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TMN IN DUTCH CITIES: A LACK OF LEARNING AND CHANGE?

A qualitative research into the role Transnational Municipal Networks play in shaping the climate policy of the Dutch cities Amsterdam, Rotterdam, Nijmegen and Tilburg

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SUMMARY

This thesis studies the role Transnational Municipal Networks (TMN) play in shaping the climate policy of four Dutch cities. However, not all TMN are the same, and therefore their roles could differ. Four different types of TMN (Busse, as cited in Giest & Howlett, 2013) are analyzed in this comparative case study: C40, EUROCITIES, ICLEI and the Covenant of Mayors. Despite their differences, all TMN govern by diffusion to induce policy change and their main governance strategy is fostering policy learning. The two concepts of policy diffusion (either policy learning, emulation/imitation, competition or coercion) and policy change (either innovation, maintenance, succession, termination or stability), are leading in the policy document analysis and interviews with policy officers.

The outcome of this study is that TMN play an instrumental role for Dutch cities to achieve their local policy goals. None of the TMN play a role in shaping the contents of Dutch cities' climate policy, so TMN never induce policy change. Also, indications for policy learning could not be found. None of the cities make use of the provided tools and services by TMN, and all cities have a teaching role instead of a learning role at the few events they attend. Emulation/imitation and competition appear to be most explanatory in understanding the role TMN play in the Dutch cities. All cities view themselves as a frontrunning sustainable city and are a member of TMN because of international profiling and seeking recognition in an international sustainable community.

The main explanatory mechanisms, emulation/imitation and competition, cannot be explained from the traditional rational view on the policy process. These mechanisms rather fit an institutional- cultural perspective, since TMN appear to be strong institutions that use discourses to trigger role-guided behavior in cities. Thus, to understand TMN as policy diffusing actors, the theory on policy diffusion should take an institutional-cultural turn.

PREFACE

Dear reader,

This master thesis does not only mark the end of my academic career, is also a perfect assemblage of the issues that specifically interested me in the past five years of studying. During my bachelor Public Administration and Organisational Science in Utrecht, I learned how Dutch public organizations deal with societal challenges. Along the way, I developed a specific interest for climate change as the biggest governance challenge of the 21st century and translated this interest in doing a minor in Social Environmental science. Climate change is however not an issue that stays within national boundaries. It is a prime example of global governance. I zoomed out to the global governance arena in the master International Public Management and Policy Masking at the Erasmus University Rotterdam. These three areas, the local, the global and climate governance, all come together in this master thesis.

Furthermore, during the process of writing this master thesis, I got acquainted with the practice of influencing public climate policy myself. As the first chair of the Youth Climate Movement, we lobbied for more ambitious climate policy on the national level. The Youth Climate Movement did not exist until November 2016, but we managed to unite over 30 youth organisations to write our own vision on a sustainable future in 2050 by November 2017. We reached national press and handed our vision over to the minister of Economics and Climate.

This combination of theory and practice has prepared me very well to further realizing my ambitions in the field of public climate policy, and has made the period of doing my masters unforgettable. Therefore, I want to thank my thesis supervisor for being patient and giving me lots of space, I want to thank my board for the incredible cooperation of the past year, and I want to thank my friends and family wholeheartedly for the support during stressful times. Specifically, I want to thank my grandfather and Iris for their feedback. On to new challenges!

Wilmine van den Bosch

CONTENTS

1. INTRODUCTION

"How to fix climate change: put cities, not countries, in charge" (Barber, 2017).

Climate change might be the biggest current challenge for global governance. National governments have tried multiple times to come to agreements to mitigate global warming under the flag of the United Nations Framework Convention for Climate Change (UNFCCC). This has proved to be very difficult, as climate change is a typical collective action problem. Up until 2015 no formal agreements were made, but the Paris agreement of 2015 seemed to be a breakthrough. The UNFCCC agreed on the ambition that the global temperature rise should stay below 2 degrees Celsius (UNFCCC, 2016). Yet, even this agreement was not binding, which became painfully clear when the United States announced in 2017 that they would cease all participation in the Agreement (Shear, 2017). Nonetheless, to stay within the limit of 2 degrees warming, climate action is urgent. The longer mitigation is delayed, the bigger the consequences will be.

These consequences are especially impending for densely populated areas like cities. Cities have a crucial relation to climate change because they have both responsibility and vulnerability (Toley, 2008). According to the UN, over two-thirds of the global population will live in cities in 2050. In Europe, already 72% of the population lives in urban areas right now (Eurostat, 2016). Many cities are located in coastal areas. Cities are therefore vulnerable to flooding, epidemics and extreme weather conditions like hurricanes and heat waves. Cities are not only vulnerable, they also hold the key to both mitigating and adapting to climate change. Cities are responsible for around 70% of total greenhouse gas emissions (UN-Habitat, 2011) and they are incubators for the social and technical innovation that is necessary to reduce greenhouse gasses and to create safe, resilient cities.

Where nation states seem to lag on adequate measures, cities are becoming more and more progressive in mitigating and adapting to climate change autonomously. They collaborate on a global scale in so called Transnational Municipal Networks (TMN). These networks represent the interests of cities at international arenas, but more importantly, they facilitate policy learning and the exchange of best practices between cities worldwide. The importance of cities and city networks was first acknowledged in 1992 in the Agenda 21, the outcome of the UN summit in Rio de Janeiro. Nowadays, dozens of TMN have emerged.

This local governance for global problems is fairly unknown to International Relations. So far, International Relations has mainly focussed on nations as the central actors in global governance. This perspective seems to tilt. Benjamin Barber (2013) advocates for the pragmatic problem-solving ability of cities in his book 'if mayors ruled the world' and states that mayors will be the future central actors in global governance. Bulkeley & Betsill (2005) and Lee (2015) continue that the field of International Relations is not suitable to understand this contemporary phenomenon. Instead of the term 'International relations', Lee (2015) therefore introduces the term 'trans-local relations', since these local interactions transcend the state level. This new 'glocal' perspective is an interesting field of study and

can provide us with new insights on how to solve global problems in both the fields of international relations, comparative politics and public policy.

Around the 2000s, TMN and translocal relations emerged as a field of study. Many research has been conducted on the incentives of cities to adopt climate strategies and to participate TMN. Fewer research has been done on the actual impact of TMN on the implementation of climate strategies. Bulkeley et al. (2003) say that "the means through which TMNs influence and impact upon municipal governance demands further theoretical clarification and empirical investigation" (p.248). This thesis aims to fill this gap. If cities hold the key to tackling climate change, its crucial to understand why and how they cooperate in order to support and accelerate this process. This study wants to contribute to a better understanding of the interaction between TMN and cities, and, in particular, to understand the role that TMN play in shaping climate policy of cities. Therefore, the research question is as follows:

What role do Transnational Municipal Networks play in shaping the climate policy of Dutch cities and how can this role be explained?

However, TMN are not identical and therefore their roles might differ. Busse (as cited in Giest & Howlett, 2013) has distinguished four types of TMN by categorizing them on a global-local scale and a scale of large-small number of members. He expects that local networks with a small number of members are better able to have an impact on cities than global networks with a large number of members. In this study, these different types of TMN are the central units of analysis and each type will be represented by one TMN. So, four TMN are the subject of this multiple case study: C40 Climate Leadership Group, ICLEI, EUROCITIES and the Covenant of Mayors.

The few studies that were conducted on the impact of TMN mainly focussed on the Anglo-Saxon countries (Bestill & Bulkeley, 2005). So far, the impact of TMN has not been analysed in The Netherlands. The Netherlands is however an interesting case since they are located below sea level for 26% (Planbureau voor de Leefomgeving, 2007) and are internationally acknowledged for their water management. Climate policy is widespread among Dutch cities and so is membership to TMN. Despite this, the Dutch government has so far not taken bold action to meet their share of the Paris agreement. In comparison to other European countries, the Netherlands is staying behind (Crezee, 2017). The lagging of the government might encourage cities to take matters into their own hands, for instance through TMN. Therefore, the role the different types of TMN play in shaping climate policy will be tested in four Dutch cities: Amsterdam, Rotterdam, Tilburg and Nijmegen.

Despite the differences between the four types of TMN, all TMN have one thing in common. They all govern by policy diffusion (Hakelberg, 2014). Obinger, Schmitt & Stark (2013) distinguish four different types of policy diffusion: policy learning, emulation, competition and coercion. Through these mechanisms TMN try to induce policy change. Policy change is better defined as policy dynamics and also consists of four types: innovation, maintenance, succession and termination. These two concepts, policy diffusion and policy change, are leading in defining the role that TMN could play in shaping Dutch climate policy.

The thesis is structured as follows: first, in the theoretical framework, the concept of TMN and the concepts of policy diffusion and policy change are elaborated upon. An overview of existing literature will help to draw the hypothesis that emulation and imitation probably are the main mechanisms for policy diffusion and that policy change will probably not occur.

Secondly, in the methodology chapter, the main research methods of this embedded comparative multiple case study are described: analysing climate policy documents dating from 2007- 2017 and interviewing policy officers.

Thirdly, in chapter four, the results of the case studies on TMN are presented by describing their roles in the various cities. Apparently, TMN are not very present in the climate policy documents of these cities and the cities are relatively inactive in the networks. At the few events they attend, they mainly have a teaching role.

Fourthly, in the chapter 'analysis', the results of the case study are analysed based on the theoretical framework. The expected difference between the four types of TMN cannot be distinguished and policy change in city climate policy appears to never be induced by TMN. Furthermore, not policy learning but emulation/imitation and competition appear to be most explanatory in understanding the role TMN play in Dutch cities.

Finally, in the conclusion, the main findings are discussed and their relevance for both science and society is considered. Cities appear to use TMN as an instrument to achieve their own local goals of profiling and gaining recognition. This role cannot be understood from a traditional rational view on the policy process. An institutional-cultural perspective is necessary, since TMN represent an idea that cities want to belong to.

2. THEORETICAL FRAMEWORK

This chapter presents the theoretical framework on which the empirical research is based. First, the concept of TMN is explained and categorized in accordance with the typology of Busse (as cited in Giest & Howlett, 2013). TMN appear to govern by policy diffusion to promote policy change. These two concepts, policy diffusion and policy change, are discussed in the second part of the theoretical framework. Finally, an overview of previous studies on the role that TMN play in influencing climate policy is presented and will result in a hypothesis.

2.1 What are Transnational Municipal Networks?

2.1.1 Definition, goals and objectives

The term 'Transnational Municipal Networks' consists of three parts. ´Transnational´ means operating across national boundaries, 'municipal' denotes a subnational actor like a city or a region, and 'network' can be explained as a policy network. A policy network is defined by Börzel (1998, p. 254) as 'a set of relatively stable relationships which are of non-hierarchical and interdependent nature linking a variety of actors, who share common interests with regard to a policy and who exchange resources to pursue these shared interests.' Thus, TMN link municipalities across different countries to pursue a common goal. Kern & Bulkeley (2009) define TMN by several characteristics. First and foremost, members are autonomous and free to join or leave. In other words, TMN are voluntary undertakings. Furthermore, TMN are horizontal, non-hierarchical organisations and are therefore characterized as a form of self-governance (Kern & Bulkeley, 2009).

The goals and objectives of TMN vary considerably, given the different issues they can concern. The most common issues covered by TMN are security (e.g. terrorism) and mitigating and adapting to climate change (Barber, 2013). Despite these different goals in content, Giest & Howlett (2013) extract two overall goals: 1) the external goal of representing the interest of their members and 2) the internal goal of facilitating the exchange of experience and transnational learning among their constituents. Since, this study examines the role TMN play in shaping the policy of Dutch cities and not vice versa, the latter internal goal will be the central focus of this study.

This thesis focusses on TMN that aim to counter climate change. Kern & Bulkeley (2009) are often cited authors on this topic and they present the specific aims of climate TMNs. Next to representing the interests of their constituents at national, supranational, and international levels and promoting the exchange of experience and transfer of expertise, climate TMN specifically aim to seek voluntary commitments from municipalities for the reduction of GHG emissions and try to enhance local capacities to address climate change (Kern & Bulkeley, 2009; Hakelberg, 2014). TMN can also act as a means

through which to implement policy (e.g. Covenant of Mayors to implement the EU's 2020 agenda) (Bulkeley et al., 2003).

2.1.2 Governance strategies

Since TMN are voluntary entities, they have no formal authority to impose policies. Therefore, they employ different forms of governance. Kern & Bulkeley (2009) describe these governing strategies elaborately and distinguish between internal and external governing strategies. The external strategies concern among other things lobbying and participation in EU stakeholder consultation processes. The internal governing strategies are crucial in understanding the behaviour of Dutch cities with regard to the networks. These internal strategies are described below.

The first internal governance strategy is called 'information and communication' by Kern & Bulkeley (2009). This strategy includes what Kern & Bulkeley (2009) call the 'bread and butter' of TMN: facilitating knowledge exchange by collecting and sharing best (or good) practices among their members. According to Kern & Bulkeley (2009) 'learning what works' from other cities is a key motivation for cities to participate in the networks. This learning does not only take place between members of TMN, TMN offer certain tools and services as well (Bulkeley et al., 2003). A way to provide this is with technical support, e.g. providing "a software package to help local authorities calculate, forecast, and monitor their emissions of greenhouse gases" (Betsill & Bulkeley, 2004, p. 478). However, according to Kern & Bulkeley (2009), TMN have difficulty in guaranteeing the quality, replicability and transferability of best practices. Cities are keen to produce best practices, but there is less evidence that cities really act upon these best practices. Cities would rather use best practices as a source of inspiration.

The second strategy is indicated as 'project funding and cooperation'. In contrast to the first strategy, this form of governance is more tangible. TMN either bid for project funding themselves, together with their constituents, or offer their members the opportunity to contact each other to jointly bid for project funding (Kern & Bukleley, 2009). These funds are usually made available by the European Union. Kern & Bulkeley (2009) however acknowledge that "the process of applying for and delivering such projects is resource-intensive and therefore primarily attracts the most active and established members of TMN".

The third strategy of "recognition, benchmarking, and certification" is a form of peer pressure. Cities get recognition for their performance, for instance by being listed as an example for other cities. Another common strategy is to organise a competition for winning a specific award. Benchmarking is intended to give cities insight in their performance by offering them the service to compare their efforts to those of other cities, with the indirect intention that cities would want to outperform other cities. Some TMN hand out labels to certain cities as a certification for their performance. Although peer pressure is a powerful tool, according to Kern & Bulkeley (2009) TMN only make limited use of this tool because they lack the authority to force members to participate benchmarking or competitions, and they lack authority to impose sanctions by non-compliance.

2.1.3 Typology of existing networks

Since the 90s, TMN have sprouted in many forms. Figure 1 shows a clear overview of the most common current TMN on climate change.

	Global	Regional
Small number of members	1. Global high-profile networks - World Mayors Council on Climate Change (WMCCC) - C40 cities - International Solar Cities Initiative (ISCI) - Clinton Climate Initiative (CCI) - Sustainable Cities International Network (SCI) - The Global Legislators' Organisation (Globe)	2. Regional high-profile networks - EUROCITIES - Cities Development Initiative for Asia - Asian Cities Climate Change Resilience Network (ACCCRN
Large number of members	3. Global in-depth networks - Cities for Climate Protection Campaign (CCP) - Local Governments for Sustainability (ICLEI) - United Cities and Local Governments (UCLG) - The Climate Group - Global Covenant of Mayors	4. Regional in-depth networks - Climate Alliance - Energie-cités - Covenant of Mayors (now Global Covenant of Mayors, type 3) - Mayors Climate Protection Centre

Figure 1: Typology of TMN (Busse, as cited in Giest & Howlett, 2013)

Busse (as cited in Giest & Howlett, 2013) presents a typology of climate TMN based on the number of participants and the territorial scope. They make a distinction between regional and global TMN, and TMN with a small and a large number of members. Busse (as cited in Giest & Howlett, 2013) expects a difference in effectiveness between the four types which he substantiates with several studies. According to him, regional-in-depth networks are most effective in getting cities to adopt and improve climate policies, and global- high-prolife networks appear to be the least effective.

Global networks, like ICLEI and C40, are very useful for raising global awareness and gaining publicity. However, they might result in members who only pay 'lip service' to the TMN, without actual implementation (Giest & Howlett, 2013, p. 9). According to Giest & Howlett (2013), members of these networks usually had prior interest in climate policies and became members (or were targeted as members) based on this condition. Therefore, these networks only complement action that already exists on the local level. In global networks well-known cities lead by example, these networks are not always able to offer best practices that are useful at the local level. Giest & Howlett (2013) say that "for network learning to occur, cities still need examples and role models that are 'closer to home (p. 8)".

Regional in-depth networks are most beneficial for cities to adopt policies concerning mitigating climate change according to Giest & Howlett (2013). They offer useful best practices and are better able to hold their members accountable for their performance and commitments. In contrast to global networks, regional networks "formulate plans together and act on them individually and collectively" (Giest& Howlett, 2013, p. 11). Notably, the networks in this part of the table are mostly European and are either supported by the European Union or by national governments.

2.1.4 TMN in the Netherlands

Membership to TMN is widespread among Dutch cities. In the Netherlands, six TMN are active: ICLEI, C40, Energy Cities, Climate Alliance, the Global Covenant of Mayors on Climate & Energy and EUROCITIES. Figure 2 presents an overview of which cities are a member of which TMN. The cities are arranged by size.

City	**ICLEI CCP**	**C40**	**Energy cities**	**Climate Alliance**	**Global Covenant of Mayors on Climate & Energy**	**EUROCITIES**
Amsterdam		X			X	X
Rotterdam	X	X			X	X
Den Haag				X	X	X
Utrecht	X		X		X	X
Eindhoven	X				X	X
Tilburg	X				X	X
Groningen						X
Almere					X	X
Breda					X	
Nijmegen	X				X	
Haarlem					X	
Arnhem					X	
s-Hertogenbosch					X	
Zoetermeer			X		X	
Delft			X		X	
Helmond					X	
Heerlen			X		X	
Heerhugowaard					X	
Lingewaard					X	
Midden-Delfland					X	
VNG Klimaatverbond	x			X		

Figure 2: TMN membership among Dutch cities

2.1.5 Learning as key influencer

Besides their internal function of interest representation, Transnational Municipal Networks are self-governing networks that aim to help cities in adopting and improving climate policy. In this thesis the focus lies on this internal function of TMN. TMN use project funding, recognition and benchmarking to achieve this goal. However, as will also be clear from the case descriptions in chapter four, their key strategy to achieve this goal is fostering transnational learning among their members, both directly from the network and between member cities.

2.2 What roles could Transnational Municipal Networks play in shaping local policy?

TMN govern by policy diffusion to induce policy change. In this section, both the concepts of policy diffusion and policy change will be discussed. However, to fully understand these two concepts, it is crucial to first take a closer look at the different perspectives on the policy process. One's perspective on policy making will shape our expectations on the roles that TMN could play in shaping climate policy. Later, these different perspectives will be connected to the different causal mechanisms for policy diffusion.

2.2.1 Different perspectives on the policy process

TMN are rather clear about their central strategy for policy diffusion: policy learning. The concept of policy learning fits in a *rational* view on the policy process. In this traditional view on the policy process, policy is made on the basis of goal achievement. A homo-economicus will weigh the cost and benefits of certain decisions and will opt for the best solution to a problem (Allison & Zelikow, 1999). Knowledge and information are viewed as crucial neutral factors in this process. The policy process is cyclical: agenda-setting, policy design, policy implementation, policy evaluation (Sabatier, 2007). However, Herbert Simon (1991) introduced the concept of bounded rationality. People have limited sources of information and means, and propagate their rationality within boundaries.

In the *political* view on the policy process, the selection of policy and policy instruments is not always a result of a cost-benefit analysis, but rather the result of a power struggle between different, often competing, interests (Pressman and Wildavsky, 1973). Policy is not made by a single actor, the government, but stems from a policy network of stakeholders that influence the policy process out of self-interest. This process is not linear but rather ad hoc. External events may create a 'window of opportunity' for problems and solutions to find each other (Kingdon, 1984).

Following the *institutional* perspective, human behavior is shaped by institutions: formal or informal rules, such as procedures, systems, routines and habits (March & Olson, 1983). Therefore, free will is restricted by the institutional 'iron cage' and so is decision making in the policy process (DiMaggio & Powell, 2000). Institutional rules and expectations can lead to role guided behavior instead of rational behavior by actors. Path dependency is an important concept in this perspective. It means that past decisions will eliminate the amount of available options in the future, creating a policy path of incremental changes. Only sudden external events can create 'critical junctures' that lead to a new policy path (Thelen, 1999).

Finally, the *cultural* perspective discards the belief in an objective truth, and thus the idea of an optimal policy solution. Reality is a social construction based on a process of mutual 'sense making' through language, interactions, symbols, metaphors etc (Weick, 1995). The 'framing' and 'reframing' of policy problems and solutions is a discursive process that is central in the creation of a shared paradigm. 'Discourse coalitions' are groups that share the same paradigm and thus the same interpretations of policy problems (Hajer, 1993). These discourses too are institutions that restrict neutral decision-making for optimal policy solutions.

So, depending on the perspective, our expectations on the role of TMN might alter. For instance, when TMN are looked at from the institutional perspective, their role might be defined in terms of triggering 'role guided behavior'. When looked at from the rational perspective, the improvement of city policy

might be the central incentive for cities to join. These four different perspectives will be applied consistently to the analysis of the mechanisms for policy diffusion.

2.2.2 Policy diffusion

The first part of the theoretical framework made clear that TMN aim to spread and improve climate policy among cities. In the literature, this spread of policy is called 'policy diffusion'. According to Selin & VanDeveer (2007), "climate change networks function as central vehicles for facilitating policy diffusion and learning (p. 15)" and according to Hakelberg (2014) TMN govern by diffusion. Policy diffusion is the process by which "policy choices in one country affect the policy choices in other countries" (Meseguer and Gilardi 2009, p. 528).

Obinger et al. (2013) present four causal mechanisms that may lead to policy diffusion (Also Shipan & Volden, 2008; Hakelberg, 2014). Although they use these mechanisms to understand policy diffusion of welfare state policy between national governments, the distinction is very helpful to understand the roles TMN play in shaping local climate policy. Obinger et al. (2013) distinguish:

1. Learning;
2. emulation (or imitation);
3. competition;
4. and coercion.

The first mechanism, learning, is clearly rational. It assumes that rational policy actors actively integrate policy learning in their policy cycle to improve their policy solutions. The second mechanism, emulation and imitation, can be assigned to both the institutional and the cultural perspective, since institutions and discourses may lead to role-guided behaviour of cities. The third and fourth mechanism stem from the political perspective, because they are based on the strategic use of power (although in an institutional context). These four mechanisms and their relevance for TMN will be discussed separately below. Special attention is paid to policy learning, since this is the self-stated key governance strategy of TMN. The section on every mechanism will end with a short conclusion on the role that TMN might play in Dutch cities.

Learning

The literature on the first mechanism of policy learning is extensive and goes way back. Already in 1992, Bennet & Howlett try to reconcile the different theories on policy learning, for they notice that many authors imply different meanings while all addressing the same term. They identify different types of learning by dividing the existing theories of Heclo (1978), Rose (1991), Hall (1993) and Etheredge (1981) by the questions: who learns, learns what, and to what extent? Rose's 'lesson drawing' seems to fit best the type of policy learning TMN seem to achieve. According to Bennet & Howlett (1992), the answer to 'who learns?' in Rose's work is policy networks, that learn about policy instruments (learn what?) to create program change (to what extent?). Rose does not focus solely on learning within the governmental organisation but on the process 'by which programs and policies developed in one country, are emulated by others and diffused around the world (Bennet & howlet, 1992, p. 277)".

Rose (1991) identifies policy learning as 'lesson drawing', in which he defines a lesson as "an action-oriented conclusion about a programme or programmes in operation elsewhere'' (Rose, 1991, p. 7). Policy makers are confronted with similar problems and by learning from how their counterparts respond, they can deal better with their own problems. Learning does not equal copying policies that other countries use. If the conclusion of learning is positive, policy can be transferred with the necessary

adaptions. If a solution turns out negative, policymakers can cross one option out. 'The process of lesson-drawing starts with scanning programmes in effect elsewhere, and ends with the prospective evaluation of what would happen if a programme in effect elsewhere were transferred here in future'' (1991, p. 3).

Following Rose (1991), policy makers learn about policy instruments. However, according to Hall (1993), policy learning might go beyond learning about policy instruments. Hall (1993) distinguishes three orders of policy learning, corresponding to three central variables of the policy process: the overarching policy goals, the policy techniques or instruments to attain these goals and the precise settings of these policy instruments. "For instance, if the goal of the policy is to alleviate the financial problems of the elderly, the chosen instrument might be an old age pension, and its setting would be the level at which benefits were set" (Hall, 1993, p. 278).

1. First order learning is rather technical and concerned with improving the settings of policy instruments. This type of learning generally results in incremental policy change. It involves routinized decision making and is seen as part of the regular policy process (Hall, 2011). First order learning takes place at the operational or tactical level. Regarding TMN, cities might alter their subsidies for green energy as a result of best practices from other cities.
2. Second order learning is more strategic and addresses the selection and development of policy instruments (Hall, 1993). In this case, cities might copy a multi-stakeholder approach from other cities to set shared goals with the industry. Both first and second order learning do not challenge the overarching policy goals and beliefs. According to Hall they therefore belong to Kuhn's 'normal science'.
3. Third order learning causes a change in fundamental policy beliefs and therewith a paradigm shift (Hall, 1993). The overarching goals of policies alter. With regard to this study, for example, TMN might play a role in convincing cities that they have a local responsibility in tackling the international problem of climate change.

Years later, in 2013, Heikkila and Gerlak still discuss the theoretical and conceptual challenges that scholars of policy learning face. Still, the definition of policy learning undecided, which leads to problems in measuring. For example, many scholars see policy diffusion as evidence of policy learning. But policy diffusion might be just a matter of coincidence and timing. Similar challenges exist in understanding the difference between individual and collective learning. Also, factors that might foster of inhibit learning are a part of the literature that is not fully developed.

That policy learning fits a rational view on the policy process is also reflected by the fact that the term policy transfer, rather than policy diffusion, is used to describe the spread of policy among multiple actors. Policy transfer conveys the message that knowledge can be intentionally transferred between two rational actors and assumes the logic of choice. Policy diffusion does however not necessarily imply rational transfer (Wolman & Page, 2002).

Thus, the first role that TMN could play in shaping local climate policy, is that of facilitating rational policy learning between cities, and learning from the network itself. This role implies that TMN have impact on the content of local climate policy: on instruments and the choice of instruments and maybe even on the overall policy goals. They try to influence this content by organising lectures and conferences, by providing tools and trainings, and by linking cities that could learn from each other.

Emulation or imitation

The second mechanism that can lead to policy diffusion is emulation. “Emulation refers to the ambition of political actors to conform to international trends and to belong to an international norm-based community” (Obinger et al., 2013, p.114). Policy diffuses not because of a rational cost-benefit analysis, but because actors want to conform to an international norm. These norms are institutions and propagated by certain discourses. Emulation is a form of role guided behaviour and fits the institutionalist and cultural approach. Hakelberg (2014) distinguishes roughly the same causal mechanisms as Obinger et al. but instead uses the term ‘imitation’. According to Hakelberg, cities “adopt a policy not for its effectiveness but for their peers’ and/or constituents’ belief in its appropriateness” (2014, p. 114). They adopt policy for their reputation, as a result of the peer pressure created by the widespread application of a certain policy. This way, policy diffusion can become purely symbolic. According to Hakelberg (2014) policy entrepreneurs like international organisations, advocacy networks and TMN, play an important role in creating international norms and expectations.

The phenomenon of organisations becoming more similar is called isomorphism. Although developed by DiMaggio & Powel (2000) for organisational sociology, the theory can be used for public policy as well. Institutional isomorphism “is defined as a process of homogenization that forces one unit in a population to resemble other units that face the same set of environmental conditions” (DiMaggio and Powell 2000, p. 66). The central question underlying studies on isomorphism refers to the mechanisms through which organizations become more similar over time.

Thus, the second role TMN could have in shaping local climate policy is creating peer pressure through institutions and discourses. This can be either intentional, for example by framing messages and creating benchmarks, or unintentional, since TMN might be part of a broader discourse on the role of cities in climate change. Rational policy learning aims to influence the content of policy, but since this mechanism can become purely symbolic, emulation and imitation is more about the form of policy.

Competition

The third mechanism that leads to policy diffusion is competition. According to Obinger et al. (2013) this mechanism concerns the strategic undertakings of cities to gain or preserve their competitive advantage. Hakelberg (2014) argues that TMN do no use this strategy to pursue their goals. The theory on policy diffusion mostly focusses on countries as units of analysis and discusses economic competition. Countries have an internal market and seek to gain competitive advantage over other countries, TMN however do not have internal markets. In contrast to Hakelberg, this study argues that competition is a very important mechanism for policy diffusion by TMN. However, not in the economic sense of the word. Cities might view membership to TMN as a way to create a green image that attracts economic activity, but more importantly, TMN widely use competition in the sense of outperforming other cities, they want to do better than another city, or to simply be the best.

Economic competition fits the rational perspective, but the mechanism of competition used in this thesis fits the political perspective on the policy process. Being the best and outperforming other cities is not a rational approach to find the best solution to a policy problem. It is a form of self-interest that might lead to more status and prestige, and increased influence in policy arenas. Furthermore, the incentives to join a competition probably result from an internal desire of local government officials to leave their mark and being re-elected. Notwithstanding, the norms that decide who is better or the best, are institutionally and culturally determined.

Thus, the third role TMN could have in shaping local climate policy, is creating competition between cities by organising awards, publishing benchmarks and provide cities with recognition for their performance. This mechanism might influence the content of local climate policy, but probably focusses on the form. Cities might change their policy, or the presentation of their policy, to gain a higher position in city rankings.

Coercion

The final mechanism causing policy diffusion is coercion. In Obinger's et al. (2013) comparative welfare state research, coercion implies the mandatory implementation of regulations imposed by higher authorities as the European Union or the United Nations. TMN are however voluntary entities and legislation is not part of their formal mandate. Still, TMN might use informal coercion to have an impact on local climate policy. Some TMN require strict conditions for membership. Cities have to meet these requirements and report on them on a regular basis. If cities fail to comply, TMN might use suspension or other forms of punishment like losing membership.

This mechanism also belongs to the political perspective on public policy. Adopting policy is the result of the strategic use of power. The adopted policy might rationally not be the optimal solution to a policy problem, but is implemented anyway. So, finally, the role TMN could have in shaping local climate policy is an attenuated form of coercion. They might force cities to implement certain policies, for the cities do not want to lose their membership. This mechanism does influence the actual content of the city climate policy.

2.2.3 Policy change/dynamics

TMN govern by policy diffusion to induce policy change. However, the above described mechanisms of policy diffusion do not automatically lead to a change in cities' climate policy. Regarding policy learning, the conclusion of 'lesson drawing' might also be that a policy should not change. Regarding emulation and imitation, membership to TMN can become purely symbolic, not resulting in any policy change. The same accounts for competition, cities might win an award with already existing climate policy. Coercion should lead to policy change, but is not a formal instrument of TMN.

Therefore, it is better to talk about policy dynamics. Hogwood and Peters (1982) distinguish four forms of policy dynamics. First, **policy innovation** refers to the development of new policy or even a new policy paradigm. There is however ongoing debate about whether or not policy can be developed apart from past developments. Second, **policy succession** involves the replacement of old policy with new policy that is aimed at the same problem. This generally takes place at the first and second order of policy instruments. Third, **policy maintenance** takes place when policy "is continued with the same task definition" (Hogwood & Peter, 1982, p. 229). This type is typically incremental of nature and involves adjustments to existing policy. Finally, **policy termination** is the deconstruction of policy with no replacement being established. This type of policy dynamic is very rare. Hogwood and Peters (1983) do not mention the last option of policy dynamics: policy stability. To keep a certain policy in place, much effort is often needed.

Thus, Obinger et al. (2012) distinguished four mechanisms for policy diffusion: policy learning, emulation and imitation, competition and coercion. These mechanisms could cause Hogwood & Peters's (1982) policy dynamics: innovation, maintenance, succession and termination. This thesis studies the role TMN play in shaping climate policy. 'Shaping' climate policy implies a form of policy change or policy dynamics that becomes visible in the contents of city climate policy. So apart from identifying the causal mechanisms of policy diffusion, this thesis also studies if the interference of TMN leads to actual policy

dynamics. For instance, when policy maintenance is observed, the question is if this policy maintenance is specifically induced by TMN interference. Since TMN aim for policy 'change', but the correct theoretical term is policy 'dynamics', these terms will be combined.

2.2.4 The various roles TMN could play in shaping local climate policy

In the second part of the theoretical framework, the different roles TMN could play in shaping climate policy were conceptualized on the basis of Obinger's et al. (2013) mechanisms for policy diffusion. These roles might lead to policy change, but do not necessarily have to. From the above theory three different options on the role of TMN can be distinguished. The first option is that TMN do not affect Dutch local climate policy at all, TMN play a negligible role. The second option is that TMN do play a role in diffusing policy, through learning, emulation and imitation, competition or coercion, but do not lead to substantive policy change/dynamics. The third option is that these mechanisms of policy diffusion do lead to policy change and can either result in policy innovation, succession, maintenance or termination. The various options are shown in the table below. The role that TMN attribute to themselves is shown in cursive. They have a rational view on their own contribution. They see themselves as facilitators of policy learning with the explicit wish to change cities' climate policy.

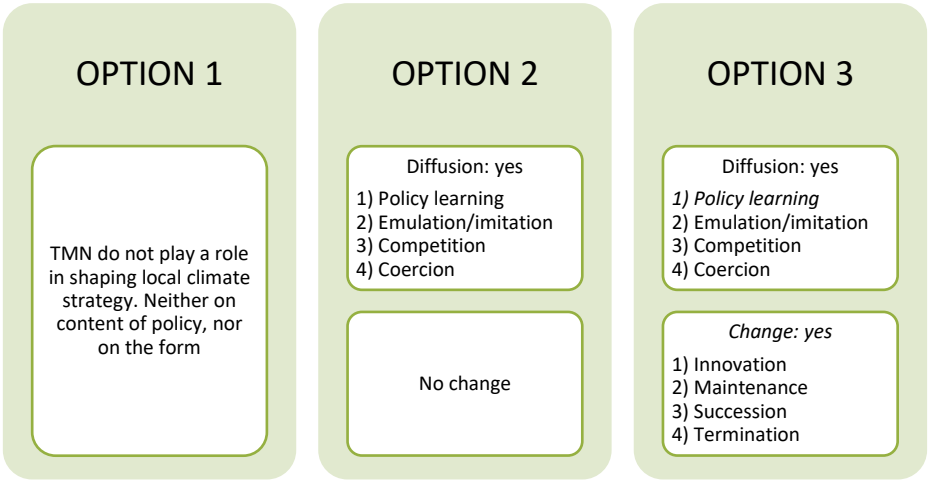

Figure 3: The different options for the role TMN play in shaping climate policy

2.3 What do other studies say about the role of TMN in climate policy?

Now that the potential roles TMN could play in shaping Dutch local climate policy are clear, the next step is to review the literature already existing on this topic to help drawing a hypothesis.

Betsill & Bulkeley (2005, 2004) are among the first to study the role of TMN. They conduct an in-depth case study on six cities in the UK, Australia and the United States to assess the role ICLEI's Cities for Climate Protection program has had in fostering local action on climate change. They find that the extent of policy learning and policy change was limited. Policy learning was most present in cities with a pre-existing energy conservation agenda. Participation in the program was seen as a way to legitimize local initiatives instead of a way to change existing policy. If policy learning took place this was mainly the discursive form of policy learning in reframing energy issues (Betsill & Bulkeley, 2003) and not the rational form learning on policy content. Furthermore, they find that the cities that were engaged most in the program, were not merely mobilized by the exchange of information and best practices, but by political (e.g. legitimacy) and financial resources.

Kern & Bulkeley (2009) continue with a study on three TMN in Europe: Climate Alliance, Cities for Climate Protection and Energie-Cités. They studied how these TMN govern in the context of multi-level European governance. Their primary finding is that TMN are 'networks of pioneers for pioneers', where the majority of the member cities is relatively passive (p. 329). The TMN consist of an inner core of active cities who interfere with the governance and strategic issues of the network, and a large outer circle of cities whose membership could be seen as symbolic and whose behaviour has hardly changed (Bulkeley & Betsill, 2005; Kern & Bulkeley, 2009).

Hakelberg (2014) focusses on the impact of policy diffusion by four TMN (C40, Energy Cities, Climate Alliance, CPP). His conclusion is twofold. First, he finds that TMN clearly promoted the spread of local climate strategies. Between 1992 and 2009 the percentage of cities (in his sample) having a local climate strategy went from 0.01 percent to 41 percent and "TMN membership had the largest positive impact on cities propensity to adopt climate policy" (Hakelberg, 2014, p.121). This study shows that policy diffusion takes place and that TMN play an accelerating role in facilitating this process. Second, he finds, like Kern & Bulkeley (2009), that TMN struggle to involve the laggards among the member cities. These cities view their membership as a public signal and do not live up to their commitments (Hakelberg, 2014): "The likelihood of a city adopting an action plan actually decreased with every additional year of TMN membership. This implies that sustained non-compliance with network goals does not lead to mounting peer pressure" (p.122). Hakelberg (2014) finds that there is a considerable gap between what cities announce in their action plans and the actual implementation of these announcements.

To understand why cities would participate in TMN, Zahran, Brody, Vedlitz, Grover & Miller (2008) study which American cities commit to the Cities for Climate Protection program (CCP) of ICLEI. They find that geographic vulnerability and socioeconomic factors are significant. "Proximity to the coast and previous casualties from natural hazards such as floods and hurricanes are powerful triggers for CCP involvement" (Zahran et al., 2008, p. 558). These factors are however only partly explanatory. They find that "well educated, politically liberal, urban communities, with a strong record of environmental activities, appear more supportive of policies to mitigate the adverse consequences of climate change" (p.559). Following Zahran et al., Dutch cities should have very ambitious climate policies, since they meet both conditions. Zahran et al. (2008) however do not say anything about the influence of the CCP program on actual implementation.

Lee (2015) introduces his theory of 'translocal' relations in his book 'global cities and climate change' and specifically focusses on the incentives of c44ities to participate in TMN, since these are a clear example of cities interfering with global governance. From his book, three major findings can be extracted. First, like Zahran et al. (2008), he studies which cities are most likely to participate. He finds that "city-level globalization is a driving factor of cities' participation" (Lee, 2015, p. 65). He studied 256 cities in 118 countries by using the economic theory of the global city and finds that cities who play a bigger role in the world economy are more likely to be an active part of TMN. Secondly, he studies which C40 cities cooperate with whom. He finds, just like Giest & howlett (2013), that geographical location plays an important role. However, homophily and policy performance are also decisive. Cities that are facing similar challenges and cities who have already shown performance on these challenges, are found to have the most connections. Thus, "Cities seek collaborating partners that already have proven performance within their regions" (Lee, 2015, p. 87). Thirdly, in a case study on three cities in Korea, Lee tries to find an answer on the question why certain global cities do join, and others don't. He finds that political leadership and institutional capacity make the difference. "Cities that have proactive mayors and are globally connected are likely to plan and implement cooperative climate change policies" (Lee, 2015, p. 190).

The question that remains in the literature on TMN is whether TMN could be a serious substitute of national policy and international climate policy by the UNFCCC. In a very recent study, Bansard, Pattberg & Widerberg (2017) are the first to provide a solid assessment of the performance of 13 TMN. They study the geographical distribution of TMN, its central players, the mitigation ambition and its monitoring provisions. They conclude that "TMN fall short of being an effective substitute for ambitious international climate action" (Bansard et al., 2017, p. 2). The Global North is overrepresented in TMN and fast-growing regions (especially Africa) are underrepresented. Furthermore, levels of mitigation ambitions vary considerably between TMN and most TMN do not even set quantified reduction targets: "Only two out of thirteen TMN set more ambitious targets than the average of targets set by Parties to the UNFCCC" (Bansard et al., 2017, p. 242). Furthermore, "nine out of thirteen TMN do not have any reporting mechanisms in place" (p. 242). Only two TMN have extensive monitoring and reporting mechanisms.

2.4 Hypothesis

Following the above studies, several expectations can be formulated. First, according to Betsill & Bulkeley (2005, 2004) and Kern & Bulkeley (2009) policy learning and policy change occur very limitedly. Membership is often a 'symbol' or a 'signal', which refers to Obinger et al. (2013) second mechanism: emulation and imitation. However, three of these studies were conducted more than ten years ago. Secondly, TMN clearly play a role in the spread of climate policy, but the implementation of this policy is questioned (Hakelberg, 2014). This would indicate that policy diffusion in Dutch cities would take place, but that policy change is missing.

Taking this into consideration, it seems likely that TMN do play a role in the climate policy of Dutch cities, mainly through emulation and imitation mechanisms. The question is whether TMN also play a role in 'shaping' the policy, resulting in policy change or other policy dynamics. The expectation therefore is that option 2 is most likely, and within option 2: emulation and imitation, see figure 4.

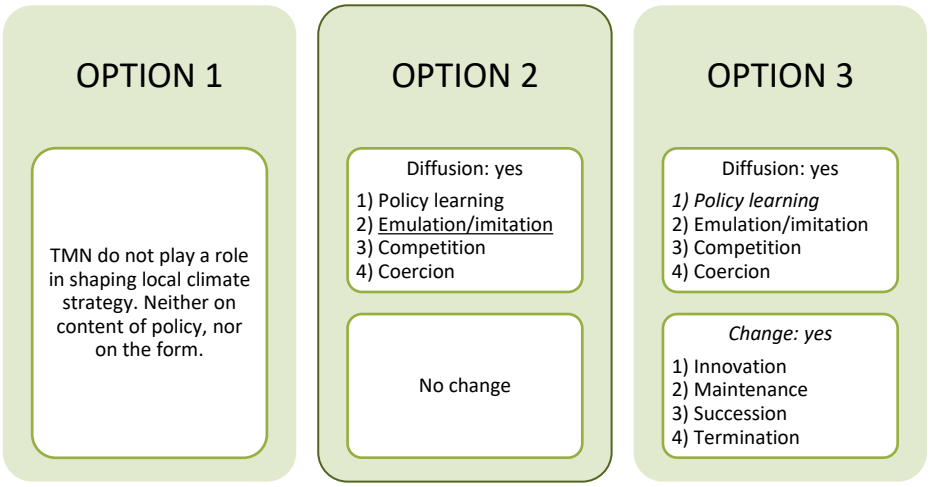

Figure 4: The expected option for the role TMN play in shaping climate policy

Furthermore, in the first part of the theoretical framework, the typology of Busse (as cited in Giest & Howlett, 2013) was presented. He expected that regional-in-depth networks would be better able to promote policy learning and change than global-high-profile networks. This expectation is hereby included in the hypothesis, and is directional in the case selection, that is discussed in the next chapter.

3. METHODOLOGY

The section below explains the research design: a comparative multiple case study with embedded units of analysis. Next, both data collection and data analysis are discussed. Finally, attention is paid to the reliability and validity of this research.

3.1 Qualitative research

To explain the role TMN play in shaping climate policy in Dutch cities, qualitative research is most suitable. With quantitative research, the influence of TMN on the actual CO2 reduction or the adoption of a climate strategy could be measured. However, as became clear in the hypothesis, adoption does not equal implementation and the influence of TMN might lie more in imitation and emulation mechanisms. These concepts are very hard to measure quantitatively. Qualitative research therefore offers the best opportunity to collect rich data on the incentives of policy makers. In qualitative research the researcher is close instead of distant to its subject and can therefore provide contextual understanding of complex social phenomena (Bryman, 2016, p. 401).

3.2 Comparative multiple case study

A case study offers the opportunity to conduct an intensive analysis of a single setting and can be either used inductive, to formulate theory, or deductive, to test theory (Bryman, 2016, p. 62). The main criticism on case studies is their limited generalizability (Bryman, 2016). To make meaningful statements on the role TMN play in shaping climate policy, it is therefore necessary that multiple TMN, one for each type, are taken into account. This increases the relevance of the findings outside this study and offers the important possibility of comparison between the different TMN. The research method suitable for this research question is therefore a comparative multiple case study.

To gain knowledge about the role of different TMN, the data needs to be collected in cities. After all, the role of a certain TMN in a certain city, can be different from its role in another city. This case study design is therefore called “embedded” (Yin, 2009). Within the four cases, multiple cities are regarded for data. However, the central unit of analysis are the TMN, since this study aims to draw conclusions on the impact of TMN on cities.

3.2.1 Case selection

To compare the roles of different TMN, the typology of Busse (as cited in Giest & Howlett, 2013) was introduced in the theoretical framework. Busse expects varying influence between the four types of TMN. Logically, one TMN of each type is selected. Six TMN have members in the Netherlands (see figure 2). C40 (type1), EUROCITIES (type 2) and ICLEI (type 3) are exclusively representing their type and are therefore selected. Three TMN can be classified as type 4: Covenant of Mayors, Energy Cities and Climate Alliance. Energy cities has only one member in the Netherlands, Climate Alliance has three members and Covenant of Mayors has 19 members. To increase the variety among the selected member cities, the Covenant of Mayors is selected as the fourth case. Also, according to Bansard et al. (2017), ICLEI, C40

Cities Climate Leadership Group and the Covenant of Mayors are the best-known networks. In 2017, the Compact of Mayors merged with the Global Compact of Mayors. However, the Covenant of Mayors is still considered as a regional TMN in this study, because it has made its impact the last ten years as a regional TMN in Europe.

Then, each case is preferably tested in at least two cities. Because C40 only has two members in the Netherlands, Amsterdam and Rotterdam, both cities are selected. Amsterdam and Rotterdam are also members of EUROCITIES and the Covenant of Mayors. Rotterdam is also a member of ICLEI. Amsterdam and Rotterdam are the biggest cities of the Netherlands, and as respectively the capital city and the biggest port of Europe, both cities are expected to have an international agenda. To obtain a complete picture of the roles TMN play in cities in the Netherlands it is therefore desirable to select two smaller cities without international expectations but with multiple memberships to TMN. Tilburg and Nijmegen appear to meet these conditions best. An overview of the selected cases and cities is shown in figure 5.

Type 1: Global high-profile network	C40 Climate Leadership Group	Amsterdam Rotterdam
Type 2: Regional high-profile networks	EUROCITIES	Amsterdam Rotterdam Tilburg
Type 4: Regional in-depth network	Covenant of Mayors	Amsterdam Rotterdam Nijmegen Tilburg
Type 3: Global in-depth network	ICLEI	Rotterdam Nijmegen Tilburg

Figure 5: Overview of the selected networks and corresponding cities

3.3 Methods

3.3.1 Data collection

The process of data collection follows several steps. First, the requirements for membership and mitigation and adaptation measures of the relevant TMN are studied. Secondly, the policy documents regarding the climate strategies of the case cities between 2007 and 2017 are analysed thoroughly over time and compared to the TMN requirements. Thirdly, the findings of both the document analysis and the theoretical framework will be questioned in interviews with policy officers of the case cities. So, the process of data collection consists of both document analysis and interviews. These two methods of data collection are discussed below. The use of 'more than one method or source of data in the study of social phenomena' (Bryman, 2016, p.86) is called triangulation. This cross checking of findings increases the reliability and validity of data (Bryman, 2016).

Document analysis

The first and central form of data collection is analysing cities' local climate policies. These documents provide insight in what cities plan to undertake on climate mitigation and adaptation, and might show how TMN play a role in these undertakings. For each city, ten to twelve documents from the period 2007-2017 were analysed. This time period is selected because both Amsterdam, Rotterdam and Nijmegen started separate climate policy in 2007 and Tilburg in 2009. In appendix I the documents are presented. Several types of documents were used: (1) Climate policy documents (plan, agenda, program), (2) Monitoring and reporting documents, (3) Proposals from the city government to the city

council and city council minutes and (4) policy documents on international strategy (not specifically on climate). The topic list that was used to structure the document analysis is adjusted from the operationalisation and can be found in appendix II.

However, documents should not just be taken as a 'transparent representation of an underlying organizational or social reality' (Atkinson & Coffey in Bryman, 2012, p. 555). Documents are written with distinctive purposes in mind and therefore form their own 'documentary reality'. For example, cities can state in their policy documents that membership to TMN is important because they can learn from other cities. Whether this exchange with other cities really takes place, may not be deduced from the documents. To understand the real role TMN play in shaping Dutch local climate strategies, documents alone are not sufficient and need to be assessed critically and complemented by interviews.

Semi- structured Interviews

The second form of data collection is semi structured interviewing. Interviewing policy officers provides the opportunity to learn about backstage processes regarding the membership of TMN, the adoption and implementation of climate strategies and to ask for examples of knowledge exchange. Interviewing is a way for respondents to tell their story, transfer knowledge and clarify their perspective (Boeije, 2014). Two policy officers in each city were interviewed in July, August or September 2017. An overview of the respondents is presented in figure 6.

City	Title
Amsterdam	Strategic Advisor sustainability and Circular economy Strategic Advisor Sustainability and International
Rotterdam	Strategic Advisor Sustainability Policy Advisor EU Affairs
Nijmegen	Senior Advisor Sustainability Policy Advisor Water and Climate Adaptation
Tilburg	Policy Advisor Climate & Energy Policy Advisor Circular Economy

Figure 6: Overview of respondents and their positions

The interviews are semi-structured. This implies that the researcher has a specific set of topics or questions to cover, but there is great flexibility in the course of the interview. The topic list derives from both the theoretical framework and the document analysis, and can be found in appendix III. Within a semi-structured interview, the interviewee has leeway to explain what is important to him or her and the interviewer picks up on things said by the interviewee (Bryman, 2012). In every interview, the same topics are covered, but they might occur in a different order and with emphasise on different aspects. This form of interviewing is important to understand the contextual differences of each case. All interviews will be held in Dutch. Respondents will be able to express themselves best in their native language.

3.2.2 Data analysis

The method of data analysis used in this study is called 'thematic analysis'. This is a technique in which qualitative data are thoroughly analysed by encoding theme's and categories. A 'code' is "a summary notation for a fragment of the data in which the meaning of that fragment is expressed" (Boeije, 2014, p.113). Both documents and interviews were encoded. The thematic analysis follows several steps. First, the recorded interview data is converted into text by transcripts. Secondly, the researcher starts 'open coding', which entails thoroughly going through the data and labelling themes and statements. Thirdly,

'axial coding' implies arranging the codes to certain categories by deciding on their importance and relevance. The size of the codes is reduced by setting up a code map or 'tree'. Finally, with 'selective coding', the researcher makes connections between central categories and thinks about how to present the coded data (Boeije, 2014). For a consistent data processing the program Atlas Ti.8 is used.

Operationalisation

The topic lists for both the document analysis and the interviews are based on the operationalisation of the central constructs of policy diffusion and policy dynamics into indicators. This operationalisation can be found in figure 7 and is based on the theoretical discussion of the concepts in 2.2.2 and 2.2.3. Since directly asking about the indicators can lead to socially desirable answers, the interviews will have a different structure, see the topic list in appendix III.

Construct	Concept		Indicators
Policy Diffusion	Policy Learning	Learning from the network	Use of tools and services; use of training facilities; use of monitoring formats; formulating climate plan especially for network; receiving feedback on monitoring; using feedback for implementation; motive for membership is improving policy
		Learning from cities through the network	Attending events/conferences/lectures; examples of attended or given presentations (teaching or learning role); examples of contact/knowledge exchange with other cities; mention of policy that is used in other cities; motive for membership is improving policy
	Emulation/imitation	Belonging to an international community	Using other cities as frame of reference: Mention membership other cities (Amsterdam does it too); mention activity of other cities in networks; being among the first members in the Netherlands; idea that the city (name) cannot be missed in the network; Recognizing the international role of cities; motive for membership is international profiling
		Having a certain image	Using the word 'profile'; wanting to increase visibility of the city; getting exposure for performances; mention of reputation/image; Awareness of exclusiveness; motive for membership is international profiling
	Competition	Comparing own performance to other cities	Participating in contests and competitions; Mention of rankings and benchmarks; winning awards;
		Ambition for outperforming other cities	Written or spoken ambition to be number 1/ the best/ better than; on a certain topic; participating contests; winning awards
	Coercion	Being coerced by TMN to monitor, report or implement policy	Mention requirements/ conditions membership; Requirements/conditions as incentive for policy; Mention punishment/suspension by TMN; threats of losing membership; Removal from TMN website

Policy Change/ Dynamics (only when induced by TMN)	Policy innovation	New policy in policy documents, not previously mentioned	TMN caused city to start climate policy; introduction of new policy instrument by interference of TMN.
	Policy maintenance	Policy continued in next policy documents	Mention of maintained usage of the same policy instrument; reporting on progress of existing policy
	Policy succession	New policy for earlier mentioned problem in policy documents	Mention of introducing a different policy instrument for the same policy problem; negative evaluation of policy
	Policy termination	Ending policy in policy documents	Mention of ending the use of a policy instrument; no recurrence of policy instrument in subsequent document; mention of ending policy goal/problem; no recurrence of policy goal/problem in subsequent document; negative evaluation of policy

Figure 7: Operationalisation of central constructs

Measuring policy diffusion and policy change

Measuring policy diffusion and policy change is not easy. A policy officer might explain that TMN have had no direct influence on their climate policy, while he or she might have unknowingly picked up some ideas at TMN events. This indirect role of TMN is impossible to measure. Therefore, this thesis can only say something about the direct influence of TMN, not about their indirect influence. However, the following cross-checking of findings helps to cover this shortcoming as much as possible:

1) TMN in policy documents
   First, the policy documents of the cities are checked on how frequent TMN and other city cooperation projects are mentioned. Close attention is paid to the use of words surrounding these mentions, since these words could indicate the mechanisms for policy diffusion (see indicators in figure 7). Furthermore, the policy documents are checked for policy dynamics over 10 years: innovation, maintenance, succession and termination. When TMN are not mentioned in the text surrounding these dynamics, the dynamics are discussed in interviews to see if TMN played a role in shaping these dynamics.
2) Activity in the network
   Secondly, the activity of cities in the networks says something about their relation and how likely it is for TMN to affect city climate policy. In both the documents and the interviews attention is paid to the frequency and nature of the contact between TMN and cities. For instance: do they attend events, do they have a position in the executive committee, do they make use of provided tools etc?
3) Experience of policy officers
   Thirdly, the policy officers are directly asked about the role that TMN play in their cities. These policy officers are directly involved with writing the city climate strategy and have knowledge about the backstage processes of forming these plans. The words the respondents use are closely analysed since these might indicate mechanisms for policy diffusion as well.

This combination helps to draw more reliable conclusions. For instance, when TMN are hardly mentioned in the policy documents of city X, the civil servants never attend events and the policy officer

in question explains that they are only a member because of an eager alderman, the conclusion that TMN have no direct role in shaping the contents of local climate policy is quite reliable.

3.4 Reliability and validity

There is an ongoing discussion in qualitative research about the applicability of research criteria of validity and reliability, because they originate from quantitative natural science (Bryman, 2012). The objectives and methods of qualitative and quantitative research differ, so some authors advocate for adjusted criteria (e.g. Guba & Lincoln and Yardly, as cited in Bryman, 2012). For this thesis the original research criteria are used because it is useful to show where they fall short or do not apply.

Reliability

Reliability is about whether the results of a study are repeatable and the measuring is consistent (Bryman, 2012). The challenge is to make sure that, if the research would be repeated, that the same conclusions can be drawn. The repeatability of this research is increased by the use of long term policy documents (that can be re-analysed) and an elaborate operationalisation of the theoretical concepts. Therefore, when repeating this study, the researcher knows what to look for in which policy documents. Furthermore, the cross-checking of the findings in the document analysis in interviews with policy officers, increases the reliability of the findings.

Validity

Validity can be divided into measurement validity, internal validity and external validity (Bryman, 2012). Measurement validity concerns the true reflection of a devised concept. This is explicitly a quantitative criteria (e.g. if you take GDP as a variable for welfare, do you really measure welfare?). In qualitative research the true meaning of concepts is a general theme: the researcher is always asking the respondent how he or she defines a certain concept. In this study the operationalisation of the theoretical concepts into indicators shows how the central concepts are measured.

The internal validity is about the question of causality: does X really lead to Y, or where other possible explanations overlooked? To study if TMN were really explanatory for policy diffusion and change/dynamics, the examples that are found in the policy documents, will be presented to the respondents and questioned in interviews. Also, respondents are consistently asked for examples. For instance, when the policy officer says they look for best practices in other cities, they have to mention a specific example.

External validity is about generalization of the results. This is a universal critique on case studies, because generalization is only possible with a large N. Generalisation is however not an explicit goal of this study. The results of this study provide an elaborate contextual analysis of diverse cities in the Netherlands. Lessons from this analysis might be applied to smaller Dutch cities or other European cities, but the context must be similar. Factors that must be similar are among others: the sovereignty and authority of cities, the size of the cities, the level of climate policy of the government, membership to the European Union, etc.

4. RESULTS

In this chapter the four selected TMN are introduced and for each TMN the results of the case study in two to four cities are presented. When introducing the TMN, attention is paid to (a) the origins and aims of the network, (b) the number of members and (c) the requirements and commitments the TMN ask from their constituents. When discussing the case cities, the following factors are described: (1) origin of the cities' climate policy, (2) reflection of networks in policy documents, (3) reason for membership (4) activities of the city in the network and the use of tools and services, (5) reporting and monitoring (if applicable) and finally, (6) a short conclusion about the role of the network in shaping the **content** of the city climate policy. The latter is an indicator for whether the TMN induced policy change/dynamics.

4.1 Type 1: C40 Cities Climate Leadership Group

This network was founded in 2005 by former mayor of London, Ken Livingstone, who brought together representatives of 18 megacities to make joint efforts on reducing greenhouse gasses and climate risks. In 2006, a partnership with the Clinton Climate Initiative was established. The global network had grown to 40 cities at this point and so the name was born (C40, 2017a). Membership of the network is reserved for megacities (population of >3 million) and innovator cities, who must be internationally recognized for barrier-breaking climate work (C40, 2012).

C40 Cities Climate Leadership Group
Type 1: Global High-Profile network
Established: 2005
Members: 90+
Requirements: none, only self-defined goals through compact of mayors

Currently, the network consists of more than 90 megacities, together accountable for 25% of the global GDP and representing more 650 million people (C40, 2017b). C40 has set up 17 networks for peer to peer exchange on 6 initiative areas covering among others: Adaptation and water, Energy, Transportation, Urban planning and management and Solid waste management (C40, 2017c). In addition to these networks C40 offers certain services that range from "localized direct support, improved access to data and broad based partnered efforts around finance (C40, 2017d)." C40 offers several tools and programs to measure and plan the emissions of greenhouse gasses.

C40 organizes its flagship the C40 City Mayors Summit about every two years. "The event draws mayors and leading thinkers from around the world to advance a shared agenda through collaboration and knowledge sharing, and increase visibility about the global potential of climate actions in cities (C40, 2016)".

The C40 climate leadership group governs by 'enabling' (Roman, 2010). No formal requirements for climate action are formulated. The network however played a pivotal role in setting up the compact of Mayors, in which cities create their own reduction targets in a 3-year action plan that is annually monitored. The Compact of Mayors was launched in 2014 at the United Nations Climate summit by UN

Secretary-General Ban Ki-moon and Michael R. Bloomberg and has over 650 member cities. The compact is an agreement of several city networks (C40, ICLEI, UCLG and UN Habitat) and collects data that cities were already reporting in a standardized manner and makes it available to the wider public (Compact of Mayors, 2015).

In the Netherlands only two cities are a member of C40: Amsterdam and Rotterdam. Neither cities meet the required population threshold of 3 million, but according to C40, both cities show ambitious climate policy. Therefore, they are labelled as innovator cities.

4.1.2 Amsterdam and C40

Amsterdam is the biggest city of the Netherlands and has more than 800.000 inhabitants. Amsterdam was specifically asked by C40 to become a member in 2008. Amsterdam also published their first climate strategy in 2008 (New Amsterdam Climate), which was the output of a big climate conference in 2007 with many partners from civil society. They set the target of reducing CO2 emissions by 40% in 2025. Since Amsterdam became a member of C40 afterwards, C40 did not play a role in initiating climate policy in Amsterdam.

Strikingly, in the period between 2007 and 2017, the C40 network appears only three times in policy documents and it is then only used as an example of how Amsterdam is internationally active. C40 is not specifically part of a climate strategy and is also not reported on in annual reports. Additional information therefore had to come from interviews.

Amsterdam appeared to be fairly active in the C40 network. They attend the Mayors summit every two years and give presentations at parallel sessions. They have informal contacts with several working groups (e.g. waste management and zero emission transportation) and organized at least two webinars. Moreover, they played a pivotal role in putting the topic of circular economy on the C40 agenda, which resulted in a separate working program in the Green Growth network, one of the initiative areas of C40.

Although C40 does not require a specific reduction target, Amsterdam does report annually on its progress to the network, through the Carbon Disclosure Project[1], and receives feedback on their performance. This feedback remains however relatively general. When asked about examples of proposed improvement by CDP, the policy advisor answered:

> Well, you know, we are just doing well, but at the same time, we are a big city. So we also have steps to take. But, you see, compared to other cities . . . , that applies to all European cities anyway, we are doing really well. . . . But, it's very general of course, because they have 90 cities to do this for (translation by W.B).

The feedback is mostly positive, that is probably why the recommendations are not traceable in the policy documents. Despite this limited visibility, C40 has led to several contacts with other cities, mainly in the area of circular economy. Amsterdam has signed Memorandums of Understanding with several partner cities worldwide. According to the policy advisor these cities are all signatories of C40 as well. The following example can be found in the policy:

[1] The Carbon Disclosure Project is a UK based organization that "runs the global disclosure system that enables companies, cities, states and regions to measure and manage their environmental impacts" (https://www.cdp.net/en/info/about-us).

> The city is actively participating in the Green Growth Network and focuses on more cooperation with cities such as London, New York and Copenhagen. For example, Copenhagen has made a proposal to work together with, for example, Amsterdam and Philips, on separate collection and full reuse of plastics. Increasingly, sustainability is part of the Memorandum of Understanding (MoUs) signed by Amsterdam and the relevant partner city (eg Paris or Seoul). Knowledge exchange and potential cooperation on projects, are concrete ways of cooperation (De Circulaire Metropool, 2014) (Translation by W.B).

When asked what role C40 plays in drafting Amsterdam climate policy, the strategic advisor is very clear: 'it's the other way around. I put circular economy on the agenda at C40 the past few years, in the green growth network. And that results now in the development of a working program to connect the existing networks' (Translation by W.B.). Amsterdam is not a member of the C40 networks to improve their policy and C40 therefore plays no role in shaping the content of Amsterdam climate policy.

4.1.3 Rotterdam and C40

Rotterdam is the second biggest city in the Netherlands with a population of more than 600.000. Rotterdam also hosts the biggest port of Europe. Rotterdam's climate policy started in 2007 with a joint initiative of the port of Rotterdam, the business community, the environmental protection agency and the city of Rotterdam and was called the Rotterdam Climate Initiative (RCI) (Investing in Sustainable growth, 2010). They set the ambition to become energy-neutral in 2030. In the first action program of the RCI, one of the objectives was to promote knowledge exchange by building a network with other port cities and organize a big conference together. This network expanded and was named Connecting Delta Cities (CDC), a cooperation between cities as Houston, New York, Singapore, Shanghai and Tokyo. The Clinton Climate Initiative assisted in setting up this network. Both the distinctive RCI approach and the leading role in setting up Connecting Delta cities gained the attention of C40 and Rotterdam was asked to become a member in 2007. C40 'adopted' the Connecting Delta Cities network and nowadays runs the secretary. C40did not play a role in initiating climate policy in Rotterdam.

C40 is mentioned very frequently in Rotterdam's policy documents and shows us what Rotterdam aims to achieve with their membership to C40. First, membership of C40 leads to external recognition of their leading position as 'innovative water-knowledge city' (RCI jaarverslag 2010). The quote below shows that Rotterdam wants a spotlight for their undertakings:

> Rotterdam can serve as an example for other cities. Through the involvement in the C40 / Clinton Climate Initiative, our successful measures are getting a spotlight (Actieprogramma RCI, 2007) (Translation by W.B).

Second, the spotlight should lead to a very practical outcome: business opportunities. In the International strategy of Rotterdam (2013), we read that the visits of international delegations lead to new orders for companies in Rotterdam.

> Rotterdam is at the international forefront with its adaptation strategy and smart, practical watermanagement. . . . This results in new orders for Rotterdam companies in cities such as Ho Chi Minh City and New Orleans. At the moment, 3600 jobs in the region are directly linked to this. . . . The Rotterdam adaptation strategy thus helps to further strengthen the economy and knowledge building with international spin-off. In order to strengthen and market this knowledge and this position internationally, Rotterdam is active in global networks: the C40

> Cities Climate Leadership Group (C40), Connecting Delta Cities (CDC), the Risk Assessment Network and Resilient cities (Rotterdam Wereldwijd, 2013) (Translation by W.B).

Rotterdam has a clear incentive for membership to C40. This incentive is also reflected in the way Rotterdam is active in the network. Rotterdam pays annual visits to C40 congresses, and also has organized events itself, like the World Port Conference in 2008. Currently, Rotterdam is active in setting up the Climate Adaptation Academy, a training facility to support other cities in drafting their own climate adaptation policy.

Their activities and the policy documents however do not say anything about extracting knowledge from the C40 network or about learning from other cities. The documents only say that Rotterdam is an example for other cities and that other cities can learn from them. When asked for examples of Rotterdam looking to other cities for best practices, the strategic advisor answered:

> Yeah, I wanted to say, yeah, maybe through Connecting Delta Cities network, there we get some input. But I would not be able to say concretely: this or that. What you often see is that, we are in the Netherlands just quite progressive ... so if you have contact with ... very different kind of countries, then it more often concerns a best practice here, than the other way around (Translation by W.B).

The reference of the policy advisor to Connecting Delta Cities is illustrated by examples in Rotterdam's policy documents. Rotterdam maintains intensive contacts with Ho Chi Minh and Jakarta to help them with their adaptation strategies. These contacts originate however from CDC and not from C40 and are again in a teaching role, not a learning role. This teaching role combined with Rotterdam's motivation for membership leads to the conclusion that the C40 network plays a very limited role in shaping the contents of Rotterdam climate policy.

4.2 Type 2: EUROCITIES

EUROCITIES is a network of major European cities, and the oldest among the four TMN described in this study. The network was founded in 1986 by the mayors of Barcelona, Birmingham, Frankfurt, Lyon, Milan and Rotterdam. The network brings together 140 local governments in 39 European countries (EUROCITIES, 2017a). It aims to work "together on exchanging best practices and on lobbying the European institutions for a better inclusion of urban requirements in European policies" (EUROCITIES, 2017b). EUROCITIES does not solely focus on climate change. The policy areas EUROCITIES covers include: economic development, environment, transport, social affairs, culture and knowledge. Cities with a population over 250.000 become full members. Smaller cities can become 'associate' members (EUROCITIES, 2017b).

EUROCITIES
Type 2: Regional High-Profile network
Established: 1986
Members: 140
Requirements: not mandatory. Voluntarily joining initiatives.

EUROCITIES' work evolves around six thematic forums and their members are organized in several working groups in which they can contribute actively. For this thesis, only the role of the environmental forum and the working group 'air quality, climate change and energy efficiency' are considered.

Because EUROCITIES is mainly focused on interest representation in the European Union, they do not require specific reduction targets from member cities. However, cities that join the Environmental Forum or the working group on climate change can initiate joint efforts. An example is the Green Digital Charter, an initiative supported by the European Commission that commits cities to reduce emissions through the innovative use of digital technologies in cities (Green Digital Charter, n.d.).

4.2.2 Tilburg and EUROCITIES

Tilburg has been an associated member of EUROCITIES since 2007 and a full member since 2009, as part of Brabantstad, a partnership between the five biggest cities of the province of Brabant. Tilburg has had climate policy included in their environmental plans since the 1990s, but started separate climate policy in 2009 and aims to be 100% climate neutral in 2045.

Although the issue of climate and environment is only one of the many issues EUROCITIES covers, Tilburg specifically became a member for the environmental cause, as can be deduced from their first climate program. Visibility in Europe on the topic of sustainability is the main reason for membership. This paragraph is however the only time EUROCITIES appears in Tilburg climate policy documents.

> Furthermore, Tilburg joined the EUROCITIES network in 2007. This network mainly consists of the larger European cities that jointly carry out projects in the field of sustainability, energy and climate policy. This network increases the European visibility of Tilburg (Eerste Klimaatprogramma Tilburg, 2009) (Translation by W.B.).

Tilburg has contact with EUROCITIES two or three times a year, when the environmental forum and its working groups meet. A policy advisor from Tilburg joins the working group Air Quality and Climate Change on behalf of Brabantstad. According to him the activities of the working group solely consist of either listening to or giving a presentation. Tilburg also signed EUROCITIES' Green Digital Charter in 2014. Their approach to the charter is exemplary for their activity within EUROCITIES.

The incentives to sign the charter can be derived from the city council minutes. First, Signing the Green Digital Charter would create again more visibility in Europe, and therewith it increases the opportunities for European Funding. Secondly, the Green Digital Charter would show commitment to EUROCITIES and thirdly, the Green Digital Charter provides a new theme on which Tilburg can cooperate with other cities. To meet the requirements of the Green Digital Charter, Tilburg needs to cut 30% of CO emmissions from municipal ICT in 2024 (Raadsvoorstel Ondertekening Green Digital Charter, 2014).

However, Tilburg's climate strategy 2013-2020 was already drawn and was not revised because of the Green Digital Charter. The Charter was said to fit the existing policy and no extra efforts needed to be made. Also, examples of cooperation with other cities in the field ICT could not be named. The policy advisor was very honest about their efforts: "many things changed? No." Eventually, Green Digital Charter will ask for their undertakings. To this notion the policy advisor responded: "I will have to come up with a story about that". "Maybe we end up being the signer that just did it for the show, I hope I won't have to say that to you in two or three years" (Translation by W.B).

According to the policy advisors, EUROCITIES did not leave its marks on the content of their climate policy. The representative of Brabantstad says the working group meetings of EUROCITIES are useful on the personal level, but are not communicated within the city on return. 'It is not like, when I come back on Monday to Pieter, like, and what did you learn? (translation by W.B)" They might discuss some of the presentations by other cities but a follow up is missing. "R1: Did you consider anything I brought back

from EUROCITIES and took it into account when writing the current climate policy? R2: No, no no, not in that way, I agree with you. R1: Just zero"(Translation by W.B).

4.2.3 Amsterdam and EUROCITIES

Amsterdam has been a member of EUROCITIES since 1991 (Dukes, 2014) and joins more than 30 working groups on different topics. In the climate policy documents of Amsterdam, EUROCITIES is not very present. Only twice in ten years the name of EUROCITIES appears in climate policy documents. The first section partly unveils what Amsterdam aims to achieve with their membership to EUROCITIES in the area of sustainability:

> Amsterdam has the ambition to belong to exemplary cities at the international level (such as Chicago and Melbourn) in the field of sustainability. This is done by publishing our own sustainability reports and by actively contributing to the EUROCITIES Environment Forum. (Milieubeleidsplan 2007-2010) (Translation by W.B.).

In short, being active in the EUROCITIES Environment Forum contributes to the image of Amsterdam as exemplary city. However, interviews with policy advisors point out that the central motive for being active in the EUROCITIES network is influencing European policy, also on environmental issues. "Because it is the most important lobbyclub in Europe" (translation by W.B.). Being a member is also a matter of principle. If Amsterdam wants to be a frontrunner on sustainability, membership to the environment forum is part of the deal: "Well, the mayor has decided that we have an international strategy, and the strategy says: sustainable urban development, so Amsterdam must be part of the EUROCITIES Environment Forum" (Translation by W.B.).

According to the policy advisor, Amsterdam has only scaled up its activities in the Environment Forum the past year. "We have always been very reluctant to be active in networks in the environmental field (translation by W.B)". The level of activity is largely dependent on the affinity of the mayor and aldermen with international networks. In 2016, the deputy mayor of Amsterdam became the chair of the environment forum. He initiated this himself, mostly "because our alderman has experienced himself that everything he wants to do, he has to deal with rules from Brussels. In air quality for example, he just does not get any further" (Translation by W.B.).

Their presidency of the environment forum has resulted in increased activity among the civil servants. The frequency of contact with EUROCITIES is now twice a month. At the previous conference, Amsterdam was present with six policy officers. Strikingly, all these officers had an active role: giving a presentation about Amsterdam policy. According to the policy officer, a passive listening role is not sufficient justification to attend the environmental forum conference: "Yeah, and we are not going anywhere anymore, and almost never to just listen, only if we present. So, you just asked about all those officers there, yes, they all had an active role in the program" (Translation by W.B.). Recently, Amsterdam also chairs the temporary taskforce on Circulair Economy, similar to their role in C40.

However, lobbying the European Union and presiding the environmental forum, does not mean that Amsterdam also extracts knowledge from the network and learns from other cities. Both policy advisors could not mention an example of projects or policy measures on climate change EUROCITIES played a role in. According to them, EUROCITIES' role in shaping the content of Amsterdam climate policy is absent, but EUROCITIES does play an important role in facilitating contacts with other cities.

> EUROCITIES itself doesn't, but it's about the contacts of course. You know, a network like this facilitates, but it's all about the people, it's about seeing each other regularly . . . what is quite

> difficult, is to ensure that this knowledge spreads in your own organization (translation by W.B)."

4.2.4 Rotterdam and EUROCITIES

Rotterdam is one of the founding fathers of EUROCITIES in 1986 and has ever since played a decisive role as the biggest port of Europe. Rotterdam's mayor Aboutaleb is currently a member of the executive committee of EUROCITIES. They are active on many topics in 29 working groups and have almost 20 civil servants working with EUROCITIES on a daily basis.

In Rotterdam's climate policy documents however, EUROCITIES is absent. EUROCITIES is mentioned only once in Rotterdam's international strategy in 2011:

> Electric transport is one of the priorities of our sustainability program. Cooperation in this area with other European cities is both valuable because of the exchange of knowledge and the opportunities for European subsidies. . . . . For the European lobby, knowledge exchange and cooperation in projects and subsidy applications, Rotterdam is also active in the EUROCITIES Environmental Forum (Rotterdam Wereldwijd 2011) (Translation W.B.).

As for Amsterdam, European lobby is the central motive for Rotterdam to be active in EUROCITIES. The opportunity for European funding comes second, and knowledge exchange is the least important. This is also explanatory for the fact that EUROCITIES is absent in climate policy documents. "We always do it from the policy-influencing side, because those subsidies are not an end, just a means for lobbying" (Translation by W.B.).

Rotterdam is part of all the working groups in the environment forum, and attends the fora twice a year. For Rotterdam, EUROCITIES is an instrument to influence EU policy, not an opportunity to improve their own climate policy. Having ambitious climate policy is in this case only instrumental to their profile as an international city, which helps to increase their influence on EU policy. "In the field of water and climate in particular, yes, we are really good, and we are known in Brussels and internationally. That is why we are in the EUROCITIES executive committee" (Translation by W.B). EUROCITIES therefore, does not play a role in shaping the contents of Rotterdam Climate policy.

4.3 Type 3: ICLEI Local Governments for Sustainability

ICLEI was founded as the International Council for Local Environmental Initiatives by 200 local governments at the world Congress of Local Governments for a Sustainable Future in 1990. In 2003 ICLEI changed its name to 'ICLEI- Local Governments for Sustainability' to reflect better its broader sustainable goals, beyond solely environmental issues (ICLEI, n.d.).

ICLEI is an international non-profit organisation with 17 offices spread over all continents that connects more than 1500 cities, towns and regions in more than 86 countries. Through regional offices, ICLEI provides technical consulting, training and information services to build capacity, share knowledge and support local government in the implementation of sustainable development at the local level" (ICLEI, n.d.a).

ICLEI Local Governments for Sustainability
Type 3: Global in-depth network
Established: 1990
Members: 1500+
Requirements: Self-defined commitments

ICLEI's Cities for Climate Protection (CCP) Campaign, established in 1993, was the first program in the world designed to support cities in climate action planning. This program still exists, but is now part of ICLEI's 10 urban agendas, striving for cities to become sustainable, low-carbon, ecomobile, resilient, biodiverse, resource-efficient, healthy and happy, with a green economy and a smart infrastructure (ICLEI, n.d.a).

To become a member of ICLEI, "the only requirements are the payment of modest annual dues based on population size in accordance with the country GNI per capita. ICLEI also encourages its members to make a self-defined commitment to its citizens to address climate change and sustainability" (ICLEI, n.d.b). Regarding the monitoring of progress, ICLEI cooperates with the Covenant of Mayors. ICLEI provide members the opportunity to monitor through the formats of the Covenant of Mayors (ICLEI, n.d.c).

4.3.2 Rotterdam and ICLEI

In contrast to Amsterdam, who quit the network because it had no added value to them, Rotterdam has been a member of ICLEI since 1992 (ICLEI, n.d.d). The original incentive for membership was motivated by environmental policy but contacts have been "dormant" for years. In 2012 the membership gained a revival, when the former deputy mayor was elected as a member of the Regional Committee of ICLEI. This was explicitly her own personal initiative: "And then, at a certain moment, Van Huffelen said: 'Yes this is quite interesting, I want to play a role in this'. She has stimulated this actively" (Translation by W.B.).

The motive to play a more active role in ICLEI becomes very clear from both the interviews and Rotterdam's international strategy: "This function offers good network opportunities with the European institutions and strengthens the positioning and profiling of Rotterdam as a sustainable world port city" (Rotterdam Wereldwijd, jaarverslag 2013) (Translation by W.B.).

In the past. Rotterdam was a co-organizer of an ICLEI seminar on water management. Currently, Rotterdam is not very active in the network. The deputy mayor attends the regional committee twice a year and the civil servants occasionally visit ICLEI's conferences ("if it's twice a year, it's a lot"), but only when especially invited by ICLEI to "tell about the practice of Rotterdam" (Translation by W.B.).

ICLEI appears only twice in documents on climate policy as a short example of international activities on knowledge exchange, but examples of this knowledge exchange caused by ICLEI lack, also when asked for in interviews. On the other hand, ICLEI is very frequently present in documents about Rotterdam's international strategy.

The role ICLEI plays in shaping the content of Rotterdam's climate policy is therefore very limited. Rotterdam only attends meetings when they can showcase their own story and they have not made use of the tools and services ICLEI offers. Rotterdam uses ICLEI solely as a stage for their own climate actions. New international contacts are just a welcome extra:

> This applies to many of those networks. For Rotterdam it very often has the purpose of, just getting a stage, offering a stage. And not so much to gain input. The practice is actually. . . we just go our own way and we choose our own approach. And then we try to get our approach out there via these kind of networks, and also, well, to get more publicity. And of course, the network creates contacts here and there (Translation by W.B.).

4.3.3 Nijmegen and ICLEI

Nijmegen is one of the oldest cities in the Netherlands and has more than 170.000 inhabitants. Nijmegen became a member of ICLEI two years ago in 2015. They started separate climate policy in 2007, when they set the target to be energy neutral in 2045. ICLEI did therefore not play a role in initiating climate policy in Nijmegen.

Nijmegen became a member of ICLEI because of the Green Capital competition of the European Commission. They applied first for the competition four years ago when the contest opened the opportunity for smaller cities to apply. Nijmegen participated because they: "think we can be a role model for other small European cities" (Translation by W.B). Nijmegen won the award in 2016, which means they may call themselves the European Green Capital in 2018. ICLEI is directly involved in the Green Capital competition and specifically asked Nijmegen to become a member of ICLEI in 2015. This was the central motive to become a member, because ICLEI had asked Nijmegen to join before, without results.

> One of the seven bodies that provide people to the jury is ICLEI, and also the one that was most open in the feedback. … Then we said, for two reasons, when we join, we spawn ICLEI a bit and that's important because then we already have a juror who has our back a little bit...(Translation by W.B.).

According to Nijmegen, membership of ICLEI is very suitable for smaller cities, in contrast to EUROCITIES. From the membership proposal, send by the civil servants to the city council, can be derived that membership to ICLEI would provide "good opportunities for Nijmegen to profile itself as a European city" and would promote knowledge exchange. "Though we are a front runner city in the Netherlands, we can still learn a lot from other cities. We see the ICLEI network as a key network for the transferring of knowledge and a way to find strategic partners" (Collegevoorstel lidmaaschap ICLEI, 2015)(Translation by W.B.). On top of that, the membership to ICLEI would fit in Nijmegen's existing policy and would require no additional obligations.

According to the policy officers, Nijmegen has monthly contacts with ICLEI. They regularly attend conferences, but often have to decline invitations due to the limited capacities of smaller cities. Nijmegen mainly attends ICLEI's conferences to give lectures. "I have been giving a lecture for three years in a row" (Translation by W.B.). They get invited for many other events, not organized by ICLEI, and according to them ICLEI is behind many of these requests. This is also an explicit motive for membership, Nijmegen wants to make use of ICLEI's contacts to fill their Green Capital program in 2018.

In the ICLEI application form, Nijmegen says to have 'great interest in knowledge transfer'. However, attending conferences does not mean knowledge exchange takes place. Moreover, the policy advisors cannot name an example of contacts with other cities on a specific issue, encouraged by ICLEI. They also do not make use of the information and training services ICLEI provides.

> Conferences or symposia . . . it's all too abstract there. Lectures of 20 minutes of 30 minutes . . . can be really interesting, but afterwards you have to start collecting. You'll have to call that person, e-mail, where is that report on a website, can I download it (Translation by W.B)?

Therefore, the role ICLEI plays in shaping the content of Nijmegen's climate policy is very limited. ICLEI's spin-off is very dependent on the civil servants' own initiative, and small cities do not always have the capacity to follow up on lectures at conferences. The policy officers explain ICLEI might be more a strategy for international policy than for climate policy.

> And ICLEI is of course completely wide, everything. You can take out as much as you want. . . or insert. . . if you are active. But it does not provide building blocks for a policy piece. At most, it provides building blocks the policy on (international) profiling. . .(Translation by W.B.).

The same accounts for the European Green Capital Award. On the question if participating in the competition made Nijmegen climate policy more ambitious, the policy officer answered: "No, we just have our objectives. Our sustainability agenda was from 2011-2015 and was extended with an implementation program 2013-2017. . ."(Translation by W.B).

4.3.4 Tilburg and ICLEI

Tilburg has been a member of ICLEI since 1997. Its membership was mainly initiated by a former policy officer who started orientating internationally. Because Tilburg has been one of the first cities in the Netherlands with environmental policy in the 90s, joining ICLEI seemed legit. Ever since, Tilburg's contribution to ICLEI has consisted of alternating active and more passive periods.

In 2005 Tilburg hosted the European ICLEI conference 'from margin to mainstream'. During this period Tilburg was relatively active and was asked multiple times to tell Tilburg's story at different events. They attended conferences, gave workshops and lectures and even contributed to an ICLEI publication with an article about the Tilburg approach. Nowadays, contacts with ICLEI are more passive. They attend an event two or three times a year.

Because of this active period, ICLEI is quite present in Tilburg's first Climate policy (2009-2012) and international strategy. They state that international conferences appeared to be very useful:

> At various network events, it appeared to be very useful to get acquainted with the experiences of other fellow-municipalities in Europe, and sometimes even in other parts of the world. The Tilburg approach in this new climate program can, in turn, count on many interested parties (Eerste klimaatprogramma Tilbug, 2009) (Translation by W.B.).

However, in Tilburg's subsequent climate policy (2013-2020), ICLEI does not appear, and also other cities were not referred to as examples of best practices or knowledge exchange. So this 'great interest in knowledge transfer', is not translated into practice.

ICLEI therefore played no role in shaping the content of Tilburg's climate policy. The policy advisors acknowledge that the effects of international activities are very hard to measure, but being active within ICLEI definitely leads to increased contacts with other cities. A follow up on these contacts is however often missing, none of the policy advisors can mention examples:

> Many conversations with many other parties at drinks. Of course, you get impressions, and you say, something is happening there that seems very interesting for me. And sometimes that happens with international partners, who you approach afterwards. Absolutely happened a few times, but I can't recapitulate right now (Translation by W.B.).

4.4 Type 4: Covenant of Mayors for Climate and Energy

The EU Covenant of Mayors was founded in 2008 by the European Commission to implement the EU's 2020 Climate and Energy package. Local authorities must set up local action plans and provide regular reports on their progress. The covenant soon expanded to include the EU's eastern partnerships in 2011, the EU's Mediterranean partnerships in 2012, and established an office in sub-Saharan Africa in 2016.

The covenant is open to all local authorities, regardless size or stage of implementation. The Covenant of Mayors has commitments from over 6800 cities in 58 countries (Covenant of Mayors, n.d.a).

The Covenant of Mayors for Climate and Energy very recently merged with the earlier mentioned Compact of Mayors, resulting in the Global Covenant of Mayors for Climate and Energy. By merging these two global initiatives in 2017, the Global Covenant of Mayors for Climate and Energy is the largest global city coalition with 7452 member cities, representing 9.32% of the total global population (Global Covenant of Mayors, n.d.).

Covenant of Mayors *(now Global Covenant of Mayors for climate and energy)*
Type 4: Regional in-depth network
Established: 2009
Members: 6800+
Requirements: 20% CO2 reduction in 2020, 40% CO2 reduction in 2030

The Covenant of Mayors evolved significantly over time. Between 2008 and 2015, signatories "made the voluntary commitment to go beyond EU's 2020 targets of 20 % in terms of reduction in CO2 emissions" (Covenant of Mayors, n.d.b). Between 2014 and 2016 the Covenant of Mayors launched the initiative "mayors adapt' in which mayors make political commitments to make their cities adaptive to climate change. Since October 2015, a new commitment was agreed on. Cities committed to "reduce their CO2 emissions by at least 40%, increase their resilience to the impacts of climate change and provide secured access to sustainable and affordable energy by 2030" (Covenant of Mayors, n.d.b).

Signatories must submit a Baseline Emission Inventory to gain insight in the emissions of their territory and perform a Risk and Vulnerability Assessment for potential climate hazards. Then they submit a Sustainable Energy and Climate Action plan (SEAP), which must be approved by the municipal council. Every two years cities submit their monitoring reports. In case the above-mentioned documents are not submitted within the established deadlines, member cities can be suspended from their membership (Covenant of Mayors, n.d.b).

4.4.1 Rotterdam and Covenant of Mayors

Rotterdam signed the Covenant of Mayors in February 2009, two years after they started the Rotterdam Climate Initiative. Rotterdam uses the requirements of the Covenant of Mayors as a baseline in multiple monitoring reports (2009, 2011, 2012) and in their climate and energy program 2010-2014: "We hope to significantly increase the use of sustainable energy and raw materials. This is in line with the Covenant of Mayors - signed by Rotterdam - which specifies that in 2020 20% of energy produced must be sustainable."

Being a signatory to the Covenant is self-evident to Rotterdam: "I think it would look strange if Rotterdam was not a member of something like that" (Translation by W.B.). "If you say, as a city: we are an energy efficient city, . . . we want to be forerunner in circularity, yeah, then you have to take part in these kind of things" (translation by W.B.). This is also the reason why they joined the Mayors Adapt initiative. As 'innovative water-knowledge city', they could not be missing from the list.

However, the city is not very active in the network; contact with the secretary takes place at a yearly basis. They have not made use of the services the secretary provides and according to them, the monitoring requirements are "sort of a mandatory obstacle" (Translation by W.B.). They have not developed a separate action plan for the Covenant in 2009, they handed in their existing climate policy:

> The questions that they ask, having an adaptation strategy, well, we already had that. So it's actually really easy for us to comply. And we can just be part of the network, but here again, we are not very active in it (Translation by W.B).

In contrast to Amsterdam, Rotterdam has used the Covenant of Mayors as a monitoring baseline. Indications that being signatory to the covenant has resulted in changing climate policy, or has led to contacts with other cities, are however not present.

4.4.2 Amsterdam and Covenant of Mayors

Amsterdam became a signatory to the Covenant of Mayors in January 2009, a year after they adopted their first climate policy. The Covenant of Mayors is only mentioned once, in Amsterdam's Climate and Energy strategy 2013, where both the Covenant of Mayors and C40 are used as brief examples of international cooperation.

This single mention seems to reflect Amsterdam's activity in the network: "the only thing we do, . . ., is that we do the yearly reporting. With them, we do not do anything else, actually" (Translation by W.B). Civil servants of Amsterdam have never attended events or participated in seminars the Covenant of Mayors offered. The policy officer explains why:

> Because when we started Covenant of Mayors, many big cities were members. Now, mostly small cities are members, and I really think they benefit from it, but big cities like Amsterdam, do not really benefit (Translation by W.B).

If Amsterdam is not active in the network at all, why are they a member? The motive seems twofold. First, membership is a matter of course: "I think it was something like, you cannot be missing. It is a kind of movement, you do not want to be the laggard on certain things. So, in that sense you have to participate" (translation by W.B.). But more important, membership of the Covenant of Mayors is mandatory for certain funding by the European Commission: "Because otherwise we will not receive certain subsidies, otherwise we would not be able to participate in certain European calls, which we would very much liked to join" (translation by W.B.).

The role the Covenant of Mayors plays in shaping the content of Amsterdam's climate policy is negligible. This is also illustrated by the mandatory SEAP, the Covenant Requires: "Our Action Plan is just our sustainability agenda, so we don't have to do anything extra for that" (Translation by W.B.). The covenant fits existing climate policy, is important for funding and functions as a matter of principle for Amsterdam. Yet, knowledge exchange is not part of the process: "We do not pick up knowledge there" (Translation W.B.).

4.4.3 Tilburg and Covenant of Mayors

Tilburg signed the Covenant of Mayors in 2009. The request to sign the covenant came in when Tilburg was developing its first climate strategy. The proposal to sign is therefore a significant part of the broader city council proposal to agree with the climate strategy 2009-2012:

> Signing the Covenant, strengthens the name of Tilburg as a city with a strong goal to be CO2 neutral. The obligations we agree with by signing, fit within the implementation of the new climate program. . . . It is proposed to sign the Mayors Covenant in januari 2009. This makes Tilburg one of the first group of signatories (Klimaatprogramma 2009-2011) (Translation by W.B.).

The Covenant appeared once more in Tilburg's monitoring report in 2012. The covenant is however not part of Tilburg's current climate strategy from 2013-2020.

The above quote already slightly unveils Tilburg's motives to sign the covenant. Tilburg wants to have an "international image" and is convinced that their approach is internationally valuable. Furthermore, membership seems self-evident: "well, if you see a movement developing, where leading municipalities in the field of climate . . . unite, and you see yourself as a frontrunner, then it is logical that you join in" (Translation by W.B.).

Tilburg does, however, not play an active role in the network. When asked about participating events, the policy officer responds: "I know they exist, but we don't do anything with it. And this is something we don't do well. We should do much more" (translation by W.B.).

The mandatory monitoring every two years, appears to be a difficult task. Tilburg was even temporarily removed from the Covenant's website, because they did not report for several years. The Covenant requires a very detailed level of monitoring:

> For example, to mention something, they distinguish building types. From offices, companies and so on. Of which we simply do not have the data, so we cannot deliver. And to set it all up, just for Covenant of Mayors, we will just not do that (Translation by W.B.).

The role the Covenant of Mayors plays in shaping the content of the climate policy of Tilburg is very limited, as can be deduced from the reflection in the policy documents and the level of activity in the network. Also, when the Covenant of Mayors asks for certain data, that does not mean Tilburg changes its policy to get the data. Despite this, Covenant of Mayors (and other Dutch organizations) do play a role as leverage to improve their monitoring on the long term, according to the policy officers:

> It forces you, also towards your internal organization, to have things structured. Because what we always lack with Covenant of Mayors, is that we're not even able to put our own energy consumption into a good monitoring system. . . . And this is an extra leverage to point out internally, like, guys, pay attention, also the Covenant or Mayors asks for it (Translation by W.B.).

4.4.4 Nijmegen and Covenant of Mayors

Nijmegen started climate policy in 2007 and became a signatory of the Covenant of Mayors in 2009. In both Nijmegen's implementation agenda 2011-2013 and 2013-2017 the covenant of Mayors is referred to multiple times. They use the mandatory target of 20% reduction in 2020 as a benchmark for their progress, and they explicitly use the words 'compelled' or 'obligated':

> As a city we are also on track to meet the obligation from the EU Covenant of Mayors (20% CO2 reduction in 2020). According to the 'Roadmap Nijmegen Energy neutral 2045', we expect to have achieved a 28% CO2 reduction by 2020 (Collegevoorstel Duurzaamheid in Uitvoering, 2013) (Translation by W.B.).

These reduction targets are however not the reason for Nijmegen to sign the covenant: "the objectives are not outrageously high". From their 2013-2017 implementation agenda can be deduced that European profiling and funding opportunities are the main incentives: "By participating in this covenant, we want to profile ourselves as a sustainable city and ease the way to EU financing" (Duurzaamheid in Uitvoering 2013-2017) (translation by W.B.).

According to the policy officer, Nijmegen has contact with the Covenant's secretary on a yearly basis. They have attended several events in the past, e.g. a conference in Brussels on funding opportunities. Their aldermen have visited the yearly ceremonies occasionally and the policy officer himself has joined a webinar on geothermics. Their activity in the network is however fairly limited, because of the city's capacity: "it always comes down to the same club of three, four, five people and the alderman" (Translation by W.B.). They are asked to give lectures or join a panel on a regular basis, but they cannot accept all invitations.

Furthermore, the required monitoring is a challenging undertaking for Nijmegen. First, they do not have the correct detailed data the covenant requires. Secondly, four years after submitting their existing climate policy as SEAP, they tried reporting on their progress through the online format provided by the covenant. The format appeared to be defect, and after years of slow email contact, Nijmegen was exempted from reporting until the merger with the Global Compact of Mayors.

The Covenant of Mayors plays a role in shaping the content of Nijmegen's climate policy in the sense that they use it as a monitoring baseline.

> Well, although we do, we think we can easily endorse them, it means a continuous stimulus, that you can mention in your city council proposal: yes, but we have signed it, so we have to achieve those objectives. We have committed ourselves to this (translation by W.B.).

The monitoring format, although not working properly, is beneficial because according to the policy officers, it makes them rethink their own monitoring and exposes missing data. Indications that being a signatory of the covenant also leads to knowledge transfer are however not present. The webinar on geothermics for example, did not get a follow up and is not traceable in policy documents. "It is not the case, as you may say, that the network is inciting us to do things. . . No, without that network, I think we would have done the same thing" (translation by W.B.).

5. ANALYSIS

In this chapter the results of the case studies are analysed based on the typology of Busse (as cited in Giest & Howlett, 2013) and the theory of Obinger et al. (2013) on their causal mechanisms for policy diffusion.

5.1 Different Typologies and policy change/ dynamics

In the theoretical framework, an expectation was presented by Busse (as cited in Giest & Howlett, 2013), who distinguished between four types of TMN on two scales: global-regional and high profile- in-depth networks (see figure 1). Busse's expectation (as cited in Giest & Howlett, 2013) was that regional in-depth networks would be most successful in encouraging cities to adopt or improve policies on climate change, in other words, to foster policy learning and policy change. These regional-in-depth networks would be better able to hold their members accountable for their actions and are better able to facilitate transnational learning because the regional context is more similar. Global high- profile networks would be least successful in implementing policy, because they consist of frontrunners who already had their own climate policy and membership is more a way to achieve publicity and awareness than to improve climate policy. In this research all four types TMN were studied in two to four cities. Do we see the same distinction in this study? See for a comparative overview figure 8 on page 46.

5.1.1 Type 1: Global High-profile: C40

The two biggest cities in the Netherlands were both asked to become a member of C40 because of their status as a frontrunner in climate policy. They are both fairly active in the network, but regularly in a 'teaching' role. Indications that Amsterdam and Rotterdam extract knowledge from the network cannot be found in both the policy documents and the interviews. According to the policy officers this is because they are exemplary for other cities, and not the other way around. The C40 network does lead to valuable contacts with other cities and has indirectly led to serval MoU's in Amsterdam.

5.1.2 Type 2: Regional High-profile: EUROCITIES

EUROCITIES is the oldest network among the four case TMN. That EUROCITIES encouraged the cities in adopting climate policy is however very unlikely because all three cities say that the main motive for membership is lobbying European institutions. All cities are active in the network, both Amsterdam and Rotterdam in an executive role, but again, primarily to influence European policy. The civil servants that visit events mainly attend to give presentations about their own approach. Extracting knowledge is secondary and concrete examples of contact between cities for knowledge exchange cannot be mentioned.

5.1.3 Type 3: Global In-depth: ICLEI

All three cities seem to be a member of ICLEI for European profiling. Rotterdam became part of the Regional committee to this cause and Nijmegen even specifically became a member to increase chances of winning the Green Capital Award. ICLEI does not require commitments from its members but is very active in involving its members in their activities. The two smaller cities however both state that they have to dismiss many invitations due to limited capacity. None of the cities can mention examples of concrete contacts with other cities on a specific topic, induced by ICLEI, to improve their own policy. They mainly showcase their own approach and say that ICLEI is beneficial in multiplying international contacts.

5.1.4 Type 4: Regional In-depth: Covenant of Mayors

The Covenant of Mayors is the only TMN that requires specific reduction and adaptation targets and requires reporting every two years. In all four cities this monitoring is seen as a burden, but does lead to increased insights in their own data to improve their monitoring. All four cities became a member as a matter of course, because they thought themselves to be forerunners in Europe and the required targets fitted the existing policy. However, none of the cities is very active in the network. They say that the covenant has so many signatories that is has lost its meaning for forerunner cities.

5.1.5 Absence of policy learning and policy change/dynamics

According to the typology of Busse (2008), the C40 network would be least effective and the Covenant of Mayors would be most effective in promoting the concepts of policy change and policy learning. These two concepts are now discussed before drawing a conclusion on Busse's typology. The first observation is that *policy change/dyamics induced by TMN does not take place* in the Dutch cities. The conclusion from all case descriptions was that TMN play no, or hardly any, direct role in shaping the content of city climate policies. A combination of multiple factors led to this conclusion: the limited retrieval of TMN in climate policy documents, the frequency and nature of contact with TMN and activity at TMN events, and the experiences of policy officers. Moreover, all cities already had their own existing climate policies. The policy dynamics of innovation, maintenance, succession and termination could never be traced back to TMN interference.

For promoting policy learning, the distinction between learning from the network and learning from other cities through the network needs to be made. *Policy learning between cities through TMN does hardly take place* in the four Dutch cities. None of the cities provided good examples of cooperation with other cities in neither documents nor interviews. Since cities do not make use of the tools and services provided by the other TMN, *learning from TMN only takes places at the covenant of Mayors*. The Covenant of Mayors provides cities with insights in their emission and energy data because of the mandatory monitoring and reporting. However, policy learning between cities is almost completely absent with covenant of Mayors because none of the cities are active in the network.

Since none of the TMN induced policy change and the differences on policy learning between the TMN are not significant, the typology of Busse (as cited in Giest & Howlett, 2013) is hardly applicable to TMN in Dutch cities. No significant differences can be distinguished between the four types.

		C40	EUROCITIES	ICLEI	Covenant of Mayors
Policy Diffusion	Learning	1. No learning from the network, because of general feedback and no use of tools and services 2. No learning from other cities through the network, since only a teaching role	1. No learning from network, because no reporting and no use of tools and services 2. No learning from other cities, since cities have teaching role at activities	1. No learning from network, because no reporting and no use of tools and services 2. No learning from other cities, since cities have teaching role at activities	1. Limited learning from the network because required reporting gives insights in data 2. No learning from other cities, since cities are hardly attending events
	Emulation /imitation	1. Both cities asked to become a member because of 'frontrunner' position 2. Gaining a 'spotlight'	1. Membership increases 'visibility' 2. Belonging to 'exemplary cities' 3. Membership as part of international strategy 4. Profiling as international city.	1. Membership for positioning and profiling 2. Membership as result of orientating internationally 3. Membership functions as a 'stage'	1. Membership self-evident; because 'you cannot be missing' 2. Signing "strengthens name as sustainable city"
	Competition	1. Membership because of "Being at the international forefront" 2. Asked to become a member because of ambition "most sustainable world port"	Name of "international water-knowledge city" led to membership executive committee	1. Membership to win Green Capital Award 2. Membership for recognition as "most sustainable world port"	1. Seeking recognition: "if you want to be forerunner, you have to participate". 2. Comparing to other cities: "how are you doing in relation to other cities?"
	Coercion	No strict monitoring requirements; no coercion	No monitoring requirements; no coercion	No monitoring requirements; no coercion	Required reporting, but format not working properly, and cities are not impressed by suspension; limited coercion
Policy chance/ dynamics	Innovation	Never induced by TMN E.g.: climate policy not initiated because of TMN; Handing in existing policy for reporting; Policy dynamics never traced back to either TMN interference or best practices from other cities that were contacted because of TMN.			
	Maintenance				
	Succession				
	Termination				

Figure 8: Comparative overview of TMN on policy diffusion and policy dynamics

5.2 Mechanisms for policy diffusion

Transnational Municipal Networks aim to diffuse policy by rational policy learning. Analysing the case studies and Busse's typology (as cited in Giest & Howlett, 2013) however shows that policy change and rational policy learning hardly takes place in the four Dutch cities. Neither through the network nor through contacts induced by the networks. This is a surprising outcome since knowledge transfer is the *raison d'être* of TMN. To explain why policy learning is absent and to find out what other mechanisms do play a role for Dutch cities to be active in TMN, the causal mechanisms of Obinger et al. (2013) are discussed below: policy learning, emulation and imitation, competition and coercion.

5.2.1 Policy learning

According to Rose (1991) policy learning can be defined as lesson drawing: "an action-oriented conclusion about a programme or programmes in operation elsewhere'' (Rose, 1991, p. 7). The internal function of TMN is specifically focussed on the exchange of knowledge between cities to implement or improve climate policy. Strikingly, from the document analysis and interviews became very clear that none of the Dutch cities is active in a TMN to improve their own climate policy. Their motives vary and are discussed in the next sections regarding the other causal mechanisms.

Dutch cities however do participate in knowledge exchange, mainly on conferences and other events organized by TMN. Yet, this policy learning is often one-way traffic. Dutch cities almost always have a teaching role on these events, by giving a lecture or a workshop on their local approach. Amsterdam even admits only to attend events when they are invited to tell their story. Therefore, TMN do not play a role in shaping the content of the cities' climate policy.

Because of the absence of policy learning, Hall's (1993) different orders of policy learning cannot be identified in Dutch cities. Nonetheless, the events of TMN are designed to share stories for first and second order learning. Dutch cities share best practices on the selection of policy instruments (e.g. moving the dyke of the Waal in Nijmegen) and the settings of instruments (e.g. the settings of environmental/ car free zones in Amsterdam). The overall message TMN aim to transfer at these events is the importance and responsibility of cities in climate change. This could be identified as third order learning.

Learning outside TMN

Despite the absence, the incentive for membership of TMN to learn from other cities is mentioned frequently in the policy documents of the four cities. These statements are however never made explicit with examples, also when asked about them in interviews. Yet, that policy learning is not induced by TMN does not mean it does not happen in cities at all. In the policy documents and in the interviews multiple examples were discussed, these examples were however never directly induced by TMN. Amsterdam, for instance, has a specific attachment to their 2011 quick scan called "Appendix 3: city comparison of climate and energy policy".

These examples of contacts and cooperation with other cities can be divided into three categories. First, learning from other cities in the Netherlands. This happens more frequently, as this quote from Nijmegen's first climate policy shows: "Experiences of the municipality of Amsterdam, Rotterdam, Tilburg and Arnhem/Duiven are being used, and a regional heat network has been set up"(Translation by W.B.). Secondly, cities also cooperate with international cities on their own initiative, outside TMN. Multiple cases emerged from the documents and interviews. Connecting Delta Cities is a clear example, where Rotterdam cooperates intensively with Ho Chi Minh and New Orleans in helping them to adopt their own adaptation strategy. Rotterdam also visited Berlin to learn about car free/environmental zones.

The third category is however most interesting. All cities could mention examples of knowledge exchange and intensive cooperation with European cities induced by projects of the European Union. These projects were very frequent in policy documents and were confirmed in interviews. Amsterdam worked together with Vienna, Copenhagen and Lyon in the European project TRANSFORM, a transformation agenda for low carbon cities. Rotterdam cooperated with Ghent and Antwerp in getting European subsidy for climate adaptation and currently hosts the first congress of the Urban Agenda for EU cities. Tilburg is also actively involved in the Urban Agenda and has worked together with housing cooperations from Vienna, Paris, Denmark and Germany in the European EPI-SoHo project: Energy Performance Integration in Social Housing. Nijmegen has joined the PROCURA project to learn about buses that run on natural gas and Nijmegen could also mention a concrete example of Lille learning from them on sewerage through 'twinning' in the Future Cities project of the EU: "in Lille we have turned the whole plan upside down" (translation W.B.).

Where TMN fail, the European Union seems to succeed in encouraging policy learning in Dutch cities. The question 'why?' is very suitable for further research, since EU projects were not central in the data collection for this study. Nevertheless, a policy officer from Nijmegen shed some light on the question:

> I think that, often, the influence comes from European projects that you participate in . . . there you do get a lot of input and of course ideas from other cities, because you work very closely together. And such a network (TMN), is more remote, yeah, where you have to go actively yourself, . . . And of course, it is also the question of how active we are, to make contacts and so on. Yeah, then you really have to go and collect it (Translation by W.B.).

Explanations for the absence of policy learning

The question why policy learning does not take place in TMN is however a question this study can attempt to answer. From this study, four reasons emerge. First, all four cities identify themselves as frontrunners. They have a lot to offer to other cities, but doubt if other cities can help them:

> What you often see is that we are, in the Netherlands, just quite progressive ... so if you have contact with ... very different kind of countries, then it more often concerns a best practice here, than the other way around (Translation by W.B).

On the world scale, Dutch cities are far ahead in both climate mitigation and adaptation policies when compared to cities elsewhere. However, there are plenty of cities in the world that are doing very well and from which Dutch cities could learn. The successful EU projects prove this statement, and a policy officer from Amsterdam says it herself:

> I think Copenhagen is very good, Stockholm is very good. (There) are a few cities that I think we can really learn from. And that's by the way, what we did in that Transform project, where we, well, almost one-on-one, copied things there (Translation by W.B).

Secondly, all four cities, but mainly the two smaller cities, are restricted by limited capacity. Visiting congresses organized by TMN and visiting other cities for knowledge exchange costs both money and time. To invest both money and time in policy learning, the spin-off of active participation in the networks must be more tangible. The next quote illustrates this tension and also introduces the next explanatory factor: "we simply have so much work to do in the city, we cannot afford to walk around at abstract international conferences" (Translation by W.B.).

Thirdly, the events organized by TMN remain to abstract and are not designed to accommodate for context and scale differences. Often, the practice of a certain city is not applicable to another. These conferences therefore do not meet the needs of Dutch cities, especially in combination with limited capacity: “Conferences or symposia . . . it’s all too abstract there. Lectures of 20 minutes of 30 minutes . . . can be really interesting, but afterwards you have to start collecting’(Translation by W.B).

Fourthly, services offered by TMN do not work properly or are non-applicable. Although, none of the cities makes actively use of the tools and training facilities offered by TMN (they are frontrunner and do not expect to learn something new), the one tool they all use falls short. The monitoring format of the Covenant of Mayors causes difficulty in all cities. The format asks for very detailed data the cities simply do not have. Also, in the case of Nijmegen, the format makes the wrong calculations with the inserted data. These errors are not encouraging cities to invest in learning from services and tools the TMN provide.

However, all cities remain active in these networks and stress the importance of international cooperation on climate policy: “Rotterdam is not alone, but instead operates in a regional, national, European and global context. Cooperation with others is essential if the sustainability targets are to be achieved” (Rotterdam Program on Sustainability and Climate Change 2010-2014). Despite the above shortcomings, membership to TMN is widely diffused in the Netherlands, why? The remaining mechanisms for policy diffusion by Obinger et. al (2013) are helpful to explain this matter.

5.2.2 Emulation and Imitation

Obinger et al. (2013) describe emulation as follows: “emulation refers to the ambition of political actors to conform to international trends and to belong to an international norm-based community”. These trends can lead to imitative behavior (isomorphism) and is not a rational cost-benefit analysis but stems from institutional pressure. The mechanism of emulation helps to explain the behavior of Dutch cities very well.

At first sight, this mechanism is most evident at the Covenant of Mayors. This is due to the fact that none of the cities are active in the network, but all cities explain a certain degree of self-evidence with regard to signing the Covenant. Amsterdam says it was ‘logical’ to sign the Covenant and explained: “You do not want to be the laggard on certain things. So, in that sense you have to participate” (translation by W.B.). According to Tilburg, the covenant is a movement “where Tilburg’s name should not me missing”, because “we belong on this international list” (Translation by W.B). Rotterdam has a reverse motive and says that “people would be surprised if Rotterdam was not a member” (Translation by W.B).

None of these motives is rational. The four cities identify themselves as sustainable city and apparently, with that label comes membership to the Covenant of Mayors. They feel a certain institutional pressure, which is perfectly illustrated by a quote from Nijmegen’s’ proposal to sign Mayors Adapt: “Conversely, non-signing could give the wrong signal: ‘why doesn’t Nijmegen participate while the other climate-active municipalities do” (Translation by W.B)? This institutional motive for membership could explain why the cities do not actively extract knowledge from the network or participate in events, membership is mostly symbolic.

Apart from the Covenant of Mayors, the mechanisms of emulation and imitation are also observed with regard to the other networks. A strong indicator is the fact that all cities attend events to tell about their own local practices. This is rather a form of active profiling then a way to participate in knowledge transfer. All cities view their activities in these networks as a way to strengthen their profile as a ‘sustainable’, ‘international’ or ‘European’ city: “I think we are very active in international networks because it increases the profile of Rotterdam as an international city, it is good for profiling” (Translation by W.B). Almost all policy officers said

that profiling was the main reason to join TMN. This urge of cities to profile themselves as international cities is not very rational, mainly for smaller cities as Nijmegen and Tilburg who hardly make impact on the global scale. They however feel called to be part of an international community. For cities as Amsterdam and Rotterdam, who play a more significant European role, the question remains if TMN are the best way to improve this profile. Contacts and business opportunities mainly resulted from the cities' own initiatives, like Rotterdam's Connecting Delta Cities.

5.2.3 Competition

This desire for city-profiling becomes however a more strategic endeavour when competition is involved. According to Obinger et al. (2013) the mechanism of competition concerns realizing competitive advantage. Although Hakelberg (2014) stated that this mechanism is not relevant with regard to TMN, this study shows the opposite. The mechanism of competition can help very well to explain why cities are active in the networks and why policy learning does not take place.

All cities express a certain degree of competition in their policy documents. They want to be *the best* or want to *belong to the best*. Figure 9 gives an overview of some of the many ambitions stated in these policy documents. Nijmegen's Green Capital Award 2018, may be the best example. Joining TMN is a suitable measure to achieve these ambitions, as TMN use benchmarking and awards as common tools.

Amsterdam: "Bicycle city number 1 in Europe" "World's frontrunner in Electric Cars" "International leading position in Hydrogen" "Frontrunner position Climate- and Energy policy"	**Rotterdam:** "Most sustainable world port" "Thé climate- and water knowledge city" "Frontrunner climate adaptation" "Clean Tech Delta of Europe" "Bio-port of Europe" "International water-knowledge city"
Tilburg: "... repeatedly, Tilburg has won prizes such as 'Sustainable municipality' or municipality with the best climate policy."	**Nijmegen:** European Green Capital 2018 "Solar power city" "Velocity 2017" "top 3 most energy-efficient cities"

Figure 9: Expression of city competition in policy documents

To win a competition and thus to be the best, two things are necessary. First, you need to be able to compare yourself to other cities. Dutch cities use TMN as a benchmark to rate their own policy:

> That you have a kind of benchmark, so you can compare yourself with others, that you know how you are doing in relation to others. Yeah, being better than others, yeah, I think from a political view, it may be like that from time to time" (translation by W.B.).

Second, an external party needs to recognize your leading position. Cities are looking for external recognition through TMN:

> When you say you're good, then you just must be there (at TMN). I mean, there must be a frame of reference. . . . But someone has to say, we really think you are leading city. But someone has to give that credit to you, someone has to give that price to you" (translation by W.B.).

Recurring, membership of TMN was an explicit wish of mayors or aldermen, who wanted to leave their mark on the city's policy. Membership is then a politically powered action, instead of the result of a rational cost-benefit analysis to solve a policy problem. Next to a political view, competition can also be viewed from an institutional perspective. Apparently, being the best is something cities want to achieve, and TMN can help to recognize this position by setting formal and informal norms. When international profiling is a means for competition with other cities, and this is an important motive for cities to be active in TMN, learning from other cities becomes secondary.

5.2.4 Coercion

The final mechanism that helps explaining why Dutch cities are active in TMN, but not to improve their policy, is coercion. The formal form of coercion, judicial imposition that can be legally enforced, is not present because TMN are voluntary understandings. However, coercion can manifest itself in other forms. In this study this form only became visible at the Covenant of Mayors and only concerned membership and reporting, not changing the content of policy.

Amsterdam signed the Covenant because they wanted to join a call for European subsidies and being a signatory of the Covenant was mandatory: "but you just had to, otherwise you wouldn't get the European projects" (Translation by W.B). In a way, Amsterdam was coerced by the European Union to become a signatory to the EU's own Covenant.

Cities also use the Covenant of Mayors as an instrument for coercion in the internal municipal organization, mainly as a form of leverage. Nijmegen reports to the local council with the words 'to comply with the obligation from the Covenant of Mayors' (Duurzaamheid in Uitvoering, 2013). Furthermore, signing Mayors Adapt was used by Nijmegen as an instrument to give climate adaptation a more prominent role within the organization. The following quote perfectly fits the political view on the policy process, since these policy advisors had an interest to influence the policy process:

> And at the same time, to ensure that climate adaptation got a more prominent position within the municipality, as we both suffered from the fact that the concept of climate adaptation was not yet known enough. And by signing it, it had to go past the board and the council, fortunately (Translation by W.B.).

Cities are however not very impressed by the threats of the Covenant to be suspended by non-compliance. Mainly because the Covenant's monitoring format is not working properly, and the secretary does not live up to its own rules. Both Nijmegen and Tilburg have not consistently met the monitoring requirements, but only in the case of Tilburg has this led to a short removal from the Covenant's website.

5.3 Using TMN as a policy instrument

This analysis shows that the mechanisms of emulation/imitation and competition are most useful in explaining the motives for Dutch cities to be active in TMN, and that policy learning is not one of them. Although TMN aim to induce policy change by fostering policy learning about policy instruments, this analysis shows that: *Dutch cities rather use TMN as a policy instrument, not to improve their policy instruments*. Dutch cities first establish local climate policy and then might strategically deploy TMN to achieve their local goals. This quote is illustrative: "so, in fact, you should see EUROCITIES as a pond in which you can fish for partners if you need them, but first the plan (policy) must be here, rather essential" (translation by W.B).

These plans consist of local goals. Both more abstract local objectives like creating an international profile, becoming more visible in Europe, earning a spotlight; and more concrete goals like getting European funding, contributing to a white paper, winning an award and filling the Green Capital year program. This instrumental use of TMN is also illustrated by the fact that TMN are mentioned repeatedly in the cities' international strategies, instead of their climate policies. Because cities use TMN as an instrument to achieve their objectives, the role that TMN plan in shaping the content of climate policy is negligible: "No, without the network we had probably done the same, I think" (Translation by W.B).

6. CONCLUSION

Cities play a crucial role in tackling climate change. They emit around 70% of the total global greenhouse gasses and home more than half of the world population (UN-habitat, 2011). This makes them vulnerable to extreme weather conditions like flooding and droughts. Nations have proven to face many difficulties in coming to binding agreements on tackling climate change. Cities increasingly take up their responsibility and work together in Transnational Municipal Networks. These networks represent the interests of member cities in international arenas and want to facilitate knowledge exchange and transnational learning to initiate and improve climate policy in cities. However, not all TMN are the same. Therefore, four different types of TMN were compared in this thesis: C40, ICLEI, EUROCITIES and Covenant of Mayors. Cities and city networks are new actors in the field of International Relations and this new phenomenon is called 'translocal relations' by Lee (2015).

In this thesis, four cities in the Netherlands were used to collect data for the TMN comparison: Amsterdam, Rotterdam, Tilburg and Nijmegen. The Netherlands is an interesting case since they are for 26% below sea level (Planbureau voor de Leefomgeving, 2007) and internationally acknowledged for their water management. Also, climate policy is widespread among Dutch cities and so is membership to TMN. To understand how TMN work in general, it is helpful to see what role they play in Dutch cities. The overall research question of this study was therefore: *What role do Transnational Municipal Networks play in shaping the climate policy of Dutch cities and how can this role be explained?* To gain a valid and reliable outcome, different types of TMN and different sizes of cities were combined with both document analysis of city climate policy and interviews with policy officers.

6.1 Recap of main findings

From the theoretical framework came a twofold hypothesis. First, to understand the role of TMN, the distinction between policy diffusion and policy dynamics must be made. Obinger et al. (2012) distinguished four mechanisms for policy diffusion: policy learning, emulation and imitation, competition and coercion. These mechanisms could cause policy dynamics: innovation, maintenance, succession and termination. From previous studies emerged that policy learning is not so common as the TMN say, and that membership is often a symbolic undertaking. Therefore, the hypothesis was that TMN mainly affect cities through imitation and emulation and that policy dynamics are not induced by TMN. Secondly, Busse (as cited in Giest & Howlett, 2013) expressed the expectation that regional-in-depth networks would be better able to promote policy change and policy learning than global-high-profile networks.

The first finding is unambiguous. TMN do not play any *direct* role in shaping the content of local climate policy. Dynamics in policy documents could never be traced back to TMN interference. The nature and frequency of contacts with the networks indicated this limited impact on the content of policy. No difference was found between the different types of TMN of Busse (as cited in Giest & Howlett, 2013).

That TMN do not directly induce policy dynamics in the four Dutch cities, does not mean they don't play a role in climate policy. This is illustrated by the fact that cities continue to choose for membership and remain active in these networks. The second main finding is that Dutch cities do not use TMN to improve their climate policy, but as an instrument to achieve their own policy goals, mainly in the areas of profiling and competition. Emulation/imitation and competition were most useful in explaining the behaviour of the four Dutch cities. The institutional pressure to belong to an international sustainable community was the main motive for membership and manifested itself in the many expressions of cities to profile as a European, international of sustainable city. Competition appeared to be important as well. Cities search for recognition for their local performances at TMN and use TMN as an instrument to compare themselves to other cities.

Cities do not use TMN to improve their policy instruments, as the conclusions on policy learning show. This is interesting because policy learning is the self-stated *raison d'être* of TMN. Policy learning was divided between learning between cities and learning from the network. First, policy learning from the network only takes place at the Covenant of Mayors, since they are the only network that require specific policy targets and give feedback through mandatory monitoring. Cities indicate that the monitoring process helps them to gain insight in the availability and accuracy of their own energy data. Secondly, learning between cities through TMN is extremely rare. All four cities mainly have a 'teaching' role and examples of contacts with other cities because of the network could hardly be mentioned. Remarkably, learning between Dutch cities and learning from international cities outside TMN does take place. In many policy documents examples of knowledge exchange, mainly EU projects, were reflected. Why the EU does seem to succeed in fostering policy learning where TMN fail, is an interesting notion for further research.

These outcomes differ in two ways from the hypothesis (see bold text in figure 9). First, the typology of Busse (as cited in Giest & Howlett, 2013) was not verified in the Netherlands. No significant difference in policy learning and policy change could be noticed between global and regional, in-depth and high-profile networks. Second, emulation/imitation can be distinguished as the most explanatory mechanism, but competition appeared more important than previously was expected. This resulted from the broader social interpretation of competition in this study, in contrast to the narrow economic interpretation in the established literature on policy diffusion (See 2.2.2.3).

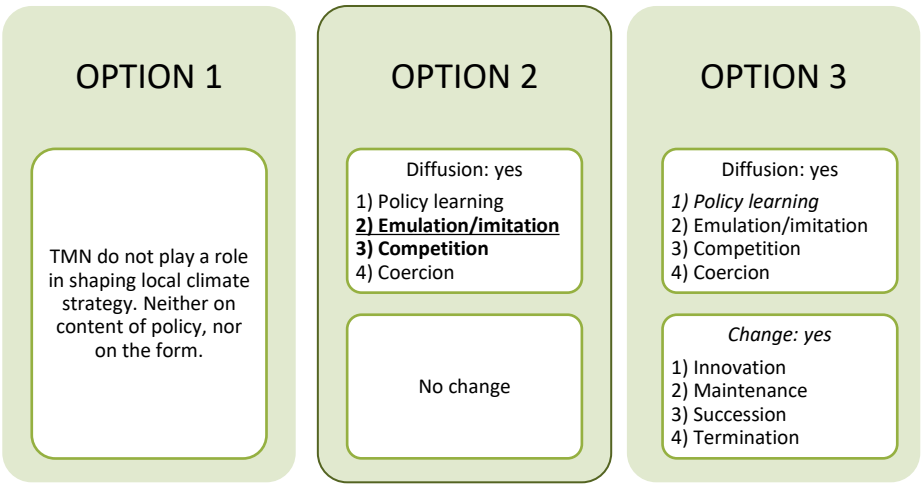

Figure 10: Schematic difference between hypothesis and results

6.2 Answer to research question

Thus, to answer the research question: TMN play an instrumental role for Dutch cities, mainly through the mechanisms of emulation/imitation and competition. Cities strategically deploy TMN to reach the objectives in their climate strategies. Cities want to belong to an international community of internationally orientated sustainable cities (emulation/imitation) and use TMN for the recognition of their performances and comparison to other cities (competition). This role is different from what the TMN themselves aim for. They do not play a role in shaping the content of urban climate policy and therewith they do not invoke policy change or dynamics. Moreover, the widely announced policy learning hardly takes place.

6.3 Scientific contribution: use an institutional-cultural perspective to gain new knowledge on TMN as policy diffusing actors

Now the findings of this study are clear, the consequences can be discussed. What do these findings contribute to science and society? To science, this study contributes to both the theory on TMN and the theory on policy diffusion. First, regarding the theory on TMN, Busse's typology (as cited in Giest & Howlett, 2013) seems very incomplete. As the results from this study show, global, regional, high-profile or in-depth networks only have the impact that cities allow them to have. Therefore, the starting point to review the impact of a specific TMN on a city, should not be: what type of TMN are we dealing with, but rather: what type of city are we dealing with? For instance, a distinction could be made in a similar square, between frontrunners or laggards on the horizontal axe, and big or small cities on the vertical axe. The latter because this study shows that small cities have fewer capacity to be active in TMN. However, further research must precede this theoretical distinction, since this study only focussed on four small (on a global scale) frontrunning cities.

Secondly, to understand policy diffusion by TMN, a turn to an institutional-cultural perspective is needed. This thesis is distinctive by linking the perspectives on the policy process to the mechanisms of policy diffusion and policy change. This might be the most important theoretical contribution of this study. The literature on policy diffusion mostly focusses on states. This is not surprising since the central actors of International Relations have long been states and supranational organisations. States however use different mechanisms for policy diffusion than TMN. In this thesis, this was illustrated by the fact that three out of four mechanisms deduced for states, did either not take place or were not applicable to TMN. Policy learning appeared to be absent and the mechanism for competition needed to be adjusted since TMN do not have internal markets and therefore economic competition is not one of their governing mechanisms. The same accounts for the fourth mechanism of coercion, TMN are voluntary undertakings without legislative power, so coercion is also hardly applicable to their case.

Except from emulation/imitation, all three mechanisms are explained from a rational view on the policy process in the literature on policy diffusion. This thesis however showed that, to understand TMN instead of states as policy diffusing actors, the institutional-cultural mechanism of emulation/imitation was most explanatory. TMN are strong institutions that set frames and norms that lead to role-guided behaviour in cities. They can be viewed as part of a discourse coalition; that use events to let cities interact and frame and reframe policy problems. This all has little to do with changing the contents of city climate policy, in contrast to learning, economic competition and coercion.

That this mechanism has not been prominent so far, is not surprising. It was only developed around 2000 when social constructivism started to emphasize the ideas and norms that influence international politics (Graham, Shipan & Volden, 2013). Subsequently, the mechanism of emulation has emerged in many forms

and is called *emulation* by some, *imitation* by the next, and *socialisation* by others (Shipan & Volden, 2008). Yet, it is time for this perspective to become more prominent in the literature on policy diffusion: it needs more theoretical substance and definition. A rational point of view is not sufficient to understand how TMN work, and research in this perspective, for instance on policy learning, will probably not result in new knowledge. The context of global governance is shifting from states to cities and city networks. To understand this phenomenon, the perspective from which to look at this shift needs to change as well.

6.4 Social contribution: take policy learning off its pedestal

As contribution to society, this study helps us to understand the behavior of forerunning cities in western countries towards TMN. It clarifies that TMN are currently unable to foster policy change and policy learning among these members and that these cities take up a teaching role instead of a learning role. Cities might want to review their own role, but the real assignment is for the TMN. They need to make themselves relevant to all cities. After all, this study showed that Dutch cities are perfectly able to organize policy learning themselves: between other Dutch cities or through EU projects. In this respect, a first recommendation can be made. Dutch cities are all invited to TMN events to share their stories, but because of profiling, these stories are always success stories. Policy learning can only take place if frontrunning cities also start to share failures and problems. TMN should alter their approach if they want to stimulate policy learning among frontrunner cities.

However, policy learning seems to be placed on a pedestal by all TMN. It seems almost necessary to say that they promote policy learning in order to legitimize themselves. Perhaps, policy learning should no longer be the central goal of TMN. As we have seen from the scientific contribution, TMN are better understood from an institutional-cultural perspective. It could be time for TMN to admit this and to let go of the ultimate goal of policy learning to convey a more realistic message about their impact. They should be brave enough to change their mission and, for instance, show on their website: “we contribute to the growing idea that cities have responsibility and innovating power in tackling climate change”. TMN represent an idea that cities want to belong to, and this symbolic function is much more important than they might think.

Finally, what do the findings of this study say about cities and their use of TMN to help tackling climate change? The crucial role of cities remains in place. The cities in this study dare to be more ambitious in setting reduction targets than the national government and the EU. However, they do not use TMN to improve their policy or to learn from other cities. TMN only seem an instrument that constantly repeats the importance of cities in the international arena to gain more influence and to encourage other cities, countries and the UN to accelerate climate action. TMN are idea-builders.

6.5 Limitations of the study

As mentioned previously, this study only examined four cities in the Netherlands. The findings could help to understand the behaviour of other Dutch or West-European cities, but cannot be directly applied to them. The context of the cases should be similar. After all, TMN might be very effective in improving and changing climate policy in e.g. Balkan cities. Furthermore, through triangulation of data by using both document analysis and interviews, the validity and reliability of the findings were increased. However, the analysed documents were available for externals. Perhaps, important internal documents about the role of TMN were missed. The same accounts for the interviews. The respondents might have had a biased opinion towards TMN or might not have been fully informed on the relations of their colleagues with the different TMN. Furthermore, as discussed in the methodology chapter, policy change is very hard to measure. Although a direct role of TMN is clearly absent, TMN might play an indirect role that cities are unaware of. For instance, through facilitating

the first contacts between cities that, years later, decide to cooperate on a sustainable project. When reading this thesis, the reader should be aware of this limitation.

6.6 Further research

Finally, as much as this study provides answers on the role that TMN play in shaping Dutch climate policy, it also raises many questions. Further research is necessary to understand and explain how TMN and cities interact. A perfect starting point to learn more about policy diffusion in the translocal arena could be the remarkable difference between the EU and TMN. The EU seems to be able to foster city cooperation and policy learning, while TMN are not, why? Furthermore, the suggested distinction between frontrunners-laggards and big-small cities should be preceded by research on the behaviour of these types of cities. Also, the sample of Dutch cities could be broadened, and the two TMN that were not included in this study (Climate Alliance and Energy Cities) could be included in further research. Last but not least, the aforementioned suggestions should all depart from an institutional-cultural perspective. The traditional rational perspective will probably not result in any new knowledge on this subject.

All in all, this thesis showed that TMN do not cause direct policy change and policy learning in Dutch cities. Dutch cities rather deploy TMN to achieve their own policy goals of profiling and gaining recognition. This behaviour and the role of TMN can only be understood from an institutional-cultural perspective. This perspective needs to get significantly more attention in the literature on policy diffusion in order to understand the shift from states to cities and city networks in the emerging field of 'glocal' governance.

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APPENDIX

Appendix 1: List of policy documents

City	Document
Amsterdam	1. Milieubeleidsplan 2007-2010 2. New Amsterdam Climate 2008 3. Quickscan Temperatuur van Amsterdams Klimaat 2011 4. Structuurvisie Amsterdam 2040 Economisch Sterk en Duurzaam 2011 5. Amsterdam Uitgesproken Duurzaam 2010 6. Duurzaamheidsprogamma 2011-2014 Amsterdam Beslist Duurzaam 7. Klimaat en Energie Jaarprogramma 2012 en jaarverslag 2011 8. Klimaat en Energie Jaarprogramma 2013 en jaarverslag 2012 9. Klimaat en Energie Jaarverslag 2013 10. European Strategy For Amsterdam: Progress in sustainable Urban Development 2013 11. Sustainability Agenda 2015 – 2020 12. Monitor Uitvoeringsprogramma Duurzaam Amsterdam 2016
Rotterdam	1. Rotterdam Climate Initiative Actieprogramma en doelen 2007-2010 2. Rotterdam Climate Initiative Rapportage 2008 3. Rotterdam Cllimate Initiative Rapportage 2009 4. Rotterdam Cllimate Inititative Rapportage 2010 5. Investing in Sustainable Growth Rotterdam Programme on Sustainability and Climate Change 2010-2014 6. Rotterdamse Duurzaamheidsmonitor 2011 7. Rotterdamse Duurzaamheidsmonitor 2012 8. Rotterdamse Duurzaamheidsmonitor 2013 9. Collegevoostel Programma Duurzaam 2015-2018 10. Programma Duurzaam 2015-20118 11. Antwoord op Raadsvragen over gemeentelijk klimaatbeleid en COP21
Nijmegen	1. Kadernotitie Klimaat 2007 2. Collegevoorstel Actieplan Klimaat 2008-2012 3. Quickscan strategische notitie Energie & Klimaat 2010 4. Milieujaarverslag 2011 5. Milieujaarverslag 2012 6. Raadsnotitie inzake noodzaak Milieubeleidsplan 2011-2015 7. Duurzaamheidsagenda 2011-2015 8. Collegevoorstel 2012 Voortgang duurzaamheidsagenda 2011-2015 9. Collegevoorstel 2013 Duurzaamheid in uitvoering 2011-2013 10. Duurzaamheid in Uitvoering 2013-2017: de tussenstand 11. Kadernota Onbegrensd en Onbevangen 2014-2020 12. Uitvoeringsagenda Onbegrensd en Onbevangen 2016-2017 13. Collegevoorstel 'Mayors Adapt' 2014 14. Collegevoorstel Lidmaatschap ICLEI 2015
Tilburg	1. Collegevoorstel Energiebeleidsplan 2002-2005

	2. Milieubeleidsvisie 2006-2010: “Zorgen voor milieu is samenspel” 3. Collegevoorstel Tilburg wereldstad, beleidskader internationale samenwerking 2008 4. Raadsnotitie noodzaak milieubeleidsplan 2011-2015 5. Collegevoorstel Klimaatprogramma 2009-2012 6. Samenvatting evaluatie Klimaatprogramma 2009-2012 7. Klimaatmonitor 2012 8. Raadsvoorstel klimaataanpak 2013-2020 9. Energievisie Gemeente Tilburg 2017-2020 10. Raadsvoorstel Ondertekening Green Digital Charter 2014

Appendix 2: Topic list document analysis

Document general	
What is the **dat**e of this document?	
Do they express the **purpose** of the document?	
Does it mention a particular **reason** for designing the document? (aanleiding)	
Does it mention a **predecessor** document?	
Are there any **clear reduction goals** specified in the document?	
TMN/ international	
Does it mention **membership** to TMN?	
Does it mention the **names of TMN**?	
Does it mention **international importance, embedding?**	
Does is say the **incentives to join** the TMN?	
Does it mention particular requirements **from the TMN?**	
Who did the **assessment** of emission reduction Who for adaptation? (some TMN provide this service)	
What is said about **monitoring**? Do they mention a TMN?	
Policy change	
Does the document have a predecessor?	
Does the document express a **change in policy** relating to older documents? Which changes?	
Does it mention the motivation of the **policy change?**	
What kind of change is it? - Policy innovation (new) - Policy succession (replacement) - Policy maintenance (continuation) - Policy termination (stop)	
Does the document show stability of policy? What?	
Does is mention motivation to not change policy?	
Policy influence	
In the motivation of policy change or stability) do you see signs of 'Policy learning' from TMN?	
- Use of tools provided by TMN, like a CO2 emission calculator	
- Meetings/conferences of TMN	
- Strategies of other cities o Dutch cities or international cities?	
- Contact with/ visits to other cities	
- Order of learning o Change in Instruments o Selection of instruments o Fundamental policy beliefs	
In the motivation of policy change (or stability) do you see signs of 'emulation/imitation' from TMN?	
- Mention of reputation	
- Mention of other cities that joined	
- No actual policy change, but showcasing membership	
- Mention of visibility	
- Mention of international profiling	
In the motivation of policy change (or stability) do you see signs of 'competition' from TMN?	
- Competitive advantage	

- Attracting companies/ organizations	
- Providing favorable climate for companies/organizations/events	
- Joining/winning a contest/award	
- Mention of benchmark	
In the motivation of policy change (or stability) do you see signs of 'coercion' from TMN?	
- Requirements of TMN	
- Treath of losing membership	
- Expectations from TMN	
- Policy imposed by TMN	
Other influences	
In the motivation of policy change or stability are other actors than TMN mentioned? Which?	
- Government, what motivation?	
- European Union, what motivation?	
- Other?	

Appendix 3: Topic list interviews

1.	Introductie
	a. Voorstellen
	b. Uitleg TMN en doel interview
	c. Wie ben je? En wat is jouw rol binnen de gemeente? Met welke TMN heb jij te maken?

2.	Klimaatbeleid
	a. Sinds wanneer voert deze stad actief klimaatbeleid?
	b. Wat is de gestelde ambitie? (% reductie/klimaatneutraal/energieneutraal)
	c. Hoe heeft deze stad de nulmeting gedaan? Door welke partij?

3.	ICLEI
	a. Sinds wanneer is deze stad lid van ICLEI en waarom?
	b. Op welke manier is deze stad actief binnen ICLEI? (conferenties, werkgroepen)
	c. Dagelijks, wekelijks, maandelijks of jaarlijks contact?
	d. Verwacht ICLEI een bepaalde commitment op gebied van klimaatdoelen?
	e. Waren dit nieuwe doelen? Of voldeden jullie hier al aan?
	f. Kun je een voorbeeld noemen van een project of maatregel die in deze stad is geïmplementeerd door toedoen van ICLEI?
	g. Heeft ICLEI gezorgd voor beleidsverandering? Voorbeeld?
	h. ICLEI stelt allerlei tools beschikbaar voor steden, zoals meten van Carbon Footprint. Heeft deze stad daar ooit gebruik van gemaakt?

4.	C40
	a. Sinds wanneer is deze stad lid van C40 en waarom?
	b. Op welke manier is deze stad concreet actief binnen C40? (conferenties, werkgroepen)
	c. Dagelijks, wekelijks, maandelijks of jaarlijks contact?
	d. Verwacht C40 een bepaalde commitment op gebied van klimaatdoelen?
	e. Waren dit nieuwe doelen? Of voldeden jullie hier al aan?
	f. Kun je een voorbeeld noemen van een project of maatregel die in deze stad is geïmplementeerd door toedoen van C40?
	g. Heeft C40 gezorgd voor beleidsverandering? Voorbeeld?
	h. C40 stelt allerlei tools beschikbaar voor steden, zoals meten van Carbon Footprint. Heeft deze stad daar ooit gebruik van gemaakt?

5.	Covenant of Mayors
	a. Deze stad heeft het Covenant of Mayors ondertekend. Waarom is destijds besloten dat te doen?
	b. Op welke manier is deze stad actief binnen het samenwerkingsverband CoM?
	c. Dagelijks, wekelijk, maandelijks, jaarlijks contact?
	d. Heeft CoM gezorgd voor beleidsverandering?
	e. CoM verwacht een Action plan. Is deze destijds speciaal voor het CoM geschreven?
	f. CoM verwacht iedere twee jaar een rapportage van het Action plan, anders kan het lidmaatschap worden opgeheven. Hoe gaat dat?
	g. Kun je een voorbeeld noemen van de manier waarop CoM invloed heeft op het Klimaatbeleid van Deze stad? En hoe zou je die invloed beoordelen?

6.	EUROCITIES
a.	Sinds wanneer is deze stad lid van EUROCITIES en waarom?
b.	Op welke manier is deze stad actief binnen EUROCITIES? (conferenties, werkgroepen)
c.	Dagelijks, wekelijks, maandelijks, jaarlijks contact?
d.	Ik focus me specifiek op de werkgroep Climate Change. Wat doet deze werkgroep?
e.	Verwacht EUROCITIES een bepaalde commitment op gebied van Klimaatdoelen?
f.	Waren dit nieuwe doelen? Of voldeden jullie hier al aan?
g.	Kun je een voorbeeld noemen van een project of maatregel die in deze stad is geïmplementeerd door toedoen van EUROCITIES?
h.	Heeft EUROCITIES gezorgd voor beleidsverandering? Voorbeeld?
i.	EUROCITIES stelt allerlei tools beschikbaar voor steden, zoals meten van Carbon Footpint. Heeft deze stad daar ooit gebruik van gemaakt?
j.	EUROCITIES voert een actieve lobby in Brussel. Zijn jullie daarmee bezig?

7.	Invloed van TMN op stedelijk klimaatbeleid
a.	Externe functie: representatie van Stedelijke belangen in internationale arena's.
i.	Herken je je in deze functie van TMN? Is deze stad hier actief mee bezig? Kun je een voorbeeld noemen?
b.	Interne functie: Bevorderen kennisuitwisseling en samenwerking
i.	Herken je je in deze functie van TMN?
ii.	Kun je een concreet voorbeeld noemen van momenten waarop Deze stad heeft geleerd van andere steden? Ook buiten TMN?
iii.	Kun je een concreet voorbeeld noemen waarop andere steden hebben geleerd van Deze stad?
iv.	Hebben jullie samenwerking met andere steden door toedoen TMN?
c.	Aanbieden services:
i.	Hebben jullie ooit gebruik gemaakt van de services die TMN aanbieden?
ii.	Zo ja welke? Zo nee, waarom niet?

8.	Invloed Rijk en Europa
a.	Hoe zou je de invloed van TMN afzetten tegen de invloed van het Rijk?
b.	Heeft het rijk meer of minder invloed dan de TMN?
c.	Heeft Europa meer of minder invloed dan de TMN?

9.	Afsluiting
a.	Tot slot, deze stad is lid van vier netwerken. Welke van de drie zou je beschouwen als het meest invloedrijk op het klimaatbeleid van deze stad?
b.	Welke zin is het beste van toepassing op de relatie tussen deze stad en TMN?
i.	We willen ons klimaatbeleid verbeteren
ii.	We willen ons Internationaal profileren
iii.	We willen het beter doen dan andere steden
iv.	We zijn lid omdat dat van ons verwacht wordt