# HOW THE EU COVENANT OF MAYORS AND CLIMATE-ADAPT STRENGTHEN LOCAL CLIMATE POLICY-MAKING

## A Case Study of the City of Bruges

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**Bram De Botselier**



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## Abstract

This paper identifies two problems in the field of climate policy. First, much of the research and politics related to climate policy focus on the national and international level, rather than on the local level, despite the fact that much of the climate policy should be implemented there, especially for adaptation. Second, when it comes to adaptation, this paper considers that there is currently a lack of attention for this issue in political science research as well as in the political debate. The EU has put into place measures to overcome these issues, namely the European Climate Adaptation Platform (Climate-ADAPT) and the EU Covenant of Mayors for Climate & Energy. This paper aims to study to what extent Climate-ADAPT and the Covenant of Mayors are effective in supporting cities in adopting and implementing climate plans. In order to answer the research question, the development of the local climate policy is studied, with Bruges as a case study as an example of a typical case, with attention for both the adaptation and mitigation parts of climate policy.

The first chapter elaborates on the analytical framework and provides background information on the case study selection. Second, an environmental and political science literature review focuses on the need to include adaptation measures in climate plans, as this is not yet seen as a given in political science. The third chapter analyses the development of local climate policy in Bruges and maps out the different drivers, pitfalls and stakeholders. The case of Bruges is studied by using relevant primary sources, such as minutes of the City Council and the content of climate plans, as well as nine semi-structured interviews with eleven policy-makers, administration officials and experts working for political party think tanks and consultancies. This chapter studies three different periods, namely the start of climate policy discussions in 2013, the drafting of the Sustainable Energy Action Plan (SEAP) and the latest developments under the new legislature after the 2018 elections. The fourth chapter then discusses the different implications of the analysis for the Covenant and Climate-ADAPT and makes some policy recommendations.

The paper finds that the Covenant has been very successful in putting climate policy on the local political agenda, mainly by serving as a litmus test for cities to declare their rhetorical commitment to combatting climate change. Furthermore, the Covenant has also been successful in translating this first commitment of subscribing to an overall emission reduction target into more concrete

measures, by forcing its members into drafting a more concrete Sustainable Energy Action Plan. Nevertheless, the Covenant is less successful in promoting the development of local climate policy past these initial stages. Climate policy is subject to politics, with turf wars between policy-makers as well as electoral considerations halting the adoption and implementation of climate plans by the political level. This paper therefore proposes that the Covenant invests more into directly engaging with the decision-making level, for example by targeting think tanks of political parties which are identified as a key source of information for local politicians. This would also allow for a more successful integration of climate concerns into already existing or planned projects, which is the most successful path towards concretely implementing climate policies. Second, there is a need for detailed information, such as cost-benefit calculations of best practices for specific regions which can offer a response to decision makers regarding concrete, practical concerns. The Climate-ADAPT database or the overviews provided by the Covenant currently do not provide this information sufficiently. As such, private companies have started to develop their own databases, which would nevertheless limit the spread of information due to the existence of paywalls. This paper therefore argues that more support should be given to the development of regional databases.

## Introduction

The Special Report on Global Warming of 1,5 °C by the Intergovernmental Panel on Climate Change (IPCC) has given a new impetus to global climate negotiations focused on mitigation, namely limiting further climate change by restricting the release of greenhouse gasses into the atmosphere, by creating a certain sense of urgency. Additionally, school strikes for climate, climate demonstrations and victories of green parties in several countries have put the issue of climate change prominently on the public agenda. However, it remains to be seen whether this will be enough to successfully finish the discussions on the implementation of the Paris Agreement as well as to push for increased ambition, as the current Nationally Determined Contributions (NDC) will not limit global warming to the Paris Agreement's target of 2°C – let alone the stricter target of 1,5°C. Rather, they will lead to a global warming of 2,6-3,1°C by the end of this century.[1]

Additionally, it has become increasingly clear that climate policy only focused on mitigation will not be enough. Even if the world succeeds in limiting global warming in line with the Paris Agreement's targets to 2°C, or even 1,5 °C, adaptation to the climate change that has already taken place, or that will take place in a new 2°C world, will be necessary. A 2°C warmer world will face a sea level rise of 56 cm, an increase of marine heat waves by factor 23, a 25% increase of the number of hot days and hundreds of millions of people affected by increased risks of droughts, floods, water scarcity and extreme weather events.[2] The exact impact of climate change nevertheless heavily depends on local circumstances. For example, while the Belgian Royal Meteorological Institute (KMI) predicts that, by the end of the century and under the RCP 4,5 scenario that corresponds to a temperature rise of about 1,8°C, rainfall in Spring will decrease in the northern part of the country by about 5%, but increase by 5 to 10% in the eastern part.[3] This makes clear that while the entire world will need to adapt to climate change, the exact adaptation measures will vary from city to city.

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[1] See: Joeri Rogelj et al., "Paris Agreement Climate Proposals Need a Boost to Keep Warming Well below 2 °C," *Nature* 534, no. 7609 (2016): 631-39, doi:10.1038/nature18307.

[2] See: "The impacts of climate change at 1.5C, 2C and beyond", *Carbon Brief*, 2018, https://interactive.carbonbrief.org/impacts-climate-change-one-point-five-degrees-two-degrees/

[3] See: "De klimaatvooruitzichten voor 2100", *Koninklijk Meteorologisch Instituut*, 2019, https://www.meteo.be/nl/klimaat/de-klimaatvooruitzichten-voor-2100

This corresponds to the first research gap identified by this paper. While international climate negotiations are driven by national governments in the framework of the United Nations Framework Convention on Climate Change (UNFCCC) and emission reduction targets are set on the national level, concrete measures often need to be taken locally – especially with regard to adaptation. However, most local governments have only limited capacities and knowledge to design and implement detailed climate plans. A meta-analysis of local climate plans in 855 cities in the EU concluded that many of them have some plan in place, especially in countries where there is a national plan in force that requires local governments to come up with their own plan. However, not all of these plans are equally detailed or variation regarding the level of detail and the number of concrete proposals.[4]

A second research gap exists with regard to a lack of attention to climate adaptation in political science research, which is a specific example of a broader issue, namely the lack of spillovers between political and environmental sciences. Indeed, while environmental scientists have done research on the change in climate that has already taken place, or that will inevitably take place by the end of the century,[5] this debate on adaptation has been much less visible in policy making circles and in political science research.[6] This is problematic, because political science does therefore not equally contribute to this developing, interdisciplinary field.[7] As Javeline (2014) phrases it:

> [A]n engineer can decide where to build a seawall to best protect a city from sea level rise, and an engineer combined with a climate scientist might determine how high to build the seawall, how thick, and with what material and what procedure. The engineer, however, does not decide whether to build the seawall—a question that involves political officials and the people who

[4] Diana Reckien et al., "How Are Cities Planning to Respond to Climate Change? Assessment of Local Climate Plans from 885 Cities in the EU-28" *Journal of Cleaner Production* 191 (2018): 24-25, doi:10.1016/j.jclepro.2018.03.220.

[5] See eg. Christopher B. Field et al., *Climate Change 2014: Impacts, Adaptation, and Vulnerability: A Working Group II Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (Geneva, Switzerland: Intergovernmental Panel on Climate Change, 2014).

[6] Ibid., 1274.

[7] See: Debra Javeline, "The Most Important Topic Political Scientists Are Not Studying: Adapting to Climate Change," *Perspectives on Politics* 12, no. 2 (2014): 420-34, doi:10.1017/s1537592714000784.

vote for them, as well as political institutions, the economy, and other factors that potentially constrain or facilitate action.[8]

Despite not having any specific competences in these areas, the European Union (EU) has attempted to provide platforms of coordination through which local and national actors can share their experiences and best practices, such as the European Climate Adaptation Platform (Climate-ADAPT) and the EU Covenant of Mayors for Climate & Energy (henceforth: Covenant).[9]

According to the latest data available on its website, the Covenant currently counts 9837 signatories from 59 countries covering over 300 million inhabitants, and 221 institutions have signed up for the role of Coordinator. The Covenant was founded in 2008 by the European Commission in order to engage local communities and encourage them to sign up to greenhouse gas emission reduction targets. The initiative quickly gained traction and in 2011 expanded beyond the EU's borders with the creation of a Covenant-East covering the Eastern Partnership countries[10] and currently comprising 365 signatories covering about 30 million citizens (also included in the figures mentioned above). In 2012 the Covenant was expanded again, this time to include the EU's Southern neighbours, via the Cleaner Energy-Saving Mediterranean Cities (CES-MED) initiative. While the Covenant was focused on the mitigation of climate change, the Commission founded a sister-organization to focus on adaptation to climate change in 2014, Mayors-Adapt. The two organizations eventually merged and in the framework of the Paris Agreement, it was proposed that the Covenant would set up global outreach offices.[11] The Covenant tries to raise awareness on climate change policy by organising webinars, seminars and workshops.[12]

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[8] Ibid., 424.

[9] Hans Sanderson et al., "Database Support for Adaptation to Climate Change: An Assessment of Web-based Portals across Scales," *Integrated Environmental Assessment and Management* 12, no. 4 (2016): 629, doi:10.1002/ieam.1755.

[10] The Eastern Partnership countries are Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine.

[11] "Covenant initiative", *Covenant of Mayors for Climate and Energy*, 2019, https://www.eumayors.eu/about/covenant-initiative/origins-and-development.html

[12] Interview with Covenant of Mayors official, Brussels, 16 September, 2019.

In order to support the Covenant members, Climate-ADAPT was launched in 2012 as a partnership between the European Commission (Directorate-General for Climate Action) and the European Environment Agency. Climate-ADAPT aims to fulfil this role by providing a platform to:

> facilitate the collection, sharing and use of information on climate change impacts, vulnerability and adaptation, and build a consistent and updated knowledge base; to assist an effective uptake of the relevant knowledge by decision-makers; to contribute to a greater level of coordination among sectors and institutional levels.[13]

The mission of Climate-ADAPT is to inform decision-makers on all levels, including the local level, as well as experts and government administrations on adaptation-related topics.[14] Particularly relevant for the purposes of this study is the Urban Adaptation Support Tool, which went through a major overhaul recently. This tool aims to provide local decision-makers with a step-by-step guide on how to develop adaptation policy.[15]

While these measures have proven to be effective with regard to mitigation and mainly for bigger cities with hundreds of thousands of inhabitants, it appears that smaller cities and rural municipalities cities are often less eager to develop climate policy. Furthermore, adaptation is often not included in local climate plans.[16] There is also a discrepancy between cities in northern Europe, which are generally less well prepared to deal with the impact of climate change, and those in the south.[17] Furthermore, the existing research is mainly limited to studying correlations between Covenant membership and the adoption of climate plans, without analysing underlying factors and motivations or looking at the actual implementation of the plan.[18]

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[13] Climate-ADAPT, “Climate-ADAPT Strategy 2019-2021”

[14] Ibid.

[15] Interview with Covenant of Mayors official, Brussels, 16 September, 2019.

[16] Reckien et al., "How Are Cities Planning to Respond to Climate Change? Assessment of Local Climate Plans from 885 Cities in the EU-28", *Journal of Cleaner Production* 191 (2018): 24-25.

[17] See: Kathrin Ward et al., "Heat Waves and Urban Heat Islands in Europe: A Review of Relevant Drivers," *Science of The Total Environment* 569 (2016): 527-39, doi:10.1016/j.scitotenv.2016.06.119.

[18] Diana Reckien et al., "How Are Cities Planning to Respond to Climate Change?".

This research paper tries to fill the two research gaps that were previously identified and investigates to what extent Climate-ADAPT and the Covenant are effective in supporting cities in adopting and implementing climate plans, with both attention for mitigation and adaptation. The City of Bruges in Belgium is used as a case study. The research is structured as follows. The first chapter elaborates on the analytical framework and provides background information on the case study selection. Second, an environmental and political science literature review focuses on the need to include adaptation measures in climate plans, as this is not yet seen as a given in political science. The third chapter analyses the development of local climate policy in Bruges and maps out the different drivers, pitfalls and stakeholders. The case of Bruges is studied by using relevant primary sources, such as minutes of the City Council and the content of climate plans, as well as nine semi-structured interviews with eleven policy-makers, administration officials and experts working for political party think tanks and consultancies. This chapter studies three different periods, namely the start of climate policy discussions in 2013, the drafting of the Sustainable Energy Action Plan (SEAP) and the latest developments under the new legislature after the 2018 elections. The fourth chapter then discusses the different implications of the analysis for the Covenant and Climate-ADAPT and makes some policy recommendations. The paper then concludes that the Covenant has been successful in putting climate policy on the political agenda at the local level. However, the political level is not sufficiently targeted by the Covenant and the need for concrete examples, with calculated costs and benefits, is not fulfilled by the Covenant or Climate-ADAPT. This hinders the translation of rhetorical commitments into concrete policy initiatives.

## Analytical framework

This paper assesses to what extent Climate-ADAPT and the Covenant are effective in supporting cities in adopting and implementing climate plans, with both attention for mitigation and adaptation. In order to answer the research question, the development of local climate policy is studied using an in-depth case study of a specific municipality, namely the Belgian City of Bruges. It reconstructs the decision-making process related to the climate action plan and maps out the main drivers and sources of inspirations that have led to the development of this plan. For this

purpose, this paper uses secondary literature and official documents, but also a set of semi-structured interviews with decision-makers and administrative officials dealing with local climate adaptation policy. A total of nine interviews have been conducted with eleven people. One person was interviewed from the Bruges City Council, the current Bruges city government, the former city government, the Flemish administration, the Covenant office as well as two experts of consultancies working on aspects of Bruges' climate plan and four people working on climate policy and local outreach at the think tanks of two political parties. These contacts with representatives from different levels of government, from both the political (government as well as opposition) as the administrative side, combined with experts of consultancies involved in the drafting of the plans, has allowed for a comprehensive reconstruction of the main push and pull factors in the development of the Bruges climate plan, including the role of the Covenant.

Bruges was chosen as a typical case so that the focus can be on the causal mechanisms and main stakeholders involved in the debate and the possible role of the Covenant and Climate-ADAPT in driving the debate, and the eventual outcome of the decision-making process.[19] First, Bruges can indeed be seen as a typical case study due to its size. Previous studies focused on bigger cities with generally more than 200.000 inhabitants.[20] Also the Commission puts emphasis on cities with a population larger than 150.000 people in its evaluation report of the EU Strategy on Adaptation to Climate Change.[21] However, this is not necessarily representative for much of the European population, of which only a small minority lives in big cities.[22] As such, this study has chosen a case with a population size of a little over 100.000, which is lower than the cities often studied in other research. At the same time, Bruges' population size presupposes that it has the technical and

[19] Jason Seawright and John Gerring, "Case Selection Techniques in Case Study Research," *Political Research Quarterly* 61, no. 2 (2008): 299, doi:10.1177/1065912907313077.

[20] Sonia De Gregorio Hurtado et al., "Understanding How and Why Cities Engage with Climate Policy : An Analysis of Local Climate Action in Spain and Italy," *Journal of Land Use, Mobility and Environment* 8, no. Special (2015): 23-46, doi:10.6092/1970-9870/3649.

[21] European Commission, *Commission staff working document: Evaluation of the EU Strategy on adaptation to climate change - Accompanying the document 'Report from the Commission to the European Parliament and the Council on the implementation of the EU Strategy on adaptation to climate change.'* Brussels: European Commission, 2018, 16-17, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018SC0461&from=EN

[22] Lewis Dijkstra and Jos Maseland, *The State of European Cities 2016 Cities Leading the Way to a Better Future* (Luxembourg: European Commission, 2016), 26.

financial means to still develop a climate plan should it wish to do so.[23] Finally, Bruges is a signatory to the Covenant since November 2014. This should have allowed its membership to already have had an impact on decision-making if the Covenant is indeed successful.[24]

## Adapting to a changing climate: A need for political science research

This chapter provides a brief overview of the latest information on climate change, specifically targeted for the City of Bruges. A literature overview is provided based on academic environmental science studies as well as the climate platform of the Flemish Environment Agency (Vlaamse Milieumaatschappy, VMM).

### *How is the climate changing?*

The premise of this study is that the world's climate has already changed, and will inevitably change, in such a way that it is and will be necessary for human beings to adjust. However, this starting principle is not generally accepted in political (science) debates, or at least there is little attention given to it. As such, this section elaborates on how the climate has already changed, and why adaptation to this change also needs to be subject to academic and policy debate.

Since the main subject of this research project involves climate change, it is important to first define climate. This study considers climate as "a description in terms of the mean and variability of relevant atmospheric variables such as temperature, precipitation and wind" or, alternatively, as the "aggregate of weather" over a period of 30 years[25]. On average, the global mean surface temperature over the period 1901-2012 has increased by 0,89°C (0,49-1,08°C using a 90% uncertainty interval). This global warming has not been constant though. The increase in global

[23] Diana Reckien et al., "How Are Cities Planning to Respond to Climate Change?", 212.

[24] EU Covenant of Mayors. *Brugge*. March 29, 2016. Accessed August 18, 2019. https://www.covenantofmayors.eu/about/covenant-community/signatories/overview.html?scity_id=18748.

[25] Hugues Goosse, *Climate System Dynamics and Modeling* (Cambridge: Cambridge University Press, 2015), 1.

mean surface temperature was larger in 1970-2000 and has been more stable in the 21st century. Additionally, while warming is nearly omnipresent on the planet, there are variations between regions, with oceans cooling slower than land and with the southern part of Greenland even showing a slight cooling in the period 1901-2012.[26]

This warming has clear consequences, but also these are different for every region. Arctic sea ice has decreased by about 4% per decade in the last 40 years. The Arctic sea ice reached it second lowest extent in 2019 – second only to 2012, and worrying is also the thinning of the ice, which is now less than half of what was observed in 1980.[27] Specifically for Europe[28], warming has been strongest in the winter in Scandinavia, while the Iberian Peninsula mostly faced temperature increases over the summer. High-temperature extremes have become increasingly frequent, while lower-temperature outliers have become less so. The sea level has increased in all of Europe except in the northern Baltic Sea, and also extreme sea levels have increased. As the climate keeps warming, currently projected to 2,6-3,1°C if all NDCs under the Paris Agreement are successfully implemented, scenarios as to *how* the climate will change also vary. In fact, it is likely that climate change will amplify the already existing climate differences between the regions, with effects for forestry and agriculture. Precipitation is projected to increase in Northern Europe but decrease in Southern Europe. Extreme weather events such as heat waves and heavy precipitation will become more likely across Europe. Wind speed extremes will be more likely over Central and Northern Europe during winter (medium confidence). There is medium confidence that Central and Southern Europe will face an increased number of droughts and that water stress will increase in these regions. The Netherlands, on the other hand, could be facing a sea level rise by 0,40 to 1,05m, by the end of the century, under a low probability/high impact scenario. According to the IPCC, "even under an average global temperature increase limited to 2°C compared to preindustrial times, the climate of Europe is simulated to depart significantly in the next decades from today's climate."[29]

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[26] Ibid., 236.

[27] "Arctic Sea Ice News & Analysis", *National Snow & Ice Data Center,* 2019, https://nsidc.org/arcticseaicenews/

[28] Unless noted otherwise, the remainder of this section is based on: Christopher B. Field et al., *Climate Change 2014,* 1275-91.

[29] Ibid., 1276.

These changes in the climate have important effects for on the frequency of natural disasters, agricultural production, and other economic activities. Coastal flooding will become more likely, creating a risk for inhabitants of coastal areas, but also for important port infrastructure. Furthermore, an increased risk of river flooding in some regions – especially in winter – worsened by population and economic growth, can affect hundreds of thousands of people. Conversely, an increased risk of droughts could make the low water levels of the Rhine unsuitable for inland navigation after 2050. Crop suitability will likely change even under a 2,5°C regional temperature increase, and there will be a need to adapt by implementing "changes in crop species, fertilization, irrigation, drainage, land allocation, and farming system."[30] Additionally, due to the existence of the Urban Heat Island (UHI) effect which causes the temperatures in cities to be higher compared to the surrounding countryside, the impact of global warming will be higher in the cities than in rural areas. This is especially problematic during times of heat waves, when high temperatures at night lead to heat stress. This effect can in turn cause sleep deprivation, heat-related diseases, as well as a decrease in labour productivity. Heat stress also increases the mortality and morbidity rates, particularly for those with less resilience such as the elderly or people with an illness.[31]

## *Climate change affecting Bruges*

These global changes will also affect the local level. In order to provide an overview of the specific climate impact in Bruges, data is used from the Flemish Environment Agency (Vlaamse Milieumaatschappij, VMM).[32] Based on a high impact scenario (a 2,5°C global temperature increase by 2100) and with the year 2050 as a reference point, the number of annual heat wave days[33] will increase by 15 to 20 to around 25, depending on the specific site in Bruges. A total of

[30] Ibid., 1284.

[31] See: Tord Kjellstrom et al., "Heat, Human Performance, and Occupational Health: A Key Issue for the Assessment of Global Climate Change Impacts," *Annual Review of Public Health* 37, no. 1 (2016): 97-112, doi:10.1146/annurev-publhealth-032315-021740; Kathrin Ward et al., "Heat Waves and Urban Heat Islands in Europe: A Review of Relevant Drivers," *Science of The Total Environment* 569 (2016): 527-39, doi:10.1016/j.scitotenv.2016.06.119.

[32] "Klimaatportaal Vlaanderen", *Vlaamse Milieumaatschappij*, 2019, https://klimaat.vmm.be/nl

[33] A heat wave is defined as a period of at least three consecutive days with an average minimum temperature (over three days) higher than 18,2°C and an average maximum temperature of more than 29,6°C.

258 institutions in Bruges are estimated to be at risk of heat stress, particularly those dealing with groups that are particularly vulnerable to the impact of heat stress, such as schools, nursing homes and hospitals. The impact of heat will be particularly strong in the historical city centre. However, the suburbs to the south of the centre will also be impacted by longer periods without rainfall – on average thirty additional days without rain per year. The entire historical city centre is at risk of flooding in the long term (2100), and also the suburb of Sint-Michiels is very vulnerable to the impact of heavy rainfall. The data estimates that 59 vulnerable institutions are at risk of being impacted by flooding. Finally, the VMM also shows the impact of a worst case scenario storm, the so-called 1000-year storm which has a probability of happening once every 1000 years. Based on the coastal defences in place in 2015, and with 2075 as reference year, the Port of Zeebruge as well as the canal connecting the Port to the historical city centre would be two meters underwater. For reference, starting from 70 cm, the VMM considers a flood to have high economic impact and to pose an acute danger to public health.

The impacts of climate change are largely modelled on a long-term scale (by 2050, 2075 or 2100). Nevertheless, models measuring the impact by 2030 already show that the situation is progressing in the direction of the long-term projections. Considering that local elections in Belgium are held every six years, and the last election was in 2018, it will already be the next legislature that will deal with this shorter term impacts.

## *Slowly developing political science on adaptation*

In its fourth Assessment Report published in 2007, the IPCC stated that "adaptation will be necessary to address impacts resulting from the warming which is already unavoidable due to past emissions."[34] However, in May 2013, a search of 152 political science titles revealed only two articles with a meaningful discussion on adaptation to climate change and most in-text mentions of climate adaptation were in non-mainstream journals.[35] In comparison to environmental science and the IPCC, political science was thus quite slow to consider climate adaptation as a relevant

[34] Martin Parry et al. *Climate Change 2007: Impacts, Adaptation and Vulnerability: Working Group II Contribution to the Fourth Assessment Report of the IPCC Intergovernmental Panel on Climate Change*. (Geneva, Switzerland: Intergovernmental Panel on Climate Change, 2008): 19.

[35] Debra Javeline, "Adapting to Climate Change", 421.

and needed study domain. In the meantime, more research has been done on adaptation, although much of it is focused on the drivers of the debate on adaptation, different ways of framing the discussion and how the issue becomes part of the public agenda.[36] Research has found that extreme events often play a key role, pointing towards a reactive policy rather than a proactive one and meaning that there is a lack of planning regarding the large-scale investments that are sometimes needed.[37] Furthermore, previous research found large differences regarding the level of detail as well as the content of the local climate plans put in place.[38] Pressure from the national level is particularly important, but some countries had a high percentage of cities with a climate plan without an obligation to do so based on national legislation. It is unclear which factors play a role, but the presence of local expertise and level of climate awareness could be potential explanatory factors. The presence of a plan on climate adaptation is much more dependent on guidance from a higher level of government than a plan on mitigation, which has higher chances to be entirely locally driven. Finally, in both countries with and without a national obligation to develop local plans, larger cities (+500.000 inhabitants) are much more likely to have a climate plan in place, and to also cover adaptation. Smaller cities often exclude adaptation – if they have a plan in place at all.[39] Indeed, studies have found that smaller cities often lack the capacity and knowledge to develop climate plans.[40]

There has been no specific analysis of the effectiveness of efforts from higher levels of government to consciously steer the debate in a certain direction, even though research on drivers of local decision-making acknowledges a possible role of these higher levels of government. Massey at al. found that policy-makers indicated extreme weather events and scientific research on the impact of climate change were the most important drivers. European efforts on adaptation were indicated

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[36] See eg. Sirkku Juhola, E. Carina H. Keskitalo, and Lisa Westerhoff, "Understanding the Framings of Climate Change Adaptation across Multiple Scales of Governance in Europe," *Environmental Politics* 20, no. 4 (2011): 445-63, doi:10.1080/09644016.2011.589571; Eric Massey et al., "Climate Policy Innovation: The Adoption and Diffusion of Adaptation Policies across Europe," *Global Environmental Change* 29 (2014): 434-43, doi:10.1016/j.gloenvcha.2014.09.002.

[37] W. Neil Adger, Nigel W. Arnell, and Emma L. Tompkins, "Successful Adaptation to Climate Change across Scales," Global Environmental Change 15, no. 2 (2005): 83, doi:10.1016/j.gloenvcha.2004.12.005.

[38] Diana Reckien et al., "How Are Cities Planning to Respond to Climate Change?", 212.

[39] Ibid., 2017-2019.

[40] Diana Reckien et al., "The Influence of Drivers and Barriers on Urban Adaptation and Mitigation Plans—An Empirical Analysis of European Cities," *Plos One* 10, no. 8 (2015): 15, doi:10.1371/journal.pone.0135597.

as particularly important by decision-makers from middle- and low GDP countries. The research did not study which 'European efforts' were particularly impactful.[41] Also Reckien et al. found that in countries without a national obligation to develop climate plans, membership of the Covenant could provide an alternative incentive to still develop climate action locally.[42] In a different article, it was even seen as one of the most significant drivers of the development of climate action plans,[43] but neither specifically studied the effectiveness of the EU's initiative.

It is nevertheless clear that the EU aims to influence local decision-making with its measures. The EU gives significant attention to the local level in its own Strategy on Adaptation to Climate Change, with the intention to strengthen the capacity of municipalities to adopt climate plans and to increase the knowledge on the local level regarding climate adaptation,. The EU-level strategy has three principal objectives: 1) "promoting action by member states"[44], which includes support for adaptation in cities through the Covenant of Mayors initiative; "promoting better informed decision-making by addressing gaps in knowledge"[45], for instance through Climate-ADAPT; and "promoting adaptation in key vulnerable sectors."[46] The first and second objective have a clear connection to local levels of government.

Considering the limited literature on adaptation to climate change in political sciences, and following the lack of studies on the effectiveness of EU policies, the following chapter provides an in-depth case study of the development of local climate policy in the City of Bruges. This allows the subsequent chapter to draw lessons and propose several policy recommendations.

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[41] Eric Massey et al., "Climate Policy Innovation", 438-39.

[42] Diana Reckien et al., "How Are Cities Planning to Respond to Climate Change?", 212.

[43] Diana Reckien et al. "The Influence of Drivers and Barriers on Urban Adaptation and Mitigation Plans", 15.

[44] European Commission, *The EU Strategy on Adaptation to Climate Change: Strengthening Europe's Resilience to the Impacts of Climate Change*. Brussels: European Commission, 2013 : 1-2 : https://ec.europa.eu/clima/sites/clima/files/docs/eu_strategy_en.pdf

[45] Ibid.

[46] Ibid.

## The development of local climate policy in Bruges

The following paragraphs discuss the development of climate policy in the City of Bruges, and analyse important pitfalls and problems that were encountered on the way, as well as the main drivers for the development of the local plans. The overview is divided into three parts, corresponding to the different stages of the climate policy development, namely the drafting of the first climate plan, the development of the Sustainable Energy Action Plan and finally the latest developments after the 2018 municipal elections. This chapter also ends with a short overview of the main issues lessons learned. The next chapter will then analyse the most important factors hindering the development of local policy and provides for several policy recommendations.

### *Approving a climate plan and joining the Covenant of Mayors*

Climate policy in Bruges developed from 2013 onwards. The 2012 local election has resulted in an upset victory for the social democratic candidate for Mayor over the christian-democratic party, which had held the Mayor's Office since 1995. These two parties were at the basis of the previous government coalition, and continued to cooperate in the new City Council. In Belgium, cities are governed by the College of the Mayor and the Aldermen (henceforth: College), a collegial body that sets out the priorities and that functions as the executive power at the local level. The Mayor and the Aldermen are each responsible for a number of delineated competences. Decisions are then approved by the City Council (henceforth: Council), which acts as the local legislature.

The 2013 coalition agreement foresaw that Bruges would join the Covenant, subscribe to the emission reduction target of 20% by 2020, and come up with a concrete climate plan that would lay down how this target would be achieved.[47] It was the first time that any climate plan was discussed in the Bruges City Council. Nevertheless, the climate plan was more controversial than initially foreseen and it took eventually more than one year for the climate plan to be proposed by

[47] Gemeenteraadsblad, *Woordelijk verslag van de gemeenteraad van 29 januari 2013*, (Bruges: City of Bruges, 2013), 27-30.

the College, with a delay of several months.[48] This is also not surprising considering that the climate plan was pushed on the political level by one single Alderwoman, who had the responsibility for Environment, with support of the administration. The other members of the College were much less supportive of the idea of developing a climate plan, despite the fact that it was part of the coalition agreement.[49] It should be also noted that the entire discussion at this initial stage was focused on the mitigation aspect. Adaptation was not seen as important and was thus not considered.[50]

On 24 November 2014, the Council formally approved the adhesion of the City of Bruges to the Covenant and on 1 December, the Mayor officially signed the accession. The decision to join the Covenant *per se* was non-controversial as it easily passed all stages of the decision-making process, it was even considered to be long overdue in comparison with other cities in Belgium. The main driver for coming up with a climate plan was the increased public attention for climate change as well as the intention to 'lead by example' as one of the bigger cities in Flanders.[51] It should also be noted that Bruges was somewhat lagging behind to other bigger cities, such as Antwerp, Ghent and Leuven, which had already joined the Covenant between 2009 and 2011. Perceived competition with these cities may have provided an additional incentive to join the Covenant. Membership of the Covenant is still today seen as noncontroversial, because it is considered to be an easy way to show public commitment to mitigating climate change, without much impact in practice. Even political parties who consider the greenhouse gas emission reduction targets that the Covenant puts forward to be unrealistic, are supportive of membership of the Covenant.[52]

The other elements of the climate plan, the 'roadmap' for the city to actually achieve the emission reduction targets, were more controversial, which led to the eventual delay in its adoption. The main problems identified in this case study are the following. First, and most importantly, the

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[48] Gemeenteraadsblad, *Woordelijk verslag van de gemeenteraad van 25 maart 2014*, (Bruges: City of Bruges, 2014), 52-57.

[49] Interview with Bruges administration official, Bruges, 25 October, 2019.

[50] Interview with former member of the Bruges College of the Mayor and the Aldermen, Bruges, 7 October, 2019.

[51] Ibid.

[52] Interview with experts of political party think tank, Brussels, 17 October, 2019: Interview with experts of political party think tank, Brussels, 10 October, 2019.

College is a collegial body, which means that it has to jointly agree before submitting a proposal to the city council. As such, the Aldermen tend to act as a check on each other's work. However, this effect was even reinforced in the case of the climate plan, because it was a crosscutting roadmap that touched upon various policy areas, such as education, transportation and energy. These competences fell under the responsibility of multiple Aldermen, who did not always appreciate the fact that they were being limited in the exercise of their powers by the proposed climate plan.[53] Second, the Alderman for Environment in the city government, supposedly the main driver of the climate plan, was new to the College and had not been active in local politics before. As such, the Alderman was faced with a learning curve that made it more difficult to make the climate plan into a priority of the College.[54] Second, the competences of Energy and Environment were split between two different Aldermen, which necessitated cooperation on the political level which proved to not always be that easy. It was particularly difficult because both Aldermen attached different levels of priority to the climate plan. Third, the Alderwoman for Environment was also responsible for other competences, such as tourism. It should be noted that tourism, in a city as Bruges where tourism generates a significant amount of income, is an important portfolio. As such, even the Alderwoman in charge of the climate plan had different priorities, and she was only able to spend about 30% of her time on her environment portfolio. As this competence also includes matters related to animal welfare, even less time could be spent on matters related to climate policy. All this resulted in a situation where other priorities overshadowed the discussion on the climate plan and delayed its approval by several months.[55]

What exactly was the role of the Covenant in this debate? It is clear that the existence of the Covenant *per se* did not convince the city to start developing policy on climate change. Rather, the increased attention of the public for climate issues as well as the perception that many other cities had already developed significant policies on this topic, were the main drivers of developing Bruges' own local climate plan. Joining the Covenant was then seen as an easy and noncontroversial way of showing the city's commitment to addressing this issue to the public.

[53] Interview with former member of the Bruges College of the Mayor and the Aldermen, Bruges, 7 October, 2019.

[54] Gemeenteraadsblad, *Woordelijk verslag van de gemeenteraad van 25 maart 2014*, (Bruges: City of Bruges, 2014), 56.

[55] Interview with former member of the Bruges College of the Mayor and the Aldermen, Bruges, 7 October, 2019.

Membership of the Covenant was indeed seen as a basic litmus test by the members of the Council on the College's commitment to develop its own climate plan.[56]

As mentioned before, the climate plan in the initial stages did not include a reference to adaptation measures, but was entirely focused on mitigation. This was also not an obligation under the then Covenant rules. More surprisingly is that adaptation was also almost entirely absent from the debate on the adoption of the 2014 climate plan, as also no other stakeholders or Council members brought it up.[57] Adaptation was indeed not seen as a priority. To the contrary, it was considered that adaptation to climate change was less important than mitigation, and therefore it was left out of the discussion.[58] This paper later shows that this mind-set has only changed very recently. Starting from 2018, adaptation was also given some attention. Nevertheless, also the incumbent College considers that climate mitigation should be given higher priority.[59]

### *Drafting a Sustainable Energy Action Plan*

The most important effect of the Covenant is most likely with regard to the next stage. Its members are required to submit a Sustainable Energy Action Plan (SEAP) within two years after joining the Covenant. This plan includes all steps to be taken by the city to achieve its emission reduction targets, which are then assessed by the Joint Research Centre of the European Commission. It makes the targets more clear an transparent.[60] Specifically for Bruges, the obligation to draft the SEAP was the main, if not only, driver to further develop and concretize the climate plan.[61] As such, the Covenant played a key role in forcing the city to continue working on climate policy. In political discussions, the SEAP was described as an intermediary step, a 'coat rack' that would then be used to have concrete measures in a second phase. These concrete measures would be

[56] Gemeenteraadsblad, *Woordelijk verslag van de gemeenteraad van 25 maart 2014*, (Bruges: City of Bruges, 2014), 56.

[57] Ibid.

[58] Interview with former member of the Bruges College of the Mayor and the Aldermen, Bruges, 7 October, 2019.

[59] Interview with member of the Bruges College of the Mayor and the Aldermen, Bruges, 30 August, 2019.

[60] "Plans & Actions", *Covenant of Mayors for Climate & Energy*, 2019, https://www.eumayors.eu/plans-and-actions/action-plans.html

[61] Interview with former member of the Bruges College of the Mayor and the Aldermen, Bruges, 7 October, 2019.

subject to the approval by the College and the Council. It was promised that all future proposals by the College would also undergo a 'climate compatibility check', but it was not explained how this would turn out in practice.[62] Note however that the SEAP was itself already the second phase, since the agreement of the climate plan (which was described as a 'roadmap') was the first phase in the development of the local climate policy.

The SEAP is rather detailed, comprehensive and transparent in the emission reduction targets it has set out for each individual sector. Furthermore, it proposes 35 different measures that should enable the city to achieve the emission reduction targets it has put forward in the framework of its membership of the Covenant. The SEAP considers local energy production, households and mobility the main areas where energy can be saved in order to achieve the targets. As such, the three main domains where energy could be saved, fell under the responsibility of three different aldermen (the holders of the portfolios of, respectively, Energy, Urban Planning and Living, and Mobility). Like in the beginning of the development of local climate policy, this led to the existence of turf wars.[63] Also in the current legislature, these portfolios are spread over three different aldermen, but the portfolios of Energy and Climate have been accorded to the same alderwoman. However, the existence of turf wars still create a problem for the implementation of the SEAP into concrete policy measures.[64]

The drafting and research process was subcontracted to two specialist consultancies. This research was based on a wide range of sources, including academic literature and best practices found in public databases. Also the Covenant resources were used as inspiration, albeit to a much more limited extent. It was found that the resources provided by the Covenant, such as the overview of 'good practices', were not very insightful. The search options are quite general (such as 'industry', 'transport'), meaning that it is not easy to generate an overview of 'good practices' related to a specific topic or challenge. Furthermore, the information provided is not as comprehensive as required for the drafting of the SEAP. Policy-makers are looking for an easy to understand overview of measures and a cost-benefit analysis for all of them, specifically targeted for their

[62] Gemeenteraadsblad, *Woordelijk verslag van de gemeenteraad van 26 januari 2016*, (Bruges: City of Bruges, 2016), 35-39.

[63] Interview with former member of the Bruges College of the Mayor and the Aldermen, Bruges, 7 October, 2019.

[64] Interview with Bruges administration official, Bruges, 25 October, 2019.

city.[65] The Covenant database currently does not provide for these options, resulting in this void being filled by private companies. Some of them now manage their own databases which includes detailed calculations for specific measures, which are then made available to companies and government institutions.[66]

Furthermore, for the 20% emission reduction by 2020, the city estimates that around 665 million euro was necessary over a period of 5 years (2015-2020). Nevertheless, the city considered that this budget did not have to come from the city resources alone, as also investments from private individuals should be attracted. According to a rough estimate based on data of the National Bank of Belgium, Bruges citizens have a total of 2,8 billion euro on savings accounts. There is nevertheless little concrete information available on how this money can be put into use. A lot of emphasis is put on direct engagement with citizens and the inclusion of civil society organisations. To this end, a 'climate forum' had been organised by the city, to engage with civil society, as well as a 'climate platform', which was aimed at engaging directly with the citizens .[67] In practice, however, these initiatives were rather unsuccessful. While civil society organisations such as unions and universities were initially eager to participate, in order to show their commitment to addressing an issue that was high on the public agenda, this eagerness did not translate into concrete cooperation. It became clear that these organisations did not have addressing climate change as their core business, and that they had little interest in discussing specific policy measures.[68] Additionally, the approach of the city government was thought to be too unilateral, with the city using both initiatives as a way to promote its own policy, rather than actively listen to the input of other stakeholders and citizens. Furthermore, the citizen-oriented 'climate platform' was 'hijacked' by environmentalists and was eventually no longer considered to be a representative sample of society, making it less attractive for the city to engage with.[69] Ironically, these civil society organisations had thus a similar approach to the city government itself, namely rhetorically committing to addressing the issue (i.e. participating in the climate forum versus joining the

[65] Interview with expert of consultancy, via phone, 24 October, 2019.

[66] Ibid.

[67] Steven Van Praet, Christophe Vercarre and Jim Baeten, *Energie Actieplan Brugge,* (Bruges: City of Bruges), 22.

[68] Interview with former member of the Bruges College of the Mayor and the Aldermen, Bruges, 7 October, 2019.

[69] Interview with Bruges administration official, Bruges, 25 October, 2019.

Covenant), while being much less keen to discuss the actual, practical implications of this commitment, because they had different priorities. The incumbent College plans to revitalize the initiatives and come up with a broad climate platform in order to include stakeholders and citizens who are not necessarily environmentalists. This approach is an attempt to move the climate debate away from party politics and to have engage a wider variety of citizens, with a broader range of opinions, in the debate.[70] This idea is also supported by the administration, but it has not yet been put into practice.[71]

Considering that the SEAP is intended to lay down how the city aims to achieve its emission reduction targets, it logically deals with mitigation for the most part. Adaptation is nevertheless mentioned in a few points. The city commits to develop a 'broad communication strategy towards the citizens, aimed towards putting adaptation on the agenda', 'starting small climate projects connecting adaptation to already planned initiatives' and thinking about 'incentives to create public-private partnerships'. The initiatives are nevertheless not translated into concrete measures.[72] As the consultancies who worked on the SEAP also have expertise on climate adaptation policy, this omission reflects a choice in priorities by the College.[73] This is consistent with the previously mentioned observation that adaptation was considered less important than mitigation and that the former should not be a priority for the city government, a mind-set that only changed in 2018.[74]

The SEAP was eventually adopted by the Council on 26 January 2016, but some opposition parties abstained because it was unclear how the proposed measures of the SEAP would be paid for, as there was no dedicated budget foreseen.[75]

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[70] Interview with member of the Bruges College of the Mayor and the Aldermen, Bruges, 30 August, 2019.

[71] Interview with Bruges administration official, Bruges, 25 October, 2019.

[72] Steven Van Praet, Christophe Vercarre and Jim Baeten, *Energie Actieplan Brugge*, (Bruges: City of Bruges), 12.

[73] Interview with expert of consultancy, via phone, 24 October, 2019.

[74] Interview with former member of the Bruges College of the Mayor and the Aldermen, Bruges, 7 October, 2019.

[75] Gemeenteraadsblad, *Woordelijk verslag van de gemeenteraad van 26 januari 2016*, (Bruges: City of Bruges, 2016), 38-39.

### *Developments under the new legislature*

Already at the end of the previous legislature, it became clear that Bruges would need a new climate plan.[76] According to the SEAP and the commitment of reducing 20% of greenhouse gas emissions by 2020 as stipulated by the Covenant, Bruges needs to reduce 180 ktons of $CO_2$ per year between 2014 and 2020. In 2018, this reduction only accounted for 104 kton of $CO_2$ or 58% of the target.[77] The targets were thus not met and a new plan was needed. This need was confirmed by members of the outgoing and incoming city government, which largely consisted of the same political parties.[78] Also on the city administration level, it was considered that more efforts were needed, but there remained scepticism regarding to what extent the political level would be prepared to foresee the necessary financial resources.[79] The new coalition agreement, drafted after the 2018 municipal elections, also includes a section on climate and sustainability. The City 'engages to subscribe' to the Covenant's targets and to have a joint approach that includes mitigation and adaptation. The first step in concretizing these commitments was the development of a new climate plan.[80] To this date, however, a concrete plan has not been proposed or approved. The College has committed to the Covenant's 2030 emission reduction target, which means a 40% reduction by 2030. Nevertheless, this goal was described by the city government itself as unrealistic.[81]

For the new climate plan, the new College aims to prioritize emission reductions from energy for heating, transportation, and putting higher emphasis on local renewable energy production. Many ideas are being floated. With regard to the first objective, reducing energy use for heating, the city aims to increase efforts to incentivize citizens to isolate their houses and increase the number of heat networks.[82] Bruges' waste processing company was actually a pioneer in developing heat networks. In 1982, it started with a pilot project that included the production of electricity from its

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[76] Gemeenteraadsblad, *Woordelijk verslag van de gemeenteraad van 27 november 2018*, (Bruges: City of Bruges, 2018), 9-12.

[77] "Brugge op weg naar 20 procent CO2-reductie tegen 2020", *Stad Brugge*, 3 October 2018, https://www.brugge.be/brugge-op-weg-naar-20-procent-co2-reductie-tegen-2020

[78] Gemeenteraad 26 februari spa

[79] Interview with Bruges administration official, Bruges, 25 October, 2019.

[80] Stad Brugge, *Beleidsprogramma 2019-2024*, (Bruges: City of Bruges, 2018), 37-40.

[81] Interview with member of the Bruges College of the Mayor and the Aldermen, Bruges, 30 August, 2019.

[82] Ibid.

incineration plant, and the supply of waste heat to surrounding buildings, including a local hospital. It was agreed that the company would look to have more of these heat networks.[83] The reduction of emissions coming from transportation would be achieved by investing in intercity biking highways as well as in electric bikes and buses for the city. Local energy production would be increased by investing in windmills and promoting solar energy in Bruges' historical city centre.[84] To this date, these initiatives have not yet been put into practice however. At the same time, the city wants to look into its own organisation and save energy and thus emissions there, by restructuring and reorganising the staff. While this idea has already created concern among the city staff, nothing concrete has been achieved to this date.[85]

The practical implementation of the climate plan is being hindered by familiar problems. First, the division of competences again led to turf wars between the different aldermen in the College. There is now a specific portfolio on Climate, with one Alderwoman responsible, who also holds the portfolio of Energy. Nevertheless, the competences on budget and mobility remain with other Aldermen. Internal rivalries have been one of the main reasons for the slow progress regarding the implementation of the climate plan. The creation of a specific Alderwoman for Climate even had as the downside that other Aldermen do not want to connect their initiatives to the term 'climate', as they consider this would pass on the credit for success stories to the Alderwoman for Climate, rather than positively reflect on their own image.[86] A second problem is related to electoral considerations. Unlike countries like Germany or the Belgian regions of Wallonia and Brussels, the Flemish Greens did not achieve a real victory, despite weeks of demonstrations and strikes by high school children and students. Flanders instead saw the rise of the far-right Vlaams Belang party, which is sceptical of this so-called 'climate hysteria' and called for more attention for issues as migration.[87] The attractiveness of climate policy in electoral politics thus decreased and individual Aldermen seem less keen to profile themselves on this issue.[88]

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[83] "IVBO legt nieuw warmtenet aan in de nieuwe duurzame woonwijken Duivekeet en Blauwe Torenpoort", *IVBO*, 12 May 2017, https://www.ivbo.be/OverIVBO/Nieuws/Bericht.aspx?id=3476

[84] Interview with member of the Bruges College of the Mayor and the Aldermen, Bruges, 30 August, 2019.

[85] Interview with expert of consultancy, Bruges, 25 October, 2019.

[86] Interview with Bruges administration official, Bruges, 25 October, 2019.

[87] Laurens Cerulus et al., "Election treble spells trouble for Belgium", *Politico*, 27 May 2019, https://www.politico.eu/article/belgium-election-results-analysis/

[88] Interview with Bruges administration official, Bruges, 25 October, 2019.

In general, the Covenant plays a very limited role in these latest developments in Bruges climate policy. The targets of the Covenant are seen as unrealistic and there is little political appetite to seriously reflect on how they can be achieved.[89] The same is true for the development of the adaptation plan, which was finished by May 2019 and which was drafted outside of the Covenant framework. This contract was awarded in the beginning of 2018 in the framework of an Interreg project on Water Resilient Cities, which has a total budget of 7,75 million euros, 60% of which was funded by the European Regional Development Fund. Six cities in Belgium, France, the Netherlands and the United Kingdom cooperate in the project, which envisages to prepare cities for the impact of heavy rainfall.[90] While the project is overwhelmingly aimed at preventing flooding, the climate adaptation plan that was drafted for the city centre of Bruges is a general adaptation plan, so it also includes the impact of heat waves and droughts.[91] The report was based on models and input from the KU Leuven, academic sources, and the Flemish Environment Agency VMM. The Covenant and Climate-ADAPT were only scarcely used, for similar reasons as why they were not used for the SEAP. It is considered that the examples in Climate-ADAPT were not sufficiently concrete and calculated to be really useful to be taken into account.[92]

The contact point of the consultancy was the administration, where it was found that there is a real eagerness to work on the issue. Conversely, there was very little engagement with or interest from the political level throughout the entire process. Also the Alderwoman responsible for Climate was not engaged in the drafting process of the adaptation plan.[93] The only contact with the decision-making level was a short presentation of ten minutes to the members of the College, during which the members seemed rather disengaged.[94] The issue has to this date not yet been formally put on the agenda of the Council by the College, a necessary step before it can be formally adopted by the Council and made public. Even Council members of the governing coalition have not seen any

[89] Ibid.

[90] "Water Resilient Cities: Increasing urban resilience to climate change through improved storm water management", *Interreg 2 Seas Mers Zeeën*, 2019, https://www.interreg2seas.eu/en/wrc

[91] Interview with expert of consultancy, Bruges, 25 October, 2019.

[92] Interview with expert of consultancy, Bruges, 25 October, 2019.

[93] Ibid.

[94] Interview with expert of consultancy, Bruges, 25 October, 2019; Interview with Bruges administration official, Bruges, 25 October, 2019.

information related to the climate plan.[95] Reasons for the delay are the existing turf wars between the different Aldermen holding portfolios that would be impacted by the adoption, as well as the perceived political sensitivity of the issue. It is felt that the plan might create unnecessary concerns among the citizens, because it shows potential flooding risks in the city centre, while it is not seen as a priority for the current College due to the long-term time frame involved.[96] The lack of involvement from the decision-making side is also problematic with regard to the cohesion between the adaptation and mitigation policy. Some measures, such as green roofs, have both adaptation and mitigation benefits.[97] However, due to the subcontracting of the drafting of the adaptation plan and SEAP to different companies, there was little coordination across the different aspects of climate policy. The SEAP was for example not used as a source for the adaptation plan.[98] This lack of coordination, which should take place on the political level, is even more important because, as will be explained in the next chapter, climate measures are much more likely to be implemented when they can be integrated into already existing projects.[99]

### *Main takeaways of Bruges' climate policy*

The above analysis of Bruges' climate plan shows that the Covenant was instrumental in the beginning of the process. Becoming a member was seen as a basic expression of Bruges commitment to combat climate change, at least rhetorically. Thanks to the Covenant, this rhetorical commitment was also made more concrete as a SEAP had to be developed under its membership rules. However, the three periods discussed point towards similar problems, which the Covenant and Climate-ADAPT do not sufficiently address. First, climate policy is politics and climate plans are subject to political games, turf wars and conflicts between different Aldermen. This makes it rather difficult to have the plans, which were drafted by administration officials or consultancies,

[95] Interview with former member of the Bruges College of the Mayor and the Aldermen, Bruges, 7 October, 2019; Interview with member of the Bruges City Council, Bruges, 4 September, 2019.

[96] Interview with Bruges administration official, Bruges, 25 October, 2019.

[97] Mary Thornbush, Oleg Golubchikov, and Stefan Bouzarovski, "Sustainable Cities Targeted by Combined Mitigation–Adaptation Efforts for Future-Proofing," *Sustainable Cities and Society* 9 (2013): p. 6, https://doi.org/10.1016/j.scs.2013.01.003.

[98] Interview with expert of consultancy, Bruges, 25 October, 2019.

[99] Ibid.

approved on the political level. Additionally, very few of the measures proposed in the plans have been implemented in practice, due to resistance or scepticism on the political level. The rhetorical commitment made by decision-makers is not always backed up by providing the necessary resources. It is thus problematic that the Covenant, directly or through the Coordinators, mainly targets the administration level and focuses a lot less on decision makers, even though the latter are still the ones steering policy. Second, there is a large need for concrete data, mainly on examples of best practices with calculated costs and benefits, provided per geographical region. This can then provide an answer to practical questions from decision-makers. Climate-ADAPT currently does not fulfil this need. The next chapter further discusses these points and analyses how the Covenant and Climate-ADAPT could address them.

## Discussion: The impact of the Covenant and Climate-ADAPT

This paper identifies two main problems in the development of local climate policy, based on the above analysis of the climate plan, the SEAP, the new climate plan and the adaptation plan in the City of Bruges. First, climate policy, like any policy area, is subject to political games, turf wars, and electoral considerations. This has hindered the adoption of the plans as well as their implementation. Second, there is an urgent need for comprehensive and accessible databases with calculated costs and benefits for specific climate measures, be it with regard to mitigation or adaptation. The following paragraphs further explain these issues and propose how the Covenant and Climate-ADAPT can address them.

### *The Covenant: From litmus test to concrete implementation*

A first important lesson is that climate, just like any policy area, is subject to politics, which brings about certain advantages and disadvantages. Issues such as the distribution of the different portfolios across different aldermen or other priorities which are considered more important and then side-line climate policy are of course inherent to the political game. These issues were not a problem in the decision of becoming a member of the Covenant, which by itself was uncontroversial. Due to many cities having joined the Covenant, Covenant membership is indeed

seen as a litmus test for a city government's basic commitment to fighting climate change. For this aspect, the Covenant was able to overcome the politics of local policy-making, just by its existence and peer pressure coming from its membership base. Similarly, the process of drafting the SEAP was not controversial, since this was a basic obligation of Covenant membership. The Covenant is thus also able to overcome politics in this second stage of policy-making, namely translating the city's subscribing to a general emission reduction target into more concrete commitments.

Nevertheless, in the next stages of climate policy development, namely the adoption of the plan as well as the implementation, the Covenant is not able to overcome these issues. After a city has become a member of the Covenant, it mainly engages with the Covenant via the administrative and technical level.[100] Furthermore, this influence goes indirectly, via so-called Coordinators. In the case of Bruges, the Coordinator is the Province of West-Flanders.[101] This means that, besides the requirement to draft a SEAP, the Covenant is not a visible factor in the political debate.[102] At first sight, this should not be a problem, considering that most of the work on drafting the climate plan is indeed done on the administration level. In this sense it is indeed understandable that the technical staff is more involved with the Covenant. Besides, the political level is subject to change, with the Alderman holding the responsibility for climate changing every legislature. There is also very little exchange of information between the outgoing and incoming alderman – even when the coalition parties remain the same.[103] In comparison, the administrative level is thus more stable.

This does not provide for the full picture though. At the end of the drafting process, it is still up to the political level to formally approve the plan, but later also to decide on the priorities, on what parts of the SEAP are implemented and what financial resources are foreseen. These discussions resulted in significant delays regarding the adoption of the different steps of Bruges' climate policy, stalling the original climate plan, the SEAP as well as the adaptation plan for the city centre.[104] This is not a situation specific for Bruges, as evidenced by the fact that the adaptation

[100] Interview with Flemish administration official, Brussels, 3 October, 2019.

[101] Interview with Covenant of Mayors official, Brussels, 16 September, 2019.

[102] Interview with member of the Bruges College of the Mayor and the Aldermen, Bruges, 30 August, 2019; Interview with former member of the Bruges College of the Mayor and the Aldermen, Bruges, 7 October, 2019; Interview with member of the Bruges City Council, Bruges, 4 September, 2019.

[103] Interview with former member of the Bruges College of the Mayor and the Aldermen, Bruges, 7 October, 2019.

[104] Ibid.

plan of the Flemish government was drafted by the administration at the beginning of 2019, but then never taken up by the cabinet of the Flemish Environment Minister, and thus never formally approved by the Council of Ministers. Most likely the incumbent Flemish government will eventually approve the deal, possibly with some different accents, but political events and other priorities nevertheless resulted in heavy delays.[105]

The concrete implementation of the proposals in the climate plan or the SEAP has been even more slow. The necessary budgets have not been made available, and other Aldermen with portfolios that would be impacted by the implementation of the plan, have been rather resistant.[106] Implementing the climate mitigation or adaptation plan *per se* indeed does not seem to obtain the required political support, even when the plans themselves have been officially adopted. Elements of the plan that are eventually implemented are mainly connected to projects that already existed. Climate policy integration into existing or planned projects is thus a more promising path, rather than starting up new initiatives. For example, no politician will agree to break up roads to reconstruct them with permeable pavements, which would be a recommended measure from a climate adaptation perspective. However, if a road needs reconstruction for other reasons, this can be seen as a window of opportunity to promote the use of permeable materials, or to also improve the sewage system to better adapt it to periods of heavy rainfall.[107]

In order for there to be a possibility to have this integration of climate concerns into existing projects, it is necessary to have an overview of all projects that are currently being undertaken. The consultancies working on the plans are nevertheless only involved in one of the plans, namely either the SEAP or the adaptation plan, as these are subcontracted to different companies. Furthermore, they are only engaged up until the moment that the plan is drafted and are not always involved in its implementation. Administration officials tend to be limited in what they can do by what decision-makers allow, and the latter tend to lack interest in actually turning the proposed measures into concrete projects and are thus also not always keen in actively looking for ways that climate concerns can be integrated.[108] Nevertheless, policy-makers are the ones who should be

[105] Interview with Flemish administration official, Brussels, 3 October, 2019.
[106] Interview with Bruges administration official, Bruges, 25 October, 2019.
[107] Interview with expert of consultancy, Bruges, 25 October, 2019.
[108] Ibid; Interview with expert of consultancy, via phone, 24 October, 2019.

mainly involved in keeping the overview and looking for ways to promote climate policy integration, since they are the ones making the decisions and steering the administration.

It is thus important to also involve the decision-makers in the process, and to keep them informed on the necessity of climate measures as well as making sure that they have a realistic view on the possibilities, costs and benefits. At the moment, the Covenant is not a primary source of information for decision-makers. The most common sources for information are the reports prepared by the administration or consultancies (which do use the Covenant database as one of their sources, as explained later), informal advisors as well as information provided by the political party.[109] Especially the latter channel seems to be particularly important for local politicians and particularly so at the beginning of the mandate. Then, they tend to look at the party for inspiration and guidance, and the party's think tank plays a key role in this. These think tanks tend to use a top-down approach for providing information at the beginning of the legislature, while they move to a more bottom-up approach of answering specific questions in the second half of the mandate.[110] Political parties and local politicians themselves put a lot of emphasis on the sharing of experiences, best practices and mutual learning. For example, thematic days, workshops and seminars are organized on a certain political issue, and then examples and experiences from different cities are discussed. One political party also provided its local politicians with an 'inspiration book' with proposals and ideas based on what had already been implemented in other cities. This book even makes explicit reference to the Covenant in the foreword. The proposals are however quite general, such as 'investing in windmills' and 'saving energy on the city's own working', without any further information provided. The political parties themselves recognize that there is a need for more practical, concrete examples that local decision-makers can, *mutatis mutandis,* implement in their own city.[111]

This paper thus proposes that the Covenant should more explicitly reach out to the political level. This could be done by, in cooperation with Coordinators, organize workshops and seminars to discuss concrete success cases. The objective of these workshops would not be to make local

[109] Interview with member of the Bruges College of the Mayor and the Aldermen, Bruges, 30 August, 2019; Interview with former member of the Bruges College of the Mayor and the Aldermen, Bruges, 7 October, 2019; Interview with member of the Bruges City Council, Bruges, 4 September, 2019.

[110] Interview with experts of political party think tank, Brussels, 10 October, 2019.

[111] Interview with experts of political party think tank, Brussels, 17 October, 2019.

politicians capable of coming up with a tailor-made and detailed climate plan by themselves. Rather, the aim should be to give them a concrete example of the approach that could be used as well as of the costs and benefits involved, to demonstrate that climate-friendly solutions indeed exist and that they can be profitable. Furthermore, in promoting climate policy vis-à-vis decision makers, the Covenant should particularly provide examples of how climate measures can be integrated in already existing initiatives, since these are the type of measures that decision-makers tend to be the most open towards. Afterwards, the administration could follow up on these elements and work out a concrete plan taking into account the specificities of the municipality concerned.

Another problem regarding the implementation of climate plans exist with regard to funding. All interlocutors participating in the research pointed towards the difficulties of obtaining European subsidies for certain projects. Bruges has a fulltime subsidy officer working on grant writing, but smaller cities do not have the resources to do this.[112] Furthermore, even in a bigger city as Bruges with more financial resources, EU subsidies are not very accessible and there has been a significant learning curve.[113] While it is arguably not possible for the Covenant to push for a revision of the EU subsidy scheme, it could do more to inform local decision-makers about the tips and tricks when it comes to applying for grants, either directly or via the Coordinators.

### *A need for more concrete data*

The development of the SEAP and the adaptation plan was subcontracted to two consultancies. For these plans, different measures and proposals are considered, including cost-benefit analysis. This cost-benefit analysis is geographically dependent, considering that investing in solar panels in a city in Spain leads to a different cost-benefit calculation than doing the same investment in the Baltics. However, the calculation for two cities in Spain will most likely generate very similar results.[114] Furthermore, administration officials and policy makers are also looking for answers to very practical questions. For example, permeable pavements have been long seen as a successful measure for climate adaptation. Instead of rainwater running over the pavement into the sewage system, which during times of heavy rainfall would be overcharged, the materials of a permeable

[112] Interview with member of the Bruges College of the Mayor and the Aldermen, Bruges, 30 August, 2019.
[113] Interview with Bruges administration official, Bruges, 25 October, 2019.
[114] Interview with expert of consultancy, via phone, 24 October, 2019.

pavement allow the water to soak into the ground.[115] Policy-makers are then looking for answers to questions such as 'what materials can then be used', 'are there differences in construction costs' and 'what are the maintenance costs like'. Initiatives to have more green areas in the cities are for example met with scepticism due to a lack of estimates regarding the additional maintenance costs.[116] As such, there is a need for very detailed overviews of all costs and benefits involved, for projects that are relevant for the specific geographic location of the city concerned. At this point, neither the information provided by the Covenant nor the Climate-ADAPT database sufficiently provide this information.[117] Furthermore, it should be noted that none of the decision-makers or administration officials that were interviewed for this project had actually heard of Climate-ADAPT. Only the two experts working for the consultancies involved in the drafting of the SEAP and the adaptation plan were aware of its existence. While this is not surprising, as it is private companies doing the core of the research rather than the administration or policy makers, it shows that both initiatives do not sufficiently reach their target audience. It can thus arguably be better to turn Climate-ADAPT into a more specialized database, which can then be used by those experts involved in the specificities of drafting the program, rather than having a semi-specialized database which is not used by experts and not known by non-experts.

As a result of the lack of detailed information provided by public databases, private companies and consultancies are developing their own to fill this void. However, this means that this data is only available behind a paywall, which by definition limits the sharing of information. Indeed, the more accessible the database, the more input that will also be provided, and the larger the database and the more best practices that can be provided, the more easily interested officials can find a tailor-made example and use it as inspiration for their own climate plan. It is therefore in the interest of the Covenant's objectives to make sure these best practices remain publicly available, by making the database more comprehensive and more easily usable. It should be noted that private companies themselves would welcome this initiative.[118]

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[115] Josh Foster et al., *The Value of Green Infrastructure for Urban Climate Adaptation* (Washington D.C., United States: The Center for Clean Air Policy, 2011): 15-16.

[116] Interview with expert of consultancy, Bruges, 25 October, 2019.

[117] Ibid; Interview with expert of consultancy, via phone, 24 October, 2019.

[118] Ibid.

There are two options for the Covenant and Climate-ADAPT to ensure that the information remains widely available. First, it could thus be beneficial to expand the information provided by the Covenant itself and include these calculated measures, which would allow users to come up with a marginal abatement cost curve and decide on the most cost-efficient measures to achieve a certain emission reduction target. Similarly, Climate-ADAPT could then include information for adaptation policy. However, this would have to be provided soon, as many cities are now developing their climate plans to comply with the Covenant rules.[119] Meanwhile, other parties are also developing their own databases. For example, the Flemish Environment Agency has developed a website[120] with a similar objective as Climate-ADAPT, namely providing examples of successful adaptation measures where users can browse the database based on whether they are looking for initiatives on heat stress, flooding or droughts. The website currently has similar problems as Climate-ADAPT, namely a lack of detail. However, in the new climate adaptation plan of the Flemish government, expanding this website is one of the measures proposed.[121] Compared to the Covenant and Climate-ADAPT, the Flemish database has as an advantage that it covers a geographically smaller scale, meaning that the examples given are more likely to be relevant for other Flemish cities. As such, this paper suggests that the best way forward would be for the Covenant and Climate-ADAPT to encourage the development of these regional databases. Climate-ADAPT could then simply collect the examples available in these databases and provide for cross-fertilization possibilities to the extent that best practices from other regions are relevant.

## Conclusion

This paper identifies two problems in the field of climate policy. First, much of the research and politics related to climate policy focus on the national and international level, rather than on the local level, despite the fact that much of the climate policy should be implemented there, especially for adaptation. Second, when it comes to adaptation, this paper considers that there is currently a lack of attention for this issue in political science research as well as in the political debate. The

[119] Interview with expert of consultancy, Bruges, 25 October, 2019.

[120] See: http://www.burgemeestersconvenant.be/

[121] Interview with Flemish administration official, Brussels, 3 October, 2019.

EU has actually put into place measures to overcome these issues, namely the European Climate Adaptation Platform (Climate-ADAPT) and the EU Covenant of Mayors for Climate & Energy and this paper aims to study to what extent Climate-ADAPT and the Covenant are effective in supporting cities in adopting and implementing climate plans. In order to answer the research question, the development of the local climate policy is studied, with Bruges as a case study as an example of a typical case, with attention for both the adaptation and mitigation parts of climate policy. The development of Bruges' climate policy is reconstructed through expert interviews with local policy makers, administration officials on different levels of government as well as experts of consultancies and think tanks related to political parties as well as primary sources, such as the content of coalition agreements, climate plans and minutes of the City Council.

The paper finds that the Covenant has been very successful in putting climate policy on the local political agenda, mainly by serving as a litmus test for cities to declare their rhetorical commitment to combatting climate change. Furthermore, the Covenant has also been successful in translating this first commitment of subscribing to an overall emission reduction target into more concrete measures, by forcing its members into drafting a more concrete Sustainable Energy Action Plan. Nevertheless, the Covenant is less successful in promoting the development of local climate policy past these initial stages. Climate policy is subject to politics, with turf wars between policy-makers as well as electoral considerations halting the adoption and implementation of climate plans by the political level. This paper therefore proposes that the Covenant invests more into directly engaging with the decision-making level, for example by targeting think tanks of political parties which are identified as a key source of information for local politicians. This would also allow for a more successful integration of climate concerns into already existing or planned projects, which is the most successful path towards concretely implementing climate policies. Second, there is a need for detailed information, such as cost-benefit calculations of best practices for specific regions which can offer a response to decision makers regarding concrete, practical concerns. The Climate-ADAPT database or the overviews provided by the Covenant currently do not provide this information sufficiently. As such, private companies have started to develop their own databases, which would nevertheless limit the spread of information due to the existence of paywalls. This paper therefore argues that more support should be given to the development of regional databases.

A few limitations of this research project need to be taken into consideration however. First, the information is provided based on the reconstruction of climate policy of a single case. While it is

argued that Bruges is indeed a typical case, for example due to its size, replication studies in other cities can provide more information regarding the extent to which the conclusions of this study can be generalized. Furthermore, it would be recommendable that also climate policy in smaller municipalities is analysed. Second, Bruges' climate policy only developed from 2013 onwards, and it became a member of the Covenant only in November 2014. This was relatively late in Belgium, so it is possible that cities with a longer track record in climate policy have different concerns. As such, this paper also recommends longitudinal analyses, in order to study whether these cities face similar problems or whether some of them are overcome over time.

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