Breaking silos: Can cities break down institutional barriers in climate planning?

Abstract

Climate and energy transformation has become one of the core issues municipalities must address, and there is a recognition that the local scale is essential if we are to address the fundamental changes needed to face global climate change. However, the nature of climate change as a wicked problem is not compatible with the specialised and sectorised nature of policy-making institutions. Urban and municipal responses to societal problems often involve making a plan. In this article, the potential of climate action plans to break institutional silos is examined. Overcoming institutional obstacles can bring forth new opportunities to shrink the gap between targets and results through knowledge transfer, identification of co-benefits and anchoring of the plan beyond the municipal department in charge. Two cases demonstrating two different approaches to ambitious local climate planning are discussed. Mainstreaming of the planning process can be observed in Trondheim, whilst in Bergen, the process has been highly politically driven. Three factors appear to be important to overcome institutional barriers at the local level: broad processes, political will and institutional entrepreneurs.

Key words: Local climate action plans, planning, political will, institutional barriers, mitigation

Introduction

Local climate governance and politics have received increasing attention from scholars. At the local level, politicians and planners are faced with both the effects of a changing climate and the recognition that people's daily lives have an effect on emissions. Likewise, people's daily lives are shaped and structured by the infrastructures and services in their home communities. Understanding climate change as a wicked problem also influences how it is perceived and dealt with at the local level. Hence, the three roles of municipalities as providers of services, enactors of legislation and developers of communities (Amundsen, Hovelsrud, Aall, Karlsson, & Westskog, 2018; Amundsen & Westskog, 2018) are all of importance when discussing how cities are to transform into low-carbon societies. Political commitment is also highly important (Uittenbroek, 2016; Uittenbroek, Janssen-Jansen, Spit,

Salet, & Runhaar, 2014) because there is a need to make decisions which may be uncomfortable and planning is of great relevance at the local and regional level (Innes & Booher, 2010).

A plan is not a static document, and 'local climate action planning is a dynamic and long term-process' (Tang, Brody, Quinn, Chang, & Wei, 2010, p. 57). Thus, the process of revising a plan can be seen as an internal evaluation of the former plan that investigates what worked, what did not work, how ambitions can be raised and how work can be better organised so that the next plan can go further than the current plan. In this article, I examine the two municipalities' processes for revising their climate and energy action plans, CAP, and how these two different models of revising a plan can be seen as ways to break down institutional silos. A silo is understood as the sectoral division of management, whether by tasks or thematic division, and where there are differences in institutional logics, workings and culture, inhibiting cross-sectoral work.

I argue for the need to focus on both political will and engagement and the planning process to understand local climate planning and its implications. The spaces *in between* politics and planning, and *in between* different sectors in the municipal administration can reveal whether the final planning document can contribute to the changes it is intended to influence. Hence, this article examines how the processes of making a climate and energy action plan is conducted with specific view on whether it can have silo-breaking effects. In the same manner, particular attention is paid to the political treatment of the plan, and the engagement from political actors, also as a means of breaking down barriers to enhance local climate action. The main question is thus, can planning processes contribute to disruptive, institutional climate work? This involves questions such as: Is ambitious political decision-making sufficient if the goals and plan are not integrated into all realms of the administration? Can a thorough planning process with high degrees of both internal and external involvement achieve local climate transformation without understanding of the implications at some political levels? In other words, can an all-encompassing problem such as climate change be faced locally without involving all levels of local governance?

Norway's emissions have increased by 3% since 1991 (Statistics Norway, 2018), whilst neighbouring Sweden has seen a significant decrease in GHG emissions (26%) since 1990. The statistics in major Norwegian cities are similar to those at the national level; emissions are stabilising, and for some cities, the 2016 statistics show slight decreases. Internationally, Norway is viewed as both fronting the Paris Agreement and as a major oil and gas producers in the world. In this scenario, Norwegian cities are acting similarly to many

cities around the globe, placing themselves at the forefront of climate efforts, as they perceive national authorities to not be doing their share. Oslo's climate strategy and work to create and implement a climate budget has received worldwide attention. The second- and third-largest cities in Norway, Bergen and Trondheim, are competing to become Norway's greenest city and have created CAPs to fulfil that goal. This article examines the process of making these plans.

Climate governance has been conceived of as a top-down process; international agreements shape the spaces of action along with national policies 'in a cascade fashion in which decisions and authority flow downwards from one level to the next in a linear way' (Bulkeley & Newell, 2010, p. 10). However, in recent years, many scholars have increasingly focused on the local as a key level at which to understand mitigation of and adaptation to climate change. Cities are claimed to be leading the way towards low-carbon societies, and the need to understand why and how cities' climate initiatives develop has become a focus in research on climate governance. Research on this topic has discussed urban and local initiatives as *experiments* (Vanesa Castán Broto & Harriet Bulkeley, 2013; Vanesa Castan Broto & Harriet Bulkeley, 2013). The authors find that how such experiments are made and exercised are of relevance is not the only major issue, but also how they are maintained over time. In a survey of climate experiments in 100 cities, Castán Broto and Bulkeley argue that municipalities often play a central role in experimentation, but that these processes are often heterogenous and involving a wide range of sectors and actors.

Another relevant perspective is that of investigation the integration of climate and environmental issues into other realms of policy and planning (Adelle & Russel, 2013; Groven, 2017). While this is a perspective more prominent on sustainability, climate policy integration (CPI) takes the same starting point as many arguing for comprehensive local climate planning, in that 'the root causes of climate change are embedded across a number of sectors' (Adelle & Russel, 2013), and hence solutions must be cross-sectoral. However, they find that climate is often side-stepped in these processes (however referring to supra-national processes).

Existing research on local climate governance and CAPs has been both quantitative and qualitative in focus and scope. In most national contexts, making CAPs is voluntary. Millard-Ball (2012, 2013) sought to discuss the causal links between GHG emission reduction and CAPs, finding that municipalities with CAPs progressed further in their efforts to reduce GHG emissions than municipalities without such plans. However, the success these municipalities experienced in their local climate efforts is explained not by a causal link to the

plans, but by citizens' environmental preferences: 'Thus, climate plans are largely codifying outcomes that would have been achieved in any case' (Millard-Ball, 2012, p. 289). Kasa, Westskog, and Rose (2017) studied the impacts of soft national regulations on local climate planning, that is, regulations without sanctions. They found that these regulations have some influence on the development of mitigation policies in municipalities at early stages, primarily because they contribute 'to legitimizing climate policy by linking it to other policy areas', but they do not have a particular influence on municipalities that are very ambitious or disinterested (Kasa et al., 2017, p. 1). A general trait of local, regional and national governance, hindering climate planning and measures, is the division of responsibilities into sectors, or silos (Cashmore & Wejs, 2014; Innes & Booher, 2010). Climate change is a cross-sectoral issue to deal with, but institutions and planning systems are organized by sectors.

Where much research has focused on the experiments, on either politics or planning or the whether the plans can be proven to have a causal effect, the article attempts to make a link between the understanding of planning and politics. By investigating local climate efforts with focus on the process of making or revising a climate and energy action plan, and how this is both a bureaucratically planning exercise and political work, the purpose is to increase the understanding of how such plans can be part of a change in municipal work seeking to grasp climate change as a wicked problem.

Climate change as a wicked problem – to be solved through planning?

Climate change has repeatedly been labelled a 'wicked problem' (e.g. S. Ney, 2012; S. M. Ney & Verweij, 2014; Urry, 2016), that is a fundamental issue seemingly without a good solution. Based on a list of criteria, Urry (2016, p. 64) defines wicked problems as those having 'multiple "causes" and "solutions" (…) long term lock-ins and complex interdependencies between processes; the effort to solve one problem reveals or creates other problems (…) each problem is never definitely solved but returns (…) there may be no solution, as such, to the problem'. Candel and Biesbroek (2016, p. 212) underscore that the wickedness of governance problems is due to not only their multi-scalar dynamics but also their 'high degrees of ambiguity, uncertainty, and deadlocked interaction patterns.' Bulkeley (2013, p. 18) emphasises that '[u]nderstanding the impact that climate change will have in cities, therefore, means understanding how it will add to or relieve, existing vulnerability',

and this adds social and ecological dimensions to the local governance problem of climate change. Thus, solving issues related to climate change also involves managing a range of other municipal matters. At the local level, in municipalities, cross-cutting problems arise in a reality in which everything—institutions, infrastructures, materialities, and power structures—is connected to everything else, affecting the logistics of everyday life and, for example, GHG emissions and air pollution (Pasquini & Shearing, 2014).

Local authorities have dual responsibilities 'to transform within their own organization, and to act as a catalyst for transformation locally' (Amundsen et al., 2018, p. 23). These dual roles can be brought together through planning, local climate policies and politics. According to the literature, local climate governance and the creation of CAPs are contingent upon a number of factors. Amundsen and Westskog (2018) discuss three elements that are central to transformation at the municipal level: understanding of the local context, institutionalisation and networks. Local context involves demography, infrastructure, but is also about the size of the municipality and the level of engagement in issues of climate and environment among actors in the community.

Planning can be viewed as the main municipal tool to steer development, and hence will also likely be vital to municipal responses to climate change. However, in local administrations, climate change expertise is often 'concentrated in environmental departments, which tend to be somewhat marginalized within the organizational hierarchy of local government, plus have limited capacity to implement planning policy' (Cashmore & Wejs, 2014, p. 204). These departments, separated from other departments, are the so-called *silos*. They are separated by tasks as well as leadership, administration (or lack of administration) of acts, type of focus (Campbell, 1996), resources, background of planners and policymakers and so on. Innes and Booher (2010, p. 3) state that this division within the governmental structure is 'poorly set up to deal with these challenges'. Hence, an understanding of these institutional barriers, particularly in a setting of cross-cutting wicked issues such as climate change, is of relevance to reach solutions.

Local climate planning – between planning and politics

The view of climate change as a seemingly impossible puzzle to be solved within an institutional composition that is unfit to tackle the challenge, is the starting point for municipalities that are developing a CAP or revising an existing one. In Norway, a CAP often has a main focus on mitigation, with one chapter on adaptation. However, many

municipalities will have separate strategies or plans concerning adaptation. Consideration must be done for the interrelationship between the political domain of a municipality and bureaucracy, including planners and all sectoral divisions. Political commitment and politics influence what can be achieved, as well as how the plan is made. This influences the role of the planner and the process of making and implementing a CAP. Uittenbroek et al. (2014) set up an analytical framework to understand political commitment to local climate adaptation, distinguishing between mainstreamed and dedicated approaches by politicians. Political commitment is what lifts adaptation on the agenda in the dedicated approach; '[p]oliticians have placed it on the political agenda, thus making it an issue that needs to be addressed municipality wide' (Uittenbroek et al., 2014, p. 1048). In contrast, the mainstreaming approach involves indirect political commitment, and 'institutional entrepreneurs attempt to obtain indirect political commitment for climate adaptation by framing the issue as giving added value to existing political objectives' (Uittenbroek et al., 2014, p. 1048). When making a plan that is compulsory according to the Planning and Building Act, as is the case for CAPs in Norway, these two approaches might be understood slightly differently, affecting the planning process. However, political will and engagement vary, which will also affect the planning process, the space of the planners and, possibly, the outcome of the plan.

Concluding their article, Uittenbroek et al. (2014, p. 1058) argue that it is important to pay attention to the need for changes in 'organizational structures and routines', which 'can be rigid and therefore difficult to change'. These organisational structures and routines are both linked to sectoral divisions, but I would argue that the planning system and hierarchy also play a part. Hence, the relationship between the CAP and other plans, and whether the goals in the plan are integrated into the master plan, are important. The process of making local climate policies is influenced by a number of factors, including the context in which the plan is revised; the process—and thus the institutionalisation—of making plans; the role of the CAP in the planning hierarchy of a municipality; the presence and possibilities of institutional entrepreneurs and the participation in networks. This raises questions: are the targets and decisions made in the CAP integrated into other, overarching plans, and is climate policy integrated into other aspects of municipal planning?

Tolbert and Zucker (1999) argue that institutionalisation is both a process and a variable. They describe the final stage of institutionalisation, which they label sedimentation, as "a process that fundamentally rests on the historical continuity of structure, and especially on its survival across generations of organizational members". Additionally, a fully institutionalised structure will rely on "relatively low resistance by opposing groups, and

positive correlation with desired outcomes" (1999, p. 178). Hence, understanding this in the realms of planning, to institutionalise the climate plan it should be able to survive changes in administration, and also in political composition, and be met with low resistance. This final point is particularly difficult when discussing a wicked issue, as opinions on solutions, but also of the problem content itself, will differ greatly. Seeing these issues also in light of broader society in which the plan is to reduce GHG emissions, difficulties can be imagined; local climate action often involves changes in the everyday lives and workings of inhabitants, and hence opposition is likely.

Several authors use the term 'institutional work' (see for example R Beunen & Patterson, 2017; Raoul Beunen, Patterson, & Van Assche, 2017; Bisschops & Beunen, 2018) to refer to 'the dynamic interplay between actors and institutional structures' (R Beunen & Patterson, 2017, p. 2). To investigate the complexity of planning to manage overarching issues, this interplay between structures, including political decision making and planning and building acts that regulate planning, the agency of the institutional entrepreneur and the particular local context should be considered. Allen (2004, p. 24) argues that 'power is something that exercises us in particular ways, where the outcomes are *provisional* and not determined in advance – precisely because what happens in between "here and there" makes a difference to the workings of power'. This—the '*in between* "here and there"'—touches upon the core of contingencies in planning: what happens *in between* planning and politics, *in between* different sectors, *in between* the working groups and the steering group and *in between* master plans and sub-plans. In addition to pointing towards the spaces where studies should investigate to identify power relations, an understanding of in-betweenness enables understanding of the need for coordination and cross-sectoral cooperation. According to Cashmore and Wejs (2014, p. 203), '[c]limate change planning constitutes an example par excellence of the importance, and conversely the challenges, of horizontal and vertical co-ordination (…) Co-ordination is posited to be essential if undesirable trade-offs are to be avoided and potential synergies exploited'.

I argue that securing ownership of a plan upwards and downwards in the municipal hierarchy as well as horizontally within relevant sectors and departments is of particular relevance for a plan that intends to solve a cross-sectoral issue but is made and implemented within a sectorally divided institution, such as a municipality. Negotiation between interests and knowledges (Rydin, 2007) within changing contextual conditions, is at the core of planning. This negotiation between stability and flexibility (Raoul Beunen et al., 2017) at different scales and levels in the municipal hierarchy, can be investigated and analysed by

focusing on the many particularities and actions that occur at the micro level in the planning process.

In the following, two cases of climate planning in the Norwegian context are explored. This study examines the process of revising CAPs in two Norwegian municipalities, Bergen and Trondheim. These two planning processes are investigated to explore how differences in institutional settings and political leadership influence the planning processes and the plans that are passed. By investigating two cases, some aspects that could be lost if just one case was explored become clearer, enabling understanding of the variances in governance structures (Marsden & May, 2006).

Methodology and empirical basis

To explore how the process of making a plan can help break down the silos that inhibit cross-sectoral problems such as climate change, interviews, observation in meetings, participation in relevant conferences and a range of conversations between these activities were done. Following Flyvbjerg (1992), who argued that closeness to reality and details can lead to a deeper understanding, particularly of what he calls dualities. Not to study politics *or* planning, but both, and to view planning also as 'physical, economic, ecological and social reality', coupled with what can be seen as opposing concepts: 'idea with reality, rationality with power, plan with implementation' (1992, p. 19, my translation).

For this study, extensive ethnographic field work was conducted. The planning processes used in the two municipalities are very different, hence, the types of actors, politicians, administrative leaders and planners with whom I engaged in each city varied. In Trondheim, the first meeting with the project leaders from the municipality and regional authorities was in September 2015. However, observation of meetings did not start until spring 2016, and the final rounds of interviews were conducted in March 2018. Observation was conducted in three working group meetings and two steering group meetings. Ten interviews were conducted in person and one was conducted by phone, mainly with people from the working and steering group, hence planners from different sectors of the municipality, and departmental leaders. Additionally, one politician was interviewed, due to difficulties in getting appointments with politicians. In between meetings and interviews a series of field conversations added to my understanding and experience of the process.

In Bergen, where the planning process began before this project started, observation and field conversations began in spring 2016 and interviews and observation in relevant

meetings was conducted, including implementation meetings and discussions on implementation and measures. Nine interviews were conducted in person, and one by email, with actors who were directly involved in the process, both planners, departmental leaders and politicians. Observation was also done at the public seminars on the municipal master plan, as this is directly related to the CAP.

The meetings in the city council are streamed and made available afterwards. Hence, these were transcribed, in both cities these discussions lasted for approximately one hour, and all political parties raised their voices. Additionally, documents, including the previous and new plans, programmes of action, case documents, comments after the public hearing and municipal master plans, were analysed.

Exploring two cases – commonalities and differences in context

Bergen and Trondheim are the second and third largest cities in Norway, and both are coastal cities with universities. They made and approved the third generation CAPs in 2016/2017. However, the processes by which they did so differed at both the administrative and political levels. These cities were selected because both were in the process of revising their CAPs, they had both two rounds of CAPs before the study and are of similar size. Both cities experienced issues regarding the construction of roads between the city, its outskirts and neighbouring places, hence increasing road capacity and the impact of transportation on emission levels. Both were in the process of negotiating policy packages for road construction, public transportation and bicycling and pedestrian infrastructure with the national authorities (about the type of policy packages, see Tønnesen, 2014, 2015). Additionally, both cities started making CAPs before the Planning and Building Act made doing so compulsory (in 2009).

In Norway municipalities form the local level in the governance hierarchy. Relevant for issues of planning, is the regional level, County council (Fylkeskommune), which is a politically elected level, with responsibilities concerning both regional planning and overseeing local planning. At the regional level is also the County Governor, a body representing the national government in each county. This level is responsible for control with and appeal for municipal decision making, and they are responsible for environmental impacts.

The Norwegian Planning and Building Act is described as a process act because it has a clear focus on the process of planning, from the making of plans to implementation.

However, the act does not describe all types of plans. For example, a thematic plan, which differs from a municipal sub-plan, is not described in the act and therefore does not fall under its legal framework. As such, the legal framework that guides the development of the CAPs may differ, hence a thematic plan can be made without the same rules and regulations regarding the process of the plan and revision. Where a municipal sub-plan, which both can be a spatial plan, and a thematic plan, must follow a set of procedures, starting with a program for the plan, working group, reference group and steering committee, a thematic plan does not have these regulations attached. However, this does not mean that it is not possible to make a thematic plan using working groups and collaborative processes, but that it varies how such plans are made.

Bergen is structured according to a parliamentary model, whereas Trondheim employs an alderman model. There is very little research on how these two different models affect the planning system, but it is a factor that needs to be mentioned. The parliamentary system was introduced in Oslo first, and later in Bergen and some counties, in an effort to increase the influence of those who were publicly elected and clarify political responsibilities and divisions (Hansen & Hofstad, 2016). Both models have city councils, but an administratively employed leader heads the alderman system linking administration and the political level, whereas a political city council leads the parliamentary system. The parliamentary system resembles the national political system, with a dedicated political city councillor for each department (e.g. health, school and children, city development, culture). These councillors are in charge of the politics of each department and thus have more responsibility for their areas than for others. This can reflect and lead to sectorisation similar to that at the national level, with ministers in charge of each sector and politicians possessing a more direct influence on planning and administration than in other systems.

Two paths attempting to break silos through planning processes

A general outline of the processes of making plans and the differences between the two cities is presented in Table 1.

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Trondheim – broad planning process

Since 2000, the main principle according to which Trondheim has developed is to 'build the city inwards' (city planner). The plan passed on 18 May 2017 is the third generation CAP in Trondheim. In this municipality, the climate section is placed within the environmental unit, which is one of nine units in the Department of Urban Development. The main goals in the CAP is a 10% decrease in direct GHG emissions by 2020 (reduced from 25% in the proposal by the administration), with base year 1991 (meaning a higher real decrease, since emissions have risen since 1991), and an 80% decrease by 2030.

The process

The plan was revised in parallel with the county's revision of its CAP, with a common reference group and meetings, discussions between the two project leaders and a similar structure in the plan document. It was made, like the two previous plans, as a thematic municipal sub-plan. Following the rules and process as set up by the Planning and Building Act, the process was broad and including several realms of the municipal sectors; A planning program was made and passed after a round of public hearing, and a working group and steering committee consisting of the heads of relevant departments and a reference group were developed. An extensive process of participation was done, partly together with the county authority, particularly a week-long conference. The working group consisted of 13 people representing their departments or teams: environmental (which includes the climate section and is the department to which the project leader belongs), city planning, water and renovation, finance, infrastructure and maintenance, and business development. Work concerning writing of the plan was divided between the members of the working group; thus, the representatives not only functioned as advisors representing their departments' interests but also contributed to the plan. In the meetings of the working group, several topics were discussed and various conflicting interests were identified. These discussions revealed issues that needed to be dealt with and increased the understanding of the ways in which different departments work and, importantly, the stages at which projects and plans can be influenced and shifted.

In the interviews, many members of the working group described the process as one of learning and finding common ground. To many, the broad, internal process and its effects were clear, and the plan was integrated into the organisation (outside of the climate section) to

a much higher degree than the former plan. In other words, the plan was more mainstreamed and involved several realms of municipal responsibilities and work. Hence, looking at institutionalisation as a process (Tolbert & Zucker, 1999), the work done in Trondheim can be seen as increasing the long term institutionalisation of climate issues across sectors and generations within the departments.

> There are some signs that this is being taken more seriously. In the process of municipal budget follow-up, midway seminars have been conducted with the different units, as they are distributed in the budget. And everyone has raised the issue of the plan on their own initiative. And I don't think that would have happened a few years ago. (climate planner, member of working group)

A climate budget, integrated as a chapter into the main municipal budget, was developed after the passing of the plan, and this budget is explained as a step toward mainstreaming climate issues across departments and responsibilities: 'to go from an environmental plan placed in the environmental unit to having an own chapter in what actually is the real steering document of the entire municipality' (climate planner, member of working group). The climate budget is seen as a way to increase accountability and make the necessary measures and effects more visible. This work has also been developed cross-sectorally between the climate and finance sections of the alderman's staff, and is a new way of integrating climate into steering documents of the municipality.

In the making of the action programme and climate budget, institutionalisation of both the processes and results have been in focus, through establishing divisions of responsibilities, and hence creating structures. Both horizontally, in the organisation of the working group and different sectors represented in the working group, and vertically, particularly upwards, through meetings in the steering group and where members of the steering group have met the alderman's leadership group. The planners and advisors were very aware of the scale of the plan and the all-encompassing nature of the work, and reflected on the challenges of working to solve a wicked issue within a municipal hierarchy: 'It is really challenging to sit quite far down the hierarchy and make a plan to change society' (climate planner, member of working group).

Many of the informants highlighted two key actors as vital parts of the process that led to better knowledge and understanding within the organisation: the project leader, from the climate section, and the head of the environmental unit, who was credited with the creation of

ownership at the top of the organisation. They stand out as more or less classic institutional entrepreneurs, one of whom is participating in such a process for the first time and the other highly experienced. After the plan was passed, the project leader kept working to keep the working group as a sort of task force for mitigation efforts in the municipality, attempting to institutionalise the mainstreaming that was initiated by the planning process.

Political involvement and passing of the plan

After the 2015 local elections, a declaration was made by part of the winning coalition. The ruling Labour party continued to possess the majority and the mayorship, but the coalition was enlarged, and in its declaration, climate-related goals were expanded: 'the centre-left parties will have as a goal that the GHG emissions will be 70-90 percent lower in 2030 compared to 1991' (The Granåsen declaration, 2015). The target of the former 2010–2020 plan was to reduce GHG emissions by 70–90% by 2050. This increased ambition during revision of the plan led to a focus on how to display the necessary measures for the working group and visualise and calculate the priorities needed to achieve this decrease in emissions. When the planning process was complete, it took six months of political assessment before the plan was passed. Eventually, the targets for 2020 were significantly lowered (from 25% to 10% of the 1991 levels).

A majority of both experienced and inexperienced political members of the city council seem to prefer what they call a *realistic* approach to mitigation efforts, a key element of which is lowering of short-term goals. In the debate in city council when passing the plan, arguments of the short-term implications for the ambitious goals were brought forward by several politicians. Both the price and the space needed for the increase in public transportation if the necessary reduction in private car use were amongst the main arguments.

Amongst the planners and advisors in the Trondheim administration, many perceive a great distance between the administration and the political sphere in the municipality: 'We should have spent more time on maturing the ideas with the politicians' (city planner, member of the working group). Even though the administration was a bit surprised by the short-term decrease in the target, they were aware of the long-term transformations that must occur. Some of the informants have pointed to the fact that to achieve transformation at the local level, transformation must also occur in the way local administration work. This realization shows an increasing understanding of how the climate issue is an overarching one.

Bergen – strong political commitment

By 2050, Bergen aims to be a '1.5-degree city. [meaning:] The goal is that the inhabitants of Bergen will decrease climate footprint to a level in line with UN's climate agreement', and its shorter-term goals are to be 'fossil free by 2030, meaning that oil, coal or gas is not used in Bergen' and to achieve a 30% reduction in emissions by 2020 (Bergen municipality, 2016). As emissions have risen between 1991, the base year, and 2016, the real reduction goal will be somewhere between 40 and 50% by 2020. The city's third CAP, the Green Strategy, was passed on 21 September 2016. Like Trondheim, Bergen developed a climate budget and incorporated it into the municipal budget.

The process

The process of making the plan did not follow the lineup for making a municipal sub-plan, as it was a thematic plan, which is not described in the Planning and Building Act. The plan was mainly written by two advisors from the climate section. The political leadership did not consider it necessary to define the type of plan and decided to revise the existing plan, which, according to one of the planners, was not suited for revision due to its broad scope and lack of clear targets. The planning process started without a program, which was described as confusing: 'We didn't have a journey for the plan. We just started unravelling it in one end' (climate planner). The status of the plan, or lack thereof, was a difficult starting point for the climate section:

> I think we have struggled with the definition all along, that we don't know what level this plan is, what kind of significance it is to have, other than that the politicians say that it is very, very important. (…) We haven't received the formal decision stating what this was to become, and it is to be made within these and these frames. But at the same time, it has been brought higher and higher during the process. So, it's not certain that the results are worse, not talking of the document itself, but about what happens afterwards. It's difficult to tell. (climate planner)

The former plan was developed through a very broad process; a hired consultant led the work, and many actors and interests were included, particularly those from outside the municipal administration. Thus, the process was described as 'including everyone's babies' and 'impossible to implement' (climate planner). When faced with a vague decision to revise

the plan without a program, the planning process was performed at a smaller scale. The city development councillor in office when the revision began was described as 'the architect of the plan' (climate planner), and was very involved in setting the parameters and developing the main ideas of the plan.

On different occasions, many actors have said that cooperation across sectors, silos and responsibilities are in general not strengths of the municipal administration in Bergen. This can be seen in both planning processes and implementation, especially when developing a plan to engage more aspects of the administration than the climate section. There is no doubt that there are many good projects and much work being done in the municipality to become a carbon-neutral city. However, whether this is the result of the CAP is less obvious.

Political involvement

Some of the political actors in Bergen have been very active, but not always in a manner that clarifies the role of the plan or the planning process: 'we don't know what level this plan is, what kind of significance it is to have, other than that the politicians say that it is very, very important' (climate planner, Bergen). The political will was clear before the local elections, but the change from the right-wing to centre-left coalition undoubtedly played an important role in increasing political commitment and focus on climate. With this change came a heightening in climate ambitions – the proposed goals in the CAP in progress were ambitious, but they were altered even more. In the first draft of the plan, which was the version sent on public hearing, the goals were 50% reduction by 2020 and fossil free by 2050, whilst the goals in the final and passed plan are 30% reduction by 2020 and fossil free by 2030.

After the new coalition was in place, the climate section was removed from the Department of City Development, and the Department of Climate, Business and Culture was established. Additionally, some of the former responsibilities and hence advisors, of the climate section, such as mobility, were moved to the department of City Environment. According to the councillor of this department, this was done because climate is well integrated in the city's development and there was a need to increase the focus on climate in other areas as well. However, this did not lead to improved cooperation between those involved in climate, business and culture, according to the advisors in the climate section, and has made it a bit harder to follow city development.

Planning hierarchy: process and politics?

A shift in the planning system has begun in Bergen during the past few years. When the document stating the principles of the forthcoming municipal master plan, the so called social element of the municipal master plan, was passed in 2015, it was the first such element to be passed since 1996. To find the last one, one must visit the city archives: 'Yes, because it hasn't been the basis for governance. The city council declarations have been the ruling documents. The city council platforms have been the master plan. Or, has given the priorities' (climate planner). (When a party, or coalition of parties assemble and form city council within the Bergen parliamentarism, they make a document stating their political platform for the next 4 years.) In other words, the city has been heavily governed by politics, and planning has had a smaller role partly due to the lack of a master plan. However, political changes and engaged politicians are working to break institutional silos by changing the institutional belonging of different themes.

The master plan approved in 2015 has a strong focus on environmental issues and climate change. It proposes to build and structure Bergen as a walking city, and several of the goals of the plan are related to making Bergen a green city. And this link between the master plan and the CAP has been emphasised by many of the informants. Bergen has tended towards policy integration, particularly regarding climate and land-use planning, rather than collaborative planning such as climate action plans. This has been a mainly politically driven process and can both be traced back to a shift away from the city being run by the political platforms and back to governing land use through a master plan. There does not seem to be a clear understanding of why thematic plans are not made as municipal subplans other than that 'it's tradition here, the subplans are only done for land-use plans' (city planner). The return to master plans with social elements stating the principles governing city development might indicate a move towards a planning system and hierarchy and the introduction of a collaborative process in the governance of Bergen.

Many of the informants argued that the type of plan does not necessarily matter. This might be true, but when a process that places responsibility and creates ownership and embeddedness outside of the climate department is lacking, some benefits from a broader process will be missed. This is similar to an important point made by Uittenbroek et al. (2014, p. 1052): 'in a dedicated approach, direct political commitment can speed up the planning process, but that it can also mean that some important decisions (on, for example, maintenance) are postponed'. Political will is very important and, to a large extent, determines what can be achieved concerning economic resources and other priorities. In Bergen this was

particularly visible in amongst other things, by the altering of ambitions and expanding the climate section by two advisors. However, policies without legal positions that are sufficiently entrenched in bureaucracy might still suffer from a lack of administrative prioritisation over other juridically imposed tasks.

Discussion: breaking silos?

In Trondheim, the focus has been at the institutional level, making the CAP through a process intended to create ownership and integrate goals, targets and measures into all relevant departments and sections. Bergen, on the other hand, had a more top-heavy process, where political leadership lifted the plan and the ambitions proposed in the goals, whilst the administration worked on meddling through a planning document. Contrary to this, in Trondheim the weakest link of the process appears to be the broad divide between the political and administrative levels (i.e. the space between planning and politics). One of the informants summarises this: 'It is really challenging to sit quite far down the hierarchy and make a plan to change the society' (climate planner, Trondheim). In Trondheim, the process of making the plan worked horizontally in many ways and vertically to a certain degree, embedding the plan within the organisation. In Bergen, however, this was postponed, and many of the informants mentioned the lack of time to 'go out and tell the organization about the plan and the goals' (climate planner, Bergen).

A view of climate change as a wicked issue, including all sectors of society, and the implications this has on the governance of the local level, requires thorough processes and mainstreaming both horizontally and vertically. The two cities investigated here, have done so in very different ways, however, if the outcome are the emission reduction goals, the results are similar, both being very ambitious. The need for cross-sectoral work also have different manifestations in the two cities; whereas Trondheim's broad, administrative process made space for new ways of working and understanding of the possibilities in other sectors, in Bergen the processes of integrating climate into other plans and realms have been orchestrated from the political level. The discussions on conflicting goals, on differences in methods and responsibilities and of finding common ground can be seen as that which Rydin (2007) calls negotiation between knowledges. By not having these broad processes, a municipality will lose out on this aspect of silo-breaking.

In Bergen, policy integration plays a greater role than the thematic CAP, particularly through the heavy focus on developing a green city in the social element of the municipal

master plan and on compact city development in the master plan. The name of the CAP in Bergen, Green Strategy, reveals what the politicians had in mind: a strategy to complement the municipal master plan. However, there is little common understanding of the distinction between strategy and plan and how these differences affect both the planning process and the municipal work following the passing of the plan. There is no doubt about the ruling coalition's ambitions concerning climate and the main goal, building a compact city, but the status, role and implications of the climate and energy action plan seem vaguer.

In both cities, actors face different kinds of 'in-betweenness' (Allen, 2004) and navigate these spaces differently based on their institutional circumstances. In Trondheim, the planning process is focused on horizontal and vertical embedding of the plan and goals and creation of a structure and system within the administration, discussions about ownership and integration were held while making the plan, whilst in Bergen, embedding and creation of awareness come after the plan is passed. Measures are embedded in a more vertical way, by instructions from political level. However, awareness of the importance of planning and steering city development in light of climate change is rising. Whether this can be attributed to the CAP and work related to it or other external factors is unclear. Hence, Trondheim is a case of institutionalisation as a process, also in the planning phase, whilst in Bergen institutionalisation is attempted through policy integration and top-down instructions.

Collaboration and cooperation across level is part of the scenery of cross-sectoral work. Whereas Trondheim had cooperation in the planning process, including a common reference group and meetings between the project leaders, in Bergen the county level was not included, apart from giving input on the document sent on hearing. These differences are a sign of the more general differences concerning cross-sectoral collaboration in the two cities, and can have effects on possibilities to achieve common mitigation projects following the CAP.

The parliamentary system at the local level gives space for more "hands-on" political work, by the dedicated thematic councillor. Allowing for processes such as the one in Bergen, where there was no clear commission on making the plan, but that it was developed as it went along, and alongside political work to lift the plan, it also allows for downplaying the role and possibilities in cross-sectoral work within the administration. On the other hand, the alderman system can allow for a quite sharp divide between the political and administrative level, and hence leave the politicians perhaps too far out of the planning process.

Concluding remarks

The article explores the possible ways in which a municipality can break down silos, which inhibit effective mitigation through climate and energy action planning. The two cases feature two very different approaches with different implications for the CAP-making process, both of which are discussed in the literature. The literature review and two cases studied in this article show that three factors are important for breaking institutional silos: a broad process, political will and institutional entrepreneurs. However, some questions still remain and are relevant for researchers and practitioners. Is a climate and energy action plan yet another sectoral answer to a cross-sectoral problem? Are municipalities able to, and do they have the space and opportunity to, transform in terms of institution and plan to overcome silos? How can space be created to allow politicians to make unpopular and uncomfortable decisions?

The two cases, which feature very different processes and institutional and political capacities, reveal that it is necessary to have elements of all three internal factors. A broad internal process increases knowledge sharing, encountering of co-benefits and projects across sectors and departments and horizontal anchorage of the plan and goals. A plan without this process runs the risk of becoming a document codifying what is being done.

Understanding climate change as a wicked problem – cross sectoral and seemingly without clear solutions – have implications for local administrative and political work. There is broad consensus in the literature that climate change must be dealt with across all sectors (Adelle & Russel, 2013; Amundsen et al., 2018), however, the division of municipal responsibilities and tasks often makes such cross-sectoral work difficult (Cashmore & Wejs, 2014; Innes & Booher, 2010). Mainstreaming and the creation of ownership must be ensured at all levels, both within the administrational hierarchy and at the political level. As this article has shown, such processes will have to be sensitive to the in-betweenness; the power relations and power struggles at and between all levels, both between interests, resources and priorities.

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