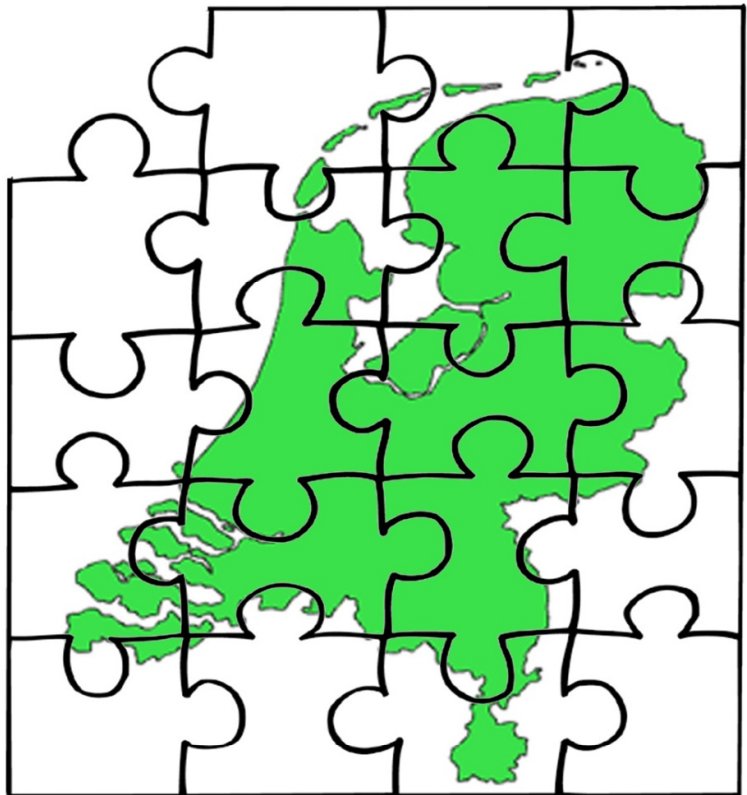


## Climate policy in Dutch municipalities

- organisation, policy, implementation and performance -



A Master's Thesis by Renske den Exter

February 2012

# **Climate policy in Dutch municipalities**

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Master thesis by Renske den Exter

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## Acknowledgements

This thesis report is written as part of my Master Urban Environmental Management at Wageningen University. From the midst of August onwards I have dived into the world of climate policy in Dutch municipalities. I have learned from literature study, the discussions with my professor and colleagues but most of all from the empirical research. I have enjoyed interviewing the experts of not less than 25 municipalities that were willing to offer some of their valuable time. It was very interesting to see what was going on in the country I have lived in my whole life. I am very grateful for the time and feedback<sup>1</sup> provided by the 25 municipalities. This thesis is built on their answers. Hopefully the thesis is interesting and valuable for them to read.

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Renske den Exter  
February, 2012

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<sup>1</sup> The thesis is based on interviews. All municipalities were given the opportunity to provide feedback to the draft thesis. Many provided valuable feedback, which has been incorporated here. Nonetheless, it should be noted that it is possible that inaccuracies remain.

## Abstract

Despite the growing body of research on (the importance of) climate governance at the local level, no extensive analysis exists of climate mitigation and adaptation policy, its organisation and performance in local authorities in the Netherlands. This research aims to fill this gap by answering the research question: *How is climate change mitigation and adaptation anchored in the organisation, policy and implementation of the biggest Dutch municipalities (>100.000 inhabitants) and how does this influence their performance?* Indicators were formulated for the level of anchoring in organisation, policy and implementation. 25 out of the 26 biggest Dutch municipalities were interviewed and analysed with regard to these indicators, taking a multi-level system perspective. Performance was measured by asking municipalities about their own and others' performance. The four municipalities with the best output-performance; Amsterdam, Rotterdam, Den Haag and Tilburg, have been used as 'reference municipalities' to find linkages between the level of anchoring and performance. Climate issues appeared to be low to medium anchored in organisation, medium in policy and above medium in implementation, in the 25 municipalities. Based on the higher performance in the reference group and their uniform and higher score on some of the indicators for anchoring, other municipalities could strengthen their internal organisation by having a central point of management/coordination (also for better monitoring) and a core team throughout the municipal organisation to involve different departments. Trainings and, in some cases, checklists or other tools could help in this integration process. This can, when fitting the culture, be steered both internally and externally by other actors within a more organised structure for structural cooperation with a broad range of actors, something that worked out for the reference municipalities.

An important finding within this thesis is that in most of the cases one cannot speak of integration of mitigation and adaptation in the climate organisation or policy. There appears to be a tendency however of placing mitigation and adaptation under a broader sustainability programme, which can provide an opportunity, but only when better operationalisation ensures that adaptation measures (more than water management only) become less ad hoc. The second important finding is that currently most municipalities still have their climate/sustainability programme centrally arranged. They work however towards decentralisation, seeing their climate organisation as a temporal organisation. A combination of centralisation and decentralisation is, also in future, thought to be most effective. The cooperation of municipalities has already shifted from focusing on specific companies to having a broader view, a promising trend. Although this thesis shows that some municipalities work towards externalisation, the bonds with the central internal structure, that could still steer and start initiatives where needed, should stay strong. Another important finding is the trend of regionalisation, especially with regard to mitigation which currently has a focus on 'action'. Since the support from the national government seems to be down-sized, this trend provides an opportunity. While functional regions help to prevent spatial mismatch of climate issues, regional cooperation, which can be stimulated by provinces and national networks, can also become useful in terms of provisioning for municipalities that do not have the capacity to turn to e.g. EU for project funding. Frontrunners should keep or even strengthen their (inter)national focus and disseminate knowledge where possible in the region. Hopefully this will get the fly-wheel, in which municipalities are strongly investing, really going.

**Key words:** climate change; local level governance; mitigation; adaptation; anchoring

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## List of Abbreviations

Abbreviation	Dutch	English Translation
<b>ARK</b>	Nationaal Programma Adaptatie Ruimte en klimaat	National Programme for Spatial Adaptation to Climate Change
<b>BANS</b>	Bestuursakkoord Nieuwe Stijl	New Style Management Agreement
<b>BEC</b>	Bosche energieconvenant	Energy covenant of 's-Hertogenbosch
<b>C2C</b>		Cradle to cradle
<b>CO<sub>2</sub></b>	Koolstofdioxide	Carbon dioxide
<b>CoM</b>		Covenant of Mayors
<b>EC</b>	Europese Commissie	European Commission
<b>ELI</b>	Economische Zaken, Landbouw en Innovatie (ministerie)	Economic affairs, Agriculture and Innovation (ministry)
<b>EU</b>	Europese Unie	European Union
<b>EPC</b>	Energieprestatiecoëfficiënt	Energy performance coefficient
<b>FTE</b>		Full time equivalent
<b>GHG</b>		Greenhouse gas
<b>I&amp;M</b>	Infrastructuur en Milieu (ministerie)	Infrastructure and environment (ministry)
<b>LDEB</b>	Lokaal Duurzaam Energiebedrijf	Local sustainable energy company
<b>NEC</b>	Nijmeegse energieconvenant	Energy covenant of Nijmegen
<b>NL Agency</b>	Agentschap NL (voorheen EVD, Octrooiencentrum Nederland en SenterNovem)	An agency under the Ministry of Economic affairs, Agriculture and Innovation
<b>RUDS</b>	Regionale uitvoeringsdiensten	Regional execution bureau
<b>SLOK</b>	Stimulering LOKale Klimaatinitiatieven	Promotion local climate initiatives
<b>(T)NMN</b>		(Trans) national municipal network
<b>VNG</b>	Vereniging van Nederlandse Gemeenten	Umbrella organisation for all Dutch municipalities
<b>VROM</b>	Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer (vroeger ministerie)	Housing, Spatial Planning en Environment (former ministry)
<b>WM</b>	Wet Milieubeheer	Environmental Act

# 1. Introduction

## 1.1. Background and problem description

The issue of climate change can be seen as one of the major challenges of this time. Many scholars agree that, although climate change is a global problem, action at the local level, and in particular in urban areas, is important (Bulkeley and Kern 2006; Gupta 2007; Sippel and Jenssen 2009; OECD 2010; Sippel 2010; UN-Habitat 2011). There are several reasons why the local level is said to be well suited for climate governance. More than half of the world's population is living in cities. Since a high portion of greenhouse gases (GHGs) is emitted in cities, local reductions could have large effects (climate change mitigation). Often, municipal authorities are responsible for key processes that affect GHG emissions at local level (e.g. land-use planning, transportation, construction) (Coenen and Menkveld 2002).

Moreover, municipalities have to protect themselves against the effects of climate change (climate change adaptation) (IPCC 2007). Especially in cities, with their high concentration of people, buildings and infrastructure, the impacts of climate change can be severe (e.g. heat waves) and the rising sea levels are a risk to many large port cities (e.g. Rotterdam, New York City and Tokyo) (UN-Habitat 2011). By integrating mitigation and adaptation, municipalities can prevent negative linkages between mitigation and adaptation activities and look for system-wide synergies (Klein 2007).

As the level of government closest to the people, local authorities can effectively deal with public involvement and form partnerships with civil society and the private sector. Linkages between policy and sustainable development are often clearer at local level, motivating cities or regions to be innovative and implement responses that fit their specific geographic, climatic, economic and cultural conditions (2009). Especially the high concentration of people and activities in cities provide opportunities for technical innovations. Also, innovative local policy solutions can, if successful, be scaled up to regional/national programmes (Coenen and Menkveld 2002; Sippel and Jenssen 2009; UN-Habitat 2011).

There are many ways in which local governments can govern climate change mitigation and adaptation. Local governments often have the authority to deal with spatial planning, local transportation, housing and energy. They can subsequently use this authority to make these fields more sustainable. If local governments are in charge of the provision of utilities, this offers a great opportunity to mitigate and adapt to climate change. Aside from using their authority and provision of sustainable services, local governments are in a good position to aim for a climate neutral emission policy and can act as an example for their inhabitants (Gupta 2007). Lastly, local governments can 'enable' other actors to become more sustainable through e.g. communication and education.

Urban climate governance does however "not take place in a vacuum" (Bulkeley 2010) but is embedded in a multi-level governance framework (Gupta, Lasage et al. 2007; Bulkeley 2010), with a local dimension and horizontal and vertical arrangements. Through transnational or national networks, collaboration between cities is seen on a horizontal level. (Horizontal) metro-regions are formed to avoid spatial mismatch. Aside from horizontal relations, vertical relations, with other level governments, are found to be critical "in shaping the capacity and political space for municipal responses" (Bulkeley 2010).

Over the last 20 years, many regional and local initiatives have emerged (Klostermann, Biesbroek et al. 2009). The evidence of the impact and effectiveness of local climate action is however still limited (Bulkeley 2010).

Research so far suggests that institutional, political, economic and informational issues seem to constrain municipalities in their climate protection. Many municipalities tend to prefer self-governing and enabling other actors to achieve emission reductions instead of making use of the possibility to use authority for climate protection. Due to liberalisation in for example the energy market (2009), also governing through provision can be limited. In general, the focus has mostly been on mitigation, only since recently climate change adaptation receives some attention in local climate change policies (Kern and Alber 2009; Bulkeley 2010). Moreover, according to research, municipal actions are narrowed down to energy efficiency or other actions that have economic as well as environmental benefits (Bulkeley 2010). Often energy policies are integrated inadequately with other climate-relevant policy areas (Kern and Alber 2009).

There appears to be a gap between the rhetoric and the reality of local climate action. Although local level action is seen by many as the way forward and it is often assumed that “cities are performing well”, no real overview exists of climate policy in local authorities (Bulkeley 2010).

So far, most studies have focused on a limited number of city case studies and the need is expressed for further comparative research using a significant number of cases (Gupta 2007; Gupta, Lasage et al. 2007; Kern and Alber 2009). Moreover, only few studies combine mitigation and adaptation (Gupta 2007; Kern and Alber 2009)

Also in the Netherlands, although quite some case studies have been done, no extensive analysis exists of climate mitigation and adaptation policy, its organisation, implementation and performance in (a high number of) local authorities. Moreover, for long, municipalities in the Netherlands could make use of national funding programmes (e.g. BANS and SLOK, to be explained in section 4.1). The expiring of this funding in 2012 can have major implications for climate actions at the municipal level.

## **1.2. Research aim**

The aim of this research is to provide an analysis of the level of anchoring of climate mitigation and adaptation in the organisation, policy and implementation of 100.000+ municipalities combined with their performance with regard to local climate mitigation and adaptation policy. This is complemented with an analysis of the influence of anchoring factors on the municipalities' performance. The research is done taking a multi-level governance system perspective (local level, vertical and horizontal interactions), but the local level has the focus.

By systematically analysing the organisation of both mitigation and adaptation and the performance in all 100.000+ municipalities in the Netherlands<sup>2</sup> taking a multi-level perspective, this research aims to fill the research gap that exists in local climate policy research which has so far mainly focussed on mitigation policies in single case studies.

The overall research is visualised in Figure 1.

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<sup>2</sup> See Annex I. Only Arnhem could not participate in the interviews.



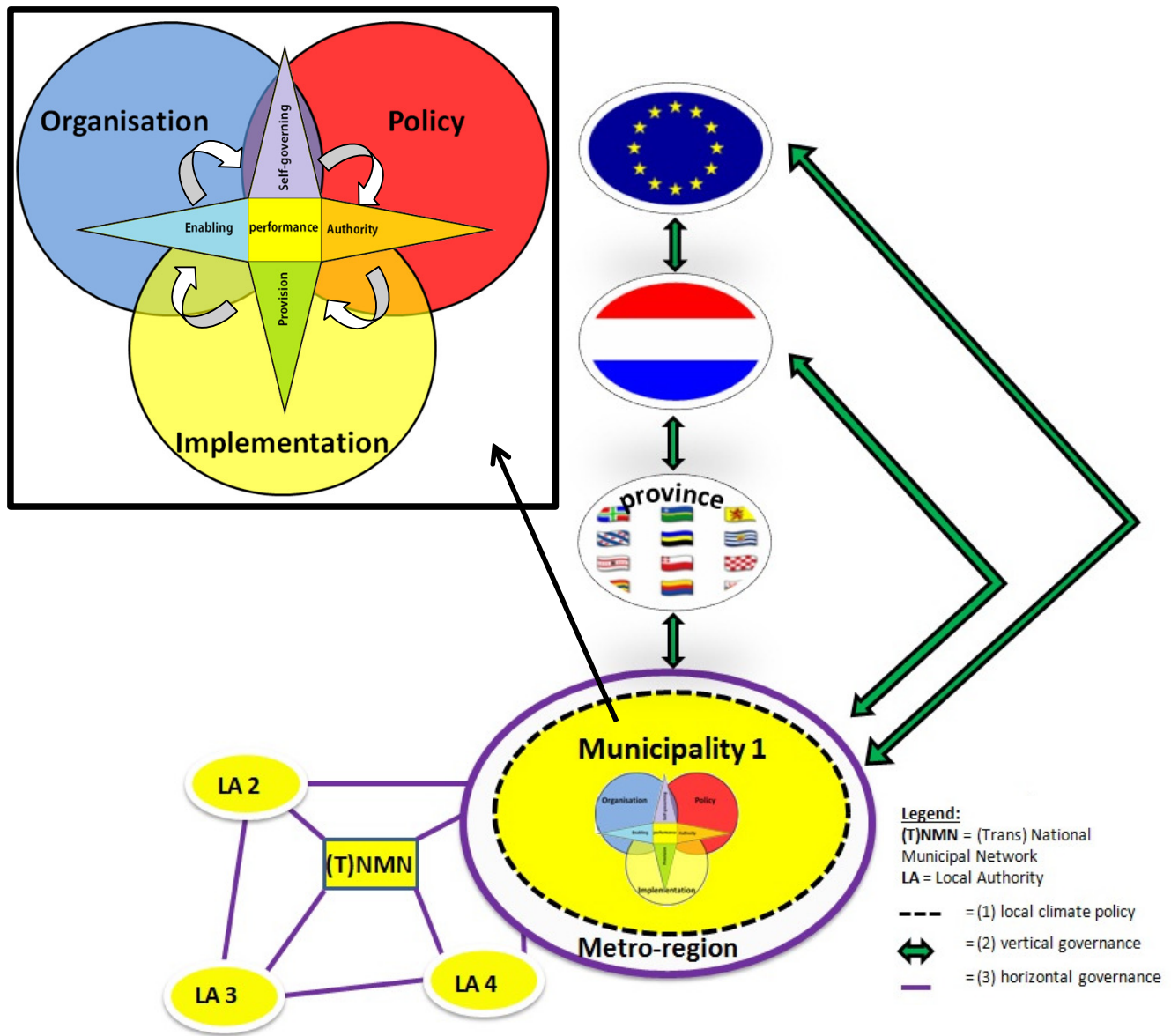


Figure 1: Visualisation of the research. The performance (star) is the core of the research. Part 1 of the research (local climate policy) is marked with a dotted circle. Part 2 is indicated by green arrows (vertical governance) and a purple circle and lines (horizontal governance). Adapted from Kern (2011) and KplusV (2010).

The core of the research is visualised by the coloured star, the performance. The performance is in this research broadly defined as the main climate mitigation and adaptation activities implemented (output), and (where possible) the outcome (e.g. the reduction of GHG emissions; the reduction of risk of flooding and heat island-effect). This performance is analysed within the multi-level framework, with (part 1) the local level and (part 2) the vertical intergovernmental relations and the horizontal metro-regions and networks.

*Part 1: Local dimension:* The left corner of Figure 1 zooms in on the local level and shows the model that is used to analyse the level of anchoring of climate change adaptation and mitigation policy in organisation, policy and implementation of municipalities and its influence on the output-performance (divided into four governing modes used) and outcome-performance. An explanation of the model can be found in the conceptual framework chapter 2, section 2.1.2 and 2.1.3.

*Part 2: vertical and horizontal interactions:* The green arrows in Figure 1 show the relations between the municipalities and other levels of government (vertical interactions), which are analysed in part 2 of the research (with a focus on the national level). The purple lines and circle visualise the horizontal interactions. Part 2 of the research also aims to analyse the engagement of Dutch municipalities in horizontal governance structures, like metro-regions and city networks for e.g. transferring policies and best-practises.

### **1.3. Research questions**

The main research question within this thesis is: *How is climate change mitigation and adaptation anchored in the organisation, policy and implementation of the biggest Dutch municipalities (>100.000 inhabitants) and how does this influence their performance?"*

This main research question can be subdivided into the following sub-questions:

#### **Part 1: Local dimension**

1. *What is the playing field for Dutch municipalities with regard to climate change mitigation and adaptation measures?*
2. *In what way is climate change mitigation and adaptation anchored in the municipal organisation, local policy and implementation?*
3. *What is the performance (outputs and outcome) of Dutch municipalities in the field of climate change mitigation and adaptation?*

#### **Part 2: Vertical and horizontal interactions**

1. *How do Dutch municipalities interact, vertically, with provinces, national government and the EU to address climate change and what role do these intergovernmental arrangements play?*
2. *What role do metro-regions and (trans)national networks play for municipalities in local climate change mitigation and climate change adaptation?*

In both parts, the following sub-questions are integrated in order to be able to give recommendations to municipalities and other actors at the end of the thesis.

1. *What factors hinder municipalities in their local climate change mitigation and adaptation actions?*
2. *What are future perspectives for municipalities with regard to local climate mitigation and adaptation?*

### **1.4. Methodology**

In order to answer the abovementioned research questions, the following methodology was followed: as a start, literature study was done on local climate mitigation and adaptation responses in Europe. Hereafter, the study zoomed in on the Netherlands, gaining information from literature, congresses, websites and rankings. With this information, the legal principles underlying Dutch municipal climate mitigation and adaptation activities were sketched out. This was complemented with a literature review on the scope of measures that municipalities in the Netherlands can take. In order to formulate indicators and interview questions, information from literature, websites and congresses was compared and complemented with information gained from an in-depth interview with NL Agency and the national network 'Klimaatverbond', see annex II for interview questions. From the interviews and literature research, sub-question 1 was answered and a start was made with the other sub-questions.

The above was followed by an analysis of a large group of Dutch municipalities. The Netherlands counts 415 municipalities (CBS 2012). Since this research is part of a broader international research, it was decided to interview all municipalities with more than 100.000 inhabitants. In the Netherlands, there are 26 municipalities with more than 100.000 inhabitants<sup>3</sup>, see annex I. Together these 26 municipalities have 5.456.045 inhabitants, which is, out of a total population of 16.619.033 (as of 1-1-2011), one third of the total amount of inhabitants in the Netherlands (33%). Time was not sufficient to also interview a sample of smaller cities.

Appointments for telephone interviews with the selected municipalities were made at congresses, by e-mail or telephone, asking for the person in charge of climate policy. Although Amsterdam and Rotterdam consist of districts (some with their own climate officer), it was, due to lack of time, decided to only interview the overarching programme bureau. Before the interviews, relevant information about the municipalities was obtained from municipal reports, policies and municipal websites and a summary was made per municipality. The general interview question lists were partly filled in based on the information found (*this information was always verified during the interviews*)<sup>4</sup>, and some municipal specific questions were added. One interview was scheduled in advance of the others, so that the interview could be pre-tested (with regard to length etc.). The 25<sup>5</sup> telephone interviews were held in November 2011, in Dutch, and lasted for a maximum of one hour. An overview of the general interview questions can be found in annex III. The interviews were taped (*for own use*) to be able to type out the interviews afterwards. Since many interviewees of the municipalities mainly dealt with mitigation, extra interviews about adaptation were done with Dordrecht (via e-mail), Eindhoven and Groningen (in a three-headed telephone conversation). For Leiden some questions were asked to the 'Milieudienst' (partly in charge of Leiden's climate policy).

Based on the transcribed interviews, the answers were grouped per aspect and analysed. Newly found differences and similarities were grouped as well. Thereafter, information was grouped according to the indicators for anchoring formulated beforehand and typed out. An excel scheme was made, based on the interviews, containing plusses and minuses per municipality, per indicator. Since there were many more nuances in the answers, this scheme was only for internal use. In the report, extra nuances and discussions were mentioned. Since information from other rankings checked was not sufficient to rank municipalities on their output-performance and performance could not structurally be analysed within an interview of less than one hour, performance was described based on the opinion of other municipalities about a municipalities' performance. Based on this, a reference group (of sort of 'frontrunners') was selected which was analysed in detail in order to say something on the influence of anchoring on performance.

A draft report was sent to all interviewees to incorporate their comments.

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<sup>3</sup> Although the 'biggest municipalities in the Netherlands' are grouped into the G4 (Amsterdam, Rotterdam, Den Haag, Utrecht) and G32 (currently 33 municipalities), not all municipalities in the G32 have more than 100.000 inhabitants and therefore not the whole 'G32' is interviewed in this research.

<sup>4</sup> While it was beforehand thought that systematic policy analysis would complement the information from the interviews, it turned out that the situation was often quite different than what was read beforehand in policy documents. Since all information had to be verified anyway in the interviews, most of the results are mainly based on the answers to the interviews and not on systematic policy analysis.

<sup>5</sup> Arnhem could not participate in the interviews.

### 1.5. Scope and limitations

The unit of research is the Dutch municipality. As could be read in the methodology, municipalities with more than 100.000 inhabitants were interviewed. Within this research, urban governance is looked at from the perspective of municipal authorities. It must be noted that urban governance not solely deals with governmental actions but deals with “any kind of action undertaken by any societal actor to obtain a certain impact on society” (Kern 2011). Further research could shed light on non-governmental actions undertaken in Dutch municipalities.

So far, mainly case study approaches have been used in the research towards local climate policies. This research aims to provide a much broader analysis of the anchoring and performance with regard to climate change mitigation and climate change adaptation<sup>6</sup> at local level in the Netherlands. Based on this research one can systematically choose examples or best-practices from the Netherlands to study in-depth in a case study. Since interviews have been selected instead of surveys, to obtain qualitative and nuanced information, this research does not provide quantitative rankings and figures. It does, however, give a good view on many aspects in almost all 100.000+ municipalities in the Netherlands and provides a lot of food for further research.

As mentioned, this research focuses on performance in terms of output and outcome. The third level of performance (impact) is not considered. With regard to output and outcome-performance, suitable rankings were not available and time was not sufficient to structurally list all climate mitigation and adaptation measures implemented by municipalities and their effects. Also, municipal wide trends in energy use could not be studied within the time available<sup>7</sup>. The solution found to ‘measure’ performance in a –within this research feasible way– was to ask municipalities about their own and others’ performance. A municipalities’ own opinion was compared with opinions of others and it was studied how many municipalities thought the same. It is acknowledged that in this approach, the results are based on the opinion of the interviewee and these opinions can be influenced by their function within the municipality, the media (which might be easier influenced by (larger) municipalities with more capacity) and by the fact that municipalities might know more of the performance of municipalities in their own region or of municipalities that are active in cooperation. It is also acknowledged that the organisational capacity etc. of the reference group (formed of the municipalities that were mentioned most often and were valued by themselves and others for a certain output-performance), consisting of the three largest cities and the sixth largest city, might be harder to copy for other municipalities. Since information is gathered from 25 municipalities however, this research provides interesting insights about and for all municipalities. Recommendations for further research on performance can be found in section 7.3.

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<sup>6</sup> This research showed that adaptation and mitigation is often not coordinated in a structured way/ by the same person. The person ‘in charge of climate’ was most often somebody that mainly dealt with mitigation. Although adaptation has always been taken into account throughout the research and also extra interviews with ‘adaptation responsible persons’ have been done, doing interviews with all adaptation responsible persons from all municipalities would have shed a more detailed light on the situation with regard to adaptation.

<sup>7</sup> This would also depend on more factors (e.g. the weather) than only a municipalities’ performance.

## 1.6.Outline report

The next chapter, chapter 2, will present the conceptual framework and theoretical background for this research. It starts with an explanation of the multi-level governance framework where after the chapter is split in two parts in which also the empirical chapter is split: part 1: the local dimension and part 2: vertical and horizontal interactions. Part 1: The local dimension, section 2.1, will start with background information on local climate change mitigation and adaptation responses in Europe (2.1.1). Thereafter the concepts of anchoring in organisation, policy and implementation are explained, as is the concept of performance. Part 2 (2.2) explains the vertical and horizontal concepts.

After the theoretical background, the thesis zooms in on the Dutch system and the empirical results. This part especially is thought to be interesting to read for municipalities. Again, this is split up in the two parts mentioned earlier. In part 1, the local dimension (chapter 3), first the Dutch local playing field is described by sketching the legal principles underlying municipal climate change adaptation and mitigation activities. Second, the results of the interviews with regard to anchoring in organisation, policy and implementation are presented. The section about the local dimension of climate governance will end with the performance of the Dutch municipalities in terms of outputs and outcomes. Part 2 of the empirical chapter (chapter 4) deals with vertical climate governance and horizontal interactions. Although the section on the local level playing field (section 3.1) already showed important national policies, this part will go deeper into the use of programmes, such as the financial structure SLOK.

The different parts of the empirical section can easily be recognised by their own (simplified) figure and corresponding colour, see Figure 2.







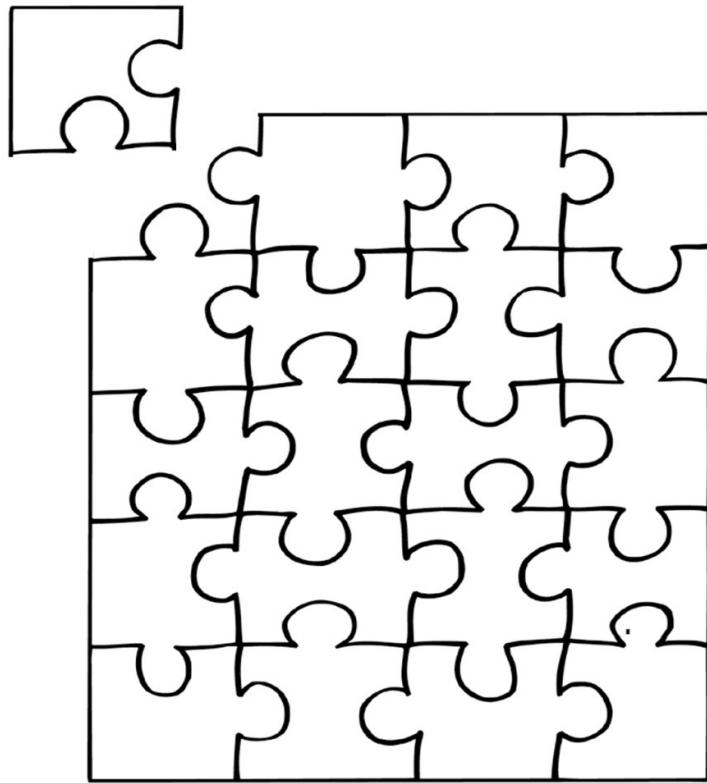
Summary and central message section:		
	Anchoring in organisation	From page: 46
	Anchoring in policy	From page: 54
	Anchoring in implementation	From page: 65
	Performance	From page: 73
	Vertical interactions	From page: 83
	Horizontal interactions	From page: 89

Figure 2: Figures and colours to recognise the different parts of the empirical research and the location of the summary and central message sections on these topics.

Since the empirical section is quite large, 'summary and central message'-sections can be found throughout the report, as can be seen in Figure 2. After the empirical results, the overall discussion can be found in chapter 5. Chapter 6 will present the conclusions and some recommendations for different actors and further research are given in chapter 7.

# Theoretical background



## 2. Conceptual framework and theoretical background

This chapter will provide the theoretical background needed in this thesis. The chapter will start with an explanatory box (Box 1) about the multi-level governance framework before zooming in on respectively the local level (section 2.1) and the vertical and horizontal interactions (section 2.2) within the multi-level system.

### Box 1

#### Multi-level governance framework & modes of governing

Throughout this thesis, the term governance is used many times. In a descriptive sense, governance refers to “any kind of action undertaken by any societal actor to obtain a certain impact on society” (Kern 2011). Traditionally, governing was mainly done by central governments, but this has shifted to new forms of governance in which the hierarchical role of central governments has declined, non-governmental actors are involved, networks are important and more responsibilities are given to regional and local governments (OECD 2010; UN-Habitat 2011).

Urban climate governance does “not take place in a vacuum” (Bulkeley 2010) but is embedded in a multi-level governance framework (Gupta, Lasage et al. 2007; Bulkeley 2010). Multi-level governance can be defined as “the dispersion of authority away from central government- upwards to the supranational level, downwards to sub national jurisdictions, and sideways to public/private networks” (Hooghe and Marks 2001). Multi-level governance can be used as a conceptual framework to understand climate mitigation and adaptation in municipalities, with its local dimension (part 1 of this research) and the relations cities have both vertically, with different levels of government, and horizontally at the same level of government with other cities or private and non-state actors in the region, country or internationally (part 2 of this research) (OECD 2010).

Within the multi-level governance system, different modes of governing can be detected. Kern and Alber (2009) define four modes of governing climate change: 1) governing by authority; 2) governing by provision; 3) governing by enabling; and 4) self-governing. On a municipal authority level, all four modes can be used. In the vertical relation between national/provincial and local level governments, governing by authority, provision and enabling are seen. Horizontal interactions are often referred to as a type of self-governing, since governmental actors are no authority in these arrangements (Kern and Bulkeley, 2009).

## **2.1. Part 1: The local dimension**

In this section the focus is on the first dimension within the multi-level framework: the local dimension. After a general introduction to European local climate policy and its challenges (section 2.1.1), the concepts of anchoring and performance are defined and linked with the concept of governing modes. The combination of these concepts is used to analyse the local level.

### **2.1.1. Background information: Local climate change mitigation and adaptation responses in Europe**

#### **The emergence of local initiatives**

Over the last 20 years, many regional and local initiatives have emerged (Klostermann, Biesbroek et al. 2009). Since the early 1990s pioneering cities started to focus on energy efficiency issues. Under the emergence of city networks like ICLEI-CCP, Climate Alliance and Energy Cities, the urban responses to climate change grew. Since 2000, municipal climate actions were seen in a wider range of cities, not only medium or small cities but also capital cities or metropolitan areas and cities in the South (Bulkeley 2010).

Aside from the actions initiated by the municipality (see municipal modes of governing, section 2.1.3) which were dominant during the 1990s, nowadays also new modes of governance have emerged in which “private actors and public agencies outside the local authorities are initiating schemes and mechanisms to address climate change mitigation activities in the city” (UN-Habitat 2011, p. 107).

#### **Mitigation**

In the beginning, the focus of climate governance was primarily on mitigation (the reduction of GHG emissions) (Kern and Alber 2009). Local authorities formulated widely varying reduction goals, some very ambitious, some in line with the Kyoto target. By formulating own goals, local governments could compensate for the inaction of their governments (e.g. in Italy). To give some examples of local targets, London has set a target of reducing GHG emissions in 2025 with 60% as compared to 1990 levels (compared to the less ambitious national target of 60% reduction from 2000 levels by 2050) (Dodman 2009; Kern and Alber 2009), Malmö (Sweden) aims to run 100% on renewable energy in 2030 and Rotterdam (the Netherlands) wants to achieve a 50% reduction of CO<sub>2</sub> emissions by 2025 compared to 1990 (Kern 2011).

Aside from this, many cities have conducted GHG emission inventories to analyse the potential for GHG reduction and subsequently measure their performance. This development is stimulated by transnational city networks but the fact that there is not one approach used by all cities, makes comparisons difficult (2009).<sup>8</sup>

With regard to institutionalisation of climate policies at local level and the integration of climate goals in other sectors, municipalities show different arrangements. Some have a unit that is in charge of climate change policy within each climate-relevant department, others have one overarching unit or steering group that coordinates climate change activities. Although there are examples of cities with a comprehensive approach, “numerous cities that have adopted GHG reduction targets have failed to pursue a systematic and structured approach and, instead, prefer to implement no-regret measures on a case-by-case basis” (Kern and Alber 2009 p. 173). Often competences and responsibility for climate change policy are located in an environmental department or agency, with often less political power and resources than other local departments.

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<sup>8</sup> Since cities can use different methodologies, this research will be careful with the comparisons.



For instance, this is the case in two thirds of the German cities (Kern, Niederhafner et al. 2005). This can lead to a situation in which “climate-related issues are not taken into account when climate-relevant decisions are taken outside the environmental department” (OECD 2010, p. 187).

The majority of the local climate actions has been in the energy sector and especially improving energy efficiency (e.g. of municipal properties) is popular (Bulkeley and Kern 2006). Also, energy policies have emerged that promote renewable energy solutions (2009). In the transport sector, which is a large contributor to GHG emissions, greening the municipal fleet is popular, but local authorities have also tried to improve public transport systems, apply demand-reduction measures for private motorized vehicles and promote walking and cycling. Within the field of urban planning, many actions can be detected. Some municipalities have standards for new buildings, others strategically plan for new neighbourhoods (Kern and Alber 2009).

With regard to the governing modes mentioned, Kern and Alber (2009) observed that, although regulatory authority is an important governance mode for implementing mitigation and adaptation, it is the least popular mode among municipal governments. One of the exceptions is Barcelona, with its Solar Thermal Ordinance (2000) which requires the installation of solar collectors for hot water supply (Kern and Alber 2009). Due to liberalisation in for example the energy market, governing through provision is also limited (2009). Self-governing is the most applied mode of governing by municipalities (Bulkeley and Kern 2006; UN-Habitat 2011). However, the impact of policies implemented through self-governance tend to be more limited, since frequently, municipal GHG emissions are only a small percentage of a city's overall emissions (e.g. two to five percent in Germany) (Kern, Niederhafner et al. 2005; Sippel and Jenssen 2009) and as UN-Habitat (2011, p. 171) puts it: “too much attention to the self-governing mode may detract resources from the broader mitigation challenges faced by a city”.

Many authors agree that although significant efforts are taking place to mitigate climate change at the urban level, the real achievements are poor. “The potential of local climate protection seems to be far from being realised” (Sippel and Jenssen 2009, p. 4). Although cities have the ambition to become CO<sub>2</sub> neutral, there are no cities yet that have achieved this (Builddesk 2007). There is also still limited information about the impact of the existing responses (UN-Habitat 2011).

### **Adaptation**

With regard to adaptation, it is becoming clear that mitigation approaches have to be complemented with adaptation policies since the effects of climate change are, varying from region to region, already occurring (2009). Sippel and Jensen (2009) found that vulnerability was the key motivator for adaptation policies, together with smart development. The development of local and regional adaptation plans lags behind mitigation (Carter 2011), but examples of cities with adaptation strategies are emerging. Mitigation and adaptation activities can however be contradictory. Some forms of adaptation lead to more emissions (and therefore need more mitigation and in the long run adaptation), e.g. in the case of air-conditioning working on fossil fuels. On the other hand, mitigation measures like dense building can make adaptation more necessary (by having more non-porous surface/heat-island effect) (Klein 2007). Integration of mitigation and adaptation, finding synergies and gaining co-benefits (in terms of improved air quality, improved quality of life etc.) for the city, is therefore important. In practice, some adaptation strategies are integrated in wider climate and sustainability strategies, aiming to find synergies with mitigation (e.g. in Madrid (Spain); Manchester (UK)), other cities prepare ‘stand-alone’ adaptation strategies (e.g. London (UK)) (Carter 2011).

Some cities only implement event-driven activities, others aim to reduce vulnerability and improve resilience to climate variability (2009). Activities planned range from defensive measures like dams to preventive measures like climate proof land use planning and ‘making space for rivers’.

Although there are some good examples of cities that care about adaptation (e.g. Rotterdam), UN-Habitat reports that “too few cities have developed coherent adaptation strategies” (p. 175). Climate change adaptation does not get city-wide attention and most climate change adaptation literature is still on what should be done since too little is actually being done (UN-Habitat 2011). Also Sippel and Jenssen (2009) found that the number of cities engaging in adaptation activities is still very limited. According to UN-Habitat (2011), also in developed countries, adaptation does not get the political support that it deserves. Major upgrades in infrastructure are costly and impacts of climate change are seen as a distant danger (2009). Since a sound scientific basis is needed to prepare an adaption strategy, cities often wait until they are affected (2009).

### 2.1.2. Defining anchoring of climate policy

After this background information on climate change mitigation and adaptation responses in Europe, the upcoming sections will structurally explain the different concepts used in this research.

In this thesis, the local dimension of climate mitigation and adaptation policy is analysed by looking at the way climate change policy is anchored in the municipal organisation, policy and implementation. According to NL Agency, an agency under the Ministry of Economic affairs, Agriculture and Innovation (EL&I), successful execution of local climate ambitions starts with the anchoring of climate policy in all aspects of the organisation (NL Agency 2011). Climate change particularly asks for a long term vision. Targets cannot be reached with ad hoc projects only. Although an enthusiastic ‘key person’ is very valuable, there is a time when he or she will leave.

Anchoring can therefore be understood as the way climate policy structurally gets a place in policy, organisation and execution (NL Agency 2009). For effective climate policy, climate mitigation and adaptation should be considered during all the stages of the policy making process. In their assistance document on anchoring of climate policy, NL Agency shows the eight elements visualised in Figure 3 as important for municipalities to focus on (NL Agency 2010).

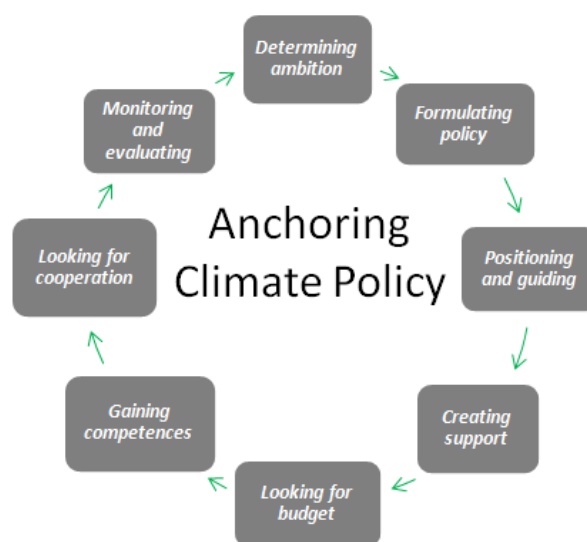


Figure 3: 8 elements to focus on for municipal anchoring of climate policy. Translated from NL Agency (2010)

In general, anchoring can be split up into anchoring of climate issues in the municipal organisation, policy and in execution/implementation of policy. The idea is that in a perfect working organisation, vision and policy, via a plan, lead to execution/implementation. So successful local climate policy asks for aims stipulated in policy, translation of aims in a plan of how this is going to be organised (who is responsible etc.) and that the plans are really executed (KplusV 2010).

In this research, the real activities implemented by municipalities are called 'output-performance'. The preconditions for effective execution, like adequate support, capacity, finances and monitoring, are seen as 'implementation factors'. When talking about anchoring in 'implementation', these preconditions for execution are mentioned.

Based on the concept of anchoring, the performance (both output and outcome) of local authorities in the field of climate mitigation and adaptation is expected to be highest when climate issues are well anchored in the organisation, the policies and the implementation. This is explained by the star in Figure 4, which is part of the earlier shown figure of the total research (Figure 1).

The theory goes that if the three components are not well balanced, there is a suboptimal situation. The first figure (I), in Figure 5 shows the situation where there is an organisation and a plan but no capacity and support and therefore no preconditions for execution. There are nice words but nothing can actually happen (window dressing). The second figure (II) visualises the situation where activities can be executed, there is an organisation, there is capacity, but the activities are not based on clear policy or a shared vision. The risk is that, in such an organisation, activities are executed that are not really asked for, or not in line with each other. The last figure (III) shows how there can be a vision but without a good organisation, without people appointed and time reserved, nobody really knows who is responsible and there is no coordination.

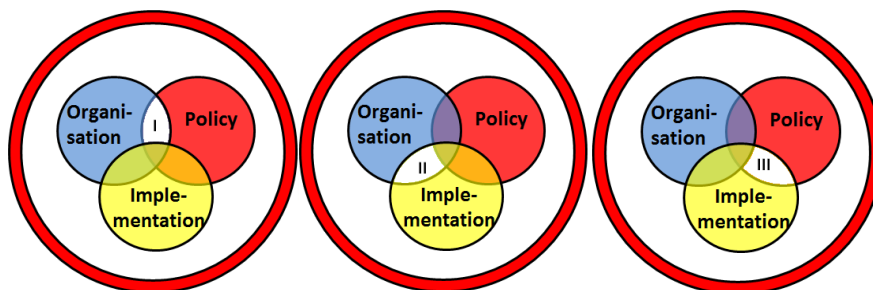


Figure 5: suboptimal organisation due to I: No support and capacity (only policy and organisation overlap) II: No shared vision (only organisation and implementation overlap) III: No clear responsibility (only policy and implementation overlap). Ball-model adapted from (KplusV 2010).

To research anchoring, indicators have to be formulated. The indicators formulated in the upcoming boxes (Box 2, Box 3 and Box 4) are partly based on the brochure 'Anchoring for tomorrow' (NL Agency 2009) and partly on other sources.

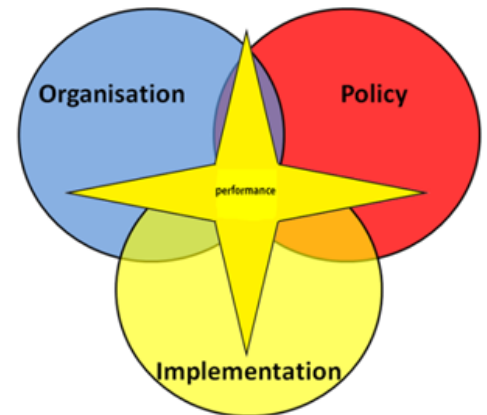


Figure 4: Part of figure 1: The performance of local authorities is expected to be highest when climate issues are anchored in policy, organisation and implementation. Ball-model adapted from KplusV (2010)¶

### Anchoring in organisation

To see how climate change mitigation and adaptation is anchored in the municipal organisation, the following indicators have been formulated for this research:

- **Integration of mitigation and adaptation in the organisation**

As was written in section 2.1.1, aside from mitigation, effective adaptation is necessary. By integrating mitigation and adaptation (combining them to reach an unified result), one can prevent negative linkages between mitigation and adaptation and look for system-wide synergies, increasing cost-effectiveness of actions and the attractiveness for stakeholders and funding agencies (Klein 2007; Lenhart 2011). By integration of adaptation and mitigation in the organisation, e.g. by having a responsible person that keeps an overview over these two aspects of the climate change challenge, both aspects of climate change can be anchored in a symbiotic way (Kern and Alber 2009).

- **Availability and position of 'programme manager'/ coordinator**

The availability of a 'climate leader' e.g. a coordinator or manager is described by NL Agency and in-depth interviews as being important for anchoring of climate issues. This person is important to keep the overall goals in mind and link different policy fields. The position of this person in the municipal organisation is described to be important as well. A higher position is said to give power and improve connections with the top of the organisation, which can help to work effectively.

- **Availability of clear responsibility division among organisation/ responsible persons in different departments**

In their brochure 'Anchoring for tomorrow' NL Agency describes that to anchor climate policy in the organisation, there should be a clear division of responsibility within the organisation, throughout all sectors. This can e.g. be through appointing responsible persons for climate per sector. As was mentioned, by only having competences and responsibilities in one department with few power, climate might not be taken into account outside this department (OECD 2010).

- **Availability internal climate steering committee**

NL Agency states that an internal steering committee on management level can help making sure tasks are well divided, which helps to anchor in the organisation. Steering committees in general can improve the internal support and coordination among sectors (Kern and Alber 2009).

- **Structural private involvement**

Although this indicator has some overlap with the indicator 'cooperation' within anchoring in implementation, private involvement will be dealt with in this section as well, as it can be a structural part of the organisation of climate issues. From in-depth interviews and literature it became clear that by structural involvement of private partners a robust cooperation between government and society can be realised, which is important to anchor climate issues. "It helps continuation", since, "surrounding areas will keep climate on board" (Interview 1 2011; Interview 2 2011).

- **Broad municipal organisation**

According to various authors (e.g. (Hiemstra and Boelens 2002; Aardema and Korsten 2009), different broad municipal organisation models, with different characteristics in terms of separation or linkage of policy and execution, amount of 'bosses', way of cooperation etc., would have (at least) theoretically an influence on the amount of integration within the municipal organisation, something that is important for a broad topic like climate. The 'direction/ network' structure is in theory seen as a positive 'flat organisation' in which different actors cooperate. Although it should not be forgotten as an indicator, Aardema and Korsten (2009) acknowledge that the model does not always tell how an organisation works in practice.

Adapted from brochure 'Anchoring for tomorrow' (NL Agency 2009)

### Anchoring in policy

To see how climate change mitigation and adaptation is anchored in the municipal policy, the following indicators have been formulated for this research:

- **Integration of mitigation and adaptation in policy documents**

To integrate mitigation and adaptation, aside from integration at sector level, various scholars agree that linking of mitigation and adaptation should also take place in an overarching document, e.g. via a long-term sustainable development perspective; an integrative climate policy or other comprehensive plan in order to anchor the linkage and synergies of mitigation and adaptation (Klein 2007; Wilson and Piper 2010; Lenhart 2011; UN-Habitat 2011).

- **Availability of long term/ strategic climate mitigation and adaptation policy (documents)**

NL Agency describes how climate policy has to be laid down in policy plans, policy agreements and policy instruments, so that the whole organisation feels responsible. Important is that climate should be integrated both at a strategic level (e.g. structural visions) (with eye for the long term) and in short term/ operational documents (see next indicator).

- **Availability of short term/ operational climate mitigation and adaptation policy (action plans)**

Aside from strategic climate documents, a municipality should, in order to anchor, have integration of climate on the execution level (in policy instruments like management plans/ checklists) to make climate/sustainability a daily 'task'. A municipality should, from a long term vision, also have an eye for the short term (NL Agency 2009).

- **Integration of climate mitigation and adaptation policy in different sector policies**

To anchor climate in policy, the importance of integration in other sectors' policies is described as well. Climate change mitigation and adaptation should be taken into account in the whole municipal organisation, in all relevant sectors' policies (planning, transport, economy etc.). Climate paragraphs, checklists, action plans (see previous indicator) can assist with this (NL Agency 2009).

**Adapted from brochure 'Anchoring for tomorrow' (NL Agency 2009)**

### Anchoring in implementation/ execution

Aside from anchoring of climate in policy and organisation; execution/ implementation is also important. The activities implemented by municipalities will be discussed as 'output-performance' in section 2.1.3 and 3.5 of this thesis. The preconditions for good implementation which are broad support, capacity, finances and monitoring, are discussed in this part of the framework.

To see how climate change mitigation and adaptation is anchored in the municipal implementation, the following indicators have been formulated for this research:

- **Availability of sufficient capacity (sufficient manpower, knowledge, skills, finances)**

Execution of policy asks for enough manpower, knowledge and skills. Knowledge in the municipality or hiring of expertise are both forms of capacity, as long as it is well organised. Another precondition is finance. Without finances, no climate policy.

- **Level of external cooperation**

Without external cooperation, a municipality cannot execute/ implement many activities and reach ambitious climate goals. The level of external cooperation is therefore an important precondition. Moreover, as was seen in the indicator for anchoring in organisation, involving important stakeholders helps in continuation of climate policy and therefore in anchoring (Interview 1 2011; Interview 2 2011);. External cooperation can be on local level but also in the region, national or even international. The local dimension will be dealt with in part 1, the vertical and horizontal cooperation in part 2 of the research.

- **Level of support created in society**

The level of support created in society is also an important precondition for execution (Klein 2007). For a large part it is society's own decision whether to reduce/ buy etc. or not. In an 'energetic society' everybody feels problem owner and initiatives come from all parts of society. (This can link with the level of external cooperation.) (Klimaatcongress 2011).

- **Level of internal support (college and council)**

There should be the will to make climate policy a success, not only externally but also at the working floor, the management, the college and council. It helps a lot if politics are on your side (Interview 1 2011). An enthusiastic alderman can be an example for the whole organisation and externally. Internal support can also be created by having an internal steering committee (see anchoring in organisation, Box 2).

- **Availability of monitoring and evaluation**

Monitoring is of the utmost importance to know the progress of policy implementation, to close the policy cycle and change where needed. Of course monitoring should be organised, and could therefore have been part of anchoring in organisation as well, but within this research the aspect will only be dealt with in 'anchoring in implementation', as a precondition for effective (and continued) execution, an important part of the policy cycle (Figure 3) (NL Agency 2009; Interview 1 2011). Moreover, it can also be used as a good communication tool (KplusV 2010).

*Adapted from brochure 'Anchoring for tomorrow' (NL Agency 2009)*

The indicators mentioned in Box 2, Box 3 and Box 4 are used in this thesis to analyse the level of anchoring. Where possible, the influence of the level of anchoring on the municipal performance in the field of climate change mitigation and adaptation will be discussed (as could be seen in Figure 4). In the next section the concept of performance as used in this thesis will be defined.

It must be noted that the indicators mentioned do overlap sometimes and cannot strictly be grouped in just organisation, just policy or just implementation.

Capacity for example, could also be understood as an organisational element, looking at the amount of people responsible, the availability of a steering group etc. Moreover, when private partners are involved in a structural way in (or in a structure outside) the organisation, the capacity increases. Cooperation is a precondition for execution and mentioned under anchoring in implementation, but where being a structural element of the organisation, it is also mentioned under organisation. Monitoring, although mentioned under implementation, is something that has to be organised, or even laid down in policy. But there are many more linkages and overlaps. To group these different aspects however, the above mentioned division is chosen for: mentioning organisational structures under anchoring in organisation, everything on policy documents in policy and all other elements (preconditions) of the policy cycle under implementation<sup>9</sup>.

### 2.1.3. Defining performance and the relation with modes of governing<sup>10</sup>

When evaluating policy performance, one often distinguishes the levels: output, outcome and impact (EEA, 2001). Outputs can be seen as the tangible results e.g. policy measures like a road tax, a subsidy programme for green roofs or a communication campaign. Outcomes deal with the results of these policy measures that can be attributed to its implementation, like the effects on the target group, in that for example CO<sub>2</sub> emissions or (the risk of) flooding-events and heat-islands are reduced. Impacts go a bit further and are for example the impacts of CO<sub>2</sub> reductions on the environment. Within this research the idea was to 'measure' performance solely by looking at the outputs and (where possible) outcome. For mitigation the outcome was defined as the reduction of greenhouse gasses. Other indicators, like: 'the amount of new buildings with stricter Energy Performance Coefficient (EPC)' or 'the amount of inhabitants reached with an energy campaign' would be sufficient as well.

For climate adaptation there is no consensus as to what good indicators for outcome are. In this research, climate adaptation outcome was defined as reduced (risk of) flooding-events and heat-islands, acknowledging that this might not be totally scientifically sound and that data in this field would most likely not be available.

It is assumed that all activities implemented by municipalities (their output-performance) can be grouped in the four modes of governing which were discussed briefly in Box 1 in the beginning of this chapter. Box 5, on the next page, explains a bit more what the governing modes mean for the local level. The output-performance in terms of the governing modes used might, in turn, have implications for the outcome-performance of local governments. To give an example, the impact of self-governing is said to be limited, since municipal GHG emissions are only a small percentage of a city's overall emissions (Sippel and Jenssen 2009). This explains the colourful performance star used in the visualizations of this research (see Figure 6), which consists of four coloured points (the output-performance divided into the modes of governing) and a yellow core (the outcome-performance).

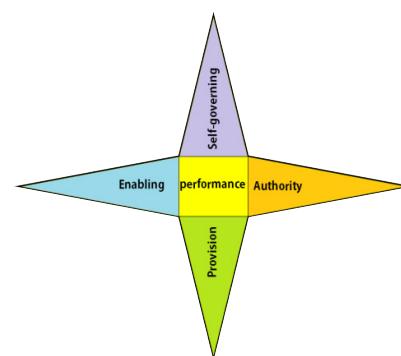


Figure 6: Part of figure 1: output-performance (four modes of governing) and outcome-performance (adapted from: Kern and Alber, 2009)

<sup>9</sup> It is also acknowledged that there is overlap between 'cooperation' in anchoring in implementation and the vertical and horizontal level and with 'the enabling' mode mentioned under output-performance. Although this shows some inconsistencies in the model used in this research, when knowing this overlap, the model is useful.

<sup>10</sup> Although the performance was defined as described in this chapter, the methodology and scope and limitations of chapter 1 and the note at the end of this section sum the possibilities and limitations within this research.



### Four modes of local governing

Kern and Alber (2009) defined four modes of governing that can be used at local level for both climate mitigation and climate adaptation:

1. Governing by authority: the municipality as planner and regulator

The first mode of governing deals with the use of traditional forms of authority, like mandates and planning law. Local governments can have the authority to deal with spatial planning, local transportation, housing and energy and can subsequently enact regulations to make these fields more sustainable (e.g. through building energy efficiency codes; road charging; or planning for flood and heat island control).

2. Governing by provision: the municipality as provider

If local governments are in charge of the provision of utilities (water, electricity, transportation, waste service, public housing), this provides a great opportunity to mitigate and adapt to climate change. Infrastructure can be developed in a climate-proof way and sustainable urban services can be provided. Possibilities are the provision of renewable energy, district heating and cooling and waste-to-heat initiatives. Through water management and the provision of early warning and emergency systems the risk of flooding and other climate impacts can be reduced.

3. Governing through enabling: the municipality as facilitator

Lastly, local governments can through for example communication, education and incentives 'enable' other actors to become more sustainable and do their share in the area of adaptation. Industrial production can for example be greened by "developing one-stop support services for green industry start-ups", "enabling existing businesses to reach energy conservation goals" and "developing awareness programmes to raise consumers' preferences for green products" (OECD 2010, p. 21). Through facilitation and coordination, climate action by various partnerships can be encouraged

4. Self-governing: the municipality as consumer and model

A municipality can act as an example for its inhabitants, and limit the ecological footprint of its own activities. Local governments are in a good position to aim for a climate neutral emission policy and can undertake many activities like increasing the energy efficiency of municipal buildings and greening the municipal fleet. With regard to adaptation, municipalities can improve the resilience of their government-owned or managed infrastructure, buildings, property and natural resources.

(Gupta 2007; Kern and Alber 2009; OECD 2010; Kern 2011; UN-Habitat 2011).

### The relation between modes of governing and organisation, policy and implementation

To complete the explanation of the conceptual framework, the relation between the organisation, policy and implementation and the modes of governing will be discussed. As mentioned in section 2.1.2, it is expected that the way climate is anchored in the municipal organisation, policy and implementation influences the performance (both output and outcome) of local governments with regard to climate change mitigation and adaptation. Moreover it was assumed that all activities implemented by municipalities (their output-performance) can be grouped into the four modes of governing.



What can also be said is that the modes of governing that can be used by a local authority depend, aside from e.g. the national framework, for some part on the organisation, policy and implementation factors of the municipality. To give an example, without cooperation with other actors, which is one of the elements of good anchoring in implementation, the enabling mode is not possible. The same counts for cooperation with public or private utilities to govern by provision. To give another example, the use of the governing mode 'enabling' by giving subsidies might be more expensive than the use of authority. The availability of sufficient finances (again one of the elements of good anchoring in implementation) may therefore influence the modes of governing that can be used. The same counts for the availability of sufficient manpower, knowledge and skills that are needed for the different modes of governing.

But not only implementation factors, also organisation and policy are expected to influence the set of governing modes that can be used. The organisational structure for example determines if the climate policy is coordinated by somebody that has influence in more sectors or only carried out by an environmental department. While enabling might still work to some extent in a suboptimal organisation, self-governing might be limited.

All in all, this leads to a combination of different concepts which is visualised in Figure 7. As can be seen the organisation, policy and implementation can influence the modes of governing (output-performance) and together they can influence the outcome-performance. The arrows are added to Figure 7 to show that the points of the star are not placed in a certain ball for a reason. The only relation suggested is the relation between the three balls (anchoring) and the modes of governing, not a specific ball and a specific mode.

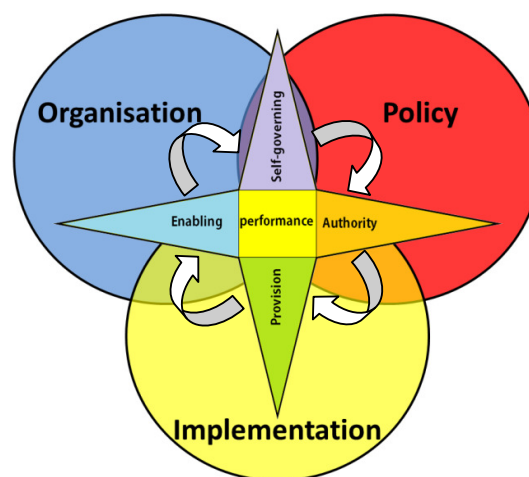


Figure 7: Part of figure 1: combined model to analyse the local dimension of municipal climate mitigation and adaptation activities. Adapted from ball-model (KplusV 2010) and modes of governing (Kern and Alber, 2009)

*Note: Although performance is defined and explained in this chapter, it was already acknowledged beforehand that this research would not be sufficient to really 'measure' output and/or outcome-performance (see scope and limitations, section 1.5). Time was indeed not sufficient to structurally list all climate mitigation and adaptation measures implemented (output-performance) and group them into the different governing modes. What was possible within the interview time was to ask municipalities about their (perceived) main performances, their best-practises and the best-practices of other municipalities. Furthermore it was checked whether they monitored the projects and the effects (see anchoring in implementation, section 3.4) and what these effects were/if they were on scheme. The discussion of the answers on these questions can be found in section 3.5.*

## 2.2. Part 2: Vertical and horizontal interactions

The second part of this research deals with the vertical and horizontal interactions of municipalities. First some background on vertical interactions will follow.

### 2.2.1. Vertical interactions

Aside from the local dimension, municipalities have vertical interactions with other levels of government. These interactions can have influence on the performance of local authorities with regard to climate change mitigation and adaptation, see Figure 8. One can see that Figure 8 is adapted to the Dutch situation in which provinces are the level of government between the national government and the municipality.

In general, vertical governance deals with the two-way relationship between local and higher levels on climate change. Although in some countries the relation between the local level and the national government is quite hierarchical (e.g. in Norway where the national level requires the development of local climate plans (OECD 2010)), different models can be found in other countries, like bottom-up action that influences national action in e.g. the United States, or a hybrid approach of ‘downloading’ and ‘uploading’, combining top-down incentives and bottom-up initiatives, in e.g. Sweden and the Netherlands (OECD 2010).

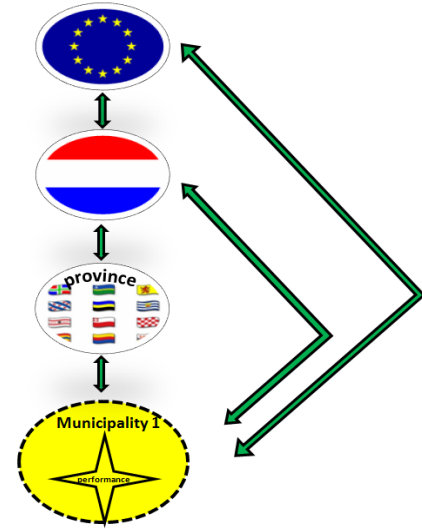


Figure 8: Part of figure 1: Vertical interactions and their influence on municipal performance.

National governments need the local level. As could be read in the introduction, climate change mitigation and adaptation is often more effective at local levels. To reach national goals, national governments have to work together with regional and local governments. Local policy approaches and innovations may also be scaled up to regional or national responses. Literature suggests that vertical interactions have an enormous impact on local authorities. The national level may enable or constrain what is possible at local scale (OECD 2010). Local governments have to work within the legal and institutional frameworks of higher levels. Moreover, they are often dependent on the money provided from above.

As with the local dimension, different modes of governing can be distinguished in vertical interactions. To take national governments as an example, they can act as regulator through mandates, as provider of funding arrangements and as enabler via guidelines, awards, benchmarking and certification schemes. As mentioned by Kern and Alber (2009) “in most countries, climate change policy is still predominantly a voluntary task for local authorities, and most national governments limit themselves to enabling modes of governing” (p. 171). “Strong national targets for adaptation and mitigation could, however, help prevent regional competition based on environmental regulations and even promote a ‘race to the top’ through proper incentives” (OECD 2010, p. 198).

Vertical configurations are not limited to national and regional interactions with the local level only. The European Union for example has initiated programmes to stimulate local action in European cities, like the Covenant of Mayors. By signing this initiative of the European Commission, municipalities confirm that they try to go beyond the 20x20x20 target of the EU (20% reduction CO<sub>2</sub>, 20% sustainable energy in 2020) (Covenant of Mayors 2011). The impact of the CoM on local authorities seems diffuse. The participants are often cities that were already active with regard to climate policy and get more active by strengthening their ties with the European Union (Kern, 2010).

### 2.2.2. Horizontal interactions

Aside from vertical interactions, the research also looks into the horizontal interactions between municipalities and other levels of government and the role these interactions play, see Figure 9. Two horizontal interactions are being discussed, being climate governance within metro-regions and city networking.

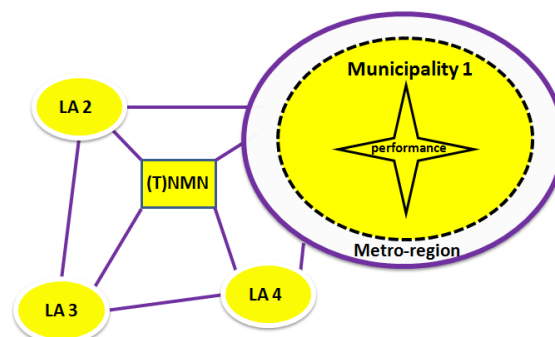


Figure 9: Part of figure 1: Horizontal interactions and their influence on municipal performance

Climate governance in metro-regions is important to prevent 'spatial mismatch'. The scale of management and authority does not always match the right scale to solve the problem. Adaptation strategies like water management systems for example require coordination beyond municipal boundaries. Also for mitigation, some problems can be tackled more effectively by working together (e.g. with regard to transport) (Kern and Alber 2009). Cooperation in the region can take place in formal regional structures (sometimes entitled as 'administrative regions') but also in less formal structures that are formed around a certain issue (entitled as 'functional regions'). Cf. (Hooghe and Marks 2003; Interview 2 2011; Kern 2011). The impact of the formation of metro-regions on local level performance has not been researched structurally.

A second form of horizontal collaboration is found in the (trans) municipal national city networks (TMNs), which have emerged since the 1990s. Examples of transnational networks include bottom-up approaches like ICLEI's Cities for Climate Protection, the Climate Alliance and Energy Cities and top-down initiatives such as C40 cities (supported by the Clinton Foundation). They all aim to let municipalities voluntarily commit to the reduction of GHG emissions, try to enhance local capacities, help with project funding and cooperation, transfer best-practices and stimulate learning among members. Often tools like recognition, benchmarking and certification are used by the networks. Through networks, cities can have a voice at national and international level (Kern and Bulkeley 2009). Despite the positive impact (trans) national networks can have for local authorities, it must be mentioned that networks are often 'pioneers for pioneers', enhancing the capacity of already leading municipalities (Kern and Bulkeley 2009). Moreover, for a long time, transnational networks have focussed exclusively on mitigation. Only the last ten years, adaptation gained some interest among the networks (2009).

# Empirical results



*After the conceptual framework and theory provided in the theoretical background, this part of the report will zoom in on the empirical results with regard to local climate change mitigation and adaptation in the Netherlands to provide the information needed to answer the sub-questions. The empirical chapters are mainly based on the answers to the telephone interviews conducted with representatives from 25 of the largest municipalities in the Netherlands, sometimes in combination with information from literature, websites or policy documents.*

*Since local climate change mitigation and adaptation is analysed in its multi-level context, the empirical results are divided into the local dimension (part 1) in chapter 3 and the vertical and horizontal interactions (part 2) in chapter 4.*

*Since this empirical part of the report is large, the sub chapters are divided into a part with an extensive description of the results (part I) and a part with summary points and the central message (part II). For anchoring in organisation the 'summary and central message'-section can be found from page 46, for anchoring in policy from page 54, for anchoring in implementation from page 65 and for performance on page 73. For vertical interactions the 'summary and central message'-section can be found from page 83 and for horizontal interactions from page 89.*

### 3. Empirical research part 1: The local dimension

This chapter, the first part of the empirical results, looks at the local dimension of climate policy in Dutch municipalities. After sketching the theoretical playing field of Dutch municipalities with regard to climate change mitigation and adaptation by looking into their obligatory tasks and possible modes of governing, the level of anchoring of climate in the municipal organisation, policy and implementation will be discussed. The local climate policy part will be concluded with a section on the performance of Dutch municipalities with regard to climate change mitigation and adaptation, as well as the division in the modes of governing used.

Part of the main research question in this thesis deals with the influence of (anchoring in) organisation, policy and implementation on performance. As was explained in the methodology, section 1.4, performance has been studied by asking municipalities about their own and others' performance. A municipalities' own opinion was compared with opinions of others and it was studied how many municipalities thought likewise. The four municipalities that were most often mentioned as 'frontrunner'/best-practice municipality, being Amsterdam, Rotterdam, Den Haag and Tilburg, were called a 'reference group'. Although in section 3.5 the selection of the reference municipalities is further explained, the four municipalities from the reference group are throughout this chapter already discussed in boxes, similar to the one pictured below.

<b>Reference municipalities:</b> Amsterdam, Rotterdam, Den Haag and Tilburg
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The reference municipalities are looked at in more focus to see where they are similar or different, in order to say something on the influence of anchoring on performance.

#### 3.1. The theoretical Dutch local playing field

This section deals with sub-question 1 of part 1: *"What is the playing field for Dutch municipalities with regard to climate change mitigation and adaptation measures?"*.

The Netherlands is a decentralised unitary state, with three levels of government: National government, 12 provinces and 415 municipalities (as of 1-1-2012, (CBS 2012)). Higher-tier government bodies supervise lower-tier ones and some national rules are applicable in all Dutch municipalities. Moreover, municipalities depend for more than 70% of their income on the national government (some earmarked funding, some free to spend budget) (Coenen 2008). The other percentage is earned by municipalities through their own taxes and levies or received from other level subsidies etc.

The unitary nature is however not based on central government alone, but on agreement between the three levels of government (Coenen 2008). Lower level governments have a certain autonomy and responsibilities are delegated from the national to other levels (Bommel and Kuindersma 2008). Municipalities can for example take care of their own 'housekeeping', if not opposing national policy. The Dutch policy process is characterised by its focus on consensus between the national government, lower level governments and other actors (Gupta, Lasage et al. 2007) and clear-cut decisions are often left to lower levels (Bommel and Kuindersma 2008).

The Dutch municipal playing field can be typified as large (Arentsen, 2008 in: Raven (2009)). There is a mix of options and instruments available under direct municipal influence or indirectly via target groups and municipalities have different areas of responsibility (Coenen and Menkveld 2002).

Examples of important instruments of Dutch municipalities are:

- Structural vision (*vision on spatial policy for 10-20 year with references to even longer terms*)
- Land use plan/zoning plan (*legally binding master plans*)
- Construction and environmental permits (*permit needed by e.g. companies to start building*)
- Budget (*e.g. to provide subsidies to inhabitants*)
- Concession (*contracting-out public services to companies*)

Different laws and acts determine the organisation and tasks of municipalities. On a national level the 'Gemeentewet' (Municipalities Act), 'Wet milieubeheer' (WM, Environmental Act), 'Wet ruimtelijke ordening' (Spatial Planning Act), 'Wet algemene bepalingen omgevingsrecht' (General provisions environmental law Act), 'Wegenwet' (Road act), 'Waterwet' (Water act) and 'Woningwet' (Housing act) are among the acts that can be important for the tasks and playing field of municipalities in the field of climate change mitigation and adaptation. Legally obligatory tasks for municipalities that can relate to climate change mitigation and adaptation entail:

- Dealing with land use planning (via structural vision and legally binding land use plan)
- Granting (and maintaining) environmental and construction permits
- Maintaining building laws and 'Wet Milieubeheer'
- Making a 'Bouwverordening' (construction by-law)
- Monitoring air quality and keeping air quality within limits
- Taking care of water storage and sewerage (and making an annual municipal sewerage plan)
- Taking care of external safety
- Developing an Environmental Policy Plan and annual report
- Developing traffic and transport policies, maintaining roads
- Maintaining public buildings, public lights etc.
- Developing housing policies (Berg, Lafferty et al. 2010; Projectteam Bezuinigingen 2010).

Municipalities have other obligatory tasks, for example in the field of education, health, soil etc.

Although proposed in 2008, there is no such thing as a 'Climate law' in the Netherlands (Uylenburg and Vogelesang-Stoute 2010; Veldboom 2011). Except from the tasks listed above, climate policy is not legally binding but based on covenants e.g. between the umbrella organisation for municipalities (VNG) and the national government. Sometimes national laws can even work against climate ambitions. Article 122 of the Housing Act for example prohibits municipalities to force sustainable building via licenses (SIX advocaten 2009; Veldboom 2011). Aside from the obligatory tasks listed, municipalities have a lot of facultative tasks. Own ambitions in e.g. municipal management, construction and housing, environment/climate can be formulated at local level, as long as they are not opposing higher level regulations (Raven 2009).

A change that is about to happen in the near future is the introduction of 'Regionale UitvoeringsDienSten' (RUDS) (regional execution offices). With the New 'Wet algemene bepalingen omgevingsrecht' many permits (building, environment etc.) are replaced with one permit: 'de omgevingsvergunning' (environmental permit). With regard to the maintenance of the environmental law it was decided that complex, supra local tasks have to be executed by RUDS (which have to be operational in 2012). Municipalities are now preparing for this change (Gemeente Groningen 2009).

Over the years, the amount of municipal tasks has increased. The new 'Wet ruimtelijke ordening' (Spatial Planning Act, 2008) has the motto 'Decentralise what is possible, Centralise if necessary' and gave municipalities more responsibilities.

### *Playing field in modes of governing*

The possibilities for Dutch municipalities in the field of climate change mitigation and adaptation can be classified into the four modes of governing that were mentioned in chapter 2: governing by authority, governing by provision; governing by enabling and self-governing. This list will complement the writing of section 2.1.3 and shed light on the situation in the Netherlands. The list, however, is not comprehensive. It is based on theory and previous research. In the section performance, 3.5, more will be said about the modes of governing used based on the data gathered by interviews.

#### **1. Authority:**

Municipalities have the legally binding land use/zoning plans and construction and environmental permits as instruments to govern by authority (Mees 2010). In zoning plans, municipalities can plan sustainable growth through integrating possibilities of sustainable energy, like siting of housing so that residual heat can be used (e.g. for district heating). Municipalities can also develop an underground zoning plan for thermal storage. Via zoning plans it is also possible to plan for adaptation e.g. through water storage areas or other plans for flood and heat island control (Gupta, Lasage et al. 2007). Municipalities are furthermore obliged to draw a 'gemeentelijk rioleringsplan' (sewerage plan) in which they show their policy and provision with regard to sewerage, drainage and storm water discharge, which are important aspects of adaptation.

Also by granting and maintaining permits to companies, municipalities can use their authority to make their municipality more sustainable. In the Netherlands, municipalities can take into account the EPC (Energy Performance Coefficient) when granting a building permit. Since 2011, new buildings that are realised have to meet the energy requirements from the 'Bouwbesluit' (Building Decree) from the 'Woningwet' (Housing act) and have an EPC of 0,6. In 2014 the EPC-norm goes to 0,4. Municipalities are, based on article 122 of the 'Woningwet', not allowed to 'have an agreement under private law' about subjects that are already dealt with in the 'Bouwbesluit' (which deals with quality and sustainability of houses). In other words, they cannot demand more building guidelines (except issues that are not dealt with in the 'Bouwbesluit', e.g. spatial quality). Municipalities can therefore not say 'the more sustainable the plans, the lower the price for the land'. Extra wishes can only be agreed upon on a voluntary basis. Sustainable building is therefore mostly based on voluntary agreements when it goes further than the legal 'Bouwbesluit'. When a municipality owns a lot of land however, in practice municipalities can still 'demand more than what is arranged by law', although theoretically their 'role' should stay clean. What is allowed and what not, is not always very clear. It is allowed to take up sustainability criteria like compulsory connection to the 'warmth net' (district heating) in the 'Bouwverordening' (construction by-law) (SIX advocaten 2009).

'Wet Milieubeheer' consists of rules for energy saving, water saving, transport management and waste prevention. With their task as maintainer, municipalities can actively check whether companies e.g. implement energy saving measures with an internal rate of return of five years (which is obligatory) (COS 2009-2010). Also other requirements agreed upon within a municipality have to be maintained.

The road tax is nationally organised in the Netherlands and there is no (municipal) road charging (yet). By bicycle lane planning and other planning measures, municipalities can still govern mobility by authority. Also, different parking tariffs, based on a vehicle's environmental impact, can be used.

## **2. Provision:**

Public utilities are organisations that perform a public service which is a service the government should provide directly or indirectly and should be available to all (water, electricity, transportation, waste service, public housing) (adapted from Merriam-webster (2011)). An utility can be privately or publically owned, by for example the municipality. If a municipality owns the public utility, this provides a great opportunity to mitigate and adapt to climate change. In the 1980s, however, the New Public Management (NPM) philosophy gained ground in many utility sectors in Europe (Schwartz 2011). NPM is about introducing 'private-sector-like' arrangements into the water, energy, waste and transport sector. In some countries many public utilities became privately owned. This had quite some influence on the 'governing through provision'-mode in various utility sectors.

The *municipal energy companies* that were abundant in the Netherlands in the beginning of the 20<sup>th</sup> century were liberalised under European legislation (EU directive 96/92/EG, Liberalisation of energy market). Production and transmission/distribution had to be unbundled (Mels 2011). In the Netherlands, the transmission/distribution is still public, but the production is in hands of private companies. Lately, however, there is a new trend of establishing 'local sustainable energy companies' (LDEB). LDEBs are (sometimes private) organisations that initiate, coordinate or manage local projects like: production, delivery and management of sustainable energy; energy reduction and financing of and participation in sustainable energy projects. Sustainably produced energy is used for the municipal organisation, companies and inhabitants. Extra energy can be sold on the energy market. Municipalities can have different roles in LDEBs. Often this role is an enabling one (NL Agency 2010) but when municipalities are the main shareholder or start the LDEB, they are very close to being the provider again. Revenues can go to the municipality e.g. for new societal benefits. Through LDEBs, municipalities can have quite some influence in energy provision and steer local climate action.

With regard to the *water sector*, it was decided in 2007 (New Water act 2007) that the water sector will remain in the public domain. In the Netherlands there are nine publically owned water supply companies and one integrated water and wastewater company (long contracts). Municipalities are the only shareholders of water utilities. With regard to water management, municipalities are in charge of the construction and maintenance of sewers and drainage in the urban region. These tasks can especially provide opportunities for climate adaptation (capture, storage and drainage). In their contracts, municipalities can make agreements on sustainability performance.

With regard to *transport*, since 2007 there have been only independent (public limited liability company) or private transport companies with which the province or region (which often has the transport authority) signs contracts.

## **3. Enabling:**

Through communication, education, subsidies and concession, municipalities can enable other actors to become more sustainable and do their share in the area of mitigation and adaptation. When municipalities cannot oblige actors, they can try to make agreements (e.g. through covenants with companies, or taking up energy requirements in agreements with housing corporations).



Municipalities can play a role in linking initiatives of third parties, to bundle strength. Instead of taking the lead, municipalities can try to be an equal partner.

New in the Netherlands are the LDEBs, as discussed in the previous section. LDEBs are often a cooperation of society, companies and the municipality. By research, subsidizing, etc. municipalities can stimulate or facilitate these LDEBs. The municipality can also be a shareholder and invest in LDEBs (if municipalities are one of the main shareholders, the governing by provision-mode applies) or be the customer etc. in order to increase the level of renewable/sustainable energy initiatives in the area (NL Agency 2010). One type of local sustainable energy company is the district heating company. For energy and other private companies it is often risky to start a district heating project (in which industrial residual heat is delivered to housing areas), so financial arrangements with municipalities seem effective (KplusV 2010).

Municipalities can also enable actors by subsidizing e.g. energy reducing/sustainable energy producing measures or e.g. green roofs. By subsidizing only part of the investment, a subsidy can bring an investment amount much higher than the given subsidy. This leads to a strong impulse to local economy. Instead of giving away subsidies, municipalities can also choose to have other financial constructions, e.g. a so called 'revolving fund'. This can take the form of a loan with low interest to make investment in sustainable energy etc. easier. Revenues go back into the fund to make new investments possible. Other ways of enabling entail communication with society through an energy saving website, climate cafés, distribution of energy boxes (with energy saving appliances) etc. Companies can for example be encouraged to take an energy coach. Municipalities can facilitate car sharing, broaden supply times for cleaner vehicles, realise fill points for alternative fuels etc. By making 'heat maps' or researching possibilities for sustainable energy production, municipalities can provide information with which other actors can take further steps. The possibilities for enabling are numerous, as are the range of partnerships that can be formed (NL Agency 2011).

#### **4. Self-governing**

With regard to self-governing, Dutch municipalities can do what they like. Municipalities can take care of their own housekeeping, and can therefore limit the ecological footprint of their own activities, e.g. by greening the municipal fleet, making mobility plans for their own employees, establishing energy management, by using instead of the criterion of payback time of five years, a payback time of e.g. 10 or more years, increasing the energy efficiency and resilience of municipal buildings and street lights, having 100% sustainable procurement in 2015 etc.

To conclude this chapter, the Dutch municipal playing field seems quite large and according to several researchers, the theoretical reduction potential is quite high. "A research project estimated the emissions of greenhouse gases related to activities that fall within the sphere of influence of Dutch local authorities to be more than 40% of The Netherlands' total greenhouse gas emissions" (Menkveld, Burger et al. 2001). This 40% relates to the use of authority, self-governing, provision and (a part of) enabling<sup>11</sup>. Also KplusV (2010) found that municipalities and provinces can have an important influence especially within the themes sustainable energy and building (40-50% influence).

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<sup>11</sup> Further research could study this percentage and compare it to the aims and possibilities municipalities have.

### 3.2. Anchoring in organisation

After having sketched the theoretical playing field of Dutch municipalities in the field of climate mitigation and adaptation in the previous section, this second section in the chapter about the local dimension of climate policy will discuss how climate issues are anchored in the municipal organisation. Herewith sub-question 2 of part 1: *“In what way is climate change mitigation and adaptation anchored in the municipal organisation?”* is dealt with. In the conceptual framework the concept of anchoring has been explained, see Box 2 in section 2.1.2. The indicators for anchoring in organisation formulated are repeated in the box below.

#### Indicators anchoring in organisation

1. Integration of mitigation and adaptation
2. Availability, role and position of ‘programme manager’/ coordinator
3. Availability of responsible persons in different departments (clear responsibility division)
4. Availability internal climate steering committee
5. Structural private involvement
6. Broad municipal organisation

First part I will extensively go over the results from the interviews with the 25 municipalities. Part II hereafter will summarize and give the central message.

#### I. Results

##### *Indicator 1: Integration of mitigation and adaptation*

In the majority of municipalities, mitigation and adaptation are not organised in a similar way. Only in Rotterdam it is clear that mitigation and adaptation are coordinated as a whole, by the same party (Programmabureau Duurzaam). In most municipalities, mitigation and adaptation are not coordinated together (e.g. *Amsterdam, Den Haag, Apeldoorn, Haarlem* etc.), although the responsible person for mitigation in some municipalities ‘keeps an eye on adaptation’ (e.g. *Breda*). Especially the municipal civil servants that deal with water issues are mentioned as the responsible person for adaptation (if it is called adaptation at all), but also civil servants that deal with green are mentioned as dealing with some adaptation tasks (*Maastricht*). These responsible persons can sometimes be found in the same ‘afdeling’ (section), e.g. in *Tilburg, Groningen, Breda, Nijmegen, Dordrecht, Emmen, Venlo*. It is mentioned to be convenient to have responsible personnel for mitigation and adaptation in the same section (e.g. within spatial planning) so that contact can easily be made. Often however, mitigation and adaptation are placed in different sections of the organisation. A special case is the municipality of Leiden where the Milieudienst (officially a municipal organisation but functionally a separated one) deals with mitigation and the municipality with adaptation. Moreover, often the policy part and the execution part of adaptation are split over different departments, but this depends on the organisational structure of the municipality as a whole. Asking about the importance of organising adaptation and mitigation in an integrated way, different opinions were heard. Rotterdam thinks mitigation and adaptation need to be integrated, especially in contact with other actors. Breda also mentions that mitigation and adaptation are both climate policy and if the responsible person for climate does not care about adaptation, there is no guarantee that the total adaptation package will be dealt with. Most of the municipalities however see adaptation and mitigation as two totally different tracks (e.g. *Den Haag*). One municipality even tried to organise mitigation and adaptation together, but did not find an added value (*Dordrecht*).

Moreover, adaptation measures can also be done for other purposes than ‘climate adaptation’ as such (*Groningen*).

Although mitigation and adaptation are often not coordinated in an integrated way, many municipalities mention that if there is a project that deals with both mitigation and adaptation, they can find the right person(s) or can work together in projects (*Dordrecht*). More information on the adaptation-mitigation discussion can be found in section 3.3, anchoring in policy, to see whether municipalities have overarching documents that integrate these subjects.

**Reference municipalities:** Only Rotterdam coordinates mitigation and adaptation as a whole. Tilburg has mitigation and adaptation both placed under the direction ‘Space’ so they can be combined and has strong integration on project level (e.g. in restructuring ‘Spoorzone’ and approaching companies). In Amsterdam adaptation is mainly focussed on water (by Waternet); In Den Haag, who sees adaptation and mitigation as two different tracks, people can find each other when necessary.



**Indicator 2: Availability, role and position of ‘programme manager’/coordinator or other ‘leader’**

Having mentioned how mitigation and adaptation are or are not linked in the municipal organisations, indicator 2 deals with the availability and position of a person or group of persons that coordinates or leads climate mitigation, energy programmes, sustainability or any other way municipalities frame their ‘climate activities’. The 25 municipalities researched, either have a programme bureau, a programme manager or a person/coordinator in line available that is in charge of climate/sustainability issues (exemption Almere, see Figure 10,VI), see Table 1<sup>12</sup>.

Table 1: Availability, role and position of programme bureau, programme manager or coordinator

Type of organisation	Description + Role	Position	Municipalities	Opinions
Programme bureau  (Figure 10, I)	Large separate bureau responsible for the climate or sustainability programme. Tries to let other parts of the organisation pull projects and work towards complete anchoring in the organisation. Currently still puller of some projects (e.g. projects that do not have a clear place in organisation)	Separate entity with formal power. Physically located in departments, therefore still ‘part of the organisation’	Amsterdam, Rotterdam	Danger of ‘dropping climate issues over the fence of the programme bureau’, but this is not seen in Amsterdam and Rotterdam. Programme bureau seen by them as strong feature to have serious climate action.

<sup>12</sup> Some extra comments should be made concerning Table 1. Unfortunately the term ‘programme manager’ is used for a range of different types of programme managers. The interview questions were not always sufficient to make a strong distinction between what type of programme manager the municipalities have. Moreover, there are differences in the scope of the programme. This can be e.g. a sustainability programme or a climate programme. Last, the difference between programme managers in line and a programme coordinator in line with a small club of people (which they might still call a programme, with a programme coordinator instead of a manager) is sometimes blurry.

Programme with programme manager higher positioned/ with formal power  (Figure 10,II)	<p>Programme manager with higher position/extra 'power' (by having e.g. direct line with direction) (can in some cases 'override line')/ qualifications to reach the aims of the climate or sustainability programme.</p> <p><i>(Sometimes the manager is in charge of 'sustainability' of which climate is part)</i></p> <p>Sometimes with core team in their own department (E.g. <i>Utrecht, Zoetermeer, Zwolle</i>).</p>	Not positioned 'in the line', but higher in organisation e.g. under a director or with other extra qualifications (for integral steering, often by indirect hierarchical power).	Utrecht, Eindhoven, (Enschede), Zaanstad, Amersfoort & Haarlemmermeer, Zoetermeer, Zwolle, Dordrecht	"Hanging up high in the organisation shows that the topic is taken seriously" ( <i>Utrecht</i> ) "This position gives advantages, you can steer the people below you" ( <i>Amersfoort</i> ), "Helps in spreading the topic, but available power is not always used" ( <i>Zwolle</i> ) "Programme management with high placed manager makes linkages and integral working easy" ( <i>Haarlemmermeer</i> )
Programme with programme manager in line/without formal power (Figure10,III)	Programme managers without higher position (and linked formal power). Sometimes with core team of people from own department.	Located in line (often environment section), without formal power.	Tilburg, Breda, Nijmegen, Apeldoorn, Venlo.	Some municipalities do not see it as negative that their programme manager does not have a high position with formal power (you need arguments).
Programme with programme manager in line -variety 2 (Figure 10, IV)	A variety to the previous type is the case of e.g. Haarlem with its own project team and budget to execute the programme. Coordinators of the team are placed at different places in the organisation to anchor climate/ sustainability (this links with indicator 3).	Located in line (often environment section), without formal power.	E.g. Haarlem (maybe more municipalities approach this type)	"Placing sustainability minded people on the right spot, is the best way of organising. A higher position is then not needed." ( <i>Haarlem</i> )
A (sort of) coordinator in line  (Figure 10,V)	Policy officers, placed in 'line', often in the environmental department of city development, spatial planning or maintenance ( <i>Den Haag, Ede</i> ) that try to coordinate climate tasks (but are often not responsible), but often also still pull some. In some cases with a small club of other policy persons from the department working on the same topic, but they can also be alone.	Positioned in line. In some cases not a formal function.	Den Haag, 's-Hertogenbosch, Emmen, Ede.	<p>"A small organisation fits the culture of the municipality" (<i>Den Haag</i>).</p> <p>"When you try to take care that most projects are pulled somewhere else you do not need a big organisation"</p>
Coordination from outside municipal organisation (Figure10,VI)	<i>Point separate from municipality with a 'linking-function' for private and social partners to make the city more sustainable</i>	<i>Separate from municipality</i>	<i>Almere</i>	<i>"improvement possible to strengthen the internal structure e.g. with programme manager energy" (Almere)</i>

Not taking into account all the varieties seen in the municipalities<sup>13</sup> and differences in the broad municipal structure (indicator 6), the main organisational structures can be visualised as follows.

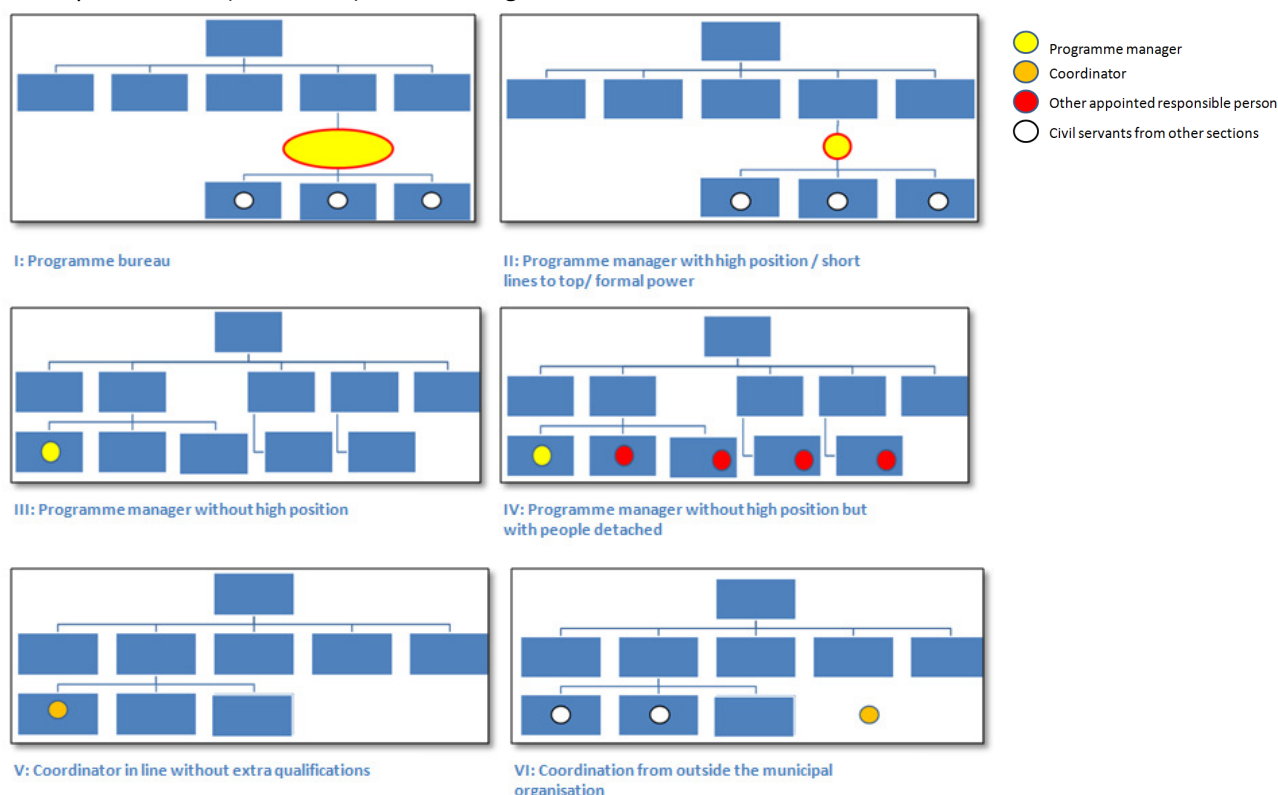


Figure 10: summary different organisational structures

The last figure, figure VI, shows the special case of Almere in which there is no climate coordinator or programme manager but DuurzaamAlmere.nl as a web based and physical flexible point with a 'linking-function' for private and social partners to make the city more sustainable (*Almere*). This will be functioning mostly separate from the municipality (with many links with the municipality). Almere thinks this is a suitable structure for climate issues. This way of organising links up with an important distinction between municipalities: e.g. how they try to structurally involve other actors (see indicator 5). Almere sees possible improvements though to strengthen the internal structure e.g. with a programme manager energy since energy activities are not well anchored in law.

Indicator 2 for anchoring in organisation has said something about the availability, role and position of the programme manager/coordinator or other 'leader'. It should be mentioned however that all municipalities want in the end that climate/sustainability is embedded in the whole organisation and try to take care that most projects are pulled somewhere else. The next indicator, indicator 3 deals with the availability of responsible persons in different departments.

<sup>13</sup> It must be clear that it is difficult to group all municipalities under distinctive organisational structures. Dordrecht for example has a 'hybrid'-organisation that they think is very suitable. A programme director sustainability takes care of some 'impulsprojecten', show-off projects that are arranged through the programme and can have result within the college period. This is aside from 'lijnprojecten', projects that are much bigger and pulled by the permanent line functions. "A hybrid organisation can have the advantages of both" (*Dordrecht*). Also, municipalities can have both a programme manager and coordinators (e.g. *Breda*, but this is not verified for all municipalities). Moreover, type of power and responsibility were sometimes difficult to grasp in the limited time of the telephone interviews.

**Reference municipalities:** The reference municipalities have different types of organisations available, positioned differently. Amsterdam and Rotterdam both have a programme bureau, a separate entity, but physically in the municipality; Den Haag has a climate coordinator in the maintenance department with some other policy persons and Tilburg has a programme manager without a high position, with a climate team in the policy development part of the environmental department (currently under 'direction Space'). The roles are similar in that they draw the policies and all try to make climate/sustainability part of the organisation (and society), pushing while pulling as little as possible themselves. Still however they all have to pull some projects and coordinate cooperation.



**Indicator 3: Availability of responsible persons in different departments (clear responsibility division)**

This section looks at how responsibility is divided over different departments and whether responsible persons have really been 'appointed'. Ideally all municipalities want climate/sustainability to become an integral part of everybody's work. They want to "get sustainability between the ears" (*Den Haag*), to embed it in the total organisation, instead of having a couple of projects pulled by the environmental department. Sustainability is a task of everybody in the organisation and everybody in the city and it is about "a fly-wheel that has to get started" (*Haarlemmermeer*). But (at least) until sustainable thinking is common property, there needs to be a (temporary) organisation that boosts this process (*Rotterdam, Zaanstad* etc.) or a person that coordinates the process and monitors progress (see indicator 2). Groningen currently lacks a central point for sustainability since Groningen believed in the 'shock therapy' which entails that without a responsible person, it should be clear that sustainability is something of everybody. The interviewee doubts if this works out this way (*Groningen*)<sup>14</sup>.

In this research no real separate entity that pulls all projects themselves, was found. In all cases, different parts of the organisation are involved, be it more in some municipalities than in others or more structurally or formal. When asking the question whether a municipality had appointed responsible climate/sustainability persons per department/section, the following differences were heard: In Zaanstad, where they work with a programme, they put people from the programme 'on the right spot'. This way they have coordinators in different parts of the organisation, in order to always think about climate. Also Haarlem has a core team of climate-related personnel throughout the organisation by detaching people in different parts of the organisation where they are needed (see Figure 11, I). Figure 11, II shows how in some municipalities there are responsible persons from other departments appointed per 'track' of the programme (*Nijmegen*) or per alliance (*Tilburg*)<sup>15</sup>. There are also municipalities where only for certain parts of the organisation a responsible person is appointed to anchor climate/sustainability goals. In Utrecht for example there are integral environmental advisors for new building projects (that look at mitigation and adaptation). In other departments these municipalities often do not have specific climate/sustainability persons, (see Figure 11, III). Breda has an energy coordinator that helps with integration of sustainability in spatial planning and an energy coordinator for municipal buildings and installations (*Breda*).

<sup>14</sup> For energy there is a temporary project team which now gets many questions about sustainability as well.

<sup>15</sup> Tilburg for example also has, separate from alliances, full integration of sustainability in public lighting.

People from other departments/sections are usually made responsible on a project base (e.g. *Amsterdam, Utrecht*) (in *Amersfoort* in project groups). In general, however, many municipalities note that there are no specific 'sustainability functions' but that it works more informally, that it follows from your function (*Den Haag, 's-Hertogenbosch, Zoetermeer, Leiden*) or that people that like the subject take it as their task. In this way other departments/sections of the municipality deal with climate/sustainability on a more voluntary base (*Eindhoven, Almere*). On the other hand, based on the municipal goals (which, if they are approved by the board, count for all), or documents in which it is stated that sustainability should be taken into account by everybody, all people are expected to take into account sustainability in an integral way (*Enschede, Ede*). Venlo for example sees strong support within the municipal organisation and, although responsibility is not arranged on paper, different sections/departments take it along in their work. Some municipalities, however, also see dangers in this approach. Leiden recognizes that it depends on the person if something happens and if some aspects of sustainability (like adaptation) are not yet clear to all, then it is difficult to expect them to take it along in their work (*Apeldoorn*). "It would be good to have responsibilities better settled" (*Apeldoorn*). Therefore, some municipalities think appointment of specific responsibilities or having a sustainability ambassador from each department in a core team (e.g. *Eindhoven, Enschede*) would be an improvement.

On the other hand there are also municipalities that prefer not to appoint somebody in specific, since it is better to share knowledge and responsibility over many persons (*Breda, Dordrecht*). The danger is that if one has specific sustainability persons/teams: others think "they will do it" (*Enschede*). To reach the goals a revolution is needed (*Zwolle*), everybody is responsible. Venlo believes that this responsible feeling can be anchored by personal development and feedback.

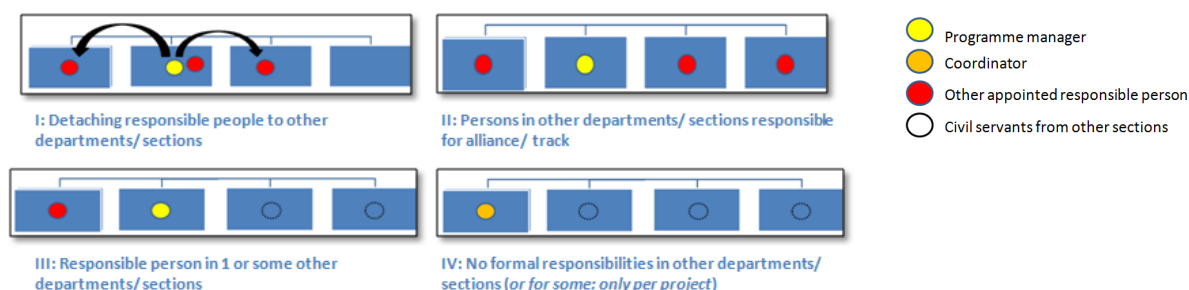


Figure 11: Different ways of having responsible persons in other departments/sections

Note that in the pictures of Figure 11, positions of people (indicator 2) are not taken into account. Municipalities with a programme manager in a higher position more often have 'responsible' persons in other departments/sections appointed, but this is not always the case. While some argue that formal power does make it easier to appoint people for projects etc, this is disputed by other municipalities. Municipalities without a higher position/power for the climate/sustainability leader can still have responsible persons appointed in different sections, as seen in picture I, II and III of Figure 11.

**Reference municipalities:** Although in Tilburg and Rotterdam responsible persons of different departments are structurally appointed (in Tilburg: in alliances), Amsterdam does this on a project base (which are sometimes so huge that one can even call them a separate programme). Den Haag informally contacts different people in the organisation.



#### Indicator 4: Availability of an internal steering group

One of the possibilities given by NL Agency to anchor climate/sustainability in the municipal organisation is to have a steering group. This indicator deals with an internal steering group (for external steering group, see indicator 5). E.g. Amsterdam, Rotterdam, Zaanstad and Groningen (*only for energy*) have a 'bestuurlijke stuurgroep' (administrative steering group), with the alderman that are involved in the topic, often also the directors and e.g. the programme management. Zaanstad describes how a steering group is very important when one works in a programme, since this goes through different 'functional structures'. With steering groups one can strongly establish the contents. More municipalities would see value in having a steering group (e.g. the interviewee of Venlo). According to Eindhoven, some people in the organisation mind if 'high people' care about the subject (it enlarges the support of part of the staff). A steering group can show this care. Aside from or instead of an administrative steering group, others have an 'ambtelijke stuurgroep' (official steering group), a steering group with civil servants (e.g. the heads of the sector/department (*Den Haag, Eindhoven, Zaanstad, Amersfoort*)).

The other municipalities do not have an internal steering group and Almere is even specifically against a 'bureaucratic steering group', since they want to have a bottom-up process. Others have therefore (sometimes aside from an internal steering group also) an external steering group (see indicator 5, structural private involvement).

**Reference municipalities:** Amsterdam, Rotterdam and Den Haag have an internal steering group. Tilburg only an external.



#### Indicator 5: Structural private involvement

Structural private involvement is the fifth indicator formulated for anchoring in organisation. There is overlap with the indicator 'cooperation' in anchoring in implementation (indicator 2 in section 3.4). This section however tries to describe private involvement as structural organisational element. An overview of 'structural'/institutionalized cooperation can be found in Table 13 in Annex IV: Formal structures for structural cooperation. Here it can be seen that there are many forms in which municipalities shape their structural contact. This can e.g. range from structural involvement of partner (groups) to having an external steering group<sup>16</sup>.

Municipalities that have an external steering group (eight out of 25), stressed its importance. Policies are discussed with these actors and they have a 'steering role'. Most of the municipalities with an external steering group try to involve a broad range of actors (i.e. also environmental, societal organisations and knowledge institutes). There are also municipalities that do not have an external steering group as such but that do have structural cooperation forms<sup>17</sup>. In general, the municipalities differ in the scope of their cooperation structures/platforms. Some are mainly focusing on e.g. energy (*Groningen*), while others want to take sustainability as a whole (*Almere*). In some cases the structural cooperation gets shape in sort of 'alliances'/working groups, e.g. in Tilburg, Breda, Haarlem and partly 's-Hertogenbosch (see examples on the next pages). In some cases, other parties are puller of different projects/alliances in these municipalities.

<sup>16</sup> Sometimes the differences are blurry.

<sup>17</sup> It can also be a combination.



E.g. Den Haag, Apeldoorn, Zaanstad and Amersfoort shape their cooperation as a platform of frontrunners which is contacted regularly. Other municipalities choose to link up (or want to link up) with an existing, sometimes regional, Public Private Partnership construction (*Tilburg, Groningen, Enschede, 's-Hertogenbosch*), in which the municipality is not the (only) puller, but also knowledge institutes, societal organisations, companies etc. Also the platforms are not always pulled by the municipality itself, but can (partly) be pulled by other partners (e.g. *Rotterdam and Haarlemmermeer*). Still, the municipality plays an active role in these structural forms of cooperation. On the other hand, there are also municipalities (around seven) that do not have a structure for structural private involvement (e.g. *Eindhoven, Nijmegen (no overall structure, but they do have Nijmeegse Energie Covenant (NEC), Enschede (wants programmes to organise it themselves), Zoetermeer, Zwolle, Leiden, Ede*) but seek cooperation on an ad-hoc basis.

While in Annex IV: Formal structures for structural cooperation, all municipalities are looked at, some extensive structures for external cooperation are given as an example below.

### Example Tilburg: Klimaatschap

Tilburg develops a cooperation in which other parties also take their responsibility, called 'Klimaatschap'. The Klimaatschap will consist of the 'Klimaatbureau' which will be the execution organisation of the Klimaatschap, supporting all initiatives and alliances, in which the real cooperation takes place. Table 2 shows the alliances within the Klimaatschap.

Table 2: Alliances within Klimaatschap (Gemeente Tilburg 2009)

Name of alliance	Examples of members (in bold: the puller)
Alliance 1: Organisation for sustainable energy services --> Is now growing to LDEB	<b>BuildDesk</b> , Building development, Energy companies, municipalities etc.
Alliance 2: Covenant renting sector	<b>Wonen Breburg</b> , other housing corporations, municipalities etc.
Alliance 3: Health and climate change	<b>GGD</b> , other health organisations, province etc.
Alliance 4: Water and climate change	<b>Water board</b> , municipalities, province, nature organisations, ministry etc.
Alliance 5: Behavioural change	<b>Fontys</b> , municipalities, communication bureau etc.
Alliance 6: Climate and spatial planning	<b>Municipality</b> , other municipalities, project developers, energy companies etc.
Alliance 7: Sustainable company parks	<b>Klostermann Nederland BV</b> , municipality, energy company, province, other companies etc.
Alliance 8: Municipal buildings& installations	<b>Municipality</b> , other municipalities

The Klimaatbureau is currently pulled from the environmental policy department (after reorganisation under 'direction Space'), but will be independent in the future, see picture Figure 12.

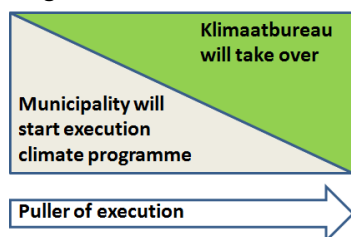


Figure 12: vision on puller of climate programme, translated from Gemeente Tilburg (2009)

The total Klimaatschap will be a local authority that focuses on climate action, outside the municipal organisation. The municipality will still be part of the Klimaatschap, but wants to be equal to other partners. Their role can be in trying to bring in municipal policy in the Klimaatschap, removing boundaries and making action concrete in deals. Currently the municipality is still initiator, money spender and facilitator, trying to start and shape the movement. One alliance is already growing to a company (a LDEB), for the other alliances (which exist around two years) there is an independent chair that evaluates if the alliances are well formed. The alliances are the ones that have to organise action. New alliances are always possible. Alliances around the themes building, education and finances may be developed soon.

#### Example Breda: Klimaattafels

Breda also knows a structure for structural cooperation. Aside from the Bredase Energieraad (Annex IV: Formal structures for structural cooperation), with frontrunners from several disciplines on personal title, that functions as external steering group, they have looked for a way to work out concepts. They formed 'Klimaattafels' with market parties around concrete business cases. The following Klimaattafels already exist: Klimaattafel Existing building (to boost reduction in existing building stock, agreements with housing corporations); Alliance companies (to bundle sustainable products of companies and link them e.g. to renovating companies); Klimaattafel companies (companies that have to become more sustainable) and Klimaattafel mobility. According to Breda adding other Klimaattafels, e.g. for adaptation, might be an improvement in future, but it is a step-by-step process. Per concrete project they see what is the best organisation form. Although external parties can be puller, Breda beliefs in a more 'pulling, steering' role than in the example of Tilburg.

#### Example Haarlem: Regiegroep Haarlem Klimaatneutraal

Aside from an external and internal steering group, Haarlem distinguishes a 'projectbureau' with a 'coordinator' from 'Stadszaken' (City business) and members from Communication, Facilitation and some from the department Environment that can be detached to other parts of the organisation. These coordinate currently five programme groups that consist of municipal and external partners.

Table 3: Programme groups in Haarlem

Name programme group	Examples of members
Programme group built environment	Different parts of municipality, housing corporations, knowledge institutes, project developers, environmental organisation, neighbourhood council etc.
Programme group industry and business	Municipality, chamber of commerce, SME networks, consultancy etc.
Programme group traffic and mobility	Different municipal departments, Connexxion, TNT-post, Shell, societal organisations etc.
Programme group municipal organisation	Different municipal departments (e.g. 'Middellen & Service'(facilitation), 'Stadsbedrijven' (city business), 'Wijkzaken' (neighbourhood business) etc.)
Programme group sustainable energy	<i>unknown</i>

### Example 's-Hertogenbosch: Bosche Energie Covenant

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The Bosche Energie Covenant (BEC) can also be seen as an intensive structure for structural involvement (*mainly for companies*). The BEC grew to something bigger than they first intended. It has an organisational structure with steering group (started with: Avans Hogeschool, Heijmans, Ricoh, Heineken, Gea Grenco, SAP en Gemeente 's-Hertogenbosch) ("Important to have strong persons in steering group" *'s-Hertogenbosch*) and some working groups. The covenant started in 2010 with 24 companies. Members have to be part of one or more cooperation projects, which would always be pulled by another party than the municipality. In the covenant the following theme groups/projects were formulated: Quick wins energy reduction in offices (puller: SAP and Ricoh); Energy reduction new buildings (Heijmans); Indirect energy use and sustainable procurement (Enexis); Sustainable mobility (BrabantWater) and Sustainable heat (*Gemeente Den Bosch 2010*).

's-Hertogenbosch sees the BEC as a parallel structure to municipal policy. BEC must in principle be self-steering: the municipality was initiator but is now just member of the covenant. "It is a covenant of organisations of which the municipality is part" (*'s-Hertogenbosch*). On the contrary to the covenant of Nijmegen (NEC) with a minimum reduction percentage, BEC-partners can formulate their own aims. "This makes it more accessible to all, but also more open-ended" (*'s-Hertogenbosch*).

In practice most theme groups are not yet very active, having had some meetings but still looking how to develop. Not all companies are 'as attached' to it. Moreover, although 'others are the puller', the municipality is always sub-puller. A lot needs to happen backstage. It is a seeking process: "If you do everything, parties will lean back. But if you lean back and nothing happens, what will you do?" (*'s-Hertogenbosch*).

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Interestingly, some municipalities are trying to 'anchor' climate/sustainability, not only by forming structural Public Private Partnerships but also by placing it physically outside the municipal organisation (externalisation). Tilburg with its alliances and soon physically separated Klimaatbureau, which will in future not be pulled by the municipality, is a well-known example of (future) externalisation, but also Almere should specifically be mentioned in this case.

### Example Almere: DuurzaamAlmere.nl

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DuurzaamAlmere.nl (website and physical point) functions as a contact and match ('makel-en-schakel') point for societal and private partners. It functions mostly separate from the municipality but has lines with different municipal departments. The municipality will still initiate some projects but this is not based on a programme. It is linked to activities that already exist in society, these are facilitated. With DuurzaamAlmere.nl Almere tries to work with bottom-up initiatives. The danger is that if people do not care, nothing happens, but "then that is the case and we have to accept it" (*Almere*).

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Although more municipalities might have a physical climate/sustainability office/podium (see also cooperation with society, indicator 2 in section 3.4) that is placed outside the organisation in order to be closer to the people, it must be clear that e.g. Tilburg and Almere are really looking for ways to place the climate/sustainability organisation as much as possible outside the municipal organisation. And although cooperation is the key word for all municipalities, some others consciously do not want to follow the Tilburg or Almere model. Groningen for example still feels that (although cooperation platforms like Energy Valley are important) the municipality still has to push the buttons itself. Breda is very curious how it will work out in Tilburg. “Simply said Tilburg has no ambitions to external partners. They just trust they will be active”(Breda). Breda thinks their municipality has to be more pulling, pushing and guiding; have a more active role. Haarlem considered to place its project bureau as separate ‘klimaatsteunpunt’ (climate point) but did not see the added value. Placing e.g. the project/programme bureau outside the organisation, can be negative for the contacts with other departments (Haarlem). Almere acknowledges this and says the performance will depend on the relation with the leader of DuurzaamAlmere.nl and the municipality. Almere is also looking for at least a programme manager energy to make sure these tasks are done.

**Reference municipalities:** The four reference municipalities all have structural private involvement. All have an external steering group that advises the municipality. The further structure for private involvement is not totally equal. Tilburg specifically puts cooperation in ‘alliances’ in which others are the puller and tries to place the structure outside the municipal organisation. Rotterdam has a strong Public Private Partnership structure as basis with four big partners and from there seeks further cooperation. Other structures exist as well in Rotterdam: e.g. ‘Stuurgroep Duurzaam Ontwikkelen’ which provides a platform for more parties. Amsterdam and Den Haag have a platform and flexibly make new cooperation structures per topic.



#### **Indicator 6: Broad municipal organisation**

The broad municipal organisational structure is not the same in all 25 municipalities interviewed. Depending on the division of departments, climate/sustainability is led by different groups. Although this broad organisational structure is not analysed thoroughly, some interesting trends could be observed. There are for example municipalities that are constantly looking in what way they can organise their municipality best (learning from new developments), many municipalities also have to reorganise due to heavy budget cuts.

Tilburg, Breda, Nijmegen, Apeldoorn and Emmen are currently going from a ‘dienstenmodel’ (department model) with many separate departments and their directors to a ‘directiemodel’ (direction model), which is said to be a more flat network organisation with ‘afdelingen’ as the highest organisational layer and only a small direction (Gemeente Nijmegen 2011)<sup>18</sup>. Often this is combined with going to a ‘network model’, involving many actors (see also the previous indicator).

In theory this ‘diensten/netwerk’ organisational form is positive for integration and anchoring (Hiemstra and Boelens 2002; Aardema and Korsten 2009). According to Tilburg the change might help in having a better connection between development and execution of climate tasks (which are often separated). Zaanstad even wants to be a flexible network organisation, which in their opinion is perfectly suited for climate/sustainability since one can easily reach the whole organisation.

<sup>18</sup> Venlo already had a similar reorganisation

More reorganisation plans are seen among the municipalities, but most of them do not see these changes as having a large impact on how well they can perform climate/sustainability tasks. “It is just the name you give to it, we are already working like a network organisation” (*Emmen*); “The organisational structure is not important, it’s more about the people and their mindset” (*Eindhoven*).

In general it was often heard though that the more topics a climate coordinator or else has in its ‘section/department’, the easier it is to integrate climate/sustainability in other fields (e.g. living, economic etc.). Especially Haarlem and Zoetermeer point at the advantages of having many different topics in their department City business/development (‘stadszaken/stadsontwikkeling’). Groningen has an interesting combination of spatial planning and economy. But, in general, no matter what place it is given, one will never get all parts of the organisation that should do something with climate/sustainability together in one department. Simply said you often either have a section e.g. ‘Space’ with both policy making and execution but ‘Social’ and ‘Economic’ are in another section or you have a department ‘City development’ where environment, economics, housing is together but only on a policy making/development level and less on execution level.

Because one can never combine all, Breda sees it as an advantage that their environment section was first combined with housing (and they could work together on sustainable building) and now with mobility (where there is also a lot to do still). Also according to Nijmegen you just has to be flexible with your organisation. This is in line with theories on “Learning Organisations” (Senge 2006), which are organisations that are open to change, risk-taking, and experimenting to fit to the ever changing world (Gerphart, Marsick et al. 1996; Bui and Baruch 2010) Learning Organisations might be more suited for climate mitigation and adaptation challenges (Lenhart 2011).

Another upcoming change in all municipalities is the formation of RUDS (regional execution bureaus). The municipal maintenance tasks will be replaced to these RUDS. In some cases this can have an important influence on how climate tasks are organised, especially when the coordinator is currently located in the sector maintenance (which will be removed) (*Ede*).

One other thing that should be mentioned is that Amsterdam and Rotterdam know ‘deelgemeenten’ (boroughs), which have their own board and policy. The programme bureaus mentioned deal with the city-wide sustainability programme. In Amsterdam a bureau named ARC works for the different districts and executes common projects. The Dutch national government however wants to abolish the boroughs.

**Reference municipalities:** Tilburg is in a reorganisation and goes from a department structure to the (in theory promoted for integration/anchoring) ‘direction/network’ structure with directions like Economic, Social and Space, which will make the link with execution easier. In Rotterdam and Amsterdam the municipality is both divided in departments like ‘Social development’; ‘Spatial/City development’; ‘Maintenance’ (*but there are also differences*). The programme bureau is in both placed under Spatial/City development and they have short lines with the top. Den Haag knows also departments as Maintenance and City development but the coordinator falls in the department Maintenance (which is seen as positive by them).



## II. Summary and central message



Returning to the sub-question: *“In what way is climate change mitigation and adaptation anchored in the municipal organisation?”* and thinking about the indicators formulated beforehand for ‘good anchoring’ one can derive that: Mitigation and adaptation is most often not organised in a coordinated way (indicator 1); All municipalities have a programme bureau, programme manager or coordinator in charge of climate/sustainability issues but only in one third of the municipalities these persons have a higher position/short lines to the top or (associated) formal power (indicator 2); Only in a few cases persons from other departments are structurally appointed as responsible for climate/sustainability (indicator 3); one third of the municipalities had an internal steering committee available (indicator 4); The structural private involvement was quite positive: two thirds of the municipalities had formal structures for private parties (but there were also municipalities that have ad hoc cooperation) (indicator 5); and some municipalities were reorganising their broad municipal organisation to a ‘direction/network’ structure (indicator 6). Based on the formulated indicators the anchoring in organisation is therefore low to medium (-/(+)) (see also Table 4).

Table 4: Overview of anchoring in organisation.

Indicator	General view 25 municipalities	Reference municipalities				Other interesting examples (that score high on indicator)
		Amsterdam	Rotterdam	Den Haag	Tilburg	
Integration mitigation and adaptation	-	-	+	-	-/+	-
(Availability and) position (formal power/short lines) of ‘programme manager’/coordinator	-/+	+	+	-	-	E.g. Utrecht, Eindhoven, Haarlemmermeer Dordrecht (+)
Availability of responsible persons in different departments (clear responsibility division)	-/(+)	-/+	+	-	+	E.g. Nijmegen, Haarlem, Zaanstad (+)
Availability internal climate steering committee	-/+	+	+	+	-	E.g. Zaanstad has both administrative and official steering group (+)
Structural private involvement	(-)/+	+	+	+	+	See examples above
Broad municipal organisation* *a plus is given to municipalities going to a ‘direction/network’ structure (see explanation indicator). Municipalities with another structure do not get a specific score.	~	~	~	~	+	E.g. Breda, Nijmegen (+)

- = low; -/(+) = low to medium; -/+ = medium; (-)/+ = above medium; + = high

Firstly the reference municipalities are observed. Trying to see links between the performance and the way climate/sustainability is anchored in the organisation, by looking at similarities among the reference group, no uniform message can be found for all aspects of the organisation. They do however still score better on anchoring in organisation, mainly through having an internal steering committee (which three of them value) and structural involvement of private parties, something the reference group uniformly valued. While these two indicators could have influence on performance, the overall picture of 'how to best organise' is not clear. Also among the 25 municipalities, many different opinions and nuances were heard.

There are municipalities which are very happy with the way they are doing it; the municipalities with a programme bureau (*Amsterdam, Rotterdam*), the municipalities with a programme manager that is high in the organisation (e.g. *Utrecht, Haarlemmermeer*), programme managers that have their own programme team which they detach to the right places (*Haarlem, Zaanstad*), a hybrid organisation with both programme-actions and line-actions (*Dordrecht*) but also municipalities with low 'anchoring' (in terms of formal power/responsibility division etc.), but a specific 'working culture' (*Venlo*). Some municipalities try to let go the control and be an equal partner in the city, others think they should play a more pulling/steering role. No one-size-fits all organisation can be given. Most probably there are also relations with the size of the municipality.

Moreover, the indicators for anchoring, formulated beforehand based on theory, were sometimes being questioned/disputed by some, not only by municipalities that 'scored low on the indicator' (as could also be seen in part I: the results.)

There is discussion about whether mitigation and adaptation should be integrated in the organisation (indicator 1). While many municipalities say "they will find the person needed" when there is overlap, and Tilburg shows how, although not coordinated together, adaptation and mitigation can be integrated strongly on project level, for some municipalities a more clear coordination (as in *Rotterdam*) or at least having an overarching programme (see anchoring in policy) might make adaptation less 'ad hoc' and more than 'water issues' only (as in e.g. *Amsterdam*).

The theory that it is better when a coordinator, programme manager or who else takes the lead is placed closer to the director, municipal secretary or alderman in order to have more power, is also being discussed (indicator 2). Also the reference group showed different forms. While especially Utrecht and Haarlemmermeer see much value in having the programme manager high in the organisation (it shows the importance the politics attach to it, gives short lines to important people etc.) and also other municipalities (without these formal short lines) would see the value of this (for less bureaucracy *Ede, Venlo*), there are also many municipalities that say it is about support, good arguments and cooperation anyway (*'s-Hertogenbosch, Emmen, Venlo*). An as high as possible position does not per definition lead to more things happening on the floor (*Apeldoorn*). Eindhoven tried to be directly under the alderman but found out that you need the management/official top maybe even more. And having formal power does not mean it is used. Zwolle points out that although the high placed programme manager helped giving attention to the topic, power to steer in the line is not common in the culture of their municipality. This would mean that indicators like internal support from other civil servants and cooperation would be more important for performance than formal power.



With regard to internal support, municipalities agree that “sustainable thinking should be common property” in the whole organisation. Some municipalities say it is slowly getting common property (e.g. *Den Haag, Venlo*), after all that has been invested over time (*Venlo*)<sup>19</sup>.

The reason that some municipalities do not have ‘specific persons per department’ appointed as being responsible for climate/sustainability (indicator 3), lies in the thought that it should be a task of everybody. The danger is however that sustainability is voluntary and easily forgotten. To really anchor sustainability in all parts of the organisation/make it a ‘standard mindset’ is still by many municipalities, also some reference municipalities, seen as a challenge (*Amsterdam, Rotterdam, Den Haag, Zwolle, Maastricht, Leiden*).

Creating internal support is easier when you are physically close to people you have to work with. This can depend on the broad municipal structure (indicator 6), of which all structures have advantages and disadvantages. Most municipalities indeed agree that the physical location of ‘the climate core’ is quite important. Even when you are a ‘separate programme bureau’ like Amsterdam and Rotterdam, being physically located in a department with relevant people is helpful. Leiden, in which all mitigation tasks are coordinated by a separate Milieudienst with a regional programme and which has in the rest of the municipality only a moderate organisation, notices that the internal involvement is low. “It is too much outside their organisation”. Contracting out many tasks, which is done a lot in Amersfoort, can also be a challenge in anchoring climate/sustainability. In this respect, it is interesting what will be the effect of a ‘starting trend’ of placing ‘climate coordination’ outside the municipal organisation (e.g. *Tilburg, Almere*), something some municipalities are experimenting with and other municipalities are afraid of since it might weaken the municipal bonds. Tilburg also acknowledges that having a Klimaatbureau on a distance has limitations with regard to the links with the municipal organisation.

This balance between the ‘internal’ organisation and the ‘external’ structures is an interesting one. Since it is important to be close to the people you work with, you can also say you should be close to society, since the municipality cannot do it alone. There is no clear answer to the question how one can best be close to society and close to all parts of the organisation. Will the structure of Tilburg work out? Or should there be more municipal pulling like in Breda? Will DuurzaamAlmere improved with a programme manager work, and what if people do not come with initiatives? Unfortunately many of these organisations are very young so the effects on performance are not yet clear.

Asking which improvements municipalities would see for their organisation of climate/sustainability, most answers had to do with platforms/cooperation centres with private parties (e.g. *Den Haag (broader and more centralised), Leiden*) or steering groups (*Venlo*). Moreover one can see the trend that currently some municipalities mainly have a team within their own department but want to create a core team with people from the whole organisation (e.g. *Enschede*).

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<sup>19</sup> Venlo was the first to embrace the C2C approach. They see sustainability as essential for economic development and have been investing for 10-15 years in sustainability (*Venlo*).



### 3.3. Anchoring in policy

The second dimension of the anchoring model, illustrated in the conceptual framework, is the actual policy. This section will show the results from the interviews with regard to the level of anchoring of climate issues in municipal policy, dealing with the sub-question “*In what way is climate change mitigation and adaptation anchored in policy?*” The indicators formulated beforehand, see also Box 3 in section 2.1.2, were :

#### Indicators anchoring in policy

1. Integration of mitigation and adaptation in policy documents
2. Availability of long term/ strategic climate mitigation and adaptation policy (documents)
3. Availability of short term/ operational climate mitigation and adaptation policy (action plans)
4. Integration of climate mitigation and adaptation policy in different sector policies

After part I with the results, section II will show a summary and short discussion.

#### I. Results

##### **Indicator 1: Integration of mitigation and adaptation in policy documents**

Three of the 25 municipalities interviewed said they had an overarching climate policy document in which they really tried to integrate mitigation and adaptation (*Rotterdam, Tilburg, Breda*) and one was working on a sustainability document that would deal with both (*Maastricht*). Breda e.g. thinks climate policy should safeguard and coordinate activities in both fields. Eindhoven does not want to talk about adaptation as such but wants to work according the four system conditions of ‘the Natural Step’. Nijmegen, which uses the same principles, mentions to focus on energy instead of adaptation (*in their climate programme*). Some municipalities do not deal with adaptation in their climate policy plan but see adaptation coming back in their overarching sustainability plan (adaptive building) (e.g. *Amersfoort*). As said before, adaptation is sometimes not mentioned as such, but can still be integrated in e.g. the nature and biodiversity section of the sustainability plan (e.g. *Zoetermeer*). Utrecht, ‘s-Hertogenbosch and Dordrecht acknowledge adaptation in their climate plan but refer e.g. to the water plan for more information. The other municipalities did not mention any integration of mitigation and adaptation in an overarching climate (or sometimes sustainability) plan. According to Den Haag, adaptation policy is in its infancy. “It has a more ad hoc character” (*Leiden*). All does not mean that adaptation is not mentioned in the municipalities’ policy plans at all. All municipalities are obliged to make a water plan. Often this document can be seen as an integrated water vision in which municipalities acknowledge the effects of climate change on the water system. Moreover, the municipal sewerage plan is used to adapt to more precipitation. Although less frequently, ‘Groen structuurvisies’ (structural vision for green area) also play a role in the anchoring of climate adaptation in policy documents. Heat island effect is however more in the phase of research and not much is arranged in plans.

**Reference municipalities:** All reference municipalities had an overarching policy document in which they tried to integrate mitigation and adaptation, however some more explicit than others. Tilburg and Rotterdam really mentioned explicitly they had an integrating document (In Tilburg: ‘Eerste klimaatprogramma Tilburg, naar een klimaatneutrale en klimaatbestendige stad’ (2009-2012), in Rotterdam: ‘Programma Duurzaam’ (2010-2014)) and climate documents in which adaptation plays a large role. In Den Haag and Amsterdam adaptation and mitigation are not integrated in climate plans, but they come together in a sustainability programme (focus mainly on water).

## **Indicator 2: Availability of long term/strategic policy (documents)**

Long term strategies are, be it in different forms, available in the municipalities interviewed. Many municipalities have an overarching strategic **sustainability** policy document (e.g. *Amsterdam, Rotterdam, Den Haag, Groningen, Nijmegen, Amersfoort, Haarlemmermeer, Zoetermeer, Dordrecht, (upcoming) Maastricht and Leiden*) which combines the aspects people planet and profit (e.g. in Nijmegen there are tracks sustainable economy, sustainable city development etc.) or an environmental vision that functions as an overarching strategic document (*Breda*). Seven of these municipalities have aside from this also an energy strategy/plan (*Amsterdam, Groningen*) or climate policy strategy (*Den Haag, Breda, Amersfoort, Haarlemmermeer, Leiden*). The others have a single climate or energy policy plan (*Tilburg, Haarlem, Zaanstad, 's-Hertogenbosch, Ede, Venlo, Utrecht, Enschede, Apeldoorn, Emmen*). Some municipalities do not have much policy (*Almere*) or do not want a new climate programme in future (*Eindhoven, Tilburg*), but something more cooperative as “sort of Green Deals” (*Tilburg*). Moreover, many municipalities have strategic plans like structural visions (spatial), integrated water plans and green structural visions in which sustainability can play a big role. For example Maastricht mentions the importance of their ‘Stadsvisie’ (City vision) and structural vision in which sustainability is the steering framework (*Maastricht*).

All municipalities have long term goals formulated in their policy plans (see Table 5). Four municipalities aim for energy neutrality (*Eindhoven, Almere, Nijmegen, Apeldoorn*). Energy neutrality means that the total energy consumption must come from renewable sources. This is something different than the term of climate neutrality, which is a municipality that has no impact on the climate with all her activities by having no net emission of greenhouse gases like CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, or the term CO<sub>2</sub>neutrality, which deals only with having no net CO<sub>2</sub> emissions by prevention, reduction and compensation (Builddesk 2008). Although many municipalities mention they want to be climate neutral, they often actually aim to only be CO<sub>2</sub>neutral. Climate neutrality is however easier to communicate. Seven municipalities aim for a percentage of CO<sub>2</sub>-reduction and have no set date for 100% climate neutrality. The specific situation in a municipality, e.g. the availability of large industry or a big harbour and the scope used, should of course be kept in mind with respect to this. Ede and Zwolle do not go further than the EU goals and Leiden aims for less than the EU goals. It is clear that some municipalities are more ambitious in their goals than others<sup>20</sup>. Zaanstad has an aim that is most nearby: CO<sub>2</sub>neutral in 2020. Zaanstad however mentions that it is not really about ‘reaching the target’, it is more about boosting the process. The interviewee of ‘s-Hertogenbosch also mentions that he does not think ‘s-Hertogenbosch will reach the target, but still, if you would change the target it would not be interesting and stimulating anymore. The second closest, Almere, aims for energy neutrality in 2025. Haarlemmermeer mentioned how they also consciously picked a target for this college period so that responsibility is not forwarded. This is however also observable in intermediate goals of other municipalities e.g. *Dordrecht*. In Table 5 the overarching mitigation targets for the municipality as a whole, the own municipal organisation and the adaptation targets are summed<sup>21</sup>.

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<sup>20</sup> Although the ambitions can be seen from Table 5, the table does not tell whether these aims are realistic. More research could study on what the percentages are based. Very high targets might in some cases not be based on a feasibility research, while lower targets might be based on sound science and be more realistic.

<sup>21</sup> It must be noted that most municipalities also have intermediate goals (for some municipalities this was not found however) and more (specific) goals, e.g. per sector, or goals for sustainable energy production etc.

Table 5: Climate targets of municipalities

Municipality	Reduction percentage	CO <sub>2</sub> / climate /energy neutral or reduction in whole municipality	By (year) (as compared to 1990)	Own organisation	By (year)	Adaptation
Amsterdam	40% Also 75%	CO <sub>2</sub> reduction	2025 <i>most communicated</i> 2040	CO <sub>2</sub> neutral	2015	
Rotterdam	50%	CO <sub>2</sub> reduction	2025			100% climate proof in 2025
Den Haag	100%	CO <sub>2</sub> neutral	2040	Climate neutral	2010	100% climate proof in 2040
Utrecht	100%	Climate neutral	2030 As compared to 2010	CO <sub>2</sub> neutral	2012	
Eindhoven	100%	Energy neutral	2035			
Tilburg	100%	CO <sub>2</sub> neutral	2045	CO <sub>2</sub> neutral	2015	100% climate proof in 2045
Almere	100%	Energy neutral	2025			
Groningen	100%	CO <sub>2</sub> neutral	2035			
Breda	100%	CO <sub>2</sub> neutral	2044	CO <sub>2</sub> neutral	2020	
Nijmegen	100%	Energy neutral	2032	CO <sub>2</sub> neutral	2015	
Enschede	30%	CO <sub>2</sub> reduction	2020	CO <sub>2</sub> neutral	2015	
Apeldoorn	100%	Energy neutral	2020 (built env.)/ 2025 (companies)/ 2035 (traffic)	Energy neutral	2020	
Haarlem	100%	CO <sub>2</sub> neutral	2030	CO <sub>2</sub> neutral	2015	
Zaandstad	100%	CO <sub>2</sub> neutral	2020			
Amersfoort	100%	CO <sub>2</sub> neutral	2030	CO <sub>2</sub> neutral	2011	
Haarlemmermeer	30%	CO <sub>2</sub> reduction	2020	CO <sub>2</sub> neutral	2015	
's-Hertogenbosch	100%	Climate (CO <sub>2</sub> ?) neutral	2045	Climate neutral	2020	
Zoetermeer	100%	CO <sub>2</sub> neutral	2030			
Zwolle	20%	CO <sub>2</sub> reduction	2020			
Maastricht	100%	Climate (CO <sub>2</sub> ?) neutral	2030	Climate neutral	2015	
Dordrecht	100%	Climate neutral	2050			
Leiden	21%	CO <sub>2</sub> reduction	2030	Climate neutral	2015	
Emmen	100%	CO <sub>2</sub> neutral	2030-2050			
Ede	20%	CO <sub>2</sub> reduction	2020			
Venlo	100%	Climate neutral	2030	Climate neutral	2015	

As can be seen from Table 5, aside from municipal wide goals, some municipalities formulated goals for their own organisation (see column five and six). Two municipalities already reached their goal (*Den Haag* in 2010 and *Amersfoort* in 2011) but they explain that this depends on the definition<sup>22</sup>. 10 municipalities have not formulated a specific climate or CO<sub>2</sub>neutral-target for their own municipal organisation (*Rotterdam, Eindhoven, Almere, Groningen, Zaanstad, Zoetermeer, Zwolle, Dordrecht, Emmen and Ede*), but some do mention aims to ‘give the right example’, implement everything with a payback time of less than 10/15 years etc., or take it along in the overall transition (*Rotterdam*). Zaanstad mentions that a climate neutral municipal organisation is not an aim on itself: it is only three percent of reduction in the whole municipality.

Rotterdam, Den Haag and Tilburg really formulated specific goals for a ‘climate proof’ municipality. Although one other municipality thinks it is good to formulate such goals, most think it is not possible to say something realistic, also with regard to the difficult monitoring. In policy documents like the water plan there are however often goals about enhancing water safety etc.

**Reference municipalities:** While Amsterdam, Rotterdam and Den Haag have an overarching strategic sustainability policy document, Tilburg has a very complete climate plan. Den Haag has a combination of both a sustainability and a climate policy strategy, Amsterdam uses the energy strategy as climate document. Interesting is that the only municipalities that formulated the aim for a climate proof municipality are reference municipalities (*Rotterdam, Den Haag, Tilburg*).



### **Indicator 3: Availability of short term/operational documents (action plans)**

Many of the climate/sustainability programmes consist of both a strategic vision and an execution programme. As mentioned, the long term goals are often operationalised into priorities and aims for the short term. When asking if there were ‘real actions plans’ six municipalities confirmed that they indeed have actions plans for the whole programme (*Rotterdam, Den Haag, Tilburg, Haarlem, Zaanstad, Dordrecht*). Tilburg however mentioned that although there are actions mentioned in the programme, not all are executed. Other municipalities explain that this differs per project (*Amsterdam, Ede*), or that the pullers within the organisation are going to or have to write these themselves (*Eindhoven, Enschede*). There are also municipalities that think you should not write everything down, but focus more on action (e.g. *Emmen*), “it is less worked out than you would think, it is dangerous to steer too much on details” (e.g. *’s-Hertogenbosch, Zoetermeer*). Better is to show the whole municipal organisation that things are feasible (*Breda*), you will not convince people with action plans, but only with tools like ‘MAP-table’, a GEO-information tool where e.g. a spatial planner directly sees features like water storage, possibilities for sustainable energy etc. (so both mitigation and adaptation) (*Zwolle*)<sup>23</sup>. For adaptation it is, based on documents found, thought that while the ‘water side’ of adaptation is operationalised on project level, there are almost no action plans for other adaptation measures (only e.g. in *Rotterdam and Tilburg*).

**Reference municipalities:** Rotterdam, Den Haag and Tilburg have action plans for the whole programme (but some are not executed according to Tilburg). For Amsterdam it differs per project.



<sup>22</sup> They reached it because they are allowed to compensate (in the case of Den Haag through their ‘climate fund’, for sustainability projects in the municipal area) and/ or use a narrow scope.

<sup>23</sup> Since many of the interviewees dealt mainly with mitigation and not with adaptation, the answers above are mostly related to mitigation.

#### Indicator 4: Integration of climate policy in different sector policies

With regard to integration of climate policy<sup>24</sup> in other sectors' policies there are different ways seen among the municipalities. Sustainability is for example obligatory in the spatial plan (*Den Haag, Ede*) (but Den Haag thinks that this will not have large effects) or there is a sustainability chapter obligatory within the whole municipality (*Rotterdam*). In Amsterdam one has to write an energy vision for new areas (and they want the same for houses) and in Breda there is a standard energy chapter in spatial planning. Zoetermeer has a sustainability framework for spatial plans, but sees that it is difficult to do this consequently ("there is already too much to think about"). Apeldoorn saw how, having projects fulfil many ambitions, combined with a collapsing market, brought them in financial problems. Many development projects cannot continue.

Others have documents or agreements how sustainability (*Natural Step in case of Eindhoven*) has to be considered in each project or by each department. Venlo explains how all projects have to be realised from a C2C/sustainable perspective. "The board sometimes even returns projects for C2C optimisation" and "project leaders have adopted sustainability prominently within their projects and they are continuously taking it to a higher level" (*Venlo*).

There are also municipalities that want a CO<sub>2</sub> table (*Utrecht*) or have/want to have a sustainability chapter for every important decision (*Tilburg, Groningen, Haarlem*), or a sustainability check for all large investments (*Haarlem*). According to Maastricht asking for a sustainability chapter in each note leads to dialogue, since they ask the coordinator what to do with it. This way sustainability becomes important in decision making. Other municipalities however have seen that this did not work in their municipality. Zaanstad or Zwolle for example had a 'Green chapter' or something similar but saw only 'standard' sentences appearing, after decisions were already made or after the building was done. "Anchoring in policy is less relevant" (*Zaanstad*). What does work according to Zwolle are tools like MAP-table, which, as could be read in the previous section, is a GEO-information tool through which mitigation and adaptation features can be integrated in different sectors.

**Reference municipalities:** The reference group all have some 'obligations' on integration of climate/sustainability in policy and projects. This takes form in an energy vision (*Amsterdam*) or a sustainability chapter in all municipal plans (*Rotterdam*), the spatial plan (*Den Haag*), or important decisions (*Tilburg*). Den Haag however wonders if this works.



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<sup>24</sup> Mainly mitigation.

## II. Summary and central message



Going back to the sub-question: *“In what way is climate change mitigation and adaptation anchored in policy?”* and thinking about the indicators formulated beforehand for ‘good anchoring’ one can derive that: Mitigation and adaptation are medium integrated in policy documents (indicator 1); Municipalities do have long term/strategic (especially mitigation) documents (indicator 2); Action plans are for less than one third of the municipalities systematically available (indicator 3); More than one third of the municipalities tries to integrate sustainability (or only mitigation) through e.g. paragraphs or other checks in other sector policies, plans or projects (indicator 4). Based on the formulated indicators, the anchoring in policy is medium (-/+) (see also Table 6).

Table 6: Overview of anchoring in policy

Indicator	General view 25 municipalities	Reference municipalities				Other interesting examples (that score high on indicator)
		Amsterdam	Rotterdam	Den Haag	Tilburg	
Integration of mitigation and adaptation in policy documents	-/+	-/+	+	+	+	E.g. Breda, Amersfoort (+)
Availability of long term/ strategic climate policy (documents)	+	+	+	+	+	Many
Availability of short term/ operational climate policy (action plans)	-/(+)	-/+	+	+	(-)/+	E.g. Haarlem, Zaanstad, Dordrecht (+)
Integration of climate policy in different sector policies	-/+	+	+	+	+	E.g. Haarlem, Breda, Zoetermeer, Ede (+)

- = low; -/(+) = low to medium; -/+ = medium; (-)/+ = above medium; + = high

As could be read in this section there is a discussion about the fact whether climate/sustainability should be anchored in policy and if so, how. Strategically, climate or sustainability is quite well anchored (indicator 2) but operationally there are differences seen (indicator 3). Although some see value in having everything laid down in action plans, there are quite some municipalities that do not want to write everything down. Although quite some municipalities have translated their long term goals in shorter term goals, more operationalised action plans could help to better anchor the responsibilities in the whole organisation, and make it less voluntarily. By having clear short term policy and action plans it is easier to evaluate/monitor and steer in a different direction if needed in order to reach long term goals.

This counts as well for adaptation. Although not researched thoroughly, it seems that adaptation is still in a research and strategic phase, expect for major water issues. Although adaptation is happening (sometimes quite ad hoc), action plans are lacking, especially for other fields than water. Maybe in future, more municipalities will conduct research on adaptation, formulate long term goals and translate them into action plans. Having only ad hoc adaptation or adaptation for other values (quality of life etc.) might work out well, but can, for more vulnerable cities, also lead to unforeseen challenges in future.

The value of combining adaptation and mitigation in policy is also being discussed (indicator 1). While in some municipalities the two tracks are clearly separate stories, some municipalities really try to integrate them, or more often, combine them in sustainability documents (sometimes not mentioned as adaptation). Combining adaptation and mitigation in policy, e.g. in sustainability documents, might help in finding overarching values and synergies. Most important is that both are well coordinated/well tuned and both mitigation and adaptation are kept in mind, also when becoming more operational.

With regard to the climate goals formulated, it was argued that some municipalities might not be able to reach their goals. Although it is important to base goals on research (as is done by many in quick scans), the boost an ambitious goal can give to society might be more important than whether the goal will be reached on time. With 'just the EU' goal it might be more difficult to profile a municipality as an ambitious municipality and move the mass.

Also the integration in other sectors shows differences in action and opinions. While some municipalities do see the value of 'climate paragraphs' in either projects or policies, in order to integrate climate/sustainability in other sectors, there are also municipalities that have tried it and did not see it work. Moreover, climate/sustainability can be perfectly integrated in other sectors without having it anchored in their policies. Anchoring through integrative visual tools like 'MAP-table' (*Zwolle*) might work out better, but is not yet evaluated. According to some municipalities integration might be more dependent on support from people than on policy. This was also mentioned in the discussion on 'making somebody responsible' (anchoring in organisation, indicator 4). So then, is climate always dependent on the availability of some willing people or can a certain 'supporting culture' be anchored and stimulated through policy?

Looking at the reference group and the possible influence of anchoring in policy on performance, it can in general be seen that for three of the indicators the reference group scores better than the average. The other indicator is in all municipalities good. So although anchoring in policy is not valued by the average of the municipalities, the fact that the reference municipalities have better anchoring in policy through integration of adaptation and mitigation; action plans and integration in other sectors' policies might explain some part of their 'better' performance.

### 3.4. Anchoring in implementation

The third element for which the level of anchoring is analysed is implementation. This section aims to deal with the sub-question: “*In what way is climate change mitigation and adaptation anchored in implementation?*” The following indicators were formulated (see also Box 4, section 2.1.2):

#### Indicators anchoring in implementation/ execution

1. Availability of sufficient capacity (sufficient manpower, knowledge, skills, finance)
2. Level of external cooperation
3. Level of support created externally (in society)
4. Level of internal support (college and council)
5. Availability of monitoring and evaluation

After discussing the results, part II will again give a summary of the discussion and show the central message. It must be noted that since many of the interviewees were mainly involved with mitigation, most results focus on mitigation. If not, it is mentioned.

## I. Results

#### Indicator 1: Availability of sufficient capacity

Whether the municipalities have enough capacity for climate tasks is a difficult question. Many municipalities answered something like: “it can always be better”, but that is also because it is an enormous theme (*Haarlem, Zaanstad*). “You therefore have to prioritize” (*Amsterdam*) and “be creative” (*Nijmegen*). But although the capacity is ‘okay’ for some municipalities right now, they are wondering if this will stay in future (e.g. *Den Haag, Amersfoort, Ede*) because of the ending of the SLOK funding and the overall budget cuts. Six municipalities state that it is difficult already. The capacity is insufficient for the ambitions (e.g. *Almere, Groningen, Apeldoorn, 's-Hertogenbosch, Maastricht, Emmen*).

When looking at the different parts of capacity: e.g. **manpower**, one can see that the amount of fte (full time equivalents) available for climate tasks differs from one fte (*Ede*) to 23 (*Rotterdam*) fte. Although this of course depends on the size of the municipality, it is also important to realise this is related to the organisational structure. Rotterdam for example has both mitigation, adaptation and ‘normal environmental tasks’ in the programme bureau. The fte’s mentioned are often the ‘core team’, but what they try to do (but do not calculate in real fte’s) is to embed sustainability in all parts of the organisation. “It has to be everybody’s job” (*Eindhoven*) and by organising it differently it does not have to “cost extra time” (*Nijmegen, Venlo*). That is also why e.g. Enschede and Leiden mention one should not think in “hours spent on sustainability” anymore. It is about getting the topic between the ears. All projects and plans should be born sustainable.

With regard to **skills** within the municipal organisation, Utrecht notices that in this phase a change from strategic to execution is required. Not all people have these skills. According to Eindhoven sustainability has to be part of everybody’s job, “you just have to do your job right”, but this might ask training etc., which is indeed done in e.g. Groningen, Maastricht, Venlo. Groningen specifically chose for their own people instead of hiring ‘skilled’ people from Energy Valley in order to anchor it more in the organisation. But still, some see that the ambitions of some other colleagues are low.



With regard to **finances**, it is clear that the municipal budget should be multiplied tens of times in order to make the municipality climate neutral (*Utrecht, Groningen*). The money available is often only sufficient for research, workshops (*Eindhoven*) etc. The few municipalities that are allowed to/can pay other departments from their programme budget (e.g. *Enschede, Amersfoort, Haarlemmermeer*) want soon the departments to pay for themselves (and the hours of the core team (*Enschede*)). According to e.g. Venlo and Nijmegen it is often not even necessary to pay departments, it is just a matter of smart organisation so that it does not cost departments extra money. Breda and Venlo specifically mentioned they want to become independent of subsidies by having revenue from LDEBs. This however asks for initial capacity.

**Reference municipalities:** The amount of fte of the 'core' differs in the reference municipalities, Amsterdam has seven fte (but every district has also one or two climate coordinators) for climate/sustainability, Rotterdam 23 fte (mitigation, adaptation and regular environmental tasks), Den Haag four fte and Tilburg five to seven fte that work full time on climate/sustainability. Especially Den Haag and Tilburg stress that there are many others in other sections that take it along in their normal work. Although they 'could all use more capacity' they all survive (at least for now). Rotterdam likes the way they take the topic seriously with many people, knowledge and money. Den Haag sees the small policy club of people they have as more suitable for their municipality than a large programme bureau.



## Indicator 2: Level of external cooperation

### Adaptation

No matter if adaptation is entitled as adaptation, there is external cooperation for 'adaptation activities'. Logically, water boards are said to be very important. Often integrated water visions are drawn together with the water boards. The GGD (health organisation) is also mentioned as a partner, to start up projects in the field of heat stress. Housing corporations are mentioned by Groningen to talk about climate adaptation in new buildings. Cooperation in the field of water is said to be more structured than in the field of climate green (*Groningen*), which has more cooperation in projects, although there are national working groups climate adaptation for landscape architects etc. Despite the available cooperation, involving external parties in adaptation can be more intensive (*Breda*).

### Mitigation

Although many different types of cooperation are mentioned by the municipalities, cooperation is grouped in cooperation with companies, cooperation with housing corporations and the building sector, cooperation in LDEBs, cooperation with energy utilities, cooperation in the transport sector, cooperation with knowledge institutes and cooperation with society. It must be noted that these groups sometimes overlap and are by some municipalities dealt with together. Cooperation with other municipalities or other layers of government is dealt with in chapter 4, Empirical research part 2: Vertical and horizontal interactions. Cooperation with water boards is already discussed under adaptation, but is also gaining importance in the field of mitigation (e.g. *Apeldoorn, energy for neighbourhood from water board*). It is however not discussed as a separate section.

- **Cooperation with companies**

Companies range from small entrepreneurs to large companies like energy companies or housing corporations. This section discusses covenants with companies and cooperation with entrepreneurs.

Table 7 shows examples of municipalities that arrange their cooperation with companies in covenants.

Table 7: Covenants with companies (and sometimes other actors)

Municipality	Name of covenant	Example companies	Extra information
Nijmegen	Nijmeegs energie covenant (NEC)	E.g. education/ knowledge institutes, waste company, energy company, building company etc.	NEC is now in phase two: the form is not clear yet. Will they collect all the footprint info they did in phase one or will it have more a network function only? Companies are going to organise it themselves. Maybe it is going to be part of/linked up to existing networks. The aims within NEC one were: three years of three percent reduction per year (2007-2010).
Haarlem	Climate covenant Groene Mug	E.g. energy companies, banks, education, housing corporations and environmental organisations.	In 2009 Haarlem drew a covenant with around 50 partners. In 2011 a group of new partners was added. Parties endorse the climate neutral aims of the municipality and do what is within their reach (they have to write down what they will do with regard to built environment, industry and companies, mobility and own organisation).
's-Hertogenbosch	Bosche energie covenant (BEC)	E.g. education, banks building, energy, waste companies, large companies.	From 2010. An intensive covenant with an organisational structure, working groups and companies as puller. Aim is chosen by members themselves.
Zoetermeer	Covenant Duurzaam Zoetermeer	Mainly small entrepreneurs. E.g. restaurants, shops etc.	With around 50 companies, they can choose from a menu of measures in the fields of energy, mobility, sustainable procurement and green/water.

Some of these covenants have already been mentioned in section 3.2, structural cooperation with private/societal partners. The others that were not mentioned do not see it as 'structural cooperation'. As can be seen, the covenants differ in members (e.g. in Zoetermeer mainly small companies versus a mix of small and large companies but also organisations in e.g. Haarlem), they differ in choosing their own aims or endorsing general aims versus having the same specific reduction target (*Nijmegen*). Moreover, some covenants are merely about signing the covenant (*Zoetermeer*), others are a basis for cooperation in working groups (especially '*s-Hertogenbosch*'). Cooperation with (mainly large) companies is also shaped in the before mentioned alliances, Klimaattafels or programme groups (*Tilburg, Breda, Haarlem*). With regard to small companies, parties like KvK (chamber of commerce) are very important and project based cooperation with small to big companies is sought as well. Eindhoven sees that having an appealing concept like Natural Step makes companies enthusiastic, many companies are adopting the approach.

- **Cooperation with housing corporations and building companies**

Housing corporations are seen as very important by the municipalities. Some see however that the contact gets more difficult due to the crisis. To get sustainability or energy reduction in corporations' business, you see municipalities on the one hand using the generic performance agreements or strategic accords for more themes to also make agreements about e.g. energy or sustainability (e.g. *Amsterdam, Groningen, Nijmegen, Haarlem, Haarlemmermeer, 's-Hertogenbosch, Zwolle, Emmen*).

On the other hand there are municipalities that make covenants with corporations or other building parties that specifically deal with energy reduction or sustainability. Examples of this can be found in Leiden ('covenant duurzaam bouwen') and Tilburg in which the covenants with the corporations have been a basis for the second alliance. Tilburg mentions their approach with energy covenants as an example for other municipalities: "The first covenant between the municipality, housing corporation and energy company stems from 2000 and dealt with some agreements for energy saving. Three more corporations joined the second covenant, which gave 16.000 'energieprestatieadviezen' (energy performance advices). The third covenant really anchored the agreements in the business of the corporations. This 'step by step' approach worked well for Tilburg. Now the parties are working together in one of the alliances" (*Tilburg*; (Gemeente Utrecht 2011)). Breda does something similar in their Klimaattafel existing building.

There are also municipalities that do not see value in covenants. They say it is more based on enthusiasm and the process than putting everything down in covenants (e.g. *Den Haag, Almere, Amersfoort*). Enschede was working on a covenant with the housing corporations but this process was so slow that it did not work. Now they started a project together (municipalities, corporations, education, Menzis etc.) called 'Maatschappelijke Investeringsopgave Duurzaam wonen' (investment sustainable living), in which an external party pulls. This way, cooperation is sought without making covenants. Almere notes that when you work together under the level of 'agreements', you see they do things themselves. On the other hand Zaanstad experiences that with the crisis, they have to pull the housing corporations more. Also Breda and Zoetermeer perceive it as a challenge to keep the speed up, now there is not much building anymore. Aside from covenants there are also persons or organisational forms that try to seek cooperation with the housing sector, e.g. 'Taskforce housing' ('s-Hertogenbosch) an execution organisation of municipal officials for housing and environment.

- **Cooperation in LDEBs**

Municipalities are looking for ways to start or facilitate a LDEB. In Table 8 municipalities that mentioned they have a LDEB (under construction) or that mentioned they want one are grouped.

Table 8: LDEBs (that are under construction)

Municipality	LDEB	Explanation
Den Haag	Aardwarmte Den Haag v.o.f.	'Aardwarmte Den Haag v.o.f.' (Geothermal Heat The Hague Partnership) is formed by the municipality, the energy companies Eneco and EON Benelux and the housing corporations Staedion, Vestia and Haag Wonen to realise a thermal energy project to heat thousands of new homes and companies in the Hague south West. It can be seen as a small LDEB. The drilling has been done and soon the warmth will be used. They are looking whether they want an overarching organisation for more of these initiatives (Aardwarmte Den Haag 2011)
Tilburg	MOED (Midden-Brabantse Ontwikkelingsmaatschappij voor Energie en Duurzaamheid)	One alliance has grown out to a (start of a) LDEB. Together the municipalities Tilburg, Goirle and Waalwijk want to see what the possibilities are for sustainable energy production. There is now a project leader of the company MOED that tries to initiate sustainable energy projects with other partners (Midpoint Brabant 2011)
Almere	Groene Reus	The municipality of Almere supports the 'Groene Reus', an initiative from outside the municipality for everybody that wants to join. Revenues will be used for investments in local energy production.

Apeldoorn	Duurzame Energiecoöperatie Apeldoorn	A societal initiated LDEB is under construction. It will be a cooperation model in which everybody can become member.
Haarlem		Looking into feasibility of LDEB
Zaandam		LDEB is not an aim on itself. But they have an 'energy development team' that seeks opportunities for sustainable energy production (with money from shares from NUON).
Amersfoort	Energy cooperation Amersfoort	Searching for form. Municipality does not want to be risk taker. Currently there is a private actor that pulls it.
Zwolle		Busy with LDEB of which society would profit.
Dordrecht	Energy cooperation Dordrecht	Pulled by waste company, province and municipality.
Venlo	Duurzame Energiecentrale Limburg + Energie Entiteit Greenport Venlo	Two LDEBs are under development.

Some municipalities mentioned their LDEB specifically under 'societal support', since it was an initiative that came from society and was only supported later by the municipality e.g. Energy-U (*Utrecht*), or 'wij krijgen kippen', Energie Noord, Windvogel etc. in different districts of Amsterdam. Other municipalities have a more active role in starting the initiative. According to the in-depth interview, it is not easy to set up an LDEB, the initial investments (e.g. for first research) are high and banks often refuse to finance. Until they are up and running (which is nowhere really the case) municipalities often play a big role (Interview 1 2011).

- **(Other) cooperation with energy utilities**

Other forms of cooperation seen in the field of energy are with waste energy companies (e.g. *Amsterdam, Almere, Enschede*) of which the municipality is shareholder. Municipalities can also be shareholder of energy producers like Eneco with which they cooperate in the field of sustainability. Some municipalities mentioned the meetings they have about district heating with Essent, Enexis etc. While Groningen really puts the cooperation in an 'energy covenant' (between province, Nuon, Essent, municipality, a bank, Water company, GasTerra) and meetings, there are also municipalities that prefer ad hoc, project based contact (e.g. *Zoetermeer, Emmen*). Especially for energy, regional cooperation is mentioned to be very important (e.g. *Tilburg, Groningen, Nijmegen, Ede*).

- **Cooperation in the transport sector**

Transport is often the task of another person than the ones spoken to (e.g. there is a separate air quality programme) (*Amsterdam, Rotterdam, Den Haag, Utrecht, Venlo*). When air quality is not a problem, sustainable transport can have less priority (*Haarlemmermeer*). From a climate perspective some say not much is happening in this field (e.g. *Zwolle*). Often the province is public transport authority, but this can also be a city region like 'Stadsregio Arnhem Nijmegen'. Some municipalities mentioned that they contact the province or other authority to see how sustainability can be entered in concessions (e.g. *Haarlem, Zaandam, Leiden*). Almere is an exemption in that they can contract out themselves, with norms for emissions. Municipalities themselves can contact taxi's etc (*Zaandam*). Tilburg mentioned they might start an alliance on transport. Other cooperation is seen in the field of sustainable fuel production (e.g. in *Ede* or the Green Hub project Arnhem-Nijmegen: 2013-2023).

- **Cooperation with knowledge/education institutes**

Also cooperation with knowledge/education institutes is valued by the municipalities. As Tilburg mentions, it is about the three O's (overheid, organisaties en onderwijs): government, companies and organisations and education. Utrecht has structural cooperation with e.g. universities, but also others mentioned projects they do together (e.g. *Amsterdam, Enschede, Dordrecht*). Groningen laid down the structural cooperation between knowledge/education institutes and the municipality in the 'Akkoord van Groningen' (accord of Groningen) in order to improve the knowledge and innovation position (also in terms of sustainability). Also Rotterdam formalised its structural bonds with universities and other education institutes. What is seen as well is that some municipalities have strong links with environmental education centres (e.g. *Almere, Haarlemmermeer, Dordrecht*). The movement of starting 'sustainability academies, incubators' in which knowledge institutes play a big role, fits in the picture of municipalities trying to create a platform for innovation (of which already quite some forms exists). In December 2011, Dordrecht won a prize for its plan for a 'Duurzaamheidsfabriek' (sustainability factory in cooperation with HVC). This innovative and technological centre will provide space for cooperation between companies and education in the field of sustainability. It will consist of technical halls, labs, company spaces and meeting points to network (Duurzaamste gemeente 2011). Similar initiatives are starting in e.g. Haarlemmermeer.

- **Cooperation with society**

Cooperation with society goes from organising energy café's, to websites or structural contact with societal initiatives and organisations. To come closer to societal (but also private) partners some municipalities establish a 'separate climate/sustainability point' (see also section above). Examples are Almere with its DuurzaamAlmere.nl and the physical shop in which they try to match with private and societal partners and be less dependent on politics. Nijmegen also has a physical point 'het Groene Hert', which they see as example for other municipalities. Emmen has Educohof, a physical podium for sustainable development. Important is also that some municipalities started the process to come to a climate programme already in cooperation with society (e.g. *Rotterdam, Haarlem, Amersfoort*). It is not the case that the municipality is always the one pulling for contact with society. They can do this with other partners (*Rotterdam, Emmen*), or even place platforms outside the municipal organisation (e.g. Stichting Duurzaam Eindhoven, subsidized by the municipality).

**Reference municipalities:** All cooperation in the reference group cannot be listed. The cooperation is very broad, especially in Amsterdam, Rotterdam and Tilburg. As mentioned, Tilburg is the only one that structures broad cooperation in alliances, that deal with mitigation and adaptation. Amsterdam and Rotterdam arrange cooperation in different projects. Although the reference group has (worked with) some covenants, they mainly say these tools are less needed in 'this phase'. "The phase of activating is over", or "it is more about the process anyway". They see companies being very ambitious (e.g. *Amsterdam*). The focus will be on bigger parties (like ICT in Amsterdam) also with help of the WM: "you will save energy, we will maintain less" or parties that are not yet involved. LDEBs are mentioned as important cooperation forms, especially in Den Haag and Tilburg. In Amsterdam the LDEBs were more initiated by society. In Rotterdam Eneco and WWF are working on a pilot project with a climate neutral neighbourhood. Transport has an important place in the reference municipalities but in Amsterdam, Rotterdam en Den Haag more in terms of air quality. It must be clear that there are also many autonomous processes: groups that are just working on climate etc. without the help of the municipality. But all reference municipalities are actively trying to play the role that fits best with every group.



### Indicator 3: Level of support created in society

The support within society was seen as good among eight of the municipalities (*Amsterdam, Den Haag, Utrecht, Almere, Haarlem, 's-Hertogenbosch, Zoetermeer, Emmen*). Municipalities based this on 'omnibus'-surveys done, the societal/neighbourhood initiatives that exists, active organisations, LDEBs with societal initiators (e.g. Energy-U or 'wij krijgen kippen') and interest in subsidies etc. On the other hand, it is also difficult "to make all parties enthusiastic for the topic". "To make sure 'the mass' takes its role" is mentioned as important challenge (*Enschede, Haarlem*). If one works with frontrunners one thinks everything is perfect, but there is still a big mass that does not really care. Money is often an issue. That is why e.g. Haarlemmermeer uses profit as the stimulus. In order to enhance external support, some municipalities have an overarching, recognizable campaign (e.g. *Rotterdam, Haarlem* etc.). Utrecht and Breda stress specifically that it is important to not let a campaign be 'municipal', but make it something from companies etc. As mentioned, digital platforms but also physical climate shops have emerged to get closer to society (e.g. *Almere, Nijmegen*).

Amsterdam already experiences they are in a new phase of communication. The phase of activating people is over. Amsterdam (but also other municipalities like Den Haag) see a movement that people want it. Amsterdam tries to focus now more on 'big parties' like ICT. Also Haarlemmermeer notices that the time of convincing is over. They go for an 'ontzorg' (total package)-strategy.

**Reference municipalities:** Especially Amsterdam and Den Haag mention the support in society is high, seeing all the sustainable initiatives coming from society. They are not actively promoting anymore (*Amsterdam*). Also Rotterdam and Den Haag see the movement that people want it. However, there is still a long way to go. (*In interview with Tilburg this question was not dealt with*).



### Indicator 4: Level of internal support (college and council)

12 of the municipalities mentioned that the support for climate/sustainability from the council and board was high because 'the plans are approved by the board', 'sustainability is part of the council agreement' etc. (*Amsterdam, Rotterdam, Den Haag, Eindhoven, Tilburg, Groningen, Breda, Nijmegen, Haarlemmermeer, Zoetermeer, Dordrecht, Venlo*). Two municipalities with Groenlinks in their council mentioned the support was even very high (*Utrecht, Haarlem*), but Breda found out that no matter what party is in the council, you can always find the right tone to work with sustainability. What works well according to Utrecht is when the alderman approves a plan to a high detail level: this makes the municipality can really come to action. Eindhoven, Almere and Venlo found that their 'Natural Step', or 'C2C'-philosophy was well supported by their aldermen and council. But although sustainability can be in the college agreement, Groningen found a gap with execution. Also Apeldoorn saw that no extra capacity was made available. "It is difficult to make everything come true" (*Emmen*). Zwolle noted that the 'top' mostly sees climate/sustainability as energy. Ede also found that there was not for everything support. There are still climate sceptics, that is why some municipalities also prefer to talk about sustainability instead of climate (*Leiden*).

Adaptation is mentioned to be in another phase than mitigation. Den Haag mentions that the policy is in its infancy and civil servants (leave alone the management and council) do not do as much with it (*Almere*). It is not seen as an urgent political problem (*Haarlem*) and does not receive as much attention. Ede and Leiden however say they try to spread the adaptation topic.

Heat island effect has less attention than water issues. For some municipalities (e.g. with a lot of water/green) heat island effect is not an issue (*Almere, Apeldoorn, Zoetermeer, Dordrecht*), some municipalities recognize that in their municipality it can be a problem and start a discussion (*Leiden*). The internal support among the whole organisation is not systematically researched (see section 7.3, recommendations for further research). E.g. Maastricht mentioned how internal support can be a challenge.

**Reference municipalities:** All reference municipalities have high support from their alderman and college and value this high support. Den Haag: “That the college wants to be climate neutral 10 years earlier gives a good impulse”.



### Indicator 5: Availability of monitoring and evaluation

#### Municipal wide monitoring

Municipal wide monitoring offers a picture of energy use/CO<sub>2</sub> emissions in the whole municipality. This is of course not only influenced by the municipal climate programme but also by other developments. Around half of the municipalities interviewed say they monitor CO<sub>2</sub> reduction municipal wide (e.g. *Amsterdam, Rotterdam, Utrecht, Tilburg, Almere, Breda, Enschede, Haarlem, Amersfoort, Haarlemmermeer, Dordrecht*), or soon do this (*Zoetermeer, Ede*). Tilburg for example makes its own yearly ‘klimaatmonitor’ report with both data per sector and information about the process. Part of the information is obtained from grid maintainers. The monitor of Alliander or Enexis is used for which municipalities have to pay. This however does not provide the total picture of all sectors. Some try to work with the ‘Klimaatmonitor’ of Agency NL (*Almere, Haarlem, Zoetermeer*), for which recently also a guide for unitary monitoring is developed by the Ministry of Infrastructure and Environment (I&M) (in cooperation with NL Agency, DHV, BECO, a group of municipalities, emission registration); Not all data is available yet (e.g. for energy from companies and schools there is no regional information yet) and there are other aspects that need to be improved. Later on, there will be a fill-in tool for municipal specific data (you can send data, they calculate it) (Klimaatcongress 2011). Municipalities are looking what value it has for their municipality and acknowledge that this monitor is not complete yet. NL agency would like the ‘Klimaatmonitor’ to be used by all, which makes comparing easier but also mentions that it depends on the priority the national government gives to it whether it will be improved (Interview 1 2011). NL Agency is also trying to involve the Dutch Covenant of Mayors (CoM) parties to further develop unitary monitoring (protocol finished) (Interview 1 2011). Nijmegen mentions how with the monitoring from CoM it is “easier to monitor energy reduction aims” (*Nijmegen*).

One problem most municipalities face is that information is scattered and it is difficult to obtain all the information (*Haarlem*). The ‘easy data’ (like energy use by households) are bought from Alliander/Enexis/Stedin (costs: 5000- 7000 euro per year, (Interview 2 2011)) but much is still difficult to get. Some municipalities are setting up systems to get information from companies etc.

There are municipalities that consciously stopped with or wait with municipal wide monitoring because they want to focus on action (*Groningen, Zaanstad*), “After five years it is more interesting to see whether you were on the right track and make a new road map” (*Zaanstad*), or they are not that far (*Leiden*) or do not want to spend that much money on it (*Zwolle*). Enschede mentions how, although they monitor municipal wide, project monitoring gets the focus, being more interesting in the beginning, since the first years the municipal wide results will not be significant.

### Project monitoring

A bit more than half of the municipalities said they monitor their projects/ the impact of the programme (e.g. *Amsterdam, Rotterdam, Utrecht, Tilburg, Breda, Enschede, Haarlem, Amersfoort, Haarlemmermeer, 's-Hertogenbosch, Maastricht, Leiden, Emmen, Venlo*) or want to do this (*Zoetermeer*). Utrecht even aims to visualise the results of the programme for all its citizens by means of a tangible interactive monitoring device. Some municipalities use the CO<sub>2</sub> monitor of DWA which calculates the CO<sub>2</sub> reduction by projects with national validated rules and data (*Amsterdam, Den Haag, Haarlem, Maastricht and Venlo* (like all municipalities in Limburg) and *Leiden, Emmen* (as discussed with Energy Valley)). Getting all data is sometimes difficult however (especially from all different districts in Amsterdam or from different sectors (*Leiden*)). There are also municipalities that mainly focus on process indicators for project monitoring (*Amersfoort*). Haarlemmermeer has set up a system that in their opinion works perfectly: not only expected CO<sub>2</sub> reduction is evaluated but also profit, visibility and experience-ability of projects. According to some, monitoring projects is the only thing that is really valuable (*Dordrecht*), but others think there will be a big gap between what was 'calculated' and what is really reduced.

### Monitoring sustainability

Since some municipalities have a sustainability programme instead of a climate programme, an extra question was whether they monitor sustainability. Seven municipalities mentioned they are trying to find something. Amsterdam is constructing a sustainability index, Rotterdam will report on sustainability indicators next year and Den Haag looks how they can work with a standard set of indicators. Tilburg already published a sustainability monitor. Eindhoven, Apeldoorn, Amersfoort are searching for the right way to not only focus on energy.

### Monitoring adaptation

Monitoring of adaptation is a difficult issue. Only two municipalities mention that they are trying to find a way to deal with this. Tilburg currently describes adaptation activities in the process part of their monitoring report. They are looking for a way to improve this. Also Rotterdam sees it as a challenge. Groningen says that adaptation is not monitored as adaptation as such, but more as quality of the environment.

**Reference municipalities:** Three reference municipalities monitor municipal wide CO<sub>2</sub> emissions, Amsterdam, Rotterdam and Tilburg. Getting the data and finding a right tool was/is for them a long trajectory. They are improving the monitoring every time, adding data of new sectors etc. For project monitoring, Tilburg has a 'process part' to see how the programme goes, Amsterdam uses the monitor of CO<sub>2</sub> service punt and Den Haag uses something similar. Rotterdam also structurally measures the effects (now only in terms of mitigation but they want to measure indicators for sustainability). Interestingly, the four reference municipalities are among the few municipalities that are working on sustainability monitoring (outcomes) and are struggling with monitoring of adaptation (*Rotterdam, Tilburg*).





## II. Summary and central message



Returning to the sub-question: *“In what way is climate change mitigation and adaptation anchored in implementation?”* and thinking about the indicators formulated beforehand for ‘good anchoring’ one can state that: climate change mitigation is quite well (more than medium) anchored in implementation (see also Table 9). There is especially a high level of external cooperation (indicator 2) and a high level of internal support at the college and council (indicator 4). However, there are differences in capacity (especially the capacity in future will diminish) and quite some municipalities are struggling with monitoring (indicator 5).

Table 9: Overview of anchoring in implementation

Indicator	General view 25 municipalities	Reference municipalities:				Other interesting examples (that score high on indicator)
		Amsterdam	Rotterdam	Den Haag	Tilburg	
Availability of sufficient capacity (sufficient manpower, knowledge, skills, finances)	-/+	+	+	(-)/+	+	e.g. Zaanstad
Level of external cooperation	+	+	+	+	+	Many
Level of support created externally	-/+	+	+	+	?	E.g. Utrecht, Almere, ‘s- Hertogenbosch, Zoetermeer, Emmen Dordrecht
Level of internal support (college and council)	+	+	+	+	+	Many
Availability of monitoring and evaluation	-/+	+	+	-/+	+	E.g. Haarlem, Amersfoort

- = low; -/(+) = low to medium; -/+ = medium; (-)/+ = above medium; + = high

The reference municipalities score high on anchoring in implementation, higher than average, notably with regard to capacity, external support and monitoring. It can be that these are some of the reasons behind their higher performance. The level of external cooperation is in all municipalities high. Cooperation is mentioned as the most important implementation factor, more than what so ever. Cooperation is sometimes actively started by the municipalities, e.g. through covenants (which are seen as useful by some, but not helpful by others), but can also take place after the initiative came out of society (in case of some LDEBs). Cooperation with knowledge institutes is valued more and more and initiatives for ‘sustainability factories’ or incubators for different partners to meet are emerging increasingly. Some municipalities have notably broader cooperation than others.

Most differences are however seen in the cooperation structures: do municipalities have their cooperation structurally organised or is it ad hoc cooperation (this has been discussed under anchoring in organisation). Ad hoc cooperation does not per definition mean that this municipality is not active in cooperation, but more extensive structures are thought to stimulate and maintain bonds with different partners better than less extensive ones or no structures.

The reference group says they are in 'another phase' with already quite an active society and ambitious companies. It can be that some other municipalities are not yet in this phase. Some are just starting to structure their cooperation a bit more, while the reference group already had their cooperation very structurally organised (see indicator 5, section 3.2) for a long time (e.g. in covenants and many other ways of active cooperation). They are now mainly looking at the missing links and/or focusing on 'working with big partners'. It can be that the capacity in the reference group helped, but interestingly the amount of fte in the reference group differs quite a lot, so it is not that 'only with 23 fte like in Rotterdam' one can be a frontrunner<sup>25</sup>.

Among the municipalities there are some that think they have enough capacity and others that do not. Some municipalities think one should not think in "hours spent on sustainability", since it has to become something natural, a part of everybody's job. Only with the whole municipality and the whole society the municipality can be made climate neutral. Now the capacity is decreasing (through budget cuts and ending of SLOK-scheme), the level of cooperation may become even more important. But to get the ball rolling, enough process-money or initial capacity seems important. Support from aldermen and the council is often existing, but does not always lead to enough capacity for the aims.

Of the 25 municipalities, some use municipal wide monitoring, but are struggling to obtain all data to get the complete picture, others focus on project monitoring and search for indicators, also for wider sustainability goals (*a combination is seen as well*). As mentioned, the reference group scores higher on monitoring/evaluation. The availability of monitoring (although Den Haag is not a frontrunner in this), shows maybe how serious they take the topic and could be the reason behind a process of continuous improvement. That there are (still) municipalities that do not value or wait with monitoring (indicator 5), is interesting. It is true that it is important to focus on action, but it is also important to know the results, to improve the organisation and actions. Monitoring can furthermore be used as a good communication tool. Considering project monitoring as important only in the end stage is often difficult, since monitoring requires systematic and timely gathering and organisation of data. Especially when 'letting go the process' to society and other partners, it is important to see whether this works out or if another role of the municipality is needed.

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<sup>25</sup> It must again be noted that the amount of fte cannot easily be compared, since the organisational structures differ, see also indicator 1.



### 3.5. Performance

This last section of the local dimension of climate change mitigation and adaptation deals with the performance of the 25 municipalities interviewed in the field of climate change mitigation and adaptation. The section is split in the output-performance, some words on the modes of governing used and the outcome-performance. Herewith sub-question 3 of part 1 is dealt with: *“What is the performance (outputs and outcome) of Dutch municipalities in the field of climate change mitigation and adaptation?”*

#### I. Results

##### 3.5.1. Output-performance

As is explained in the scope and limitations, section 1.5, it was not possible within this research to compare and rank all municipalities. What could be done was to ask the municipalities about their main performances and in which field they saw themselves as being leader. Moreover, the municipalities were asked which municipalities they saw as leader and why. The data obtained can be grouped in different ways. First the municipalities are mentioned that were seen as an example by other municipalities, see Table 10. It must be noted that the reasons behind ‘seeing another as frontrunner’ were not always ‘output-performance’ reasons in terms of activities done, but also organisation, policy or implementation reasons. In Table 11, these reasons are grouped.

Table 10: Examples for other municipalities

‘Place’	Municipalities seen as example by others, and why
1	Tilburg is mentioned by 13 municipalities as a leader/example in amongst others: cooperation; dare and big projects; energy and policy.
2	Amsterdam and Den Haag are both seen as an example by six municipalities. Amsterdam in amongst others electric mobility, financing structures, cooperation with companies and sustainable energy.
2	Den Haag is mentioned to be leader (by six municipalities) in amongst others action (geothermal energy); climate fund; and big projects.
3	Rotterdam is respected by five municipalities because of their big programme bureau; lobby with national government/EU, cooperation with big companies and innovation.
4	Apeldoorn was mentioned nine times, four times in a positive way for their leadership in LDEB or policy but also five times in a negative way because they “reduced to nothing” (something that is not agreed with by Apeldoorn. They indeed went back in capacity but also chose for a more facilitating role (after a more intensive phase) ( <i>Apeldoorn</i> )).
5	Amersfoort is looked at by three municipalities because of their approach to existing building and LDEB.
6	Municipalities that were mentioned two times were Utrecht (strong ambition, energy); Almere (fund; spatial planning); Groningen (cooperation with universities); Nijmegen (NEC).
7	Municipalities that were mentioned one time were Breda; Haarlem (strong organisation) and ‘s-Hertogenbosch (BEC).

Interesting was that the municipalities not always mentioned the things other municipalities thought they were leader in. Plus, many of the things municipalities said they were leading in were not mentioned by the other municipalities. Table 11 shows, grouped per topic, which municipalities mentioned a topic as best-practice for themselves and which municipalities were mentioned to be leader on that topic by others.

Table 11: Leaders per topic (according to themselves, according to others)

Per topic:	Mentioned themselves	Mentioned by others
<b>Organisation</b>		
Organisation	Zaanstad	Rotterdam, Haarlem
<b>Policy/plans</b>		
Policy	Den Haag	Tilburg, Nijmegen, Apeldoorn
Broadness/integral	Eindhoven (Utrecht, Zwolle)	Rotterdam
Ambitions/dare	Rotterdam, Haarlemmermeer	Utrecht
<b>Implementation</b>		
Cooperation	<b>Tilburg</b> , Amersfoort, Apeldoorn, Haarlemmermeer, Dordrecht, Emmen	<b>Tilburg</b>
Companies	<b>Nijmegen</b> (NEC)	Rotterdam, <b>Nijmegen</b> , 's-Hertogenbosch (BEC)
Knowledge institutes	Enschede	Rotterdam, Groningen
Climate shop	Nijmegen	
Lobby (vertical/horizontal)		Rotterdam
Innovation		Rotterdam
<b>Output-performance</b>		
Sustainable energy	Breda ( <i>will be</i> )	<b>Den Haag</b> , Tilburg, Utrecht
Wind	Amsterdam, Almere, (Zoetermeer)	
Solar	Amsterdam, Den Haag, Almere	
Geothermal	<b>Den Haag</b>	
Sustainable district heating	Eindhoven, Almere, Dordrecht	
LDEB-constructions		Apeldoorn, Amersfoort
Smart Grids	Zaanstad	
Sustainable building	Tilburg	
Existing building	Den Haag, Almere, Enschede, Haarlem, <b>Amersfoort</b>	<b>Amersfoort</b>
Spatial planning		Almere
Vision underground + MAP table planning	Zwolle	
Sustainable mobility	<b>Amsterdam</b> , Rotterdam, Zaanstad ( <i>as second</i> )	<b>Amsterdam</b>
Bicycles	Groningen	
Green gas	(Groningen), Nijmegen	
Sustainable lighting	Groningen, Utrecht, Tilburg	
Green IT	Amsterdam	
C2C	Venlo	
Natural Step	Eindhoven	
Financing structures	Amsterdam, Den Haag	Almere
Action	<b>Den Haag</b> , Utrecht	<b>Den Haag</b> , Tilburg
Adaptation	<b>Rotterdam</b> , Apeldoorn, Dordrecht	<b>Rotterdam</b>

Matches (between what municipalities mentioned themselves and what others mentioned) are made bold. With regard to implementation factors, the following matches were found:

- *Tilburg as a leader on cooperation (see example in indicator 5, section 3.2)*
- *Nijmegen as a leader on cooperation with companies (see example NEC in Table 7)*

With regard to output-performance:

- *Amsterdam is seen as leader in sustainable transport (electric) (see explanation in annex V)*
- *Den Haag is seen as leader on action and sustainable energy (geo-thermal) (see example in Table 8)*
- *Amersfoort is seen as leader in reduction in existing building (see explanation in annex V)*
- *Rotterdam is seen as leader in adaptation (see explanation in annex V)*

### The selection of reference municipalities

**Reference municipalities:** Throughout the report Amsterdam, Rotterdam, Den Haag and Tilburg were used as reference municipalities. This reference group was chosen based on Table 10, in that they were seen as a leader most often. Since this was sometimes also due to policy, organisation or implementation reasons, it was studied as well whether the reference municipalities were also mentioned by others for their output-performance (activities really implemented), see Table 11, to be able to say something about the influence of their way of anchoring on performance. The four cities that were mentioned most often, were indeed all four also brought up because of output reasons and were therefore suitable to form the reference group.



Asking which municipalities a municipality saw as 'leader', made clear that there were quite some municipalities that were not very interested in the 'who is leader' question. They point at Apeldoorn as an example of "once a leader, look what it is now". They mention "it is not about that, we just do our best" (*Haarlem*), or "all 100.000+ municipalities are frontrunners, everybody is better than the national government" (*Dordrecht*), but "there is not one performing well in everything" (*Zwolle*).

Interesting was that Amsterdam, Utrecht, Eindhoven and Zwolle said they were 'broader in their approach than others'. Amsterdam: "Only Rotterdam has also the whole package", Utrecht: "There are not many as broad as we". Eindhoven: "There is no one that threats the topic as integral as we do"; Zwolle: "Not the feeling that municipalities think as integral over the whole broadness of the topic". Moreover, not all are as interested in or actively looking at others, but rather go their own way. Other comments with regard to comparisons given were: "There can be very beautiful stories, or municipalities that do well in the media, but if you look at the data, we are all struggling" (*Enschede*). "It is difficult to compare municipalities" (*Zoetermeer*). Eindhoven and Haarlemmermeer could not find inspiring examples among Dutch municipalities but looked at other countries or companies.

There are also many municipalities that are interested in others. Breda is for example very curious how it will work out in Tilburg with "giving market parties that much freedom". Some even want more exchange and hope the 'Klimaatagenda' can still have a function in this respect (e.g. *Tilburg*).

### Adaptation

Although adaptation seems to receive, on average, less attention in many municipalities' policy etc., this does not mean nothing is happening in the adaptation field. Many municipalities mentioned to do a lot in the water field (e.g. *Utrecht, Haarlem, Nijmegen, Zwolle, Leiden*). Dordrecht is mentioned as international frontrunner in adaptive building and flood management (Gemeente Dordrecht and Waterschap Hollandse Delta 2009; Dordt Duurzaam 2011) and different municipalities have subsidy schemes for green roofs etc (e.g. *Amsterdam, Utrecht, Groningen etc.*)

Heat island effect is more in the phase of research (*Eindhoven, Leiden*), but the measures that can help against the heat island effect are taken for other reasons (e.g. quality of the living environment or other sustainability aims (*'s-Hertogenbosch, Zaanstad*)). Some municipalities mention that they therefore do not recognize adaptation as such (*Groningen*), although it happens. Not mentioning performances in the field of adaptation as adaptation activities is sometimes also a strategic choice. Adaptation can lead to discussion of climate sceptic people (*Breda*).

### **On scheme?**

Whether municipalities are on scheme depends on whether one asks about being on scheme with their projects (output) or with regard to effects (outcome). Considering projects, e.g. Rotterdam and Zaanstad answered they are perfectly on scheme ("even ahead with sustainable energy" (*Zaanstad*)). Many other municipalities are for some projects/themes on scheme but for others more in the 'preparation phase' (*Haarlemmermeer, Venlo*). For effects, see section 3.5.3, 'outcome-performance', in this same chapter.

The above information, collected from the interviews, gives some information on the output-performance of municipalities but does not give a good view on how far municipalities are exactly with their climate activities and which municipality is really leading in specific fields. Since performance could not structurally be measured within this research, other rankings have been studied as well to examine whether they were suitable to use. In the rankings found however, only a couple of municipalities participated, the measurements were only focussed on single projects, criteria were un-known, the research was out-dated etc. In the 'duurzaamheidsmeter' of COS Nederland (2009), Breda and Nijmegen had the highest score, followed by Groningen and Tilburg. Since the criteria were not output-performance criteria only but a mix of policy, plans and implementation factors and the information was not up to date, also this tool could not be used to have a good overview on output-performance. Another tool, Klimaatmonitor, is promising. This monitor splits data obtained from different sources, e.g. surveys or CBS, into ambitions of municipalities, their activities and performance indicators and municipal wide: performance indicators target group and energy use and produced energy. Klimaatmonitor uses very specific indicators for performance in the themes municipal buildings, infrastructure, fleet, housing, utility buildings, companies, mobility and sustainable energy. To give an example of an indicator: 'the amount of new buildings with stricter EPC realised'. Comparison based on this extensive file would be interesting, since there are many, very specific indicators. However, the monitor is only filled in partly and only by some municipalities, often with information from 2009. Of the few municipalities that filled in the monitor, 's-Hertogenbosch had the most activities implemented, then Tilburg, Groningen and Nijmegen. Although it is interesting that Tilburg, Groningen and Nijmegen were also mentioned in the 'duurzaamheidsmonitor', it is difficult to draw conclusions. Clearly, in-depth study is needed to be able to compare performances. Further development of the 'Klimaatmonitor' would help with this.

According to the in-depth interviews the performance of local authorities is, given the national circumstances, not bad (Interview 1 2011). Bigger cities are far ahead of smaller ones. But although they are ahead of others, they still 'just started' (Interview 2 2011)). They mainly focus on mitigation (energy) in existing building stock, transportation (electrical vehicles) and LDEBs. Adaptation happens but is not highly visible (Interview 1 2011).

### 3.5.2. Modes of governing

As was shown in the conceptual framework, the activities implemented by the municipalities can be grouped into the four modes of governing. Since no structural list of activities implemented could be made, this research cannot count which modes of governing are used more frequently. However, based on the interviews some interesting trends can be observed in the four modes of governing.

#### 1. Authority

Municipalities do use their authority in the field of spatial planning and zoning plans to stimulate sustainable development. Some also use the authority to make connections to district heating (with e.g. residual heat) obligatory (e.g. *Dordrecht*).

In the field of wind energy municipalities do not have the authority and depend on the province. Long, difficult procedures are often the state of the art. Amsterdam has an interesting approach to make other partners not scare back: they already plan wind locations, they arrange the permits (which can still take some time) and then offer the locations on the market (enabling).

With regard to maintaining 'Wet Milieubeheer' at companies (e.g. implementing all measures with payback time of less than five years) there are municipalities that stated they want to focus more on using this authority. However, often they prefer cooperation: by offering help to companies they expect more result (more enabling than authority) (e.g. *Amsterdam, Utrecht*). Interesting will be what will happen with regard to the RUDS. Many maintenance tasks will be distributed to these regional offices, whereby municipalities might 'lose some direct authority'.

#### 2. Provision

With regard to provision, it was mentioned in section 3.1 what is and what is not possible for Dutch municipalities. While in some municipalities LDEBs are initiated by society, some other municipalities are actively looking themselves how to start a LDEB, also to generate money that they return to their climate/sustainability programme. So although LDEBs are often a cooperation and therefore 'enabling', some types have features of 'provisioning' as well.

#### 3. Enabling

The whole range of possibilities of enabling mentioned in section 3.1 is indeed being practised by the municipalities. Through communication, education, subsidies, covenants etc., municipalities try to make climate/sustainability a responsibility of all. To give some examples: Amsterdam has an 'Energy team' to help renters talk to their landlords about energy saving, Den Haag had a solar subsidy in which inhabitants could choose how much subsidy they preferred (the less, the faster) etc. It seems however (due to budget cuts but also due to changing opinions) that municipalities move away from enabling through subsidies to other financial constructions (e.g. revolving funds) or enabling through cooperation.

Enabling seems to know 'many different types' and it seems that municipalities go through different phases of enabling. Some say they are done with the 'convincing phase' and now focus on cooperation with big parties. The change in going from 'puller' to being an equal party and/or facilitator is also remarkable. This is sometimes combined by 'outside the municipality constructions', e.g. by linking up to broader platforms/initiatives. Since the municipal organisation only emits around five percent, they need others and this asks for a role switch. There are however discussions what role this should be. Seeking the best ways of enabling will probably be the core of climate/sustainability policy in future.

#### 4. Self-governing

As could be seen in Table 5, some municipalities do have specific self-governing aims. But also others with less specific aims, do work on aspects like: municipal fleet, sustainable procurement (some even look at the total life cycle of a product (Total Cost of Ownership) and even choose for solutions that are cheaper in 40 years (*Venlo*) etc. Depending on the scope, some municipalities have already reached a 'climate neutral municipality'. However, it is realised that, despite the fact that this can give a good example, it is not going to have a big effect.

##### 3.5.3. Outcome-performance

With regard to outcome-performance, two municipalities mentioned to be on scheme, but the reports were not yet available (*Breda* and *Dordrecht*, who are going to gain a lot from sustainable district heating). Many municipalities find it difficult to say however. Many say that they will only know it when the programme is finished (e.g. next year). Nijmegen saw that the energy use was lowered, Tilburg saw around five percent reduction and Zoetermeer eight percent. Most municipalities however are with regard to effects not on scheme. Energy use has only grown (*Amsterdam*, *Haarlem*, *Zwolle* etc.), they are far ahead (*Emmen*), "will only reach it in 2080" (*Maastricht*) or are "only 0,5% neutral" (*'s-Hertogenbosch*). But, as they say, they are in the first phase of the transition (sometimes in the stage where they try to get experience in projects to later go to the general transition, *Zwolle*). It is an S-curve, a process that has to get started (*Eindhoven*, *Enschede*). Currently it is still mentioned to be a challenge to create concrete results (e.g. *Tilburg*, *Almere*, *'s-Hertogenbosch*).

According to some consultancy firms (Klimaatcongress 2011) municipalities are occupied with energy reduction but not with the total transition. Often the 'avoided CO<sub>2</sub> by sustainable energy production' is not enough to cover the CO<sub>2</sub> emissions. Many will not reach their ambitions and either have to lower their aims, or have to extend the date or just have aims for the sectors they have influence on. Interesting will be when the theoretical reductions from project monitoring (soft data) can be compared with hard data (for the whole municipality). It might be that reductions have been overestimated (Klimaatcongress 2011).

**Reference municipalities:** While in Amsterdam the energy use has grown, Tilburg saw a reduction in CO<sub>2</sub> emissions which is enough to meet the intermediate goal of five percent reduction in 2012. For Rotterdam, based on roadmaps etc., they believe the aim of 50% reduction in 2025 will be reached.





## II. Summary and central message

Based on the information collected in the interviews, Amsterdam, Rotterdam, Den Haag and Tilburg were selected as 'best performing' municipalities: they were mentioned most times by other municipalities, and were seen as best-practice for output-performances like electrical transport, adaptation and sustainable energy. However, high quality measurements of output-performance could not be made within this research and also existing tools were not sufficient.

With regard to the different modes of governing used it is clear that enabling is the most important mode of governing used and it seems to get even more important. With self-governing, an example can be given, but it does not have much influence. There are no municipalities that only focus on self-governing, it is always combined with enabling. Even when authority is possible (e.g. in case of using WM), municipalities prefer to make agreements etc. Within the mode of enabling many different forms can be distinguished. While some municipalities are still trying to convince society, other municipalities now focus on cooperation with big parties. LDEBs seem popular as well, but the roles of municipalities with regard to them differ. Some municipalities seem to become a bit a 'provider' again, while other municipalities only help local emerged initiatives. Municipalities are trying to find which role they should have, how actively they should 'enable'. Should they pull or only link up with rising initiatives? Seeking the best ways of enabling will probably be the core of climate/sustainability policy in future. Although the results of outcome monitoring are not always very clear (missing data or no reports published etc.) the general picture is that 'the big reductions and sustainable energy productions' still have to come. Hopefully it is because it is the first phase of the transition and that once everything is running, it goes faster. The performance should also be seen in the light of national circumstances (see section 4.1). While some municipalities like to look at other cities to see their performance, some do not see the use. Since some municipalities mention 'they are the only one with a broad approach', it seems they can still learn from each other. Municipalities can especially learn from each other in the field of the challenges mentioned: revolving funds, enlarging sustainable energy production, existing building reduction projects and also with regard to the newer topic: adaptation.

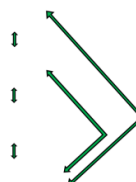
## 4. Empirical research part 2: Vertical and horizontal interactions

After having discussed the local dimension of climate change governance in Dutch municipalities, this second part of the empirical research deals with the way Dutch municipalities interact, vertically (section 4.1) and horizontally (section 4.2). As was done in the previous chapter, boxes are added in which the reference municipalities, the four municipalities mentioned by others as the main ‘frontrunners’, are focussed on.

### 4.1. Vertical interactions

First the vertical dimension will be focused on. Central is the sub-question: *“How do Dutch municipalities interact, vertically, with provinces, national government and the EU to address climate change and what role do these intergovernmental arrangements play?”*

The section is divided into Part I the results: divided into provincial-municipal relations, national-municipal relations and EU-municipal relations, with a (literature) focus on the national-municipal relations; and Part II: a summary and central message. Like with the municipal modes of governing, the province, national government or EU can use different modes in their relation with municipalities. The results are grouped according to the different modes used per level of government<sup>26</sup>. Although in literature research the national level had the focus, the roles of all levels of government have been equally discussed in the interviews.



#### I. Results

##### 4.1.1. Vertical Provincial-Municipal interactions

Although the provincial-municipal relations are within this thesis not extensively studied in literature, from the interviews it became clear that in many municipalities the province plays an important role. In this section the provincial-municipal relations are discussed, by looking at the authority, provision and enabling modes.

##### 1. Authority

Provinces are in charge of some amount of spatial policy. Municipalities have to take into account their structural visions when making zoning plans. Together provinces and municipalities have to look for suitable locations for the production of sustainable energy. Moreover, often provinces are the official authority for public transport concessions (KplusV 2010). Although this is not ‘authority over municipalities’, it is still important to mention since municipalities can try to cooperate with provinces in making sustainability agreements in contracts with transport companies (provision/enabling). In the interviews quite some municipalities mentioned the intensive contact they have with provinces, especially on topics for which the province is an important authority (e.g. transport and wind energy) (e.g. *Almere*, province of Flevoland).

##### 2. Provision

Not only the national government provides subsidies to municipalities. Provinces are in charge of the redistribution of subsidies to local governments and can have financial arrangements in the field of

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<sup>26</sup> The fourth mode of governing, self-governing, is not being discussed for provinces, the national government or the EU. This mode is in this context referring to horizontal interactions, which are discussed in section 4.2 (Kern and Bulkeley, 2009).

climate change mitigation and adaptation. Examples are the development fund sustainable energy Noord-Holland ('Ontwikkelingsfonds Duurzame Energie Noord-Holland') to stimulate sustainable energy projects or the Energy subsidy of Limburg ('Limburgse EnergieSubsidie') (KplusV 2010); (CO<sub>2</sub>-servicepunt 2011). Provinces can moreover also directly provide subsidies to inhabitants. In the interviews some municipalities mentioned the importance of their province for financing (e.g. *Nijmegen*, province of Gelderland).

### 3. Enabling

There are also examples of an enabling role of provinces. 'CO<sub>2</sub>-Servicepunt' from the province of Noord-Holland for example supports municipalities and market parties in realising climate policy. In 2008, almost all municipalities in Noord-Holland have signed a climate covenant with the province to intensify execution of climate policy in a cooperative manner. In line with the National 'Klimaatagenda', Noord-Holland formulated a new provincial agreement. Guidance from CO<sub>2</sub>-Servicepunt will be continued, with helpful tools like 'Bouwtransparant' (a tool to support municipalities and building parties in realizing the EPC-norm) or helpful information to inhabitants (websites like 'Bespaardaar') (CO<sub>2</sub>-servicepunt 2011).

As mentioned, from the interviews it became clear that in many municipalities the province plays an important role. There is intensive contact between provinces and municipalities. Half of the municipalities mentioned their province to be important. Aside from the sometimes provisioning role, they mainly play an enabling role. Provinces are mentioned to be important for lobbying towards the national government (*Dordrecht*, province of Zuid-Holland) and have an important network-role<sup>27</sup> (e.g. for *Ede*, province of Gelderland or for *Dordrecht* in the KISSZ<sup>28</sup> network of province of Zuid-Holland, or in groups like B-5 (biggest cities in province of Brabant)). The network role can be on climate or on specific topics (e.g. residual heat (*Dordrecht*)). Some provinces draw their own climate programmes and make agreements with municipalities, as was described for Noord-Holland but also seen in Limburg with the Omschakelakkoord (*Venlo*). It must be noted that some provinces seem to give more guidance than others.

**Reference municipalities:** Tilburg has intensive contact with the province within the B5 network. Amsterdam, Rotterdam and Den Haag did not specifically mention the province in the interviews, which might also relate to their size, see discussion in part II, starting on page 83.



#### 4.1.2. Vertical National-Municipal interactions

The national-municipal relations are a bit more elaborated upon, in order to understand how the national government has promoted local policy making over time. It will start with a general overview for mitigation and adaptation. Thereafter, the relation will again be analysed by looking at the way the national government uses its authority and the provisioning and enabling mode.

#### Mitigation-overview

In the first National Environmental Policy Plan (NEPP) and the first white paper on energy saving (1990), municipalities were given a role as co-executor of energy policy (Bommel and Kuindersma 2008). A framework with basic mandatory and voluntary tasks in the field of energy was provided in order to implement the NEPP.

<sup>27</sup> It is acknowledged that the network role of municipal-provincial interactions has a large horizontal dimension.

<sup>28</sup> Knowledge in Synergy in Sustainable Zuid-Holland.

Over time, different funding schemes were implemented to promote local policy making (Bommel and Kuindersma 2008). In 1999, ‘Bestuursakkoord Nieuwe Stijl’ (BANS), (New Style Management Agreement) a national policy agreement on climate change, was negotiated with about half of the then 487 municipalities of the Netherlands and 12 Provinces. It started in 2002. The Dutch BANS agreement has been mentioned as leading example in Europe in the climate policy field (2009). In order to receive the funding under this covenant, local authorities had to do an initial scan and implement a climate action plan, based on a so called ‘prestatiekaart’ (performance card) in which municipalities could choose between the activity levels: active, advanced and innovative. In 2008, BANS was transformed to the ‘Stimulering Lokale Klimaatinitiatieven’ (SLOK)-programme (Promotion local climate initiatives), an initiative of the Ministry of VROM. Both programmes focused mainly on mitigation (Gupta, Lasage et al. 2007).

SLOK was part of the working programme ‘Schoon en Zuinig’ (Clean and Efficient) of Cabinet Balkenende IV, that was initiated in 2007 to reach the targets formulated in the coalition agreement: 30% GHG emission reduction as compared to 1990, two percent energy reduction per year and 20% renewable energy in 2020 (Klostermann, Biesbroek et al. 2009). Within the programme it was chosen to focus on cooperation with the private sector and local governments. For the local level the national ambition was translated into ‘Klimaatakkoord 2008-2011’, a climate covenant about energy and GHG emission reduction and energy transition (NL Agency 2008). This covenant between the national government and the local governments was linked to SLOK funding, which aimed to stimulate local governments to take extra GHG emission reducing measures (Klostermann, Biesbroek et al. 2009). More information on the SLOK scheme can be found in Box 6 on page 78. According to the in-depth interviews, the SLOK scheme was less effective than BANS, since there were less rules and reporting obligations. Recently the national government worked on a new ‘Klimaatagenda 2011-2014’ (local climate agenda 2011-2014) as part of the National Roadmap Climate 2050. This agenda is not combined with financial support like was done with BANS or SLOK. Figure 13 visualises the national-municipal mitigation schemes over time, which were in the case of BANS and SLOK a combination of a covenant (enabling) and financial support (provision).

Now there is a covenant without financial structure.

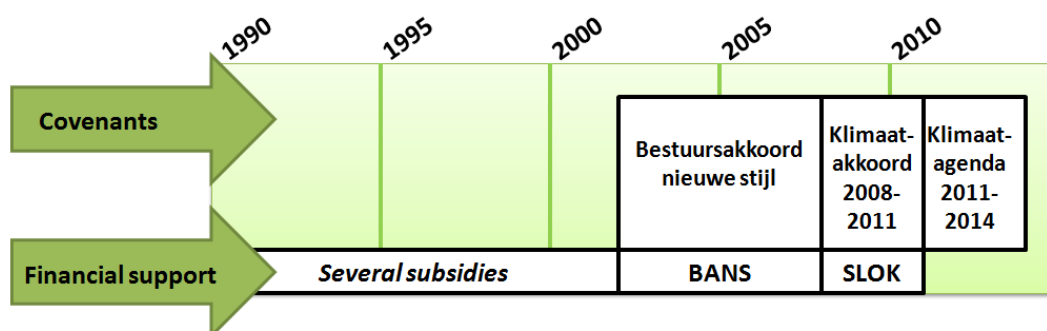


Figure 13: Overview of covenants and financial support from national government with regard to climate mitigation

### Adaptation-overview

In the beginning, Dutch National climate policy focussed on climate mitigation only. But before the Netherlands formulated an explicit national adaptation strategy in 2007 (‘Maak ruimte voor klimaat’), adaptation policy already existed in the form of water policy (Mees 2010).

Also the local governments were involved, e.g. in the 'Nationaal Bestuursakkoord Water' (National Water Management Agreement) where national, regional and local level agreed to work together. The 'Nota Ruimte' (Spatial Strategy) of 2006, with the national spatial policy until 2020 stressed the delegation of responsibility to provinces and municipalities. Also in the ARK programme (the National Programme for Spatial Adaptation to Climate Change) initiated in 2006 in order to climate proof spatial planning, municipalities were closely involved (through the VNG). ARK aims that the Netherlands is climate proof in 2050 and in 2015 adaptation should be an integral part of policy of governments (Gemeente Breda 2008). ARK developed in 2007 a National Adaptation Strategy, titled 'Maak ruimte voor klimaat' (Make space for Climate) (VROM 2007). Risk management and restoring natural processes are central in the national adaptation strategy. Although it was aimed to integrate adaptation into existing policy sectors, the focus is still merely on the sectors water management and spatial planning (Bommel and Kuindersma 2008; Swart, Biesbroek et al. 2009; Mees 2010). The Dutch government also tries to give scientific support for learning at local and regional level (Mees 2010), e.g. through the 'Kennis voor Klimaat' (Knowledge for Climate) programme (2008-2013) in which regions are used as test ground to make national adaptation strategies (hotspots). As mentioned, in 2008 a climate covenant was reached between the national government and local authorities which also discussed adaptation. It was agreed upon that municipalities would look which climate adaptation measures would fit into the existing policies (Berg, Lafferty et al. 2010). However according to Interview I (2011) adaptation was not really covered in the agreement (also not in the current 'Klimaatagenda').

After this overview, the different models of governing used by the national government in their relation with municipalities will be turned to.

### **1. Authority**

In Section 3.1 it was described which tasks are obligatory for municipalities to carry out. This is determined in the 'Gemeentewet' (Municipalities Act), 'Wet milieubeheer' (Environmental Act), 'Wet ruimtelijke ordening' (Wro) (Spatial Planning Act), 'Wet algemene bepalingen omgevingsrecht' (General provisions environmental law Act), 'Wegenwet' (Road act), 'Waterwet' (Water act) and 'Woningwet' (Housing act). The Spatial Planning Act for example sets out which governmental level should do which task with regard to spatial planning. For municipalities this entails making zoning plans that are in line with higher strategic visions. Also housing must be in accordance with national standards (Gupta, Lasage et al. 2007). Since 2011 municipalities are obliged to have separate sewer systems (*Groningen*).

Due to these laws in which obligatory tasks for municipalities are described, the national government has most authority compared to the other levels of government. Although the laws guarantee certain national standards for e.g. housing, authority is not used to oblige having e.g. climate or sustainability policy. In the interviews, Ede specifically stated that the national government should show it cares and therefore use its authority by making the writing of climate programmes obligatory (as is done now for environment).

The authority used by the national government rather diminishes municipalities' freedom to act in a sustainable way, than that it helps them to become more sustainable. As mentioned in section 3.1, municipalities cannot take up more requirements than the minimum requirements for building and the standard for energy efficiency mentioned in the 'Bouwbesluit' (Building Decree). Also the feed-in tariffs are disliked by municipalities (Interview 1 2011).

## 2. Provision

The Dutch national government has always merely tried to engage the local governments voluntarily into the process of climate policy making (Bommel and Kuindersma 2008). For long this was done through the provision of subsidies. Until 1980 local environmental management was seen as a task to be paid for from the general municipal budget (Coenen 2008). But when implementation was limited due to limited capacity, the central state made national funds available (Coenen 2008), see also Figure 13. The Dutch BANS agreement was a leading example in Europe in the climate policy field (e.g. Kern and Alber (2009)). The SLOK-scheme that followed (described in Box 6, below) was less an example since there were less obligations and therefore no strong linkages with output<sup>29</sup>.

### Box 6

#### **SLOK** funding structure as part of 'Klimaatakkoord 2008-2011'

The SLOK scheme ('Stimulerend Lokale Klimaatiniciatieven', Promotion local climate initiatives) is actually not a subsidy programme but a decentralised budget coupled to the Municipal and Provincial fund. 47 million euro was made available for municipalities and provinces. By handing in an action plan municipalities could receive subsidy for hiring expertise; communication of climate policy; salaries of civil servants and organisation strengthening preconditions. The amount of money differed per amount of inhabitants etc. and according the performance card. For six categories (municipal buildings; buildings; utilities; companies; transport and large sustainable energy options) municipalities could choose to aim for the active; the frontrunner or the innovative level. The higher the level, the more points. With enough points a municipality would not earn the basic funding but a 'plus package' (NL Agency 2011). Of the 26 municipalities, all except Almere and Emmen received SLOK. The SLOK scheme ran until 2012. The interviews showed different opinions regarding the ending of SLOK: especially many of the smaller 100.000+ municipalities think it will have negative influences because their budget will be, of course also combined with the other budget cuts, smaller (*Nijmegen, Haarlem, Den Bosch, Zwolle, Maastricht, Dordrecht, Ede*). They however think it is going to be even worse for the municipalities smaller than 100.000+. This is also confirmed by other research (KplusV 2010). Many of the 100.000+ municipalities do have other financial sources and some realise the EU will in this national climate become more important. Aside from the municipalities that mention they will miss SLOK in terms of money, there are municipalities that only saw it as 'starting up money'. "We have to get out of the calculation, we need to push the mass (*Utrecht, Enschede*)". "It is about the people, not the money (*Zaanstad*) and the ones that care will continue (e.g. *Amsterdam* about the districts)". Moreover, some also do not think subsidy works. "It would be better to have different financing constructions" (*Haarlemmermeer*). But everybody says that SLOK was a good signal that national government cares. "No money is not the problem, but they also do not have a vision. They do not put a dot on the horizon" (*Zaanstad*).

<sup>29</sup> Aside from BANS and SLOK there have been/are also single subsidies in the field of (specific parts of) climate mitigation and adaptation municipalities can make use of. This research does not aim to list these subsidies. VNG and NL Agency try to communicate the financial possibilities to municipalities (see e.g. VNG (2008). Financiële regelingen voor lokaal klimaatbeleid.). It must be noted that many subsidies are not specifically aimed at municipalities but at a broader group. Aside from the fact that this helps with more sustainable initiatives in their municipal area, municipalities can also in some cases use these subsidies when they e.g. produce sustainable energy ('subsidie duurzame energie').

### 3. Enabling

Enabling is the mode of governing that has for long been used by the Dutch central government and seems to be the only mode really used at the moment with regard to stimulation of local climate policy. Through covenants with (amongst others) local authorities the national government tries to reach its targets. 'Bestuursakkoord Nieuwe Stijl' (BANS) has been mentioned before as an international example, followed by the climate covenant of 2008 (in combination with SLOK) and currently the 'Klimaatagenda 2011-2014'. More details on the current and previous covenant can be found in Box 7 and Box 8. What must be noted is that although appointments are made in the climate covenants, covenants are not legally binding. They are more about 'effort obligations' than about the results. An important party that should be mentioned with regard to enabling is NL Agency, an agency of the Ministry EL&I that implements policies in the field of sustainability and innovation. They provide information, advice, subsidies, networks etc. On their website many information brochures, factsheets and action plans can be found to help municipalities. To give some examples: a factsheet sustainable procurement; a self-scan to see whether climate policy is well anchored in the municipality; a digital platform 'network local climate policy'. They also give trainings and workshops regarding anchoring of climate policy. NL Agency organises information about municipalities in the 'Klimaatmonitor' and is important for implementing the below discussed agreements. The support from NL Agency is however down-sized (e.g. Ede; (Interview 1 2011)).

#### Box 7

#### **'Klimaatakkoord 2008-2011' (Climate covenant 2008-2011) agreement behind SLOK**

To reach the climate targets of the coalition agreement, *see mitigation-overview at the beginning of section 4.1.2*, a covenant was reached between the national government and local governments. Some points agreed upon:

- Aim for a climate neutral organisation (75% sustainable purchasing by municipalities in 2010 and 100% in 2015; realising energy saving in fleet, buildings (2% p.a.) and public lighting (1,5% p.a.)).
- National government and municipalities try to reach a share of 20% sustainable energy in 2020.
- In 2020 new housing estates should be climate neutral. The energy use in houses and buildings should be 50% lower by then.
- Municipalities and national government stimulate that municipalities integrate CO<sub>2</sub> reduction in local and regional traffic plans etc. (Gemeente Zaanstad 2010; NL Agency 2010).

The municipal climate covenant was divided into five topics namely: Sustainable government; Sustainable energy production; Clean and efficient mobility; Sustainable building; and Sustainable companies. For each topic a thematic team was formed, with an ambassador (deputy mayor from an innovative municipality in this field); officers from other innovative municipalities (the frontrunners) and a secretary from NL Agency (also VROM and VNG were member). The thematic team would carry out innovative projects in their own municipalities, put barriers on the agenda, identify solutions and share knowledge. It was aimed that the frontrunners spread knowledge to 'the followers' and 'the peloton' (KplusV 2010). According to research on the climate covenant by KplusV, "the thematic team-approach in the covenant did not lead to intensified activities among the peloton and the covenant had only a moderate stimulating and coordinating role. The covenant seemed to focus more on writing down already existing ambitions, than on formulating new ambitions and contained few new stimuli for local governments to do more" (KplusV 2010; Interview 2 2011).

The 'Klimaataakkoord 2008-2011' has been followed by 'Klimaatagenda 2011-2014', which will be focussed on in Box 8 below. This time the covenant is not linked with a funding scheme.

## Box 8

### **'Klimaatagenda 2011-2014' (local climate agenda 2011-2014)**

In November the Climate Agenda 2011-2014 'Werk maken van klimaat' (Make work of climate), made by NL Agency in cooperation with the ministry of I&E and ambassadors, was launched. Spear heads were formulated within 5 themes (Sustainable built environment: Make existing buildings more energy efficient/ to energy neutral building; Sustainable mobility: Better chain mobility/ sustainable transportation of goods/ green gas and electrical transport; Sustainable companies: Local sustainable economy/ energy saving via maintenance; Sustainable energy production: Local sustainable energy production/ smart grids; Climate neutral city/ region: transition to the climate neutral city and region.) The Climate Agenda focuses on mitigation instead of adaptation (which is dealt with in 'Bestuursakkoord Water' and an accord between the national government and the Union of water boards).

In the agenda different actions are described and the responsibilities of the national government and local governments are divided. "The national government will give space to sustainable initiatives and give support by connecting parties, giving information and taking away barriers e.g. by diminishing rules/make the permit trajectory faster" (Ministerie I&M 2011). As with the previous covenant, the structure of thematic teams and ambassadors will stay (see table in this box), for horizontal networking, but now also provinces and water boards will join. Learning groups will be formed around specific topics and local governments can make use of national instruments like 'digital platform Network Local Climate policy', digital lessons box for existing building etc. (Interview 2 2011; Ministerie I&M 2011). No money will be made available together with the agenda (as compared to BANS or SLOK). And although the national government states that NL Agency will help the local governments, this guidance is according to in-depth-interviews minimized to a bare minimum (Interview 1 2011). A general feeling is that the Klimaatagenda is a 'down-sized agenda' with low ambitions (Interview 1 2011; Interview 2 2011) and that the help from the national government is too low.

Theme	Ambassador
Built environment	Haarlemmermeer
Sustainable mobility	Eindhoven
Sustainable companies	Rotterdam
Sustainable energy	Amsterdam
Climate neutral city	Tilburg
Sustainable energy production	Water board Veluwe
Mitigation and adaptation in built environment	Water board Regge en Dinkel

At 19-12-2011, the Klimaatmonitor only showed 11 (of all Dutch) municipalities that had signed the agreement. Of the 100.000+ municipalities, six signed: Amsterdam, Eindhoven, Haarlem, Haarlemmermeer, Rotterdam and Tilburg (which are mostly the ambassadors) (NL Agency 2009; KplusV 2010; NL Agency 2011).

Another way in which the national government tries to enable local governments (but also other actors) is through so-called 'Green Deals' (which are not linked to the 'Klimaatagenda 2011-2014').



The national government wants to help projects that are initiated by society, municipalities, companies etc, in these deals by linking partners, by supporting markets for new green technology and by removing barriers in law and sometimes by helping with financing e.g. through a revolving innovation fund or other instruments to be developed. The government currently works on allowing more types of biomass for co-digestion, on allowing a 'salderingsregeling' (an arrangement to stimulate solar energy, not only for individuals but also organisations of inhabitants), and on trying to take away barriers for wind energy on land. Examples of Green Deals made are:

- Green Deal Noord-Nederland: to make an Energy Academy with private and public partners.
- Rotterdam Climate Initiative: to become the world's greenest port.
- Amsterdam: to build 24000 energy neutral houses between 2015-2020 (Rijksoverheid 2011).

Also some other municipalities mentioned to be working on a Green Deal (e.g. *Utrecht*), "because they still need some support from national government". There are different opinions whether Green Deals are really helping local governments as much as required (Interview 1 2011; Interview 2 2011). Be it with regard to provisioning and enabling or only with regard to enabling, the general feeling of the municipalities interviewed is that they are left alone by the national government. The national government "does not take enough responsibility" (*Breda*), "does not show they care". Maastricht mentions that if the politics do not care, there will be a time the municipality says "sorry, we cannot continue". The municipalities also notice that the help from the government via NL Agency suffers from budget cuts (*Ede*). This is sad because quite some municipalities value the work from NL Agency (*Almere*, *Amersfoort*, etc.). The thematic teams are also seen as important (*Breda*, '*s-Hertogenbosch*') but the thematic teams feel high pressure and a lack of capacity. They get the role that they have to inform/help other municipalities (*Breda*), but are not helped in this.

**Reference municipalities:** Three of the reference municipalities have their alderman in a thematic team group. Although Tilburg thinks the 'Klimaatagenda' is still important as platform, the (now ending) SLOK gave an important signal that the national government cares. Amsterdam and Rotterdam hope that through Green Deals the national government gives space to their plans.



#### 4.1.3. Vertical EU-Municipal interactions

Although the national-municipal relations have the focus in this research, this section deals with the (role of) EU-municipal relations. According to Kern and Bulkeley (2009) "EU decision making has become far more important than domestic policy-making in this policy area". This was also mentioned in the in-depth interview with Klimaatverbond (Interview 2 2011). Again, the relations are analysed by looking at authority, provision and enabling.

##### 1. Authority

European regulations are immediately enforceable laws. Directives often describe an end-goal without obliging the means. An example of an important directive in this study is the Energy Performance of Buildings Directive (EPBD), which deals with energy saving in housing. Some requirements of this directive from 2006 are: for public buildings bigger than 1000m<sup>2</sup> the energy label has to be available since 2009. An energy label gives information on the amount of energy needed for that building. Since 2008 there can be no housing transfer without energy label. In 2013 the Netherlands will implement the 'herziene Europese richtlijn voor energiebesparing in gebouwen' (recast EPBD-2010), which entails amongst others that it is obligatory to have a maintenance and sanctioning system for energy labels from 2012, plus some extra requirements to the energy label.

From 2018 new public buildings and renovations should be energy neutral and from 2020 all new buildings and big renovations should be energy neutral (Gemeente Nijmegen 2011; NL Agency 2011).

## 2. Provision

Examples of European financing constructions are e.g. JESSICA (Joint European Support for Sustainable Investment in City Areas) and ELENA (European Local Energy Assistance). Another example is INTERREG IVC (2007-2013) to help regions of Europe work together to share their knowledge and experience (EC 2011). Emmen and Venlo e.g. mentioned the INTERREG IVA programme 'Deutschland – Nederland' and its subsidies to be important for them. Also other project networks combined with subsidies were mentioned. Quite some municipalities mention that since national subsidy has stopped, EU financial instruments will become much more important.

The Covenant of Mayors (CoM) should be mentioned as well in this context. By signing the CoM municipalities confirm they try to go beyond the 20x20x20 target of the EU (20% reduction CO<sub>2</sub>, 20% sustainable energy by 2020). Although technically not having its own subsidy scheme, the CoM tries to relate to the above mentioned European financing constructions<sup>30</sup> (Covenant of Mayors 2012). A key document in the CoM is the Sustainable Energy Action Plan (SEAP) which shows how each member will reach its commitment by 2020. NL Agency is a supporting structure of the CoM, helping municipalities to become member of the covenant. Currently there are 17 Dutch signatories, 13 of the 26 100.000+ municipalities: Amsterdam, Rotterdam, Den Haag, Utrecht, Eindhoven, Tilburg, Breda, Nijmegen, Apeldoorn, Haarlem, Zaanstad, 's-Hertogenbosch and Zoetermeer. (*Enschede is in the process of becoming member*). They have the status of one (signature) or two (Action Plan submitted) but not yet three (results monitored) (Covenant of Mayors 2011).

The Covenant of Mayors is mentioned by three municipalities as being important because they see the EU getting more important and want to get subsidies and learn from each other (*Nijmegen, Enschede, Haarlem*). Amsterdam and Tilburg that are also member of CoM mention they do not do so much with it, also because the monitoring requirements are difficult. According to in-depth interview 1, not one SEAP is approved. And because Dutch municipalities have their own national and provincial covenants, there is also not that much interest in CoM (Interview 1 2011).

## 3. Enabling

Aside from the CoM, the EU enables municipalities by initiating projects. Municipalities can be involved in these projects, e.g. the European Green Capital; the European Mobility Week. The different European projects provide aside from often financial support (provision) also a platform to stimulate horizontal interactions to share knowledge etc. To not mention them twice, these European funded (network) projects are mentioned under horizontal interactions (section 4.2).

In general some municipalities state that the EU becomes more important. This is especially true given the current national political climate in the Netherlands (*Den Haag, Breda, Haarlem*). But currently, still not all are that active internationally (e.g. *Almere; Enschede*).

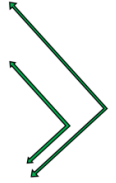
**Reference municipalities:** The four reference municipalities stress the (growing) importance of Europe for subsidies, networking (and indirectly, law). CoM is not seen as very important them.



<sup>30</sup> Although CoM is often mentioned as 'provisioning' mode, it is merely an enabling mode with no direct relation to funding.

## II. Summary and central message

Focusing on the modes of governing, it could be seen that the national government has, with its laws in which obligatory tasks for municipalities are described, most authority, as compared to the other levels of government. However, the national government has never really used its authority to oblige having e.g. climate or sustainability policy. The authority used by the national government rather diminishes municipalities' freedom to act in a sustainable way, than that it helps in becoming more sustainable. Although the province has also some authority, it is not seen as their most important mode of governing. The EU has only indirect authority via the national government.



With regard to provisioning, especially the national government has been important. For long it has provided funding schemes to municipalities to start up and stimulate climate policy. The Netherlands was internationally renowned for its BANS scheme. SLOK had less monitoring and accountability requirements and was therefore difficult to evaluate but was for quite some municipalities an important source of money and by all seen as a good signal that the national government cares. Currently the Dutch government withdraws from its provisioning role through financial support, trying to make municipalities less dependent on subsidies. And although it can indeed be discussed whether subsidies are the best way of stimulation, it has been useful for many municipalities (especially smaller ones). Many see it as a major challenge to continue and guarantee quality work despite the budget and subsidy cuts (*Groningen, Haarlem, Zaanstad, Maastricht, Ede*). Also now, many still need financial constructions to start the process, to invest in strong structures for cooperation and to start or stimulate LDEBs that can create money to invest in more sustainability programmes. Although Green Deals might in some cases give some financial constructions, it is questioned whether all municipalities, so not only the big (reference) municipalities, are able to profit from it. (*In that sense, regional cooperation (see 4.2) or cooperation in the province can play a big role.*) Moreover, Green Deals seem very specific since the focus is on projects rather than on a comprehensive climate/sustainability approach.

Although the provinces have been mentioned with regard to financial support as well, their budget is also dependent on the national government. Although for some (larger) municipalities the EU has already been a providing level of government, through its (regional) funding programmes, not many municipalities are receiving EU money. The EU might however, relating to the national and provincial situation, become more important in terms of provisioning, especially through project subsidies, but this might be a slow development. Subsidies via CoM are valued less, since many municipalities (even the reference municipalities that are frontrunner in monitoring) struggle with their monitoring requirements. On the other hand, Dutch municipalities might get around the CoM and directly apply for funding schemes.

With regard to enabling, all levels of government, focus on enabling and especially the national government and provinces are developing towards merely enabling. The national government went from a combination of provisioning and enabling to having enabling as (almost) the only used mode of governing. Whether municipalities really feel 'enabled' through the 'Klimaatagenda 2011-2014', is being questioned. Via this 'enabling' climate agenda (focusing on mitigation) the national government wants to make agreements on climate policy with the local governments. Most municipalities have the feeling however that this is not combined with enough support from the

national government and feel left alone. This goes much further than no financial support. Municipalities have the feeling the national government does not have clear and stable ambitions. Valued help, by e.g. NL Agency decreases and although the 'Klimaatagenda' can have a knowledge sharing function, municipalities (and climate ambassadors) feel the national government does not help them as much as needed. Moreover, like or even worse than the previous covenant (Climate covenant 2008-2011), the covenant is not very ambitious, writing down mostly existing ambitions. The enabling mode of provinces, might therefore become more important (also because they might be less able to play a role in provisioning). The contact with provinces is easier, is more specified to the region and provinces are better trusted. The enabling role of provinces might also become bigger with regard to stimulation of horizontal interactions in functional regions (see section 4.2).

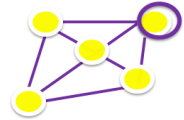
In general, a shift can be observed in the roles the different levels play. While, the national government has played an important role in starting the process of climate policy in municipalities, through a combination of covenants and funding structures, national support seems to have deteriorated over time. The current political environment is rather mentioned as a hindering for local climate change mitigation and adaptation actions, with regard to bureaucratic legislation and low ambitions. There has been deregulation towards municipalities (and therefore a larger playing field) but it is not combined with enough support: there will be no money available, which would especially affect smaller municipalities, and NL Agency's capacity to support local authorities is downsized. The national government could however, when not wanting to financially support, still use its authority (obliging the writing of a climate (maybe better: sustainability) programme) to show that they care and have a stable and ambitious view. Especially smaller municipalities might stop putting energy in this field, when the national government gives the feeling 'it is not important'.

The role of the province might, with the decreasing important role or even negative role of the national government, become even more important. From the interviews it seemed that especially the province already plays an important role for municipalities with regard to climate issues. Many provinces are in intensive contact with the municipalities (especially with regard to sustainable energy and transport), make agreements, help with uniform monitoring and have workshops on different themes. Although this seems relatively less important for the reference municipalities, which are much larger and (especially Rotterdam and Amsterdam) have much more history in and capacity for lobbying at higher levels (national, EU), many other municipalities mentioned the province as the other level of government they valued most. Aside from lobbying towards the national level, the province plays an important role in terms of organising and stimulating horizontal (regional) interactions. This role links with the next section on horizontal interactions (section 4.2) in which it can be read how many municipalities seem to prefer contacts with municipalities nearby (e.g. in their own province). It seems as well that, while the trust in the national government is lower, many provinces are (still) trusted, maybe also since they are easier to reach. The decreasing important role of the national government resulted as well in an increasing important role of the EU. The EU will especially be turned to for funding, by the municipalities that have capacity to do this.

With regard to adaptation there are no general agreements or funding structures between the national government and the municipalities. And although adaptation is being researched in national projects on municipal test grounds, national adaptation still focuses merely on water management and spatial planning and municipalities are not stimulated to make adaptation (with all its aspects) an integral part of policy of local governments.

## 4.2. Horizontal interactions

Aside from the local and vertical dimension, the multi-level governance framework also mentions horizontal interactions in metro-regions and (trans) national city networks. In this section the findings to the sub-question “What role do metro-regions and (trans)national networks play for municipalities in local climate change mitigation and climate change adaptation?” are discussed. There will again be a Part I, with the results: divided into interactions in metro-regions, national networks and transnational networks and a Part II: a summary and central message.



### I. Results

#### 4.2.1. Horizontal interactions in Metro-regions

In the interviews, regions were almost always mentioned as being very important with regard to climate change/sustainability (e.g. *Amsterdam, Den Haag, Utrecht, Almere, Groningen, Nijmegen, Enschede, Haarlem, Zaanstad, Haarlemmermeer, Maastricht, Ede, Venlo*). For many municipalities the things happening nearby are the most important, also because one can better compare municipalities from the same region in terms of culture etc. (*Groningen, Maastricht, Ede*).

An example of an important region mentioned is the ‘Metropool regio Amsterdam’ (*Amsterdam, Almere, Zaanstad, Haarlemmermeer*), a formal network/coalition of about 36 municipalities that work together on transport, mobility, greening housing, wind, solar power. This metro-region Amsterdam developed a road map for 2040 (of which a part deals with sustainability and becoming energy neutral in 2040, but not yet with adaptation) (Interview 2 2011). Not only municipalities are member, but also another level of government: the provinces. Together the members can stronger lobby at the national government and make use of European funds (e.g. European fund for regional development) (Metropool regio Amsterdam 2012).

Other regions mentioned in the interviews were the Arnhem/Nijmegen region (*Nijmegen*) of 20 municipalities with their green transport hub (‘de Groene hub’) and covenant, ‘Regio Drechtsteden’ (*Dordrecht*) of six municipalities that together do projects, ‘Stedendriehoek’ (*Apeldoorn*) of seven municipalities, ‘Stadsregio Rotterdam’ of 15 municipalities and ‘Stadsgewest Haaglanden’ of nine municipalities (*Den Haag, Zoetermeer*). The last two are working towards a bigger ‘Metropool regio Rotterdam-Den Haag’ (Stadsgewest Haaglanden 2012). Of course many other regions that are important for climate issues exist. Sometimes the cooperation region can be found in neighbouring countries like for *Maastricht, Emmen* and *Venlo* with their EU-region. The regions often work on accessibility, a strong economic competitive position and a healthy (sustainable) living and working climate.

Another example of a regional cooperation that is very important for climate issues is ‘Energy Valley’ (*Groningen*), a network organisation from public (municipalities and provinces) and private partners of the ‘Energy Valley Region’ (which consists of the provinces of Drenthe, Friesland, Groningen and the northern part of Noord-Holland) that explores regional growth opportunities in the energy sector by knowledge transfer etc. Energy Valley plays also a role in signing agreements e.g. the ‘Noordelijk Energieakkoord’ (Energy accord of the North) in 2007 or a current Green Deal with the national government. In a part of the province of Brabant, the regional cooperation MidPoint-Brabant (see cooperation Tilburg with Waalwijk, Goilre in MOED, section 3.4), is also organised as a cooperation between municipalities, educational institutes and companies.

As can be seen, provinces are sometimes part of this 'horizontal' networks. Moreover, provinces sometimes provide themselves platforms for cooperation in their province, e.g. as is done by CO<sub>2</sub>service punt from the province of Noord-Holland.

With regard to adaptation, one form of 'regional cooperation' was mentioned in the interviews, being the adaptation research done as B5-cities (biggest cities in the province of Brabant) *in cooperation with the province*. More forms of regional cooperation for adaptation exist.

In some cases the regions in which cooperation takes place are formal regional structures (e.g. the provinces (or other territorial units), or the upcoming RUDS-regions), which are sometimes entitled as 'administrative regions'. In other cases less formal structures exist (entitled as 'functional regions') since not all formal structures are suitable to talk about e.g. becoming climate neutral. Cf. (Hooghe and Marks 2003; Interview 2 2011; Kern 2011).

Within the region, municipalities learn from each other, have intensive contact etc. But metro-regions are also important for efficiency (e.g. for green transport (gas) in Arnhem/Nijmegen); lobbying together at the provincial level<sup>31</sup>, at national level (e.g. the Metropolitan region Amsterdam makes propositions together and lobbies at national level (Interview 2 2011)), or EU-level (to get funding, as is done by the Metropolitan region Amsterdam, Energy Valley etc.).

Klimaatverbond, a national network, is currently setting up a programme to stimulate regional cooperation. They see regional cooperation as the only way to go further and try to bring members together and lobby for funding to start developing roadmaps for regions. They have succeeded in that the 'Klimaatagenda 2011-2014' took up the idea of regional cooperation. But although the region plays an important role, Breda, Enschede and Dordrecht mention that since they are the bigger/leading municipality in the region, they are also often the puller. Although it is sometimes helpful to form a group, they cannot always learn that much.

**Reference municipalities:** The reference group stresses the high importance of cooperation in the region.



#### 4.2.2. Horizontal interactions in national networks

This section discusses what role national networks play for municipalities in local climate change mitigation and adaptation. A national network for municipalities on climate is Klimaatverbond Nederland. As of December 2011, 148 municipalities, 11 provinces and two water boards are member of Klimaatverbond Nederland (Klimaatverbond 2011). Through membership of Klimaatverbond, participating cities are also member of Energy-cities.

Klimaatverbond's activities entail lobbying at the EU and national level, knowledge exchange, development of programmes to get local policy more in the spot lights, pointing at European subsidy rules and talking about 'barriers' with the national government. The goal is to stimulate the energy transition. Although Klimaatverbond has mentioned adaptation in its goals, it has no priority (Interview 2 2011). According to Interview 2 (2011) only some larger cities are actively involved on the EU level, for the others, Klimaatverbond can be the link. 25 of the 26 municipalities researched are member of Klimaatverbond. Almere did not choose to become member (Klimaatverbond 2011). In the interviews

<sup>31</sup> Note that of some regional networks the provinces are part.

Klimaatverbond was mentioned by two municipalities as being important (*Nijmegen, Zaanstad*). Other municipalities that are member mentioned they do not do that much with it (e.g. *Tilburg, Haarlem, Zwolle, Maastricht, Dordrecht, Emmen, Ede, Venlo*).

Other national networks that were mentioned in the interviews as being important (for climate change mitigation) were the G4 (with the four biggest municipalities) (*Amsterdam, Rotterdam, Den Haag, Utrecht*) and the G32 (the 33 biggest municipalities, except G4) (mentioned by e.g. *Apeldoorn, Venlo*) in which they also have sustainability tracks. In 2008, the biggest municipalities e.g. wrote a letter to the national government with a proposal for sustainability. This is a form of uploading 'wishes' to higher levels of government. Some municipalities have specifically used the spearheads from this proposal in their climate programmes (e.g. *Venlo*).

Although mentioned under vertical interaction, the thematic teams, (also) formed under the 'enabling' 'Klimaatagenda 2011-2014' (covenant), provide a network of municipalities from different parts of the country, to share knowledge on specific climate topics. Although these thematic teams have the goal to share knowledge with the other municipalities, they are especially valued by the municipalities (the 'frontrunners') that are member of the teams and less by other municipalities. While the national government expects these thematic teams with their climate ambassadors to spread the message, this also asks extra capacity of these municipalities which they do not always have (*Breda*).

Other national networks are more on specific themes and cannot all be listed here. One that is or will be important however according to Amsterdam was: E-decentraal, a national cooperation for decentralised sustainable energy in the Netherlands, which also has a Green Deal with the national government (E-decentraal 2011). For adaptation, Dordrecht mentioned the 'national network': 'innovation trajectory adaptation strategy' with the national government and other parties. Also other networks stemming from parts of the national Delta programme are important regional/national interactions for adaptation.

**Reference municipalities:** G4 is important for the three biggest reference municipalities, same as the thematic teams that are part of the covenants.



#### 4.2.3. Horizontal interactions in transnational networks

There are also transnational interactions of municipalities on the horizontal level. In Table 12 one can see the 100.000+ municipalities that are member of (one of) the three big transnational climate networks (TMNs).

Table 12: Transnational networks and their 100.000+ members

Transnational climate network	Member municipalities	Importance
Energy Cities	Delft, Zoetermeer, Utrecht, Apeldoorn. Also Klimaatverbond is member.	Mentioned by Zoetermeer (for projects and money)
Climate Alliance	Den Haag	
ICLEI-CCP	Amsterdam City, Rotterdam City, Haarlem and Tilburg and the umbrella organisation for all municipalities, VNG.	Mentioned by Tilburg



The in Table 12 shown transnational networks specifically work on climate issues and aim to stimulate GHG emission reductions, help with project funding and cooperation, transfer best-practices and stimulate learning among members. The networks mainly lobby at European level.

The Rotterdam Climate Initiative from Rotterdam participates in another transnational network, C40 (which cooperates closely with the Clinton Climate Initiative), which is a group of large cities committed to tackling climate change (*Rotterdam*).

Major European Cities are connected in Eurocities, a network that works on more themes but has climate as one of its priorities and tries to work with and influence EU institutions (Eurocities 2012). Eurocities was mentioned as being an important network for Utrecht and Tilburg.

The European Union itself, by financing projects (vertical interaction), creates the possibility for many horizontal European interactions. An important network, coming out of an European project, is E-harbour: a project financed by the European Union, Interreg IVB North Sea Region Programme (so also vertical provision) about the creation of smart grids in harbour regions (cooperation between Zaanstad (puller of project), Amsterdam, Antwerpen, Hamburg, Dundee, Malmö and Uddevalla).

The above networks mainly focus on mitigation. Interestingly for adaptation many EU subsidized project networks (vertical provisioning) were mentioned as very important, like 'PREPARED' (2011) for Eindhoven; 'Future Cities urban networks to face climate change' (2011) for Nijmegen and GRaBS (Green and Blue space adaptation in urban areas and eco towns) (2011) for district Nieuw-West in Amsterdam.

Mentioned international networks for adaptation broader than Europe were Connecting Delta Cities for Rotterdam and the MARE-project (Managing Adaptive Responses to changing flood risk) for Dordrecht (MARE 2011) in which Dordrecht works with local and national governments and academic partners from the Netherlands, Great-Britain, Germany, Norway and the USA. Within the European part of the MARE project, Dordrecht works together with water boards, provinces, ministries and knowledge institutes. The mix of different layers of government, subsidy from the Interreg IVB North Sea Region and the important network function makes it a mix of vertical and horizontal interaction.

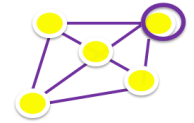
Aside from the municipalities that mentioned international networks to be very important (*but often mainly for funding*), other municipalities stated "we want to focus on action" less on talking and networking, especially not with 'far away' partners (e.g. *Groningen, Haarlemmermeer, 's-Hertogenbosch, Zwolle, Emmen*). On the other hand many municipalities stress the increasing importance of the EU, since the national government does not take enough responsibility (e.g. *Den Haag, Breda, Nijmegen, Enschede, Haarlem* etc.).

**Reference municipalities:** European and international networks are considered as very important by the four reference municipalities. They are member of a TMN and of project networks.





## II. Summary and central message



With regard to horizontal interactions of municipalities, a trend of regionalisation is evident. Especially for mitigation the region seems most important horizontally. There is intensive contact and much cooperation in regional networks/projects. These regions are sometimes formal (territorial) structures, but increasingly also regions that are found useful to prevent spatial mismatch ('functional regions') like e.g. Energy Valley. While some regional networks mainly work on tasks that are effectively solved together (like sustainable energy), other regional networks also try to lobby at provincial and national level and sometimes even effectively apply for EU-funding. A strong regional network seems to make the link with other layers of government easier, also with regard to the national Green Deals. Sometimes provinces are part of this regional cooperation or platforms are created by provinces.

It seems that, especially for mitigation, the focus of municipalities is diverted (back) to the region instead of to 'far away', which was a trend when mitigation got attention and actors stressed the global scope of the issue. In general there seems to have been a switch away from internationalisation for networking, to more regional networking and to networks on specific topics or projects (specialisation). This might have to do with the decreasing capacity (due to the national climate) and the current focus on 'action' with regard to mitigation more than on research and knowledge sharing.

The international attention that is available on the other hand seems to be more focussed on project networks, which are often linked with funding (vertical provisioning). While national subsidies stop, municipalities can apply for European projects that are combined with money. Especially the reference municipalities Amsterdam, Rotterdam, Den Haag and Tilburg are internationally focused (like some other municipalities). This fact can be related to their size, capacity and their history in international action, which makes internationalisation easier. This international focus could as well have resulted in their 'better' performance. While there are some more municipalities that are or want to become more active on international level (mostly for EU money), there are also many municipalities that do not have the capacity to do this. While frontrunners could continue or increase their (inter) national focus, clusters could be formed around frontrunners, so that they can share their knowledge with 'nearby-municipalities' so that all are stimulated to continue or enhance their sustainability policy. This way, via frontrunners, metro-regions could be linked to Trans Municipal Networks. Via their regional cooperation metro-regions can also apply for funding.

While, national networks like Klimaatverbond were less valued by the 100.000+ municipalities than regional networks, they might have a lot of value in stimulating regional cooperation, in regions that are functional for tackling climate/sustainability issues. The new focus of Klimaatverbond on regional cooperation is therefore very positive, although some 100.000+ municipalities might less need their help in finding regional cooperation partners. With regard to other national networks it is expected that the amount of specialised networks on single topics or projects will grow.

With regard to adaptation, it is clear that, since adaptation is mainly a local issue, regional cooperation is highly important. On water issues, cooperation with the (networks initiated by or projects of) national government is important as well. This has been a non-simultaneous development, since the other aspects of adaptation are often not taken up in these programmes. Interestingly however, there is also an important international focus seen for adaptation in international project networks, more than for mitigation. This might have to do with the 'research' phase adaptation is still in, in many municipalities (especially with regard to a combination of adaptation issues), something mitigation was in some time ago. It can be expected that after having shared knowledge internationally, after proper adaptation scans are being done, the focus, as was seen for mitigation, diverts again to the local level (combined with project money from EU project networks).

## 5. Discussion

In the empirical part of this research (chapter 3 and 4), the most important results have already been discussed in depth in 'summary and central message'-sections. This chapter contains the central discussion of this thesis, aiming to discuss and combine the different parts of the main question *"How is climate change mitigation and adaptation anchored in the organisation, policy and implementation of the biggest Dutch municipalities (>100.000 inhabitants) and how does this influence their performance?"*

In the 'summary and central message'-sections, it could be read that based on the formulated indicators (see section 2.1.2) the average anchoring in organisation among the 25 municipalities is low to medium (-/(+)), the anchoring in policy is medium (-/+) and the anchoring in implementation is above medium ((-)/+).

Within the interviews the value of many of the indicators was however disputed, not always only by the municipalities that scored low on the indicator. This can mean that some indicators might not be important for anchoring or performance and/or that other indicators are more important. A discussion on the results of different parts of the main question is therefore needed.

### **Integration of adaptation and mitigation**

This research dealt with both mitigation and adaptation. The first thing that has to be discussed is the value of integrating mitigation and adaptation. Adaptation and mitigation were most often not organised or coordinated together (indicator 1, organisation), which was also not seen as necessary by many. Also among the reference group this was valued differently. The reference municipalities did show some better integration of mitigation and adaptation in policy documents however (which was medium among the 25 municipalities) (indicator 1, policy).

The fact that integration of adaptation and mitigation was not always valued, might have to do with the fact that adaptation still gets less political support. Also nationally, adaptation is not taken up in covenants between the national government and municipalities. Although adaptation is being researched in national projects on municipal test grounds, national adaptation still focuses merely on water management and spatial planning and municipalities are not stimulated to make adaptation (with all its aspects) an integral part of their policy. Trans municipal networks and national networks have also focussed so far mainly on mitigation.

Adaptation seems to be in 'another phase' than mitigation. Maybe, adaptation is in the phase mitigation was 20 years ago, in a phase of research and orientation (which might explain the bigger attention for international adaptation projects, while for mitigation regionalisation and action has the focus). Maybe when, based on (increasingly done) adaptation research (which can be promoted (inter)nationally or regionally), adaptation turns out to be a major issue for municipalities, *more than water management only*, having better coordination is seen as more valuable. On the other hand, there is also an example of a vulnerable municipality that has tried integration of mitigation and adaptation in the organisation ('by organising it together') and did not see the value. Most municipalities say they 'will find the right person when needed'.

Although still not really a priority as such, adaptation measures are in practice often happening, but, *(especially for other issues than water management)* sometimes more ad hoc under other values.

Although not coordinated together, the integration of mitigation and adaptation in e.g. broader sustainability documents (which seem to be increasingly developed in municipalities) might be a good approach to find synergies, but should also be based on research with the value 'adaptation' in mind. Having only ad hoc adaptation or adaptation for other values (quality of life etc.) might work out well, but can, for more vulnerable cities, lead to unforeseen challenges in future. Just a few green roofs and some extra green to improve the quality of life might not be enough to ease the heat stress in future. To prevent this, the combination of an integrated strategic document and operational action plans or integrated tools is seen as important. An organisational structure that promotes contact between adaptation and mitigation people, with or without a coordinator, is, depending on the importance of adaptation for a municipality, something municipalities can think of to anchor the issues better in the organisation.

### **Anchoring in organisation (sub-question 2, part 1)**

Looking at anchoring in organisation in general, it seems that different ways of organising climate issues/different types of institutionalisation can be equally successful. From all indicators formulated, especially the indicators for anchoring in organisation were disputed by some municipalities. Often it seemed that 'the mindset of people running the programme', the 'internal support in the organisation', is most important. How this support can be anchored and not depend on 'single persons' that might leave the organisation, should further be researched.

Also the reference group, with, as defined within this research, 'the highest performance', showed especially for the indicators of anchoring in organisation most differences (although they uniformly valued strong structural cooperation and three of them an internal steering group, *see influences on performance later in this chapter*). Looking at the most discussed indicators, it was for example being disputed whether a coordinator or programme manager or who else takes the lead should be placed higher in the organisation/have formal powers (indicator 2, organisation). Only in one third of the municipalities the persons in charge have these formal short lines to the top. While some see much value in having short lines to the top, saying that it shows the importance attached to the topic and that it increases internal support from civil servants, other municipalities say they do not need this power or say that it is about good arguments, cooperation and support anyway. Leadership can also be based on other qualities. But having formal power does not mean a 'leader' does not work on support and good arguments, it is just that power can be used when useful (for some to increase the internal support or to spread the topic). On the other hand it seems clear that it would not fit the culture of some municipalities. Moreover, leadership in networks is often not based on hierarchical power. With the trend of developing towards network organisations it can be questioned what else is needed to produce leadership.

Interestingly, all municipalities talk about their climate programme team, their coordinator with core team etc. as being a temporary organisation, something that will, if everything works out well, not be necessary anymore in future. Already there is an example of a municipality that has decreased its central municipal climate organisation and changed its role to mainly being 'facilitator'. While the situation in this municipality is being questioned by some other municipalities, it might also be true that this municipality actually does what other municipalities plan to do later on (i.e. decentralisation after a time of more central steering). There is also an example of a municipality that already lacks a 'central point' for sustainability to make clear that sustainability is something for everybody, but this approach was being questioned by the municipality itself.

The tendency towards decentralisation seems evident. While many municipalities mention that their 'climate/sustainability' organisation is temporary, it is however being questioned whether it is really possible in near future to have no climate/sustainability programme with e.g. a manager/coordinator and e.g. a core-team. Will climate/sustainability issues enough be anchored to stop coordination, steering and pushing? Who keeps an eye on monitoring and progress and who will try to embed new upcoming topics? This thesis rather thinks decentralisation and centralisation should be balanced. A central coordinating structure might stay necessary to take up new topics and give them a place in the organisation, do research to 'show why something is important', take care of monitoring and steer where necessary.

The idea to get 'everything between the ears' in all parts of the organisation and society, gave also discussion about the indicator whether there should be specific responsible persons appointed per department/section (indicator 3, organisation). Also among the reference group differences were seen. Since 'it should be a task of everybody', some municipalities do not want these specific responsible persons. The danger is however that when sustainability is voluntary, it is easily forgotten or it is felt there is 'no time for it aside from all obligatory tasks'. Of course there are also cases where, although responsibility is not arranged on paper, different sections/departments take it along in their work, but many municipalities, even the reference municipalities, still mentioned it as a challenge to anchor sustainability in all parts of the organisation. Also according to the in-depth interviews there is inadequate integration in different policy areas. The municipalities working with more specific responsibilities (e.g. by detaching, having department leaders per track etc.) however, value this for integration throughout the organisation. Of course, not only these persons should care about sustainability, but having responsible persons in all parts of the organisation, can, since they are close to their colleagues, maybe better anchor the thoughts, not only for single projects, but for all activities. Therefore it is thought that, although not always seen in the reference group, a core-team of people from different parts of the department improves integration and the overall performance since it is easy for meetings (important for anchoring, (Interview 1 2011)), monitoring and spreading of internal support. Other tools and activities might help as well to increase anchoring in all parts: e.g. tools like MAP-table and education or workshop programmes for training.

The discussion on the internal organisation should be complemented with a discussion on how to organise external cooperation. One thing that seems very important for anchoring is the structural involvement of other actors. Among the 25 municipalities, the structural private involvement was quite positive: two thirds of the municipalities had formal structures for private parties. The tendency to involve more and more stakeholders (and to organise this structurally) might protect municipalities from 'dropping climate issues'. Making strong linkages with other partners, helps for continuation as "the surroundings will help the municipality to continue" (Interview 1 2011).

Municipalities can however have different types of structural cooperation. Examples are having a platform and flexibly making new cooperation structures per topic or shaping cooperation in alliances in which other actors are puller. While it can, from this research not be stated which type is the best, the reference group municipalities at least all have an external steering group with a broad range of partners and structured (one more extensive than the other) cooperation. This can be a prerequisite for performance. There were still municipalities that only have ad hoc cooperation. With ad hoc cooperation, climate/sustainability is thought to be less anchored, since no structure keeps the process going.

Better seems to have a Public Private Partnership structure for structural involvement of a broad range of partners (on all aspects, mitigation and adaptation), within which structures around aspects of sustainability can be formed. Some structures can, if this provides opportunities, also be regional.

Aside from the increasing cooperation, there are trends seen of 'externalisation', by letting other actors pull and/or by placing 'climate coordination' outside the municipal organisation. These thoughts are often based on the 'energetic society' concept (Klimaatcongress 2011), where instead of that the government has to solve it, everybody is problem owner and municipalities 'learn to let go'. It might, since climate/sustainability is something from the whole society, indeed be good to be physically in society, to be open and easy to reach for society. And having other actors pulling (some of the) cooperation can work out positive, since it can prevent other parties from leaning back and thinking 'the municipality will do it'. Moreover, "a governmental organisation is organised such that it eliminates risk" (Interview 2 2011) and linkages with organisations and business are helpful to take some more risk, which is needed in this field. It should be questioned however how much the municipality should let go the control? What if no initiative comes from other parties? Although an energetic society sounds wonderful, it is not clear what should be done, if the society is not so energetic. Among the municipalities there is a lot of discussion how much the municipality should pull. Will the structure of Tilburg work out? Or should there be more municipal pulling as mentioned by Breda? Will the external Duurzaamalmere.nl work? Unfortunately many of these organisations are very young and there are no good examples where such an organisation is mature and evaluated.

It might be that externalisation only has positive effects when a 'climate/sustainable' culture is already grounded in society (after years of action), when a certain (indeed 'energetic') culture has been created. While this is thought to be the case in some of the municipalities researched, this does not account for all municipalities. Moreover, care should be taken that the bonds with the municipality should not be weakened too much. Also the different municipal departments are needed and it is acknowledged that the more you place something outside the municipality, the more difficult it is to maintain support from the different parts of the municipality. With respect to externalisation it is also interesting how the RUDS will work out, since these regional execution bureaus will be in charge of the execution of at least some maintenance tasks. This development can, if climate/sustainability is their priority, improve the level of maintenance in municipalities, but can also be negative e.g. by decreasing the contact of municipalities with big companies.

A proper balance should therefore be found between the internal and the 'external' organisation. It should be kept in mind that a strong and active municipal organisation with enough capacity for incentives and initiatives when needed might stay important, also in future. Good monitoring must show how much a municipality should steer.

#### **Anchoring in policy (sub-question 2, part 1)**

With regard to anchoring in policy, it was found that strategically, all municipalities anchored their climate/sustainability topics quite well (indicator 2, policy). Although the difference between having a strategic climate document or an overarching sustainability document has not been researched within this thesis, it is thought that the integration of economy, ecology and social issues in sustainability documents is promising, also because this easier goes further than 'energy only' (although some strategic climate documents also take an overarching view). Moreover, some municipalities still mentioned scepticism with regard to the term 'climate', which can be avoided by working under a sustainability approach.

As mentioned, climate mitigation and adaptation can also be integrated under the sustainability umbrella. Something that is difficult however, is to get the definition of sustainability clear to all. Since it is such a wide and easily differently interpreted concept, less clear aspects might be 'forgotten'. Operationalisation might, with such a 'vague concept', become even more important.

With regard to short term/operational documents, action plans were only for (less than) one third of the municipalities systematically available (indicator 3, policy), while the reference group scored uniformly positive on this indicator. The reference group anchored climate/sustainability also better through integration by e.g. paragraphs or other checks in other sector policies, plans or projects (indicator 4, policy) (which was among the 25 municipalities done in more than one third of the municipalities) and through integration of mitigation and adaptation in policy documents, *see the beginning of this chapter*. In the reference group there was less discussion about the question if climate/sustainability should be anchored in policy. Among the other municipalities it was however questioned whether everything should be laid down in action plans. There are municipalities that do not see the value in writing everything down. Also formal integration in other sectors' policies was being discussed. While it can be understood why 'having a climate paragraph' does not per definition lead to real integration, having everything 'voluntary' might be dangerous as well, unless enough internal support has been created. According to in-depth interviews there is however still inadequate integration in different policy areas. Municipalities, in which this is the case, should therefore see whether they can work with checklists as a reminder or tools like MAP table. A central organisation might, aside from this, stay important to show the added value, to help remembering the goal. More operationalised action plans could also help to better anchor the responsibilities in the whole organisation, and make it less voluntarily. By having clear short term policy and action plans it is also easier to evaluate and steer in a different direction if needed in order to reach long term goals.

#### **Anchoring in implementation (sub-question 2, part 1)**

On average there was least discussion about the value of the indicators for anchoring in implementation (maybe only about the value of monitoring, *see also influences on performance later in this chapter*). There was especially a high level of external cooperation (indicator 2, implementation) and a high level of internal support at the college and council found among the municipalities (indicator 4, implementation), which were both seen as very important. That the internal support of board and council was quite okay everywhere was interesting, since an in-depth interview suggested that there was less enthusiasm now many boards are more right wing.

The internal support of the rest of the organisation is also seen as very important but was not structurally researched. Often it was said that instead of formal power or responsibility, it matters whether there is 'internal support'. However, it can still be discussed how this internal support can best be created. Is internal support (dependent on) something that can be anchored through a type of organisation, or stimulated (even through policy)? Or is climate/sustainability something that is mostly dependent on the availability of some willing people? Further research is recommended (*see section 7.3*).

There were differences found in capacity (indicator 1, implementation) and how municipalities perceived this capacity. Especially the capacity in future is thought to diminish. The budget cuts and no new subsidy-scheme will, according to the in-depth interviews, especially affect the smaller municipalities. In these municipalities the topic might be totally removed from the agenda in that they will do no more than national obligations, or at least have far less capacity.

But if something is stopped, it is difficult to start up again (CO2-servicepunt 2011). The impact on the 100.000+ municipalities is thought to be smaller since they already have a substantial organisation, but can according to the interviews still be significant. Solutions might be found in trying to gain money with sustainable energy (through LDEBs), but this also asks for initial capacity. Moreover, a focus on energy savings in combination with poverty (as done in many municipalities) could tackle two problems at the same time. Whether municipalities will have sufficient capacity to continue or start these programmes has to be seen.

### **Influences on performance (sub-question 3, part 1)**

Since the performance measurements within this research have some limitations (see section 1.5 and 7.3) one cannot say that, in all cases, certain indicators lead to better performance. It was remarkable however that the reference municipalities 'score' the highest on anchoring (especially Rotterdam and Amsterdam). Two other cities that have a similar level of anchoring as Den Haag and Tilburg were Haarlem and Dordrecht. They were however not often mentioned by other municipalities (Haarlem one time, Dordrecht never).

Compared to the low to medium (-/(+)) average anchoring in organisation, the reference group scores above medium ((-)/+) (mainly because the structural involvement of private partners and having an internal steering committee are higher than average). Compared to the medium anchoring (-/+) in policy, the reference group has above medium to good anchoring in policy ((-)/+ to +) (mainly because the integration of adaptation and mitigation in policy; availability of action plans and integration in other sectors' policies was higher than average). And compared to the above medium ((-)/+) average anchoring in implementation, the reference group has good anchoring in implementation (+) (capacity, external support and monitoring higher than average).

Aside from the indicators where the reference municipalities were different in, *mentioned earlier in this chapter*, they were the same for many other (less disputed) indicators. These can therefore be indicators that have a link with performance. The fact that the reference municipalities score higher on the indicators that are mentioned hereafter, might be the reason behind their better performance.

Following this argumentation, it could be said that having an internal steering group (indicator 4, organisation) (which three of the reference municipalities have), although some other municipalities argue that they are against these bureaucratic structures, can be very helpful and have an influence on performance. Reasons behind this might be found in: better integration in different sectors, creating internal support at different levels, importance for civil servants that need hierarchical structures etc. Only internal steering is however, especially with the needed cooperation, not enough. External steering is thought to be more important. All reference municipalities had an external steering group. Structural private involvement seems to have an influence on performance (indicator 5, organisation). The more structural and the broader the private involvement, the better other actors can have input in policy and cooperate in execution, not only on some aspects but on a broad range. Ad hoc cooperation does not per definition mean that this municipality is not active in cooperation, but more extensive structures are thought to stimulate and maintain bonds with different partners better than less extensive ones or no structures. Linking to the indicator of anchoring in implementation (cooperation), municipalities should try to have their cooperation not only structured but also broad.



Regional structures might become important and helpful to structure the extensive cooperation, when there is insufficient capacity (or because it is easier for e.g. sustainable energy). Interestingly many municipalities acknowledge that more structured, broad, platforms/cooperation centres with private parties would be an improvement, and many are already working towards this. With regard to the broad municipal organisation (indicator 6, organisation), although having a 'direction or network organisation' was mentioned as indicator for anchoring in organisation, it must be said that this could not properly be researched. Many municipalities are still in the process of change. The effects of the changes to e.g. a 'direction/network' organisation are not yet clear. Moreover, it is not researched properly whether other municipalities, that did not mention to have or change to a 'network/direction' organisation, do not have features of a network/learning organisation available.

Under 'anchoring in policy' in the beginning of this chapter it could be read that not all municipalities value operationalising in action plans (indicator 3, policy). Still, since all reference municipalities have action plans, it might have a link with better performance. Other municipalities could work on this aspect. The same accounts for integration in other sectors' policies (indicator 4, policy), although it is not clear which form (i.e. climate paragraphs, guiding principles, checklists or other tools) works best.

Capacity (indicator 1, implementation) can depend on the value the top attaches to the subject but also of course on the national environment/the budget cuts. The ending of the SLOK-scheme and the overall budget cuts seem to make EU money more important. Interestingly the reference municipalities seem to have more international focus than the average municipalities. This fact can be related to their size, capacity and their history in international action, which makes internationalisation easier. It may be one of the reasons behind their sufficient capacity and their better performance. The external support (indicator 3, implementation) is on average also higher in the reference municipalities. This can be something they are blessed with, but also a result of other indicators (like cooperation/capacity etc.) or the fact that they might have been active for a longer time. They now see many initiatives coming out of society. But even in some front running municipalities it is seen as a challenge to make all parties enthusiastic for the topic and to make sure 'the mass' takes its role. In general many municipalities try to set up incubators and knowledge centres to stimulate external support. This example can be followed by the rest. The national government should however also show it's care since the importance attached to sustainability by the cabinet can resonate downwards.

Based on the comparison with the reference municipalities that score higher than average on monitoring (indicator 5, implementation), it seems that monitoring should get more priority than it gets now. The availability of extensive and continuously improving output- and outcome-monitoring among at least three of the reference municipalities can be one of the reasons behind their better performance. Although it can be understood that monitoring is time consuming and costly, proper monitoring is very important to know the overall picture and the results of the programme in order to improve the organisation/actions. It can furthermore be a helpful communication tool. Monitoring requires systematic and timely gathering and organisation of data and should therefore be considered from the start. Especially when 'letting go the process' to society and other partners, it is important to see whether this works out or if another role of the municipality is needed. Regional cooperation forms, provinces and NL Agency are thought to be very helpful in helping with and streamlining monitoring.

### **Linkages output, modes of governing, outcome**

Although the linkages between output (divided into the modes of governing) and outcome are, as could be read in the conceptual framework, interesting, this could not be researched structurally. It is clear that enabling is the most important mode of governing used and it seems to get even more important. Although the results of outcome monitoring are not always very clear, (missing data or no reports published etc.) the general picture is that the municipalities are very active but the major outcomes still have to come (for some maybe are about to come very soon). On the one hand one can think that this shows bad performance since climate policy has, especially in the Netherlands, already quite a long history, but what is probably more realistic and fair to think is that performance of climate issues has an S-curve, with a very slow start before real achievements increasingly come. Single activities do not have a big impact and creating a movement costs time. Some municipalities seem to be far in the first phase of the transition and once all is started, everything might go faster.

### **Discussion vertical influences (sub-question 1 and 2, part 2)**

The local dimension as discussed above should be seen in its broader picture. In the extensive 'summary and central message'-section in 4.1 it has been discussed that a shift can be seen in the modes of governing the different levels of government use and the roles the different levels play. The national government went from 'being a frontrunner country' with the internationally renowned BANS scheme (a combination of provisioning (of funding) and enabling) to enabling only. However, municipalities do not feel 'enabled' that well by the national government, they feel rather left alone. This is not only because the SLOK-funding has stopped (which is seen by many municipalities, most probably even more by smaller municipalities, as a barrier). Especially the low, unstable ambitions of the national government seem harmful, same as the decreased help through e.g. NL Agency. Moreover, barriers in law are not removed as fast as promised. So, while authority is not really used by the national government to oblige comprehensive climate/sustainability policy, the authority used rather diminishes municipalities' freedom to act in a sustainable way. More positive use of authority (in obliging e.g. a sustainability programme) could, if the national government chooses to not use its provisioning mode, at least set a standard, show the importance. Now it might turn out that, while decentralisation of tasks to municipalities continues but is not combined with support or authority, there might become a wider gap between frontrunners and laggards (polarisation). The Green Deals that can be made with the national government (which are separate from the climate agreements and more on specific projects rather than being a comprehensive approach) might provide some support but it is thought that this is not equally accessible to all, creating a selective impact that can lead to further polarisation. Regionalisation, *which is discussed in the next discussion section*, might turn out to be valuable to avoid polarisation.

Although the national government has played an important role in starting the process of climate policy in municipalities, the current national political environment is rather mentioned as hindering for local climate change mitigation and adaptation actions. The importance of the other two levels of government, the province and the EU, seems to become more important in this respect. Already now, the province has been mentioned as very important for the municipalities for intensive contact on themes like sustainable energy and transport and lobbying at higher levels (which is relatively less important for the reference municipalities, which are much larger and have much more history in and capacity for lobbying at higher levels of government themselves).

Although also for provinces their 'provisioning' role is thought to decline, the enabling role of provinces might become bigger now the importance of the 'enabling' role of the national government is being questioned. Provinces seem to be better trusted and play an important role in terms of organising and stimulating horizontal (regional) interactions. This role is thought to become more important (*see also the next section*). Also the role of the EU is thought to change due to the decreasing important role of the national government. Compared to the development towards (merely) enabling in provinces and the national government, the EU still has a provisioning role and this role might be increasingly seen by municipalities (that have capacity to apply for EU funding) and (increasingly formed) regions.

#### **Discussion horizontal influences (sub-question 1 and 2, part 2)**

In the extensive 'summary and central message'-part in section 4.2 it has been discussed how a trend of regionalisation is evident. For all municipalities, cooperation in regions is most important.

There seems, mainly for mitigation, to have been a switch away from internationalisation for networking which was a trend some years ago, to more regional networking and to networks on specific topics or projects (specialisation). When municipalities (often the larger municipalities with history in internationalisation) have an international focus, this seems often linked to funding, although some municipalities use international horizontal interactions also for knowledge sharing. Although this becomes more important with less national support, many municipalities might not have the capacity for internationalisation. They are however thought to still be able to learn from 'leaders' in their region that do have the capacity for an international focus, when regional clusters are formed. This way, via frontrunners, metro-regions could be linked to TMNs.

When regional frontrunners keep learning from each other in national networks like the thematic teams, this knowledge can also be disseminated in regional clusters. Looking at the results of this study (seeing municipalities with similar or totally different approaches) it should be mentioned that also in this period of action municipalities can still learn a lot from each other. Although the 'linking to TMNs and knowledge sharing' role can also (more) actively be fulfilled by Klimaatverbond, it was seen that, at the moment, regional networks were valued more. Klimaatverbond's current activities on promoting regional cooperation in regions that are functional for tackling climate/sustainability issues are therefore relevant. A strong regional network seems to make the link with other layers of government easier, also with regard to the national Green Deals and EU funding. Provinces play and can play an even larger role in promoting regionalisation in e.g. functional regions as well. What the scope and possibilities of the to be established RUDS will be is not yet clear. Most probably larger or different regional cooperation is more effective in the field of climate change.

While the above described trends of regionalisation and (funding related) internationalisation mainly describe the situation for mitigation, adaptation seems to show, aside from regional cooperation, a stronger focus on internationalisation, not only for money, but also for learning, than mitigation. This can relate to the 'research' phase adaptation is still in, in many municipalities, especially with regard to other adaptation issues than water management only. As how it went with mitigation, it can be expected that after having shared knowledge internationally, after adaptation is researched and scans have been done (which could be promoted internationally or in the region), the focus, as was seen for mitigation, might return again to the local level.

## 6. Conclusions

In the previous chapter the different elements of the main research question “*How is climate change mitigation and adaptation anchored in the organisation, policy and implementation of the biggest Dutch municipalities (>100.000 inhabitants) and how does this influence their performance?*” have already been discussed and answered. This chapter does not want to repeat the ‘scores’ on the different indicators for anchoring but aims to draw conclusions on a higher level.

Looking at the main research question from a general perspective it could first be concluded that in most of the cases one cannot speak of a combination of mitigation and adaptation in climate organisation or policy. There is however the tendency of giving climate mitigation and adaptation a place in a broader sustainability programme. This seems a promising development since sustainability deals with many more values than energy reduction, sustainable energy production and adaptation only. When through a sustainability programme better integration can be obtained of economy, ecology and social issues, all things done within a municipality can be born with a sustainable heart. It might give less scepticism than ‘climate’ and synergies between e.g. climate mitigation and adaptation can be found under this overall umbrella. Since sustainability is a wide and easily different interpreted concept, operationalisation is important. Only when operationalised well into mitigation and adaptation goals, based on proper research to prevent just ad hoc action, it can be expected that this tendency will lead to the right amount of reductions and adaptation measures in ‘sustainable’ municipalities. The operationalisation should furthermore lead to clear indicators for monitoring, in order to make improvements possible and prevent sustainability from ‘becoming too vague’.

Having said this, it can be concluded that most municipalities still have their climate/sustainability activities centrally arranged, be it in some municipalities larger and stronger than in others. All municipalities however work towards decentralisation, seeing their climate organisation as a temporal organisation until it is embedded in all parts of the organisation. Although it seems clear that to make a municipality climate neutral, the whole municipality should work along (decentralisation), it is expected that also in future a combination of centralisation and decentralisation is most effective. New sustainability topics will always come up that need to be researched and given a place in the organisation, and coordination is also necessary to monitor and continuously improve. Strong internal steering and integration and support in all departments could be combined with having a strong core team with people from the whole organisation, that on their turn involve their department. Trainings and in some cases checklists or other tools could help in this integration process. This should be combined with having a Public Private Partnership structure for broad structural involvement (on all aspects, mitigation and adaptation). Within this, structures around different aspects of sustainability can be formed. Some of these structures can be regional.

The cooperation of municipalities has already shifted from focusing on specific companies to having a broader view. Most municipalities look which parties they are not yet cooperating with and find a structure to involve them. This tendency to involve more and more stakeholders is positive and might help municipalities to keep climate issues, also in the non-ambitious national climate, on the agenda. Some municipalities even work towards externalisation, where cooperation goes in parallel structures, that are placed outside the municipal organisation, and pulled by other partners.

Although the municipal climate/sustainability aims, especially when considering the current budget cuts and expiring SLOK funding, ask for extensive cooperation with actors and municipalities in the region and maybe letting go of some control, the effects of total externalisation of climate/sustainability issues under a (regional) network organisation that is not lead by the government are still unknown. Currently most municipalities still have an active pulling and steering role and it is thought that this will in future (partly) still be needed. With respect to externalisation it is often difficult to maintain good contact with the municipality and keep the municipal involvement and support high. It is therefore thought that the strong external structure should be balanced with a strong internal structure (combination of centralisation and decentralisation), to not only 'let things go', but still be able to keep this steering role and start initiatives when necessary. This way of organising, might give the best performance.

Another important conclusion is that the performance of municipalities should be seen in a broader perspective than the local dimension only. As mentioned, the research question was dealt with taking a multi-level system perspective. One of the main challenges for the municipalities is to continue and guarantee quality work despite the budget and subsidy cuts. But even worse are the low national goals and their changing view. The national government does, according to the municipalities, not show it is important, does not put a dot on the horizon. As was already suggested in literature the national government limits itself to enabling modes of governing, but even that is according to some municipalities down-sized. While the larger municipalities have the capacity to turn to the EU for project funding and knowledge sharing, something that is thought to be happening more often due to the Dutch national climate, not all municipalities might have this capacity for and history in internationalisation. Another apparent trend, the trend of regionalisation, might be an opportunity in this respect. From this research it was clear that especially for mitigation the focus of municipalities seems to be diverted (back) to the region for cooperation instead of too far away due to decreasing capacity and the current focus on 'action'. Regional cooperation between municipalities, which can be stimulated by provinces and national networks, seems an opportunity.

By forming clusters around frontrunners/internationally focussed municipalities, municipalities can share knowledge with 'nearby-municipalities' so that they are stimulated to continue and enhance their climate/sustainability policy, learn from each other to make a balanced strong internal and external (regional) structure, and maybe even via regional cooperation apply for funding, at EU level or through Green Deals. This might apply even more for smaller municipalities.

In general, the 25 municipalities researched, do a lot. They have a structured approach, not just 'no-regret measures on case-by-case basis', but a large range of activities. But although trying hard, it stays for quite some municipalities a struggle to get sustainability integrated in the whole organisation and to move the mass in society. Although some seem to be 'on scheme', many are still strongly investing in the transition that should get started, mainly by enabling.

## 7. Recommendations

### 7.1. Recommendations for municipalities

First of all, it should be recommended to municipalities to 'keep up the good work'. A word of respect is in place for the many municipalities that still have, despite the tough national climate, strong ambitions and the enthusiasm to make their municipality a (more) sustainable one. Second, improvements are always possible of course. Based on the higher performance in the reference municipalities (*see discussion in chapter 5*) and their uniform and higher score on some of the indicators for anchoring, other municipalities could strengthen their internal organisation by having (if not available) a central point of management/coordination and a core team throughout the municipal organisation that is, when fitting the culture, both internally (by all involved aldermen and the management) steered and externally by pullers/frontrunners within a more organised structure for structural cooperation. Within this cooperation structure, structures (of which some can be regional) can be formed around different aspects of sustainability. Important seems to take care of the balance between a central structure and integration throughout the municipality.

Based on the higher performance in the reference municipalities, other municipalities' performance can also be enhanced by having further operationalisation in action plans and sustainability paragraphs or checklists (or in their culture fitting tools like MAP-table) in different sectors. This can go hand in hand with trainings/workshops to create a 'sustainable working culture'. A higher valuation and improvement of monitoring is also recommended (for reasons, *see chapter 5*).

100.000+ municipalities that are the leader in their region and do not learn that much from their (smaller) surrounding municipalities should keep strong contact with other leaders, large municipalities/frontrunners (via e.g. the G4, thematic teams or other platforms) and keep learning e.g. about the effects of externalisation. When these municipalities have capacity for internationalisation they can strengthen their international focus for additional funding and knowledge sharing. Municipalities without this capacity should continue forming strong functional regions in which knowledge can be shared (on e.g. municipalities' approaches, effects of externalisation and the balance between centralisation and decentralisation), projects are more easily executed and in which together can be lobbied and applied for funding.

Learning from colleague municipalities seems, also in this phase of action, still important. Reading chapter 3 and 4 of this research might already provide some interesting information about other 100.000+ municipalities. Moreover, an idea of one of the municipalities was that involved civil servants would actively Twitter about their municipal issues, but support for this idea has not been tested within this thesis.

### 7.2. Recommendations for other actors

#### Provinces

Provinces should know they do and can, since they are often more trusted than the national government, play an important role for municipalities with regard to climate issues. They can stimulate the trend of forming regions of cooperation by organisations like CO<sub>2</sub>service punt from Noord-Holland. Important is that they are more stimulating than the not very ambitious national government. They can help in knowledge sharing on e.g. equalising monitoring and link municipalities for lobbying and applying for funding.

### **National government**

The national government, once a leader in Europe with regard to climate policy and stimulation of local governments, lowered its ambitions quite a lot, which seems to have a negative impact on the municipalities. It is important however that the national government has clear and stable stimulating ambitions, to show the importance of the topic. Important is that the national government should not only sponsor already existing projects, but stimulate new ones. Especially in the process in which municipalities are building strong structures and starting the transition, they should have enough capacity. It costs more to build up structures than to maintain them. Since the new 'Klimaatagenda 2011-2014' is not combined with subsidies, the national government should at least try harder to take away barriers that hinder municipalities in sustainable actions (e.g. with regard to LDEBs, which could make municipalities (more) independent from national money), which are currently too slowly removed according to some municipalities. Having signed the climate agenda with more ministries (so that more feel responsible) could have been an improvement.

Since there is less money to gain from the national government, NL Agency should at least get enough capacity from the national government to support municipalities with questions and to stimulate the cooperation between frontrunners and their pulling function in the region, also to form regions that are strong enough to apply for EU funding. Thematic teams should also be helped to take along their surrounding municipalities. The national government should also consider whether they want to stimulate specific projects (through Green Deals) only (and maybe also polarise since it might be easier to apply for frontrunners) or stimulate (or oblige) more integrated sustainability approaches. When they do not have money to spend (provision), they can still consider to use authority, to at least show the importance and prevent (smaller) municipalities from dropping the issue. The authority that is currently used, more often provides barriers to sustainability than that it guarantees climate/sustainability action.

### **Climate/ sustainability networks**

To not only give recommendations to governmental actors, some small recommendations will be given to 'networks', although it is acknowledged that 'networks' can vary highly in scope and characteristics, so that never the same set of recommendations applies. As could be read in this thesis, regionalisation provides opportunities and functional regional networks should be formed and strengthened, also to make deals with or get funding from other levels of government. A national network like Klimaatverbond should continue its work in stimulating functional regions. They can also learn from this thesis that they could more actively show their added value to municipalities. TMNs should stay innovative to keep stimulating at least the internationally focussed frontrunners, which can on their turn disseminate knowledge in their region. More is expected from international project networks however. The international focus with respect to adaptation is promising and needed in the 'research phase' adaptation is in. Adaptation scans and other research can be promoted.

## **7.3.Recommendations for further research**

In this section, based on a reflection on this thesis, recommendations for further research are done.

### **Smaller municipalities**

This research limited itself to structural analysis of the Dutch municipalities with more than 100.000 inhabitants. Although climate actions in these municipalities are thought to have a high impact, since they contain one third of the Dutch population, and are often more interesting for international comparisons, there are still around 390 municipalities that are not researched.

It is expected that the level of anchoring in these municipalities is definitely lower than the four reference municipalities. Probably it is also lower than the average 100.000+ municipality. The 25 municipalities researched all had an organisation and (often) policy for climate/sustainability issues. And although the budget cuts and expiring SLOK funding are mentioned by many to have an impact on their capacity, the implications for small municipalities, especially the ones that do not have firm anchoring, are expected to be much higher. The importance of regionalisation might especially for these small municipalities be high. Further research could shed light on the situation in the smaller municipalities and test these expectations.

### **Additional indicators**

Although the indicators formulated for anchoring gave an interesting picture of the municipalities, these might not be the only indicators that could explain anchoring. The influence of additional indicators would be interesting as well. According to Interview 1 (2011), prices also help for anchoring. This would be interesting, since it would mean that there is a two-way relation in which performance also influences anchoring. Furthermore, many indicators are related. The indicator internal support could for example be researched further. Based on this research it seems that one of the most important things is the internal support of the whole municipality. Since this seems often more important than many of the other formulated indicators, it would be good to do structural research towards the causal relations between e.g. education, workshops, different ways of organising, guiding principles like C2C or Natural Step or even checklists and other tools and this internal support, to be able to give recommendations on how to enlarge internal support.

More systematic research towards (indicators for) integration in different policy areas would complement this research as well. In this research one person (sometimes two) per municipality was interviewed. It would be interesting to do interviews throughout the whole organisation to see how much different parts of the municipalities pull and which tools for integration (e.g. responsible persons, policy obligations etc.) work best.

Moreover, some indicators might be differently important in different types of organisations. While a higher position of a manager is valued by some municipalities, new organisational types with more externalisation might ask for different ways of anchoring. Maybe even risk-taking or experimentation (with respect to a learning organisation) might be more important than anchoring in policy etc. Since many municipalities are still in the process of change to e.g. a 'direction/network' organisation, the effects of these changes (and possible different ways of anchoring) are not yet clear.

### **Performance measurements**

Only by formulating many performance indicators for all the themes, performance could have been 'measured' and compared properly. Making a set of indicators that would give a fair output comparison and having this filled in through telephone interviews only (in which never all activities can be mentioned) or study of documents (which are not always available or correct) was not feasible within this research. Since other rankings were not complete (Klimaatmonitor) or based on a mix of aims and ambitions or indicators that were in this research used as indicators for anchoring (so that influence of anchoring on performance could not be analysed), the method as described in section 1.4 was followed, while acknowledging its limitations (e.g. larger municipalities seem to have an advantage in that they are better known, see section 1.5). When tools like Klimaatmonitor, with very specific performance indicators, would be complete, better rankings (less dependent on opinions etc.) could be made of the municipalities.



This could thereafter be linked to the most interesting indicators (especially e.g. different types of structural involvement). Sub groups could be made so that smaller municipalities can better also compare themselves.

A structural analysis of the monitoring reports that would become available in near future (often at the end of the programme), would moreover give better insight in outcome-performance than the answers given in the interviews. This could be compared with more in-depth study of (intermediate) goals and information from road maps with expected outcomes etc. The model presented in this thesis could be worked out more in-depth, trying to see the influences of the modes of governing used on the real reductions (outcome-performance).

### **Sustainability versus climate policy**

The research started as a research on climate mitigation and adaptation. In some municipalities however, climate falls as one aspect under a broader sustainability programme. Several municipalities had a programme manager or programme bureau sustainability. Some municipalities were very strong in their view that one should not see climate as a separate topic but should deal with sustainability as a whole. This is an interesting indicator that has not been researched from the beginning. It seemed however that having an overarching sustainability programme could work out positive, the same as working with concepts like C2C or Natural Step. The trend of having overarching sustainability programmes (or specific guiding concepts like C2C or Natural Step) and the influence on climate mitigation and adaptation goals could be studied more in-depth.

### **Centralisation versus decentralisation**

Also the other apparent trend could be a topic for further research. This research suggests that, although municipalities are working towards decentralisation throughout the whole municipal organisation, there should be a balance between a central climate/sustainability organisation for monitoring, steering etc. and integration throughout the whole municipality. There are no totally opposing municipal examples for case studies, but e.g. a municipality like Groningen where currently a central point for sustainability lacks can be compared to e.g. Zaanstad, with a strong programme team, or (but these municipalities might be too big for comparison) the central programme bureaus of Amsterdam or Rotterdam.

### **Externalisation**

Within this research, different examples have been mentioned of arrangements for structural involvement of private parties. Since many of the organisational forms are quite young, it could not be said which elements work well or less. In-depth study of e.g. Tilburg or Almere could be done since they have quite innovative approaches and 'want to have climate organised from outside the municipality'. This can be compared with e.g. Breda, Haarlem etc. which think one should pull more as a municipality. With respect to externalisation it is also interesting how the RUDS will work out, since these regional execution bureaus will be in charge of execution of at least maintenance tasks.

### **Regionalisation**

Since regionalisation was evident from this research, it could be researched more structurally which role different parties do or could play e.g. in forming functional regions. The importance of provinces was highlighted in this research, but there seems also quite some difference in the support from different provinces. Further research would be interesting. Moreover, it is interesting to follow how regionalisation really changes linkages with other levels and the possibilities for funding.

## 8. Reference List

- Aardema, H. and A. Korsten (2009). "Gemeentelijke organisatiemodellen." Bekke, A: naar een collegiaal en samenhangend overheidsbestuur.
- Aardwarmte Den Haag. (2011). "Official website LDEB Aardwarmte Den Haag." Retrieved December, 2011, from [www.aardwarmtedenhaag.nl/aardwarmte\\_den\\_haag/waarom\\_een\\_vof/](http://www.aardwarmtedenhaag.nl/aardwarmte_den_haag/waarom_een_vof/).
- Berg, M. v. d., W. Lafferty, et al. (2010). Adaptation to Climate Change induced flooding in Dutch municipalities.
- Blogspot. (2011). "Amsterdam Electrisch." Retrieved December, 2011, from <http://amsterdamelektrisch.blogspot.com/2011/10/amsterdam-capital-of-electric.html>.
- Bommel, S. v. and W. Kuindersma (2008). Policy integration, coherence and governance in Dutch climate policy : a multi-level analysis of mitigation and adoption policy. Wageningen, Alterra: 121.
- Bui, H. and Y. Baruch (2010). "Creating learning organizations: a systems perspective." The Learning Organization **17**(3): 208- 227.
- Buiddesk (2007) "CO2-neutrale steden: Apeldoorn, Heerhugowaard, Tilburg."
- Buiddesk (2008) "Stappenplan klimaatneutrale gemeentelijke/provinciale organisatie."
- Bulkeley, H. (2010). "Cities and the Governing of Climate Change." Annual Review of Environment and Resources **35**(1): 229-253.
- Bulkeley, H. and K. Kern (2006). "Local government and the governing of climate change in Germany and the UK." Urban Studies **43**(12): 2237-2259.
- Carter, J. G. (2011). "Climate change adaptation in European cities." Current Opinion in Environmental Sustainability **3**(3): 193-198.
- CBS. (2012). "Gemeentelijke indeling op 1 januari 2012." Retrieved January, 2012, from <http://www.cbs.nl/nl-NL/menu/methoden/classificaties/overzicht/gemeentelijke-indeling/2012/default.htm>.
- CO2-servicepunt (2011). Meeting CO2 service punt R. d. Exter. Haarlem.
- Coenen, F. (2008). New interpretations of local governance for sustainable development in the Netherlands, Routledge Taylor & Francis Group.
- Coenen, F. and M. Menkveld (2002). The role of local authorities in a transition towards a climate-neutral society.
- COS. (2009-2010). "Lokale duurzaamheidsmeter." Retrieved September, 2011, from <http://www.duurzaamheidsmeter.nl/resultaten/2009/nl/totaalscores>.
- Covenant of Mayors. (2011). "Covenant in figures." from [http://www.eumayors.eu/about/covenant-in-figures\\_en.html](http://www.eumayors.eu/about/covenant-in-figures_en.html).
- Covenant of Mayors. (2012). "Financing instruments." Retrieved January, 2012, from [http://www.burgemeestersconvenant.eu/support/funding-instruments\\_nl.html](http://www.burgemeestersconvenant.eu/support/funding-instruments_nl.html).
- Dodman, D. (2009). "Blaming cities for climate change? An analysis of urban greenhouse gas emissions inventories." Environment and Urbanization **21**(1): 185-201.
- Dordt Duurzaam. (2011). "Lof van minister Schultz voor Dordtse aanpak waterveiligheid." Retrieved December, 2011, from <http://cms.dordrecht.nl/dordt/nieuws/archief/september-2011/lof-van-minister-schultz-voor-dordtse-aanpak-waterveiligheid?waxtrapp=utbuxcBsHaKnPrBFCFozwWlzwW>.
- Duurzaamste gemeente. (2011). "Winnaars prijs duurzaamste gemeente 2011." Retrieved December, 2011, from <http://duurzaamstegemeenteprijs.nl>.
- E-decentraal. (2011). "e-decentraal: vereniging federatie duurzame energie nederland." Retrieved December, 2011, from <http://www.e-decentraal.com/>.
- EC. (2011). "Key EU-funding." Retrieved October, 2011, from [http://www.managenergy.net/communities\\_fund.html](http://www.managenergy.net/communities_fund.html).

- Eurocities. (2012). "Official website Eurocities." Retrieved January, 2012, from <http://www.eurocities.eu/main.php>.
- Future Cities. (2011). "Future Cities: Urban networks to face climate change." Retrieved December, 2011, from <http://www.future-cities.eu/>.
- Gemeente Amsterdam. (2011). "Amsterdam elektrisch." Retrieved December, 2011, from <http://www.amsterdam.nl/parkeren-verkeer/amsterdam-elektrisch?ActLbl=netwerk-oplaadpunten&ActItmIdt=486241>;
- Gemeente Breda (2008). Steek positieve energie in het klimaat Breda: een CO<sub>2</sub>- neutrale stad in 2044. Breda.
- Gemeente Den Bosch (2010) "Bossche energieconvenant."
- Gemeente Dordrecht and Waterschap Hollandse Delta (2009). Dordrecht werkt aan hoogwaterbeheer.
- Gemeente Groningen (2009). Jaarprogramma Duurzaamste Stad 2010.
- Gemeente Nijmegen (2011). Duurzaamheidsagenda 2011-2015.
- Gemeente Nijmegen. (2011). "Nieuw organisatiemodel gemeente Nijmegen." Retrieved October, 2011, from <http://nieuws.nijmegenonline.nl/organisatiemodel-gemeente-nijmegen/>.
- Gemeente Rotterdam (2010). Rotterdam Climate Proof, adaptatieprogramma 2010.
- Gemeente Tilburg (2009). EERSTE KLIMAATPROGRAMMA TILBURG NAAR EEN KLIMAATNEUTRALE EN KLIMAATBESTENDIGE STAD.
- Gemeente Utrecht (2011). Programma Utrechtse Energie 2011-2014.
- Gemeente Zaanstad (2010). INTEGRAAL KLIMAATPROGRAMMA ZAA NSTAD 2010-2020.
- Gerphart, M. A., V. J. Marsick, et al. (1996). "Learning organisations come alive." Training and Development **50**(12): 34-45.
- GRaBS. (2011). Retrieved December, 2011, from <http://www.grabs-eu.org/>.
- Gupta, J. (2007). "The multi-level governance challenge of climate change." Environmental Sciences **4**(3): 131-137.
- Gupta, J., R. Lasage, et al. (2007). "National efforts to enhance local climate policy in the Netherlands." Environmental Sciences **4**(3): 171-182.
- Hiemstra, J. and J. Boelens (2002). "Nieuwe organisatiestructuren in gemeenten." Openbaar bestuur **1**.
- Hooghe, L. and G. Marks (2001). Multi-level governance and European integration, Rowman & littlefield publishers, INC.
- Hooghe, L. and G. Marks (2003). "Unraveling the Central State, but How? Types of Multi-level Governance." American Political Science Review **97**(2): 233-243.
- Interview 1 (2011). Interview with dhr. Schellekens; NL Agency. R. d. Exter. Utrecht.
- Interview 2 (2011). Interview with dhr van Ewijk, Klimaatverbond. R. d. Exter. Utrecht.
- IPCC, Ed. (2007). IPCC fourth assessment report Climate change 2007: synthesis report.
- Kern, K. (2011). WUR Course: governance in sustainable cities. d. R. Exter. Wageningen.
- Kern, K. and G. Alber (2009). Governing Climate Change in Cities: Modes of Urban Climate Governance in Multi-Level Systems. The international conference on Competitive Cities and Climate Change, Milan, Italy, 9 - 10 October, 2009, Paris, OECD.
- Kern, K. and H. Bulkeley (2009). "Cities, Europeanization and multi-level governance: Governing climate change through transnational municipal networks." Journal of Common Market Studies **47**(2): 309-332.
- Kern, K., S. Niederhafner, et al. (2005). Kommunaler Klimaschutz in Deutschland Handlungsoptionen, Entwicklung und Perspektiven. Berlin, WZB.
- Klein, R. (2007). Inter-relationships between adaptation and mitigation. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.
- Klimaatcongress (2011). klimaatcongres 2011, Utrecht.
- Klimaatverbond. (2011). "Klimaat verbond Nederland, Officiële website." Retrieved September, 2011, from <http://www.klimaatverbond.nl/leden>.

- Klostermann, J. E. M., G. R. Biesbroek, et al. (2009). "Multilevel klimaatbeleid in Nederland: mitigatie en adaptatie." Bestuurskunde **18**(4): 17-26.
- KplusV (2010). Rapportage evaluatie Klimaatakkoorden. Arnhem.
- Lenhart, J. (2011). Integrating Mitigation and Adaptation of Climate Change Policy in Cities. The case of Malmö. Unpublished Manuscript, Wageningen UR: 27.
- MARE. (2011). "MARE project: Managing Adaptive Responses to changing flood risk." Retrieved December, 2011, from <http://www.mare-project.eu/partners/3/laa-dordrecht>.
- Mees, H. (2010). Climate Greening London Rotterdam Toronto: A comparative analysis of the governance capacity of adaptation in climate change in urban areas. Utrecht, University of Utrecht.
- Mels, A. (2011). WUR Course management urban environmental infrastructure. R. d. Exter. Wageningen.
- Menkveld, M., H. Burger, et al. (2001). Het speelveld van lokaal klimaatbeleid. Onderzoeksproject 'Lokale overheden en klimaatbeleid' ECN, CSTM.
- Merriam-webster. (2011). "Digital dictionary." Retrieved September, 2011, from <http://www.merriam-webster.com/dictionary/public%20utility>.
- Metropool regio Amsterdam. (2012). "Official website Metropoolregio Amsterdam." Retrieved January, 2012, from <http://www.metropoolregioamsterdam.nl/achter.html>.
- Midpoint Brabant. (2011). "MOED, Midpoint Brabant." Retrieved December, 2011, from <http://www.midpointbrabant.nl/Moed.aspx>.
- Ministerie I&M (2011). Werk maken van klimaat. Klimaatagenda 2011-2014. M. v. I. e. Milieu.
- NL Agency (2008). Financiële regelingen voor lokaal klimaatbeleid.
- NL Agency (2009) "Borgen voor morgen, voorbeelden van verankering van gemeentelijk klimaatbeleid."
- NL Agency (2010). Dutch Climate Policy: Local challenge supported by the national government, NL Agency.
- NL Agency (2010) "Handreiking borging klimaatbeleid."
- NL Agency (2010). Kracht uit eigen energie: Gemeenten en lokale duurzame energiebedrijven. N. Agency.
- NL Agency. (2011). "Klimaatmonitor." Retrieved 09-2011, from <http://www.klimaatmonitor.databank.nl/>.
- NL Agency. (2011). "Lokaal klimaatbeleid." Retrieved 31-8-2011, from <http://www.agentschapnl.nl/programmas-regelingen/lokaal-klimaatbeleid>.
- NL Agency. (2011). "Official website." Retrieved September, 2011, from <http://www.agentschapnl.nl/>.
- OECD (2010). Cities and Climate Change, OECD Publishing.
- PREPARED. (2011). Retrieved December, 2011, from <http://www.prepared-fp7.eu/prepared-home2>.
- Projectteam Bezuinigingen (2010). Nota bezuinigen. Proloog: 'Anders werken met minder middelen'. Arnhem, Gemeente Arnhem.
- Raven, J. P. (2009). Bevorderen van duurzame energie door gemeenten : een verkennende studie naar de rol van gemeenten bij het bevorderen van duurzame energie binnen de Nederlandse energievoorziening.
- Rijksoverheid. (2011). "GreenDeal." Retrieved 10-12-2011, from [http://www.rijksoverheid.nl/onderwerpen/duurzame-economie/green-deal?ns\\_campaign=Thema-Milieu\\_ruimte\\_en\\_water&ro\\_adgrp=Duurzame\\_economie\\_Green\\_deal&ns\\_mchannel=sea&ns\\_source=google&ns\\_linkname=%2Bgreen%20%2Bdeal&ns\\_fee=0.00](http://www.rijksoverheid.nl/onderwerpen/duurzame-economie/green-deal?ns_campaign=Thema-Milieu_ruimte_en_water&ro_adgrp=Duurzame_economie_Green_deal&ns_mchannel=sea&ns_source=google&ns_linkname=%2Bgreen%20%2Bdeal&ns_fee=0.00).
- Schwartz, K. (2011). New Public Management in the Water Sector.
- Senge, P. (2006). "The Fifth Discipline: The Art and Practice of a Learning Organisation." Random House(2nd edition).

- Sippel, M. (2010). "Cities in Germany & their Climate commitments: more hype than substance?" MPRA **23011**.
- Sippel, M. and T. Jenssen (2009). "What about local climate governance? A review of promise and problems." MPRA **20987**.
- SIX advocaten. (2009). "Gemeentelijke eisen bij gronduitgifte." from <http://www.sixlegal.nl/nl/nieuws-publicaties/nieuws/gemeentelijke-eisen-bij-gronduitgifte>.
- Stadsgewest Haaglanden. (2012). "Official website Stadsgewest Haaglanden." Retrieved January, 2012, from <http://www.stadsregio.info/#pagina=3378>.
- Swart, R. J., G. R. Biesbroek, et al. (2009). Europe adapts to climate Change: Comparing National Adaptation Strategies. Identifying knowledge gaps and formulating policy recommendations. Partnership for European Environmental Research (PEER). Wageningen. **Report No 1**.
- UN-Habitat (2011). Cities and climate change : global report on human settlements, 2011, Earthscan.
- Uylenburg, R. and E. M. Voegelzang-Stoute (2010). Toegang tot het milieurecht: een inleiding voor niet-juristen. Alphen aan den Rijn, Kluwer.
- Veldboom, A. (2011). Duurzaam willen doen. Milieuwetenschappen Utrecht. Utrecht, Universiteit Utrecht.
- VNG (2008). Financiële regeningen voor lokaal klimaatbeleid.
- VRM (2007). Maak ruimte voor klimaat! Nationale Adaptatiestrategie Ruimte en Klimaat.
- Wilson, E. and J. Piper (2010). "Spatial Planning and Climate Change. ." London: Routledge Publications.

Note: as pre-study all 25 municipal websites and relevant climate/sustainability (policy) documents have been studied. If not referred to in this thesis, these websites and documents are not taken up in this reference list.

## Annex I: 100.000+ municipalities

	Municipality	Inhabitants (as of 1-4-2011; CBS)	Province	Interviewee	Function
1	Amsterdam	783.364	Noord-Holland	S. van de Wiel	Programme bureau climate and energy
2	Rotterdam	611.495	Zuid-Holland	E. Schilperoord	Programme bureau sustainability
3	Den Haag	496.745	Zuid-Holland	H.W. Terlouw	Programme coordinator climate change
4	Utrecht	312.634	Utrecht	M. Hoogwijk	Programme manager Utrechtse Energie
5	Eindhoven	216.157	Noord-Brabant	V. Silvertand + L. Postmes	Programme manager sustainability + Policy advisor green and water
6	Tilburg	206.186	Noord-Brabant	P. Biemans	Programme manager climate and energy
7	Almere	191.239	Flevoland	E. Lindeijer	Energy planner
8	Groningen	190.334	Groningen	I. Wiersma + W. Veldstra	Policy advisor sustainability + City ecologist
9	Breda	174.829	Noord-Brabant	P. Paree	Senior advisor environment
10	Nijmegen	164.540	Gelderland	G. Nalis	Senior advisor climate & energy
11	Enschede	157.587	Overijssel	M. Frauenfelder	Senior policy advisor
12	Apeldoorn	156.355	Gelderland	H. Kuijpers	Strategic advisor public space
13	Haarlem	150.744	Noord-Holland	P. Onel	Senior policy advisor environment
14	Arnhem	148.320	Gelderland	-	-
15	Zaanstad	147.141	Noord-Holland	C. Verberne	Programme manager climate
16	Amersfoort	146.889	Utrecht	P. Sparenburg	Senior advisor environment
17	Haarlemmermeer	143.484	Noord-Holland	D. de Rijk	Programme manager sustainability, knowledge and innovation
18	's-Hertogenbosch/ 's-Hertogenbosch	141.134	Noord-Brabant	E. Bosch	Coordinator energy and climate
19	Zoetermeer	121.964	Zuid-Holland	J. Lako	Policy advisor environment
20	Zwolle	120.661	Overijssel	C. Voortman	Senior policy advisor
21	Maastricht	119.623	Limburg	P. Rompelberg	Senior policy advisor sustainability
22	Dordrecht	118.906	Zuid-Holland	R. Sweers	Senior policy advisor energy
23	Leiden	117.914	Zuid-Holland	M. Blondeau + W. Hoekman	Policy advisor development + Milieudienst West Holland
24	Emmen	109.244	Drenthe	R. Gengler	Policy advisor energy, climate, environment
25	Ede	108.255	Gelderland	E. van Tol	Advisor climate policy
26	Venlo	100.301	Limburg	F. Jonker	Climate coordinator

## Annex II: Interview questions in-depth interviews

### Interviewee: NL Agency, R. Schellekens

#### 1) NL Agency

- a) You are senior advisor and expert local authorities at Agentschap NL and Secretary Thematic team sustainable built environment, can you shortly describe what your activities are with regard to climate issues in local authorities?
- b) What are the most important programmes that NL Agency currently runs in the field of local climate change mitigation/ adaptation?
- c) *What do you think is the influence of the activities of NL Agency on the performance in municipalities with regard to climate change mitigation and adaptation?*

#### 2) National level & (Future) barriers and opportunities

- a) What factors hinder municipalities in their local climate change mitigation and adaptation actions?
- b) What are future perspectives for municipalities with regard to local climate mitigation and adaptation?
- c) *What is the influence of the current Cabinet on NL Agencies work and in general on local climate mitigation/ adaptation?*
- d) How are climate mitigation/ adaptation activities in municipalities restricted by higher levels? (e.g. Article 22) *(are there other laws that restrict municipalities)?*
- e) In what way did the current Klimaatafspraak deal with local adaptation?
- f) What do you expect of the national "Climate Agenda 2011-2014", *(Combined with the Climate Agenda it is announced that the cabinet wants to remove regulations that form a barrier, can you give an example of what is going to happen?)*
- g) Do you expect a new subsidy programme combining this agenda? /What do you think are the consequences of the ending of the SLOK-scheme?

#### 3) Local dimension

- a) What do you think is the level of anchoring of climate issues in the municipal organisation, local policy and implementation in the big municipalities and how can be improved?
- b) *Which different organisational models do you see in municipalities with regard to climate policy?*
- c) What do you think of the performance (outputs and outcome) of Dutch municipalities in the field of climate change mitigation and adaptation?
- d) *What do you think about the modes of governing Dutch municipalities use/ can possibly use?*
- e) What do you think of the current output-performance measurements. *Is output-performance clear to NL Agency? Are there good tools around to compare cities?/ studies that have compared cities? What is the role of klimaatmonitor and how will klimaatmonitor be made complete?*
- f) Is there a big difference in performance seen between big cities? Which big cities are in your opinion lagging behind? Which are frontrunners?
- g) What types of outcome monitoring are municipalities using? *Importance of CO2 monitoring Noord-Holland?*
- h) For SLOK municipalities had to tell which level of monitoring they wanted to do (output, outcome, impact) do you have these data for the 26 cities and can I see them?
- i) *How do you see the future of LDEBs and what are the current challenges?*

## **Interviewee: Klimaatverbond, M. van Ewijk**

### **1. Klimaatverbond**

- a. Can you first shortly tell a bit about your job and your activities within Klimaatverbond?
- b. There are many programmes on the website, can you tell what are the most important programmes that Klimaatverbond currently runs in the field of local climate change mitigation/ adaptation?
- c. On the website it was stated that first the focus was most on sustainable energy and sustainable wood, but that you now see climate policy as both mitigation and adaptation. Klimaatverbond mentions adaptation as one of the main themes and points at national documents and other projects. What are Klimaatverbonds' own activities with regard to local adaptation? In what way is Klimaatverbond involved in the issue of adaptation?

### **2. Networks/ interactions on horizontal level**

- a. What do you think is the influence of Klimaatverbond on the performance in municipalities with regard to climate change mitigation and adaptation? (outcomes (self)-evaluations?)
- b. *You are associated member of Climate Alliance and Energy Cities. Furthermore it is stated that Climate alliance, ICLEI, ENERGY cities tell Klimaatverbond when subsidy is around. Can you tell a bit more about advantages of this cooperation?*
- c. What is the advantage of being member of Klimaatverbond as compared to other networks?
- d. How is Klimaatverbond involved with (promotion of climate mitigation/ adaptation in) metro-regions for climate mitigation and adaptation and what role do these play?

### **3. Local dimension**

- a. What do you think is the level of anchoring of climate issues in the municipal organisation, local policy and implementation in the big municipalities and how can it be improved?
- b. In my research I am interested in the organisational structures for climate mitigation/ adaptation policy. Can you explain the organisation structure of your municipality (Zaanstad), is this a favourable organisation structure or would you like it to be different? Do you see differences in organisation of other municipalities? Does Klimaatverbond stimulate a certain type of organisation?
- c. What do you think of the performance (outputs and outcome) of Dutch municipalities in the field of climate change mitigation and adaptation?
- d. How is Klimaatverbond involved in unitary monitoring within municipalities? How can unitary monitoring be made possible in future?

### **4. Interactions with other governments**

- a. Klimaatverbond was highly involved in the development of BANS and SLOK. What do you think was the influence of these programmes on the performance in municipalities with regard to climate change mitigation and adaptation?
- b. How do you see the future with the ending of SLOK and the new Climate agenda 2011-2014?
- c. One of your activities is pointing at barriers for local climate policy to national government. What are the major barriers currently? How are in your opinion climate mitigation/ adaptation activities in municipalities restricted by the higher levels?
- d. *On your website it is stated that "European union, has given priority to Energy agencies in Klimaatverbond municipalities". What does this entail?*

### **5. (Future) barriers and opportunities**

- a. In general, what factors hinder municipalities in their local climate change mitigation and adaptation?
- b. What are future perspectives for municipalities with regard to local climate mitigation and adaptation?



## Annex III: Interview questions municipalities

1. What is your function within the municipality? (sector/ department)

### Internal organisation and capacity

2. How is climate change mitigation and adaptation organised in your municipality?
  - a. leading department? (name)
  - b. climate coordinator? (hierarchical position/tasks)
  - c. Other departments involved?
  - d. Climate steering committee? (who included? External/internal parties?)
  - e. Private/ societal parties structurally involved in organisation/ delegation of climate issues to external parties? How?
  - f. Recent changes in organisation structure?/ Plans to change organisation?
  - g. Why is organisation structure well/ less suited for climate change mitigation and adaptation/ proposed improvements?
3. Does your municipality have sufficient capacity to address climate mitigation and adaptation (e.g. manpower, knowledge, skills, finances)?
4. How is the level of internal support for climate actions in council/board of mayor & alderman?

### Climate policy

5. Does your municipality have an overarching up to date holistic climate policy?
  - a. Mitigation and adaptation?
  - b. Most important climate change mitigation/ adaptation policy documents at strategic level (long-term) and operational level (short-term)?
6. Municipalities overarching long term climate aims with regard to mitigation/ adaptation?
7. Are for all climate aims action plans available (with concrete aims, resources, a timeline and clear division of tasks and responsibility)?
8. How is climate integrated in the policies of different departments/ sectors?
  - a. Somebody in charge?/ Assessment procedures?
  - b. Look at synergies (e.g. between mitigation/ adaptation?)

### External cooperation

9. What are the most important forms of cooperation your municipality has?
  - a. Private sector, energy and transport utilities/ NGOs/ public organisations like water boards?
  - b. Level of external support regarding climate measures in society so far?
  - c. Availability of overarching campaign (public programme)?

### Performance

10. Type of monitoring (*output, outcome, impact*) used/ Effects measured so far?
11. Are you on track with your climate change mitigation and adaptation measures?
12. What were the main implementation challenges so far?/ Future perspectives?
13. Which field within climate change mitigation/ adaptation has your municipality already performed well in?
  - a. Most important achievements?
  - b. Leader/ best-practice in certain field?
14. Which cities do you see as leading/ best-practice cities, why?

### Vertical/ horizontal interactions

15. Most important networks (e.g. regional, national or international) in? Why important for you?
16. Most important role of provinces, national government, EU?
17. What does it mean for your municipality that the SLOK scheme ends in 2012?

## Annex IV: Formal structures for structural cooperation

Table 13 lists formal structures for cooperation. The municipalities where no formal structure for cooperation has been realised (yet) are marked in italic. In bold one can see the structures that are mentioned to be an external steering group. Aside from 'structural'/ institutionalized cooperation, all municipalities cooperate with many partners. This overview can be found in section 3.4.

Table 13: Formal structures for structural cooperation

Municipality	Structural cooperation structure	Explanation
Amsterdam	<b>Klimaatraad</b>	Steering group of ambassadors of companies, knowledge institutes, societal organisations. Meet two times per year, and flexible per topic. Discuss policy and advice municipality.
Rotterdam	<b>RCI + RCI-board</b>  <b>+ marktstuurgroep Duurzaam ontwikkelen</b>  <b>+ 'Comitee aanbevelingen' (Climate proof)</b>	RCI is a Public Private Partnership construction of municipality, Milieudienst, Havenbedrijf en Deltalinqs. RCI-board can be seen as steering group (with mayor, aldermen, programme manager RCI, director Milieudienst, director Havenbedrijf Rotterdam Nv, chair Deltalinqs). Through RCI other cooperation with partners is formed. Other structural cooperation structures are e.g.: Marktstuurgroep Duurzaam ontwikkelen = several market parties and municipalities meet one time per month. And 'Comitee aanbevelingen' for Rotterdam Climate Proof
Den Haag	<b>Overlegtafel klimaat + Platform duurzaamheid + Want sustainability centre</b>	Steering group of environmental organisations, energy companies, knowledge institutes etc. Had 14 x meeting with same core to discuss policy and be critic. Now looking flexibly for extra people depending on topic. Have also sustainability platform only for big companies. Wants sustainability centre to broaden and centralise external contact.
Utrecht	Aside from structure there is, Utrecht would like 'klankbord' group of frontrunners.	Have structure for private involvement, want steering group of frontrunners.
Eindhoven	<i>Want to have something for sustainability in broad</i>	<i>Only structural involvement for some topics like 'sustainable building' (with knowledge institutes and companies) or CSR-network.</i>
Tilburg	Klimaatstap with Klimaatbureau, alliances and <b>Klimaatadviesraad</b> (want them to become more steering)	Klimaatadviesraad with management and direction of companies, knowledge institutes which give advice. Wants klimaatbureau outside municipal organisation. See for more information the examples in section 3.2. Wants to link up to MidPoint Brabant (regional economic cooperation programme for social innovation, lead by representatives of education, organisation and government). Within MidPoint, MOED is under construction which stands for: Midden-Brabantse Ontwikkelingsmaatschappij voor Energie en Duurzaamheid. This is a Public Private Partnership for sustainable energy production (LDEB).
Almere	Duurzaamalmere.nl	Duurzaamalmere (website and physical point) as contact and match point for societal and private partners. This will function mostly separate from the municipality with lines with different municipal departments, see section 3.2.
Groningen	<i>Regional Energy Valley</i>	<i>Municipality can use regional network Energy Valley (which is a Public Private Partnership with government, knowledge institutes and companies) as input for their policy</i>
Breda	<b>Bredase energieraad + klimaattafels</b>	Frontrunners from several disciplines (building/ housing companies, bank, employers organisation, knowledge institutes etc) on personal title in steering group to reflect on policy and develop innovative concepts. Execution around concrete projects in klimaattafels.
Nijmegen	<i>Ad hoc</i>	<i>Broad cooperation but not structural. Might go in this direction. (Do have NEC-covenant with companies).</i>

Municipality	Structural cooperation structure	Explanation
Enschede	<i>Ad hoc</i>	<i>Broad cooperation for big projects but no central responsibility/ structural form. Programmes will have to arrange this themselves. Wants to link up to existing forms.</i>
Apeldoorn	Stichting Apeldoorn voorop in duurzaamheid, + Regional Stedendriehoek	Platform ('aanjaaggroep') of frontrunners: Municipality, companies, organisations + Private/ societal involvement via the regional 'stedendriehoek' is also said to be important.
Haarlem	<b>Stuurgroep Haarlem Klimaatneutraal</b>	Public Private Partnership cooperation within programme groups (alliances), project bureau and steering group (with municipality, ministries, housing corporations, consulting, water board, bank, chamber of commerce, Nuon etc.) (see example in section 3.2).
Zaandam	Duurzaam samenwerken + Environmental platform	Duurzaam Samenwerken: Cooperation municipality, organisations, companies in sustainability (workshops, meetings + sustainability coach for structural contact) + Environmental platform: representatives local environmental organisations, neighbourhood councils, organisations.
Amersfoort	Frontrunner ambassadors sustainability programme	Platform of frontrunners (ambassadors) of companies (but also society ambassador) and mobility.
Haarlemmermeer	<b>Partners Incubator</b>	Incubator has to be operational in 2012: physical structure pulled by Rabobank, Schiphol, Dura Vermeer, Delta development group and municipality (as facilitator), for helping starting sustainable entrepreneurs. These key players are also seen as a steering group. It is really a project of five key players, they not only subsidize but will also execute the incubator. They want that the incubator will be cost neutral in three year. Broader steering groups are available as well.
's-Hertogenbosch/ 's-Hertogenbosch	BEC  <i>Are trying to link up with something existing</i>	Bosche Energie Covenant as parallel structure with own steering group and working groups (see example in section 3.2).  <i>Are trying to link up with City Change Centre (independent platform carried by key partners in city). These are also working on climate and can be seen as 'klankbord'.</i>
Zoetermeer	<i>Ad hoc</i>	<i>No broad structural (plat)form, but management of EREA (an organisation that pulls some climate projects) consists of private partners like corporations, bank they can contact. Also some networks on themes (MVO or building society).</i>
Zwolle	<i>Ad hoc</i>	<i>Per project (but structural cooperation with corporations, see section 3.4).</i>
Maastricht	<b>Platform Cool Maastricht</b>  Sustainability Lab	Steering group of target group coordinators from education, companies, building sectors and society to advice municipality. Alderman is chair of this cooperation.  Will get sustainability lab for broad cooperation which will be part of an even bigger 'city lab'.
Dordrecht	Platform Duurzaamheid (inhabitants) + energy cooperation	Structural cooperation with societal initiative. Also HVC plus municipality pull development of energy cooperation in which other partners are going to take up projects.
Leiden	<i>Ad hoc</i>	<i>Proposed Public Private Partnership working groups are not established.</i>
Emmen	Educohof	Department outside municipality provides platform for sustainability. In big projects cooperation per topic. <i>Wants to make knowledge network around themes.</i>
Ede	<i>Ad hoc</i>	<i>Proposed climate panel not established.</i>
Venlo	C2C expo lab	Aside from structural contact with single parties there is a Cradle2Cradle (C2C) expo lab under economic department that links government, education/ knowledge institutes, companies and organisations to stimulate and support C2C developments. This is an independent foundation, founded by the community of Venlo.

## Annex V: Output-performance examples

With regard to output-performance, Amsterdam was seen as a leader in sustainable transport (electric), Amersfoort as leader in energy reduction in existing buildings and Rotterdam as leader in adaptation. More details about their performance can be found in the boxes below. Den Haag was seen as leader in action and sustainable energy (geo-thermal). This example was dealt with in Table 8.

### **Amsterdam: Electric transport**

In 2009 Amsterdam developed the plan 'Amsterdam elektrisch' with the ambition to be 100% electric in 2040. The amount of charging points grows fast (in e.g. October 2011, 10 extra locations per week) and Amsterdam expects 300 charging points at the end of 2011. The municipality not only tries to stimulate electric transport by placing charging points, they also have a subsidy for business people that drive a lot, free parking until March 2012 and a subsidy for placing your own charging points (Blogspot 2011; Gemeente Amsterdam 2011).

### **Amersfoort: Existing building approach**

According to Amersfoort they have developed good instruments together with market parties to reduce energy in the existing building. They really created a movement. Other municipalities look at Amersfoort with regard to energy reduction in existing buildings. The strength lies in cooperation with market parties, with which they tried to provide a readymade energy saving package for housing owners ('ontzorgen') (Campaign 'energiebesparing in de wijk', 2010). They combined this with neighbourhood workshops, climate street parties etc. "Be careful, you cannot exclude other market parties and should be open" (*Amersfoort*). Covenants with housing corporations (e.g. with the biggest housing corporations two percent yearly reduction) were also very important, especially because of the process of together looking for chances (*Amersfoort*).

### **Rotterdam: Adaptation**

Rotterdam aims to be 100% climate proof in 2025. Rotterdam beliefs that the goal can be reached by using three pillars: Knowledge, Actions and Exposure, within five themes (1) flood management, (2) accessibility, (3) adaptive building, (4) urban water system and (5) urban climate. With regard to flood management, Rotterdam wants for example to keep the Rotterdam delta safe, also when climate changes, by strengthening the storm surge barriers. Also the transport infrastructure should be made resilient to climate change. Roads can be elevated and the use of boats increased. Adaptive building can be obtained by for example floating neighbourhoods in the city ports area. Rotterdam already has the floating pavilion as example. With regard to the urban water system an additional 600.000m<sup>3</sup> of storm water storage space will be made available. Water plazas will for example be constructed and green roofs are subsidized. The first water plaza will be built on the new Bellamyplein in Spangen and will be ready in 2012. With regard to the urban climate, Rotterdam wants to ease heat stress in the city (for example, by providing shade and cooling by e.g. green roofs) (Gemeente Rotterdam 2010).