing capacity than European cities, as well as governed by other contextual factors, but where these initiatives are taking-off.

8.2.3. On citizen participation

In terms of citizen participation, I encountered in the different case studies, lack of knowledge among the civil servants on how to reach and engage citizens that are not interested or aware on climate action. It was common for me to encounter during the interviews that the interested citizens were already engaged, however, in relation to the population of the city, the amount of people was not significant. It is therefore recommended to study what the best method or combination of methods are to make this population group to participate.

Moreover, it was found that tools for the monitoring of citizen participation processes was missing or were inappropriate. This is because current practices (e.g. questionnaires or phone calls) do not provide adequate information about what strategies are working to, for example, increase awareness, and measure the impact that participation was having on climate action. I acknowledge that is it challenging to obtain this data and to make valuable insights from it, however, I suggest to research citizen participation monitoring by using proxies, such as online sustainable pledges that inhabitants can make online. If done well, this could potentially lead to better statistics on what inhabitants are doing regarding climate action, and the potential of their actions.

8.3. SOCIETAL RELEVANCE AND RECOMMENDATIONS

This study's societal relevance is embodied by the adopted theme, namely, city climate networks and their influence on citizen participation processes in local governments. In the multi-level governance system, city climate networks are thought to be an important place where climate governance is taking place. Moreover, cities have been named to be relevant actors in climate action due to the increased decentralization of tasks from the central government, and inaction of the latter to set higher climate ambitions. Ultimately, citizen participation is recognized as a key factor for the success of global, regional and local actions. Therefore, this research sheds light on the interaction of these three points and explores the importance transnational and national climate networks have. Practically, I intend to develop an awareness of the city climate network's level of influence on engaging citizens.

To further highlight the societal importance of this study, recommendations for the relevant actors are presented below.

8.3.1. Recommendations to the Covenant of Mayors

- The firmest recommendation that I can make to the initiative, is that it should strengthen its supporting network in the country, as right now it is not working. The strengthening of the network can be done by including new actors (e.g. the Vereniging van Nederlandse Gemeenten). By doing this, the network can be further promoted and the benefits better portrait. Right now, the civil servants were aware about the possibility to share knowledge and experiences within the network, however, access to funding was not evident to them, which is an issue that is encountered in most of the municipalities. This would lead to better penetration to the network and increased memberships.

- The second recommendation is to enforce the evaluation of the current coordinators and supporters based on the compliance of their roles. This recommendation is not aimed at suspending the coordinator or supporter if they are not fulfilling their tasks, but rather to know how to improve their performance. For instance, the main task of the person responsible of the CoM at the Rijkswaterstaat is the operation of the Klimaatmonitor, a role that is not strongly related to climate policy within the agency. Therefore, it can be evaluated if another person within the Rijkswaterstaat is more suited to support the members of the CoM in their climate policies.

- To better support its members in citizen participation processes, the Covenant of Mayors can include in its supporting network of the Netherlands, an actor that knows the needs of citizens and has a close contact with them. In the country, for instance, it can be the HIER. Municipalities are aware of the need to involve citizens in their climate projects, however, they do not always know citizens' interests and how to effectively engage them. By including this actor, more support to cities is given and better attractiveness to join to the network can be achieved.

8.3.2. Recommendations to the Klimaatverbond

- In this research, it came to light that civil servants do not know how to involve non-active and interested citizens into climate action. As the Klimaatverbond main activities is to create knowledge for the use of municipalities, I recommend to research the ways that municipalities can reach and engage non-active citizens into the energy transition. This would create more interest in the network from the current and new possible members.

- As a second point, and according to the interviews, it was found that member cities and the Rijkswaterstaat do not think the Covenant of Mayors is aligned to the climate context of the Netherlands. Therefore, and to strengthen the CoM in the country and make it more attractive to the members, the Klimaatverbond can help to streamline the requirements and functions of the CoM with the needs of the Dutch municipalities.

- Additionally, it was found that the network is low in attention in the civil servants' heads, therefore, it is recommended to start a campaign to renew the commitments of its members. This will help the Klimaatverbond to gain support and recognition among the municipalities.

8.3.3. Recommendations to the City Council and civil servants

The recommendation to the City Council and civil servants are:

- In most of the cases, no plan for participatory processes were found. Therefore, it recommended to the municipalities to draft a participation plan in which the objectives, phases, stakeholders

and monitoring practices are included. In this way, participatory processes are clearer to the civil servants and citizens. The outcome of the process can greatly be benefited.

- As a second point, it is important for the City Council and civil servants to ensure that the inputs given by the local communities are taken-up and considered while drafting new or updated climate policies. In none of the case studies was found how municipalities were taking up citizens opinions, even though participation sessions were made. So, it is strongly recommended to the City Council and civil servants to make clear how opinions and inputs from citizens are included or discarded in climate policy. This would create more confidence in the process and among citizens, laying the first step to increase the participation level of citizens.

- Moreover, the results of this study indicate that strong collaboration with the local Energy Cooperative proves to be effective in engaging citizens into climate action. Thus, it is recommended to collaborate as much as possible with this actor in the city. Additionally, this can increase the financial and personnel capacity of the municipality, and create more trust in the relationship municipality-citizen.

- For cities that are members of climate networks, it is recommended to have a person responsible of the management of the network within the municipality. Right now, in the Dutch municipalities, there was none or only one person in charge of the CoM or Klimaatverbond. By doing this, legitimacy of the commitment to joining the network can be increased and adoption could be incentivised.

- Lastly, and for the implementation of city networks, it is recommended to the Dutch municipalities to involve all the departments of the organization. In the Dutch cases, the CoM was an isolated project within the municipality. When compared to the city of Bruges, the CoM has proven to be effective in helping the city to build climate governance capacity, and catch up the leaders in short time. Among the reasons is because there was commitment and large internal involvement.

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APPENDIX A. RESEARCH FLOW DIAGRAM

In Figure 16, the flow diagram of this research is presented. The approach taken in this study is shown to allow a quick understanding of the process taken in this thesis. Section 4, which is methodology, is not shown.

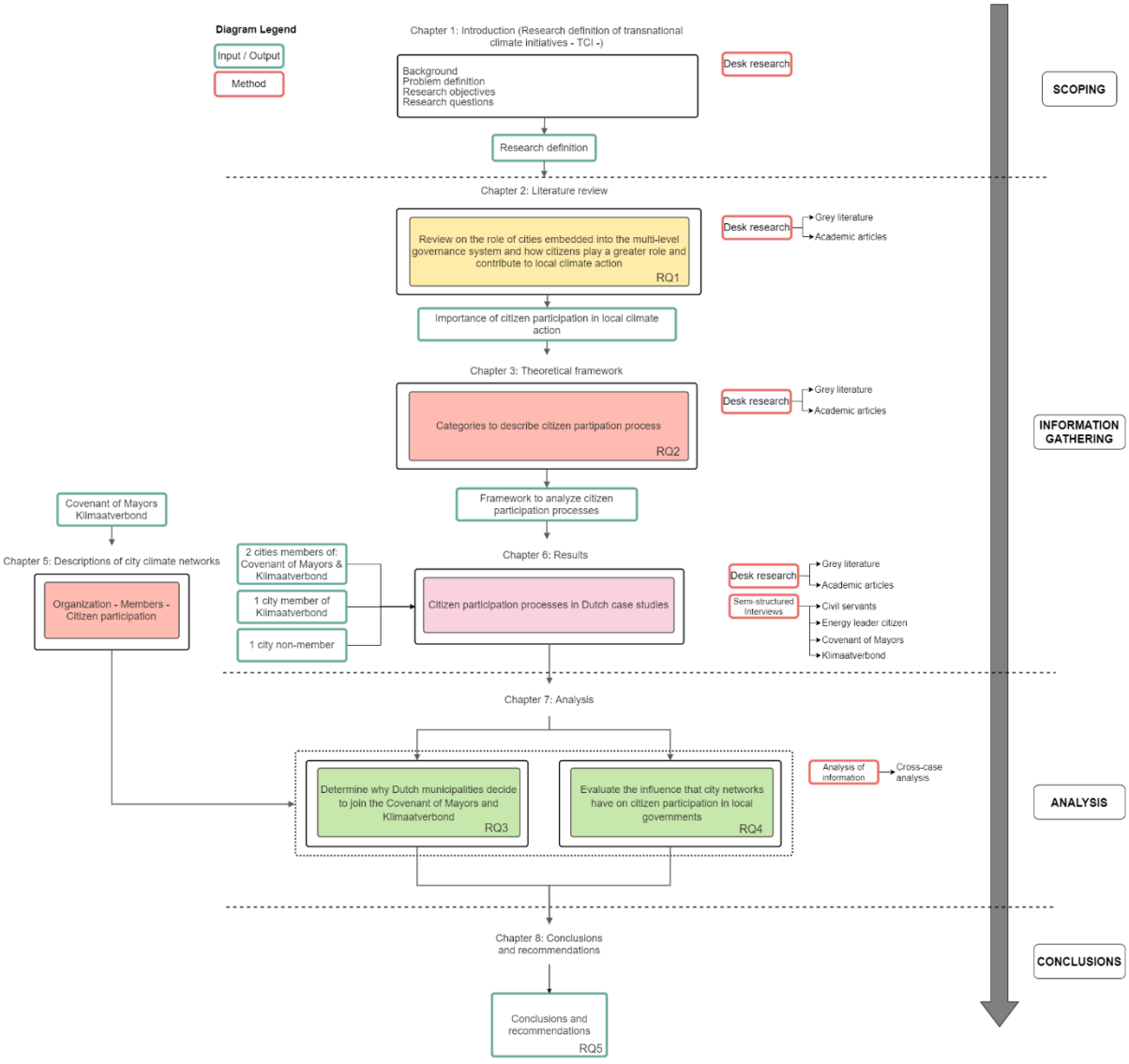

***Figure 16**. Research flow diagram*

APPENDIX B. CITIZEN PARTICIPATION METHODS.

Table 6 shows the different participation methods found in the literature. It is important to take into account that this is not an exhaustive list of methods, as other methods may have been missed. However, this categorisation of citizen engagement serves to aid the research of citizen engagement in climate actions plans in cities that are signatories and non-signatories of the Covenant of Mayors.

Table 6. Citizen participation methods. Sourced from (Arnstein, 2019; Rowe & Frewer, 2005; Wilcox, 1994)

Category	Participatory method	Description
Inform	Information broadcasts (television, newspaper or radio)	Traditional communication methods through which a specific population is targeted with general information divulged on media.
	Public hearings Public meetings	With this type of participatory method, the initiator relies on the public to come to the information. The selection of the citizens attending is biased towards the most proactive and interested. Public hearings are mostly used when a government program is implemented. Public meetings are used in response to citizens' concerns. Both mechanisms are initiated by the local government.
	Hotline	This participatory method relies on the own citizen initiative. Information is supplied in response to individual queries.
Consult	Opinion poll Survey	High controlled way to acquire answers to specific questions from large samples. Quantity of information is more important than the quality of it.
	Consultation document (printed or digital)	Document sent to a list of potential interested citizens (representative of interest groups). In this document, open responses can be given on different issues.
	Focus group Study circle Citizen panel	In this method quality of the information is more important than quantity. It involves as many as dozen people discussing over a topic. Not much information is given by the initiator, therefore active exchange of information does not flow two-ways, rather opinions from citizens are gathered.
Involve	Workshop	This method is characterized by controlled selection of participants with discussions facilitated by an external party ("experts" who are available to answer questions from the participants). Moreover, there are unconstrained limits on the participant responses. Flexible information input from the initiator. These workshops go throughout different days.
Partnership	Citizen advisory committee Consensus building	These methods are characterized by controlled selection of participants. The group output is not structured and depends on social factors.
Citizen control	Neighbourhood corporation/cooperatives	This method is characterized by no intermediaries between the cooperative and the source of funds. They have full control of the final outcome.

APPENDIX C. INTERVIEW QUESTIONS FOR THE COVENANT OF MAYORS

Introduction

1. What is your position within the European Climate Alliance?
2. How are you involved in the CoM?
3. How many of your colleagues are working on the CoM?

Knowledge about the CoM in the Netherlands

4. Does the CoM have different approaches to different countries?
5. How would you describe the role of the CoM in the Netherlands?
6. How would you describe the interaction (communication) of the CoM with:
    a. The supporter (Klimaatverbond)?
    b. CoM coordinator (Rijkswaterstaat)?
    c. Municipalities signatories of the CoM?
    d. Municipalities non-signatories of the CoM?
7. When you communicate with these other organizations, what is this communication mainly about?
8. How "active" do you think is the CoM in the Netherlands?
    a. Why does it succeed/fail to be extensively used?
        i. Better/Not enough governing capacity
            1. Staff
            2. Money
            3. Knowledge of the city network
            4. Experience
        ii. Competition/Support with other networks
            1. Regional networks
        iii. Contextual factors in the NL
            1. Strong climate plans in the Netherlands?
            2. Strong local cooperation?
        iv. Too much work on the municipalities?

Citizen participation

9. Are you aware of the effects citizen participation has on the implementation of climate action plans? (less opposition, prioritisation, development and implementation of climate plans)
10. What is the importance the Covenant of Mayors gives to citizen participation in the climate action plans?
11. Does the Covenant of Mayors promote/stimulate the participation/engagement of citizens in climate action within the municipality and other local authorities?
12. How is this promotion/stimulation conducted?
13. What is the target group for this promotion?
14. What kind of engagement tools does the Covenant of Mayors promote? (trainings, tailored guidelines, knowledge sharing, polls…)

15. How would you describe the interaction between the CoM and local governments regarding citizen participation?
16. How intensively do you experience citizen participation processes in CoM municipalities in the Netherlands?
17. How and why would you explain this level of participation?
    a. Local communities' intrinsic capacity
    b. Local government capacity
        i. Money
        ii. Time
        iii. Knowledge
18. How do you monitor citizen engagement level in Municipalities?
19. What do you think is the added value for a city belonging to a network in terms of citizen engagement?

20. How would you describe the ideal citizen engagement process in Municipalities?
21. What do you think is needed to accomplish this ideal process?
22. How do you think the CoM can help you achieve this ideal process?

Conclusions

23. Do you see the CoM as a useful tool to better engage citizens in local climate action plans in the Netherlands? Why yes or not?
24. Do you see the CoM as a useful tool to better monitor citizen participation in local climate actions in the Netherlands? Why yes or not?
25. Do you see the CoM as a useful tool to increase governance capacity of cities?
26. Do you have any additional remarks with regards to the role of the CoM in the citizen participation process of citizens in signatory cities?
27. Do you know any other person or people that are relevant to speak with?

APPENDIX D. INTERVIEW QUESTIONS FOR KLIMAATVERBOND

Introduction

1. What is your position within the Klimaatverbond?
2. How are you involved in the CoM?
3. How many of your colleagues are working on the CoM?

Knowledge about the Covenant

4. How would you define the problem that the Covenant is trying to tackle?
5. What do you think the CoM's mission is?
6. What are the climate priorities for your organization?
7. Do you think these correspond to the CoM's priorities? Why and how?

Klimaatverbond engagement

8. What is the role of the Klimaatverbond?
9. What is the role of the Klimaatverbond as supporter in the Netherlands for the Covenant of Mayors?
10. How "active" is the Klimaatverbond as supporter of the CoM?
11. How would you describe the interaction (communication) under the CoM with:
    a. The Covenant of Mayors?
    b. Municipalities signatories of the CoM?
    c. CoM coordinator (Rijkswaterstaat)?
12. When you communicate with these other organizations, what is this communication mainly about?

Covenant of Mayors analysis

13. Do you think the CoM is an active city network in the Netherlands?
    a. Why does it succeed/fail to be extensively used?
        i. Better/Not enough governing capacity
            1. Staff
            2. Money
            3. Knowledge of the city network
            4. Experience
        ii. Competition/Support with other networks
            1. Regional networks
        iii. Contextual factors
14. How do you think the CoM complements or competes with regional climate networks?
15. Which kind of network do you think is more relevant to Dutch municipalities for climate action plans? And why?
16. What is needed for the Covenant of Mayors to play a more important role in Dutch cities?

Citizen participation

17. Are you aware of the effects citizen participation has on the implementation of climate action plans?
18. What is the importance the Klimaatverbond gives to citizen participation in the climate action plans?
19. Does the Klimaatverbond promote/stimulate the participation/engagement of citizens in climate action within the municipality and other local authorities?
20. How is this promotion/stimulation conducted?
21. What is the target group for this promotion?
22. What kind of tools does the Klimaatverbond use? (trainings, tailored guidelines, knowledge sharing…)

23. How intensively do you experience the citizen participation process in the Municipalities?
24. How would you explain this level of participation?
    a. Local communities' intrinsic capacity
    b. Local government capacity
25. How do you monitor citizen engagement in the Municipalities?
26. What do you think is the added value for a city belonging to a network in terms of citizen engagement?

27. How would you describe the ideal citizen engagement process in Municipalities?
28. What do you think is needed to accomplish this ideal process?
29. How do you think the CoM can help you achieve this ideal process?

Conclusions

30. Do you see the CoM as a useful tool to better engage citizens in local climate action plans in the Netherlands? Why yes or not?
31. Do you see the CoM as a useful tool to better monitor citizen participation in local climate actions in the Netherlands? Why yes or not?
32. Do you see the CoM as a useful tool to increase governance capacity of cities?
33. Do you have any additional remarks with regards to the role of the CoM in the citizen participation process of citizens in signatory cities?
34. Do you know any other person or people that are relevant to speak with?

APPENDIX E. INTERVIEW QUESTIONS ENERGY LEADER

For interviewing the energy leaders, two questionnaires were drafted: (1) for energy leaders that live in a city that is member of a city climate network; and (2) for energy leaders that live in a city that is not a member of a city climate network.

Questionnaire for Energy Leader in a signatory city

Introduction

1. Do you know the city has/is drafting a climate action plan?
2. How are you involved in the climate action plans of the Municipality?
3. For how long have you been actively participating in climate action?
4. Why did you become active in the municipality's climate plans?
    a. Personal reasons
    b. Influence by the municipality

Knowledge about CoM

5. Do you know what is the CoM?
6. What do you think the CoM's mission is?
7. What do you think are the climate priorities for the Municipality? Relate to action plans of the Municipality.
8. Do you see many similarities between the priorities that come first within your organization and those of the CoM? Why and which similarities?

Citizen-municipality communication

9. How would you describe your communication with the municipality?
10. What is this communication mainly about?

Citizen engagement

11. Are you aware of the effects citizen participation has on the implementation of climate action plans?
12. What do you think is the importance the Municipality gives to citizen participation in the local climate action plan?
13. How would you describe the interaction between the Municipality and citizens?
14. How does the Municipality promote the participation/engagement of citizens in climate action? Relate to personal experiences and check against climate plans
15. What kind of tools does the Municipality use? (trainings, tailored guidelines, knowledge sharing…) Relate to personal experiences and check against climate plans
16. Have you participated in one of these activities?
17. How did the municipality reach out to you?
18. How do you think is the information flow between the Municipality and citizens?
    a. One-way
    b. Two-way

19. Do you think citizens have a space to share their opinions and contribute in the creation of a climate plan?
    a. If so, how do you express yourself?
    b. What method does the municipality offer to you to make your voice count?
20. How intensively do you experience the citizen participation process in the Municipality? Relate to his experiences
21. Why do you think the municipality succeeds/fails to engage citizens in climate action of the city?

Conclusions

22. Do you have any additional remarks with regards the citizen participation process in the Municipality?
23. Do you feel satisfied with the level your engagement in climate action?
24. Do you know any other person or people that are relevant to speak with?

Questionnaire for Energy Leader in a non-signatory city

Introduction

1. Do you know the city has/is drafting a climate action plan?
2. How are you involved in the climate action plans of the Municipality?
3. For how long have you been actively participating in climate action?
4. Why did you become active in the municipality's climate plans?
    a. Personal reasons
    b. Influence by the municipality
5. What do you think are the climate priorities for the Municipality? Relate to action plans of the Municipality.
6. How the relationship with the municipality?

Citizen-municipality communication

7. How would you describe your communication with the municipality?
8. What is this communication mainly about?

Citizen engagement

9. Are you aware of the effects citizen participation has on the implementation of climate action plans?
10. What do you think is the importance the Municipality gives to citizen participation in the local climate action plan?
11. How would you describe the interaction between the Municipality and citizens?
12. How does the Municipality promote the participation/engagement of citizens in climate action? Relate to personal experiences and check against climate plans
13. What kind of tools does the Municipality use? (trainings, tailored guidelines, knowledge sharing…) Relate to personal experiences and check against climate plans
14. Have you participated in one of these activities?
15. How did the municipality reach out to you?

16. How do you think is the information flow between the Municipality and citizens?
    a. One-way
    b. Two-way
17. Do you think citizens have a space to share their opinions and contribute in the creation of a climate plan?
    a. If so, how do you express yourself?
    b. What method does the municipality offer to you to make your voice count?
18. How intensively do you experience the citizen participation process in the Municipality? Relate to his experiences
19. Why do you think the municipality succeeds/fails to engage citizens in climate action of the city?

Conclusions

20. Do you have any additional remarks with regards the citizen participation process in the Municipality?
21. Do you feel satisfied with the level your engagement in climate action?
22. Do you know any other person or people that are relevant to speak with?

APPENDIX F. INTERVIEW QUESTIONS CIVIL SERVANT

For interviewing the civil servants, two questionnaires were drafted: (1) for civil servants working at the municipality of a city that is member of a city climate network; and (2) for civil servants working at the municipality of a city that is not a member of a city climate network.

Questionnaire for civil servant in a signatory city

Introduction

1. What is your position within the municipality XXX?
2. How are you involved in the climate plans of the municipality?
3. How many of your colleagues are working on the municipality's climate action plans?

Knowledge about CoM

4. How are you involved in the CoM?
5. How many of your colleagues are working on the CoM?
6. What do you think the CoM's mission is?
7. What are the climate priorities for the Municipality? Relate to action plans of the Municipality.
8. Do you see many similarities between the priorities that come first within your organization and those of the CoM? Why and which similarities?

Examination of the CoM within the Municipality

9. Why did the municipality decide to join the CoM?
10. How would you describe the interaction (communication) with other local authorities:
    a. The CoM
    b. CoM coordinator (Rijskwaterstaat)
    c. CoM supporter (Klimaatverbond)?
    d. Other municipalities?
11. When you communicate with these other organizations, what is this communication mainly about?
12. How active or widely used is the CoM within the Municipality?
    a. Why does it succeed/fail to be extensively used?
        i. Better/Not enough governing capacity
            1. Staff
            2. Money
            3. Knowledge of the city network
            4. Experience
        ii. Competition/Support with other networks
            1. Regional networks
        iii. Contextual factors
13. How do you think the CoM complements or competes with regional climate networks?

Citizen engagement

14. Are you aware of the effects citizen participation has on the implementation of climate action plans?

15. What is the importance the Municipality gives to citizen participation in the local climate action plan?
16. How would you describe the interaction between the Municipality and citizens?
17. How does the Municipality promote the participation/engagement of citizens in climate action? Relate to action plans
18. What is the target group for this promotion? Relate to action plans
19. What kind of tools does the Municipality use? (trainings, tailored guidelines, knowledge sharing…) Relate to action plans
20. How do you think is the information flow between the Municipality and citizens?
    a. One-way
    b. Two-way
21. Do you think citizens have a space to share their opinions and contribute in the creation of a climate plan?
    a. If so, how do they express themselves?
    b. What method does the municipality offer to citizen to make their voices count?
22. How intensively do you experience the citizen participation process in the Municipality?
23. How would you explain this level of participation?
24. Do you have means to monitor citizen engagement in the Municipality?
25. What do you think are the main enablers in the Municipality to promote citizen participation in local climate action plans? And why?
    a. Finance
    b. Knowledge
    c. Personnel
    d. Trust
26. Do you think, with the current practices, that the Municipality is committed to engage citizens into climate action?

CoM and citizen engagement

27. What has the participation in the CoM brought to the Municipality in terms of
    a. Citizen engagement efficacy?
    b. Knowledge and information?
    c. Financing?
    d. Influence in the climate debate (such as government layers)?
28. How useful is the CoM as a tool to better engage citizens in local climate action plans? And why?
29. Do you see the CoM as a useful tool to better monitor citizen participation in local climate actions? And Why?
30. What is needed for the Covenant of Mayors to play a more important role within the Municipality?

Conclusions

31. Do you have any additional remarks with regards the citizen participation process in the Municipality?
32. Do you have any additional remarks with regards to the role of the CoM in the citizen participation process?

33. Do you know any other person or people that are relevant to speak with?

Questionnaire for civil servant in a non-signatory city

Introduction

1. What is your position within the municipality XXX?
2. How are you involved in the climate plans of the municipality?
3. How many of your colleagues are working on the municipality's climate action plans?
4. What are the climate priorities for the Municipality? Relate to action plans of the Municipality.

Knowledge about CoM

5. Do you know what the CoM is?
6. In case of a positive answer to Q5, why do you think the city has decided not to join in such network?

Interaction with other actors

7. How would you describe the interaction (communication) with other actors regarding climate action?
    a. Other municipalities?
    b. NPRES
8. When you communicate with these other organizations, what is this communication mainly about?

Citizen engagement

9. Are you aware of the effects citizen participation has on the implementation of climate action plans?
10. What is the importance the Municipality gives to citizen participation in the local climate action plan?
11. How would you describe the interaction between the Municipality and citizens?
12. How does the Municipality promote the participation/engagement of citizens in climate action? Relate to action plans
13. What is the target group for this promotion? Relate to action plans
14. What kind of tools does the Municipality use? (trainings, tailored guidelines, knowledge sharing…) Relate to action plans
15. How do you think is the information flow between the Municipality and citizens?
    a. One-way
    b. Two-way
16. Do you think citizens have a space to share their opinions and contribute in the creation of a climate plan?
    a. If so, how do they express themselves?
    b. What method does the municipality offer to citizen to make their voices count?
17. How intensively do you experience the citizen participation process in the Municipality?
18. How would you explain this level of participation?
19. Do you have means to monitor citizen engagement in the Municipality?

20. What do you think are the main enablers in the Municipality to promote citizen participation in local climate action plans? And why?
    a. Finance
    b. Knowledge
    c. Personnel
    d. Trust
21. Do you think, with the current practices, that the Municipality is committed to engage citizens into climate action?

Regional networks

22. How is the municipality involved in regional climate collaboration?
23. What has the participation in the regional network brought to the Municipality in terms of
    a. Citizen engagement efficacy?
    b. Knowledge and information?
    c. Financing?
    d. Influence in the climate debate (such as government layers)?
24. How useful is the regional network as a tool to better engage citizens in local climate action plans? And why?
25. Do you see the regional network as a useful tool to better monitor citizen participation in local climate actions? And Why?

Conclusions

26. Do you have any additional remarks with regards the citizen participation process in the Municipality?
27. Do you know any other person or people that are relevant to speak with?

APPENDIX G. CODE FOR PUBLIC PARTICIPATION

This appendix shows the code book used for analysing public participation in the case studies selected.

***Table 7**. Codes for analysing public participation data*

Citizen participation category	**Sub category**	**Code**
Initiator capacity	Decision-making	- Interests local debate - Prioritization - Urgency - Policy agenda
	Implementation	- Financial resources - Availability of staff - Knowledge - Experience
	Accountability	- Transparency - Trust - Monitoring - Communication strategy - Legitimacy
Purpose of participation	Public body	- Exchange of information and education - Improve or better outcomes - Acceptance and responsibility - Legal requirements - Trust and support
	Citizens	- Influence in projects - Will to do something - Revenue stream - Share information - Gain knowledge
Type of stakeholder	Private	- Interests - Needs - Role
	Public	- Interests - Needs - Role
	Citizens	- Interests - Needs - Role
	International bodies	- Interests - Needs - Role
Methods for citizen participation	Inform	- Public meetings - Evening meetings - Information broadcast - Newspaper - Online media - Social networks - Advisor
	Consult	- Survey - Focus group
	Involve	- Workshop
	Partnership	- Citizen advisor committee - Consensus building
	Citizen control	- Neighbourhood corporations

APPENDIX H. SIGNATORY CITIES BY COUNTRY OF THE COVENANT OF MAYORS

***Table 8**. Signatory cities of the Covenant of Mayors by country*

Country	Number of signatory cities	Inhabitants	Coordinators	Supporters	SECAPs submitted	SECAPs accepted	Submitted monitoring reports
Italy	4884	53162356	105	33	3244	2782	1044
Spain	2779	37872033	35	20	1561	1225	927
Belgium	523	14091684	23	25	243	213	186
Ukraine	295	21724483	14	3	91	65	41
Greece	224	9064869	6	10	127	92	29
Hungary	213	7227545	2	8	30	20	12
France	183	20594845	5	12	82	33	17
Romania	176	11013593	2	10	65	52	17
Portugal	166	8061981	7	8	113	99	71
Croatia	95	2193322	0	6	66	56	27
Germany	85	20345984	3	8	62	40	25
Poland	83	7058217	3	7	39	26	12
Moldova	68	1948852	1	3	16	11	5
Sweden	67	4907108	2	5	52	28	26
Belarus	58	4151014	2	2	11	9	7
Slovenia	58	1170079	0	5	29	26	4
United Kingdom	56	24612005	1	2	34	18	10
Czechia	52	2647561	1	2	7	5	5
Bosnia-Herzegovina	51	2504341	0	2	19	13	4
Bulgaria	44	3207991	0	6	25	16	5
Denmark	43	3515260	2	1	35	24	13
Slovakia	39	1109265	3	1	4	4	2
Malta	36	243906	0	1	24	9	0
Netherlands	35	5462202	1	1	20	5	5
Turkey	30	22946655	0	1	12	9	3
Armenia	28	1756833	1	3	10	8	0
Austria	28	1969077	0	2	12	8	6
Lebanon	27	188450	0	0	3	3	0
Cyprus	25	526492	0	3	24	22	8
Latvia	24	1250654	1	2	20	14	9
Georgia	23	2268035	5	3	10	10	1
Ireland	20	3112362	0	4	9	7	3
Finland	17	2473056	1	3	11	9	8
Lithuania	17	1552224	0	1	14	7	3
Palestine	16	1403069	0	0	4	4	0
Serbia	14	2516650	0	2	1	1	0

Morocco	13	3177628	0	0	5	4	0
Luxembourg	12	148806	0	1	1	1	0
Norway	12	1784999	1	1	8	3	1
Switzerland	11	909198	0	0	9	3	3
Kazakhstan	9	2621055	1	2	1	1	0
Azerbaijan	7	788325	1	0	1	1	0
Estonia	7	563300	0	2	5	4	2
Israel	7	462244	0	0	4	3	1
Jordan	7	1825000	0	0	3	2	0
Montenegro	6	289519	0	0	3	1	0
Albania	5	692086	0	0	1	1	0
Kyrgyzstan	5	294900	1	0	0	0	0
Macedonia	5	877768	0	2	1	1	0
Mexico	4	1963226	0	0	0	0	1
Tunisia	4	739947	0	0	1	1	0
Iraq	3	5696178	0	0	0	0	0
Algeria	2	692500	0	0	3	3	0
Argentina	2	2947907	0	0	0	0	0
Kosovo	2	180514	0	0	0	0	0
Bangladesh	1	81720	0	0	0	0	0
Brazil	1	152435	0	0	0	0	0
Chile	1	269992	0	0	0	0	0
Iceland	1	118427	0	0	1	1	1
Tajikistan	1	30000	0	1	1	1	0
Total	**10710**	**337161727**	**230**	**214**	**6177**	**5004**	**2544**

APPENDIX I. STEPS FOR CITIZEN PARTICIPATION PROCESS IN ALKMAAR

Figure 17. *Participation plan in Alkmaar*