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# Shaping local response – The influence of transnational municipal climate networks on urban climate governance

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#### ABSTRACT

In recent years, many cities have joined transnational municipal climate networks (TMCNs), which were set up in response to climate change. Despite the fact that some of these TMCNs have been active for more than two decades, there has been no systematic investigation of the networks' impact on local climate governance. In this article we attempt to answer if and how local climate governance has been influenced by municipalities' memberships in TMCNs. Our assessment is based on an online survey conducted with staff from all German cities above 50,000 inhabitants with membership in TMCNs, fieldwork and interviews in seven German cities. Network membership mainly influences local climate governance through the following processes: (1) *Enabling internal mobilisation* (2) *Formulating emission reduction goals* (3) *Institutionalising Climate Trajectories* (4) *Enabling direct exchange* and (5) *Offering project support*. Our data suggests that the main influences of TMCN membership unfold in internal political processes in the member cities. External interactions, such as between cities or between network staff and cities is comparably less important. We also found that many of these benefits can be associated with laggards rather than pioneering cities. We conclude that TMCNs have considerable influence on local climate governance in Germany.

#### 1. Introduction

World-wide, the implementation of climate change policies for mitigation and adaptation is increasingly becoming a task for local governance. Cities offer great potential for climate change mitigation measures since they represent concentrations of flows of physical materials (Anderberg, 2012) and carbon (Bulkeley et al., 2013). In the face of increasing numbers of climate change induced threats (IPCC, 2014), questions of adaptation have also entered the urban climate agenda (Wamsler, 2014). Consequently, there has been increasing demand for more or improved climate governance, which has been addressed through a range of approaches and initiatives: e.g. national programmes, regional cooperation, public-private partnerships and engaging communities (Bulkeley and Newell, 2015).

In this context, several transnational municipal climate networks (TMCNs) have been established in recent decades. These are networks of local governments that voluntarily come together to improve climate governance (Kern and Bulkeley, 2009). Some focus on either mitigation or adaptation; others combine these two interrelated topics (Busch, 2015). TMCNs have gained growing attention in the 2000s with an increasing number of publications focussing on their functions within and impact on multilevel climate

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governance (Bulkeley et al., 2003; e.g. Bulkeley and Kern, 2006; Davies, 2005; Toly, 2008). However, investigations assessing how TMCN memberships influence local climate policies and governance are scarce (e.g. Davies, 2005; Hakelberg, 2014; Zeppel, 2012).

The aim of this article is to address this gap by identifying and assessing the major impacts of TMCN membership on local climate governance in a coherent and systematic manner. With this article we aim to increase the scientific understanding of the impacts of TCMNs as well as providing ideas to practitioners as how they can improve their work. Our research focus is on the local level of urban climate governance.

Our inquiry builds on empirical data from Germany. Germany is the country within the European Union (EU) with the largest population and the largest economy, and a country where membership in TMCNs is very widespread (Busch, 2015). 136 out of 183 German cities with more than 50,000 inhabitants are members of at least one TMCN. Simultaneously, Germany has considerably reduced its greenhouse gas (GHG) emissions and has initiated an ambitious transition of its energy system: the *Energiewende* (Gawel et al., 2014; Strunz, 2014). Many cities have played an active part in this process through local measures such as local building codes (Kronsell, 2013) or supporting renewable energy projects through local power suppliers (Busch and McCormick, 2014). Due to these characteristics, Germany can serve as a critical case from which we can learn about the role of TMCNs in local climate governance.

We attempt to answer the following overarching research question:

Which impacts do TMCNs have on municipal urban climate governance?

We operationalise this question by posing and answering the following sub-research questions:

Which aspects of local climate governance are influenced by membership in TMCNs?

How do these impacts occur?

#### What does this mean for climate pioneer and laggard cities?

"Impact" is here defined as a modification of urban climate governance which can be traced back to any aspect of TMCN membership. This introduction is followed by a brief overview of the most important TMCNs, and a summary of the scientific literature on these networks, including their historical development. Thereafter, we present previous theoretical frameworks and studies on local impacts of TMCNs. In the methodology section we present our approach, methods and data. In the following sections, we present and discuss our results, before we conclude by summarising our findings, placing them in the wider context of research on TMCNs and suggesting further trajectories of research on this topic.

#### 2. Theory: TMCNs, their history and conceptual underpinnings

Several definitions of TMCNs have been brought forward in recent years. For this article we draw on a definition by Busch (Busch, 2016): TMCNs are transnational institutions which provide space for local governments to have an exchange on topics related to the governance of climate change. This In turn means that TMCNs a) have to have members from different countries: b) members can acquire formal membership; c) a network is more than a city partnership, hence TMCNs have more than two members; d) a TMCN focusses on climate issues; e) the network has its own staff and physical address (Busch, 2015). All TMCNs included in this article operate in Germany (see Table 1).

The two most important networks in Germany, Climate Alliance and the Covenant of Mayors are intertwined in several ways. Climate Alliance is part of the consortium running the Covenant of Mayors on behalf of the European Commission. The networks hold conferences jointly, e.g. the European conference of Climate Alliance 2013 in The Hague was at the same time used as assembly for members of the Covenant of Mayors. Several staff members are employed by both networks simultaneously. In addition, Climate Alliance and the Covenant of Mayors share the same address for their Brussels offices (Busch, 2015). Despite the links between different networks, different TMCNs have different goals and objectives: for example C40 Cities Climate Leadership Group (in the following C40) aims at bringing together megacities and cities which are with a very strong track record in regards to climate

#### Table 1

#### TMCNs active in Germany.

Network	Focus	Members	Members in Germany	German members above 50,000 inhabitants
Mayors Adapt (since 2015 part of Covenant of Mayors)	Adaptation	137	11	10
Covenant of Mayors	Mitigation	7335	62	40
Climate Alliance (only full individual members)	Mitigation and adaptation	1715	480	127
C40	Mitigation and adaptation	90	2	2
Energy Cities (only full individual members)	Mitigation	2698	8	6
Future Cities	Adaptation	8	2	1
Cities for Climate Protection Europe (ICLEI Programme)	Mitigation and adaptation	176	11	9
World Mayors Council on Climate Change	Mitigation and adaptation	131	1	1
UNISDR Resilient Cities	Adaptation	3553	1	1

Source: adjusted from Busch (2015). Numbers updated April 2017.

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