

MAINSTREAMING CLIMATE ADAPTATION AT THE IMPLEMENTATION LEVEL: ROUTINES AS POSSIBLE BARRIERS TO ORGANIZATIONAL CHANGE

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ABSTRACT *This article aims to develop a conceptual framework to better understand the role of routines as possible barriers to organizational routines in the case of mainstreaming climate adaptation. It is the implementation level where barriers to climate adaptation often emerge. The way the actors involved in the implementation process interpret and respond to policies is of particular importance here. Reorganizing the resources and practices of these actors to initiate mainstreaming often proves difficult due to standardized organizational routines. As organizational routines aim to provide stability they tend to be re-affirmative. Consequently, they could prevent policy change. This paper uses an analytical framework consisting of four self-reinforcing mechanisms to understand and explain how organizational routines can hamper the mainstreaming of climate adaptation during implementation. A case study is used to illustrate routines as possible barriers during implementation. The paper concludes by stating that a change in routines is needed in order to optimize the possibilities of mainstreaming climate adaptation. In order to stimulate change in organizational routines the focus should be on legitimacy building and learning.*

Key words mainstreaming climate adaptation, organizational routines, barriers, policy implementation, local level

1 INTRODUCTION

Climate change is considered to be one of the main challenges that cities have to deal with (Bulkeley 2013; Hunt and Watkiss 2011; McCarney et al. 2011). Cities are in general densely built and highly populated which makes them vulnerable to climate change risks. A calculated increase in temperature, more extreme precipitation events and sea level rise are expected to induce risks, such as heat stress, (urban) flooding and periods of drought (OECD 2010). These anticipated risks put stress on the urban systems and services, which could lead to social disruption, economic damage to the built environment and health impacts (Carmin et al. 2009). To become sustainable, cities will be wise to adapt their urban systems to the expected climate change risks (Bulkeley and Betsill 2013).

It has been recognized that municipalities play an important role in adapting the urban systems to climate change risks (Castàn and Bulkeley 2013; Measham et al. 2011; Bulkeley 2010). Because the authority, resources and networks differ per city and nation, the ways that municipalities fulfill this role vary (Hunt and Watkiss 2011; Smith et al. 2009). Hence, different approaches to address climate adaptation in urban policy are visible in practice. Some municipalities have placed climate adaptation high on the political agenda, installed climate departments with resources and created specific adaptation strategies (see e.g. Rotterdam, London and New York City). These cities were able to apply a dedicated approach to climate adaptation (Uittenbroek et al. 2012). In general, this leads to a fast implementation of strategies and physical measures. Since there is political commitment for climate adaptation, sufficient (human and financial) resources are allocated to accelerate implementation (Uittenbroek et al. 2012; Bierbaum et al. 2013). However, due to overfull political agendas and limited investment capacity, not all cities can or are willing to apply a dedicated approach to address climate adaptation. In order to still address climate adaptation, several municipalities have chosen to integrate climate adaptation directly in existing policy domains and related organizational processes. In literature, this is also referred to as 'mainstreaming' (e.g. Juhola 2010; Bulkeley et al. 2009). The aim

of mainstreaming climate adaptation is to search for policy linkages between climate adaptation and existing policy objectives, and to combine resources. The mainstreaming approach is considered to lead to more effective and efficient policymaking (Kok and De Coninck 2007).

Despite the aim of mainstreaming climate adaptation at the municipal level, several researchers have reported on barriers that hamper current adaptation practice (e.g. Rijke et al. 2012; Moser and Dilling 2010; Adger and Barnett 2009). Most of these barriers appear to occur during implementation (Biesbroek et al. 2013). The linkages made between climate adaptation and the policy objectives of various policy departments (e.g. spatial planning, water management, public health) in policy documents do not automatically translate into implementation. Policy implementation is not solely determined by policy documents, as there are many other factors that could influence the implementation. For example, the way actors involved in the implementation process interpret and respond to these policy documents (Grin 2010; Sutton 1999). Although these actors might support these linkages made by policymakers, reallocating resources as well as reorganizing practices to support this new demand often proves difficult. New policy initiatives require the reconfiguration of organizational structures and hence, a change in the allocation of resources and benefits to the actors involved in the implementation process (Sutton 1999). For this, it is necessary to identify patterns of interaction among actors and coordination of perspectives, interpretation and knowledge (Storbjörk 2010). Organizational routines provide structure for coordination and interaction between actors within an organization – e.g. concerning resource allocation, distribution of responsibilities, and adopted and preferred practices. Analyzing routines can provide insight into the ability or inability of organizations to adapt to changing situations (Feldman 2003). While routines are useful as standardized procedures can optimize the output, this standardization can also make routines rigid and difficult to change (Sydow et al. 2009). Organizational routines could then hamper new challenges, such as the mainstreaming of climate adaptation. Nevertheless, a change in organizational routines at the implementation level is probably necessary to support the mainstreaming of climate adaptation in various policy departments.

The aim of the paper is to develop a conceptual framework to better understand the role of routines as possible barriers to organizational change. By taking routines as units of analysis, it is possible to capture either stability or change in the organizational processes of, for example, a municipality (Becker et al. 2005). An analytical framework based on four self-reinforcing mechanisms is introduced to explain how routines can form a barrier to mainstreaming. A case study of an implementation process in the City of Amsterdam, The Netherlands, is used to illustrate organizational routines as possible barriers. For this case study, 15 in-depth interviews were held with actors from the City district, the water company¹, the City's spatial planning department and bureau of engineering in the period of May to June 2013 – see the appendix for a list of interviewees. The actors were asked about their practices, the resources available to them, the rules and norms they followed and to what extent these were flexible, their capability to learn and alter practices; their preferences on addressing urban flooding (as a result of climate change), and the expectations of others involved at the implementation level about this.

DISCUSSION

It is notable that all of the actors interviewed are open to implementing GSI practices, they understand that this needs to be addressed at the implementation level, and that this possibly involves the organizational processes that they are involved in. For mainstreaming, this willingness to act is important, as change requires motivation and energy (Sutton, 1999). Although the actors are willing to

¹ The water company, Waternet, is responsible for the entire water cycle in Amsterdam and surroundings and does this on behalf of the City of Amsterdam and Water Board Amstel, Gooi & Vecht.

explore new practices, they also state clearly that there are limits to the extent that they can support and take responsibility for the new practices. The organizational routines that are currently in place are considered by the actors to be efficient and effective. To alter organizational routines without being sure if the process is going to be effective and efficient makes actors at the implementation level, who are generally considered pragmatic, reluctant to change. For them, the current organizational routines – although based on dominant synergies, strict rules, exploitative learning and expectations of expectations – secure a legitimate output. Even though the aim is to mainstream climate adaptation into existing policy domains and related organizational processes, actors at the implementation level (but most likely also at other levels) need to consent to this with attuned or new organizational routines. This process will be slow as legitimacy among actors needs to be built for new synergies, shifted responsibilities and new patterns of resource allocation (Wejs et al. 2013; Sutton, 1999).

However, the case illustrates that over time, the routines and output are changing in favor of mainstreaming climate adaptation. It has been argued before that the mainstreaming of climate adaptation needs to occur based on performance – as opposed to conformance (Uittenbroek et al. 2012). Where conformance focuses on the concurrence between intentions and output, performance provides the actor with the possibility of assessing a situation in relation to the intentions and allows solutions that fit the context (Faludi 2000). By not requiring conformance immediately but focusing on the three stages of performance, the actors can gradually build legitimacy for the mainstreaming of climate adaptation. First, actors become *acquainted* with new practices, then they will *consider* the need for these practices and finally, *consent* to the practices necessary (Van Doren et al. 2013). The three attempts illustrate a variation of these stages (table 2). In the first attempt, the actors explored GSI practices and were in the stage of considering the need, but this stage was cut off due to time planning of the overall project. In the second attempt, GSI practices were again explored and the need considered, but there was no consent on GSI practices. In Betondorp, there is consent to implement GSI practices: the city district and the water company even assigned additional resources to overcome barriers created by self-reinforcing mechanisms in the routines. These additional resources allowed for more time to develop expertise and experience with GSI practices and see how they can fit current organizational routines. In this way, the GSI practices and with them the mainstreaming of climate adaptation can become a legitimate output and organizational routines will be adopted or attuned in order to support the output and become effective and efficient again.

It could be questioned whether the first two attempts only failed as a result of organizational routines or that possible other (context-specific) barriers can be appointed. For example, if there would have been more time to develop the ideas for GSI practices in the first attempt; this might have resulted in implementation. However, this limitation of time derives from a complementary effect: a synergy between multiple objectives. In an established synergy not all objectives will have similar priority; the objective with the most priority will put time constraints on other objectives. As a result, actors will consider how much is possible within the time frame available to them. Many of the barriers relate to the coordination and interaction between actors and therefore, much can be explained by looking at the organizational routines and the self-reinforcing mechanisms.

Furthermore, although the actors at the implementation level showed willingness in implementing GSI practices, they might not have the ability to change their organizational routines. Actors can participate in the pilot projects and bring in practical knowledge on how the organizational routines are currently organized and what alterations in routines might be necessary, but for example additional financial resources for pilot projects (as provided in Betondorp) are decided on by others higher in the municipal organization (e.g. the mayor and aldermen or the head of the policy department) (Kingdon 2002). Hence, the involvement of other actors in the municipal organization is necessary to change the organizational routines. The involvement of other actors can lead to new resources and skills that might not exist in the current organizational routines.

CONCLUSIONS

The aim of this paper was to investigate the role of organizational routines as possible barriers to the mainstreaming of climate adaptation at the implementation level. By doing so, providing a more in-depth understanding of what types of barriers can arise during implementation and moreover, why these barriers occur, as this type of research has been missing in literature thus far (Biesbroek et al. 2013). An analytical framework of self-reinforcing mechanisms has been used to explain how organizational routines can on the one hand provide positive patterns for coordination and interaction, but can also imply dominant synergies, strict rules, exploitative learning and false legitimacy. These barriers arise because the current organizational routines are not designed to mainstream climate adaptation. Consequently, climate adaptation ideas and practices need to become part of the organizational routines. A change in organizational routines will take time as the change needs to be considered effective and efficient. In order to stimulate this change, the focus needs to be on legitimacy building. This might require additional resources, concurrent with the involvement of others higher in the municipal organization, in order to set up learning processes that encourage the development of expertise and experience regarding climate adaptation practices.

Although the research provides interesting insights in the role of organizational routines as possible barriers to mainstreaming climate adaptation, we encourage other researchers to apply the analytical framework of self-reinforcing mechanisms on other cases. This could lead to the identification of other self-reinforcing mechanisms and assist in highlighting relations between the mechanisms. Furthermore, we are aware that the framework of self-reinforcing mechanisms presented in this paper is not unique to the mainstreaming of climate adaptation. Further research is necessary to learn whether particular mechanisms are more challenging in the context of climate adaptation. By doing so, it will be possible to explore more precisely in what ways organizational routines need to be changed in order to support the mainstreaming of climate adaptation.