

# Urban Partnerships on Climate Adaptation: Stuck in Transition

*The Case of Rotterdam and Ho Chi Minh City*



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## Preface

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The picture at the front page is not randomly chosen. The picture was taken in District 4 in Ho Chi Minh City in Khanh Hoi Park. Although the man in the front probably catches your attention at first, if you look at what is going on behind him, you see the construction process of clearing houses in this area for the development of a park and possibly a retention reservoir, as advised in the partnership with Rotterdam. It is the reality of a mega-city in development that is looking for opportunities to adapt to climate change. A part of the story behind that reality is what is in the pages to come.

To have taken this picture myself and having been able to experience with my own eyes the ins and outs of the business going on in a mega city like Ho Chi Minh City was a fascinating experience I will not quickly forget. Having the opportunity to travel abroad for writing a master's thesis and to talk to different experts in the field of climate change adaptation, from two different countries, is a privilege that not many in the world have, as I was several times reminded of by someone very close to me. Therefore, I am grateful and appreciative of having had this chance, which I hope will show in my writings.

Yet, without the support and assistance of several people, it would not have been possible to do this research. First, I want to thank my supervisor Jeroen van der Heijden at the Environmental Policy Group, who supported me with his academic insights and the flexible attitude I needed during the research process. I also want to thank NWO, together with the L.A. Buma Stichting, for providing the majority of the finances needed to execute my fieldwork abroad. Furthermore, I want to specifically extend my gratitude to the faculty of Environment and Biotechnology at the Van Lang University, and Judith van Leeuwen and Thu Trang Tran for establishing the contact with this faculty. The faculty played a very important role in facilitating interviews in HCMC and in providing a working place for me to work on and prepare for my interviews and to help me understand some of the Vietnamese customs and politics. I want in particular to acknowledge the help from Mrs. Kim Oanh Le and Mr. Truong Le Minh in this regard, who have made me feel welcome in this immense city by also inviting me into the comforts of their own homes. Their hospitality helped to make my experience in Ho Chi Minh City a grand one. Regarding my respondents, I want to thank them for their time and willingness to share their information and knowledge about the partnership between Rotterdam and HCMC with me. Although I put forward a critical perspective on the partnership in this research, this is not a personal critique nor a critique on the content of the work done within the partnership, but is a result of the particular theoretical and methodological approach I have used.

Finally, for my family who has supported me through my whole academic endeavour, thank you for being there for me when I needed you the most. For Juliana, who spend all those long days with me at the university, especially near the end, thank you for being the friend that I needed, for your patience, understanding and laughter. Last but not least, to my great love Maarten. I cannot imagine how I would have done this without your love, compassion and continuous encouragement. I dedicate this piece to all these loved ones so near to me.

Fenna Wielenga



# Abstract

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In recent years, urban governance has become an important form of governance in the field of climate change adaptation. Specifically, the establishment of partnerships between cities has been promoted as a useful policy instrument by global city networks to exchange knowledge on this topic and to advance the implementation of climate adaptation measures. For this reason, delta cities, cities that are highly vulnerable for climate change impacts, have united in the city network Connecting Delta Cities. Within this network, Rotterdam and Ho Chi Minh City have collaborated to develop a Climate Adaptation Strategy for Ho Chi Minh City and to implement a pilot project in one of the city's districts. This research evaluates the outcomes of this partnership for the adaptive capacity of Ho Chi Minh City, to establish whether urban partnerships are indeed able to tackle complicated issues such as climate change adaptation. Results show that while this partnership was successful in facilitating the exchange of knowledge and learning processes between the two cities and the development of an adaptation strategy, it was not able to materialize such new knowledge into concise adaptation measures on the ground. It is therefore argued that this partnership is stuck in the transition from raising awareness to implementation practices. Hence, urban partnerships thus know limits to what can be achieved concerning climate adaptation and it is therefore recommended that city networks pay more attention to the aspects of cases that shed light on these limits so that cities can successfully protect themselves against the impacts of climate change in the future.

Key words: urban partnerships, climate adaptation, adaptive capacity, Connecting Delta Cities network, Ho Chi Minh City, Rotterdam.

# Table of Contents

---

1. INTRODUCTION.....	1
1.1. PROBLEM STATEMENT .....	3
1.2. RESEARCH OBJECTIVES.....	4
1.3. RESEARCH QUESTIONS.....	4
1.4. JUSTIFICATION .....	5
2. CONCEPTUAL FRAMEWORK.....	7
2.1. CLIMATE GOVERNANCE .....	8
2.1.1. FROM A MULTILATERAL TO A POLYCENTRIC PERSPECTIVE .....	8
2.1.2. CLIMATE ADAPTATION GOVERNANCE.....	10
2.2. URBAN CLIMATE GOVERNANCE .....	11
2.2.1. THE DEBATE.....	11
2.2.2. URBAN PARTNERSHIPS.....	15
2.2.3. ROLE DIVISION WITHIN URBAN PARTNERSHIPS .....	17
2.3. ADAPTIVE CAPACITY .....	18
2.3.1. KEY DETERMINANTS OF ADAPTIVE CAPACITY .....	20
CONCLUSION .....	23
3. RESEARCH DESIGN .....	24
3.1. A CASE STUDY DESIGN.....	24
3.1.1. WHY A CASE STUDY? .....	24
3.1.2. CASE SELECTION .....	24
3.2. METHODS.....	25
3.2.1. LITERATURE REVIEW .....	25
3.2.2. SEMI-STRUCTURED INTERVIEWS .....	26
3.3. DATA ANALYSIS.....	27
3.4. LIMITATIONS .....	28
3.5. VALIDITY AND RELIABILITY.....	29
4. THE PARTNERSHIP BETWEEN ROTTERDAM AND HCMC .....	32
4.1. LOCAL POLITICS IN THE NETHERLANDS .....	32
4.1.1. POSITION OF THE MUNICIPALITIES.....	32
4.1.2. THE HISTORY OF URBAN PARTNERSHIPS IN THE NETHERLANDS.....	33
4.1.3. THE INTERNATIONAL POLICY OF ROTTERDAM .....	34
4.2. LOCAL POLITICS IN VIETNAM .....	35
4.2.1. A CENTRALIZED POLITICAL STRUCTURE .....	35
4.2.2. ASIAN CONTEXT FOR URBAN PARTNERSHIPS .....	37
4.3. VIETNAMESE OWNERSHIP, DUTCH PARTNERSHIP .....	39
CONCLUSION .....	41

5.1. ROLE DIVISION WITHIN THE PARTNERSHIP .....	43
5.1. ROLE DIVISION WITHIN THE PARTNERSHIP .....	43
5.1.1. MUNICIPALITY.....	43
5.1.2. NATIONAL LEVEL OF GOVERNMENT .....	43
5.1.3. EMBASSY AND CONSULATE.....	44
5.1.4. LEAD STANDING OFFICES.....	44
5.1.5. KNOWLEDGE INSTITUTIONS.....	45
5.1.6. AFFILIATES .....	45
5.2. COMPARING TRANSNATIONAL “DEVELOPMENT” PARTNERSHIPS WITH CLIMATE PARTNERSHIPS.....	47
5.2.1. MUNICIPALITIES AS POLITICAL ENGINES .....	48
5.2.2. NATIONAL LEVEL: A SYMBIOTIC RELATIONSHIP .....	49
5.2.3. A LIMITED PRESENCE OF CIVIL SOCIETY.....	49
5.2.4. CLIMATE SPECIFICS? PRIVATIZATION AND SCIENCE.....	51
CONCLUSION .....	53
 6. CAPACITIES AND INFLUENTIAL FACTORS.....	 54
6.1. THE CAPACITIES.....	54
6.1.1. KNOWLEDGE AND SKILLS .....	54
6.1.2. TECHNICAL CAPACITY .....	57
6.1.3. FINANCIAL CAPACITY .....	58
6.2. INFLUENTIAL FACTORS.....	60
6.2.1. DESIGN AND SCOPING OF THE PARTNERSHIP .....	60
6.2.2. POLITICAL LEADERSHIP AND CONTINUITY .....	62
6.2.3. INSTITUTIONAL CONSTRAINTS .....	63
6.2.4. INTERNATIONAL “DONOR” ENVIRONMENT .....	64
CONCLUSION .....	66
 7. DISCUSSION AND CONCLUSIONS.....	 68
7.1. ROTTERDAM AND HCMC – STUCK IN TRANSITION.....	68
7.2. URBAN PARTNERSHIPS: WHAT CAN BE EXPECTED?.....	70
7.3. REFLECTIONS ON THEORY.....	72
7.3.1. THE VALUE OF URBAN GOVERNANCE.....	72
7.3.2. POLYCENTRIC GOVERNANCE.....	74
7.3.3. THE CAPACITIES.....	75
7.4. RECOMMENDATIONS FOR POLICY MAKERS .....	76
7.5. RECOMMENDATIONS FOR FUTURE RESEARCH.....	76
 BIBLIOGRAPHY.....	 78
ANNEX 1 - INTERVIEW LIST .....	91
ANNEX 2 – INTERVIEW ANALYSIS CODING .....	92

## List of Abbreviations

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Climate Adaptation Strategy for Ho Chi Minh City	CAS
Communist Party of Vietnam	CP
Conference of the Parties to the UNFCCC	COP
Connecting Delta Cities	CDC
C40 Cities Climate Leadership Group	C40
Ho Chi Minh City	HCMC
Intergovernmental Panel on Climate Change	IPCC
Letter of Intent	LoI
Memorandum of Understanding	MoU
Public-private partnership	PPP
United Nations Framework Convention on Climate Change	UNFCCC

# 1. Introduction

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*“Climate change is more than the hobby of a mayor. Cities will need to be engaged with climate change every day. There is no time to lose.”<sup>1</sup>*

- Mayor of Rotterdam, Ahmed Aboutaleb

It will not have been the first, nor the last time that the mayor of Rotterdam promotes the action of cities with regards to climate change. Not only because Rotterdam has to deal with challenges posed to the city by climate change, such as more extreme rainfall patterns and rising sea levels, but also because Rotterdam presents itself as the example for other delta cities around the world on climate adaptation (Dircke and Molenaar, 2015). The fact that Rotterdam launched the world’s first Climate Adaptation Academy and established the Connecting Delta Cities (CDC) network, a city network that connects mega delta cities across the globe under the auspices of the C40 Cities Climate Leadership Group (C40), is a case in point (C40, 2018; Dutch Water Sector, 2017).

Simultaneously, at almost ten thousand kilometres distance from Rotterdam, the delta city Ho Chi Minh City (HCMC) in Vietnam is struggling with an increased occurrence of more extreme and frequent tidal floods and changing precipitation patterns in the rainy season, as well as hotter temperatures during dry season (Storch and Downes, 2011; Molenaar et al, 2013). Due to the rapid economic development of the city and the rising population growth, it has become increasingly urgent for HCMC to change the spatial planning of the city so that it is better able to cope with the changing climatic circumstances and the other social-economic pressures the city is facing (Molenaar and van de Groep, 2011). Because of Rotterdam’s experience in developing a climate adaptation strategy (CAS) for the city and redeveloping the city by situating harbour activities in front of the coast instead of in the city, which opened up space in the city for other spatial purposes, HCMC reached out to Rotterdam for its knowledge and expertise on how to tackle such issues (Moens and Oudkerk Pool, 2016; Molenaar and van de Groep, 2011). As such, from 2009 onwards they have cooperated in an urban partnership to develop an adaptation strategy for HCMC and to make a first start in implementing this strategy via a pilot project (Molenaar and van de Groep, 2011). The outcome of the partnership has been highlighted as a success within the C40’s good practice guide on climate adaptation in delta cities (C40, 2016).



Figure 1. Urban flooding in HCMC (Thanh Nien Daily, 2016)

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<sup>1</sup> Translated and adapted from H2O, 2017.



This activity of urban partnering on the issues of climate change does not stand isolated but is part of a larger trend noticeable within climate governance. Next to the traditional approach of negotiating an international legally binding treaty to tackle a global issue, in the last two decades climate governance has been marked by a growing number of voluntary initiatives by local communities, the private sector and sub-national authorities, who have taken their own actions on climate change mitigation and adaptation (Falkner, 2016). However, not until the international climate negotiations in Copenhagen in 2009 has it been recognized that the response to climate change was no longer a single global one, but rather one coming from multiple geographical levels and scales of governance, including cities (Bulkeley, 2010; Hoffman, 2011). The disappointing results of these negotiations shifted attention within politics and academics to alternative forms of governance (Castan Broto, 2017; Hoffman, 2011). Cities gained special consideration in this regard, as cities “exercise a degree of influence over emissions of greenhouse gases in ways which impact directly on the ability of national governments to achieve internationally agreed targets” (Bulkeley and Betsill, 2003, p. 2). The latest multi-lateral agreement established in Paris has further solidified this trend by recognizing the prevalence of domestic politics in climate change (Falkner, 2016). Also in science, particularly in the latest Intergovernmental Panel on Climate Change (IPCC) report, there has been separate recognition for the role of urban areas, especially in building resilience to the impacts of climate change (Revi et al, 2014). More recently, IPCC also organized a special conference to establish a global research agenda on cities and climate change in March 2018 (Cities IPCC, 2018). Being highly aware and part of these developments, cities have made use of their position as “practitioners” in climate change and have over time bundled their capacities in city networks, such as C40, to gain more leverage to participate at other political levels of decision-making on climate change issues (Bulkeley and Betsill, 2013; C40, 2018). As such, urban climate governance is firmly established as an additional form of governance for the climate change agenda.

Within urban climate governance, it has rather been the theme of urban adaptation in which in recent years significant advances have been made in policy, practice and science (Carter et al, 2015). Due to the current projections on the rise of the global mean temperature, which will very likely not remain below 2 degrees Celsius, adaptation has become a necessity for cities, in particular for delta cities (Carter et al, 2015). In light of this, the establishment of the CDC network, initiated by Rotterdam, has been one of the responses within urban climate governance to address this issue. This network is not the largest one, including only thirteen global cities, but by connecting these delta cities, they are enabled to exchange knowledge, experiences and best practices to support them in setting up their adaptation policies and strategies (CDC, 2018; Molenaar et al, 2013). Furthermore, the CDC network has facilitated the formation of strategic partnerships between specific cities, as shown by the connecting lines within the circle of cities in figure 2. This manner of working aligns with the general approach used by C40 in advancing climate action (Molenaar et al, 2013).

Although the creation of partnerships between cities in itself is not a new phenomenon, the fact that such partnerships revolve around tackling climate adaptation issues, is a relatively new concept about which little is yet known. As being the so called leading delta city in the world, Rotterdam is at the heart of this development. Thus, to delve deeper into a partnership that Rotterdam has with another delta city, especially one of which the outcome is exemplified as a ‘good’ case, could possibly

give us a better understanding of this particular form of urban climate governance. That is what this research aims to do.

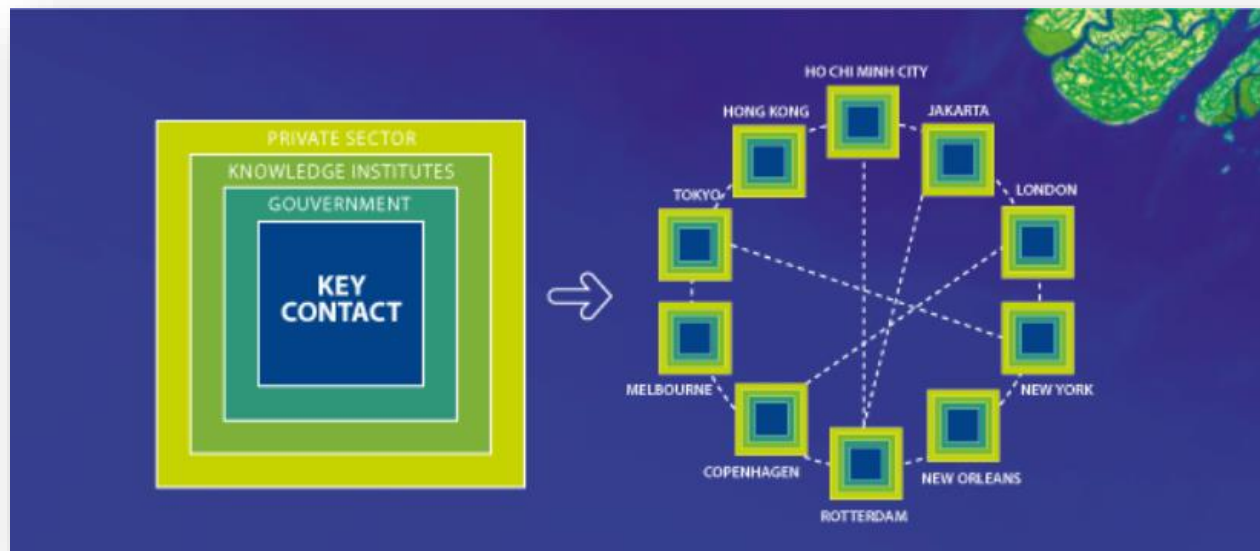


Figure 2. A visual representation of the CDC network and the bilateral partnerships between cities within the network. The member cities Singapore, Venice and Washington DC are not represented in this figure (CDC, 2018).

## 1.1. Problem Statement

City networks, in which urban partnerships are formed, hold that their work with regards to climate adaptation and mitigation is essential in furthering climate action (C40, 2017). This is for example shown by the rhetoric of C40 that holds that “Cities [...] are on the frontline in the battle against climate change” or that “cities are making a meaningful global impact by implementing sustainability practices” (C40, 2011; Molenaar et al, 2013, p.11). More specifically with regards to climate change adaptation and delta cities, it is conveyed that partnerships and connections between cities are tools that help to increase the capability of cities to adapt to the impacts of climate change, also known as the adaptive capacity of cities (Burton et al, 2001; C40, 2016). Or, in the words of Aboutaleb and former C40 chairman Michael Bloomberg, “together, we have made great strides in tackling the unique set of issues delta cities face” (Molenaar et al, 2013, p.11).

However, the issue is that there is in fact little empirical evidence on the value of urban partnerships as policy instruments for complex problems such as climate change (Harman et al, 2015). More particularly, there is little knowledge about the manner and under which conditions they contribute to increasing the adaptive capacity of delta cities to anticipated climate change impacts. One of the reasons for this is that the concept of urban partnership is not separately distinguished within the scientific literature on urban climate governance. Moreover, scientific literature has predominantly focused on the efforts of cities to reduce GHG emissions, whereas adaptation in urban climate governance has had a subordinate position (Bulkeley and Tuts, 2013). Additionally, little empirical research is specifically focused on delta cities, while delta cities are vulnerability hotspots for climate

change impacts and much attention within these cities is placed on ameliorating their adaptive capacity to face these impacts (Molenaar et al, 2013; Nicholls et al, 2007). The fact that on the one hand urban partnerships are promoted as a manner to achieve climate action, while on the other hand there is insufficient concrete and independent evidence to back up such statements, could have important future implications for climate action and climate governance in case the evidence does not match with the oratory.

Therefore, this research intends to fill these knowledge gaps by generating empirical evidence about the value of urban partnerships as policy instruments to enhance the adaptive capacity of delta cities to climate change. The partnership between Rotterdam and HCMC will function as a case study.

## **1.2. Research Objectives**

Following the foregoing problem statement, the main aim of this research is to generate empirical knowledge on the partnership between Rotterdam and HCMC in order to draw lessons about the value of urban partnerships as an instrument to improve the adaptive capacity of (delta) cities. Such insights are of interest to local policy makers, who are investigating ways to improve their adaptive capacity to climate change and for scholars engaged in research on the effectiveness of urban climate governance for climate adaptation.

For this research project to go full circle, initially the existing state of knowledge is synthesized to gain insights into the key explanatory factors for urban climate governance effectiveness. Subsequently, an in-depth empirical study informed by this knowledge and factors is carried out. Finally, the lessons learnt from this empirical research are used to reflect on the existing state of knowledge. To support this set-up, the main objective of this research is split up into four sub-objectives. The first three of these objectives address the empirical part of this research, while the last one involves the reflection on the conceptual framework underlying this research.

The first sub-objective of this research is to give an initial insight in how urban partnerships on climate change are internally organized. As nothing specifically has been written on this, the internal organization in the partnership between Rotterdam and HCMC can help to give a first understanding on which actors are involved in these types of partnerships and what the role division between these actors is.

The second sub-objective is to empirically explore which determinants of adaptive capacity are addressed by the partnership between Rotterdam and HCMC. As adaptive capacity cannot be measured directly (see section 2.3.1), the determinants of adaptive capacity will function as the variables that give evidence on the performance of the partnership on improving adaptive capacity.

As a follow up to the second objective, the third objective of this research is to analyse which factors can explain why the determinants of adaptive capacity are or are not addressed by the partnership between Rotterdam and HCMC. This will give insights on the underlying processes and dynamics that enable or prevent an urban partnership to perform in improving the adaptive capacity of cities.

Finally, the last sub-objective is to assess the value of urban partnerships as a policy instrument to improve the adaptive capacity of (delta) cities by using the case study to reflect on existing knowledge and define lessons learned. This makes it possible to say something about the value of urban climate governance as an alternative or complement to other forms of climate governance. Central to this objective is to reflect on the scientific debate on the performance of cities in the field of climate governance.

### **1.3. Research Questions**

Based on the outlined objectives, the following question takes centre stage in this research:

*How and to what extent has the partnership between Rotterdam and Ho Chi Minh City contributed to the adaptive capacity of Ho Chi Minh City?*

To answer this main research question, the following sub-questions have been formulated.

- I. What is the role division between the different parties involved in the partnership between Rotterdam and HCMC?
- II. Which determinants of adaptive capacity are addressed by the partnership and in what manner?
- III. Which factors have influenced the outcomes on the determinants of adaptive capacity generated by the partnership and to what extent have the different identified parties played a role in this?

### **1.4. Justification**

The formation of urban networks and partnerships has accelerated in the last years (Acuto and Rayner, 2016). Consecutively, they have gained increased recognition as legitimate and significant forms of climate governance (Bulkeley and Tuts, 2013). It can therefore be expected that urban partnerships will have an essential influence in shaping climate politics and governance for the future. At the same time, with regards to climate governance themes, a shift has taken place from a predominant focus on mitigation, to one in which adaptation is now also recognized as a vital part of any policy response to climate change (Bulkeley and Tuts, 2013). The combination of the developments on urban partnerships and climate adaptation thus raises important questions about the details of the relationship between them and what this means for climate change governance. Hence, this research ties both elements together to make a first step in exploring this interrelationship.

With regards to adaptation, the focus is placed on the adaptive capacity of delta cities, since these are the areas that are considered to be among the most vulnerable for climate change impacts (Nicholls et al, 2007). Moreover, in most cases, adaptive capacity is the central element of climate adaptation intervention (Brooks and Adger, 2004; Jones et al, 2010). Having empirical knowledge on how to ameliorate the adaptive capacity of these cities is thus both an academic and socially relevant topic

for current, but also future practices of policy makers and scientists on climate change adaptation and governance.

Considering partnerships, this research is focused on a transnational partnership, between a city situated in the global North and a city situated in the global South, for two reasons. The first is that the current research on partnerships for climate adaptation either focuses on regional partnerships in the global North, or on partnerships between government, business and civil society, rather than the cooperation between local authorities from different cities (Bauer and Steurer, 2014; Harman et al, 2015). Hence, researching a transnational partnership thus fills a gap in the literature. Secondly, while cities in the global South are expected to be most disproportionately affected by climate change, cities in the global North have in general more experience with adapting to climate change as well as access to more resources (Heinrichs et al, 2013). The links between these two types of cities thus only will become more relevant in the future, for both political and economic reasons.

As there is little existing research available on the specific interrelationship between urban partnerships and adaptation, it is especially warranted to execute an in-depth and exploratory case study, in which questions are asked about how urban partnerships are used for this purpose (Flyvbjerg, 2006). By taking this approach, this research attempts to give some first insights in the relation between urban partnerships and adaptive capacity. This can help to identify interesting leads in the field of urban climate adaptation and governance that are important to further investigate and study. Future research can then use this study as a starting point for the development of generative patterns on the topic. In this manner, it will eventually be possible to better understand the effectiveness of urban governance in ameliorating the adaptive capacity of (delta) cities.

To accomplish this study, the remainder is structured as follows. The next chapter starts with outlining the theoretical concepts underlying the research questions and synthesizing the existing knowledge about these concepts. Subsequently, chapter 3 gives details on the research design and methods used to gather data. Chapter 4 elaborates on the background context of the partnership between Rotterdam and HCMC, especially with regards to the relative position of cities in the Dutch and Vietnamese political structure, as well as describes the details of the case study itself. Chapter 5 and 6 provide the main results, in which chapter 5 delves into the role division of the different parties within the partnership, while chapter 6 addresses the outcomes on the key determinants of adaptive capacity and the factors that have influenced these outcomes. To finalize, chapter 7 provides overall conclusions and found results are used to reflect on the theoretical literature and concepts provided in the following chapter. Additionally, some recommendations for policy makers and future research are provided. By following this structure, this study attempts to systematically assess the value of an urban partnership as a policy instrument to enhance adaptive capacity.



## 2. Conceptual Framework

In this chapter, the conceptual framework of this research will be accounted for. As the topic of urban governance on climate adaptation falls under the larger realm of climate governance, the first section will provide background information on the development of climate governance in the scientific literature, with a special focus on the transition from a multilateral perspective on climate governance to a more polycentric one. Additionally, since adaptation rather than mitigation is scrutinized in this research, the specific governance challenges for this domain are also highlighted. Subsequently, the second section delves deeper into urban climate governance, as one of the forms of polycentric climate governance. In this section the views on urban partnerships will be elaborated upon, as well as the current debate on the value of urban climate governance as an alternative form of climate governance. The concept of adaptive capacity and its key determinants are introduced in the last section of this chapter to provide the variables that can be measured in the case study to be able to say something about the effectiveness of urban climate governance in the realm of climate adaptation. Hence, the conceptual framework of this research is self-constructed as the concepts of urban governance and adaptive capacity, coming from separate strands of literature, are for this research tied together in one framework.

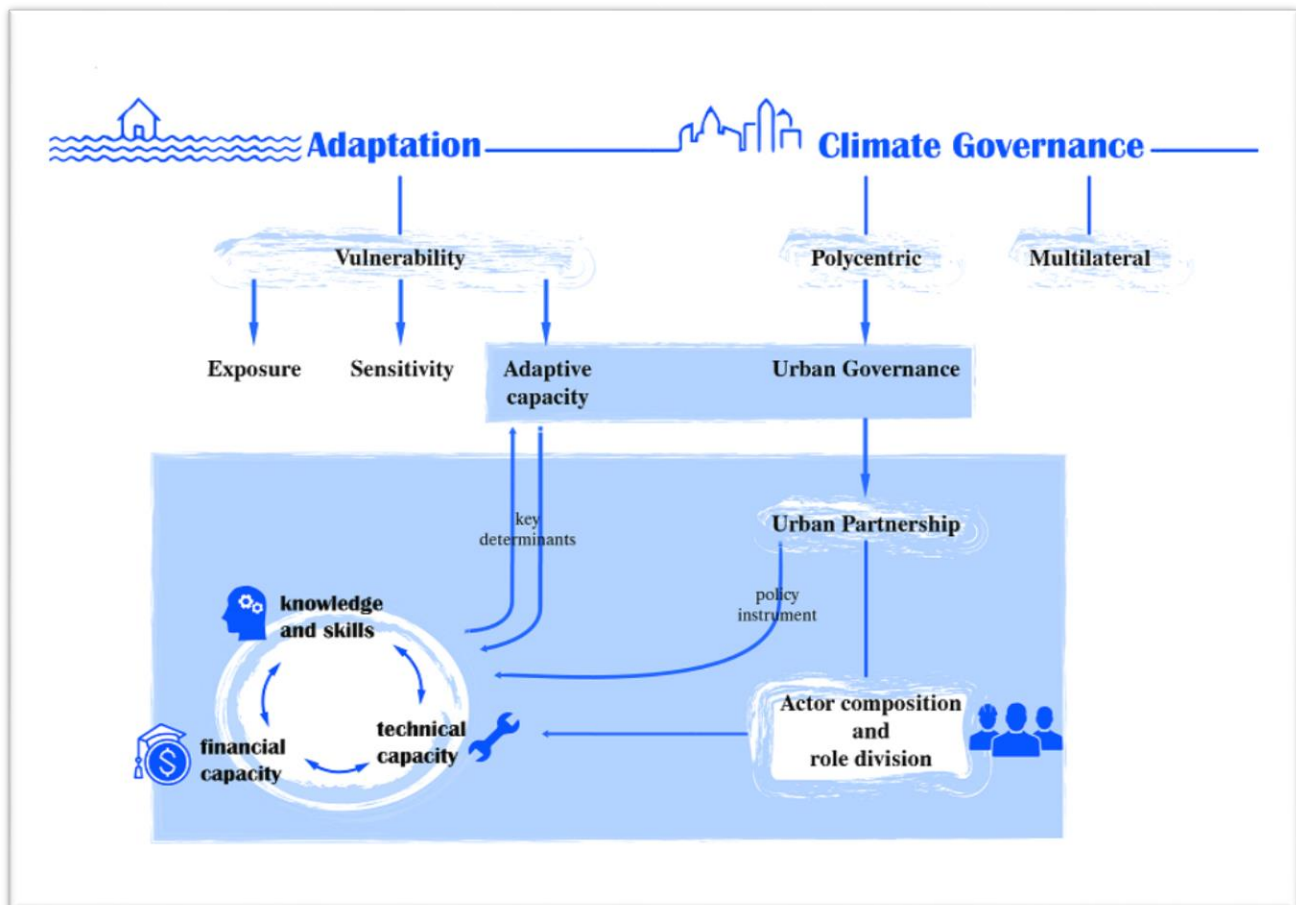


Figure 3. Visualization of the conceptual framework. The blue boxes encompass the core theoretical concepts of the research. The lines represent the connections between the different concepts as used in this research.

## 2.1. Climate Governance

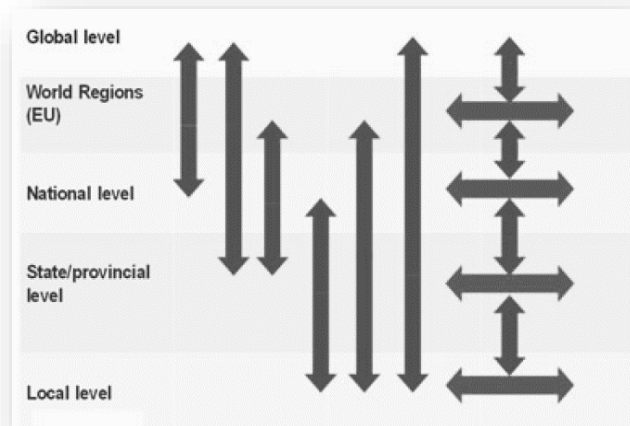
### 2.1.1. From a multilateral to a polycentric perspective

As the issue of climate change has gained increasing attention and is more and more recognized as an issue that requires attention in its own right, and not as one of the multiple environmental problems the world is facing, so has the area of climate change governance emerged and developed (Knieling and Filho, 2013). Within the scientific literature, authors are specifically concerned with understanding how climate change is governed, by whom and what the consequences and challenges are of certain modes of governance (Bulkeley and Newell, 2010). In much of the literature, **governance** refers to the wider use of the term, in the sense that it is about all forms of regulations to provide common goods for a given community or society on different levels of decision-making, which can range from self-regulation by civil society to formal summit negotiations at the UN level (Andonova et al, 2009; Knieling and Fröhlich, 2013). Based on this interpretation of governance, **climate governance** can be further defined as the “wide variety of coordinating methods contributing to the adaptation and mitigation of climate change” (Knieling and Filho, 2013, p. 1). Although from this interpretation it can be assumed that climate governance is a public business, this does not necessarily mean climate governance is only done by public actors (Andonova et al, 2009). On the contrary, most authors argue that climate governance transcends levels of politics and sectors, as well as involves many diverse type of stakeholders (Bulkeley and Newell, 2010; Hoffmann, 2011; Knieling and Filho, 2013; Saerback et al, 2017).

Yet, this has not always been the dominant perspective on climate governance. For a long time, climate governance was seen as simultaneous to the yearly negotiations by the Conference of the Parties (COP) under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC) (Betsill et al, 2015; Hoffman, 2011). This view on climate governance is not surprising. It was also the global level where the issue of the correlation between rising CO<sub>2</sub> levels and a rise in mean global surface temperature was first raised, during the First World Climate Conference in 1979, organized by the World Meteorological Organization (Betsill, 2015). This then set the precedent for the many international meetings on climate change that came after, of which the summits in Kyoto, Copenhagen and Paris are most well-known (Betsill, 2015). What certainly also has had an influence is that, from the beginning onward, climate change has been framed as a problem with a global scope, with CO<sub>2</sub> emissions transcending the boundaries of nation states, making it impossible for one country to tackle the problem alone (Bulkeley and Newell, 2010; Cole, 2011). Hence, when framed in such a spatial manner, it is only logical that the global level is the level where climate governance takes place (Bulkeley and Newell, 2010; Hoffman, 2011).

While this view of climate governance is still just as relevant, in the last years a shift has taken place in the perspective on climate governance, from a global to a more **polycentric** outlook. This shift arose due to the recognition that the governance of climate change on the global level can only be effective when backed up by efforts made at the national, regional and local level (Cole, 2011). Furthermore, this focus on governance processes at the other levels than the international one has is also the consequence of a growing pessimism about the lack of action undertaken at the latter (Betsill

et al, 2015). It has therefore been argued that the lower levels of governance are not only needed for implementation of what is decided upon by the global level, but that for governance institutions to work effectively at each level, they require a certain degree of influence in the decision-making process as well as independence in how to form climate policy (Cole, 2011). This implicates also an alteration in responding to climate change from a single directed policy that is designed in a top-down manner to a more diffuse and dynamic setting where a diverse group of actors take action,



leading to multiple outcomes that are only loosely connected with the negotiations that are taking place at the international level, as is depicted by figure 4 (Hoffman, 2011). This is the policy-centric view on climate governance. It also originates from this view that some authors have identified the trend of cities gaining importance in shaping climate governance and possibly providing a more effective alternative to the international form of climate governance (see section 2.2).

Figure 4. Polycentric governance model (adapted from Jänicke, 2017)

For some, the fact that climate governance is more dispersed is positive, as it is seen to enhance the effectiveness of governance. It is argued that this promotes the interaction between different levels, which creates new opportunities for learning and innovation and stimulates the possible potential of each level (Victor et al, 2005; Saerbeck et al, 2017). Cole (2011) argues in a similar manner by pointing out that the multiple sub-issues of which climate change consists, from energy transition to flood protection mechanisms, are in this manner addressed by the governmental levels whose responsibilities match the best with the scale of the issue. However, others have also expressed the concern that when climate governance becomes too fragmented, and the individual elements are not sufficiently integrated, this set-up can become ineffective as stakeholders can ‘shop’ policy at the level that best fits their own interests and not those of society (Keohane and Victor, 2011). Additionally, policy made at different levels also runs the risk of opposing each other if not sufficiently coordinated (Termeer et al, 2017). From this perspective, there is more attention for how the role of UNFCCC should be switched from an authority that governs climate change to one of a coordinator in a landscape of climate initiatives taking place at multiple levels and in multiple sectors (Betsil et al, 2015; Keohane and Victor, 2011). In this regard, especially the importance of the linkages between one and another to strengthen climate governance as a whole are pointed out (Betsill et al, 2015). In sum, one could thus state that to effectively address climate change it is of importance that its governance is taking place at the most relevant scale and level, while simultaneously all different levels and scales should be to such an extent connected that the different activities considering climate change are in synergy with each other. Hence, climate governance thus needs to be constantly balanced between centralized and de-centralized forms of regulation. Yet, how this balance is

acquired needs to be determined by more specific knowledge on which governance mechanisms at which levels are most effective and helpful in achieving climate mitigation and climate adaptation. The next section will highlight the specific challenges for climate adaptation governance in this regard.

### 2.1.2. Climate adaptation governance

As climate change mitigation policies in the last decades have not been able to sufficiently curb CO<sub>2</sub> emissions, adaptation has gained increasing importance as a policy issue to make sure that the world will be able, now and in the future, to cope with altering climate patterns caused by anthropogenic climate change (Bauer et al, 2012). Traditionally, climate adaptation has mostly been done at an individual level, by households, companies and communities, without much interference from the government (Bauer et al, 2012; Huitema et al, 2016). However, due to more rapid developments in climate change and an increase in the complexity of societies, adaptation requires more collective action and attention of policy-makers (Jordan and Huitema, 2014). As such, adaptation is a relatively young and undeveloped policy field which only limitedly features at the political agenda (Termeer et al, 2017). In comparison to climate mitigation, the policy domain is thus much less defined and responsibilities are less clearly divided (Termeer et al, 2017). This is also more difficult for the adaptation field, since adaptation has a less common agreed goal or mission (Huitema et al, 2016). Whereas CO<sub>2</sub> emissions are quantifiable and more targeted policies can be formulated accordingly, adaptation is a cross-sectoral issue, involving a variety of physical and social systems such as health, infrastructure, housing and tourism, leading to a fragmented governance system (Bauer et al, 2012; Huitema et al, 2016; Termeer et al, 2017). This is the first challenge within the governance of climate adaptation. The second challenge is that adaptation governance has to deal with a high level of uncertainty, as scientific models are not always applicable to local situations and current knowledge is still under development (Knieling and Fröhlich, 2013). While policy makers want to account for this uncertainty by including the knowledge that is there, the question of which knowledge to include and from whom is a challenge in itself and can turn into a normative dilemma, as this process is highly susceptible to political and economic interests (Bauer et al, 2012). Thirdly, adaptation governance has in common with mitigation governance that both have to deal with long time-horizons, which are not only difficult to incorporate in current regulations, but also requires constant dedication from policy makers and tax payers, which is often lacking (Knieling and Fröhlich, 2013; Termeer et al, 2017). Fourthly, relating to the formerly outlined concerns about polycentric governance, adaptation governance has to deal with different levels of politics which all have different judicial powers (Bauer et al, 2012). More than mitigation, adaptation has a local character, but the judicial power to formulate an adaptation response is often not adequate at this level, while linkages with the political levels that have these powers are not always sufficiently developed or understood (Bauer et al, 2012; Huitema et al, 2016). Finally, adaptation governance has to deal with the dilemma that while non-state actors are very important for the implementation of adaptation policy, their inclusion in decision-making processes could also be normatively undesirable as they do not always represent the interests of society (Bauer et al, 2012; van der Heijden, 2018). All in all, actors governing climate adaptation thus have difficult choices to make about the inclusion or exclusion of certain actors, the alignment of different sectors, the scaling of an adaptation issue and the selection of the most

appropriate policy instruments. The next section will explain how cities are viewed in taking a role in such governance tasks.

## 2.2. Urban Climate Governance

In the shift of perspective on climate governance from a multilateral to a more polycentric one, specific attention has been given within academic literature to the governance of climate change in the urban context. This is because on the one hand cities cause a significant amount of CO<sub>2</sub> pollution, while on the other hand cities are also expected to bear the direct impacts of climate change, especially considering the cities located in delta's (Kern and Alber, 2009; Lenhart, 2015; Nicholls et al, 2007). At the same time, cities also are the main centres of economic growth in the world, therefore playing potentially an important role in financing climate change policy measures (Heinrichs et al, 2013). Although the scientific literature only picked up the activities of cities on climate change in the last decade, urban actors, especially in the global North, have already taken action in this field since the 1990's, initially in a more individual and less organized manner (Bulkeley, 2010; Heinrichs et al, 2013). Such activities encompassed developing new financial mechanisms for climate projects, deploying novel technologies and raising political awareness, especially in the domain of climate mitigation (Bulkeley and Betsill, 2013). Over time, such actions have been integrated in existing city transnational city networks, such as C40, enhancing the visibility of **urban climate governance** and creating increased scientific attention for urban action on climate change (Bulkeley, 2010; Bulkeley and Betsill, 2013; Castan Broto, 2017). Especially the manner in which city networks have formed and are used strategically to raise the profile of cities in national and international climate debates, has lead the scientific literature to focus predominantly on the power relations within city networks and between city networks and other governance actors (Allen, 2010; Acuto and Rayner, 2016). However, besides the focus on power relations, there is a bigger debate going on about the fact whether urban governance can actually take meaningful climate action, in which proponents put large trust in cities, while critics point out the flaws and limitations of urban governance (van der Heijden, 2018). It is this debate that is of specific importance to this research and thus will be highlighted next.

### 2.2.1. The debate

On the proponents' side of urban climate governance, there is very little confidence in the international and national arena to be able to solve problems related to climate change. Arguments to support this view are that the lack of enforcement mechanisms for international treaties, such as the Paris agreement, makes such agreements ineffective and that the continuity in climate change policy is very dependent on the willingness and political views of individual national leaders (Barber, 2017; Sassen, 2015). Benjamin Barber, author of the book "If mayors ruled the world" is one of these proponents and his argumentation focuses specifically on the interaction between national and local level. He states that while national government officials are caught up by party politics, city leaders are more engaged with the citizens that fall under their jurisdiction and therefore can better understand the problems citizens have and the solutions they need for climate change related issues (Barber, 2017). While he acknowledges that cities do not always have the authority or resources to undertake action needed, he ascribes this as a fault from the national political level to provide cities



with these capabilities (Barber, 2017). The essence of his argumentation is thus that while cities are willing, capable and legitimate actors to achieve progress in solving climate change problems, they have not yet reached their potential due to barriers posed by the national level. As such, his argumentation has a rather political nature. Another political argument posed by urban climate governance proponents is that while nation states are constrained to talk openly about climate-related challenges due to bi- and multilateral affairs in other focus areas, local authorities are not and can thus more openly discuss such challenges and share ideas, thereby by-passing the confinements of international protocols (Lenhart, 2015; Sassen, 2015).

Some other authors, however, focus more on practical arguments to argue in favour of urban climate governance. Such arguments, for example, focus on the fact that by housing a broad range of actors, such as NGO's, private companies and essential public institutions, cities are more easily able to facilitate the development of networks that are needed to implement climate change policy (Knieling and Klindworth, 2016; Sassen, 2015). Related to this is the argument that cities are important global hubs that connect people from all over the world, showcasing that local environments such as cities also have an important international dimension and are thus highly relevant for climate change governance (Sassen, 2015). Nonetheless, an even more important practical argument is the idea that cities make it possible to implement and apply new scientific knowledge and technologies, which are not yet big enough to be applied at the national level (Sassen, 2015). Hence, cities are good 'testing areas' out of which positively assessed measures can be replicated and scaled up to other areas (Sassen, 2015; Bulkeley and Castan Broto, 2012; Lenhart, 2015). However, this argument is often presented in a way that the development of climate models and strategies are already sufficient evidence in itself to show that cities undertake climate action, while very little is being said about the actual implementation of what flows out of these models and strategies (Hodson and Marvin, 2010). It has therefore been pointed out that such an argument should be considered with reservation (van der Heijden, 2018). Finally, the fact that cities will face the immediate impacts of climate change and that they are in many cases vulnerable entities, makes it for proponents not always a matter of practicality or politics, but a matter of scaling climate change issues with the right level of authorities (Knieling and Klindworth, 2016; Sassen, 2015). Cities are simply not able to avoid taking governance action on climate change, since they will be immediately affected (Sassen, 2015).

On the more critical side of the debate, most of the arguments challenge or temper the positive outlook provided by the advocates of urban climate governance. First of all, critics caution for the unequal influence and impacts urban climate governance has for different groups in society. This perspective becomes most concise in the argumentation of Bouteligier (2014) and Hodson and Marvin (2010) who reason that pilot projects focused on climate mitigation or adaptation in the city are developed by a particular coalition of social groups, including large consultancy firms and investment agencies, which have interests that are not driven by social, but rather private incentives. Hence, they warn that urban climate governance is at the risk of being socially exclusive, creating 'ecological' enclaves that only provide 'bounded security' (Bouteligier, 2014; Hodson and Marvin, 2010). In other words, security against climate impacts within the city is only developed for the rich in attractive city areas, but not for the urban poor. For example, after the 2005 floods in

<b>Concept</b>	<b>Definition</b>
Governance	<i>All forms of regulations that provide common goods for a given community or society on different levels of decision-making (adapted and combined from Andonova et al, 2009; Knieling and Fröhlich, 2013)</i>
Climate governance	<i>The wide variety of coordinating methods contributing to the adaptation and mitigation of climate change (Knieling and Filho, 2013).</i>
Polycentric governance	<i>Governance model which is not restricted to government actors, but aims to include a broad variety of business and civil society actors across all levels (Jänicke, 2017).</i>
Urban climate governance	<i>The (partly) independent governance actions of cities at the local, national, regional and international level on the mitigation and adaptation of climate change (adapted from van der Heijden, 2018).</i>
Global North and global South	<i>The political, economic and cultural division between the regions Europe and North America and Latin America, Asia, Africa and Oceania (Dados and Connell, 2012)</i>
Urban partnership	<i>Collaborative arrangements between local authorities at any level in two or more countries, with the possible support from actors from other spheres of society, to resolve climate mitigation and adaptation challenges that local authorities cannot tackle on their own (adapted and combined from Bauer and Steurer, 2014; Harman et al, 2015; UN-Habitat, 2001).</i>
Climate change adaptation	<i>Adjustment in natural or human systems in response to actual or expected climate stimuli or their effects (Burton et al, 2001).</i>
Vulnerability	<i>The inclination of a system to be adversely affected by changing climate conditions (Noble et al, 2014).</i>
Exposure	<i>Nature and degree to which a system experiences stress by changing climate conditions (Adger, 2006).</i>
Sensitivity	<i>Predisposition of society to suffer harm from climate change as a consequence of intrinsic and context conditions (Cardona et al, 2012).</i>
Adaptive capacity	<i>The potential or capability of a system to adapt to climatic stimuli or their effects or impacts (Burton et al, 2001).</i>
Urban adaptive capacity	<i>Ability of city governors, businesses and residents, and associated structures and systems to prepare for and moderate potential harm from climate change hazards and exploit any emerging opportunities (Carter et al, 2015).</i>
Public-private partnerships	<i>Cooperative institutional arrangements between public and private sector actors (Hodge and Greve, 2007).</i>
Financial capacity	<i>The financial means available to a system to adapt to climate change impacts (adapted from Burton et al, 2001).</i>
Technical capacity	<i>Current level of adaptation technologies available to a system and ability of a system to develop and maintain new technologies to adapt to climate change impacts (adapted from Burton et al, 2001; Haselip et al, 2015).</i>
Capacity in knowledge and skills	<i>Knowledge about the scientific background of climate adaptation, available climate adaptation options for the system, the capacity to assess these options and the ability to select the most suitable ones (adapted from Burton et al, 2001).</i>

Table 1. List of concepts and definitions used in this chapter.

Mumbai in India, a rehabilitation package was offered by the state, but this did not include the slum settlements, while slum dwellers are the most vulnerable group at risk of flood hazards (Boyd et al, 2015). Current flood mitigation strategies also do not address these areas due to the political sensitive status of the slum dwellers (Boyd et al, 2015). Hence, the inclusion of the most vulnerable groups within urban climate adaptation projects remains a contentious issue. Moreover, the increasing involvement of private actors in these projects, which are not democratically chosen, poses questions about whether such projects sufficiently take into account the needs of the citizens (van der Heijden, 2018). As such, climate governance in cities cannot only increase unequal relationships between citizens, but also between citizens and other city actors. Furthermore, the 'inequality' argument also extends beyond the boundaries of the cities, framed both in national and international context. That is, the type of cities that are playing an increasingly important role in urban climate governance are pre-dominantly global mega-cities with important international infrastructure, such as airports, harbours and stock markets, and cities that are mostly located in the global North (Bansard et al, 2017; Bulkeley 2010). Subsequently, as only a specific type of cities is involved, inequalities are potentially created between citizens within a country, as smaller cities will gain less from climate governance action than the larger ones, but also further exaggerate inequalities between cities in the **global North and the global South** (Bouteligier, 2013; Hodson and Marvin, 2010). Both research of Bouteligier (2013) and of Bansard and colleagues (2017) provide evidence for this argument with regards to the national level, by showing that cities in the global South are not only underrepresented in city networks, but also by showing that these cities have less influential functions within such networks. It is therefore also claimed that, in contrast to what proponents claim, urban climate governance does not provide an alternative form of climate governance but is rather a replication of international interests at a different political level (Bansard et al, 2017).

Another argument, which is also recognized by proponents to be a limitation of urban climate governance, is that in many cases cities still lack sufficient autonomy and decision-making power to implement climate policies and are therefore dependent on the national level, especially for financial resources and judicial backing (van der Heijden, 2018; Johnson et al, 2015). Heinrichs et al (2013) support this point by stating that commitment by a city to take action on climate change has to be backed up by commitment and willingness of the national level. However, the difference with regards to Barber (2017) is that whereas Barber points to the national level as a constraining and disruptive actor, the authors on the critical side of the debate merely point out that the interrelationship between the two political levels is a challenge for the effectiveness of urban climate governance and that this should be taken into consideration when valuing urban climate governance as an alternative form of climate governance. Naturally, the degree to which the national level hampers urban climate governance is also dependent per case and on the political system of a country, as one can expect a local authority to have more decision-making power in federal state systems such as in the United States and Germany, than in a centralized political structure such as in China (Johnson et al, 2015).

Finally, the most recent critical literature delves deeper into the evidence on the performance of urban climate governance. In this light, the research of Bansard et al (2017) has shown that out of the thirteen city networks under their research, only two set more ambitious goals with regards to emission reduction than the average targets set by Paris. Subsequently, it has been argued that it cannot be said that cities set more ambitious goals than the international level (Bansard et al, 2017).

Moreover, results from the same research showed that there is none or little monitoring and reporting of the actions taken, making it difficult to quantify the performance of these networks (Bansard et al, 2017). This is held to be problematic, as the possible discrepancy between what city networks say they are doing and what is actually being done can create a deceptive illusion on the world stage about how much climate action is undertaken, with important implications on the believed need for future activities (van der Heijden, 2018).

To be able to say something about either side of the debate, especially in the case of climate adaptation, it is necessary to have more evidence. There is some evidence provided by city networks themselves and by scientific literature, but as much is reliant on context and complex political, social and economic structures, the evidence that is there is not yet sufficient to tip the debate to either side. Hence, as van der Heijden (2018) points out, more concise evidence on what urban climate governance can and cannot achieve is crucial to be able to say something about the relative value of this level of governance compared to others with regards to solving climate change issues and to provide more nuance to the current scientific debate. To extend current evidence and ‘test’ the debate, this research links the concepts of urban partnerships and adaptive capacity. The next section will explain more about this first concept and elaborate on how urban partnerships have been discussed in the climate governance literature so far and which knowledge gaps remain. The concept of adaptive capacity will afterwards be outlined in a separate section, as it belongs to a different strand of literature.

### 2.2.2. Urban partnerships

In the literature on urban climate governance, partnerships between cities have often been put on par with city networks, due to which the concept ‘**urban partnership**’ has not been distinguished separately. The few authors that do distinguish partnerships within urban climate governance, rather put a focus on the partnerships between government, business, civil society and citizens within a city than the cooperation between local authorities from different cities (Castan Broto et al, 2015; Bauer and Steurer, 2014; Harman et al, 2015). This is, for example shown, by the definition given to adaptation partnerships by Bauer and Steurer (2014), who hold that these partnerships are “collaborative arrangements in which actors from government, business and civil society strive for common goals in [...] adaptation to climate change” (p.819). Moreover, these studies also dominantly focus on partnerships within the global North, not considering partnerships between the global North and the global South (Bauer and Steurer, 2014; Harman et al, 2015). One could argue that this leaves a considerable gap in the urban climate governance literature, as it does not cover specifically the collaboration *between* cities on a larger geographical scale. It is the literature on the governance of sustainable development that offers content to fill this gap.

In the realm of sustainable development the term city to city cooperation was used for the first time (Tjandradewi, 2006). This notion gained momentum when the need for municipal cooperation was highlighted at the international conference of UN Habitat in 1996 (Bontenbal and van Lindert, 2009; Tjandradewi et al, 2006). According to the literature, the need for such cooperation was instigated by the development that local authorities, especially in developing countries, increasingly gained responsibility from the central level of government for addressing issues related to urban growth and planning, without having the capacity to adequately deal with these tasks (Tjandradewi et al,

2006; Elander, 2002). Accordingly, city to city cooperation, or in other words urban partnerships, was presented by UN Habitat as a solution to solve issues related to the lack of capacity of cities, defining the concept as “all possible forms of relationships between local authorities at any level in two or more countries, which are collaborating together over matters of mutual interest” (UN-Habitat, 2001, p.6). By explicitly acknowledging the relationship *between* local authorities, this definition addresses an important element that is lacking thus far in the conceptualization of urban partnerships in the field of climate governance, as well as switches the focus on who are the main actors in such partnerships. Combined, one can define urban partnerships within the realm of climate governance as follows:

*Partnerships are collaborative arrangements between local authorities at any level in two or more countries, with the possible support from actors from other spheres of society, to resolve climate mitigation and adaptation challenges that local authorities cannot tackle on their own* (adapted and combined from Bauer and Steurer, 2014; Harman et al, 2015; UN-Habitat, 2001).

When defined in such a manner, the perspective on city networks involved in climate governance also changes considerably. Instead of viewing partnerships and networks as the same, it is more accurate to identify city networks as the facilitators of partnerships. The descriptions of these networks’ activities support such a view as the focus lies on “connecting cities” and “providing a platform” (C40, 2018). City networks thus play an active part in furthering the creation of partnerships, by making it possible for cities with similar challenges to connect with each other, but they cannot be considered to be equal to urban partnerships.

Equalizing partnerships and networks also has had another effect within the urban climate governance literature. As mentioned earlier, the larger part of this literature has focused on how the element of political power plays a role within city networks (Acuto and Rayner, 2016; Allen, 2010; Andonova et al, 2009). As such, it is argued that these networks have the ability to steer their participants towards a certain public goal (Andonova et al, 2009). Others hold that these networks cause for a certain mode of politics to be ‘locked in’, as political action initiated by these networks is immediately concretized within socio-technological structures on the ground (Acuto and Rayner, 2016; Bulkeley and Castan Broto, 2012). As such, this perspective fortifies the notion that urban networks and partnerships represent a new form of political power, due to their capacity to steer politics into a certain direction. However, within the sustainable development literature a different characteristic of partnerships is accentuated. That is to say, it has focused on how urban partnerships can serve as a tool, or policy instrument, to address a governance need. As pointed out, the need for cooperation between cities was instigated by the trend of decentralization of responsibilities to the city level, without increasing capacity for cities to fulfil these newly gained responsibilities that local authorities, especially in developing countries, increasingly gained responsibilities (Tjandradewi et al, 2006; Elander, 2002). To account for this gap, city authorities could use partnerships with other local authorities to exchange lacking resources (Tjandradewi et al, 2006; Elander, 2002). Moreover, the decentralization of responsibilities also made it possible for cities to reach out to each other directly, instead of mediating contact via national authorities (Tjandradewi et al, 2006). From this perspective, urban partnerships are thus mainly seen as instruments or tools which facilitate the transfer of resources for the purpose of increasing the capacity of one or both cities to manage their



affairs. These perspectives on urban partnerships from the different strands of literature are not mutually exclusive, but rather accentuate different characteristics of urban partnerships. Though, by adding the latter perspective, the view on the function of urban partnerships becomes enriched and more dimensional than depicted thus far by the urban climate governance literature. Urban partnerships are no longer merely steering political devices, but also policy instruments that can address certain needs.

Finally, with regards to what these partnerships can deliver, the few authors within climate governance that distinguish partnerships and the authors of the sustainable development literature are in agreement. According to both groups, these partnerships are particularly important for knowledge sharing and the transfer of financial and technical resources (Bauer and Steurer, 2014; Bontenbal, 2009; Harman et al, 2015; Tjandradewi et al, 2006) Bauer and Steurer (2014), for example, found evidence for this as interviewees from regional partnerships in Canada and England identified learning as one of their partnerships' key activities, whereas Bontenbal (2009) found in her research that the exchange of financial resources was an important element in partnerships between cities from the Netherlands and various cities in the global South. It, however, remains to be seen whether this is also the case for transnational urban partnerships on climate change adaptation.

### 2.2.3. Role division within urban partnerships

To understand how urban partnerships contribute to climate adaptation governance, a sub-focus is to discover which type of actors are involved in such partnerships and how these actors and the relationships between them enhance or hamper partnership activities on adaptive capacity. This could provide useful contextual information on the effectiveness of urban partnerships on climate adaptation. To be able to say something about this, again the literature from the sustainable development governance field is used, in particular a typology of actors defined by Bontenbal (2009). This typology is selected, as in her research Bontenbal aimed to provide new knowledge on the objectives, results, organisational structures, success factors and weakness of urban partnerships with regards to development cooperation (p. 18). To some extent, the main focus of her research is thus similar to this research, in the sense that both aim to acquire new knowledge about the potential of urban partnerships to contribute to a particular policy field. For this purpose, Bontenbal did an extensive analysis on the different urban actors involved in a partnership, in order to better understand how cities operate in international cooperation structures (p. 21). She particularly focused on North-South partnerships, which also has high relevance for this research as the selected case study reflects this type of partnership, with Rotterdam as the Northern city and HCMC as the Southern city.

Due to the outlined similarities, it is held that the typology developed by Bontenbal can provide a good starting point for analysing the selected case study. However, it is also acknowledged that there are differences between both researches, specifically with regards to the focus in policy field, due to which Bontenbal's typology comes with some inherited limits. Therefore, Bontenbal's typology is merely used as a tool to help to understand the results found in this research and not as a normative basis on how urban partnerships should look like. As such, her typology will be used as a base of comparison, to highlight found differences and similarities, without passing a normative judgement on the outcomes. A summary of Bontenbal's typology can be found in table 2.

Actors	Description	Function
Local administration	The municipalities or public governing body of the city	<ul style="list-style-type: none"> <li>- Political key role in creating support and accountability</li> <li>- Exercising control: making decisions about, inspect and evaluate project implementation</li> <li>- Executive role in implementing partnership activities</li> </ul>
Coordinating civil society entity	Organizations established to carry out the work of the partnership	<ul style="list-style-type: none"> <li>- Coordinating and facilitating role in collaborations between other actors</li> <li>- Awareness-raising and educational activities</li> </ul>
(Decentralised) public sector donors	Public institutions from the sub-national level or from the international community	Provide financial resources and technical expertise
National NGOs and external development agents	Entities that bring in external resources to the partnership network, but which are not under its direct control	Provision of resources, such as know-how, expertise and finances
Private sector	Individual businesses or associations in which businesses are conglomerated	Provision of financial resources and expertise
Civil society actors	Involves any type of group of citizen associations (schools, neighbourhood communities, women's organizations etc.) or individual citizens	Awareness raising and educational activities

Table 2. Typology actors and role division within North-South urban partnerships (adapted from Bontenbal, 2009).

Another important note on the typology is that the actors defined by Bontenbal can come from both the Northern and Southern city. Subsequently, the difference in geographical presence can influence the type of function the actor has. For the purpose of clarity, however, these functions have been summarized and integrated into one table. Table 2 thus provides a general description of the functions that actors have, but differences per case can occur.

Having synthesized the scientific knowledge on urban partnerships, the next section will address the second important element of this conceptual framework, adaptive capacity.

### 2.3. Adaptive Capacity

Adaptive capacity is an integral part of **climate change adaptation**. Adaptation is a crucial aspect of climate governance, since climate change can cause significant changes in the characteristics of

natural systems, leading to adverse impacts on the related socio-economic environment (Toman and Bierbaum, 1996). This is especially the case when the socio-economic environment is very dependent on services provided by nature, such as land for agriculture, forest for wood and rivers as freshwater resource or as a way of transportation (Toman and Bierbaum, 1996). From a policy perspective it is therefore important to consider how changes in the natural system in the future can be translated in adaptive responses today, to reduce or profit from the effects of these changes (Toman and Bierbaum, 1996). Adaptation is thus the “adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects” (Burton et al, 2001, p.882). For the human system, adaptation usually refers to a process, action or outcome in a system, such as a city, in order for it to cope better or adjust to changing climate conditions that cause stress and risks, but also opportunities for the system (Smit and Wandel, 2006).

The extent to which a system can adapt to changing climate conditions depends on its **vulnerability**, its “propensity [...] to be adversely affected” (Noble et al, 2014, p.839-840). An important remark is that vulnerability in the context of climate adaptation differs from vulnerability in the context of disaster risk management, as the former focuses on long-term trends instead of short-term forecasting, as well as that potential hazards are viewed through a lens of anthropogenic climate change and not natural variability (Cardona et al, 2012; Knieling and Klindworth, 2016). Vulnerability in the climate adaptation context is determined by three different components; exposure, sensitivity and adaptive capacity (Adger, 2006). In the context of climate change vulnerability, **exposure** is the nature and degree to which a system experiences stress by climate change, which is determined by the geographical location of the system and the manner in which its population and economic resources are located (Adger, 2006; Cardona et al, 2012). In delta cities, the exposure to impacts of climate change such as flooding and extreme weather patterns is relatively high, as these cities are located near the coast while also being a location for a large and growing population and economic assets (Hallegatte et al, 2013; Molenaar et al, 2013; Nicholls et al, 2007; Revi et al, 2014). The second element of vulnerability, **sensitivity**, refers to “the predisposition of society [...] to suffer harm as a consequence of intrinsic and context conditions” (Cardona et al, 2012, p.72). In other words, the sensitivity of a system thus relates to the extent of which the community in that system is affected by the impacts of climate change. For example, those people in the system that are dependent on nature for their income, such as farmers, or who have little to no access to official communication systems, such as homeless people in urban areas, are likely to be more sensitive to the impacts of climate change than others (Bachofen and Cameron, 2018). Finally, the **adaptive capacity** of a system is “the potential or capability of a system to adapt (to alter or to better suit) to climatic stimuli or their effects or impacts” (Burton et al, 2001, p.881). Adaptive capacity thus refers to the ability of a system to prepare for risks in advance and to respond to established effects, depending largely on its possibility to mobilize resources and the capacity of institutions to anticipate and respond to expected changes in the climate (Burton et al, 2001; Cardona et al, 2012). When the concept of adaptive capacity is translated to the urban system, the definition of **urban adaptive capacity** can be formulated as follows:

*“Adaptive capacity for cities refers to the ability of city governors, business and residents, and associated structures and systems to prepare for and moderate potential harm from climate change hazards and exploit any emerging opportunities” (Carter et al, 2015, p.6).*

Although all three components of vulnerability are discussed here separately, one should take into consideration that the processes driving them are interdependent, due to which these components are very much inter-linked and intertwined.

Despite the intertwinement of the different components, adaptation is often seen as the manifestation of adaptive capacity, as adaptive capacity helps to resolve exposure and sensitivity issues of an urban system (Smit and Wandel, 2006). Thus, with a higher adaptive capacity, the ability of city actors to prepare and moderate potential harm from climate change impacts, it is possible to compensate for high exposure and sensitivity. Moreover, the adaptive capacity of a system is often more changeable in the short-term than the other two components (Toman and Bierbaum, 1996). Finally, singling out adaptive capacity is of value to identify barriers to implementing adaptation responses in an urban system and to formulate targeted policies to enhance the ability of such a system to cope with the effects of climate change (Carter et al, 2015). Enhancing the adaptive capacity of a community or a system is therefore often at the centre of climate change adaptation intervention (Brooks and Adger, 2004; Jones et al, 2010). This makes it possible for this research to evaluate special features of adaptive capacity in relation to urban governance in general and urban partnerships in particular.

### 2.3.1. Adaptive capacity and its key determinants

Adaptive capacity is a complex concept to grasp for scholars, as it is defined by the context of a system, e.g. the nature of the hazards faced and the system characteristics, like population size and how livelihoods are sustained (Brooks and Adger, 2004; Smit and Wandel, 2006). This makes it difficult to measure adaptive capacity directly (Jones et al, 2010). Nevertheless, according to the literature, some universal determinants that have a large impact on adaptive capacity can be identified. For the purpose of these research three of those determinants have been selected; (i) financial capacity, (ii) technical capacity and (iii) knowledge and skills. These three determinants were selected for a few reasons. The first is that these capacities are more easily measurable within the confines of this research than other determinants (Burton et al, 2001). Secondly, the current literature on partnerships has found some results on the influence of urban partnerships on the enhancement of knowledge and skills and financial capacity (see section 2.2.2.). Further research on these capacities therefore can expand and assess current knowledge. Finally, the topics of technical and financial capacity are hotly debated and not easily agreed upon at the international level of climate governance, due to which it is interesting to investigate whether on the urban level more progress is made in this regard.

#### *Financial capacity*

The economic condition of a system is an important element of adaptive capacity, as it determines to a large extent the means that are available for the system to prepare for potential harm posed by climate change hazards and whether it can bear the costs for certain adaptation measures (Burton et al, 2001). In light of this, the last IPCC assessment report has highlighted that the level of funding needed for adaptation projects is expected to go beyond the capacity of local and national governmental agencies (Revi et al, 2014). Latest estimations by the UN Environment Programme show that the costs of adapting to climate change for developing countries could rise between \$280

and \$500 billion per year by 2050, estimates that have risen in comparison to former years (UNEP, 2016). Coastal cities in specific are calculated on average to need \$350 million annually, as they require more specific engineered protection (UNEP, 2016). Because of this, local governmental authorities need to work together with other actors to meet this financial demand. However, there are several challenges with regards to financing adaptation measures, especially for low- and mid-income countries. One of them is the lack of knowledge on how to leverage existing funds by incorporating adaptive practices in more general development plans and to get access to and resources from financial institutions (Anguelovski and Carmin, 2011; Chambwera, 2014; Nordgren et al, 2016). Moreover, there is also a lack of background knowledge on the different possible options for adaptation, making it difficult to spend available financial resources in the most efficient manner, on both the public and private side (Agrawala and Fankhauser, 2008). Finally, with regards to the private sector and establishing **public-private partnerships** (PPP's), it can be difficult to persuade the private sector to invest in adaptation measures, as the social benefits reaped from it are higher than the private benefits (Agrawala and Fankhauser, 2008; Chambwera, 2014). It is possible that transnational urban partnerships could play a role in solving these challenges, considering that partnerships played a role in this for other developmental purposes (Bontenbal, 2009). From the foregoing information and earlier research on urban partnerships, four different manners in which urban partnerships can enhance the financial capacity of a city can be identified. This is by (i) facilitating donations of money to a city for climate adaptation purposes, (ii) providing funds for partnership activities on climate adaptation, (iii) increasing knowledge on how to leverage existing funds and (iv) leveraging financial resources from external funding partners (Bontenbal, 2009; Nordgren et al, 2016).

#### *Technical capacity*

Insufficient availability and access to technology can severely limit the adaptive capacity of a system, as it limits the possible range of responses to expected climate hazards (Burton et al, 2001; Carter et al, 2015). Therefore, technology transfer has been for a long time part of the debate on climate change at the international level (de Coninck and Sagar, 2015; Haselip et al, 2015). With regards to climate adaptation this mostly concerns technologies in the agricultural and water sector, such as flood control measures, protective structures and crop breeding mechanisms (Burton et al, 2001; Haselip et al, 2015). It is, however, also a contested topic, in which developing countries argue that sufficient access to technology is a precondition to enhance adaptation and mitigation, but that developed countries have not delivered on their promises to transfer such technology (Haselip et al, 2015). Moreover, within the discussion on technology transfer, technology is predominantly viewed as material equipment that has to be transferred from one place to the other, giving less attention to the capabilities needed to work with and maintain such technologies (de Coninck and Sagar, 2015; Haselip et al, 2015). This already has directed the debate into the issue of patent rights and the tense relation between the commercial incentives of the owners and the sustainability needs of global society (Forsyth, 2007; Haselip et al, 2015). The policy transfer literature prescribes that for transfer to be successful there should be sufficient information about how the technology operates in the context from which it is transferred and sufficient attention should be paid to the differences in context with regards to social, economic and political factors (Dolowitz and Marsh, 2000). Moreover, technology transfer also requires other capacity building activities, such as training for usage and maintenance of the technology (Forsyth, 2007). Finally, there should also be a sufficiently enabling



environment, such as a legal framework, but also awareness and acceptance from the potential future users, to have a successful transfer (Traerup and Stephan, 2015). Although this gives some first pointers to which challenges attention should be paid to with regards to transferring technology, very little information is yet specifically known about how this is at the urban level, as most research has thus far focused on projects at the international level (Haselip et al, 2015). Yet, from the current knowledge on technical capacity, it seems that urban partnerships could potentially contribute to enhancing this capacity by (i) transferring technologies from one city to the other and (ii) increasing the related capabilities on how to use and maintain these technologies.

### *Knowledge and skills*

Another aspect playing an important role in building and enhancing adaptive capacity is that key stakeholders of a system should have sufficient knowledge about the climate hazards they are facing and on how to design strategies to cope with these hazards (Burton et al, 2001). First and foremost, information is needed to create a certain level of awareness about possible impacts of climate change to instigate a willingness to act (Bauer and Steurer, 2014; Butler et al, 2015; Carter et al, 2015). Subsequently, once there is sufficient willingness to act, an increased access and availability to information can enlarge the amount of options available to adapt to climate hazards, provided that those who receive and use the information have the skills to understand and work with it (Burton et al, 2001; Carter et al, 2015). However, the difficulty in understanding climate science, how to deal with the high levels of uncertainty involved in predictions on climate hazards, but also which tools to use to translate climate models and adapt them to the local context are often identified as hurdles for enhancing knowledge and skills (Anguelovski and Carmen, 2011; Nordgren et al, 2016). Urban partnerships are therefore frequently presented by transnational city networks as tools to overcome such hurdles, so that knowledge, experience and best practices can be transferred from one place to the other (Bauer and Steurer, 2014; Harman et al, 2015; Lee and Meene, 2012). They can contribute in (i) raising awareness on impacts of climate change, (ii) increasing knowledge on climate science and how to use this for local contexts and (iii) increase knowledge on possible adaptation options. In this sense, it is especially the public sector that is argued to be a key player within transnational connections between cities to generate flows of knowledge and human capacity (Bontenbal, 2010). The transfer of such knowledge can take place in different forms; (i) peer to peer exchange between colleagues on subjects of interest, (ii) via meetings and workshops, where the exchange of information takes place in group sessions, (iii) field visits to places of thematic interest, (iv) attending conferences or other events organized by third parties or by (v) carrying out training courses (Bontenbal, 2010).

As shown, these three determinants of adaptive capacity all have their own characteristics and challenges. From the literature so far it has become clear that transferring knowledge and human capacity is one of the main activities of urban partnerships. How well they perform in this aspect is however less well known. With regards to financial and technical capacity fairly little to none is known about the manner in which urban partnerships play a role in enhancing these determinants of adaptive capacity and if so, to what extent they succeed in their efforts. This will be the essential focus of the remainder of this research, so that evidence is provided to reflect on the urban climate governance literature.

## Conclusion

The main topic of this research belongs to the field of climate governance. More specifically, the first section has shown that it belongs to the polycentric view on climate governance that highlights the perspective that climate governance is not merely taking place at the international level, but across levels of politics, across different sectors and between large ranges of actors. As climate governance comes with challenges that the international level cannot sufficiently tackle, especially with regards to adaptation, other alternative forms of governance are gaining attention. Urban climate governance is one of these alternatives. Proponents believe that cities are the perfect test areas for new technologies and knowledge to be piloted and that due to their pragmatic character, cities are able to bypass the constraints of international negotiations. At the same time, critics argue that there is little evidence of the implementation of climate measures by cities and that the action that is undertaken is very susceptible to creating social inequalities within and between cities on different geographical scales. The performance of cities in the realm of climate governance is thus under debate. To reflect on this debate, this chapter has introduced the concept of urban partnerships, that has thus far received little distinguished attention within the literature on urban climate governance, and the concept of adaptive capacity. More specifically, the second section has introduced the perspective that urban partnerships can be seen as policy instruments that function across national borders to address certain needs of local authorities, in this case the need for climate adaptation. The element of adaptation that is often at the heart of urban adaptation projects is adaptive capacity, the ability of city actors and associated structures to prepare for and moderate potential harm from climate change hazards. The concept of adaptive capacity therefore provides a useful analytical concept to apply to the case study of this research. However, as adaptive capacity cannot be analysed directly, the third section introduced three key determinants of adaptive capacity: (i) financial capacity, (ii) technical capacity and (iii) knowledge and skills. All of these determinants enlarge the possible options of a city to respond to and prepare for the impacts of climate change, but also come with their individual challenges. With the case study of the urban partnership between Rotterdam and HCMC it will be analysed how the partnership attributes to either of these determinants and due to which reasons the partnership is or is not successful in this regard. In this manner, new evidence can be provided to enrich the debate on the performance of urban climate governance.

## 3. Research Design

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The value of research findings is for a large extent determined by the quality of the research design. Therefore, this chapter will elaborate on the study design, which for this research is a case study, the methods used to gather data and how data retrieved has been analysed. These topics are covered respectively in the first three sections. Then, in the final section, the limitations as well as the validity and reliability of the used research methods and the found results will be outlined.

### 3.1. A Case Study Design

#### 3.1.1. Why a case study?

This research follows the study design of a case study. A case study is a type of study in which a specific case, for example, a community, a place or an event, is studied in an in-depth manner (Kumar, 2011). Or in other words, the case is a bounded subject which functions as “the basis of a thorough, holistic and in-depth exploration of the aspects you want to find out about” (Kumar, 2011, p. 123). A specific strength of the case study design is that it places particular attention to the complexity and subtlety of the case under investigation (Cohen et al, 2005). These kinds of studies thus can be helpful in identifying specific interactions between actors, associations between specific factors present in a case or to understand the perception of actors on a certain event (Cohen, et al, 2005). What a case study does is to “portray ‘what it is like’ to be in a particular situation, to catch the close-up reality [...] of participants’ lived experiences of [...] a situation” (Cohen, et al, 2005, p. 182). Because of this, case studies are held to be particularly valuable for understanding real-life situations (Flyvbjerg, 2006).

This feature of the case study design suits well with the topic of this research. As mentioned in the former chapter, adaptive capacity is a concept very much defined by its context (see section 2.3.1). With regards to the fact that case studies are well designed to zoom in on such contexts, they prove to be a valuable method to understand what factors ameliorate or aggravate the adaptive capacity of a system. With large scale studies these particular features of a system cannot be studied in detail, running the risk of overlooking problems that take place on a smaller scale (Cohen et al, 2005). Although on the other hand the specific context also makes it complicated to generalize results, it can still lead to interesting leads that can be checked to be present in other cases, especially in the case when little is yet known about a topic, such as the relation between urban partnerships and adaptive capacity (Flyvbjerg, 2006; Kumar, 2011). This is also the reason why this research is an exploratory one. Its main purpose is to generate a novel understanding about the applicability of urban partnerships for enhancing adaptive capacity and to possibly generate new hypotheses that can be tested in future studies.

#### 3.1.2. Case selection

The case study chosen for this research is the partnership between Rotterdam and HCMC. Several reasons have led to the decision to choose this case. The first is a practical consideration, acknowledging the fact that this partnership has started in 2009 and thus is already ongoing for eight years. The relationship is therefore well-established and has created tangible output in the form of

strategy documents and other studies that have made it possible to analyse the content of partnership activities. Secondly, this partnership has gained much attention within the CDC and C40 network. In the C40's good practice guide on climate adaptation in delta cities, the success of the formulation of the CAS for HCMC and its implementation in the form of pilot projects is attributed to the exchange of knowledge and experiences by the city with Rotterdam (C40, 2016). Within this guide, no other exchange between two cities has been highlighted. To some extent, this relationship can therefore be considered to be an 'extreme' case, one that stands out from the rest (Flyvbjerg, 2006; Seawright and Gerring, 2008). Although it is more difficult to generalize results from such a case, it gives an excellent opportunity to understand why this partnership is particularly highlighted and to identify which factors within the partnership play an important role in defining adaptive capacity to make the outcome of this partnership an exemplifying case. Considering the current status of knowledge on urban partnerships on climate adaptation, it is first necessary to gain these new insights, so that afterwards it becomes possible to further identify general patterns between different partnerships.

Finally, what is of importance is that this partnership resembles a relationship between a city of a developed country and a city that is in economic transition, or in other words, a North-South partnership. The other limited research available on urban partnerships and adaptive capacity has only focused on cities within one region, particularly in the global North, and thus has not focused on transnational partnerships between the global North and global South (Bauer and Steurer, 2014). Doing research on such a transnational partnership thus adds to the scientific debate and generates knowledge that is not yet present. Moreover, as cities in the global South are expected to be challenged the most by the impacts of climate change, while cities in the global North have enough resources to generate knowledge about such impacts and the capacity to face them, it is highly likely that these type of partnerships will gain increasing importance in the future (Nicholls et al, 2007). Hence, generating empirical knowledge about these partnerships can prove to be relevant for understanding future developments in urban climate governance.

## **3.2. Methods**

As this research is aimed at assessing and analysing governance structures and their effectiveness in achieving adaptive capacity, a qualitative research method has been chosen to make this assessment. Such a method helps to identify issues from the perspectives of relevant actors and makes it possible to understand the meaning actors give to these concepts as well as the reasoning behind the evaluation of their actions (Hennink et al, 2011). Therefore, it facilitates the examination of the experiences of the persons involved in the partnership between Rotterdam and HCMC. Two specific methods have been used for this research: literature review and semi-structured interviews.

### **3.2.1. Literature review**

Scientific literature and grey literature, such as policy briefs and institutional reports, have been used during various stages of the research. Scientific literature has mostly been used to develop the conceptual framework and specifically to create an understanding of the concepts "adaptive capacity" and "urban partnerships" in the first stage of the research. It has also helped to place the

case study within the context of the scientific debate on the performance of urban climate governance as well the historical context of both countries on urban partnerships and the degree of decision-making power of local authorities. During the phase of data gathering, both scientific articles and grey literature, in this case documents produced by the partnership between Rotterdam and HCMC and official papers from government institutions of both countries, were used to set-up the interview guides and to prepare for the interviews themselves. Finally, for the data analysis, literature was used to triangulate the statements made by the interviewees. Scientific literature has been retrieved by the use of academic search tools, such as Scopus and Global Search. Policy reports and documents about the partnership were found on the websites of the relevant governmental institutions or via a search on the internet.

### 3.2.2. Semi-structured interviews

The second method selected to gather data for this research has been semi-structured interviews. These are scheduled interviews that follow a script covering a certain list of topics, an interview guide, in which the questions are of an open-ended nature (Bernard, 2006). This type of interviews was chosen as it is held that semi-structured interviews work particularly well when interviewing bureaucrats or other “elite” members of community that often have little time available and are used to use such time efficiently (Bernard, 2006). Since the main parties to the partnership under examination in this research are government officials and senior employees at private companies, the relevant respondents were identified as being part of this type of group. Hence, interviews were at forehand well prepared, but enough flexibility was reserved to follow new leads that came up during the interviews. Some of these new leads were used to adjust the question within the interview guide, but most questions remained the same, so that respondents answered identical questions, increasing the comparability of their responses (Cohen et al, 2005).

For this research, a total of 12 semi-structured interviews, 1 un-structured interview and 1 questionnaire were conducted, covering a total of 15 respondents. This is because in one semi-structured interview two respondents participated simultaneously. The un-structured interview is an interviewing method in which questions are not pre-determined and asked in a flexible manner, dependent on the course of the conversation (Kumar, 2011). It was initially not planned to use this method, but at the point of time in the research when this interview was conducted, the main part of the interviews had already been finalized and the answers to the questions of these former interviews had already defined the boundaries of the data. It was thus opted to use an unstructured method to check if important additional information was still lying outside these boundaries, by not asking pre-determined questions. This delivered new data that was useful to better understand the context in which the partnership was situated but also verified results from earlier interviews. The aim with which the unstructured interview was set up thus has been achieved. As one respondent did not have the time to partake in a face-to-face interview, it was requested to answer the interview guide as a questionnaire per e-mail.

To select respondents, a purposive sampling in combination with snowball sampling was used. With purposive sampling respondents are selected on the base of who is believed to deliver the best information to achieve the objectives of the research (Kumar, 2011). This type of sampling is

considered particularly useful when developing knowledge about something about which little is yet known (Kumar, 2011). Considering that this is indeed the case for the topic addressed in this thesis and a very specific case study was selected, this sampling method was deemed most suitable. The respondents that were regarded as having the most relevant knowledge in relation to the objectives of this research were the parties to the partnership between Rotterdam and HCMC. Initially, relevant parties were identified by official documents from and about the partnership. Via snowball sampling, in which initial respondents were asked to identify other important persons within the partnership, other respondents were also added to the sample (Kumar, 2011). As is often the case within qualitative data, no exact predetermined sample size was identified, but this was rather determined during the data-gathering phase at the point when data saturation had been reached (Kumar, 2011). This point was reached after 12 interviews. The other interview and questionnaire were already scheduled and therefore used to strengthen and broaden the earlier retrieved data.

The first set of interviews was conducted in the Netherlands with the selected Dutch parties. All interviews, except for one which was conducted via skype, were done via face-to-face contact. These interviews were held in Dutch. The second set of interviews was done in Vietnam, in both Hanoi and HCMC, for a duration of five weeks. The interviews in HCMC were facilitated by the faculty of Environment and Biotechnology at Van Lang University, a partner university of Wageningen University. Personnel of this faculty assisted in this research by using their personal contacts to set up meetings with identified respondents. The faculty also provided a translator for one interview, which was held in Vietnamese and translated to English. The rest of the interviews in HCMC were directly held in English, without any translator. In addition, via informal conversations about the research, personnel of the faculty also provided extra explanation on some complicated matters within Vietnam, such as the arrangements on land use and corruption. All interviews in Vietnam were done via face-to-face contact. The questionnaire also came from a respondent from HCMC. Additionally, one respondent was interviewed via skype after field work in Vietnam had finished.

### **3.3. Data Analysis**

Data collected from the interviews was processed in a systematic manner. Since all of the interviewees allowed for the interviews to be recorded, the interviews were first transcribed. This was generally done within two days after having conducted the interviews. Subsequently, to structurally process the data from these interviews a coding system was used by following more or less the step approach identified by Kumar (2011, p. 248). First, with the design of the interview guide some of the main themes of the research, such as for example the three different key determinants derived from the conceptual framework, were already identified. Accordingly, these themes were assigned codes, using keywords in combination with colour coding. Yet, when specific themes or topics reoccurred within the interviews, that were not given a code beforehand, the coding scheme was supplemented with extra codes during the data-gathering phase. An overview of the complete coding scheme can be found in Annex 2. Next, the transcripts of all interviews were classified according to the coding scheme. Since the amount of respondents was not extremely high, this classification was done by colour coding the text within word documents. Once all transcripts were classified, all texts with the same colour were put in separate documents. These separate



documents then summarized the data on a specific theme. These documents were used when related to describing and analysing the results for the sub-questions of this research.

Three respondents were asked to validate the found results, to safeguard the validity of the findings. Two of them provided this validation while one was unfortunately not in office when the summary of results was finalized. The validation was done via a telephonic conversation of around an hour per person. Next to this validation, the results have also been triangulated with scientific literature, to ensure an encompassing explanation of the results, as well as to identify whether the results were specific to this particular case or also applicable to other cases.

### **3.4. Limitations**

Every research comes with its limitations, including this one. These limitations are related to three elements of the research: (i) the scope of the research design, (ii) the selection of respondents, (iii) the order in which respondents were interviewed and (iii) the interview process itself.

With regards to the first element, the scope of the research design has limited the research in two manners. The first considers the selection of the determinants of adaptive capacity (see section 2.3.1.) Although three determinants have been selected to be able to measure the impact of the urban partnership on adaptive capacity, there are more determinants that can have an influence on the adaptive capacity of a city. Hence, the results found by this selection only show a part of the picture on adaptive capacity in HCMC. Yet, it has also to be acknowledged that the three determinants that have been selected are those that have in literature been addressed most frequently, to enhance the external validity of the research. Moreover, a selection in the determinants was necessary considering the limited time available for this research. This limitation can thus be considered to be fairly unavoidable. Another limitation of the three determinants is that, when having no particular knowledge about them, it can be difficult to understand what is exactly meant with them. This turned out to be the case in the first interview. Therefore, during all interviews an explanation was given on the definition of the determinants.

The other manner in which the scope of the research design was limiting was due to the chosen case study. Especially the particularities of the political systems in which both cities are situated proved to play an important role in defining some of the outcomes of this research, making the generalization of these results limited. From the naturalist tradition of science, this has also been an often mentioned criticism on the case study design (Flyvbjerg, 2006). Within the research, this limitation has been intercepted by using literature to triangulate the results and to provide evidence to show that certain results found have also been noticed in other cases, when this information was available. In this manner, an attempt has been made to make a distinction between results that are case-specific and results that have or could be found in other research in the field of urban climate governance. At the same time, it has also been stated that due to the gap in knowledge, an exploratory case study was necessary. To some extent, the limitation in generalising results, the external validity of this research, has thus been factored in from the beginning. Furthermore, although the partnership had been going on for nine years, during the data gathering phase it turned out that the process of translating gained capacities in concrete actions was not yet finalized. A longitudinal analysis would thus have been valuable to gain more conclusive results, but this was not possible due to time constraints.

For the second element, the selection of interviewees, it has been tried to incorporate the most important parties involved in the partnership between Rotterdam and HCMC in the respondents list. However, it turned out to be almost impossible to get in contact with the central level of government in Vietnam, as well as with governmental institutions of high political importance at the local level, such as the People's Committee and the party secretary, the highest official of the Communist Party (CP) in HCMC. Although it was attempted to arrange an interview with the People's Committee, the process of arranging this turned out to be highly bureaucratic and therefore impossible to execute within the limited time available. This was unfortunate, since especially the People's Committee could have given important insights in the specific role of their institution in the partnership and its perception on the impact of the partnership on the selected determinants of adaptive capacity. Nevertheless, sufficient information could be retrieved from other interviews as other respondents elaborated on their working relationship with the People's Committee. To check and substantiate this data, literature on the responsibilities and authority of the People's Committee within the general political structure of Vietnam was used.

Thirdly, one could also consider the order in which the respondents have been interviewed a limitation to the research. As the first respondents place attention on specific topics, this can unintentionally have biased the research. By first interviewing the Dutch respondents, the topics that they considered to be important were highlighted first, such as for example the struggles with regards to financing. The outcomes of these interviews were consequently also addressed in the interviews with the Vietnamese respondents, to understand and portray the Vietnamese perspective on these outcomes. In the case that the Vietnamese respondents were interviewed first, the nature of the focus in the interviews could have been different, simply due to a possible difference in the type of topics highlighted. It has been tried to minimize this limitation as much as possible by keeping the questions in the interview guide on the core elements of the research the same and by being aware of the differences in political and cultural perspectives in both countries and to take this into account while doing the interviews and the data analysis.

Finally, considering the interview processes, language barriers emerged to be an important limitation. With the Dutch interviewees, the interview was done in their native language, which made it easier for them to express themselves. With the Vietnamese interviewees, the interview was held in English, which made it difficult for some respondents to explain answers in detail or to correctly understand the question. To account for this issue, extra explanation of the questions was given during most of the interviews with the Vietnamese respondents and sometimes questions were rephrased when the initial question was not clear. Moreover, to ensure that the content of the answers was understood correctly, the answers were shortly summarized during the interview, to check whether the respondents agreed or whether something had been understood wrongly, after which respondents were given the chance to further elaborate. In addition, questions of clarification were asked when initial answers remained incomplete.

### **3.5. Validity and Reliability**

To lend legitimacy to the used research method and the found results, it is important to establish the internal validity, external validity and reliability of this research.

The internal validity of a research, also referred to as credibility, concerns the trustworthiness and accurateness of data, or in other words, the extent to which the results from the research reflect the reality (Kumar, 2011). The accuracy of the results of this research was verified in four different manners. To start, an iterative process was used to first find results from official documents related to the partnership, such as the CAS for HCMC and the book “Resilient Cities and Climate Adaptation Strategies” published by the CDC network, to subsequently validate these findings with the interviews, and finally to verify the results found with other scientific and grey literature sources. In this manner awareness was kept of the consistency of the found results. Secondly, the results from interviews were also cross-checked with each other. This was possible as on the specific topics this research wanted to produce results on, the same questions were asked to all respondents. For these questions, answers from different respondents were compared, which highlighted the results that were repeated multiple times and results that were more singular. Singular results were cross-checked with relevant literature, which was for example the case in establishing information about the limited presence of civil society within the partnership. As only one respondent had given specific information on the public participation climate in Vietnam, these results were cross-checked with scientific literature that had researched this issue before. This method helped to find encompassing explanations for found results. Thirdly, the selection of interviewees was set up in such a way that both sides of the partnership were represented in the respondents list, to make sure that both perspectives on the partnership were sufficiently addressed. Moreover, based on the indication of respondents, also the parties that were regarded as being most closely involved and knowledgeable about partnership activities were interviewed for this research, with the exception of the People’s Committee. The limitation posed by the absence of the People’s Committee as a respondent has been reduced by the usage of the results from other interviews and literature sources, as explained in the former section. Finally, after results were analysed and interpreted, they were presented to two former respondents for validation. When it was indicated that the analysis was incomplete or was not entirely correct, adjustments were made on base of the comments received. Hence, the validation has assured that the accurateness and credibility of results also remained intact after the analysis.

Considering the external validity, the degree that findings of a research can be generalized to other contexts, it has already been outlined that this is limited for this research because of the specific case study used (Kumar, 2011). If the contextual conditions were different with regards to the countries involved or simply the topic of collaboration between the two cities, it cannot be said that results would remain the same. Therefore, findings cannot be generalized in an empirical sense, but they can be used for a theoretical extrapolation. For this purpose, the findings of this research are analysed on the base of the synthesized knowledge on urban partnerships provided in the second chapter, and subsequently integrated to make a start in forming preliminary conclusions about the value of urban partnerships for climate adaptation purposes. This analysis can be found in the final chapter.

Finally, to comment on the reliability, the ability of a research design to produce the same results when used repeatedly, it can be stated that for qualitative research this is difficult to achieve as methods used to retrieve results are flexible and evolve during the data-gathering process (Kumar, 2011). Nevertheless, the fact that almost all of the interviews had a similar set-up due to the usage of a structured interview guide and since the manner in which this research has been conducted has

been carefully described in this chapter, this research has to some extent tried to overcome this inherent limitation of qualitative research.

In the end, the exploratory design of this thesis has led to empirical findings upheld by a selection of the parties that reflect both sides of the partnership between Rotterdam and HCMC. Chapter five and six will further explore these findings, after the Dutch and Vietnamese political context in which the partnership is situated has been described in chapter four.

## 4. The Partnership between Rotterdam and HCMC

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As an integral part of this research, this chapter will introduce the case study. Before doing so, however, it is important to have some background information on the political climate in which Rotterdam and HCMC are vested. Moreover, it is also of added value to understand the position of urban partnerships within this political climate and how such partnerships have developed over time for both countries and specifically for the cities. This chapter will start off with providing such information. It will first give an account of the Dutch political environment, which will go from a more general outlook on the position of municipalities in the Dutch political structure, to an overall history of partnerships, to the specific international policy that Rotterdam has in place. Subsequently, a similar approach will be taken to describe the situation in Vietnam and HCMC. With this background information in mind, the chapter will close off with an overview of the details about the partnership between Rotterdam and HCMC.

### 4.1. Local Politics in the Netherlands

#### 4.1.1. Position of municipalities in the political structure

The Netherlands is characterized by its position in the large and complex delta of the rivers the Rijn, the Waal and the Maas (VNG, 2008). This has had an important effect on the politics of the country, as the fact that half of the land lies below sea level has made it necessary for residents, in the past and now, to work together to protect themselves from the existing water threat (VNG, 2008). As such, the Netherlands has a culture of consensus, in which generally the perspectives of all relevant parties of society are heard and evaluated, before political decisions are made (Hoetjes, 2009). This culture of consensus is embedded within the Dutch political structure of a decentralized democratic state, in which the central, the provincial and municipal level work together to regulate society affairs (Klijnsma, 2016). Within this structure, the central government provides unity by being in charge of legislation and supervision of the activities at lower levels, while the municipalities have the autonomy to make decisions on local affairs, such as building local infrastructure, regulating citizens affairs and translating national and European law into workable documents for the local level (VNG, 2008). Municipalities thus have considerable freedom in formulating national policies into municipal policy and practices on the ground, giving them also a certain degree of power in shaping Dutch policy. Since 2015, this decentralization of powers from the central to municipal level has only increased further, especially with regards to health care services and employment (Rijksoverheid, 2018).

On the municipal level, citizens are represented by elected politicians from local political parties, who together form the municipal council (VNG, 2008). This council is in charge of the decision-making as well as has the task to monitor the municipal executive body and question or criticize their actions if necessary (VNG, 2008). To some extent, the political structure of Dutch municipalities thus reflects the structure on the national level, but on a smaller scale. The role of the mayor, however, cannot be compared to that of the prime-minister. Namely, the mayor is both chairman of the municipal council as well as of the executive body, while he is not a member of the council since he is not directly elected by the public (VNG, 2008). The mayor is supposed to be above party politics and has the function to

ensure that both bodies, the council and the executive body, are cooperating well and that decision-making processes happen without problems (VNG, 2008). Also in contrary to the national level, at the municipal level, citizens can directly participate and speak during municipal meetings on specific policy areas, such as housing regulations (VNG, 2008). This, however, does reflect the culture of consultation and cooperation that is omnipresent at all Dutch levels of politics, albeit in different forms.

Financially, municipalities in the Netherlands are mostly dependent on funds from the central level (VNG, 2008). These funds are divided in funds that are dedicated to costs made by municipalities in specific sectors, such as urban redevelopment or primary education, which cannot be transferred to other expenses, and a general fund in which the municipality is free to decide on its allocation (VNG, 2008). How much finances are allocated to the municipalities by the central level is determined by many indicators, of which the number of inhabitants is highly important (VNG, 2008). Thus, bigger cities, including Rotterdam, are allocated more money. Moreover, the big cities in the Netherlands have a separate financial status, due to which they can run larger budget debts (Hoetjes, 2009). This gives big cities such as Rotterdam more financial leeway than smaller municipalities (Hoetjes, 2009). Next to this, municipalities also get income from raising their own taxes on properties and land under their authority and possibly also from European subsidies (VNG, 2008).

All in all, municipalities in the Netherlands do have a fair degree of autonomy, as they have the power to translate national laws and regulations into municipal policy and implementation measures and they have gotten direct decision-making powers in more policy areas over time. Yet, at the same time there autonomy is also restricted as the laws and regulations of the higher levels of government on same policy areas prevail due to their dependence on the central level for the main part of their budget (Klijnsma, 2016).

#### 4.1.2. The history of urban partnerships in the Netherlands

The history of urban partnerships in the Netherlands has been very much shaped by large historical events in the world, specifically when related to Europe. Urban partnerships were first shaped in the aftermath of the Second World War, in which they had the function to establish good connections with Germany and other European countries, to safeguard the peace in the continent (Hoetjes, 2009). Hence, these partnerships were merely located in Europe and had a social character, e.g. connecting schools and citizens organisations (Hoetjes, 2009). A second development was during the 1960's, during the period of de-colonialization, when leftist idealists sought to support the people in developing countries (Hoetjes, 2009). The character of these partnerships can be considered to be more political than former ones, as the ideal behind it was to change the world order of that time, so that developing countries would get a better political and economic situation (Bontenbal, 2010; Hoetjes, 2009). More significantly, this development marked the start of Dutch urban partnerships beyond the borders of Europe, which has provided an important base for the urban partnerships of today (Bontenbal, 2010). After, Dutch city partnerships varied from being in Europe again, due to the fall of the Berlin Wall and the expansion of the European Union to Eastern-European countries, to being directed to countries from which the Netherlands had a lot of immigrants, such as Turkey and Morocco (Ewijk and Baud, 2008; Hoetjes, 2009). Nowadays, Dutch city partnerships take pre-



dominantly place in the context of sustainable development and climate change, which has redirected the attention again to partners in the global South (Ewijk and Baud, 2008; Hoetjes, 2009).

As the location of the partnerships has shifted over time, so has the Dutch attitude towards the purpose of these partnerships. With regards to partnerships with the global South, in the de-colonization era there was solely the focus on strengthening local administrations and the skills of civil servants in the other country (Bontenbal, 2010). A Dutch city was thus merely a giver of knowledge and other resources, while the other city from the global South was passively receiving. In the present, partnerships are no longer seen as having a hierarchical character, but rather as a medium in which cities can cooperate as equal peers (Bontenbal, 2010). As such, the Dutch have also taken a more business-like attitude towards partnerships, in which Dutch municipalities seek for their own benefits within a partnership, especially with regards to economics and trade (Bontenbal, 2010; Hoetjes, 2009; Ewijk and Baud, 2008). This can also be observed in the international policy of Rotterdam described in the next section.

#### 4.1.3. Rotterdam's international policy

Among the larger Dutch cities, Rotterdam has been, together with The Hague, most active in the international arena (Hoetjes, 2009). From the international policy framework of Rotterdam for 2015 to 2020, it becomes very clear that Rotterdam approaches the cooperation with other international cities with a business attitude, confirming the trends outlined in the former section. According to this policy document, Rotterdam focuses mainly on international cooperation to stimulate the local economy, to characterize the strengths of the city, to learn from other cities best practices and to commercialize its own knowledge (Gemeente Rotterdam, 2015). With regards to climate change and sustainability, Rotterdam is looking for a positive profiling of the city, as it is seen to enhance its business climate, can help to improve its international competitive position on the economic market and can help to attract additional (international) funding (Gemeente Rotterdam, 2015). In other words, climate change and international cooperation is strategically used by Rotterdam for economic purposes.

This is also the case in its approach to the relationship with Vietnam. According to the policy documents, Vietnam is interesting for two reasons. First, it provides Rotterdam with the opportunity to characterize itself as an innovative city in the region, making it possible to commercialize its knowledge with regards to climate adaptation and resilience (Gemeente Rotterdam, 2016). Such commercialization could for example take place if Dutch companies are hired and paid to help Vietnam with its climate adaptation. This links to the second reason of interest. To be exact, Vietnam, and in particular HCMC as harbour city, is interesting to Rotterdam as Vietnam is an upcoming market and contacts with local authorities can help open the doors for businesses, but could also facilitate the settlement of companies in Rotterdam if relations between the two harbours are well streamlined (Gemeente Rotterdam, 2015). It is especially seen as having a positive effect on the positioning of the Dutch water sector in the region, which is one of the specific sectors Rotterdam wants to commercialize its knowledge in (Gemeente Rotterdam, 2015; Gemeente Rotterdam, 2016). The goals that Rotterdam tries to achieve thus go hand in hand. While advancing its image as a climate friendly city on the one side, it can concurrently boost new business opportunities on the other. This positioning also fits the Dutch International Water Ambition, a national policy aimed to raise

awareness on climate adaptation abroad, while simultaneously promoting the export of the Dutch water sector (Partners voor Water, 2018).

From all of the above, it can be understood that Dutch cities, especially the bigger ones, have a relatively large degree of autonomy to undertake international relations with other cities. Such relations are currently mostly taking place in the context of sustainable development, of which climate change is a big theme, but are also inextricably connected with economic objectives due to the business-like character of Dutch urban partnerships. At the same time, local authorities have increasingly needed to cooperate with other parties involved in transnational urban partnerships, mainly including private actors and relevant ministries of the central government. Due to this, partnerships have become more complex constructions over time. How this is organized in Vietnam and HCMC, will be highlighted in the next section.

## **4.2. Local Politics in Vietnam**

### **4.2.1. A centralized political structure**

Vietnam is one of the few socialist republics in the world, ruled by the CP (Kerkvliet, 2004; de Wit, 2007). Compared to the Netherlands, Vietnam knows a more complex political system with four levels of politics: the central level, the province level, which also includes large cities such as HCMC, the district level and the ward level (Kerkvliet, 2004). The local level of government of HCMC is thus not the lowest level in the political system, as is the case with Rotterdam. This is also logical, since Vietnam is a much larger country than the Netherlands and HCMC has a considerably higher amount of inhabitants than Rotterdam. Another contrast is that Vietnam's politics are practiced according to a tradition of vertical hierarchical rule from the central to the local level (Marr, 2004). Such a centralized structure has largely been the result of centuries of dynastic and autocratic rule, first by the Chinese, later by the French and eventually by the Vietnamese socialist regime after the Vietnam War (Marr, 2004). Consequently, the local levels of government have traditionally had low degrees of autonomy in Vietnam (Kerkvliet, 2004).

At the political levels of province, district and ward, it is the People's Council that represents the legislative power, while the People's Committee can be considered to be the executive power (Kerkvliet, 2004). Officially, the People's Council is elected every 5 years by the public, but candidates for the Council are often endorsed by the CP, due to which the election process is rather a formality than a truly democratic process (Kerkvliet, 2004; de Wit, 2007). The People's Committee in its turn is appointed by the People's Council (Kerkvliet, 2004). Moreover, although the People's Council has decision-making power on how to implement laws and policies of the national level within its area of jurisdiction, in practice this Council often merely approves plans coming from the higher level of government, instead of shaping local policy decision-making itself (Kerkvliet, 2004). This gives the People's Committee considerable power in local affairs, due to which the chairman of this committee, the equivalent of a mayor, is the key actor that has most decision-making power at the local levels of politics (Kerkvliet, 2004). This is also the reason why he or she is often a prominent member of the CP (Kerkvliet, 2004). At the same time, however, the People's Committee is also restricted in its actions. The People's Committee is accountable to both the People's Council of the same level, as well as the chair of the People's Committee of the higher political level, which is in the case of a city like

HCMC the national Prime Minister (Kerkvliet, 2004). In the case that decisions taken are not in line with the central policy, these decisions can be overruled or annulled by the higher level's People's Committee (Kerkvliet, 2004). Securing approval from the higher level before taking action is thus essential to practice politics at any level, including the city level.

Another special feature of the local political structure in Vietnam is that at the city, but also at the district level, one can find branches and offices of the separate national ministries, called 'departments', whose role is to assist the People's Committee in implementing national laws (Kerkvliet, 2004). These departments are accountable to the People's Committee of the same level, but also to their counterparts on higher political levels (Kerkvliet, 2004). The supplementary decentralization of ministerial bodies adds another degree of complexity to the political system. In addition, it also shows that Vietnam in general knows a system of dual accountability, in which political bodies have to justify their actions both horizontally and vertically to other political bodies that are higher in rank (see figure 5). Due to the fact that the higher ranking bodies have overruling power, local levels of government have, in essence, little space to manoeuvre when formulating and implementing policy. Moreover, the complexity of the local political system has also caused functions and responsibilities of the different institutional bodies at the different levels to overlap, making effective decision-making difficult and corruption a wide-spread problem (Nguyen et al, 2013; Kerkvliet, 2004).

With regards to finances, till 1989 the local levels of government have had the role of collecting finances for the central government, which in its turn decided on the re-allocation of the overall budget (Morgan and Trinh, 2016). Between that time and 2004, however, some steps have been undertaken in giving more financial responsibilities to the local levels, but this is particularly for the levels below the province or city level (Morgan and Trinh, 2016). Big cities in Vietnam have by national law upon till recently thus still constrained responsibilities in deciding on how to use their finances and in which areas to invest (Nguyen et al, 2013). During the conduction of this research, however, the central government of Vietnam has issued a resolution that allows HCMC per January 2018 to keep half of the money collected from land taxes and to keep all of the money that arises from adjusting revenue collection policies, while this formerly had to be contributed to the central budget (VietnamNet, 2017; VN-7). The extra money that comes available is expected to be used for developing the city's infrastructure (VietnamNet, 2017). In any case, this resolution is the first in its sort and thus marks a new development in the decentralization of financial responsibilities to larger cities, although currently only applicable for the case of HCMC.

Hence, when compared to the Dutch situation, the local levels of government in Vietnam have considerably less decision-making power and mostly function as extensive branches of the central level of government. Additionally, the local level in Vietnam also knows more institutional bodies, which are not only horizontally connected with other political institutions, but also vertically with their counterparts at other political levels. This does not only make the system more complex, but has hampered effective decision-making and clear visibility of division of responsibilities. Yet, that the central level has final authority is without a doubt, also with regards to the international affairs of cities.

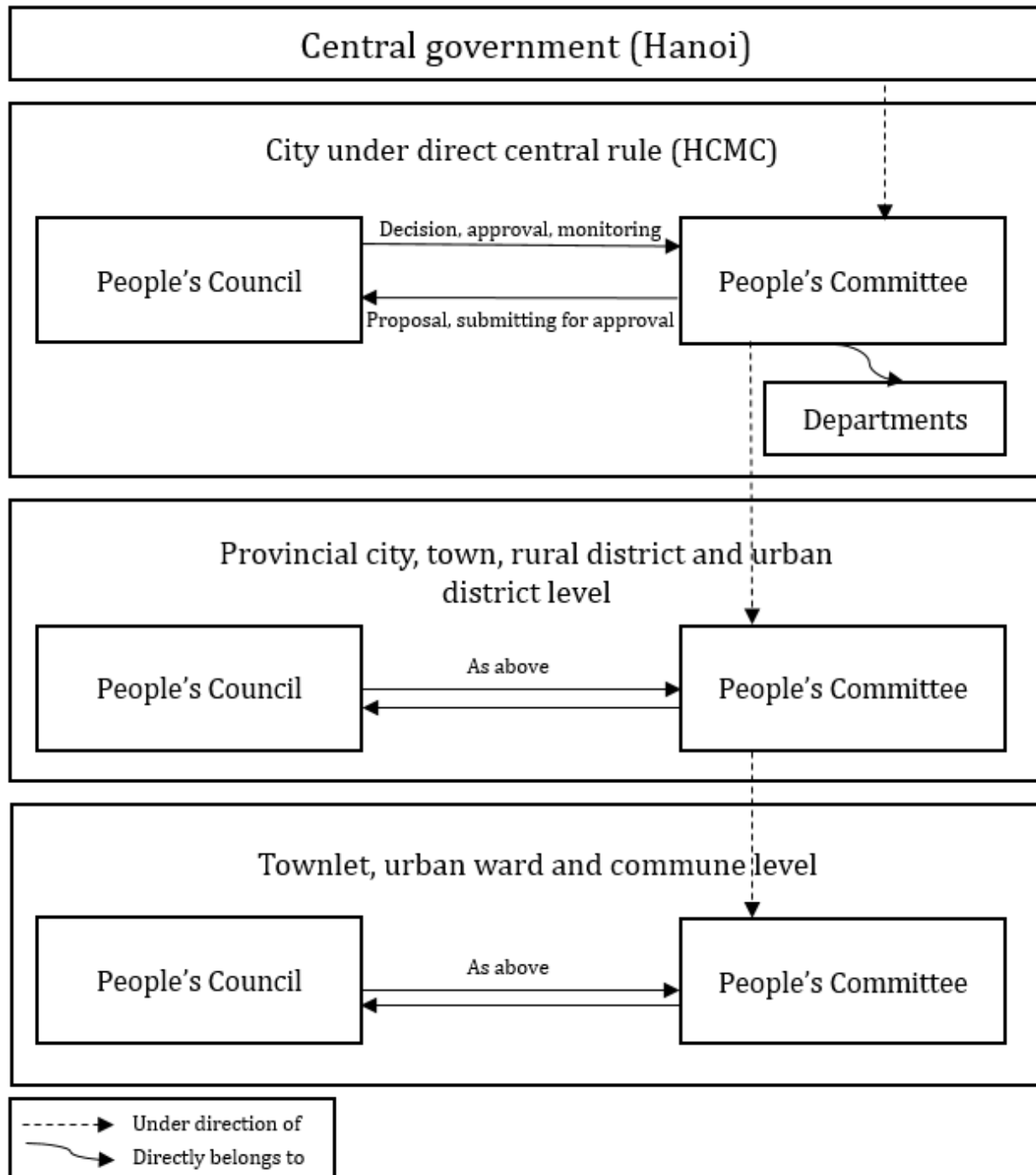


Figure 5. Organogram of the political organization of HCMC (informed by Nguyen et al, 2013; Ministry of Home Affairs of Vietnam, 2013).

#### 4.2.2. Asian context for urban partnerships

Such a detailed history on the development of urban partnerships as is available for the Netherlands is unfortunately not obtainable for Vietnam. This is either due to the fact that most of this research has been done in Vietnamese, because the topic has rarely been studied specifically for this country or because transnational urban partnerships have had less of a role in the history of Vietnamese

international affairs. It is, however, still possible to get an idea of the context in which urban partnerships have developed by looking more generally at position of cities in Asia over time and the development of Vietnamese cities in particular.

In a very early research of Zelinsky (1991) on the dispersion of urban partnerships over the world, it is stated that such partnerships were least existing in South Asia, including Vietnam, during the late 1980's. Although no particular reason was found for this phenomenon, Zelinsky (1991) does observe that countries with socialist political ideologies in particular have engaged little in urban partnerships. This could have to do with the little degree of autonomy cities have in such systems, due to which they cannot easily instigate these partnerships on their own, but in the case of Vietnam the long and recent history of outside intervention in the country, has also made the central government wary to involve itself with foreign partners for a long time (London, 2015). Yet, although transnational city relationships barely existed, a beginning was made in 1987 when HCMC became one of the first members of the regional city network CITYNET. The network had the purpose to provide cities in the region with resources to deal with the social and environmental issues accompanied by the cities' growth (Niederhafner, 2013; Tjandradewi and Marcotullio, 2009). As having the largest economy, it was especially Japan who took the lead within this network to showcase and finance methods that could help cities to improve their quality of services (Tjandradewi and Marcotullio, 2009). Unrelated, but happening around that same time was the foundation of the Association of Cities in Vietnam (Albrecht et al, 2010). This organization was established to unite the interests of the different cities within Vietnam and to actively make proposals to national authorities about urban issues (Albrecht et al, 2010). Hence, the beginning of more serious coordination and cooperation between cities can thus be traced to this period, but this development, especially with regards to transnational partnerships, was still very much in its infancy.

Another form of international cooperation in Vietnamese cities, which can help to better understand the context of Vietnamese urban partnerships, is the cooperation with regards to Foreign Direct Investment (FDI) and Official Development Assistance (ODA). An important event for this type of cooperation has been the Asian crisis (Douglass, 2002; Nguyen et al, 2010). Because of this crisis, cities in South-East Asia were in need to attract FDI from foreign investors for their economic growth, as increasing urbanisation involved substantial development needs in infrastructure and health and education facilities (Douglass, 2002; Nguyen et al, 2010). Quickly, FDI proved to be an essential aspect of economic growth for Vietnamese cities, as is shown by the fact that FDI provided billions of USD for infrastructural projects alone from the early 1990's to the beginning of the 21<sup>st</sup> century, of which HCMC was one of the main recipients (Albrecht et al, 2010; Nguyen et al, 2013). However, long term investments funds from private investors were more difficult to conceive, due to which ODA became another central driver for urban development in Vietnam (Nguyen et al, 2010). In the beginning of the 2000's both Hanoi and HCMC together accounted for at least 70 ODA projects, representing a total amount of 2.6 billion USD, both in donations and loans (Nguyen et al, 2010). At the moment, most of the city development projects within Vietnam are still financed by such funds, due to which it seems that cities have in general more close relations with international financing bodies than other cities. For example, more recent activities of the Association of Cities have been transnational projects, but this is rather in cooperation with the European Commission or the World Bank, instead of between two cities directly (DELGOSEA, 2018). For HCMC in particular the

relationships with the World Bank, the Japan International Cooperation Agency and the Asian Development Bank have been essential with regards to urban development projects (Nguyen et al, 2010). However, this does not mean that city to city cooperation is not present within Vietnam. The city partnerships that are currently there, fit within the wave of city partnerships focused on sustainable development, as mentioned earlier (Niederhafner, 2013). Connections with other cities are mostly used for improving the capabilities of local authorities or to retrieve support in developing urban policy (Albrecht et al, 2010; Niederhafner, 2013). Moreover, for the drafting of city master plans, which are plans of 5 years that determine the urban planning and technical infrastructure of a city, other cities are consulted to provide their knowledge and expertise (Albrecht et al, 2010). This is also the case for HCMC.

While it is difficult to retrieve the history of HCMC's involvement in transnational urban partnerships, except in the case of CITYNET, it is clear that nowadays HCMC clearly uses such connections to tackle its environmental and infrastructural issues. Evidence of this can be found in the participation of HCMC in C40 and the CDC network, but also in two particular city partnerships that have received most attention in recent years. The first is the relationship with Osaka, with which HCMC has a partnership since 1995 (Ho Chi Minh City Climate Change Bureau, 2013). Although having friendly relations for a long time, it was not until 2009 that the cities decided to cooperate officially, with a focus on the issue of municipal solid waste management (Ho Chi Minh City Climate Change Bureau, 2013). Then, since 2013, the two cities have agreed to further cooperate to develop HCMC into a low-carbon city (GEC, 2016). For this purpose, Osaka has also helped to provide input for the climate action plan of the city for 2016 till 2020 and provided support for building capacity to execute this plan (GEC, 2016). The second partnership of importance for HCMC is the one central to this research, its partnership with Rotterdam. To some extent, the content of this partnership seems to be of the same nature as the one with Osaka, albeit with a different focus.

### **4.3. Vietnamese Ownership, Dutch Partnership**

In 2009, the cities of Rotterdam and HCMC started collaborating in the field of climate change adaptation. In this year, both cities started their partnership by signing a Letter of Intent (LoI) in which they declared their wish to cooperate together on climate change adaptation within the context of the CDC network (MoU, 2015). The cooperation was initiated by HCMC, as the fast economic development of the city, its rapidly growing population and the increasing frequency of flooding required a need for knowledge and experience on how to use the space of the city more appropriately in the light of these changing economic, demographic and climatic trends (Klimaatverbond, 2011). To provide some context, due to an average increase of 0.5 degree Celsius and a sea level rise of about 0.20 meters during the last 50 years in Vietnam, HCMC is encountering an increased occurrence of more extreme and frequent tidal floods and changing precipitation patterns in the rainy season, as well as hotter temperatures during dry season (Storch and Downes, 2011; Molenaar et al, 2013). At the same time, HCMC is also on its way of becoming a mega-city, with a current population of 7.7 million people, which is expected to grow to 10 million people by 2025 (Schwartz et al, 2016; VCAPs, 2013). This has led to an extension of buildings into formerly open areas, the degradation of multi-functional natural areas within the city, the increase of more paved areas and the loss of space for water (Nguyen et al, 2013; Storch and Downes, 2011). As such,



pressure has been put increasingly on the urban infrastructure and the quality of living standards in the city, as flood risk and other relevant risks posed by climate change have been aggravated (Storch and Downes, 2011). Considering the Dutch efforts to promote international collaboration on the themes of water, climate change and sustainability and Rotterdam's experience in coping with similar problems that HCMC is facing, the choice for Rotterdam by HCMC as the place to get expertise is highly unlikely to be a coincidence (Klimaatverbond, 2011; Molenaar and van de Groep, 2011).

Following the LoI of 2009, the first Memorandum of Understanding (MoU) was signed in March 2011. In this document the two cities agreed to work together on the CAS for HCMC (MoU, 2015). The goal was to support HCMC in developing a long term sustainable development strategy for the city, taking into consideration the effects of climate change, while also doing capacity building for the local governmental institutions (Moens and Oudkerk Pool, 2016). For the latter part, several workshops with a 2 to 3 day length were held, in which participants had to actively draw and design ideas that were discussed for the strategy (Moens and Oudkerk Pool, 2016; Molenaar et al, 2013). The principle behind the cooperation was "Vietnamese ownership, Dutch partnership", which entailed that the main responsibility for the execution of the project lied with HCMC, whereas Rotterdam was assigned to take on an advisory role by sharing knowledge and experience (Klimaatverbond, 2011). To oversee and execute the partnership from the Dutch side of the collaboration, the private consultancy firm Grontmij, now known as Sweco, was contracted by the municipality of Rotterdam (NL-4). This was done in cooperation with other private partners, including architectural bureaus, engineering consultants and knowledge institutions, which together formed a consortium of private partners under the name of VCAPS: the Vietnam Climate Adaptation Partnership (Moens and Oudkerk Pool, 2016). From the Vietnamese side, the Department of Natural Resources and Environment (DONRE) was supervising the project (VCAPS, 2013). Next to this, also six other relevant city departments have participated in the project, including for example flooding services and architecture, under the auspices of the People's Committee of HCMC (Moens and Oudkerk Pool, 2016). A list of the organizations involved in the partnerships can be found in table 3.

In April 2013, the CAS for HCMC was finalized and officially handed over by the vice mayor of Rotterdam to the vice chairman of the People's Committee of HCMC (Dutch Water Sector, 2013). The document did not provide one, but several strategic directions HCMC could take to become a more sustainable city (VCAPS, 2013). In addition, also an "Atlas", which categorized relevant data about the city, had been developed (VCAPS, 2016). During this session also a new MoU was signed, to continue the cooperation and "with the objective to support HCMC with the process of implementation of the CAS in urban planning and development" (Dutch Water Sector, 2013; VCAPS, 2016, p.1). Although HCMC thus remained the main responsible for further implementation practices, Rotterdam committed to provide needed support and to collaborate with HCMC to further work on such processes. This marked the second phase of the project. From this MoU followed a pilot project for one of the Districts in HCMC, District 4, to test the feasibility of the strategic directions that were developed in the CAS, to serve as an example to show how districts within the city could become climate proof and to "kick start the climate adaptation in HCMC" (Moens and Oudkerk Pool, 2016; VCAPS, 2015; VCAPS, 2016). As such, three other documents were designed by the involved parties, one being a "passport" for District 4 with the Districts' social, economic and geographical information,

a pre-feasibility study, providing an assessment of the feasibility of the pilot project and possibilities for investment and an implementation strategy, a roadmap on the implementation of the CAS, conceptualized by the example of District 4 (VCAPS, 2016). In 2015, another MoU was signed. In this MoU the parties agreed to further promote city to city cooperation, to concentrate cooperation for the further implementation of the CAS in districts where adaptation measures are most effective and to continue exchanging lessons learnt on climate adaptation (MoU, 2015). Concisely, under this MoU it was planned do to a full feasibility study for the pilot project in District 4 and to further develop and put out a Call for Investment to get a contractor and the finances for the pilot project (VCAPS, 2015; VCAPS, 2016). This last MoU marks the third phase of the partnership and ends this year.

Main parties partnership	
City of Rotterdam	HCMC People's Committee
<ul style="list-style-type: none"> <li>▪ Sweco</li> <li>▪ Witteveen+Bos</li> <li>▪ Bosch-Slabbers Architectures</li> <li>▪ Institute for Environmental Studies VU Amsterdam</li> <li>▪ Ecorys</li> <li>▪ Triple-A team (1<sup>st</sup> phase)</li> <li>▪ Urban Solutions (1<sup>st</sup> phase)</li> <li>▪ Water.NL (2<sup>nd</sup> phase)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Department of Natural Resources and Environment (DONRE)</li> <li>▪ Department of Agriculture and Rural Development (DARD)</li> <li>▪ Department of Transportation (DoT)</li> <li>▪ Department of Zoning and Architecture (DZA)</li> <li>▪ Steering Centre for Flood Control (SCFC)</li> <li>▪ Department of Construction (DoC)</li> <li>▪ Department of Planning and Investment (DoPI) (2<sup>nd</sup> phase)</li> <li>▪ Department of Finance (DoF) (2<sup>nd</sup> phase)</li> <li>▪ Ho Chi Minh City Institute for Development Studies (HIDS) (2<sup>nd</sup> phase)</li> </ul>

*Table 3. List of the main parties involved in the partnership. When a particular phase is mentioned behind the party, the party was only active in the partnership during that phase. Individuals from other organizations that were listed as supporting actors are not included in this table (informed by Moens and Oudkerk Pool, 2016; VCAPS, 2013; VCAPS, 2018; VN-2).*

After having produced four official documents, the current focus of the partnership is thus on the implementation of the pilot project in District 4 and to kick start climate adaptation in HCMC. Whether the studies created could and have been applied in the city, is expected to come to the front when answering the questions central to this research.

## Conclusion

This chapter has provided some contextual background on the political position of cities in both Vietnam and the Netherlands, to better understand the environment in which the partnership between Rotterdam and HCMC was established. One important finding is that the political systems of the two countries are very different, in which the Dutch system decentralizes a relative large amount of decision-making power to local authorities, to the extent that cities can formulate their own international policies. In contrast, cities in Vietnam can in general not undertake own affairs

without the approval of the central government. With regards to the history in urban partnerships, the developments in the Netherlands could be directly related to historical events in the world related to Europe, while for Vietnam the developments in foreign economic cooperation of cities provided some context on current urban partnerships. At the moment, cities of both countries find themselves in the wave of urban partnerships for sustainable development, which is also reflected by the content of their own partnership. With a focus on developing a long-term adaptation strategy for HCMC to become a more sustainable city that can better cope with its economic, demographic and especially environmental pressures, this cannot be mistaken. The content of the partnership also suits the current situation and needs of both cities. For HCMC, who has a history of cooperating with other parties to cope with its inimitable speed of development, this partnership fits within the manner of using international affairs for development purposes, while it gives Rotterdam the opportunity to profile itself as a world leading city on climate adaptation and to boost new business opportunities. That this combination has been fruitful in providing documents on how to adapt HCMC to climate change has been pointed out in the last section of this chapter, but whether this has had an impact on the key determinants of adaptive capacity in HCMC and whether it has been able to kick start the CAS via the pilot project in District 4, will be discussed in chapter 6. Yet a more detailed look at the different actors involved in the partnership and their respective roles will first be further defined in the next chapter.

## 5. Roles and Responsibilities

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After having described the political and historical context in which the urban partnership between Rotterdam and HCMC has been established and having specified the content of the partnership, this section will dive deeper in the topic of the role division between the actors involved. During the data gathering phase, interviewees were asked to specify their respective tasks and responsibilities within the partnership. From their answers, in combination with literature research, six types of actors were defined. The following sections will per actor highlight the roles on both the side of HCMC and Rotterdam, if applicable. A summary of this can also be found in table 4. Subsequently, to place these results in context, the role division within this partnership will be compared to the typology from Bontenbal (2009) that was introduced in chapter two. The importance behind this comparison is to know who as actors are included and excluded within urban climate partnerships, since this could influence the outcomes on adaptive capacity. Finally, some preliminary conclusions will be drawn.

### 5. 1. Role Division within the Partnership

#### 5. 1.1. Municipality

From the outset, the involvement of the local public authorities or municipalities seems to be the most important within a transnational urban partnership. To some extent, this is indeed the case. First and foremost, the local public authorities make it possible to have the partnership at all. On both sides, they are responsible for the political connections and contacts between the two cities, for example via delegation meetings and official engagements between the city mayors and other associated local officials (NL-3, NL-4, VN-2; Elander, 2002). Next to this, municipalities are also responsible for overseeing the overall project (NL-4). Hence, municipalities can thus be regarded as the official commissioners of a partnership. More importantly, as was stated by one respondent, the municipalities give political backing to the content produced, due to which the final outcomes acquire more political acceptance and chances of the outcomes being used in practice are increased (NL-5). On the Dutch side, the municipality of Rotterdam was also one of the main financers and thus delivering the funds for the execution of partnership activities (NL-4, NL-5). With regards to the production of content in the partnership, however, the local authorities have little to no responsibility (NL-4). In the case of Rotterdam, this responsibility has been outsourced to a consortium of private companies (NL-3, NL-4). In the case of HCMC, the People's Committee does play an important role in steering the content of the partnership as its approval is needed for any important decisions made, but the production of content mainly happened by the departments participating in the partnership, in cooperation with the Dutch parties (NL-3, VN-2, VN-6).

#### 5.1.2. National level of government

The partnership between Rotterdam and HCMC is part of a wider strategic partnership arrangement between the Netherlands and Vietnam, focused particularly on cooperation in the field of climate change adaptation and water management for the Mekong Delta (NL-2; Ambassade van het Koninkrijk der Nederlanden, 2010). The national level thus provides a larger political umbrella in which the partnership is embedded (Ambassade van het Koninkrijk der Nederlanden, 2010). One respondent also mentioned that it was the appeal from the national level of government that made Rotterdam agree to the partnership with HCMC, as such a request could not easily be declined (NL-

4). It was not meant that Rotterdam was forced to cooperate with HCMC, as it also was acknowledged that there were particular interests to do so for Rotterdam, but it does indicate that the national level had a steering role in realizing the partnership (NL-4). Furthermore, as the owner of the strategic partnership arrangement, the Dutch national level of government has also provided a large part of the funds allocated to this partnership (NL-2, NL-3, NL-4). This was, however, only intended for the Dutch parties and did not cover the costs of the Vietnamese officials participating in the project (NL-3, VN-7). On the Vietnamese side, also some additional funding was provided for the officials working on the project, but according to one respondent this only amounted to a set amount of 25 USD per month, which was perceived to be insufficient compared to the number of meetings and time spent on the partnership (VN-6).<sup>2</sup> Besides this, the national governments leave the political contact between the cities to a large extent up to them and generally interfere little within this relationship (NL-2). However, due to the hierarchical structure in Vietnam and the direct scrutiny of HCMC's activities by the central government, the support of the national level remained highly influential for the execution of partnership activities (NL-1, VAL-1).

#### 5.1.3. Embassy and consulate

Since the project took place in Vietnam, the Dutch embassy and consulate also played a crucial role in the partnership. Although they were officially not named as a party to the partnership, both bodies were important in providing services to facilitate the cooperation between the municipalities, for example by arranging the meetings between the parties of the two countries as well as other related events (VN-1, VN-2). Moreover, the embassy also monitors the relationship and mediates between the two cities when needed (VN-1). Most importantly, however, is that the embassy and the consulate function as an information channel for the municipality of Rotterdam, or, as one respondent named it, as “the eyes and ears” of the municipality (NL-4). The reason for this is that the embassy and consulate can more easily have meetings with the Vietnamese parties and because they have the staff that is more familiar with the habits and the language of the country (NL-4, VN-2). Such meetings are also used for the evaluation of current and former partnership practices and to identify new opportunities of collaboration between the cities (VN-2). Whereas the consulate is mostly in charge of more practical matters, the embassy is mainly responsible for discussing matters of cooperation with both municipalities (NL-4, VN-2). As such, the embassy has the ability to steer the relationship between the two cities, as they can select the information that is communicated to either side. Considering the fact that the embassy acts on the base of national foreign policy objectives, which do not necessarily have to be the same objectives as the ones Rotterdam is trying to achieve, this is an interesting dynamic to take into account.

#### 5.1.4. Lead standing offices

Among the parties that are working on the content of the partnership, the lead standing offices are the parties from both sides that manage partnership activities (NL-3). These supervising parties have also been briefly mentioned in the former chapter (see section 4.3.). Although officially the lead standing offices were in this case represented by a private company on the Dutch side and a governmental department on the Vietnamese side, in practice it turns out that the work assigned to the lead standing offices is executed by two individuals, the “project leaders”. What mostly sets the

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<sup>2</sup> No documents were found that prescribed the details on the finances of both sides of the partnership. It has thus to be taken into account that this statement could not be triangulated with other sources.

lead standing offices apart from other actors is that they are the main communicators to the municipalities on the activities done and progress made (NL-3, VN-6). The project leaders report relevant information on the output of the partnership to the local public authorities when important decisions need to be made and process returned responses (NL-3, VN-6). Due to the hierarchical structure of the Vietnamese political system, the Dutch project leader also used the communication channel with Rotterdam to get approval from the People's Committee when advancement of the partnership was slow (NL-3). The local public authorities were thus very important for the project leaders to get things done, which relates to the statement made on political backing as mentioned earlier. The project leader from HCMC was mostly responsible for arranging the Vietnamese team, setting up the working schedule with the Vietnamese participants and getting approval from the municipality for important documents and decisions (VN-6). In the Dutch interviews, the project leader was especially multiple times referred to as knowing all the ins and outs of the partnership (NL-1, NL-4, NL-5). This indicates the important central position of this actor among the other parties of the partnership.

#### 5.1.5. Knowledge institutions<sup>3</sup>

Climate change is a topic that involves much scientific information, so the involvement of knowledge institutions within this partnership should not come as a surprise. On the Dutch side, the knowledge institution was an official party of the partnership, but on the Vietnamese side this was not the case (VN-3). The Dutch institution had the role of providing detailed knowledge on the basics of climate change and climate change adaptation and on how scientific scenarios from the IPCC could be translated to a local situation (NL-1). During the partnership, the Vietnamese institution was reached out to by the Dutch one, to get more insight in the local situation and to get feedback on developed adaptation options for HCMC (NL-1, VN-3). Whereas the Vietnamese knowledge institution thus had a relative confined role in sharing experience and knowledge, the Dutch institution was also more engaged in the regular partnership work, such as writing reports and facilitating workshops (NL-1, VN-3). By being closely engaged in the project and providing education during the workshops, the Dutch knowledge institution was responsible for creating an equal base line of knowledge about climate change for all Vietnamese participants (NL-1).

#### 5.1.6. Affiliates

Finally, those organizations that did not have lead responsibilities within the partnership, such as the lead standing offices, but that still had a significant share within partnership activities, are gathered under the group affiliates. The denominator that particularly groups them together is that all of them offered needed expertise from their field of work (VN-4). For example, on the Dutch side, an architectural bureau was incorporated to make technical drawings of newly developed adaptation options and to provide a spatial and integral dimension within the development of such options (NL-5). Similarly, on the Vietnamese side the department for flood control was involved to provide data on the flood risk areas in Vietnam, to use their expertise to analyse possibilities to solve flood related problems and to reassess flood risk areas on base of the adaptation options developed during the project (VN-4). In this manner also other types of expertise were incorporated, such as finance, land use, technical engineering and urban planning (NL-3, NL-5, VN-5, VN-8). During meetings the

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<sup>3</sup> Although the Dutch knowledge institute was part of the Dutch consortium of private partners, it is highlighted here separately, due to its specific role in knowledge transfer on climate change science.

expertise was used to create the documents produced by the partnership (see section 4.3.) (NL-5). Two differences between the Dutch and the Vietnamese affiliates can also be observed. The first is that the affiliates on the Dutch side were private actors, whereas on the Vietnamese side these were all public actors (Moens and Oudkerk Pool, 2016). Secondly, whereas the Dutch affiliates collaborated as a team and shared responsibilities on creating the output of the partnership, the Vietnamese affiliates functioned initially more as separate institutions with difficult interaction, as they were not used to work together, because of the missing links between them in the general political structure (NL-1, NL-3, NL-5). Taken together, the Dutch affiliates supported and educated the Vietnamese affiliates to increase the Vietnamese capacity in working on climate adaptation (NL-1, VN-5).

<b>Rotterdam</b>	<b>Party</b>	<b>HCMC</b>
<ul style="list-style-type: none"> <li>- Organize and maintain political contact with counterpart</li> <li>- Approve and support outcomes produced by the partnership</li> <li>- Official commissioner of the project.</li> <li>- Provide financial resources</li> </ul>	Municipality	<ul style="list-style-type: none"> <li>- Organize and maintain political contact with counterpart</li> <li>- Approve and support outcomes produced by the partnership</li> <li>- Official commissioner of the project.</li> </ul>
<ul style="list-style-type: none"> <li>- Provide services to facilitate meetings between Dutch and Vietnamese parties</li> <li>- Mediate between the municipalities</li> <li>- Channel information to the municipalities</li> </ul>	Embassy/consulate	Not applicable
<ul style="list-style-type: none"> <li>- Provide national political framework for foreign relations</li> <li>- Provide financial resources</li> </ul>	National level of government	<ul style="list-style-type: none"> <li>- Provide national political framework for foreign relations</li> <li>- Provide financial resources</li> </ul>
<ul style="list-style-type: none"> <li>- Communicate output partnership to municipalities and process returned feedback</li> <li>- Manage partnership activities</li> </ul>	Lead standing office	<ul style="list-style-type: none"> <li>- Communicate output partnership to municipalities and process returned feedback</li> <li>- Gather participants and set up working schedule</li> </ul>



<ul style="list-style-type: none"> <li>- Organize communication with counterpart and participants</li> </ul>		<ul style="list-style-type: none"> <li>- Organize communication with counterpart and participants</li> </ul>
<ul style="list-style-type: none"> <li>- Provide scientific background to the content of the partnership</li> <li>- Evaluate and develop outcomes partnership</li> <li>- Educate and facilitate activities of participants</li> </ul>	Knowledge institution	<ul style="list-style-type: none"> <li>- Provide local knowledge and experience on climate change</li> <li>- Provide feedback on output partnership</li> </ul>
<ul style="list-style-type: none"> <li>- Provide expertise and knowledge from own field of work</li> <li>- Create output partnership</li> <li>- Support and educate counterpart</li> </ul>	Affiliates	<ul style="list-style-type: none"> <li>- Provide expertise and knowledge from own field of work</li> <li>- Create output partnership</li> </ul>

*Table 4. Typology of the actors defined in the partnership between Rotterdam and HCMC and their respective roles.*

## 5.2. Comparing Transnational “Development” Partnerships with Climate Partnerships

It is difficult to say something about the above mentioned results without having a base line to compare it with. Unfortunately, since a gap exists within the scientific literature on transnational urban partnerships on climate adaptation, such a particular baseline has not yet been developed. What has been acknowledged, however, is that urban partnerships for adaptation are never merely consistent of local public authorities, but always incorporate a range of different actors (Harman et al, 2015). This has also been the case for former transnational urban partnerships in development cooperation (Bontenbal, 2009). Within the research of Bontenbal (2009) an extensive mapping of actors involved in such partnerships has been provided, together with a definition of their respective roles and responsibilities. Therefore, for want of anything better, this typology provides a good alternative as a baseline for comparison. As explained in chapter two, the typology does not function as a normative, but rather as an empirical analytical tool to better understand the results for this particular case by highlighting similarities and differences. It is also acknowledged that the typology of Bontenbal is limited because of differences between her research and this one. Hence, especially when outcomes of this research divert from the typology, the results are triangulated with other scientific literature to further explain these results.

### 5.2.1. Municipalities as political engines

In her research, Bontenbal defines more or less three key roles for municipalities in partnerships. The first is creating support and accountability, in which she points particularly to the ability of mayors to enhance and maintain political support for the partnership, its activities and outcomes (p. 142). The second is that the municipalities supervise the partnership, by inspecting and evaluating its outputs and by making key decisions when needed (p. 142). Finally, municipalities also have the role of executing some of the partnership activities, such as budgeting needed funds, keeping in contact with the other parties of the partnership and organising delegation visits (p. 142). As can be noticed, these responsibilities pretty accurately overlap with the responsibilities of the municipalities found in this research. In both cases, maintaining political contacts, acquiring the funds needed for partnership activities (at least in the case of the Northern city) and macro-managing the partnership captures the essence of their task. Yet, what mainly stands out is the political weight they bring to the table. With their involvement, municipalities create legitimacy and appearance for the partnership results vis-à-vis outsiders, which is for example showcased during the official meetings between the two municipalities. Therefore, municipalities can best be regarded as the political engines of transnational urban partnerships (see figure 6).

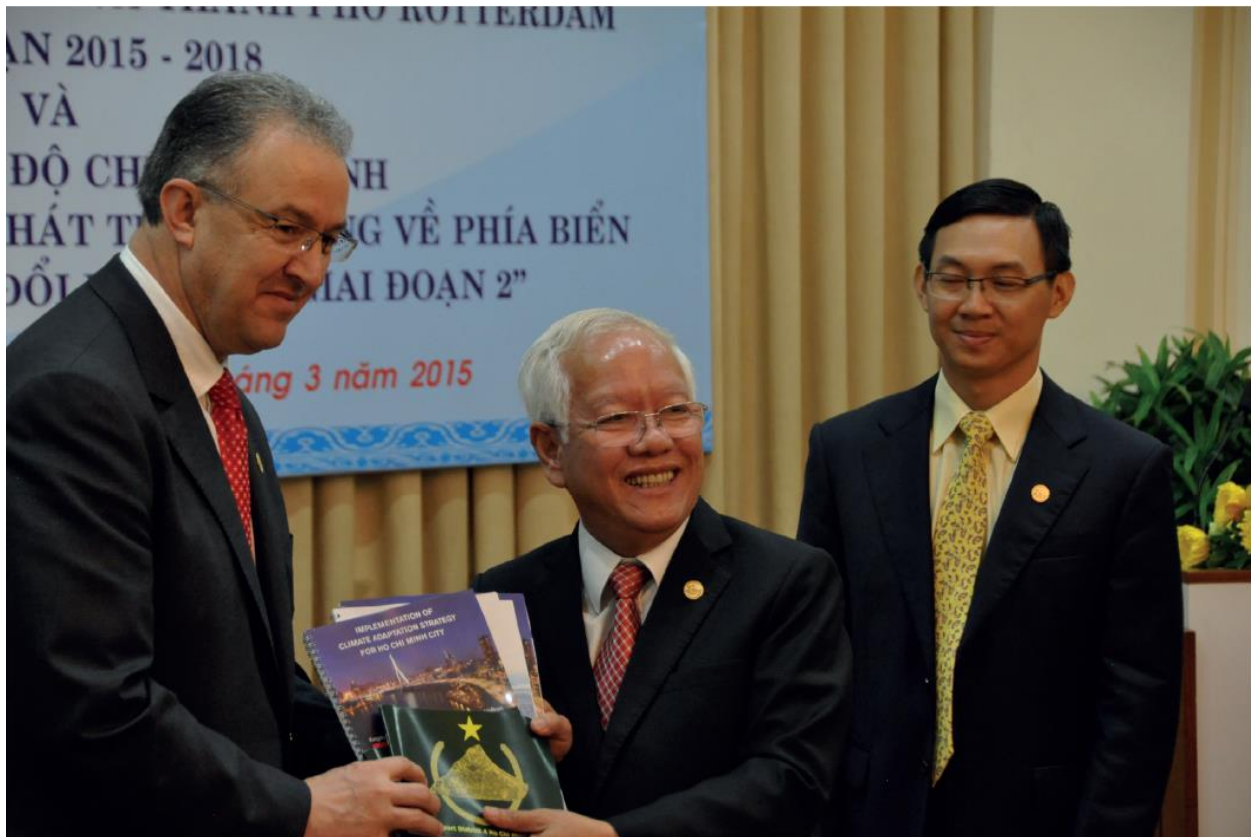


Figure 6. Picture of an official ceremony held in March 2015, in which the results of the partnership between Rotterdam and HCMC thus far are presented by the mayor of Rotterdam and the chairman of HCMC's People's Committee (VCAPS, 2016).

### 5.2.2. The national level: a symbiotic relationship

Although the municipalities function as political engines, they are not able to do so without having a supportive basis from the national government. In her research, Bontenbal does not devote specific attention to the national government by defining it as a separate actor in her typology, but she does recognize the supporting role of national governments for urban partnerships (p.77). National governments are important to provide a legislative basis for partnership activities and to provide an essential part of funding, although in the case of Southern governments this last type of support more often falls short (p.79 and p.115). Transnational urban partnerships thus require a constant interaction with the national level, in which the urban level needs the national level to sustain its international activities. This point also came to the fore in the second chapter as a specific challenge for climate adaptation governance (see section 2.1.1.). More than in Bontenbal's research, this case study highlights that the national government is a very strong element in urban climate partnerships. This is in particular true with regards to funding, as it was pointed out during the interviews that when national funding had reached its limits, the partnership activities of the cities quickly became strained and eventually halted (NL-3, NL-4). In other studies it has also been highlighted that in more general terms the interaction between municipal and national level needs to be well coordinated to make sure that the one does not constrain the other in efforts to advance climate adaptation (Juhola and Westerhoff, 2011; Carlsson-Kanyama et al, 2013). This does not only have to do with available resources, but also with the simple fact that for climate change, the national level is still a primary actor in determining policy and that policies between the different political levels need to be streamlined to prevent maladaptation (Bäckstrand et al, 2017; Juhola and Westerhoff, 2011). Additionally, this case study has also shown that although the symbiotic relationship with the national government holds for both cities, the degree and type of interaction differs due to the degree of centralization of a political structure.

Moreover, another discovery is that in transnational cases national embassies also can be influential actors. In Bontenbal's typology the embassy falls under the decentralized public sector, but was only time mentioned one time specifically as providing "moral support" and facilitating communication and delegation visits (p.186). However, the results of this research show that this only is a part of the role that embassies can play within urban partnerships. In fact, embassies seem to have the ability to exercise quite some control over the dynamics between the two municipalities and future directions of the partnership by being the gatekeeper of information on the latest developments in either city or country. Unfortunately, no in-depth research about the specific interaction between municipalities and embassies within transnational urban partnerships could be found to put this finding in perspective. Hence, to realize whether this role division is only particular to this case or can also be found in other partnerships is an issue in need of further investigation.

### 5.2.3. A limited presence of civil society

What is most remarkable about the typology of Bontenbal is that civil society covers a large part of the actors involved in urban partnerships, via diverse manners. On the one side she identifies coordinating civil society entities, which are non-governmental organizations that have been established with the main function to carry out the activities of an urban partnership (p. 172). Their existence thus depends on the partnership and can take on the form of a more informal working

group, a foundation or a regional centre, all of which are in many cases run by citizens and volunteers (p. 173). Their activities target the inhabitants of the cities and focus on education and awareness-raising on the topic the partnership is addressing (p.173). According to Bontenbal, these entities are also the central elements of municipal partnerships, as their core tasks revolve around the partnership, while for other parties the partnership is only one of the many activities they are involved in (p. 195). At the same time, Bontenbal also distinguishes national NGO's, that partake by organizing fundraising events and providing know-how, and other civil society actors, such as youth organizations, schools, neighbourhood communities and religious groups, as two other types of societal actors (p. 175-176). The latter group is also involved in fundraising and awareness raising activities between the two cities (p. 176 and p. 189). She finds such actors to be present on both the side of the Northern and Southern city (p. 187-189).

In this partnership, NGO's and civil society organizations were only very limitedly involved in the partnership between Rotterdam and HCMC. NGO's were invited for workshops and, during the development of the pilot project in District 4, conversations with the citizens were held on what they perceived to be needed to solve the flooding issues in the area, but these parties were not structurally involved in partnership activities (VAL-1, VAL-2). One of the most important explanations put forward for this limited presence of civil society is the general lack of public participation in Vietnam's political processes (VAL-1, VAL-2). One respondent highlighted that NGO's or private civil society organizations in fact do not exist in Vietnam, as there is no law in place to establish such organizations (VN-7). Instead, Vietnam knows social based organizations, organized for particular groups in society, such as women or veterans, which are funded and supported by the state and are therefore not independent civil society organizations (VN-7; Huntjes et al, 2014). In this manner, the CP "mobilizes public support, whilst maintaining [political] control" (Huntjes et al, 2014, p. 58). In a research on public participation in Vietnam's political decision making, it is stated that although the central government is more and more acknowledging the importance of independent public participation, NGO's and other civil society organizations not owned by the state have difficulty establishing themselves due to a lack of a clear legal framework (Taylor et al, 2012). Moreover, NGO's are also approached with suspicion as non-governmental is often interpreted as being outside of government control, showing that these type of organizations are not always well understood (Taylor et al, 2012). Another research on interaction between inhabitants and city governments in Vietnam found that in rapidly developing cities, such as HCMC, public participation in decision-making decreases, with the suggestion that resources in such cities are more directed to mobilizing investment and businesses than encouraging citizen engagement in decision-making processes (Nguyen et al, 2015). Especially the city poor have therefore become at risk of being excluded from having a say in decisions that directly affect their lives (Nguyen et al, 2015). According to these observations, the limited presence of NGO's and other civil society organizations can thus be explained by the fact that they traditionally not have had a place in political processes due to the cultural characteristics of the political system and that changing this situation is highly complex and not necessarily in the interest of the CP.

At the same time, much literature on the topic holds that the inclusiveness of civil society actors within climate adaptation procedures is very essential to elevate adaptive capacity, as also highlighted by the UNFCCC and IPCC (Brooks and Adger, 2004; Conde and Lonsdale, 2004; Few et al,

2007). Yet, there is also discussion on how civil society actors should be involved and that for it to be truly effective it should be a sustained effort over a longer period of time, in which a clear purpose, limits and expected outcomes from that participation have to be formulated beforehand to manage expectations (Few et al, 2007; Kasperson, 2006). Moreover, such participation also comes with other challenges, such as extra costs and maintaining a long-term commitment from individuals involved (Few et al, 2007). This case study has affirmed that when considering public participation processes, it is also important to take into account the cultural characteristics of a particular political system and society, such as the most accepted manner of conflict resolution or traditional forms of organizing public participation (Huntjes et al, 2014). For an urban partnership between two countries that differ in this respect, with the Netherlands placing high value on individual interests, while in Vietnam the interests of society stand above individual interests, it is difficult to effectively embed public participation in partnership activities (Huntjes et al, 2014; VAL-2). Taking this into consideration together with the limited resources made available for the partnership and the set objective to build the capacity of government officials, it can be considered to be reasonable within this case that civil society actors were not more structurally involved.

#### 5.2.4. Climate-specifics? Privatization and science

The other opposite in comparison to Bontenbal's typology is the involvement of private actors and knowledge institutions. Although knowledge institutions were not found to play a role in the partnerships within her research, private actors were identified, but with a "relatively insignificant role" (p. 187). In many cases they have been involved for the provision of funds and occasionally also for their expertise (p. 175-176). In this case study it is completely the other way around. Private actors do not commit to any funding, but are pre-dominantly involved to provide a particular type of expertise, as shown by the Dutch participants. As such, they better fit the actor defined by Bontenbal as "external development agents", external consultants brought in by Northern municipalities to provide expertise and know-how that is not available at the municipality itself (p. 175 and p.187). In any case, private actors do have stronger presence in this case study.

There are some explanations to clarify this difference. The first is that, within climate governance in general, private actors have been stimulated to partake in partnerships with governments and to showcase their climate proof activities (Bäckstrand et al, 2017). The Paris Agreement created a platform for this, but also at the COP in Marrakech a year after, businesses, amongst other groups, were called upon to play a more integrated role within climate change policy (Bäckstrand et al, 2017). Moreover, especially within climate adaptation it is recognized that the involvement of private actors is needed to scale up adaptation responses, to provide additional finances for implementation of adaptation policy and to motivate social learning processes between private and public actors (IPCC, 2014a; Mees, 2017). Simultaneously, a group of private companies is taking action to use more environmentally-friendly technologies and policies, not only for the good of the planet but also because it can make them a frontrunner in sustainable practices and can therefore serve their own private interests (Bäckstrand et al, 2017; Vandenberg and Gillian, 2017). In that sense, climate adaptation is also a relatively new policy field not organized via traditional public arrangements, but more open to new types of governance arrangements, including private actors (Mees, 2017). There

is thus a favourable context for private companies to involve themselves with climate change practices.

On the other hand, cooperation between municipalities and private businesses is also not something new, but has already been a common practice since the 1980's, when PPP's became an increasingly common phenomena due to the dominant neo-liberal market ideology, especially in countries from the global North (Elander, 2002; Mees, 2017). The collaboration was not only seen to be more efficient, but was often also out of necessity due to insufficient public capacity to get municipal tasks done (Elander, 2002). This is not different in the case of climate adaptation. Climate change issues are expected to overstrain the public sector, both financially and knowledge wise and thus private actors are needed to fill this capacity gap (Klein et al, 2017). For the Dutch situation in particular, this is also one of the characteristics of the latest wave of urban partnerships, as explained in the former chapter (see section 4.1.2.). A combination of the two explanations clarifies the increased presence of Dutch private actors in the partnership between Rotterdam and HCMC and their respective roles.

What then explains the absence of Vietnamese private companies? For a long time, Vietnam has had a centralized economy with all companies state owned, a situation that didn't change until reforms in 1986, when the country switched to a more market-based economy (Odell and Castillo, 2008; VN-7). Although since then policy and regulations are in place for private companies and PPP's to be established, the laws on the latter topic are highly complicated and PPP's are not much stimulated by the government (VN-1, VN-7). Additionally, the majority of the companies within Vietnam are small to medium sized companies, in which the balance is rather tipped to the former than the latter segment (NL-6, VN-7). Loans from the bank are not affordable for such companies, due to which they have keep their business running with their own profits or savings, making it impossible for them to expand their activities (VN-7). Such companies then do not have the needed capabilities to be involved in urban partnerships (VN-7). All in all, the fact that Vietnamese private companies thus have not been present in the partnership between Rotterdam and HCMC has quite arguably to do with the rather immature business climate within the country.

Finally, with regards to the more prominent position of knowledge institutions, the explanation is also rather clear-cut. As mentioned before, climate change is a field in which science plays a very important role, as the future development of climate change and its impacts are highly uncertain and science plays an important role in addressing this uncertainty (Bauer et al, 2012). More importantly for this case, however, was the fact that for an adaptation strategy for HCMC to be developed, awareness needed to be raised and knowledge for the different departments of the city on climate change adaptation had to be increased and equalized (NL-1). Especially knowing how to translate global climate change dynamics into local changes and impacts was considered to be important for working on a CAS (NL-1). Knowledge institutions thus fill the need of having a scientific background for climate adaptation projects. This, in combination with the promotion of inclusion of private actors in the general climate governance realm clarifies the differences in presence of these types of actors when compared to Bontenbal's typology.

## Conclusion

This chapter has provided a detailed account of the actors included in the partnership between Rotterdam and HCMC and their respective roles and responsibilities. In comparison to more traditional types of urban partnerships on development cooperation, four key findings have been highlighted. The first is that the role of municipalities has remained very similar, in which municipalities have the essential function of providing political backing for partnership activities and outcomes, thereby ensuring the legitimacy of the partnership vis-à-vis outsiders. On the other hand, without the financial and political support of the national level, municipalities are constrained in fulfilling this role, which reconfirms their dependency on national policy processes. That the influence of national bodies, such as embassies, possibly even goes a step further, due to their mediating and informing role between municipalities, is another key finding in need of further research. Thirdly, the case study has shown that within the wider realm of climate governance, private actors and knowledge institutions have gained a prominent place, which in this case has been represented by the Dutch side of the partnership. Both actors fill a knowledge and capacity gap to develop climate adaptation responses that local public authorities cannot fill themselves. For HCMC, however, the immature business climate and unclear legal framework for PPP's still prevents such incorporation of private companies in climate adaptation affairs. Finally, the limited presence of representatives of city inhabitants or other relevant civil society organizations in the partnership between Rotterdam and HCMC has highlighted the difficulty and complexity of the inclusion of these actors, as well as the influence of a country's institutional organization and cultural characteristics on this aspect. With these findings, an answer has been given to the first sub-question of this research. Whether and how these actors have impacted the outputs of the partnership with regards to the adaptive capacity of HCMC will be a part of the next chapter, which outlines the results on the key determinants of adaptive capacity and related factors influencing these determinants.



## 6. Capacities and Influential Factors

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In chapter two, three key determinants of adaptive capacity have been introduced. These three determinants are (i) financial capacity, (ii) technical capacity and (iii) knowledge and skills. As the determinants represent three separate forms of capacities, the terms determinants and capacities are used interchangeably within this chapter to refer to these three concepts. In this chapter the outcomes on how these capacities in HCMC have been influenced by the partnership between Rotterdam and HCMC are discussed. Next to this, the chapter will also identify which factors had an influence on the outcomes for the three capacities. While doing so, the outcomes and factors are also triangulated with scientific literature to put these results into perspective. As such, this chapter answers the second and third sub-question of this research.

### 6.1. The Capacities

With regards to the different key determinants of adaptive capacity, all respondents have been asked for each determinant whether these were enhanced. If the answer was affirmative more detailed questions were asked about how exactly such a determinant was enhanced and if negative, more inquiry was done about the reasons behind this. The following is a summary of the responses given to these questions.

#### 6.1.1. Knowledge and skills

All of the respondents were of the opinion that the level of knowledge, especially for the Vietnamese participants, has been increased because of the partnership. The type of knowledge that was transferred within this partnership covered the basics of climate change, how this relates to climatic events in HCMC and how problems at the city level could be solved in the context of water management and urban planning (NL-1, NL-3). This not only covered what kind of hard or soft measures could be used, or how the planning could technically look like, but also addressed which type of governance arrangements could support implementation measures on the ground (NL-3). A specific focus lied on how to think in an integrated manner, thus for example how a change of management in the flow of all water within the city could solve flooding problems within one particular area (VN-4, VN-5). One respondent noticed that this was different from other adaptation projects it had participated in and that it has raised the awareness on the importance of not only thinking in terms of technical solutions for specific areas, but to look at interrelationships between different factors that cause climatic problems in the city and relate solutions to such interrelationships (VN-4).

The transfer of knowledge took place in different manners, including peer to peer exchange, workshops, field visits, training courses and by the attendance of conferences (NL-3, NL-4, NL-5, VN-4, VN-5, VN-7). Hence, all types of knowledge exchanges identified by Bontenbal (2010) (see section 2.3.1.) were present within the partnership. What was special to this partnership, however, was a specific type of workshop, called charrettes, a method also highlighted in an official document of the CDC network and in the CAS (Molenaar et al, 2013; VCAPS, 2013). In the CAS, charrettes are defined as “highly focused and interactive workshops aimed at finding connections between sectoral issues and interests, leading to integrated solutions and a joint agenda” (VCAPS, 2013, p.7). Within these

charrettes, Vietnamese officials would do research on adaptation solutions by actively drawing and designing ideas in two days and presenting them at the end of the final day under the guidance of Dutch experts (NL-3; Moens and Oudkerk Pool, 2016). The usage of drawing was seen as particularly successful method, because it transcended language barriers and initiated discussions, as the visualization of an idea and the communication about such an idea do not always correspond (NL-1, NL-5). Moreover, drawing required an active posture and attitude, facilitating a higher level of engagement of participants and interaction between them (NL-5).

That the transfer of knowledge was successful was exemplified in a few ways. One respondent who had participated in the partnership could quite clearly recall visiting the sluices in the harbour of Rotterdam during a field visit in the Netherlands, how these sluices had worked and how the respondent's department has become aware by the partnership on how it is necessary to rethink the developmental direction of the city (VN-5). This related to the initial plans of the city authorities to further develop the city on the southern side, for both living and economic purposes, but which was advised against by the Dutch parties, except for the development of the harbour, because of the unfavourable conditions with regards to soil composition and sea level (NL-1). These considerations are currently taken into account in the revision of the urban planning master plan for HCMC (VN-5). Another respondent highlighted that in the second phase of the partnership, the Vietnamese participants of the first phase passed on the knowledge they had acquired during this phase of the partnership to new participants (NL-1). The transfer of knowledge did thus not only take place from the Dutch parties to the Vietnamese parties, but also between Vietnamese participants. Another example of this was provided by a respondent who visited a conference in which the Vietnamese participants presented the work from the partnership (NL-5). According to the respondent who highlighted this example, the Vietnamese participants were able to explain the work in a detailed and correct manner and were able to ask questions that were relevant to the content they had been working on in the partnership (NL-5).

However, it was also demonstrated that in urban partnerships it is not only about the transfer of concise information from documents or presentations, but that, more importantly, it is about broadening a way of thinking (NL-3, NL-4). By having mutual interaction, one is able to expand their own view and adjust their mentality in addressing climate change issues, which can then also be used in activities outside the partnership (NL-4, NL-5). In addition, interaction also leads to the creation of new knowledge and novel ideas that do not always conceptualize immediately (NL-3, NL-4). This interaction works both ways, due to which it was found not only to affect the Vietnamese, but also the Dutch parties (NL-3, NL-5, VN-5). It was for example noted that because of the experience within the partnership, some respondents have become more aware of the usability of small-scale solutions for water management in the Netherlands (NL-3, NL-4, NL-5). This aspect of building the capacity in knowledge and skills is rather abstract and its exact effect is thus difficult to measure, as one respondent pointed out (VN-4). Nevertheless, it does give the idea that urban partnerships can function as a hothouse for expanding, creating and testing (new) thought-processes on climate adaptation solutions that leave untraceable influences on future climate adaptation activities in both countries.

Moreover, the urban partnership has also been identified to work as an amplifier to retrieve knowledge from other places. One manner in which this takes place is via the urban networks in which HCMC is involved. Because of the partnership they are able to show some lessons learned within these networks which consequently raises their reputation and makes it able for the city to discuss possible partnerships with other cities (VN-6). The fact that they have worked together with Rotterdam as the leading city within the CDC network was considered to be especially valuable in this regard (VN-6). Such connections within the city networks helps government officials to set priorities in what activities are important for the city with regards to climate adaptation (VN-6). Moreover, it has also been stated to create opportunities for further cooperation with other parties involved in the partnership, such as the knowledge institutions (VN-5). The knowledge institutions themselves have also recognized that the urban partnership has been used as a base to further other scientific activities in the city outside of the partnership. The Dutch knowledge institution for example highlighted that the partnership has made it able to work together with other institutions to do more in-depth research on the impacts of floods on HCMC, which has also been published and made accessible for others, while the Vietnamese knowledge institution acknowledged to be using the documents from the partnership for teaching classes (NL-1, VN-3). In sum, the building of capacity in knowledge is thus believed to stretch further than the partnership.

Yet, certain difficulties remain with regards to utilizing the knowledge in practice within HCMC. Much of the knowledge that was transferred has been captured in the documents created by the partnership. Within the interviews, the documents that were referred to most often were the CAS, the Atlas and the feasibility studies for District 4. From these documents, only the CAS is currently used in practice (VN-1, VN-5, VN-6). At the moment, the different departments within HCMC are revising their city master plans, and the CAS is used or is planned to be used as one of the documents to provide input for revisiting the development of the city with regards to climate change for the next ten to fifteen years (VN-4, VN-5, VN-6). Yet, whether or how this document is exactly used still depends on the definitive instructions from the central government and the development process of the master plan (VN-5, VN-6). The exact usage of the CAS is thus yet to be determined, but the usefulness of the document is acknowledged (VN-5, VN-6). At the same time, some departments have also signalled that they have difficulty in translating the made recommendations into practical implementation measures and that outside expertise is again needed to provide support to realize this (VN-2). With regards to the Atlas, several explanations have been given on why the document is currently not used. One of these is that Vietnamese officials have stated that the goal of this document was not clear to them, due to which the content has not been kept up to date (VN-1). Although information gathering was one of the goals, as this was needed to set up the CAS, it has been stated that another goal was to initiate cooperation between the Vietnamese officials and to show that such cooperation is needed to be able to work in an integrated manner on climate adaptation (NL-1, NL-3, VAL-1). In the validation process it has been pointed out that these goals have also been communicated to the Vietnamese participants (VAL-1, VAL-2). Yet, a third goal, which entailed that by letting Vietnamese participants gather data together the authenticity of the data would in later processes not be called into question by individual departments, was not communicated (VAL-2). It can therefore be possible that the Vietnamese departments did not fully comprehend the value of creating this document. In the end, the working method on the Atlas was also not adhered to, as the people who were supposed to use it were also supposed to make it, but in practice the Dutch side of

the partnership had taken on most of this task (NL-1). This can possibly also have affected the perceived value of the document for the Vietnamese officials (VAL-2). Yet, some departments have also stated to be willing to use this Atlas, but they are constrained by the lack of knowledge on how to update the document and by the lack of finances to hire an external party for this task (VN-2, VN-6). Finally, it was pointed out that the content of the Atlas was also gathered in a quick manner, therefore giving a concise overview of some of the most important data on HCMC with regards to climate change, but not encompassing enough to use as input for the master plan revision (VN-5). To close, the studies related to District 4 have been limitedly used due to issues political continuity and financial capacity, as will be explained in the remainder of this chapter. All in all, it can be concluded that the usage of the knowledge incorporated in the partnerships documents in practice is thus limited at best.

As the Vietnamese participants do not always have the ability to apply their knowledge in practice, the issue of loss of knowledge has also been raised (NL-2, VN-2). This has been acknowledged by a few respondents, although it was simultaneously mentioned that when officials do have the chance to work on it, they still try to apply the gained knowledge as much as possible (VN-6, VN-8). The extent to which knowledge gets lost due to lack of practical implementation, is thus not completely clear. Simultaneously, however, loss of knowledge also takes place as talented and experienced officials leave the government to get a better paid job in the private sector within Vietnam or because they retire (NL-2, VN-7). This is not a personal loss of knowledge, but a loss of knowledge by a particular institution. Although one respondent did not find this problematic, as such individuals would have more freedom to use their retrieved knowledge within the private sector, another respondent pointed out that the knowledge is lost at the place where the most important decisions on climate adaptation issues are made (NL-2, VN-7). In any case, how to maintain knowledge after knowledge transfer and learning processes have finalized is a point of attention for urban partnerships.

Considering the three identified manners in which urban partnerships were considered to be able to increase the capacity in knowledge and skills (see section 2.3.1.), it can be stated that all of these have been present. The partnership has (i) raised awareness on the impacts of climate change and particularly on (ii) how this is the case for the local context and how relevant climate science can be translated to this level and (iii) it has increased the knowledge on possible adaptation options by letting government officials interactively work on designing such options. Additionally, the partnership has contributed to this determinant in a fourth manner by advancing learning processes in which new knowledge is created and dispersed between the different actors involved. However, simultaneously the limitations for knowledge maintenance and translating newly gained knowledge into policy change and implementation practices also have to be taken into account.

#### 6.1.2. Technical capacity

The enhancement of HCMC's technical capacity was very limitedly present in the partnership. In the first phase, the partnership was focused on mapping the consequences of climate change for HCMC and setting up an adaptation strategy accordingly, but while doing so no attention was given to possible technologies for application (NL-1, NL-3). In the second phase of the partnership, when the focus was shifted on the implementation of adaptation measures, Vietnamese participants were

made aware of which technologies could be used and what needed to be taken into account when doing so, but this was discussed on a basic level, so no detailed information on how to actually implement such techniques was provided nor were technologies transferred (NL-1, NL-3). However, it was also mentioned that according to a Vietnamese expert on adaptation, the application of technological measures, such as dikes, was also not necessarily wishful as there would not be sufficient human capacity to maintain such techniques (NL-1). Hence, the usefulness of an increase in technical capacity also depends on the manner in which this is established.

While this partnership was low-tech in the perspective of transferring technologies from one city to the other and increasing the related capabilities on how to use and maintain such technologies, some technical assistance was provided in working with certain management tools. In this regard, Vietnamese participants were taught the SWOT method, a method to analyse strengths and weaknesses of a certain measure before applying it and other project methods on how to build up an adaptation plan step by step (NL-1, VN-4). Also some computer software was used to help with the design of drawings and the composition of the Atlas, but the software itself or knowledge on how to use it was not transferred (NL-1, NL-5, VN-6). Finally, also a climate app was introduced, an online application that can give an insight into feasible measures for climate adaptation to a particular situation (NL-5). One of the respondents acknowledged to still be using this app (VN-8). This partnership thus shows that the interpretation of technical capacity can be further stretched to also include the capacity to work with management tools and informational technology. Although these results are extremely scarce, it could be an interesting lead to further research how online information technologies are currently used between cities, considering the rapid developments within this sector, and how this can contribute to enhancing the adaptive capacity of a city.

The lack of attention for the increase of technical capacity has much to do with the initial scope and goal-setting of the partnership. This was specifically directed to increasing the knowledge and skills of personnel of the local authorities in HCMC, in which the enhancement of technical capacity was not considered to be a priority (NL-3). Nevertheless, it has been pointed out that there have been other projects by the Dutch government in HCMC with a more technical 'character' (VAL-1). Thus, to what extent building technical capacity does or does not play a role in other urban partnerships needs to be further investigated.

### 6.1.3. Financial capacity

From the interviews it has become clear that increasing the financial capacity of a city via an urban partnership for climate adaptation purposes is a struggle. First of all, donations by the Northern side of the partnership, as done in former transnational urban partnerships on development cooperation, were not made in this case (Bontenbal, 2009). This has to do with the rationale behind the Dutch foreign policy, in which it is held that donating money only has a short-term impact and runs at the risk of implementing measures that are not wished for by the recipient country (VN-2, VAL-2). Therefore, funds made available by the national Dutch government were only for the execution of partnership activities (NL-3). In comparison to what other countries make available in this regard, however, this budget was deemed to be quite minimal (NL-2, NL-3, NL-4). The municipality of Rotterdam also contributed funding to the project, but this was mostly in kind, meaning that the municipality covered the employment and travel costs of own employees and the costs of the Dutch

private partners involved in the partnership (NL-4). This has made it possible for HCMC to do the partnership, but has not directly increased the financial resources of the city to further develop or implement adaptation responses. The costs of the Vietnamese participants were not covered by Dutch funding and were partly covered by the Vietnamese government (VN-6, VN-7).

The implications of the constrained budget became particularly clear in the second phase of the partnership. After an implementation strategy and a pre-feasibility study for District 4 were developed, partnership activities halted as for further implementation of the pilot project extra funds were needed, that no parties within the partnership were able to provide (NL-1, NL-3). The municipality of Rotterdam eventually reserved a part of the needed capital from its own budget for the execution of a feasibility study, but this was not responded to by HCMC (NL-4). Although the exact reason is not clear why this was the case, it was suggested that the change of political leadership could be one factor (NL-4, VN-1). Another reason identified was that the attitude of HCMC is to do the whole project at once (VN-2). Hence, as long as there is no investor for the follow-up of the feasibility study, it is not deemed to be useful to execute this study, while it has been advised by the private consortium to carry out such a study to provide a detailed analysis of the investments needed for further implementation (VN-1; VCAPS, 2016). From other interviews it also became clear that larger structural problems in the Vietnamese political and economic structure played a role with regards to the financial complications for the pilot project in District 4, as will be explained in the second part of this chapter. Regardless, the situation led to a cooling of the relationship between the two cities, showing that constraints in political commitment and the availability of financial resources can have significant consequences for the quality and continuity of an urban partnership (NL-3, NL-4, VN-1).

On the other hand, within the second phase, information was provided on a rough estimation of budget needed for the pilot project in District 4, what to pay attention to when going to (private) investors to request for funding and how to apply for funding at international funding agencies, such as the World Bank and Asian Development Bank (NL-3; VCAPS, 2015). It was found by the department in charge of climate change issues that these initial tools had increased its capacity in applying to more different types of financial resources (VN-6). The Asian Development Bank was also actively approached during the partnership, but no funds became available, as the project was financially probably not attractive enough (NL-1). Having access to these international institutions was by some seen as a solution to compensate for the limited funding provided by both country governments and to further the financial capacity of HCMC for implementing adaptation solutions, as these institutions are able to provide the large amount of capital needed for such solutions (NL-2, NL-3, NL-4, NL-5, VN-7). Yet, as Vietnam is now a low-middle income country, loans with such institutions have become more expensive and it is highly likely this situation will only exacerbate as the country is gearing towards the status of upper-middle income country (NL-6; World Bank, 2016). Outside of the partnership efforts are made to create opportunities for the usage of PPP's for filling the investment gap, but turning to private investors, however, proves to be difficult for reasons stated in the former chapter (see section 5.2.4) (NL-6, VN-2).

In the end, regarding the four identified manners in which the partnership could have been able to contribute to this determinant, (i) no donations were provided, (ii) the partnership did devote funds to partnership activities but these funds were limited, (iii) the partnership did provide some

knowledge on how to approach international investment institutions in the second phase, but (iv) it was not able to open up financial resources from external investors. Especially with regards to the financial complications for the pilot project in District 4 it is not illogical why in most cases enhancing the financial capacity was encountered as being an obstacle (NL-1, NL-3, NL-4, NL-5, VN-3, VN-6, VN-7). The Dutch foreign policy was by some criticized in this context, as this policy places value on the implementation of cooperation activities, while at the same time no resources are made available to back this up (NL-2, VN-7). From this case it can thus be concluded that the enhancement of financial capacity for the implementation of adaptation responses remains a point of contention and a question of responsibility within urban partnerships, as will also be shown in section 6.2.4.

The next section will further elaborate on the factors that were identified during the analysis of the results as having an influence on these particular outcomes on the capacities. Figure 7 gives a visual representation of the connections between the capacities and the influential factors.

## **6.2. Influential Factors**

### **6.2.1. Design and scoping of the partnership**

The results on knowledge and skills and technical capacity show that the setting and scoping of a partnership has an important influence on how these determinants of adaptive capacity are addressed. Since building the capacity of the participating Vietnamese government officials was one of the main goals, much focus was placed on the transfer of knowledge and increasing the ability of these officials to develop and design adaptation strategies and solutions (NL-1, NL-3). Moreover, the usage of techniques was limited as the other main goal of the partnership was to create a strategy on the different adaptation pathways for HCMC (NL-3). Although this leads to the inclusion of some design and management techniques, the character of the partnership was not technical, therefore providing little attention to enhancing the technical capacity of HCMC (VAL-1). The goals determined at the beginning of the partnership thus define the focus and direction of the partnership activities and subsequently the outcomes on the key determinants for adaptive capacity.

Next to this, the goal of a partnership also has an effect on the agency within the partnership, the actors included and excluded. If the initial target group of the partnership with regards to capacity building is government officials, this also defines the particular places within a city where the adaptive capacity is changed and where it is not. In relation to the findings from chapter five, this thus also explains why the affiliates on the Vietnamese side of the partnership were departments of the city. Within this partnership, the government officials were also specifically selected on the base of three factors; (i) age, (ii) knowledge and (iii) English language (VN-7, VAL-1). The first factor was considered important as it was recognized that climate change is a long-term issue that will need to be addressed for years to come, making it more desirable for young officials to join the partnership (VN-7). Secondly, climate change adaptation was also recognized to be a cross-sector issue and therefore it was preferred to have officials that had knowledge of all the different priority fields of development of HCMC (VN-7). This proved more difficult, due to the institutional structure of HCMC, as will be explained later in this chapter. Finally, it was important that officials mastered the English language, not only for communication purposes within the partnership, but also because climate change has an important international dimension for which contact with other international



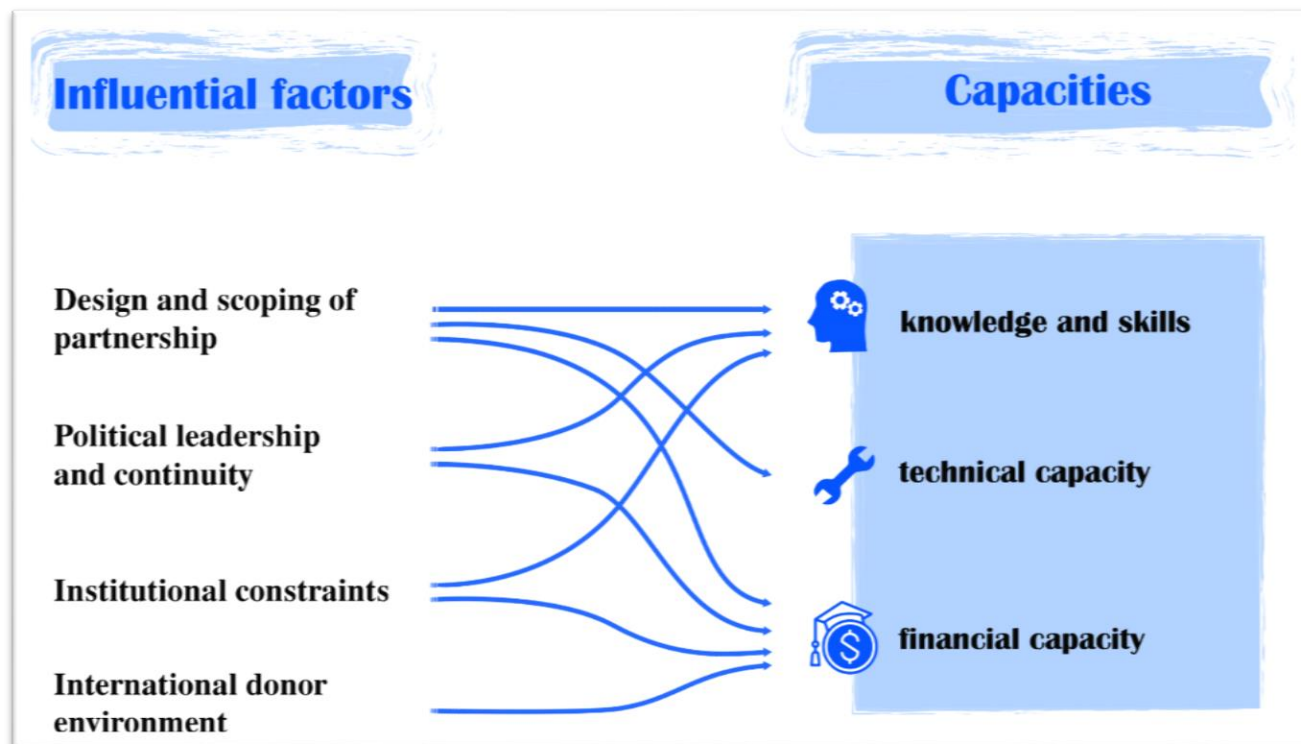


Figure 7. Visualization of the connections between the different influential factors and capacities.

organizations is also relevant (VN-7). The application of such a selection has had an important influence in facilitating the capacity building in knowledge and skills, as the team resulting from this selection was enthusiastic and eager to learn (VAL-1). The downside, however, is that the increase in knowledge and skills is also very localized (NL-1). Hence, built up knowledge and skills are fragile and susceptible to disappearance over time due to the departure and retirement of government officials or the transfer of officials to another division for which the knowledge acquired is not needed (NL-2, VN-6, VAL-1). For an urban partnership to ameliorate this particular determinant of adaptive capacity, it is thus of importance to analyse beforehand the strengths and weaknesses of targeting a certain group.

Finally, as the cities were satisfied with the results of the first phase of the partnership, another MoU was signed to support HCMC with the implementation process of the CAS (VCAPS, 2016). Implementation is also an important part of increasing the adaptive capacity of a city, as then the actual situation is adjusted to become more resilient against the impacts of climate change. Yet, there apply other conditions for building the knowledge of government officials and developing a strategy, than implementing it on the ground. Although it was mentioned that barriers to implementation were identified in the first phase of the project and in the development of the pilot project of District 4, within the related documents (the CAS and the implementation strategy for District 4) these barriers are only mentioned implicitly and are of a technical nature (VCAPS, 2013; VCAPS, 2015; VAL-1). For this project, however, it has been shown that there are also institutional barriers that have halted its implementation and have disrupted the activities of the partnership (see section 6.2.3). Moreover, for the realization of such a pilot project also other actors are needed, such as international and

private investors. Hence, the construction of initially starting with a design phase, and subsequently changing to the implementation phase of policy also impacts the outcomes of the partnership activities on the different capacities. As the initial set-up was focused on increasing the knowledge capacity of officials this was quite successfully achieved, but that did not immediately provide the needed basis for also implementing the newly gained capacity in knowledge and skills in the form a pilot project (VAL-2). The change in dedication of finances by the municipal and national level, which was more certain in the first than the second phase, also played a role in this.

### 6.2.2. Political leadership and continuity

Willingness of important government officials to dedicate time and resources to work on the partnership influences partnership outcomes, as well as the interaction between the parties involved. A change in leadership can affect the continuity of partnership activities, as became clear by this case. When the partnership initially started, it operated smoothly as it got a lot of encouragement from national governments and was supported by a good understanding between the two mayors of the cities and between the government officials and the Dutch private parties (NL-4, VN-1). Yet, when the mayor in HCMC changed around 2014-2015, and therefore also the people in its surrounding offices, the relations between the cities took a turn as the political commitment by HCMC for the partnership diminished (NL-4, VN-1). Although Rotterdam was initially still willing to proceed, shown by the fact that it reserved a part of its budget for furthering the pilot project in District 4, Rotterdam also lost its motivation to take further steps within the partnership when this offer was not responded to by HCMC (NL-2, NL-4, VN-1). Moreover, it was held that these developments were not according to what was agreed upon in the latest MoU (NL-4, VN-1). The consequence of this (temporary) ceasing of interaction is that partnership activities are halted and the continuity in addressing determinants of adaptive capacity is disturbed. As pointed out by one respondent, although the cooperation between two cities can create certain opportunities, it also requires effort and long-term dedication to maintain the relationship to reap these opportunities (VN-5). The current situation between the two cities shows that the direction of this very delicate balance is to large extent determined by the unpredictable behaviour of municipal government officials. This is also a confirmation of the findings in the former chapter on the important role of municipalities as the political engines behind a partnership. As soon as the political backing for partnership activities subsides, these activities slowly die out and the partnership is no longer viable until such commitment returns.

These findings are not isolated. In a study of Measham et al (2011) on the barriers and challenges of three municipalities in Sydney adapting to climate change, political leadership was identified as an important factor to further the topic of climate adaptation on the political agenda. Especially the opinions of senior officials and mayors in this regard were found to be detrimental (Measham et al, 2011). In a similar study done by Burch (2010), it has been pointed out that leadership is a facilitating factor when strong and informed but can be an obstacle when absent. When acting as a facilitator, political leadership can help to overcome institutional barriers to the implementation of climate adaptation, but when acting as an obstacle, it creates an extra barrier by itself (Burch, 2010; Jensen et al, 2016). The importance of political leadership has thus been also acknowledged in earlier studies on climate adaptation at municipal level. In addition, this study has now shown that this is not only

the case for individual actions of municipalities, but that such leadership also plays an important role in determining the continuity of activities between urban partners.

### 6.2.3. Institutional constraints

Next to political leadership and continuity, also some structural institutional constraints were identified to influence the outcomes of the partnership on the capacities. A common institutional constraint within the field of climate change adaptation is the 'silo problem' (Measham et al, 2011). As pointed out in chapter two, the cross-sectoral character of climate adaptation poses a challenge in the form of fragmented governance (see section 2.1.1). Within this partnership this problem also came to the front, as in HCMC each sector has its own department and cooperation between them is minimal, while for the development of the CAS and the ability to enhance the knowledge and skills in thinking and working in an integrated manner, such cooperation was necessary (NL-1, NL-3, NL-4; Gravert and Wiechmann, 2016). During the partnership, the cooperation between the departments was established as the departments were instructed to do so by the People's Committee (VN-2). Yet, now the partnership activities have ceased, mixed signals are being given about the level of cooperation. According to some respondents, there is still cooperation between the departments with regards to climate change issues and other projects, but it has not been explicitly mentioned whether this is done voluntarily or due to instruction of higher political levels (VN-4, VN-5, VN-6). At the same time it has also been mentioned that the master plans of the city are developed independently of each other and that it has been difficult for departments to continue to work in the integrative manner of working as done in the partnership as the main institutional setting has not changed and does not enable such interactive types of meetings (VN-2, VN-6). It was for example stated by one of the departments that they were waiting for the finalization of the master plan of DPA to be able to develop their own (VN-6). The development of these plans, that also determine climate adaptation measures taken in the city, are thus not developed according to integrative approach used in the partnership. In their research, Gravert and Wiechmann (2016), have found similar results that show that although it is stated that the master plans of departments "shall comply with each other", there are no clear procedures in place or responsibilities assigned to facilitate this (p. 30). Although the partnership overcame this institutional barrier temporarily due to the instructions of the People's Committee on assembling the relevant departments and letting them work together, the ability to create a sustainable impact has been limited, putting a boundary on the extent to which an urban partnership can enhance the capacity in the skills of working in an integrated manner.

A different institutional constraint found by this case study was the presence of corruption. This showed itself particularly in the difficulties surrounding the pilot project in District 4, specifically when it was tried to implement plans to build a retention reservoir in this area. For this retention reservoir a proposal for investment was handed in by a state owned investment company to the department of planning and investment, which needs to be evaluated before it is send to the People's Committee for approval (VN-6). Yet, this process has been delayed due to the fact that other private real-estate companies also had an interest in the ground on which the retention reservoir was planned to be built, as District 4 is close to District 1, the economic centre of the city (VN-6). These companies have quite some power due to the amount of capital they have, as well as due to the strong ties with important government officials at the higher political level (VN-6). In fear for repercussions

from the higher political level, the department is postponing the decision on which proposal for investment to approve (VN-6). The department is now trying to circumvent this by inviting the Party Secretary of HCMC, the local leader of the CP, to participate in a workshop about the investment, so that the department can already announce what their preference is and test whether this would be agreed upon by the Party Secretary. Yet, this situation has delayed the process of installing the investment for already a year and a half, while in the CAS it has been stated that protection against flooding in this District cannot wait, as damages are already occurring (VCAPS, 2013; VN-6). Corruption thus affects the pace with which adaptive capacity is achieved by a city, by obstructing access to needed funds for the implementation of adaptation measures. It has been pointed out that this situation is not unique to HCMC and that corruption is a wide-spread issue within the whole country (VN-7).

In the corruption index of 2017 by Transparency International, Vietnam ranked the 107<sup>th</sup> place of 180 countries (Transparency International, 2017). Obviously, Vietnam is not the only country where this is an issue. Other countries within the region that also have a high vulnerability with regards to climate change, such as Indonesia, the Philippines and Cambodia do not score much better with a ranking of 96<sup>th</sup>, 111<sup>th</sup> and 161<sup>st</sup> place respectively (Yusuf and Francisco, 2009; Transparency International, 2017). It is thus highly unlikely that the effect of this type of policy failure is only specific to the case of HCMC, making it an aspect that needs to be taken into consideration at the pre-establishment of an urban partnership aiming to increase a city's adaptive capacity.

Finally, with regards to the financial capacity, this factor can be seen to be constrained by the lack of city autonomy in arranging financial matters. When extra finances were needed for the continuation of partnership activities, both cities were limited in gathering these resources. In general, departments in HCMC have shown to have trouble with raising funds for climate change activities (Gravert and Wiechmann, 2016). The fact that extra budget for the partnership or the application for financial investments at international financial institutions had to be approved by the central government in Hanoi does not make this easier for the city (VAL-1). Although the room for manoeuvre was more constrained for HCMC than for Rotterdam because of the highly centralized political structure of Vietnam, Rotterdam also did not have the capacity to further partnership activities when the national government in the Netherlands was no longer able to release extra funds for the pilot project in District 4 (NL-3, NL-4). This reaffirms the results in the former chapter in which the symbiotic relationship between the central level of government and the municipal level has been highlighted.

#### 6.2.4. International “donor” environment

Specifically in relation to financial capacity, often the situation about the different donor partners in HCMC came up. As noted earlier, the Netherlands has a specific policy in which no investments are made in the implementation of measures, to not run the risk of implementing measures that are not wished for, but also to avoid corruptive practices (VAL-2). Different opinions were stated about this policy. On the one hand, this was stated to be a good manner of working, since it forces government officials in HCMC to learn how to solve issues with regards to finances in their own way (NL-2, NL-3). Yet, on the other hand it was also stated that since this policy does not make extra financial

capacity available, the documents created by the partnership cannot be given follow-up since HCMC does not have sufficient resources on its own or the authority to find the external finances to execute the made plans (VN-7; Gravert and Wiechmann, 2016). Within this opinion, such documents are therefore seen as symbolic and not creating an effect in reality (VN-7). In contrast, other donor countries, such as Japan and Korea, are known for being willing to provide such extra funds (NL-1). To what extent the financial capacity for a city is increased, thus is partly dependent on the national policy of the partner in this regard.



Figure 8. Pictures of a housing and a sewer system project in HCMC, both in cooperation with Japan. Pictures were taken in District 1 and District 4 in March 2018.

Yet, this situation also raises another issue. Namely, it shows that in rapidly developing cities as HCMC, the partnership with Rotterdam is not the only transnational relation used by the city to work on climate change adaptation. International consultancies, cooperation with other donors and research projects are more and more involved in improving the understanding of the local impacts of climate change and in developing adaptation measures (Gravert and Wiechmann, 2016). From the interviews it became clear that more projects are done simultaneously with Germany, Japan, Korea and many others (NL-2, NL-4, VN-7). All these projects are done on their own terms (NL-6). It is the city's tasks to organize the coordination of the content of these projects and it is held that to some extent this also has been done, such as for example between the partnership of Rotterdam and HCMC and the partnership of Osaka and HCMC, in which an exchange of information was made (VN-7). Yet, at the same time it also pointed out that whether such connections are being made depends on the donors themselves and that the coordination of the city is thus not always decisive (NL-6). Some donors are also known for paying bribes to government officials in HCMC, while others are known to not partake in such actions, giving officials a skewed incentive to work with certain countries over others (NL-4, VN-7). The different financial terms provided by the different countries has had a direct effect on partnership activities, as the situation occurred that Vietnamese officials were absent during a training day, as they had a meeting on the same day for another partnership which provided more money (VAL-2). The presence of many different types of projects and partnerships, under their own terms and conditions, thus are highly susceptible to undermining the capacity building of the city as it can lead to competition between them, rather than the synergizing of efforts. It has been stated that there is collaboration between donors to disseminate a common vision in this regard to the larger region of the Mekong Delta, but that it is also not yet certain how this will work out in



practice (NL-2). For HCMC, further investigation on the current coordination between different partnerships is needed to prevent maladaptive practices that negatively impact the adaptive capacity of the city.

## Conclusion

This chapter has summarized the found results on the impact of the urban partnership between Rotterdam and HCMC on the identified key determinants of adaptive capacity and the factors that have influenced these outcomes. From the three key determinants, the capacity in knowledge and skills has been most positively influenced by the partnership. The partnership has been acknowledged to have increased the knowledge and skills of government officials in HCMC on the topics of water management and urban planning, and on the integrated manner of working and thinking to tackle issues regarding climate adaptation. The usage of interactive workshops and drawing as methods to transfer knowledge between participants were particularly seen as useful to overcome language barriers and to initiate discussions in this context. Moreover, the partnership is also regarded as a platform to create new connections for knowledge development outside of the partnership and to create novel mentalities and knowledge that can conceptualize in other climate adaptation projects of the involved parties. The initial scoping of the partnership and the specific selection of individuals has facilitated this success, while the compartmentalization of the different sectors acted as a barrier. The latter has prevented the partnership from, creating a sustainable impact, putting a boundary on the extent to which an urban partnership can enhance the capacity in the skills of working in an integrated manner. The materialization of newly gained knowledge into policy change and implementation in the form of a pilot project has proven to be another difficulty, because of changes in political dedication, corruptive practices and the limited availability of financial resources by either city. Moreover, the improvement in the capacity in knowledge and skills also turned out to remain fragile due to the loss of knowledge, both by people who have participated in the partnership as well as by the involved government institutions of HCMC due to the departure and retirement of trained government officials. For the other two determinants, the urban partnership has had less of an impact. With regards to the technical capacity this had to do with the initial scoping of the partnership, which was not technical in character. Consequently, the technical capacity of HCMC was only limitedly addressed. The financial capacity was indirectly increased a little by the provision of knowledge on how to apply for funds at international finance institutions and directly by providing the funds for creating studies on climate adaptation for HCMC, such as the CAS and some studies for District 4. Yet, for the further development of a feasibility study for District 4 and the actual implementation of the pilot project no extra funds were made available, due to the national foreign policy of the Netherlands, because of changes in political commitment by the municipalities, which put a strain on the relationship between the two cities and eventually led to the halting of partnership activities, and the corruptive practices related to finding an investor for the project. Moreover, the partnership has also not been able to release funds from external parties. The lack of city autonomy in getting access to financial resources, both for Rotterdam and HCMC, and the general donor situation in HCMC are factors that also have had an influence in the outcome on this capacity. In relation to these factors, it were thus mostly the municipalities and the national governments that played an important role because of funding and political commitment. Additionally, the findings

have also highlighted the importance of other national governments not directly involved in the partnership and international institutions, which can be considered to be related to the transnational character of the partnership. This newly established knowledge about the output of this urban partnership on the three determinants of adaptive capacity, the factors of influence and the results of the former chapter on the role division within the partnership will be used in the next chapter to reflect upon the theories and concepts that have been put forward in the second chapter, to identify lessons learned and to recognize implications for further action.



## 7. Discussion and Conclusions

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This last chapter will focus on the lessons learned from this research. To be able to do that, it is first necessary to answer the main question of this research, based on the results presented in chapters five and six, to provide some conclusions on the findings derived from the partnership between Rotterdam and HCMC. Consequently, these conclusions can be used to highlight new knowledge gained on the utility of urban partnerships for enhancing the adaptive capacity of cities and what can be expected of these governance constructs in future practices on climate adaptation. Next, the found conclusions are used to reflect upon the scientific debate on the value of urban climate governance as an alternative or complement to other forms of climate governance and on other theoretical concepts introduced in the second chapter. This is to assess the theoretical implications of this research. To conclude, the chapter closes off with recommendations on policy practices and future research.

### 7.1. Rotterdam and HCMC – Stuck in Transition

At the beginning of this research the central question *“How and to what extent has the partnership between Rotterdam and Ho Chi Minh City contributed to the adaptive capacity of Ho Chi Minh City?”* was raised. When combining the results from chapters five and six, one of the key findings is that the partnership between Rotterdam and HCMC has mostly contributed to increasing the knowledge and skills of a selection of HCMC’s government officials. On the Dutch side, especially the private companies hired by the municipality of Rotterdam and the involved knowledge institutions had an important role in managing and facilitating the knowledge transfer and learning processes. By doing so, the involved officials have gained an increased awareness on climate change impacts in the short and long-term for HCMC and they have learned how to work on the development of adaptation solutions in an integrated manner. The positive evaluation from the Vietnamese respondents on this aspect shows that this has been a particular strength of the partnership. Within the organized workshops especially the method of drawing helped in overcoming language barriers and in initiating learning processes among Vietnamese departments and between the Dutch and Vietnamese parties. Yet, every strength has its limitations and this case has shown that such limitations come from both inside and outside of the partnership.

With regards to internal limitations, this case study has highlighted the specific influence of political continuity and dedication of the involved municipalities for the output of an urban partnership on adaptive capacity. Although former studies on urban climate governance for climate adaptation have as well highlighted this factor as a challenge for individual actions of municipalities, this case study generated new knowledge by showing that the same applies for cooperation between cities. When both municipalities put effort into the partnership, the partnership has a higher chance of reaching its defined objective. Yet when such willingness and continuity changes, a formerly well-established relation between two cities can quickly shift to an insecure and dampened one, as happened between Rotterdam and HCMC. The finding that the Dutch embassy played a role as mediator and gatekeeper of information in this regard is a new insight for urban climate governance. This newly gained insight shows that the symbiotic relationship between the national and the municipal level possibly does not only revolve around the matters of finances and judicial authorities, but also on the access and

availability of information with regards to international affairs. At the same time, municipalities remain the political engines behind partnership activities and when political backing for these activities stops, due to the change of government officials at the municipal level, it disturbs the continuity of the partnership activities which in this case translated in the lack of the materialization of increased knowledge and skills into a pilot project for District 4, limiting the partnerships' extent to advance the adaptive capacity of HCMC. Another important internal limitation, but at the same time a support, are the boundaries set at the beginning of the partnership. In the case of Rotterdam and HCMC the partnership was initially highly focused on two particular goals: enlarging the knowledge and skills of government officials on climate adaptation and developing a CAS for HCMC. On the one hand this has supported the enhancement of the capacity in knowledge and skills, as financial and human resources were specifically released for this purpose, but on the other hand, this limited the ability of the partnership to direct attention to advance other determinants of adaptive capacity, such as technical capacity, as available resources are not infinite and boundaries have to be placed on the scope of partnership activities. Which determinants of adaptive capacity received attention from the partnership thus was also largely determined by the set objective. Additionally, the scope and resources of the partnership also caused the development of knowledge and skills to be much localized, thus only addressing this part of adaptive capacity with a selective group of government officials spread over different departments in HCMC. Consequently, the build capacity in knowledge and skills for these specific departments in this sense is also very fragile and susceptible to loss when trained individuals retire from their job or leave the departments for a job in the private sector. Yet, at the same time, it also has to be acknowledged that the urban partnership resulted in spin-offs in knowledge development, due to the involvement of knowledge institutions and the cities' engagement with the CDC and C40 network, but the exact effects of these spin-offs on the adaptive capacity of HCMC are difficult to trace and define.

Externally, and this has become particularly apparent in the limited ability of the partnership between Rotterdam and HCMC to contribute to the financial capacity of HCMC for kick starting the pilot project in District 4 in the third phase of the partnership, the dependency of cities on national actors for funding has come to the fore as a constraint. Related to the transnational character and the North-South dimension of the partnership, the boundaries set by the Dutch foreign policy played an important role, which is certain to be different for the involvement of HCMC in other bilateral agreements, as some other countries have been pointed out to be more willing to provide finances for implementation practices in climate adaptation projects with HCMC. At the base of the situation, however, lies the limited autonomy of both Rotterdam and HCMC with regards to finances, as also described in the fourth chapter and highlighted by the results on the symbiotic relationship between the national and the municipal level in the fifth chapter. The fact that HCMC is incorporated in a more centralized political structure enforces the degree of this lack of autonomy and has therefore indirectly also affected the possibility of the partnership to extract funds from international institutions such as the World Bank, as for the application of such funding the approval of the central government in Hanoi is first needed. It is interesting to see whether and how the newly passed resolution that gives HCMC more financial autonomy changes this dynamic with the national level. Just as important, however, is the issue of corruption. Although from a society perspective it is generally held that corruption is harmful for the effectiveness of any policy process, this case has shown that it can also be particularly disruptive for urban partnership activities, specifically with

regards to realizing the investments for the implementation of the retention reservoir in District 4, for which corruption was an important factor in obstructing the access to needed funds. As a result of these external restrictions, the most what the partnership between Rotterdam and HCMC could achieve with regards to financial capacity was increasing the knowledge of participating government officials on what to pay attention to when developing funding requests for (large) investors and providing the finances for the development of the different documents created by the partnership. Another important external institutional constraint with regards to building the capacity in knowledge and skills has been the institutional separation between the activities of the different involved departments and the lack of facilitation by this setting for working in an interactive and integrated manner to develop climate adaptation policy and measures. This has hampered the ability of the partnership to create a sustainable impact in enhancing the capacity in the skills of working in such a manner.

In the end, when assessing the value of urban partnerships as a policy instrument for contributing to the adaptive capacity of a (delta) city, it can be concluded that what these different dynamics have led to is that the partnership between Rotterdam and HCMC has been successful in achieving results for raising awareness and knowledge on climate change adaptation, but that the sustainability of this newly built capacity is insecure. Moreover, these dynamics have not enabled the partnership to overcome the barriers for translating such knowledge into the implementation of a pilot project. As such, this particular partnership has shown to be stuck in the transition from raising awareness and setting the agenda to implementation practices.

## **7.2 Urban Partnerships: What can be Expected?**

To be clear, it is not implied that being stuck in this transition is necessarily bad. It, however, does give an indication of what we can expect from urban partnerships with regards to climate adaptation. Comparing the results of this case study with the research from Bauer and Steurer (2014) on regional partnerships in Canada and England for climate adaptation, a similar outcome can be found in the sense that “partnerships actively foster learning” (p.829). Similar to their research, this case study shows that exchanging information, experience and ideas has been a large element in partnership activities between Rotterdam and HCMC and that the process of learning has taken place as knowledge was not only exchanged, but also new knowledge was generated (Bauer and Steurer, 2014). In this sense, urban partnerships also fit the main aim of city networks of facilitating learning and collaboration between member cities (Lee and Meene, 2012). This research reaffirms the findings of other literature on the strength of connections between cities in exchanging knowledge and skills, as the empirical evidence shows that Rotterdam and HCMC, both member cities of the CDC and C40 network, are involved in exactly those kinds of activities. On the other hand, this research additionally highlights the limitation behind this strength in preserving such knowledge and skills after partnership activities cease. The separate development of the masterplans in HCMC and the halted usage of the Atlas are a case in point. Moreover, for learning to result in policy change is a complicated and long-term process, which this case study exemplifies by showing that the CAS produced by the partnership in 2013 is currently still under revision for the development of new master plans for HCMC and that the extent of its usage is dependent on the final instructions from the central government (Lee and Meene, 2012). This while the urgency for adaptation measures is

only further increasing for the city. In a similar fashion, Harman et al (2015) point out that partnership activities have mostly focused on building knowledge bases for climate adaptation, but have not been able to deliver in creating adaptation solutions on the ground, due to limited financial and political capacity. Additionally, Bauer and Steurer (2014) highlight that the voluntary character of the partnership also plays a role in maintaining engagement between the parties in the long-term and securing policy change. The evidence of this case study supports this statement. Hence, when comparing the results of this case study to other existing literature on urban partnerships and city networks, one of the answers to what can be expected from urban partnerships on climate adaptation with regards to content is that urban partnerships provide a favourable environment for learning practices and knowledge exchange, but due to their limited financial, human and institutional resources and their relative short and unpredictable lifespan partnerships are less capable as instruments to achieve policy change both on paper and on the ground. Managing complex problems such as climate adaptation and adaptive capacity in this sense is thus a bridge too far for urban partnerships, especially when having a transnational character and involving different political structures and ideologies. For this bridge to be crossed, other policy constructs and instruments on other political levels are needed to complement urban partnership activities.

Yet, simultaneously another realistic but perhaps less satisfying answer is: it depends. What partnerships can achieve is highly likely to be dependent on the political and economic context of both countries involved and the specific resources made available by the countries and municipalities for certain objectives. What this case study has shown is that the political structure and culture of Vietnam played a significant role in structuring relationships within the partnership, exemplified by the Dutch project leader using the municipality of Rotterdam to get approval from the People's Committee for the progress of partnership activities, the inclusion and exclusion of actors, shown by the limited role of civil society, and in releasing external finances for the implementation of the pilot project in District 4. On the Dutch side, the limits of the national foreign policy also placed boundaries on the ability of the partnership to support in the implementation of adaptation measures in HCMC. Yet, when having a look at the study of Tjandradewi et al (2006) on the collaboration between Penang (Malaysia) and Yokohama (Japan), different results were found for the outcome of the partnership. Trying to solve issues for Penang in the field of solid waste management, this partnership was able to implement a recycling programme via a pilot project in Penang, which was also kept in place after the partnership had officially ended (Tjandradewi, 2006). According to the research, this partnership was fruitful in implementation as there was full political support from the national Malaysian government for the cooperation between the cities, a cost sharing scheme between both municipalities was in place with a higher amount of costs for Yokohama than for Penang and because there was a demand-driven focus of the partnership (Tjandradewi, 2006). In the relationship between Rotterdam and HCMC the national political support for the partnership has in general been positive, albeit more present at the beginning than at the end of the partnership, costs were also shared between both sides of the partnership with skewed amounts between Rotterdam and HCMC and the partnership was driven by the need and request of HCMC for addressing their climate adaptation issues by developing and kick starting a CAS. The successful factors for implementation that were present in the partnership between Penang and Yokohama were not necessarily absent in the partnership between Rotterdam and HCMC. Yet, the outcomes of their activities differ. Although a more extensive in-depth analysis would be needed to pinpoint the exact explanation for the

variances between these cases, it is not unlikely that the differences in the issue-specific objective and political and economic contexts of the countries involved has had an influence on the reach of partnership activities and the manner in which partnership activities were executed in both cases. Next to this comparison, the findings of this research on the design and the scope of the partnership as an influential factor for the key determinants of adaptive capacity also give a first hint in this direction. Moreover, in the case of urban partnerships for climate adaptation contextual factors could possibly even have a stronger effect on the variability in outcomes of urban partnerships, as adaptation in itself is already a concept with a contextual and local character. To fully validate these hypotheses though, and to entirely understand when outcomes of urban partnerships are determined by contextual factors and when by general factors that apply for all urban partnerships, a larger empirical database than currently available on urban partnership needs to be developed.

Finally, from the history on urban partnerships in the Netherlands, the research of Bontentbal (2009) and this research it has come to the fore that urban partnerships have a relative high complexity with regards to the involvement of different kind of actors from both the public and private sector, at least in the cases where the Netherlands is one of the involved parties. However, as climate change issues are expected to overstrain the public sector in terms of knowledge and finances, the presence of private companies and knowledge institutions in other transnational urban partnerships on climate adaptation is not unlikely, at least when the environment for such inclusion is sufficiently developed and conducive. Next to this, climate adaptation is a cross-sectoral issue for which these actors are needed, especially with regards to providing the scientific background for developing adaptation measures, to provide expertise and in the near future also to provide investments. With regards to the latter, interviews done for this research have specifically pointed towards the increased attention for PPP's. A recent report from the C40 also points towards the collaboration between city governments, private companies and other societal groups for a better deliverance of climate action (C40 and ARUP, 2015). With regards to the actor composition it can thus be expected that within urban partnerships this remains a mixture of public and private actors, in which companies and knowledge institutions will probably be more and more relied upon to fill the financial and know how gaps with which municipalities are faced.

### **7.3. Reflections on Theory**

In the second chapter of this research several theoretical concepts and the theoretical debate on the value of urban governance in comparison to other forms of climate governance have been introduced. The case study has provided knowledge that can help to reflect on this debate, to better understand the theory of polycentric governance as a lens through which to explore urban climate governance activities and to reflect on the usability of the three selected key determinants for analysing the concept of adaptive capacity.

#### **7.3.1. The value of urban governance**

As described in the second chapter, both proponents and critics have put forward several arguments to why they believe urban governance is or is not a good alternative or complement to other forms of climate governance. Although from a different perspective, they both argue that city action within

climate governance is constrained due to political, judicial and financial limits put in place by the national level (Barber, 2017; van der Heijden, 2018; Heinrichs et al, 2013). This case study has shown that the national level indeed plays an important role in facilitating the ability of a city to act in the field of climate adaptation. It affirms the argument that cities are highly dependent on the financial resources received from the national level and the national's level political support to carry out climate adaptation activities (van der Heijden, 2018; Heinrichs et al, 2013). This case study has also shown that for a centralized political structure the dependency on the national level is even more decisive, which can slow down the implementation of climate adaptation measures on the ground. This relationship is a challenging, but a necessary one. Both political levels need each other within the realm of climate governance to further action on climate change, due to which it is highly important that policies on both levels are geared to one another. However, the insights from this research on the internal organization of urban partnerships show that this is not the only relationship that influences the ability of a city to act on climate change. Especially for an emerging mega-city like HCMC it has been shown that city officials and city leaders not always know what action to take on climate change adaptation and to figure that out also the support from a range of other actors is needed, including private actors, knowledge institutions and international financiers. Hence, the relationship between the national and the city level is an important one that should not be underestimated, but only looking at this relationship as being constraining for urban action on climate change does not do reality justice. Cities are situated in a web of horizontal and vertical relations, with both private and public actors, that all have a particular influence on a city's capability to act in the field of climate governance. To analyse the value of urban climate governance, not one specific relationship, but the sum of all these relationships should be taken into account.

Can it then be said that cities are good testing areas for implementing new scientific knowledge and technologies, as proponents argue (Sassen, 2015; Bulkeley and Castan Broto, 2012)? First of all, following this case study and other literature on urban partnerships it would perhaps be more accurate to argue that cities are good breeding areas for the exchange of existing knowledge and the development of new knowledge. Second, they can be good testing areas for implementing new knowledge, not because cities necessarily facilitate the implementation of positively developed measures, but because cities also can help in identifying barriers to implementing climate adaptation measures. Although the pilot project in District 4 in HCMC has not (yet) been implemented, it has helped to find that corruption and a general lack of financial resources for climate change measures are important barriers for implementing such climate adaptation measures. However, this is a different take on the usability of cities as testing areas than proponents have thus far argued. In their argumentation the focus lies mostly on how positively assessed measures can be replicated and scaled up to other areas (Sassen, 2015; Lenhart, 2015). I would argue that the cases in which implementation was not successful or in which certain scientific knowledge could not be applied, also should be highlighted as they provide lessons learned on important barriers for implementing climate (adaptation) measures such as pilot projects. This leads us into the direction on the argument that there is a risk involved with merely highlighting positive cases from cities on climate change action (van der Heijden, 2018).

Completely at the beginning of this research it was pointed out that the outcome of the relationship between Rotterdam and HCMC has been highlighted as a success within the C40's good practice guide

on climate adaptation in delta cities, as accordingly it has led to development of HCMC's adaptation strategy and the implementation thereof (C40, 2016). However, the manner in which the results of this partnership are portrayed by C40 only shows one particular side of the complete situation. Although the development of the CAS was indeed a success because of the knowledge and expertise provided by parties that were hired by the municipality of Rotterdam, the extent to which the CAS is integrated in the new master plans of the city is not yet certain nor without any obstacles. The increased likelihood of success of the strategy because of the implementation of pilot projects before scaling up measures as mentioned in the guide is also far from certain, as it has turned out to be very difficult to start the implementation of the pilot project in District 4 in the first place (C40, 2016). In fact, the troubles that have arisen in relation to finances in this regard and the changes in political will for executing a feasibility study for the District, among other factors, have led to a halt in the friendly exchanges between Rotterdam and HCMC. These facts show that there is also a different side to the picture drawn by C40 in the good practices guide on climate adaptation. Comparing the claim made by C40 that cities are making a meaningful global impact for the implementation of sustainable practices against climate change with the results of this research thus gives support to the argument that the rhetoric used by city networks does not always (completely) match reality (van der Heijden, 2018). What is needed, in my opinion, is that city networks start to highlight not only the positive aspects of case studies, but also the problems that arise during climate governance activities in cities and why certain cases do not succeed. Such changes would still fit the main aim of city networks of facilitating learning between member cities, as lessons from 'failed' cases highlight the barriers that still need to be overcome to further climate action, which are just as, and perhaps even more, important than the lessons of good cases. If such barriers are better understood and worked on, it is possible that cities stand a chance of contributing more to climate governance than that they are currently doing.

### 7.3.2. Polycentric governance

The theory of polycentric governance has been helpful in understanding the relational dynamics within the case study. Due to this perspective it has been able to see the different types of actors at the same level as the city and across levels, as highlighted above as well. It has in this case been shown that for HCMC to work effectively on climate change issues, it is dependent on the connections that exist with private actors, knowledge institutions, the national government and (financial) institutions on the international level. The connections between these actors have enabled learning between them, but also have hampered certain contributions for adaptive capacity when the interests of the different actors are not in harmony. As such, the city is fully present in the polycentric governance model of climate change. That this polycentric character of climate governance is at risk of different climate initiatives being too fragmented, as has been argued by Keohane and Victor (2011), has also been shown by the situation regarding the international donor environment in HCMC.

Within this research it has unfortunately not been able to establish to what extent different climate projects are coordinated by the People's Committee of HCMC. What has come to the fore, however, is that in an emerging mega city such as HCMC many different types of projects, not only concerning climate adaptation, but also infrastructural projects, are present at the same time and that all these projects are mostly executed on specific bilateral terms. Especially with regards to financial terms



there are high variabilities between different partners with whom HCMC is collaborating. Because of this the capacity building efforts of one project can be undermined by the other and competition between parties supporting HCMC can arise. Also, to add to the argumentation of Keohane and Victor (2011), city stakeholders in this sense do not only 'shop' policy that that best fits their interests, but also 'shop' partners to collaborate with on climate change issues. Some first signals on the synergizing of efforts between supporting parties of HCMC have been given in the interviews, but this still seems to be in its infancy and not on a broad scale. This particular example gives the insight that the fragmentation of climate governance at the international level can influence the effectiveness of climate governance at the urban level and that it is highly important to understand how and under what conditions synergies between these different levels and actors can be created. Hence, merely a polycentric governance model on its own is not efficient in governing climate governance issues, due to which in combination some extent of top-down coordination is required to streamline climate governance actions taking place at the different levels and between the diverse set of actors.

### 7.3.3. The capacities

Finally, it is important to reflect upon the usability of the three key determinants of adaptive capacity to analyse the ability of an urban partnerships to contribute to the adaptive capacity of a city. On the one hand, these determinants proved to be relevant capacities for the city level, especially with regards to knowledge and financial capacity. Although technical capacity was less of a matter within this particular case, it is an aspect that was acknowledged to play a role in other city projects. Hence, analysing the partnership between Rotterdam and HCMC with the lens of these specific capacities has provided relevant information on the strengths and weaknesses of urban partnerships with regards to building knowledge, providing technical assistance and making financial means available to adapt to climate change impacts and the relative importance of each determinant in relation to each other within partnership activities. On the other hand, the boundaries between the different capacities are highly ambiguous. The provision of knowledge on what to pay attention to when setting up an investment call touches upon the capacity in knowledge and skills and financial capacity, while the technical assistance on the development of SWOT analyses and how to set up an adaptation strategy relates to both technical capacity and the capacity in knowledge and skills. This makes it difficult to categorize a certain result of an urban partnership under one capacity or the other and is a limitation that should be taken into account when used in further research on adaptive capacity. With regards to the content of the concepts, findings of the case have identified that the concept of technical capacity can be further broadened to also include capacity to work with management tools and informational technologies and that the capacity in knowledge and skills can also encompass learning processes in which knowledge is not only transferred but also newly created. All in all, considering the fact that adaptive capacity is a highly complex concept, these determinants provide relatively useful pointers to gain knowledge on at least one side of the complete picture in the urban context.

## **7.4. Recommendations for Policy Makers**

From the foregoing findings, this research provides the following recommendations that are aimed at the international community, the People's Committee in HCMC, other city authorities involved in urban partnerships and the CDC and C40 network.

First, to advance the building of the capacity in knowledge and skills on climate related issues, this partnership has shown that for partnerships with a transnational character the method of using drawings is successful in facilitating learning processes and to overcome language barriers. This method can also be used within other transnational partnerships to facilitate such capacity building. At the same time, it also recommended that for partnerships particularly focused on increasing knowledge and skills for climate adaptation there is the need for a follow-up plan to maintain newly gained knowledge and skills in the institutions where the capacity building has taken place after the finalization of partnership activities. This can improve the sustainability of the build capacities. Such a follow-up plan should be defined at the beginning of the partnership, as the localization of knowledge and selection of partnership participants has proven to play an important role in the conservation of knowledge.

The second recommendation is that to ensure that different partnership projects in HCMC complement each other in their activities, the People's Committee could consider organizing round tables in which all the different partners that they are involved with come together on a regular base to share information on their activities and to identify opportunities and relations between different partnership projects. This is to prevent that scarce financial resources are invested in measures that contradict each other with regards to making the city climate proof or that opportunities for the creation of synergies between the different partnership projects are missed. In this regard, there is also a role for the international community to provide financial means and regulatory standards to facilitate these types of coordinating activities on international, national and local level, to support the streamlining of climate governance actions on these different levels.

Finally, it is recommended to the CDC and C40 network to not only highlight the fruitful aspects of urban partnership cases and individual climate actions of cities, but to also to put a spotlight on aspects within cases that did not go according to plan or on completely 'failed' cases. Creating such a spotlight would fit the aim of both networks to provide useful lessons for cities on how to achieve successful climate governance, as it would show the barriers and problems that still need to be overcome when implementing climate measures and can prepare cities in facing such challenges.

## **7.5. Recommendations for Future Research**

At the beginning of this research it has been pointed out that little information is currently available on the interrelationship between urban partnerships and climate adaptation. Although this in-depth study on the partnership between Rotterdam and HCMC has broadened this knowledge a little, more research is needed to identify general patterns. What seems to be especially needed is a large scale and long-term research on different transnational urban partnerships on climate adaptation to understand which factors are general in influencing the value of urban partnerships as a policy instrument to enhance the adaptive capacity of a city and which factors are dependent on context.

Establishing differences between general and contextual factors is most idealistically done with a large-N analysis, but as time and resources for doing such a particular large-scale and long-term research are often too limited, it is probably a more realistic option to coordinate multiple small-scale researches on this particular topic over a certain period of time between different research departments who are specialized in climate governance. Once sufficient amount of data is gathered via these different small scale researches to establish general patterns, it can then be possible for experts in the field of urban climate governance to integrate the gathered data and to execute a meta-analysis.

An unexpected outcome of this research was the relatively important role of embassies within urban partnerships in providing information to municipalities. As a niche-topic within the urban climate governance literature it would be interesting to further follow this lead by delving into the particular role of embassies in this context and perhaps also other types of national bodies that mediate between municipalities (in national or international context) and under which conditions this is taking place. This can possibly provide interesting insights and a different perspective on the symbiotic relationship between municipalities and national political bodies within climate governance.

Lastly, this research has shown that HCMC is particularly struggling with finding financial resources for the implementation of adaptation measures. Considering the current trends in urbanization and the predicted gaps in financial capacity for climate adaptation measures, especially in developing countries, it is highly likely that other delta cities in the global South are currently dealing with the same challenges or will do so in the future. Hence, more knowledge is needed on which financial structures can help to overcome these challenges and especially how and if transnational partnerships between delta cities from the global North and the global South can help in the advancement of such financial structures. This research implies that urban partnerships are probably not the most optimal policy instruments for this purpose, but more focused empirical research is needed for a more conclusive answer.

That climate adaptation is becoming a more pressing issue for (delta) cities is without a doubt. It is now the task to find the right tools and circumstances to unleash the potential of delta cities to deal with this. For now, urban partnerships have not yet proven to be the ideal answer.

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## Annex 1 – Interview List

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



Code	Location/medium	Date	Respondent type	Interview type
NL-1	Amsterdam	22-01-2018	Scientific institute	Semi-structured
NL-2	The Hague	23-01-2018	Government	Semi-structured
NL-3	De Bilt	24-01-2018	Private	Semi-structured
NL-4	Rotterdam	31-01-2018	Government	Semi-structured
NL-5	Skype	06-02-2018	Private	Semi-structured
NL-6	Skype	12-04-2018	International institute	Semi-structured
VN-1	Hanoi	01-03-2018	Government	Semi-structured
VN-2	HCMC	06-03-2018	Government	Semi-structured
VN-3	HCMC	07-03-2018	Scientific institute	Semi-structured
VN-4	HCMC	13-03-2018	Government	Semi-structured
VN-5	HCMC	14-03-2018	Government	Semi-structured
VN-6	HCMC	15-03-2018	Government	Semi-structured
VN-7	HCMC	20-03-2018	Private	Unstructured
VN-8	E-mail	29-03-2018	Government	Questionnaire
VAL-1	Telephonic conversation	31-05-2018	Private	n/a
VAL-2	Telephonic conversation	01-06-2018	Private	n/a

### Notes:

- 1) Due to the political sensitivity of some of the topics discussed in the interviews, none of the respondents are named by name or organization. The respondent type was included to show the distribution of type of actors that have been interviewed.
- 2) The code NL refers to the Netherlands and VN to Vietnam. These codes stand for the country where the researcher was at the time of the interview and does not necessarily reflect the nationality of the respondent. The code VAL stands for the two respondents who have validated the results after they were summarized and analysed.

## Annex 2 – Interview Analysis Coding

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Theme	Coding name	Coding colour
Stakeholder involvement	Role division	
	City to city cooperation	
Key determinants adaptive capacity	Knowledge and skills	
	Technical capacity	
	Financial capacity	
Influential factors	Implementation	
	Obstacles	
	Advantages	
Others	Mal-adaptation	
	Facilitation cooperation	