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Political Discourse and Climate Change: The Challenge of Reconciling Scale of Impact with Level of Governance

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1 Introduction

1.1 Theme

Climate change has primarily belonged to the national and international level as a democratic governance issue, with the Kyoto agreement being the main institutional apparatus for handling the problem. During the 1990s however, local climate policy and planning was established as a distinct policy field of its own and it has become evident that local level action can be an important supplement to climate change actions at other levels of governance (Collier and Löfstedt, 1997; Bulkeley and Betsill, 2003; Lindseth, 2004).

The local level is the main focus of this thesis[1]. However, the opportunities and constraints for climate protection are not shaped within the 'local' (Bulkeley and Betsill, 2003). This thesis assesses the role of local climate protection in light of emerging forms of multi-level governance. I address climate change at the local level considering its interplay with other levels, and aim to illustrate the connections between the global and the local in terms of governance structures and how actors understand and 'frame' the climate problem in terms of geographical scales. This thesis describes how the climate issue is translated as an abstract and diffuse problem into particular political constituencies. It discusses what makes the problem solvable in a local context, ways in which the issue can be organised, and cities that are motivated around specific problem definitions ('frames').

This thesis builds on a social constructionist perspective of the environment. I not only argue that there is a choice as to how the climate problem should be solved, I also argue that environmental problems do not materialise by themselves. Environmental arguments might seem factual and scientific but the fact that the destruction of forests receives attention at a specific place and time, "cannot be deduced from a natural natural-scientific analysis of urgency, but from the symbols and experiences that govern the way people think and act" (Hajer and Versteeg, 2005, p. 176). Basic concepts like nature, the environment, and sustainability are always contested. Nature has to be made intelligible; without such an interpretative process it

[1] With local, I come to mean the municipal level, often just refereed to as the 'city' and the 'municipality'

would be hard to solve environmental problems at all. A social constructionist perspective on the environment studies the mechanisms that lead to the agreement on what constitutes an environmental problem (Bäckstrand, 2001, p. 32).

The theoretical perspective in the thesis is a *discourse* approach. I draw to a large degree on the work of Maarten M. Hajer. Hajer (1995, p. 44) defines discourse as,

> […] a specific ensemble of ideas, concepts, and categorizations that is produced, reproduced, and transformed in a particular set of practices and through which meaning is given to physical and social realities.

I aim to contribute to a better understanding of how discourse can be used in environmental policy analysis. I highlight the embedded and contextual nature of global environmental issues, and the "constitutive role of discourses" in shaping identities and attitudes (cf. Macnaghten and Urry, 1998, p. 93). I argue that such a perspective is needed in the study of environmental politics in general and climate change specifically. Numerous studies show that people are concerned about environmental values, but still do not see these values as having much impact on their daily lives. It is suggested that understanding more of how perceptions and ideas about the environment are shaped is of vital importance for the political space to initiate climate policy (Macnaghten and Urry, 1998).

In particular, discourse allows for conceiving scales in environmental politics. The concepts 'scales' and 'scaling' makes it possible to capture "the migration of the political from national government to multi-actor multi-level forms of governance" (Feindt and Oels, 2005, p. 170). There are few references to scale and the politics of scale in studies of environmental policy and planning (Bulkeley, 2005). When it is mentioned in the literature, there is a failure to recognize scale as socially constructed: Scale is seen as synonymous with the "nested territorial containers within which social and political life take(s) place" (Bulkeley, 2005, p. 876). In this thesis I highlight how a clear distinction between issues located at different political levels is problematic and argue that we need a better spatial grammar to comprehend environmental governance. I have come to understand 'scale' as a contested concept where what constitutes a geographical scale and what the relationships between

particular scales are both up for discussion. Scales can be hierarchical, ranging from households to community to local to regional, etc., but scales are also often seen in terms of webs of networks and relations, where the local extends into the global, and the global penetrates the local (e.g., Cox, 1998). Keil and Debbanè (2005) argue that scale is shaped by particular discourses, and that we need to understand policy processes and outcomes in environmental politics on the basis of which geographical scale solutions are sought

From an environmental perspective it is particularly interesting to discuss whether the (constructed) scales of an issue fit the level of governance where the problem is placed (e.g., Young, 2002). Cash and Moser (2000) discuss the ways in which environmental problems belonging to or placed at a specific institutional level correspond to the geographical dimensions of the particular problem. This is particularly relevant in a climate change context. Can climate change be demarcated ontologically to a specific scale as an environmental problem? Climate change has generally been treated as a case of global environmental change (Young, 2002). With local level actors taking responsibility for climate change however, it can be argued that they are changing the nature of the problem. The world's climate is an interdependent global system. However, to apply the term 'global' to the causes and effects of global warming is more problematic (Lutes, 1998). For instance, the international network Cities for Climate Protection Campaign argue that cities are both a part of the climate *problem* (since cities are a major source of greenhouse gases emissions) and a part of the climate *solution* (since success in climate change action will depend on concerted local action) (see Lindseth, 2004).

I argue in this thesis that the ways in which different actors relate to and use scales in their political argumentation has consequences for the outcome of political struggles. It will be shown how 'local', 'national' and 'global' must be understood not just as arenas where political struggles play out, but as discursively constructed concepts that consciously and unconsciously are used as a means of power in political processes. In particular this thesis studies the discourse I call 'thinking globally'. This discourse argues that climate policy should help to internationally secure the most cost-effective reductions in GHG emissions. Such an understanding limits the need for domestic reductions; rather than prioritising unilateral emission reductions, it is argued that

Norway could contribute to reducing the total global emissions through its relatively clean petroleum activities (Hovden and Lindseth, 2004). I show how this discourse has been employed both nationally and locally with great success, and how the dominance of this discourse captures an important trend in environmental governance. Multilevel governance is a reality that local level actors will meet in their aim to work for climate protection. I argue, however, that there is a choice as to what extent and how one should include the *local* level of governance in any kind of governing process. The thinking globally discourse is a severe challenge to local and national actors that aim to take responsibility for local and national emissions, since they can be met with the argument that what really matters are the global emissions. Later in this introduction (section 4.1) I provide further discussion on this matter.

The issue that underlies many of my discussions is that of governance, specifically environmental governance. The governance concept is highly contested and defined in many different ways. Traditionally, governance has connected "the act or process of steering", though recent theories have expanded the concept to include many forms of steering (Lafferty, 2004, p. 5). Today, 'governance' often refers to a set of practices where stakeholders and civil society organisations are involved in addition to government bodies and experts in policy formulation and implementation (Hajer and Wagenaar, 2003; Berger, 2003). In two of the articles in this thesis I elaborate on the governance concept (*'Multilevel'* and *'Kristiansand'*) and in section 4.3 I provide a broader discussion on the vertical and horizontal dimensions of governance.

The introduction (Part I) of this thesis ends with a discussion of 'discursive strategies'. This thesis aims to illustrate the complexities of climate change governance and contribute to a constructive debate on how actors can be better equipped to tackle the problems at hand. Inspired by the work of Yvonne Rydin (2003) I try to assess how specific discourses can be used as a tool in policy and planning. I argue that an economic, communicative, and scientific rationality infuse processes of environmental policy and planning and that a better understanding of how these rationalities frame particular contexts is important in reaching sustainable development.

1.2 Research questions

The overall aim of this thesis is to use a discourse approach to understand climate politics and policy at the local level of governance. I show how discourse analysis is a tool well suited to comprehend and enhance our understanding of the climate politics process. My study emphasises that the ways in which climate change and environmental issues in general are understood locally are quite complex and relational, and that discourses play a role in both mediating environmental disputes and causing specific political outcomes. The articles in the thesis do rely on a broad understanding of the discourse concept. Rather than concentrating on how discourses can be defined or the differences between the discourse concept and other related concepts, I see discourse as an overarching framework partly covering or encompassing other related concepts (e.g., 'ideas', 'knowledge systems', 'frames'). The main point is not how to define these concepts, but how they become useful in the particular cases at study.

The geographic focus in the thesis is primarily Norway, and climate policy and planning in Norwegian municipalities. In order to say something about the conditions for local climate protection[2] in Norway, this thesis also includes national climate policy in Norway, international experiences with local climate planning, and discussions on climate change as a form of multilevel governance. My conclusions primarily concern the Norwegian context and are primarily valid for the Norwegian context. However, through studying international experiences with local climate protection, I compare the Norwegian case to a broader context thereby aiming to bring forward knowledge that applies outside Norway.

The thesis' main research question is: *What is the role of discourse in the intersection between levels of governance in climate change politics and policy?*

This question is divided into the following four sub questions:

[2] In this thesis I will come to understand the concept 'climate protection' as overlapping the more general concepts of climate politics or climate policy. The concept is to a large degree made familiar and publicly known through the Cities for Climate Protection Campaign.

1. Which discourses – at which levels and scales – can be identified in climate politics?
2. What is the role of discourse in influencing policy?
3. How are governance relations changing in climate politics?
4. How can discourse analysis be further developed as an approach for analyzing the relationship between scale and multi-level governance in policy analysis?

The thesis is a collection of six articles that discuss how climate change is translated and made relevant in a local (and national) context. I show multiple ways of framing environmental issues and controversies and my articles provide a closer reading of local environmental conflicts to see how these conflicts are played out. Since this is a collection of articles each with independent aims and objectives, each article addresses the four different sub-questions to a varying degree.

1.3 Structure of the thesis

The thesis is organised in two parts: the *first* part contains the introduction, methods and theory, synthesized versions of the articles and a concluding discussion based on the six articles. The article concept rarely gives room for broad theoretical and methodological discussions so section two in the introduction provides a broader discussion of these matters. Section three summarises the six different articles and section four provides a final discussion based on the articles. The *second* part contains the six articles. Three have been published in international peer reviewed journals, one is forthcoming, and two articles have been submitted. The following articles are included in the thesis:

Article 1: Hovden, E., and Lindseth, G. (2004) "Discourse in Norwegian Climate policy: National Action or Thinking globally?", *Political Studies* 52: 63–81. The article is reprinted with permission from Blackwell Publishing. http://www.blackwellpublishing.com

Article 2: Lindseth, G. (2004) "The Cities for Climate Protection Campaign (CCPC) and the framing of Local Climate Policy", *Local Environment* 9 (4): 325–336. The article is reprinted with permission from Taylor & Francis Group. http://www.tandf.co.uk

Article 3: Lindseth, G. (2005) "Local level adaptation to climate change: Discursive strategies in the Norwegian context", *Journal of Environmental Policy & Planning*, 7 (1): 61 – 84. The article is reprinted with permission from Taylor & Francis Group. http://www.tandf.co.uk

Article 4: Lindseth, G. (2006) "Scalar strategies in climate change politics: debating the environmental consequences of a natural gas project", forthcoming in *Environment and Planning C: Government and Policy*. The article is printed with permission from Pion Ltd. http://www.pion.co.uk/

Article 5: Aall, C., Lindseth, G. and Groven, K. (2006) "Multilevel governance and local climate planning in Norway", submitted to *Global Environmental Politics.* To be published with a substantial revision.

Article 6: Lindseth, G. and Reitan, M. (2006) "The urban governance of transport and the environment in the city of Kristiansand", submitted to *Journal of Environmental Planning and Management.*

A brief orientation of how the articles relate to each other follows. The national debate is important for local work on climate protection. Climate change evolved as a specific challenge for politics in the end of the 1980s. '*Norwegian climate policy*' is a reading of the frames into which climate change was set in Norway. Although this article does not address the local level, it does provide an important entry point to understand the politics of scale and the challenges of reconciling climate change with petroleum production. This issue is discussed in more detail in the '*Stavanger*' article. I show here a clear similarity between these two cases in how climate change has been framed, and how the dominating discourse of 'thinking globally' is also important in structuring the local debate in Stavanger. Research questions 1 and 2 are mainly addressed by these two articles.

The '*Kristiansand*' article and the '*Multilevel*' article both address the more explicit issue of 'governance'. Climate protection was an important background for the Land use and Transport project (ATP) studied in the '*Kristiansand*' article. Transport is also

a major contributor to global warming, both in Kristiansand and an international context. Although the climate issue surrounds this case, the '*Kristiansand*' article does not explicit discuss climate change and climate governance. The focus is on how the transport issue is reconciled with a broader environmental agenda in an inter-municipal and a partnership governance structure. The '*Multilevel*' article focuses on vertical relations of governance, particularly the relationship between local and national levels. These two articles are the main source for answering research question 3.

The '*CCPC*' article addresses the issues of governance and policy frames. It is related to the '*Norwegian climate policy*' and '*Stavanger*' articles in that it discusses ways climate change can be understood in terms of scalar categories and global and local discourses. Moreover, it is related to the '*Kristiansand*' article and the '*Multilevel*' article in the sense that it accounts for network as a specific form of governance.

The '*Climate adaptation'* article is the cornerstone to this thesis. It has a more theoretical aim and brings forward an understanding of how discourse can be used as a tool in climate politics and planning. Though published in 2005, the article is in many ways a conclusion to the thesis. This article is the key source in addressing the fourth research question. Together with results from the other articles I use it to discuss how discourse analyses can be further developed to tackle the problems at hand.

2 Methodological and Theoretical Perspectives

The main methodological approach in this thesis is discourse analysis. Apart from one exception (cf. Aall, Lindseth and Groven, 2006), all articles to some degree rest on a discourse approach. A classification by Ostrom (1999) is useful to place discourse in the theoretical and methodological landscape. She separates between frameworks, theories, and models. According to Ostrom they can be separated as follows: *Frameworks* identify the most general factors of analysis as well as generic relationships between them. *Theories* specify a set of hypotheses about core elements and how they interact in more detail. These should be useful in explaining processes and predict outcomes. *Models* are further formalized and make more precise assumptions about a limited set of often quantifiable variables and how they function.

Based on this classification it seems evident that a discourse approach does not fill the role of either a *theory* or a *model*. Discourse analysis is best understood as a 'framework' in the sense that it points to a basic set of factors key to understanding a phenomenon; it argues that we should look for regularities in the text and language and study how this affects practice. Bäckstrand (2001, p. 47) argues that in a discourse perspective, empirical material cannot be used to verify or falsify hypotheses, and in this sense it is not a theory. Rather than being an objective standpoint in the choice between different theories, a discourse analysis can generate arguments in favour or against different theories. Bäckstrand argues that empirical data in a discourse analysis are best understood as arguments in a theoretical debate. In line with this, Ostrom (1999, p. 40) states that 'framework' provides "a metatheoretical language that can be used to compare theories". In short, it is an approach or a method.

The ambition of this thesis is to further understanding of climate change as a policy problem through referring to a variety of discursive approaches[3] that include; *frame analysis, scalar analysis,* and *institutional-discourse analysis.* These three approaches share a number of basic preconditions about the nature of the environmental problems

[3] I understand the concept 'approach' as similar to, or overlapping, the concept 'framework'. Nilsson (2005, p. 9) describes approaches as "sets of basic factors for research that are key to understanding a phenomenon".

and the policy process. Even though discourse analysis is not a theory in itself, the present thesis is not without theoretical ambitions. In my articles I focus on empirical case studies of climate change politics; this data will be studied in light of discourse analytical frameworks and will be confronted by other kinds of research on the environment and the climate. In line with Bäckstrand (2001, p. 47) I aim to "advance an informed argument for why certain theoretical approaches are more adequate in answering the research problem". The quest for a rational inquiry is thus not abandoned, since grounded theory and framework approaches are of vital importance for scientific discoveries.

2.1 Towards a discourse approach

The particular theoretical contribution this thesis aims to make is a better understanding of how discourse can be used in policy analysis. Although discourse analysis has been used for several decades in sociology, linguistics, and social anthropology, it is used only to a limited degree in political science and in policy analysis. In order to better understand how discourses influence the policy process, I begin with a reading of the context in which discourse studies developed.

A forefather in the field, Harold D. Lasswell, defines the policy sciences in two main approaches: the 'analysis of policy processes' concerned with knowledge about the formation and implementation of policy and 'policy analysis' concerned with knowledge in and for the policy process; (Lasswell, 1970a in Parsons, 1995, p. 20). The *policy analysis* approach can be traced back to the war years, in particular to operations and techniques of economic analysis. Policy analysis as we know it today developed in the 1960s and 1970s in close relation with the managerial practices of governments (Parsons, 1995; Fischer, 2003). Policy analysis aimed to be a problem solver; in America it came to be associated with the Kennedy-Johnson 'New Frontier' and 'Great Society' programmes that called upon analytical techniques for how political science could solve society's problems. Wildawsky's (1979) 'speaking truth to power' captures a dominant belief in the early post-war period of policy analysis; that social science was in all essentials 'a form of engineering or medicine'. It indicated a problematic relationship between those finding the true state of the world and those wanting to rule it, and also that knowledge of society could improve affairs (Parsons, 1995). *Analysis of the policy process* developed alongside the policy

analysis approach in the 1960s, and concentrated on studying the role of constitutions, legislatures, interest groups, and public administration in the policy-making and implementation process. The research set out by Lasswell, Simon, and Easton specified the different stages in the policy process that explained how problems are defined, decisions are made, and policy implemented and evaluated (Parsons, 1995).

The dominant focus within post-war political science (i.e., Anglo-Saxon political science) has been 'objective' policy research or research based on behaviourist and/or rational-actor approaches (deLeon, 1998). This was viewed as the only 'real' basis for how policy sciences could develop into a model of predictive status and thereby gain credibility. With its logical simplicity and its ability to produce impressive empirical results, it is easy to see how such a natural science ideal became attractive in social science (Flyvbjerg, 2001). Neopositivist/empiricist[4] methods came to dominate the social sciences, with a strong emphasis on quantitative analysis where facts were separated from values and the search for general results was independent of contexts (Fischer, 2003). Clearly, writers like Simon (1957) have informed this tradition of policy analysts that humans have 'bounded rationality'; they will never have sufficient knowledge about the policy process. However, Fischer (2003, p. 5) argues that even this understanding reveals an ideal of a rational model where 'satisfactory knowledge' is the standard offered to decisions makers.

Even though rational approaches based on the natural science model continue to be an ideal for many of the social science traditions, a growing dissatisfaction with these approaches has become evident (Flyvbjerg 2001; Fischer, 2003). The social sciences have not delivered effective solutions to pressing societal problems nor have they developed into anything that resembles a predictive 'science' of society (Fischer, 2003). Flyvbjerg (2001, p. 32) states bluntly:

> After more than 200 years of attempts, one could reasonably expect that there would exist at least a sign that social science has moved in the desired direction, that is, toward a predictive theory. It has not. […] The difference between the natural and the social sciences seems to be too constant and too comprehensive to be a historical coincidence. […] We may thus be

[4] Burr (1995, p. 184) defines *positivism* as "the belief that we can only know what we can immediately apprehend. That which exists is what we perceive to exist"; and *empiricism* as "the view that that the only valid knowledge is that which is derived from observation and experiment".

> speaking of so fundamental a difference that the same research procedure cannot be applied in the two domains.

Underlying the limited success of social science in making a difference in the political environment of the 1960s and 70s was the problem of context (Fischer, 2003). The Vietnam War was an example of a constantly changing policy arena, requiring policy makers and analysts to consider the specific context in which policy was situated. After also the failure of policy analysis to inform decision-makers about energy politics in the 1970s, it became increasingly clear that policy analysis lacked an understanding of how knowledge leads to politics (Fischer, 2003). Increasingly, studies began to acknowledge that politics are much more complicated than assumed and infused with sticky problems. Majone (1989, p. 1) writes: "As politicians know only too well but social scientists too often forget, public policy is made of language". The early 1990s saw the development of approaches that valued the role of language in policy analysis. Fischer and Forester's (1993) *The argumentative turn in policy analysis and planning* and Schön and Rein's (1994) *Frame reflection* are examples of books that signalled a new direction in policy studies. In the 1990s numerous other scholars wrote about discourses in environmental politics following the pioneering work of Litfin's (1994) *Ozone Discourses* and Hajer's (1995) *The Politics of Environmental discourses*. During this decade this tradition developed into argumentative discourse analysis. The term signifies that it is more correct to speak of an *argumentative* than a *linguistic* turn, since the focus is on more than just the text; discourse analysis goes beyond the text to see how texts are situated in particular contexts and aims to show how language shapes reality (Hajer, 2003, p. 103).

What these and other approaches stated was that social science needed to change if it is to regain relevance. Hajer and Wagenaar (2003) argue that the classical-modernist politics ('conceive-decide-implement') fails to deal with the complexities of modern politics. In discussing planning processes, Rydin (2003) writes that policy is seldom the result of a rational process purely involving expert knowledge pursued in the public interest. Outcomes are instead more or less the product of the engagement of powerful actors with each other and claiming to have different assumptions about what is the right thing to do (Rydin, 2003, p. 3). Flyvbjerg (2001) argues that there is more to social sciences than what is shown in the context independent causal oriented

approaches. With a thorough epistemological critique post-positivist or post-empiricist traditions have sought for an orientation that goes beyond an 'objectivist' conception of reality.

Social constructionism[5] underpins to a greater or lesser degree all the different approaches within post-empiricism and post-positivism. Society is socially constructed and social and political life is embedded in a web of different practices reproduced through discursive practices (Fischer, 2003). Social constructionism is a common denominator for a number of newer theories about culture and society. Burr (1995, pp. 2-5) states that four different characteristics are shared by the wide variety of social constructionist approaches. First, they are critical of what is denoted as 'taken for granted knowledge' since our world cannot be seen as 'objective'. Second, humans are fundamentally historical and cultural beings and our understanding of what constitutes knowledge about the world is historically and culturally contingent. Third, our ways of understanding the world are shaped and maintained in social interaction. Fourth, the social construction of knowledge and 'truths' have social consequences: certain worldviews naturalise certain types of actions and discredit other types of action.

I have relied on these types of principle to develop a specific social-constructionist approach in the thesis that aims to highlight and analyse the discursive dimensions of social reality.[6] Sabatier (1999) however, in his key review of different policy approaches; "Theories of the Policy Process" fails to find room for (or legitimate) a discourse approach. He sees constructivist frameworks as less promising because, in his view, they: "(a) leave ideas unconnected to socioeconomic conditions or institutions and (b) conceive of ideas as free-floating, that is unconnected to specific individuals and thus largely nonfalsifiable" (Sabatier, 1999, p. 11). In Sabatier's

[5] Burr (1995) states that 'constructivism' and 'social constructionism' are used interchangeably in literature, but argues that in order to avoid confusion with the Piagetian theory and to particular perceptual theories, it is analytically clarifying to use 'social constructionism' for the approaches described here.

[6] All discourse approaches are also social constructionist approaches, but not all social constructionist theories are discourse approaches. 'Critical psychology', 'deconstruction', and 'post-structuralism' are examples of other social constructionist approaches that are not necessarily studying discourses (Burr, 1995). Burr (1995) argues that due to vivid debates within and amongst social constructionist approaches, it is difficult to separate the different perspectives . For instance is it debated in the literature whether all post-structuralists necessarily are social constructionists. Such debates are beyond the scope of this thesis.

defence, it should be stated that discourse analysis in politics has developed considerably since he wrote his book in 1999. At that time however, there were scholars within environmental politics that addressed the specific type of issues Sabatier criticized discourse studies for (see Litfin, 1994; Hajer 1995). Below I account for discourse analysis in more detail as an approach in policy science, including commenting on the criticism that Sabatier has raised against social constructionist perspectives.

2.2 Discourse analysis: basic orientation

2.2.1 Foucault's legacy

In this thesis I build on the tradition of Foucault in seeing beyond the mere linguistic approaches in discourse to include the broader context and the institutional practices where discourses are produced. In *The Archaeology of Knowledge* (1972) Foucault, takes as a starting point the assumption that there are a set of practices that render production possible and maintain a set of assertions: an archive. Foucault is interested in the rules behind expressions accepted as meaningful and truth-worthy in a specific historical epoch. Foucault (1972, p. 117) defines a discourse in this way:

> We shall call discourse a group of statements in so far as they belong to the same discursive formation. [. . .] It is made up of a limited number of statements for which a group of conditions of existence can be defined.

A Foucaultian perspective on discourse can be characterised by four factors (Feindt and Oels, 2005, p. 164). The first factor is a focus on the productive functions of discourse. Discourses not only describe things, they also 'do things' through the ways they make sense of the world and give meanings to things. Second, power relations are seen as present in all kinds and forms of social interaction. Power is not first and foremost repressive and limiting people's choice of action, power is also productive and constitutive. Third, following the previous point, discourse is both hindering and enabling to action. Discourses are locations of struggles and negotiations. Fourth, discourses constructs subjectivity and make people 'governable'. Individuals are seen as important realms of politics, since governing the population takes place largely through how concepts and political problems constitute objects and subjects.

Most of today's analytical perspectives on discourse follow Foucault's[7] view as something relatively regular that define what is meaningful, and that bring forward the idea that 'truth' is something created discursively. However, Foucault tends to focus on the long historical lines and regimes of knowledge that dominated each historical epoch. My focus in this thesis is the micro processes of discourse. I study how different discourses can exist side by side or strive for the right to decide what is true or false in political debates. My approach is strongly influenced by the work of Maarten M. Hajer (Hajer, 1995 and also Hajer, 2003; Hajer and Wagenaar, 2003; Hajer and Versteeg, 2005) who builds on a Foucaultian discourse approach in his studies of environmental politics. Hajer (1995, p. 44) defines discourse as,

> […] a specific ensemble of ideas, concepts, and categorizations that is produced, reproduced, and transformed in a particular set of practices and through which meaning is given to physical and social realities.

In particular Hajer has sought to develop Foucault's perspectives and make them more relevant for policy studies. He argues that there is a need for a more middle range theory than what we inherit from Foucault, somewhere there is also room for individuals' strategic action (Hajer, 1995). Through concepts such as 'storylines' and 'discourse coalitions' Hajer has given a better account of how actors can use discourses as a means to work for specific aims. His work has contributed to understanding the roles of institutions in discourse and the way changes happen in politics.

Phillips and Hardy differentiate critical discourse analysis and constructionist discourse analysis (2002, in Hardy 2004). Hardy (2004) argues that not all researchers are as explicitly interested in the power dimensions as Foucault was. Whereas critical discourse analysis focus on bringing out the power dimensions, Phillips and Hardy 2002, p. 416 in Hardy, 2004) state that constructionist approaches aim to shed light on the,

[7] We can separate Foucault's work into an archaeological and a genealogical period. In his later genealogical work Foucault develops a theory about power and knowledge. Instead of looking at agents and structures as primary categories, Foucault now focuses on power. Power is spread over different social practices, not something that specific agents exert over passive subjects (Phillips and Jørgensen, 2002).

> […] intricate way in which discourses lead to the creation and reification of certain phenomena, rather than exploring who is advantaged or disadvantaged by a particular socially constructed 'reality'.

In my articles I talk about discursive power on several occasions; an important aim in my studies is to assess how different discourses structure political debates and cause specific outcomes. However, unlike critical discourse analysts (cf. Fairclough, 1992), I do not aim to show how discourses are ideologically invested or determined by relationships of power in particular institutions or contexts. More important in this thesis is understanding how a phenomena (climate change) is constructed as a particular social reality.

2.2.2 Policy as discourse

The study of discourse gives new perspectives on how we are to understand policy processes and how different policy suggestions are legitimised. The key to understanding how actors argue or how claims of rationality are made in a case, is to see them as socially constructed through discourse (Rydin, 2003). Discourses consist of different arguments and perceptions of what is an appropriate or logical way to do things. These arguments and perceptions are structured in different patterns that our statements or utterances follow when we are placed within a particular domain, and it is precisely this regularity that constitutes a discourse; we are part of different discourses. Discourse is the use of language to express thoughts, intensions, values, and alternative courses of action.

In his study on the acid rain problem, Hajer (1995) emphasises how policy-making is an interpretative activity where different actors struggle over the meaning of a policy problem, and how the definition affects the ways in which solutions are sought and found. The process that results in a particular definition of a policy problem is seen by Hajer (1995, p. 22) as a 'discursive closure'. When a problem is 'closed' one can analyse what is included in the problem and what is left out. In line with Foucault (1972) Hajer (1995, p. 49) argues that,

> Discourses imply prohibitions since they make it impossible to raise certain questions or argue certain cases; they imply exclusionary systems because they only authorize certain people to participate in a discourse; they come with discursive forms of internal discipline

> through which a discursive order is maintained; and finally there are also certain rules regarding the conditions under which a discourse can be drawn upon.

The power of discourse is the structural constraints determined by the linguistic frame of reference in a debate. Politics is a discursive struggle. Furthermore, discourses are not independent, they are upheld by institutions and material structures; political struggles do not take place in a 'social vacuum'. These structures both enable and constrain actors (Hajer, 1995). For Hajer, interests cannot be assumed as given; they are inter-subjectively constituted through discourse. It is paramount for the understanding of a topic or a problem approach to study what is being said or expressed and in which context this expression takes place.

Through studying these discourses, we comprehend how different claims to rationality or standpoints are being presented and how these are related to institutional norms and other material and social issues that aim to legitimise policy. Discourses 'mediate' in this way between the different aspects of social life, including the interaction between different interests (Rydin, 2003). Discourses make possible an understanding of how the interaction between interests is structured, but also the dynamics in itself. This is an important benefit of discourse analysis: When we study different representations of a particular case as a discourse, we gain insights into what is presented as 'truth'. These truths often hide other presentations and ideas. Such an analysis is fruitful since it says something about the possibilities of action and the hindrances that actors meet. Foucault's objective is to uncover the structure in these different regimes of knowledge; the rules for what can and cannot be said, and the rules for what is truth or falsehood (Phillips and Jørgensen, 2002, p. 13).

2.2.3 Discourse and agency

One of Sabatier's (1999, p. 4) criticisms of social constructionist approaches is that they, "conceive of ideas as free-floating, that is unconnected to specific individuals and thus largely nonfalsifiable".

Foucault indeed had an ambivalent view on the subject. Thus Hajer's (1995) ambition is to show how a clearer view of individual agency can be operationalised within discourse analysis. Hajer understands actors as constrained by discursive structures,

but sees a role for actors within these discursive structures and pays particular attention to the concept of 'storyline'. In Hajer's (1995, p. 56) words a storyline is a "generative sort of narrative that allows actors to draw upon various discursive categories to give meaning to specific physical or social phenomena". Finding an appropriate 'storyline' is an important form of agency. A storyline is a strategy that actors can use to pursue a particular agenda. Actors form 'discourse coalitions' around these storylines; not primarily based on shared interests or goals, but on shared concepts and terms (Hajer, 1995). These groups uphold or develop new ways of approaching the problem; the actors do not necessarily know each other, or may not even have met, but they place themselves around certain storylines or broader discourses which they employ when they engage in political discussion. Since discourses are always to some degree subject for social struggles, a role for agency follows (Phillips et al., 2004).

The role of actors is still often underestimated in discourse studies. Further developing the actor perspective is thus an important task if discourse analysis is to be taken seriously in policy analysis. Hardy (2004, p. 420) argues that we,

> […] need to find new ways of contextualizing agency so that it takes into account the fluidity and idiosyncrasy of a discursive field, at the same time acknowledging that some actors are more active and consequential in creating and using texts to influence organizing processes.

Hajer and Versteeg (2005, p. 181) write that discourse analysis is a study of regularities in language, but it does so "in the awareness that it is the actors that utter statements and that those actors might do so with certain tactical or strategic goals in mind". The point is that we do not reduce politics to strategic behaviour, since this would make the actors more sovereign than they actually are. It remains evident that certain actors' groups, such as epistemic communities, have greater discursive resources and a better chance in reaching their goals than others in a discursive context (Hajer and Versteeg, 2005).

In this thesis I emphasise how actors are vital to the power of discourses, and that there are different ways they can influence discourse. In the way they take the power of discourse into account (the structural constraints determined by the linguistic frame

of reference in a debate) they can exert power in discourse (e.g., design their text and speech in line with the assumed expectations of their audience in order to be more forceful) (Holzscheiter, 2005). In short, actors influence discourse through their production and dissemination of texts. This thesis focuses on an understanding of texts as "symbolic inscriptions that range from spoken, written, graphical, and material form" (Hardy 2004, p. 419). It follows that the context is also drawn into discourse analysis. I begin with the texts and the local or proximate context. To understand or shed light on the particular phenomena, I also extend the analysis to a more distal context. It is important to pinpoint that this broader context is not the locus of the analytic activity: this provides insight that follows from the micro-analysis of the primary texts.

2.2.4 Discourse and institutions

The other criticism from Sabatier (1999, p.11) against social constructionist approaches is that they "leave ideas unconnected to socioeconomic conditions or institutions".

This statement seems to have little resonance in the newer discourse literature. Following Foucault, a central building block is to bring out the institutional dimension of discourse, considering where things are said and how specific ways of seeing can be structured or embedded in society at the same time as they structure society (Hajer 1995, p. 263). This perspective highlights that discourses are not just speech and text floating around; they have a *material and institutional anchoring*. Discourses are materialised in certain regularities: the material world (institutions, belief systems, 'economic laws' etc.) resists when one tries to change it. Neumann (2001, p. 92) points out that understanding the social resonance and the reproduction of these discourses is one of social sciences' most important tasks. The social constructivist perspective of discourse analysis is then not a strategy for finding out what people *really* mean, or to find out what reality is actually behind the discourse; it is based on the assumption that you cannot truly grasp reality without the discourses, and it is therefore the discourse itself that constitutes the object of the analysis. Discourse analysis builds on the assumptions that these social practices and structures must be re-presented. They become representations of reality when they are expressed through discourses. Rydin (2005, p. 77) even sees the rise in discourse studies largely due to

the problems in science of how to understand in detail how “interests, conflicts and outcome were represented and how this affected social interactions and policy processes”.

The approach used in this thesis does not deny the role of interests or institutions in shaping ideas. Schmidt, (2002, p. 250) in employing a discourse approach in an institutional analysis, states that the ideas articulated by a discourse should not be separated from other types of influence; neither the interests that find expression through discourses, the institutional interactions which shape their expression, or the cultural norms that frame them. Ideas often shape the interests themselves. Rather than reducing ideas to a reflection of self- interests, this thesis acknowledges that ideas must be seen on their own terms and be assessed in relation to their impacts on political decisions. The point is to underline that language is the medium in which the very meanings upon which ideas are constructed, which again structures social action (Fischer, 2003, p. 41).

Discourse analysis brings forward a different understanding of institutions than what has been common in institutional theories. Most of these theories have been “dominated by realist investigations in which the examination of organizational practices has been disconnected from the discursive practices that constitute them” (Phillips et al., 2004, p. 636). Phillips et al., (2004, p. 636) argue that,

> […] institutions are constituted through discourse and that it is not action *per se* that provides the basis for institutionalization, but rather the texts that describe and communicate those actions.

From a discourse perspective, language is the purposeful activity. However, any actor will find him- or herself subject to the prevailing norms of working practice, and may well face overlapping and even competing norms that represent institutions. Institutions provide an account of the context within which language occurs (Rydin, 2003, p. 52). Hajer (1995, p. 264) makes an important distinction between an institutional and a discourse approach:

> […] discourse analysis is not to be counterposed with institutional analysis, but is rather a different way of looking at institutions that is meant to shed new light on the functioning of

> those institutions, how power is structured in institutional arrangements, and how political change in such arrangements comes about.

There is however, not too great a distance between discourse analytical approaches and new institutional theories where institutions are defined as "historical accretions of past practices and understandings that set conditions on action", through the way in which they "gradually acquire the moral and ontological status of taken-for-granted facts which, in turn, shape future interactions and negotiations" (Phillips et al., 2004, p. 8). Within the institutional theory, institutions are seen as socially constructed. Extending this to a discourse perspective entails that institutions are constructed through discourse. Discourses are norms and rules that enable certain ways of acting and make other ways costly and impossible. When sanctions are sufficiently robust, an institution exists (Phillips et al., 2004, p. 8). However, even though all institutions are discursive products, not all products of discourse are institutions. Hajer (1995) makes the separation between discourse structuration (the ways in which certain ideas have to be referred to in order to convey legitimacy on actors) and discourse institutionalisation (the way in which particular understandings of policy problems become ingrained in policy practices and institutions). A discourse perspective on institutions sees institutions constructed primarily "through the production of texts, rather than directly through actions" (Phillips et al., 2004, p. 10). Phillips et al., (2004, p. 11) argue that,

> […] institutions are constituted by the structured collections of texts that exist in a particular field and that produce the social categories and norms that shape the understandings and behaviour of actors.

This is not to say that institutions also are formed without text.

2.2.5 Discourse and environmental politics

Within the broader field of environmental discourse we find numerous subtopics, such as air quality, climate change, toxic substances, and nature protection (Feindt and Oels, 2005, p. 164). Several attempts have been made to classify different environmental discourses (Hajer 1995, Dryzek 1997; Benton and Short 1999; Darier 1999: Rydin 2003; Oels 2005). Many of these categorisations are quite broad. For instance Dryzek (1997) sees 'environmental problem solving', 'survivalism',

‘sustainability’, and ‘green radicalism’ as the four main environmental discourses. Through looking at the history as well as the content of the discourses, he depicts how they have developed and what effect they have had on society. In studying the discourse on acid rain in the UK and the Netherlands, Hajer (1995) uses the more middle range concept of ‘storyline’ and shows how identifiable policy discourses provide the signpost for action through their storylines. In particular Hajer accounts for how ‘ecological modernization’ has emerged as the new dominant policy discourse in environmental politics. This discourse states that the environment and the economy are mutually reinforcing if properly managed. It suggests that “environmental problems can be solved in accordance with the workings of the main institutional arrangements of society” (Hajer, 1995, p. 3).

Another key concept in environmental politics is ‘sustainable development’. Hajer (1995, p. 3) argues that the Brundtland Commission’s report from 1987 *Our Common Future* is one of the paradigm statements of ecological modernisation. According to Langhelle (2000) ecological modernisation has no established relationship with global environmental problems or social justice, and thus ecological modernisation and sustainable development should not be conflated. Whereas Langhelle (2000) tries to prescriptively define these two different concepts, Hajer (1995) first and foremost uses them to describe changes in perceptions of environmental problems. The key aspect for Hajer is thus not primarily what these concepts are ‘labelled’ or whether we can ontologically define the concepts, but how we can understand the practices in current environmental politics in terms of discourse. Even though sustainable development is defined by the Brundtland report, it is more important in a discourse perspective to account for how this idea has been received, developed, and embedded in institutional practices, than to argue prescriptively how it *should* have been understood.

This is the key to understanding the environment from a discourse perspective. Rather than seeing environmental problems as ontologically defined; they are instead subject to discursive struggles. Discourse analysis has established that nature is no longer lying outside society but is being co-produced with society. “Expressions of environmental concern and sentiment are not self-contained but are bounded within wider social, cultural and political contexts” (Macnaghten and Urry, 1998, p. 97).

Environmental problems have become a conflict of interpretation, where different actors gather around specific concepts and ideas that produce common understandings. Hajer and Versteeg (2005, p. 177) point out the fact that even if actors try to make sense of environmental problems this does not always result in the different actors understanding each other. A seemingly mutual understanding might even conceal complexity and different sub discourses. Rather than calling for clarity of concepts, or a more positivist understanding of environmental problems however, discourse studies enhance our understanding of environmental politics through seeing how "inherent ambiguities in concepts were fostered within the policy process to allow different discursive strategies to be adopted by different actors" (Rydin, 2005, p. 77). It is well suited to describe the complexities of environmental politics, since it offers an explanation of why environmental policy making is not seen as a 'necessity', as the natural science ideal informs us. Discourse analysis "allows one to study the power effects produced by and built into environmental discourses" (Feindt and Oels, 2005, p. 169). Certain problems are left out or included as certain actors are viewed as legitimate partners in the discussion and some are not.

The key issue is thus how the environment is *represented*. The way that problems are defined and the meaning attached to specific environmental problems decides the available solutions which again affect outcomes, laws, and institutions. This thesis focuses on the representation of climate change in politics, and what enables or hinders local actors in climate protection work. It has been suggested that climate change is part of a wider problem in the 'risk society' (cf. Beck, 1992), and the risk dimensions will be investigated in my cases of climate policy-making. However, risk dimensions are far from the only dimension infusing climate policy processes. Macnaghten and Urry (1998, p. 97-98) point out,

> As risks transcends the boundaries of sensory perception, and as the contours of risk extend to the very distant and the extraordinary long term, we become dependent on national and increasingly global expert systems for information, knowledge, images, and icons to enable such processes to be 'interpreted'.

2.3 Conducting Discourse Analysis

2.3.1 Methods and data

What kind of 'method' is discourse analysis? Fischer (2003, p. 191) sums up the overall aim of discourse analysis as a matter of,

> […] establishing interconnections among the empirical data, normative assumptions that structure our understanding of the social world, the interpretative judgements involved in the data collection process, the particular circumstances of a situational context (in which the findings are generated or the prescriptions applied), and the specific conclusions.

In a more concrete sense, Yanow (2000, p. 22) suggests four basic steps in interpretative policy analysis that can be used to guide the study of discourse. The *first* is to 'identify' the artefacts (language, objects, acts) that are carriers of meaning in a specific policy analysis. Since discourses cannot be studied directly, they can only be explored by studying the text that constitutes them. Discourse analysis involves the systematic study of texts. The first step therefore includes how texts are produced, disseminated, and consumed (Phillips et al., 2004, p. 6). Discourse analysis does not simply focus on individual or isolated texts, but on collections of texts and the ways they are made meaningful through links to other texts. The *second* step according to Yanow, is to identify the 'communities of meaning' that are relevant to the policy issue. The focus then moves on to see who is producing the texts and what kind of policy communities are involved. The *third* step is to identify the relevant discourses. The aim is to explore the relationships between discourse and social reality through studying how texts draw on different discourses, "…how and to whom they are disseminated, the methods of their production and the manner in which they are received and conceived" (Phillips et al., 2004, p. 6). The *final* step is to identify points of conflict and how they reflect different interpretations by different communities. This is what Hajer (1995) denotes as a discursive struggle; it points to a kind of destabilization that could possibly lead to a policy change.

My articles to a smaller or greater degree follow these four steps. Through beginning with texts, I aim to describe the actors and the policy communities involved in discursive struggles. The purpose of such a study is to make better sense of the

complexities and connections in a specific policy issue. My method is an open, explorative, and qualitative approach. The research process I used can be characterised as *abduction*. Abduction signifies a round dance back and forth between theory and empirical material (Alvesson and Sköldberg, 1994, p. 42). It is a combination of induction (which generalizes from findings) and deduction (which starts from theory), where new moments are added as the process moves on. Induction is from the perspective of abduction concentrated on empirical facts; these facts however, are not seen as independent of theory. Empirical arguments are seen differently as new knowledge and insights develop in the study. Theory also develops as empirical material is gathered. Such an understanding of science goes beyond both objectivism and relativism. It is a methodology that has roots in Aristotle and the intellectual deed of *phronetics*: practical wisdom and ethics. Flyvbjerg (2001) states that phronetics is about the analysis of values with a basis in practice. Phronetic research is then pragmatic, variable, and depends on context.

Not only has the research focus and questions changed due to the process of abduction, these matters have also changed due to the specific institutional conditions in which this thesis was carried out. I have held positions both at Western Norway Research Institute and ProSus/University of Oslo and have been involved in different broader research projects at these institutions while working on the thesis. Before I began I was already involved in a book project at ProSus (Realizing Rio in Norway) where I wrote a chapter on Norwegian Climate Politics with Eivind Hovden. This chapter was later developed into a discourse perspective and came to be included in the thesis. Furthermore, I wrote a report (Lindseth, 2003) for ProSus about climate impact and adaptation that was later developed into the '*Climate adaptation*' article. Researchers Carlo Aall and Kyrre Groven at Western Norway Research Institute invited me to participate in a paper that summarized the experience with climate planning in Norway. This has also been included in the thesis, although it is not a paper employing a discourse perspective.

My thesis consists of six case studies of climate politics. Case studies are characteristically portrayed by different kinds of data sources. I tried to follow the policy processes at hand closely and collected a great deal of empirical material,

First in this collection are policy documents from local and national authorities. I have collected minutes, project plans, and other documents accounting for how specific policy processes have developed. In '*Norwegian climate policy*' I studied minutes from the Parliament. I also used media clippings; these were a particularly important source in the '*Kristiansand*' and '*Stavanger*' cases. To better understand how political conflicts are played out I searched internet editions of newspapers in Stavanger and Kristiansand. I studied documents and research reports from organisations and businesses. Both in *'Stavanger'* and *'CCPC'* I relied on documents produced by the organisations studied. I have also conducted interviews especially in the *'Kristiansand'* and *'Stavanger'* cases. The point of the interviews was not to investigate the specific motives people have, or what they 'really' mean about particular cases. The interviews were used as more explorative in trying to get information about important processes and possible future actions. As part of the data material for the *'Multilevel'* article I carried out a survey. All municipalities and counties reported on were sent an email survey. Those that did not answer through e-mail were included through a telephone interview. Finally, I relied on articles, book chapters, books, reports, and papers written about similar problems or that studied similar contexts.

2.3.2 The question of causality

Social constructionist perspectives are often written off due to the failure to account for causality. Fischer (2003, p. 157) states,

> How, ask the critics, can the social sciences explain social phenomena if they ignore the causal relationships underlying them? Without casual explanations, for example, how can we come to know why people hold the ideas and beliefs they employ to interpret events? What social conditions – for instance, the conditions of the wealthy or the poor – lead people to see the world one way or another? Seeking firm causal knowledge, empiricists have generally argued that meanings cannot be causes.

Fischer states that some interpretivist researchers neglect the questions of causality. Fischer (2003, p. 158-159), however, also argues that this is unnecessary and that we can adopt a different form of causality than positivists and empiricists. The author argues that empirical analysts seldom manage to establish a cause-effect relationship; they can prove statistical correlations, but are unable to prove that A caused B.

According to Fischer (2003, p. 158) is the basic reason clear: “the social world is simply too complicated to permit isolating variables in ways that permit determinations of what caused what”. A social interpretivist analysis should move beyond the ‘causal relationships’ to focus on ‘casual mechanisms’,

> […] only a closer qualitative analysis can offer us statements about how and why these variables are connected. Only through interpretive methods can we discover the various possible explanations of what particular actors thought they were doing when they engaged in actions pertinent to the causal relationships (Fischer, 2003, p. 158).

Thus the casual mechanism is explained through qualitative research. Fischer (2003, p. 159) argues we should comprehend social science as ‘quasi –causal’. Rather than governed directly by external conditions, we act in terms of how we interpret these conditions and the beliefs, intentions and purposes we ascribe to them. While ideas never stand altogether apart from interests and institutions, these ideas will be seen as independent in this thesis, in the sense that they have their own rules that structure public deliberations. Ideas and principles are ascribed as possible explanations, but these ideas are only comprehended through representation in language.

2.3.3 Validity and the role of the researcher

I would argue that there is no value-free position for the researcher. Phillips and Jørgensen (2002, p. 22) point out that if we accept all knowledge as a single representation of reality amongst many, we enter into a number of ultimately unsolvable philosophical problems. All research is grounded in a subjective dimension, and this decides what the researcher will see and bring forward as results. There will always be other positions from where the world will look different.

This account of science does not mean that there can be no objectivity; it only looses its rigorous meaning. Rather we must accept that the concept relies on social definitions and this involves “recognizing that objectivity typically means that we converse with people who agree with our standards of comparison” (Fischer, 2003, p. 153). Phillips and Jørgensen (2002, p. 178) argue that it is through the meaning we ascribe to things that we can come to understand them, but that most meanings are relatively stable. As such,

> […] if a single individual declares that during the afternoon, she has undergone a sex change, it is not likely that this will be accepted by those around her or that our understanding of gender will suddenly change. The existing fixities of meaning are too stable for that (Phillips and Jørgensen, 2002, p. 178).

Instead of objectivity as a standard, Fischer (2003, p. 154) argues that credibility is more important for the researcher. Not all research results are equally good. Phillips and Jørgensen (2002, p. 173) suggest the following rules of thumb for the researcher in assuring the research is valid:

- Analysis should be *solid*. The interpretation should be based on a number of different textual sources.
- Analysis should be *comprehensive*. The questions posed to the text should be answered fully and textual references that seem to conflict should be clarified or accounted for.
- Analysis should be accounted for in a *transparent* way. The reader should as far as possible be able to 'test' the claims made. Interpretations made in the text should be documented as far as possible through the empirical material.

I have sought in this thesis to follow these rules of thumb but the question of subjectivity deserves further discussion. A scientific ideal is to try to tell a story that to the least degree is the author's own synthesis of what happened, but a story that is laid open such that the reader by herself can experience and draw her own conclusions (Phillips and Jørgensen, 2002). It is debatable whether I have managed to be theoretically consistent and free myself from my personally biased knowledge. As a researcher and part of research communities that work with sustainable development (at ProSus and Western Norway Research Institute) I am already engaged and interested in environmental politics that can arguably lead me to become narrow minded. Additionally, it is easy to become an advocate for environmental interests opposing industrial projects that the environmental movement is sceptical towards. It is my hope that through a reflective and consequent use of theory and methods I have managed to free myself from some of the biases I brought with me into the research process. The argument is that it is through seeing the world through a specific method or theory we can distance ourselves from some of the assumptions and common

sensual ideas that we use, and subject our material to questions other than our everyday perspective (Phillips and Jørgensen, 2002).

I would also argue that instead of striving for an 'independent position', an alternative is to select dominating discourses and open them up for problematisation as Hammer (2001, p. 21) points out, not because we think they can be replaced by utopias, but because Foucault has shown us that agreement is potentially dangerous and that conflict and disagreement should be assigned more value. In my thesis I have done this. I have studied the development of the thinking globally discourse in detail and sought to understand how this discourse has come to enjoy a hegemonic position. Phillips and Jørgensen (2002) argue that one makes clear where one stands in relation to the discourses and contexts at study, and reflects over the consequences one's own contribution has to the discursive production of society. I have sought to analyse the discourses without taking a stand towards the moral or ethical basis of the dominant discourses. I would like to stress that I see that explanations or discourse framings other than mine also are possible but I posit that my methods are fruitful in that it emphasises things other perspectives overlook.

Yanow (2000, p. 90) also informs us that bias and subjectivity not need to be a problem from the researcher; she informs us that there are other options available. In particular interpretivist research has a certain democratic potential: The policy analyst can be seen as a translator, bringing different stories from different communities into the study and letting different voices be heard. Interpretative analysis also depends on the ability of the researcher as a storyteller not a technocratic expert, to open up the conversation for lay people. In my research I have been in close contact with many actors at the local level of governance, mostly in Stavanger and Kristiansand. I have interacted and learned from a number of people and through interviews they have had to chance to tell their stories. Through a close and detailed study of these local contexts it is my hope that my study has a certain democratic potential: that I can provide local actors with a more detailed knowledge about how politics has played out in these constituencies.

Finally, when objectifying is impossible, the question is rather what we choose to be engaged in. Here we can conclude with the words from Spinosa, Flores og Dreyfus

(1997) that it is that man functions at his best when he aims to change what is perceived as matters of course or common sense, and not through abstract distanced reflection.

3 Summary of the Articles in the Thesis

3.1 Discourses in Norwegian Climate policy: National Action or Thinking globally?

This article builds on and is a further development of, the book chapter "Norwegian Climate Policy 1989-2002" by Hovden and Lindseth (2002). This article takes Norway as a pioneering country in climate politics at the end of the 1980s as a starting point. We argue that Norwegian climate policy changed considerably during the 1990s. It has evolved from a broad consensus in 1989 where the notion that a national target for the stabilisation of CO2 emissions was the principal instrument for climate change abatement, to a situation at the turn of the century where Norway emerged as one of the most committed supporters of flexible mechanisms, the so-called 'Kyoto mechanisms'.

We read this empirical development through a discourse approach; we identify two main discourses in the Norwegian politics of climate change: 'national action' and 'thinking globally'. We propose that these are the two main discourses in Norwegian climate politics and highlight how different actors placed themselves around them and formed two coalitions to influence the discursive context. We argue that the core element in this struggle is that of scale, namely what scale the climate problem belongs to. Both discourses emphasise climate politics as an important concern, but disagree on what responsibility Norway should take. The national action 'NA' discourse focuses on curbing national emissions, whereas the thinking globally 'TG' discourse explicitly targets international emissions. The motive for the NA discourse is to lead by example, invoking moral imperatives to lead the way and do one's share of the work; for the TG discourse the motive is to achieve international reductions in emissions as cost-effectively as possible. Consequently, the policy focus is international for the TG discourse, and national for the NA discourse (albeit as an intrinsic part of honouring international obligations). The core development in the 1990s is that the TG discourse took over as the dominant discourse in the second half of the decade

We provide insight into how the TG discourse managed to translate the Norwegian petroleum industry from a problem into a benefit for Norwegian climate politics in the 1990s. Whether through direct export of oil and gas, the direct export of gas-based electricity, or as domestic use of gas-based electricity, the arguments of the TG discourse essentially revolved around the same line of reasoning: since Norwegian petroleum products are relatively clean internationally, Norwegian oil and gas production is good international climate policy. We emphasise how the TG discourse has managed to depoliticise the petroleum industry in climate politics to a large degree. The TG discourse allows the main institutional arrangements of society, such as the petroleum industry, to remain while addressing the environmental problem at hand. This makes the TG discourse rather attractive, and the NA discourse suffered loss after loss in the late 1990s as it is seemingly baseless after the Kyoto protocol.

The main theoretical contribution this article makes is that Norwegian climate politics must be understood through scales. By reading the conflict through these two scalar configurations, we highlight how the climate problem is represented through concepts, terms, and the communication of scientific knowledge that relate to two specific scalar categories. We argue that climate policy depends not only on actors and interests, but also on the power of the various discourses that emerge from the representations of the climate issue. Our purpose has been to supplement the more actor- and interest-based accounts available and provide another lens through which the developments in this policy field may be viewed and which can broaden our understanding of the processes at work.

3.2 The Cities for Climate Protection Campaign (CCPC) and the Framing of Local Climate Policy

This aim of this article is to explicate knowledge about the possibilities and problems of translating the global dimensions of climate change into local action. The concepts ‘frame’ and ‘framing’ are used as theoretical perspectives through which this case is studied. The word ‘framing’ means that some aspects of a perceived reality are selected and made more salient. I emphasise how climate change is a diffuse ‘problem of the common’, and that if the local level is to contribute constructively in climate change work it is important to clarify the ‘in between’ substance linking the local and

the global. The Cities for Climate Protection Campaign (CCPC) is selected as a case. This article sees the CCPC (organisation) as an actor trying to mobilise and persuade cities to work on climate protection. This campaign, originating from ICLEI (The International Council of Local Initiatives), has come to play a pivotal role in organising local community work on climate change and acting as a torch for cities worldwide willing to work with climate protection.

Understanding how the campaign framed climate change is an important source of knowledge about the 'nature' of local climate politics. The article summarises several strategic documents from CCPC and ICLEI organisations, in which their positions and perspectives on climate change protection are laid out. The empirical material is mainly from CCPC's early phase (1993–97), when the campaign's framework was established. I discuss the campaign's profile both in light of this framework, and the results from the campaign.

I highlight two aspects of the CCPC climate change frame. First, the problem is established and made relevant through scientific knowledge explaining that we will increasingly notice the effects of climate change. City dwellers are at risk from climate change and therefore should cut emissions. Second, motivation for action is based on the assumption that local and global issues are linked. It is this last dimension that is the main focus in the CCPC's reports and documents about climate protection. In a closer examination of CCPC I concentrate on determining to what degree the different elements of local and global sustainable development agendas can be mutually reinforcing, and whether climate change protection can be reconciled with local priorities and initiatives that reduce GHG.

Through data from regional CCP campaigns and studies of the organisation by other researchers, I argue that the frame that CCPC aim to 'market' climate change through has not been effective in reducing GHG emissions in CCPC cities. Clearly, the conditions for climate protection are not shaped only within the local level of governance. However, I argue that this frame of seeing overlapping local and global issues does not account for how a civic subpolitics of climate change can emerge: where people are provided explicit means through which they can collectively respond, and where the responsibilities of other actors and institutions are explicitly

acknowledged. I argue that CCPC does not explicitly show how climate change is an overarching responsibility for society where climate protection means saying 'no' to unsustainable development, and about restricting practices and policies in other sectors of society. In short, CCPC has discussed the climate issue without reference to climate change or the harm it causes nature.

The CCPC case illustrates the problems and prospects of organising climate initiatives to represent a global awareness. The criticism of CCPC opens up a discussion on other ways that climate change protection action could be framed. It may be that CCPC is failing to use all its potential or that other strategies could bring about more emission reduction (within the cities' available policy space). Finding new and meaningful ways of linking the global and the local should be a core concern of local climate change protection action. This article also questions whether the extremely complex climate change issue might not lend itself to being portrayed in a way that is empirically credible to those who need to be mobilised. In this regard, constructing climate change as a local issue can pose a problem because it creates the impression that climate change matters can be solved locally.

3.3 Local Level Adaptation to Climate Change: Discursive Strategies in the Norwegian Context

The aim of this paper is to show how climate adaptation can be further developed in Norway through a discourse approach. The issue at stake, *climate adaptation*, aims at moderating the adverse effects of climate change through a wide range of actions targeted at vulnerable systems. Even though people have adapted to variances in climate throughout history, there is now a new dimension to adaptation in light of the human induced process of global warming. Thus far, climate impacts and adaptation initiatives have not realised the added value of climate adaptation; adaptation often appears as an afterthought, with an emphasis on technological solutions. Based on a review of literature on climate impacts and adaptation, I argue that what is lacking in the climate adaptation literature is consideration of the process of adaptation; how adaptations will be implemented, by whom, and why. So far, assessments have not resulted in strategic and long-term planning for climate adaptation. Moreover, the idea

that the sub-national level should play an important role in adaptation is only acknowledged to a limited degree in the literature.

This article is a thought experiment. It assumes that Norway will have to be much better prepared for climate changes in the future. I argue that before planning for adaptation, the planner(s) must understand how the issue of adaptation or vulnerability is framed before being able to select tools for the planning process. The paper presents an institutional-discourse approach based on Rydin (2003) as an alternative to further climate adaptation planning. There seems to be agreement in the climate adaptation literature that institutional factors are crucial in forcing and determining adaptation. Institutions both affect the social distribution of vulnerability, as well as determine the management of climate-sensitive aspects of society. Through an application of Rydin's approach, the paper shows how specific institutions operating at the local level can play a role in climate adaptation in Norway.

Three specific discursive strategies, a *scientific–economic, communicative–economic*, and *scientific–communicative discourse*, are presented. Rydin (2003) argues that scientific, economic, and communicative rationality are the three main rationalities used to legitimate policy and decisions in environmental planning. A discourse perspective on environmental planning must take into account and build on how these rationalities work to develop and frame an issue. The rationale for combining these rationalities into specific discourses is to take into account the 'holistic' nature of sustainable development, and shows that if we draw on established rationalities in a new and creative way, planners and local actors can be given new discursive tools in planning for a sustainable development. It should also be noted that the rationale for combining these rationalities is not to decide whether the different rationalities can be combined logically, in terms of their content or assumptions, but to consider how the discursive structure affects their potential for being combined and used in discursive strategies for planning.

The article continues with assessing the discursive structure of the rationalities and includes an institutional dimension in a portrayal of how specific institutions operating at the local level in Norway can convey or 'carry' these discourses and how actors placed within these institutions can use discourses as *resources* when planning

for climate adaptation. An adaptation agenda will look quite different depending on which discursive strategy that is chosen. The article does not favour one over the other, but acknowledges the need to investigate and discuss different approaches throughout Norway. Furthermore, the contextual nature of knowledge and local climatic and social conditions will result in unique ways of legitimating climate adaptation policy in each community. In this sense, the article can be seen as a 'tool kit' for local planners. The analysis suggests how adaptation can be achieved if local actors in local institutions realize the potential of discursive planning.

Rydin is one of the few authors to use discourse analysis as more than an analysis technique. She aims to provide a normative theoretical basis that shows how discourses can be used as planning tools, bringing a discursive dimension to the institutional approach. There is clearly a need for further studies to demonstrate how insight from discourse analysis can be used as a tool for planning. The paper has sought to find an analytic perspective that is constructivist without being ideographic or positivist.

3.4 Scalar Strategies in Climate Change Politics: Debating the Environmental Consequences of a Natural Gas Project

The issue at stake in this article is how the domestic use of natural gas in the Norwegian city of Stavanger became a struggle over scale; over which geographical scale the environmental and climatic consequences of a natural gas project should be seen. The article is a further development of the scales perspective addressed in Hovden and Lindseth (2004). Additionally, there are few references to scale and the politics of scale in environmental politics and planning. This paper argues that this field of research could gain from understanding how the concepts of 'scale', 'scalar strategies' and 'struggles over scale' play out empirically in issues of sustainable development and the environment.

The article by Hovden and Lindseth (2004) discussed the relationship between petroleum and climate politics on the national level; this article discusses the relationship at the local level. Stavanger is selected because of the role it plays as best practice in urban sustainability. The conflict between the use of natural gas and

climate protection at the local level of governance has never been as apparent as in Stavanger. Stavanger is a pioneering case in showing how local actors come to debate and negotiate the environmental and climatic consequences of domestic use of natural gas.

The conflict has its root in two specific events. In the summer of 2000 the local energy company *Lyse Energi* decided that they would implement their plan to bring natural gas through the Stavanger region via a pipeline. In June 2002 the Municipal Council in Stavanger approved a Climate Plan for the municipality. After the plans to build the pipeline materialised it brought about a vocal and intense debate over the environmental consequences of the use of natural gas. The use of natural gas in the Stavanger Region would be a severe challenge to the role Stavanger plays as 'best practice' in urban sustainability. It would thus make it more difficult to reach the climate objectives, in particular the goal of reducing GHG emissions from stationary energy use with 30 % by 2010 (compared to 2000 level).

This article analyses the conflict between the use of natural gas and climate protection through the lens of scale theory. I emphasise how, as an issue in environmental governance, scale is not merely an independent variable causing specific outcomes but is negotiable, allowing actors to adopt different strategies to pursue their varying agendas. Even though the political struggle studied was primarily 'localised' in the city of Stavanger, the process in question cannot be reduced to 'local' or 'global'. We often misunderstand environmental politics if we aim to use bipolar categories.

The article demonstrates how a local energy company felt compelled to use environmental arguments to win positive acceptance within an established local climate protection discourse. Various scalar strategies can be identified in the debate. I show how a local struggle can be represented as a global struggle. By framing climate change as a global issue, local actors found arguments that enabled them to portray this natural gas project as environmentally friendly. The local case was thus reframed to shift attention from local responsibilities. In order to achieve its preferences *Lyse Energi* drew in other centres of social power – both locally and nationally based actors – and formed a *discourse coalition*. Ultimately it was the State Pollution Control Agency (SPCA) that decided in favour of the company's *Rogass*

project. The realisation of the project can be seen in relation to how it fit with an established national climate discourse. The way in which *Lyse* framed the project and the approval of the SPCA bears clear resonance to the thinking globally discourse that was developed during the climate debate in the 1990s in Norway.

I argue that the article has more general implications for the understanding of environmental governance. The case demonstrates how local actors need to re-scale sub national governance in search of a 'sustainability fix' (cf. While et al., 2004) that can accommodate a new and demanding ecological challenge such as climate change. The Stavanger case shows how *Lyse Energi* used a scalar strategy that ultimately managed to undermine alternate local climate-change objectives by referring to climate change as a global issue which demands global solutions. The discursive approach used here revealed how a local energy company could use the old environmental slogan 'think global, act local' to its benefit. The results of the Stavanger case study indicate a growing need to critically explore the normative implications of scalar re-framing as a discursive technique in local environmental conflicts.

3.5 Multilevel Governance and Local Climate Planning in Norway

In this article we draw on experiences from local climate planning in Norway to discuss the ways in which climate change enters into a multilevel policy setting. We address the following three research questions:
(1) How can climate change be described as multilevel oriented?
(2) What are the experiences with local climate planning in Norway?
(3) How can we assess policy space for local climate policy?
By local we mean sub-national governments, and in Norway this means municipalities and counties. Although our emphasis is on Norway, we relate to the experiences internationally, and in this way discuss local climate policy more generally.

For the first question we understand multilevel governance to be an alternative and opponent to the traditional hierarchical top-down system of international-national-

local government relations. Multilevel governance signifies both that trans-national levels of government *and* local authorities play a more important role in global politics. It also signifies a horizontal shift where responsibilities are moved from governmental towards non-governmental actors. We highlight that in this multilevel governance chain local actors can play the role as a 'structure' for the implementation of national or international climate objectives, as well as that of policy 'actor' taking independent policy initiatives.

The second research question considers what the particular case of Norway can tell us about the nature, potential, and pitfalls of local government action on climate change. Our study covers all municipalities in Norway involved in comprehensive local climate planning at the time of the study. The study consists of two surveys: one during spring 2002 (Groven and Aall, 2002), and a follow-up study during winter 2003/04 (Lindseth and Aall, 2004). Regarding the implementation of the climate plans we find that the follow-up concentrated for the most part on measures within the *energy* sector, wherein the installation of district heating was prevalent. This was the case for measures implemented in both municipal buildings and the local community as a whole. Only some of the larger cities reported implementation of measures within the transport sector, in which structural measures and investments in public transport dominate. We emphasise the municipalities' clear shift of focus from climate *and* energy to *mostly energy* during the period the plans were drafted in 2000, to the follow-up survey during winter 2003-04.

The third research question addresses policy space for local climate policy. Based on the Norwegian case and supplemented with knowledge gained from international review, we present a typology of six different categories of local climate policy:
(1) business as usual;
(2) policy redressing;
(3) picking the low-hanging fruit;
(4) symbolic climate policy;
(5) local authorities as policy structure; and
(6) local authorities as policy actor.

In the discussion we argue that even though the local level has increasingly been acknowledged as an important contributor in global environmental politics and in a multi level governance chain, national governments continue to play an important pre-requisite for local climate protection. We emphasise how the relationship between national and local authorities is a crucial factor if climate policy as a specific local responsibility would be strengthened. In particular, the Norwegian experience with local climate planning gives food for thought as to how the communication lines and responsibilities between the local and national level should be ordered. It seems evident that unless national commitments are strengthened, it is unlikely that local climate policy will become more than a policy area for the few front-runner municipalities: in a larger context this will only represent symbolic contributions to the global quest of reducing GHG-emissions.

Multilevel governance is a reality that local level actors will meet in their aim to work for climate protection; we argue that there is a choice as to what extent and how one should include the *local* levels of governance in any kind of governing process.

3.6 The Urban Governance of Transport and the Environment in the City of Kristiansand

This paper studies how environmental objectives are integrated in transport policies through the empirical case of Kristiansand where a cooperative project was initiated to better find a co-ordination of environmental and transport objectives. We studied a project called the Land use and Transport forum (ATP) in which political and administrative representatives from Kristiansand, five surrounding municipalities, and two counties were brought together with the State Road Administration. We also analysed ATP's relationship with private business organisations in the 'City forum' in Kristiansand.

The paper investigates how different discourses about transport and the environment are presented and argued in this new co-operative institutional setting. In assessing the possibilities of a change in policy discourse, we combine discourse analysis with an institutional approach. In line with Healey et al., (2003) we employ a relational view of institutional capacity where the ability of a discourse change through these

deliberative forums is seen as a product of relational resources, knowledge resources, and mobilization capacity.

The core challenge for the ATP forum was to settle tensions and barriers between those that saw the forum as a road-building project, and those that primarily saw it as an environmental project to provide better access and conditions for the bus, including restricting car use in the city centre. Although the project promised to prioritise environmental solutions, it is also evident that the more global dimensions of transport were not addressed. It is first and foremost a 'localised' understanding of transport problems that was stressed; more global problems such as the contribution transport makes to climate change were not addressed.

In terms of governance relations the project gives clear indications of change. We argue that the ATP forum set up new channels of communication, challenged the City council's established discourses and practices, and improved relationships with business interests in the city partly due to the establishment of the 'City forum'. We argue that this is an example of how one kind of new governance structure (ATP) creates a need for better integration and inclusive governance between other actor constellations. It seems evident that a new, more open minded and inclusive style of governance has been established in Kristiansand. The way that business interests have increasingly come to realise that environmental issues and environmental projects also be beneficial for them, can be seen as one of the more visible products of these governance relations thus far.

4 Discussion

The different articles are informed by discourse approaches. This final chapter of the introductory section gives a more explicit interpretation of the analytical and more general aspects of both climate policy and discourse analysis. I do not provide a comprehensive account, since the different articles provide individual results and conclusions, but I aim to bring out the more general aspects. The discussion relates directly to the four different research questions in section 1.2. In the discussion I refer to the different articles by the following abbreviations:

Article 1: 'Discourse in Norwegian Climate policy: National Action or Thinking globally?' will be called '*Norwegian climate policy'*
Article 2: 'The Cities for Climate Protection Campaign (CCPC) and the Framing of Local Climate Policy' will be called *'CCPC'*
Article 3: 'Local Level Adaptation to Climate Change: Discursive Strategies in the Norwegian Context' will be called *'Climate adaptation'*
Article 4: 'Scalar Strategies in Climate Change Politics: Debating the Environmental Consequences of a Natural Gas Project' will be called *'Stavanger'*
Article 5: 'Multilevel Governance and Local Climate Planning in Norway' will be called *'Multilevel'*
Article 6: 'The Urban Governance of Transport and the Environment in the City of Kristiansand' will be called *'Kristiansand'*

4.1 Which discourses – at which levels and scales – can be identified in climate politics?

There are numerous ways of organizing discourses in environmental politics. Environmental issues do not place themselves in well-defined boxes; they are contested and interconnected in many ways (Dryzek, 1997). As Dryzek (1997) argues, the more complex the problem is, the larger the possible perspectives. In this thesis, I emphasise the scalar dimensions attached to discourse. Since delimiting or constructing a discourse is always the task of the researcher, there are other plausible discourses that could have been used as labels for the particular contexts I have

studied. Nevertheless, I propose that scalar dimensions are well suited to understand the politics of climate change and climate protection at the local level of governance in particular. Scalar dimensions relate to where the climate problem belongs, in terms of which level of governance is best suited to deal with the problem and the global or a local 'nature' of the problem.

One finding from my studies is how the climate issue at local and national levels of governance are 'scaled-up' to the global level. The first article '*Norwegian climate policy'* sets the stage. For the national action 'NA' discourse, the focus is on curbing national emissions whereas for the thinking globally 'TG' discourse it is explicitly international emissions that are targeted. In '*Stavanger*', the climate issue was framed as a global issue, and in that sense the local case was reframed to shift attention from local responsibilities. I argue the same dynamics take place in debates at the local ('*Stavanger'*) and the national level ('*Norwegian climate policy'*) of governance. Both articles show how climate change was primarily understood as a global problem, and how local and national policies and projects should be seen and evaluated in light of how this impacts the total global emission situation. A key argument was that a policy and development that result in an increase in local emissions can be environmentally sound since the same policy can result in a reduction of the total global emissions.

The core idea about discourses in this field is that the way we think and talk about basic concepts concerning the environment has consequences for the politics and policies that occur in the environmental field. Both these cases indicate a growing need to critically explore the normative implications of scalar re-framing as a discursive technique in environmental conflicts. In terms of policy, I show how bringing in the global scale in a local context makes the decision spaces wider. The thinking globally discourse allows the petroleum industry to remain while addressing the problem at hand. I have shown how 'thinking globally' can be a way of strategically framing climate change in conflict with the direct struggles of people, most visibly environmental groups, that aim to take responsibility for their country's or region's own contribution to global warming.

This thesis argues that there is no perfect 'fit' between the ecosystem and institutional systems in climate change, since it is contested both how the climate issue should be

understood and how it should be solved. The key issue is how specific issues are scaled or rescaled and whether there have been networks or arenas created around these issues in which governing can take place (cf. Bulkeley, 2005). Lutes (1998) argues that the 'global' construction of the climate issue warrants careful scrutiny since it privileges particular ways of controlling greenhouse gases. It is true that the climate issue also is global. The world's climate has come to be understood as an interdependent global system. The point here, however, is that the term 'global' applied to the causes and effects of global warming is more problematic (Lutes, 1998). Lutes argues that these responses place the responsibility on supra-national institutions and a further extension of market principles such as property rights, to control emissions. This does not mean that global climate agreements such as the Kyoto protocol are not useful in battling climate change. The question is what happens when the term global is applied to national and local action.

The core argument of the thinking globally discourse as studied in this thesis is that since Norwegian petroleum products and activities are internationally relatively clean, Norwegian oil and gas production is good international climate policy.[8] For this to happen, however, one must make sure that cleaner fossil energy that is produced in Norway actually replaces the older dirty energy, i.e., one would have to make certain of two things: old energy sources like coal are phased out as the 'new' power is phased in, (that not the new energy comes in addition to the old energy and does not actually lead to increased energy supply and use), and the 'dirtiest' power is phased out. The core argument that the thinking globally discourse rests on is that these mechanisms actually work. From the beginning of the 1990s Norway focused on how emissions from petroleum could be debited to Norway under an international climate regime of flexible mechanisms (Hovden and Lindseth, 2002). Even in the absence of such an international agreement, these 'substitution benefits' continued to be the core argument of the thinking globally discourse. There are currently no institutional arrangements that ensure that natural gas will replace coal or, for that matter, hinder that natural gas does not replace cleaner energy like wind power or bio fuel. In a

[8] In the beginning of the 1990s, this argument first and foremost concerned oil production. It was argued that it was unreasonable that unavoidable emissions from oil production for export should only be debited to Norway, since Norwegian petroleum products were less pollution intensive than fossil alternatives such as coal. This argument has been further developed to concern natural gas; the export of natural gas, the direct export of gas-based electricity, and domestic use of gas-based electricity.

liberalised European energy market, the price mechanism makes stipulations of where and how such replacements will take place a highly uncertain business. We can conclude that the TG discourse has been based on preconditions that have not actually been met in Norwegian national climate policy.

The evaluation of the thinking globally discourse comes out differently when we look at the local case of '*Stavanger*'. In this case, there were actually mechanisms in place that would ensure that a replacement of more polluting fossil fuel would happen. *Lyse Energi* had signed a number of contracts for the delivery of natural gas with different industries and businesses that would phase out more polluting fossil fuel. They claimed that based on its contracts with customers, the use of natural gas would replace a total of about 200 GWH from other energy sources. The environmental movement found it hard to argue against the logic of this replacement, even though the debate that developed in Stavanger showed a fundamental disagreement about future sustainable energy paths. The thinking globally discourse thus, in this case, provided solutions that could result in GHG reductions. The most serious attack on the thinking globally discourse is arguably, however, that in the long run fossil fuels will also replace investments in alternative energy sources. It seems evident in light of the major challenges that IPCC[9] has warned us about for more than a decade, that a sustainable future is one that makes a transition to an economy that is less fossil dependent as soon as possible. It is alarming that new infrastructure investments in fossil fuels like natural gas and increased supply of gas based power in a 30 year perspective will press power prices down and reduce investments in renewable energy that today are almost competitive (Vogstad, 2005).

The thinking globally discourse is forceful in that it reunites strong economic interests with environmental concerns. However, it is appropriate to ask if the thinking globally discourse has become a linguistic tool for *some* businesses and politicians that has enabled them to maintain an image of environmental concern, while ignoring the serious problems at hand. The discourse is fronted by the business and industry sector

[9] IPCC (2001) concludes that globally averaged surface temperatures have increased by 0.6 ± 0.2°C in the 20th century; and for the range of scenarios developed in the IPCC Special Report on Emission Scenarios (SRES), the globally averaged surface air temperature is projected by models to warm 1.4 to 5.8°C by 2100 relative to 1990, and globally averaged sea level is projected by models to rise 0.09 to 0.88 m by 2100.

to a large degree and they are meshing the 'global' character of the climate problem with an economic rationality. Lutes (1998, p. 170) states that global warming as a political issue is losing its potential for progressive change. It is an agenda being:

> […] appropriated by state and corporate institutions more interested in maintaining profits and keeping the world safe for corporate capitalism, than in creating a world in which society and nature can reconcile their differences in a mutually supportive manner.

From a democratic governance perspective it seems evident that the idea that communities have a *democratic* responsibility to take on climate commitments at the local and national level appears to have lost resonance relative to the idea that climate change is a global issue requiring global solutions. In the absence of an effective way of dealing with the climate issue at the supra-national level[10], the thinking globally discourse in Norway has not created networks or arenas around issues in which effective governing can take place (cf. Bulkeley, 2005). Furthermore, if a leading climate municipality in Norway (cf. '*Stavanger*') cannot maintain the idea of 'differentiated responsibility' – with specific ameliorative burdens taken on by local-community interests – how and why should other municipalities in Norway be expected to take on such commitments?

The question is whether the alternative discourse of taking national or local responsibility is capable of providing the means through which climate change can be effectively governed. The '*CCPC*' article sheds light on this matter. In this story the global dimensions of climate change are the sole rationale for creating and organising the work in a network. To find a solution for such a large-scale problem, action from vast numbers of people is required; it is the cumulative work of the many cities that together contribute to the reduction of global warming. The global dimensions are further emphasised in the motivation to act based on the overlap between global and local issues: local action contributes to reducing global warming as well as solving local problems. In this way CCPC is *localising* a global issue. However, when the cities entered the stage of implementation, the global dimensions are lost in this localised discourse. As other researchers also emphasise (Betsill 2001; Slocum 2004a;

[10] This could however change in a latter phase of the Kyoto protocol with US involvement and more effective sanction mechanisms when countries do not fulfill their obligations.

b) it is the local benefits of climate protection that are emphasised by the CCPC as the key motivation for cities. Local benefits might be helpful in bringing attention to global warming, but the modest reductions of GHG in CCPC cities thus far questions whether this localised discourse works or not; there are indications that the cities in this campaign under a 'climate banner' work with projects and initiatives that have little or nothing to do with reducing GHG. As research on CCPC has pointed out (Bulkeley and Betsill, 2003; Betsill, 2001; Slocum, 2004a; b) the climate is often discussed without reference to climate change or the harm it causes nature.

There are evidences in the CCPC case that the deontological aspects of climate change that emphasise the intrinsic problematic nature of GHG emissions are lost. The global dimensions that CCPC emphasised in the beginning of the campaign (the scientific evidence, risks, and moral concerns outside the time perspective and space location of people encouraged to take action) took a backseat when the CCPC entered in to the stage of implementation. A somewhat different understanding of scale is seen in this case compared to the Norwegian case. Whereas the global dimensions are used to divert attention from local climate action, the global seriousness of the problems are forgotten in the CCPC case.

What I show in this thesis is the conflicts between different scalar discourses and how they are actively used. The discussion emphasises the complex ways in which scalar categories framed the decisions context. Global or local cannot be understood as 'bad' or 'good'. The global and local can be used as categories that can hinder or empower actors in climate politics. The global can be used to point to the seriousness of the climate issue, and it can be used to move attention away from local and national responsibilities. The local or national can be used as a category to prioritise local responsibility for climate action, but is also a way to prioritise local needs that have little or no consequence for the climate. This last aspect is emphasised in the '*Multilevel*' article, where state money for local climate planning resulted in the municipalities mostly prioritising local needs. Instead of emission cutting projects, action and measures were taken in less controversial sectors with little or no effect on GHG emission reduction.

My discussion ends with a somewhat pessimistic conclusion in relation to finding effective means through which climate emissions can be curbed. I argue in the '*CCPC*' article that due to its extreme complexity the climate change issue might not lend itself to being portrayed in a way that is empirically credible to those who need to be mobilised. The CCPC case does not provide clear signs that networks and arenas around these issues have been created in which effective governing can take place (cf. Bulkeley, 2005). In light of this, it seems evident that future local level engagement n climate protection work would have to continue the discussion on how to find new and meaningful ways of linking the global and the local.

4.2 What is the role of discourse in influencing policy?

I reject an extreme constructivist approach where language is the source of society. I emphasise a physical reality independent of our understanding or perceptions[11]. I also argue that ideas can have a causal influence, but that they can seldom be totally separated from material interests or institutional processes. In line with Fischer I argue that a social interpretivist analysis should not reject causality as a means of explanation, but that it should move beyond the 'causal relationships' to focus on 'casual mechanisms. Only a closer qualitative analysis can offer us statements about how and why these variables are connected (Fischer, 2003, p. 158). However, it is difficult to separate cause and effect in such studies. Weale (1992, p. 58) argues that language or ideas could be conceived as effects rather than causes, for example as rationalizations of economic or political interests. In this way references are made to the interests underlying the ideas rather than the ideas themselves. What does my articles say about this problematic?

I acknowledge that actors involved in the discursive struggles clearly can be understood as having material interests. In *'Norwegian Climate Policy'* and *'Stavanger'* I show how the petroleum industry stood to lose if a discourse on national and local responsibility were to win through. However, in both cases a discourse on local and national responsibility also played a role. This was based on a deontological ethic, emphasising the intrinsically problematic nature of GHG emissions. This discourse shaped the framework of the debate in such a way that the petroleum

[11] In this particular case, I take as a precondition that climate change is actually happening; that the scientific evidences are strong enough to argue this.

industry was forced to present their activity in terms of concepts, ideas, and categories that acknowledged the seriousness of global warming. These actors could have argued that petroleum production is more important than the threats of global warming, or they could have questioned the seriousness and trustworthy of the scientific evidences of global warming in the first place. Neither position has played a significant role in the Norwegian debate. In this way, ideas mattered in structuring the Norwegian debate on global warming, contrary to what a more interest-based approach would suggest.

In the later phase of the debate it is more difficult to separate material interests from the ideas put forward. I have shown in *'Norwegian Climate Policy'* and *'Stavanger'* how the petroleum industry played a more important role in the debate and how eventually solutions were found that led the petroleum industry to continue with its production and address climate change at the same time. It is possible to portray these policy processes in terms of an interest-based approach, but a discourse perspective can also add something to an understanding of the policy process here. Rightly so, the petroleum industry has remained in these political battles concerning climate politics. But actors had to develop a discourse that could gain legitimacy in the political context in finding a strategy that would make the petroleum industry continue uninterrupted. This thinking globally discourse clearly had a component of material interest, but it also addressed environmental values needed to provide the conceptual basis for the continued existence of the petroleum industry and to show how this production fits into the framework of existing policy. I have shown, particularly in *'Norwegian Climate Policy'*, how actors' made active use of the thinking globally discourse to increase assent, discover new implications, and anticipate or answer criticism. In this way the discourse was continually reproduced and developed further in the field of climate policy. Legitimization and justification is an integral part of politics. Given that language of politics, inscribes the meanings of a policy problem, politics is not only expressed through words, it is also constructed through language (Fischer, 2003).

In *'Stavanger'* I showed that by insisting on using the reference to climate change as a global issue which demands global solutions *Lyse* used a scalar strategy that ultimately undermined alternative local climate-change objectives. A core discursive

structure and hindrance for the environmental movement is that it no longer owns the old slogan ‘think global, act local’. My article disclosed how the energy company managed to use the idea of ‘thinking globally’ to its benefit. In *‘Stavanger’* I argue that with the translation of the thinking globally discourse into concrete politics [building the gas pipeline], the nature and interpretation of local climate protection as a policy problem has been challenged and reframed. By its decision to permit *Rogass*, the State Pollution Control Agency effectively institutionalised the *relationship* between domestic use of natural gas and climate change. In line with Phillips et al, (2004) I argue that discourses are norms and rules that enable certain ways of acting and make other ways costly and impossible and that when sanctions are sufficiently robust, an institution exists. In the *Rogass* case the thinking globally discourse developed from structuring the debate to institutionalising the relationship between domestic use of natural gas and climate protection: an institution was formed. This is an important hindrance for actors arguing that we should take national or local responsibility for our climate emissions. Even though interests play a part in the thinking globally discourse, it is the rationality claims and conceptions posited by this (now institutionalised) discourse that actors challenging these interests must take into account. This is the power of discourses – to determine the linguistic frame of reference within which the debate takes place.

I would argue that we are always surrounded by discourses. Actors are constantly putting forward rationality claims and trying to persuade others of their ideas. Whereas a more positivist account of reality would stress that we can only gain knowledge about what we can immediately apprehend, I argue that our primary source of knowledge and our best guess in trying to grasp ‘reality’ are these statements and texts people produce. Discourse analysis is arguably well suited to account for the politics of a situation, because it is grounded in “a detailed contextual examination of the circumstances at play in specific cases” (Fischer, 2003, p. 108).

My reading of discourse analysis sees it, amongst other things, as a tool for identifying how actors actively use language to pursue their interests. I also argue that interests, actor networks, or resources are insufficient in understanding the politics of climate change. Climate change threatens not only the interest of national governments and multinational companies, but every one of us in our dependence on

products and services yielded by fossil fuels. The extensive character of the climate issue results in a multitude of actors, organisations, and various interests groups at the international, national, and local levels that all have opinions, ideas, and requirements concerning how policies on this field ought to look. The climate problem's character not only depends on the actors participating in the debate, but on new technological discoveries and the character of the institution for available scientific research. The climate field is a highly complex field where it is impossible to predicate what kind of solutions world society will reach in years and decades to come. My thesis adds to this field by paying attention to the crucial role of discourse. The purpose has been to supplement the more actor- and interest-based accounts available and provide another lens through which we can broaden our understanding of the processes at work and perhaps make them more amenable to change.

4.3 How are governance relations changing in climate politics?

Section 1.1 states an understanding of governance in this thesis broadly as the "totality of steering mechanisms employed, regardless of the seat of responsibility" (cf. Lafferty, 2004, p. 7). Eckerberg and Joas (2004, p. 406) argue that governance is a highly contested concept, where scholars only seem to agree on one common aspect: it entails a change from traditional ways of management or government to a more modern way of management or government. Political science has focused on how these new modern ways of management are changing the role of the nation state. Eckerberg and Joas (2004) account for how the multilevel governance system has been through both a vertical and horizontal shift. *Vertically*, we have seen a movement of political power upwards to trans-national levels of government while sub-national levels of government are gaining more power. *Horizontally*, we have seen a shift of responsibilities from governmental actors towards non-governmental actors. This shift can be noticed at all societal levels (Eckerberg and Joas, 2004. p. 407). This thesis addresses matters concerning both the vertical and horizontal shift.

4.3.1 The vertical dimension

The '*Multilevel*' article accounts first and foremost for the vertical dimensions and places local climate protection in a multilevel governance chain. We highlight that in this structure of governance local actors can play the role as a 'structure' for the

implementation of national or international climate objectives as well as that of a policy 'actor' taking independent policy initiatives, including sending political signals to the national and international level. In the '*Multilevel*' article, we emphasise the relationships between the national and the local levels of governance in Norway.[12] The direct cause for municipalities starting with climate planning in Norway was the Ministry of Environment (MoE) 2000 grant of NOK 7 million[13] to stimulate local climate planning in Norwegian municipalities and counties. The experiences from these planning processes show that apart from a few front-runner municipalities, climate change is rarely on the forefront of the local political agenda. In the *'Multilevel'* article we account for a general decline in commitment and interest in climate issues among the municipalities. This trend engenders more profound questions about the relationship between the national and local level in environmental politics.

Through a number of publications over recent years, Western Norway Research Institute and ProSus have accounted for the national-local relationship in environmental politics (Aall et al., 2001; Aall et al., 2002; Lafferty et al., 2002; Lafferty et al., forthcoming). One of the general findings is that national authorities have used the municipalities as a 'laboratory for experiments' in this field. The state funded project for local climate protection in Norway follows a tradition within environmental policy and planning: initiating *pilot* projects. Through the 1990s until the present numerous pilot projects in a number of municipalities have been initiated to make the municipalities take responsibility for global environmental issues. After the pilot projects end however, municipality activity and initiatives drop and go back to concentrate more on locally oriented environmental problems like waste treatment, noise, and air pollution (Aall et al., 2002). The Norwegian experience with local climate planning gives food for thought as to how communication lines and responsibilities between local and national levels should be ordered. First, even though the local level is increasingly recognised as a partner to national authorities in environmental politics, actors at the local level experience hindrances due to national

[12] It should be emphasised that the Norwegian institutional structure is different from federal states. Norway is a unitary state where conflicts between national, regional and local levels of governance are part of the 'political game'. Norwegian municipalities also have a relatively high tax rate compared to other countries. There is also more of a culture for strong public steering (not least through the land-use plan) than in many other countries.
[13] Approximately 850,000 €

inaction. This is due to the failure of coordinating conflicting interests and the integration of climate issues in sectors such as transport, communication, and energy at the national level, and also because local actors do not hold the policy measures required to create changes in policy (see Aall, 2000; Aall et al., 2002). It is also unclear what the national authorities want the municipal level to do with global issues. Norwegian authorities, through White Papers and guidelines, clearly state that the municipalities have a role to play with respect to global environmental problems. After the projects and the money that has facilitated local action on these matters ends however (for instance in Local Agenda 21 and the project with local climate planning), the municipalities are left uncertain of what they should do next.

The '*CCPC*' article accounts for a somewhat different story. The article describes how a trans-national municipality network acted as a policy actor in climate politics by initiating a climate campaign independent of nation states, trying to organize a co-operative effort among cities and playing a role in the international climate arena. Before and after the Kyoto meeting in 1997, CCPC gave their input and recommendation to the parties in the Climate Convention. CCPC follows a framework that parallels the Conference of the Parties (COP), and representatives from the CCPC attended the meetings (Lindseth, 2003). Many regard the Johannesburg meeting in 2002 as the point when the local level of governance was finally and fully recognised as a partner in a coordinated and multilevel approach on sustainable development, much thanks to the work of the International Council of Local Environmental Initiatives (ICLEI) and CCPC.[14]

Even though I question the success of the CCPC in terms of contributing to reducing global warming, this network accounts for new ways of governance in climate politics. Not only does it show how local actors can initiate actions themselves in the absence of nation state politics, it is also creating a new sphere of authority within which climate governance takes place (Bulkeley, 2005, p. 894). Bulkeley (2005, p. 894) argues that this network can be seen as part of a "polycentric system of multilevel or multi-scalar governance". The CCPC does not operate across existing scales, but destabilises the old notion of how governance is played out in a hierarchy,

[14] CCPC has its own staff and its own campaign organisation. However, CCPC grew out of ICLEI and is a campaign under ICLEI's organisational umbrella.

since it is not defined in terms of a particular territory. Whereas the CCPC was initially coordinated by staff at ICLEI's international headquarters in Toronto, the CCPC programme is more and more decentralized as ICLEI establishes national and regional campaigns. Today, local and regional campaigns have developed close partnerships with a number of national governments (Bulkeley and Betsill, 2003, p. 51). In line with the experience from the '*Multilevel*' article, this also indicates that cities are dependent on help from higher level of governance in order to succeed. Through its policy dialogue with the Conferences of the Parties (COP) under the Climate protocol, the CCPC has emphasised that cities are doing fine, but need help. Legally binding national commitments to reduce greenhouse gas emissions, if agreed-upon targets and timetables are ambitious, would significantly enhance and amplify local initiatives. On the other hand, weak national commitments risk undermining local government initiatives (Lindseth, 2003).

'*Stavanger*' and '*Kristiansand*' account for different ways that national politics is inflicted on local politics. In '*Stavanger*' I show how the realisation of the *Rogass* project became critically dependent on state power, when in July 2003 the State Pollution Control Agency (SPCA) decided that *Lyse's* plans for the pipeline had to be evaluated according to the National Pollution Control Act. In late November 2003 the SPCA approved all aspects of *Lyse's* application and the decision effectively states that climate commitments must be seen in relation to other national goals and values. As such, local actors aiming to keep climate commitments did not receive any help from a crucial national actor.

In '*Kristiansand*', we portray how the national authorities became an important factor in changing policy discourses through its reward grant to stimulate public transport and delimit car use. A precondition for this allocation is that the cities have managed or planned to introduce initiatives that reduce car traffic. There has been a discussion on whether one really needs to initiate restrictive measures to release this money. In meetings in the city development committee and the executive committee on the local council in Winter 2005/2006 however, it was confirmed that these measures are important, not only to get money from the Ministry of Transport and Communication (MoTC), but also to provide better conditions and access for the bus. In the application to the MoTC completed in November 2005 it is stated that the

municipality has already initiated a number of restrictive measures and that it sets out to do the following: Remove parking places, put restrictions on parking, work with traffic refurbishing, and preserve certain streets for public transport. It seems evident that this institutional anchoring including national government 'carrots' played a role in structuring the work in Kristiansand.

This thesis is not infused with the idea that 'small is beautiful' and that ecological crises will be best managed through local action. However, experiences from the '*CCPC*' and the '*Multilevel*' articles indicate that unless national commitments are strengthened, it is unlikely that local climate policy will become more than a policy area for the few front-runner municipalities. The strong normative argument here for a better facilitation and support from national authorities is that it is hard to see how nation states will be able to meet their international commitments for addressing climate change without including a strong cooperation with local authorities. Kristiansand is an example of how this could be done where the reward grant from the Ministry of Transport and Communication initiated actions to delimit car use in the city.

4.3.2 The horizontal dimension

With the involvement of other policy actors, the political game is also changing. In the '*CCPC*' article I state that CCPC understood that giving priority to options with clear co-benefits is helpful in persuading groups that would otherwise not be persuaded to adopt innovations. This might seem wise from the perspective of businesses, consumers, and local authorities. By integrating climate change into the broader sustainability debate, the window of opportunity is bigger and more actors can be a part of the process. However, a problem with such a broad approach seen from an environmental perspective is that climate issues can become less prioritised; the sector or organisations responsible for climate change protection action will not be given the principle authority and will therefore lose out to other sector interests. In democracies there is always a discussion about what kind of policy issues should prevail, and in many cases it is legitimate to put aside environmental objectives for more pressing concerns. The widening of the policy agenda, in terms of more non-state actors and governmental sectors participating, makes visible the possible win-win solutions where mutual benefits can be realised. However, it is also clear that in

many cases climate objectives stand in contrast to and compete with other policy issues. Lafferty (2004, p. 203) suggests that non-environmental sectors would be equally monitored with environmental sectors – in the case of curbing CO2 emissions – in its compliance with an overriding norm. The suggestion here is that a priority principle should apply to individual sectors and cumulatively across sectors.

The *'Kristiansand'* article tells a story of how local business increasingly was drawn into the Land-use and Transport project (ATP) in the city. The ATP forum set up new channels of communication and managed to create a partnership with local business. Business and industry were not formally integrated, but the project highlighted a need for better dialogue with business organisations in order to realise projects and plans. This led to the establishment of a 'City forum', where the leader of the business association and the leader of the *Kvadraturen* met together with key persons in the municipality administration. This new City forum is an example of how one kind of new governance structure (ATP) creates a need for better integration and inclusive governance between other actor constellations.

The Kristiansand case shows how policy integration between the environmental sector and representatives and business actors can happen. Information and new knowledge about public transport and shopping combined with a new institutional structure played important roles. A survey on bus-use contributed to a new understanding among business representatives in the city. It seems that a process of reframing is taking place. Key persons in business life increasingly realise that there are solutions good for both shopping and the environment. The changing relations among the businesses can be seen as a discursive reframing in terms of how to view the bus in the city. Where the bus was formerly seen as an enemy and a competitor to the car, it is now seen as an asset in the city centre.

4.4 How can discourse analysis be further developed as an approach for analysing the relationship between scale and multi-level governance in policy analysis?

I argue in the '*Climate adaptation'* article that discourse analysis also needs to answer the 'so what?' question: What does the insight from this study actually mean for

improving our understanding of environmental politics or providing insights on similar cases in different contexts? What is necessary to develop a discursive theory of local environment politics? The specific issue that I aim to bring into the political science literature is the issue of scale. I argue at the end of the '*Stavanger'* article that much more needs to be known about how the emerging multi-scaled politics of climate change policymaking is shaping the conditions for urban environmental management.

Political science research has made little impact on climate policy analysis and policymaking. Where do we go from here? The founder of discourse analysis, Foucault was not interested in determining what is 'good' or 'bad' but to determine the 'main danger'. For Foucault "not everything is bad, but everything is dangerous" (Luke, 1999, p. 27). From this perspective a response to the question of "where do we go from here?", would be to ask what the main dangers are with framing climate change in terms of the global scale. Fairclough (1992, p. 91) states that only discourses that take an active role in reproduction or transforming society are ideologically invested. When a discourse is ideologically effective it has managed to *naturalize* a certain understanding and win acceptance as a common sense. The point for Fairclough is to *denaturalize* such an opinion. This entails showing which interests and perspectives lie behind such a dominating or *hegemonic* understanding. Certain ways of framing climate change emphasise and empower some institutions and individuals whose concerns and competencies they are associated with and simultaneously marginalize others (cf. Keeley and Scoones, 1999, p. 25). In earlier times it was easier to 'pick out the bad guy', but as Hajer (1995) writes, today everybody is 'green'. Discourse analysis informs us to never take any argument as given and emphasises finding the overlooked marginal voices. In this case, it is problematic that everybody is green, while climate emissions still continue to rise. The most critical aspect or 'danger' of the thinking globally discourse is that it is backed by powerful actors from business and the political arena. The scalar category of 'global' has provided corporate groups with a language that can accommodate ecological issues. My studies indicate that scalar framing should be a core concern in mapping out power dimensions in climate politics. For instance, Lutes (1998, p. 171) suggests that we "reconceptualise the 'global' without romanticizing and reifying the 'local'".

In this thesis I rely heavily on Rydin's (2003) way of conceptualising discourses. Rydin suggests that if discourse analysis is to be used as a means in environmental politics and planning, we should pay attention to three specific sources of rationality: scientific, economic, and communicative. These three sources appear to be the main rationalities used to legitimate policy and decisions in this field. Rydin develops three distinctive discourses: a scientific–economic, communicative-economic, and scientific–communicative. Combining the rationalities aims to contribute to the ongoing process by which a stronger justification for environmental and sustainable policy can be built (Rydin, 2003, p. 168). Rydin's perspective has broad implications for the discourse field as an attempt to systematize local discourses on the environment in such a way that they are useful for environmental planning.

In the final discussion of this thesis I relate Rydin's ideas of rationalities to my findings and offer ideas of how to move on from here. Applying Rydin's perspective in such a discussion is legitimised in the ways these rationalities resemble the idea of sustainable development. The core idea of sustainable development is its holistic character: the ways in which it seeks to combine the environmental, the economic, and the social. Rydin (2003, p. 167) explains how these three dimensions are closely related to the rationalities:

> Scientific rationality supports the claims of environmental sustainability; economic rationality relates directly to the economic dimension; and communicative rationality justifies the involvement of a broad range of actors and considerations of a wide range of perspectives, a key link to social sustainability.

Applying this perspective to the three articles discussed above (*'Norwegian Climate Policy', 'Stavanger', and 'CCPC'*), we begin by investigating what role these rationalities play in the dominating discourses in the different cases. It seems evident that there is a dominance of *economic rationality* in the thinking globally (TG) discourse as portrayed in *'Norwegian Climate Policy'* and *'Stavanger'*. Here the climate issue is constructed in terms of (international) cost-effectiveness, and nature is seen as a resource and an object of consumption: Norwegian petroleum production is an environmentally and climatic sound harvesting of nature's resources. The TG

discourse does not pay particular interest to a *scientific rationality*; i.e., seeing nature as a physical reality which is an object of scientific inquiry. The limitations – envisaged and revealed by scientific knowledge – of an uninterrupted continuation of economic processes is not discussed in the TG discourse. To the degree that scientific rationality is included in this discourse, it is found among the actors of the petroleum industry that aim to further develop the methods and means of petroleum production to make it cleaner and more acceptable from an environmental perspective (and thus also more internationally competitive). *Communicative rationality* emphasises how nature is socially constructed in the interface between the physical and the social, and highlights the importance of a wide range of stakeholder involvement in the decision making process. The critique of economic rationality from the perspective of communicative rationality is inadequate stakeholder involvement and the rejection of lay knowledge in the process. Arguably, the TG discourse is a technical discourse relying on a consequential ethic (see *'Norwegian Climate Policy'*), and dependent on a continuous 'knowledge brokerage' to make it comprehensible. Whereas a discourse of national or local responsibility relies on an understanding that there is too much GHG in the atmosphere (a point that was 'brokered' a long time ago), the TG involves complex macro-economic reasoning. Thus, a communicative rationality has not played a dominant role in the TG discourse.

In the *'CCPC'* article I show that the frame into which CCPC has put climate change has a stronger influence on *scientific rationality*. Scientific evidence of human induced global warming and the threats this produces for humanity are themes repeated in CCPC documents. Additionally, a scientific methodology is core in the approach and the tools that CCPC recommends for its member cities. Once inducted, the local government should complete five performance milestones. The milestones are a methodology helping local governments understand how municipal decisions affect energy use, and how reductions in use can mitigate global climate change while improving the quality of life. CCPC has also designed GHG emissions software for municipalities, which streamlines emissions analysis. The frame also includes a significant focus on *economic rationality* however, through how CCPC is portraying the benefits cities enjoy in working with climate protection. When the CCPC enters the stage of implementation it is this economic rationality that is increasingly stressed. Scientific methodology is still the primary tool, but as the article shows, the CCPC is

now diminishing the importance of scientific rationality (of an unbalanced world that requires immediate action). This way of framing climate change as a technical and economic issue mirrors a general trend in climate politics as portrayed by Weingart et al., (2000). These authors argue that initially, a basic understanding of the underlying science and cause and effect of climate change is established, and is then translated into responsibilities of different actors and corresponding policy options. In later phases, the climate field becomes more technical and 'removed' from the original problem formulation. This development can be seen as a lack of communicative rationality in climate politics. The climate issue no longer belongs to the people, and the concerns of the people are not influencing the ways in which the issue is treated.

The main discursive argument is that the scalar discourses analysed in this thesis do not mesh and create a balance between the different rationalities and thus fail to create sustainable development (cf. Rydin, 2003). In the quest for sustainable development, the discourse approach informs us that different rationalities are more than ideology and interests. Rationalities entail that knowledge and ideas have an independent force since they are built on arguments. These arguments can be more or less true, but as long as we believe them, they have their own force. In the thinking globally discourse, economic rationality is a strong and growing presupposition within the policy process as a whole (see also Dryzek, 1997; Hajer, 1995; Flyvbjerg, 1998). Any actor willing to create a better balance between economic, scientific, and communicative rationality, must realise that economic rationality is an important presupposition in local and national politics. Environmental actors are forced to rethink how they can make use of this rationality to the benefit of the environment. Local actors therefore need to redefine or reframe globally oriented policy discourses by for instance, a scientific-economic discourse. Such a discourse would seek to incorporate the knowledge generated by environmental science into the prevailing economic models (see '*Climate adaptation'*). Rydin (2003, p. 170) argues that the two rationalities can easily complement each other since they both use the rhetoric of the expert and can speak with the expert voice. Such a discourse could be used to identify the potential for finding solutions both technologically feasible and economically viable in real-world situations.

Another key point from a discourse perspective is that the time for agitated environmental battle without compromises is over. To the degree that one only makes use of a scientific rationality that emphasises knowledge of environmental degradation and effects of climate impacts, the environmental issue will also lose out in the future. Illustrative here is the article "The Death of Environmentalism, Global Warming politics in a post-environmental world" by Michael Shellenberger and Ted Nordhaus. These authors argue that the green activists have reduced themselves to a small sectoral interest group by reducing all environmental questions to a limited issue that only can be solved through technical regulations (Shellenberger and Nordhaus, 2004). The article has clear resonance for the Norwegian condition (see Kaarbø, 2005). The environmental movement is in the process of being placed on the sideline due to the tough Kyoto demands and the failure to provide a realistic answer to how an increasing need for energy and the Kyoto- requirements are to be met without a market-oriented strategy. By insisting on promoting resistance to natural gas based power plants, the environmental movement risks losing to an alliance of business, labour unions, and strong political actors (Kaarbø, 2005).

Today's environmental fight, globally, nationally, and locally, demands a better understanding of the need to combine different rationalities and create alliances with different actors that are carriers of different rationalities. Rydin (2003) informs us that the potential for a renewed sustainability discourse lies here: These discourses have the potential of facilitating action through the creation of new actor constellations. Through accentuating different rationalities, designing its message in such a manner that actors from businesses, organisations or communities are given an understanding and a language through which they can comprehend the issue at stake, more actors can be mobilized under the sustainable development banner. The challenge for environmental planners and environmentally concerned citizens is to make an analysis of its constituency and find out how knowledge about rationalities and discourses can be used to create a new engagement for sustainable development.

Bringing different rationalities into the debate affords the promise that the public debate can be more open. It is only through democratic institutions that conflicts relating to climate change and other interests can be solved. Habermas (1996) informs us that when the idea is consensus, private and special interests will be diminished in

the public arena as it will not be legitimate to argue for political solutions based on pure self-interests in this space. Paramount for sustainable development is to allow different interests to meet each other in an open debate on sustainability. In this regard it is problematic that there is virtually no current debate about our petroleum industry seen from a climate perspective. As Erling Kjekstad, commentator in the newspaper *Nationen* stated 23 July 2005,

> [It…] should be possible to speak loudly about politically decided limits for petroleum extraction. Once a production limit was actually discussed in Norway [...] in consideration of pressure on the economy, but also due to environmental concerns. The question about the speed of oil extraction, possibly the most important question in Norway, has become de-politicized.

In light of the facts that the Norwegian parliament stated in 1989 that we should stabilize our CO2 emissions, we have ratified the Kyoto protocol, and our emissions continue to grow, a debate about the opening of new oil fields in the North of Norway[15] should also be assessed from a climate perspective. In this case an open debate where different rationalities are upheld may result in a discussion about what has gone wrong in Norwegian climate politics, and a search for solution could commence, where all sectors and actors – including the petroleum industry - would have to address the problem that climate emissions are continuously growing.

[15] Cf. The ongoing debate on the "*Forvaltningsplan for Nord- Områdene*"

5. Conclusion

This thesis concerns the politics of climate change as understood through a discourse perspective. Central to this perspective's understanding of the environment is that the lack of urgency about the problem cannot be attributed to the nature of the climate problem and human beings alone. Environmental problems are not ontologically fixed, but are subject to discursive struggles. I have highlighted that the way climate change is defined and the meaning attached to this problem decides available solutions. In line with Hajer and Versteeg (2005, p. 181) I see the strength of discursive analysis as the "ability to trace the discursive power struggles underlying environmental politics". Rather than striving for analytical clarity or discussing nuances or differences between discourse and other related concepts like 'frames', 'storylines' or 'ideas', I employ the discourse concept in a pragmatic way, aiming to advance insights about the processes under study. I have sought to understand how particular definitions and interpretation of climate change catch on and what the consequences of these particular framings are.

My findings are first and foremost valid for the Norwegian context. However, I have also accounted for different aspects of the climate issue that have broader and more general implications. Most importantly, the discourse perspective and the empirical cases have contributed to new insights through the way they interact: I have shed light on specific climate controversies and have contributed to a more nuanced understanding of the discourse perspective. I would argue that this thesis makes at least two important contributions to the field of climate politics.

First, I will argue that viewing climate change controversies in terms of 'scales' is an important asset to policy literature in this field. I adopt an understanding of scale as a fluid and procedural concept that is socially constructed. In climate politics there is no perfect fit between the ecological dimensions of climate change and the institutional dimensions of the problem. My studies show how climate change as a political problem belongs to the local, regional, national, or global scales. I argue that we misunderstand politics if we make clear distinctions between local or global politics.

The core challenge for politics in light of this perspective, becomes one of assessing whether or not dominant understandings of climate change as a political problem fit with the institutional apparatus set up to handle the problem. In this setting, my thesis concludes that local and national actors have up-scaled the climate issue. In Norway the climate issue has been institutionally placed as a responsibility for both national and local levels of governance; i.e. both Norwegian national and local authorities have committed to work on climate protection. My thesis however, shows that these actors in their work and discussions on climate change bring forward a discourse in which the climate issue is a global problem requiring global solutions.

Second, and related to the first point, this way of viewing climate change as a global issue in a national or local context has consequences for the policy solutions that can be sought. Local and national actors aiming to work for climate change are being met with the argument that projects and plans must be evaluated according to emission consequences at the global scale. This thesis argues that it is not that the climate issue should be solved at the local level of governance or within the boundaries of the nation states. – This work opens up a broader discussion about climate change as a concerted multilevel operation. In this light the thinking globally discourse is a break with the idea of differentiated responsibilities, where communities at the local and national level have a democratic responsibility to deal with their own emissions. We argue in the '*Multilevel*' article that it seems today that unless national commitments are strengthened, it is unlikely that local climate policy will become more than a policy area for the few front-runner municipalities. The idea of thinking globally might work to distract attention from how actors at the different levels of governance can make a contribution to climate governance.

Building on these points, this thesis also provides a normative theoretical answer to the question of how we can move forward. Through relying on a perspective by Yvonne Rydin (2003) I contribute to a better understanding of how discourses can be used as a tool in climate change policy making. Rydin contributes to the ongoing process by which a stronger justification for environmental and sustainable policy can be built; she does this by bringing attention to three dominating rationalities in environmental policymaking: scientific, economic, and communicative. Based on Rydin's perspective I argue that the scalar discourses analysed here do not mesh and

create a balance between these different rationalities. Today's environmental challenges, globally, nationally, and locally, demand a better understanding of the need to combine different rationalities and create alliances with different actors.

Discourse analysis is underestimated as a tool in environmental policy and planning. The strength of the perspective in policy analysis has so far been its ability to reveal the power relations that lie in language use and to account for how politics turns out the way it does. However, an important next step for discourse analysts should be to find productive ways to *use* discourses. This thesis has brought forward a perspective by Rydin that is constructivist without being ideographic or positivist. Such a perspective suggests ways that discourses can be used as tool for a better realisation of policy goals. Further research should be set into discussing whether specific rationalities, discourses, and knowledge systems from one case can be transferred to other contexts, situations, and cases without compromising the strength and the fruitfulness of the discourse approach. The promise that lies in trying to systematise how different rationalities and discourses frame policy processes, is a discursive theory of environmental politics.

6. Literature

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Discourses in Norwegian Climate Policy: National Action or Thinking Globally?

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Norway is often recognised as a pioneer country in environmental politics. Norwegian climate policy has changed *considerably* during the 1990s. It has evolved from a situation in 1989 where there was a broad consensus round the notion that a national target for stabilisation of CO_2 emissions was the principal instrument for climate change abatement, to a situation at the turn of the century where Norway emerged as one of the most committed supporters of flexible mechanisms, the so-called 'Kyoto mechanisms'. We identify two main discourses in the Norwegian politics of climate change, and label them 'national action' and 'thinking globally'. This paper gives insight into the core elements of these two discourses and how they act as basic knowledge systems when actors put forward standpoints on the climate change issue.

In 1989, Norway became the first country in the world to set a stabilisation target for CO_2 emissions. The aim was to stabilise emissions at the 1989 level by the year 2000. By 1995, this stabilisation target was officially abandoned, and no new target for reducing domestic CO_2 or greenhouse gas (GHG) emissions was set (MoE, 1995). Throughout the 1990s, Norway's CO_2 emissions continued to rise and the business-as-usual scenario for 2010 estimates an increase of GHG emissions of no less than 22 percent above 1990 levels. The most important reason for this development is an anticipated 90 percent increase in emissions from oil and gas production in the period 1990–2010 (MoE, 2001, p. 52). Norway's current climate policy objective is to comply with its international obligations stemming from the Kyoto protocol (MoE, 2001, p. 28)[1] – to reduce GHG emissions to 1 percent above 1990 levels by the period 2008–2012.

If one views climate policy as a question of national action to reduce emissions, Norway is facing a substantial and, some would say, insurmountable challenge to fulfil its obligations under the Kyoto protocol, especially if it is to be achieved at a reasonable cost. However, if Norway makes extensive use of flexible mechanisms for which the Kyoto protocol makes provision, it could still fulfil its Kyoto obligations in a cost-effective manner, in spite of an increase in national emissions. There is a broad consensus in Norway today that, given the high cost of mitigation in Norway, *some* use will be made of flexible mechanisms, so that emission reductions can be more cost-effective. However, there is disagreement as to the *extent* to which the provisions should be used, and thus how much reduction of GHG emissions should take place through national action.

The extent to which flexible mechanisms may be used towards fulfilling the Kyoto protocol obligations has also been a source of contention in international climate

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negotiations: should the reduction of GHG emissions take place through national action or through the use of internationally more cost-effective flexible mechanisms? The Kyoto protocol states that national action may be supplemented by the use of flexible mechanisms, but no overall quantitative requirements for national action are stipulated. Broadly, the disagreements on this issue have been fronted by the US on the one side, and the EU and, by and large, the G-77 on the other (Westskog, 2002). The former has been seeking a more flexible protocol, and the latter has placed more emphasis on national action. Similar debates have ensued nationally among parties to the Kyoto protocol. In this paper, the international context, and the question of exactly how a party may fulfil its obligations under the protocol, forms a backdrop for a more detailed analysis of Norwegian climate policy debates from 1989 to the present day.

Norway is often recognised as a pioneer in environmental politics, with Gro Harlem Brundtland in a central and dual role as former Norwegian prime minister and chair of the World Commission on Environment and Development (WCED) (Langhelle, 2000). A broad political consensus developed in Norway in the late 1980s and early 1990s, where climate change was viewed as a serious environmental problem where national action for reducting CO_2 emissions was required. Today, however, the focus on national action to reduce GHG emissions has been replaced with an equally committed focus on the so-called Kyoto mechanisms and, more generally, the supposed positive international climate effects of the Norwegian petroleum industry. There is no Norwegian national target for reducing GHG emissions.

Our point of departure is this change in focus from 'national action' to 'thinking globally'. We will draw on *discourse analysis* to deconstruct the story of climate policy in Norway from 1989 to the present day. We do not primarily seek to provide a judgement as to which of these policy discourses should prevail, nor do we engage in any evaluation of their effectiveness. Rather, we propose a perspective which highlights the discursive manoeuvring around political and scientific considerations, which in the space of just 3–4 years in the early 1990s led to a dramatic change in Norwegian climate policy. A discursive perspective makes visible how central actors in the public debate relate to, and seek to influence, the discursive context. Through the actors' active use of the discourses, the discourses are continually reproduced and developed further in the field of climate policy. We aim to show how central actors, inadvertently perhaps, use discourses in their very public struggle to be heard, understood and validated.

As the signatories to the Kyoto protocol now begin to consider how to fulfil their obligations, and whether and to what extent use should be made of the flexible mechanisms, the Norwegian case takes on special relevance. This is because Norway was one of the first countries where these issues were debated, and Norway has been alone in Europe in its efforts to secure an international regime allowing for virtually unlimited use of the Kyoto mechanisms. The Norwegian case will therefore shed light on an issue area which is likely to become a 'hot potato' among the European Kyoto signatories in the years leading up to 2008–2012.

Discourse Analysis as an Applied Methodology

This paper is not by any means unique in its empirical focus. Several studies have discussed developments in Norwegian climate policy in the 1990s, some with a broader scope than what follows below. Nilsen (2001) is a historical work, while authors such as Reitan (1998), Bolstad (1993) and Sydnes (1996), to a greater or lesser extent, employ an interest-based perspective. The analysis below differs in that it does not begin with interests as such, but rather ideas and concepts manifested in discourses. This focus is necessary if we are to unveil the important and independent role discourses played in the development of Norwegian climate policy throughout the 1990s.

We will draw on *discourse analysis* to show how Norwegian climate policy has developed from a situation where Norway concentrated on unilateral Norwegian targets and measures, to a situation where climate change has come to be understood, first and foremost, as an *international* problem where national action is less significant. Based on Foucault (1972), discourses will be viewed as broader sets of linguistic practices embedded in networks of social relations and tied to narratives about the construction of the world. In particular, we have founded our understanding on pioneer work done on the social constructions of environmental problems (Hajer, 1995; Litfin, 1994; Dryzek, 1997). Hajer defines discourse as 'a specific ensemble of ideas, concepts, and categorizations that is produced, reproduced, and transformed in a particular set of practices and through which meaning is given to physical and social realities' (Hajer, 1995, p. 44).

A discursive approach stresses framework of meaning. Discourses define the range of policy options and operate as resources which empower certain actors and exclude others. They also serve as sites of resistance, fomenting the emergence of counter discourses. Discourses imply prohibitions, since they make it difficult to raise certain questions or argue certain cases; only certain people are authorised to participate in a discourse (Hajer, 1995, p. 49). Policies are here viewed as products of discursive struggles, rather than merely as products of institutional factors (Allison, 1971) or actors' interests (see Sabatier, 1999, for a thorough overview of different actor-driven theories of the policy process). However, without the agents promoting them, struggling over them or identifying with them, discourses would not exist (Litfin, 1994). Institutions and individuals can thus reproduce, maintain and 'carry' discourses, highlighting that discourses are not text and speech 'floating around', but have a material and institutional anchoring (Neumann, 2001, p. 92). Actors act within the framework of discourses, which exist independently of the particular intentions and motives of these actors.[2]

In the politics of climate change, the establishment of key reference points in the debate – contextual factors such as certain concepts, terms and phrases – play a crucial role in terms of strengthening the arguments associated with these contextual factors, and correspondingly weakening the arguments that do not make use of the same contextual factors. This is the *power of discourses* – to determine the linguistic frame of reference within which the debate takes place. Following Hajer (1995), our discussion is primarily focused on the continuous discursive struggle

between various groups and political coalitions, where politicians, scientists, activists and the media participate in the debate on climate policy. These can be divided into different groups that uphold or develop new ways of approaching the problem; in other words, they are part of various discourses. The actors do not necessarily know each other, or may not even have met, but they place themselves around certain discourses which they employ when they engage in the discussions about climate policy.

The power behind discourses, behind the ability to determine the frame of reference and the key terms to which every other participant in the debate must refer, is perhaps underestimated, at least in the context of Norwegian climate policy, and it is our aim here to draw attention to this factor in the policy-making process.

Climate Policy and Discursive Struggles

In our studies of Norwegian politics of climate change, we have identified two principal climate discourses (Hovden and Lindseth, 2002a): the *national action* (NA) discourse and the *thinking globally* (TG) discourse. The NA discourse emphasises a national climate policy based on reductions in domestic GHG emissions in order to fulfil an international obligation and to demonstrate willingness to be an environmental pioneer. It has its origin in the aftermath of the Brundtland report (WCED, 1987) and its credibility comes from scientific evidence of global warming. It focuses primarily on setting a national and, if necessary, unilateral target for reducing GHG emissions. In Norway in the late 1980s, the key sector identified for reductions in emissions was the transport sector.[3] This would demonstrate how Norway led the way as an environmental pioneer, and how Norway took seriously its moral obligation to act domestically to 'save the planet'. In the late 1980s, this idea was shared among all the different parties in parliament (except the right-wing Progress Party). The stabilisation target was also applauded by the environmental movement. The NA discourse views the argument about international cost-effectiveness with scepticism and argues that, in any case, Norway will have to demonstrate substantial national action first (Naturvernforbundet, 1992; Willoch, 1992).

The TG discourse shares with the NA discourse a concern for climate change, but it emphasises the need to think globally and to help secure the internationally most cost-effective reductions in GHG emissions. A strong focus on the need for reductions to be internationally cost-effective will limit the need for domestic reductions in Norway. The principal argument is that the climate issue has to be viewed in an international context: rather than prioritising (unilateral) reductions in Norwegian emissions, one should make sure that total global emissions are as low as possible, and reduced at the lowest possible price. At the national level, business leaders and, later, politicians argued that Norway could contribute to reduced emissions globally by exporting oil and gas to replace coal as a fossil fuel abroad. Climate policy initiatives would in this way *not* be in conflict with continued Norwegian oil and gas production.

These are the two main climate policy discourses of the 1990s. It is important to stress that the two discourses are not mutually exclusive, and that they share an overall concern with climate change and the view that action is needed. Further-

more, both discourses actually use the global dimension as a central concept, but in very different ways: the NA discourse places emphasis on Norway as a responsible actor in the global arena, fulfilling its international obligations by reducing its GHG emissions; whereas the TG discourse refers to the global dimension in its emphasis on reducing global GHG emissions through a system that is internationally cost-effective. Thus, both discourses seek to appropriate 'the global' or the 'planetary' – terms which have long had a central place in progressive environmental politics and philosophy.

Below, we will follow a discourse analysis of two central and interconnected climate policy controversies in the 1990s. The aim is to show how the policy change that came about in the mid-1990s was made possible by a gradual discursive shift from the NA discourse to the TG discourse. Only through the latter could Norway maintain both an expansive petroleum industry *and* international credibility in environmental matters. The purpose of this paper, however, is not merely to describe two sets of discourses. While we believe this to be important for a comprehensive understanding of Norwegian climate policy, the crucial issue is how these discourses operate in the public domain.

We have chosen to focus on two debates: gas-based power stations and Norway's fulfilment of the Kyoto protocol. These provide good illustrations of how the two discourses are employed in national debates relating to climate policy. By far the most important of these has been the debate on gas-based power stations. It stems from the early 1990s and has had very high stakes, ultimately causing a government resignation in 2000. It is hard to overestimate the importance of this debate for the broader Norwegian debates on climate issue. We will therefore place more emphasis on this issue than the follow-up of the Kyoto protocol.

Gas-Based Power and Climate Policy

In 1990, a debate ensued in Norway concerning the development of the Heidrun oil and gas field, which included an on-shore, gas-based power station. Until this point, questions regarding the opening of new oil and gas fields had been viewed as questions that were relatively uncontroversial and technical in character.[4] However, with the Heidrun debate, there appears to have been a 'politisation' and 'climitisation' of a, until then, relatively uncontroversial policy field.

Thorbjørn Berntsen, the Labour minister of the environment at the time, stated that he was against the building of a gas-based power station because 'with a 5 percent increase in [CO_2] emissions [it will] not ... be possible to reach the national CO_2 target' (cited in Hansen, 1991, p. 21, our trans.). In the debate which followed, the opposition to the gas-based power station prevailed, and no gas-based power station was built in connection with the Heidrun oil field (Bolstad, 1993, p. 51; Nilsen, 2001, p. 154).

The debate on the Heidrun project was an early indication of what was to come in Norwegian climate policy over the next decade. Those who opposed the power station retained, like Berntsen, a national reference with the national CO_2 stabilisation target as their main cause for concern. Those in favour presented a new dimension to the climate policy debate in Norway, and drew on the TG discourse,

with a clear tendency to downplay national objectives of emissions reduction and emphasise international aspects (Bjørnæs, 1996). Local politicians argued that gas-powered aluminium production in Norway was more environmentally friendly than German gas-based aluminium production, and extremely costly reductions in Norwegian emissions were unnecessary when the same reductions could be secured abroad at a lower price (Nilsen, 2001, p. 154).

Although the debate on the Heidrun project was not just about national and international environmental issues (employment considerations were also important), one could still see the two discourses engaged in 'battle'. We thus see the contours of later debates – one discourse defends the national action line, the other refers to the international context. Furthermore, Berntsen, a Labour minister of the environment, as well as his deputy, the state secretary[5] Jens Stoltenberg, opposed the gas-based power station *on the grounds that it would compromise the 1989 stabilisation target*, placing their argument firmly within the NA discourse. This is of crucial importance, as we shall see, for later debates on climate policy.

From Heidrun onwards, it was clear that those involved with oil and gas production in Norway would have to consider Norway's responsibilities with respect to climate policy. Ignoring Norway's international obligations was clearly not an option; oil and gas extraction would have to be in harmony with an active and high-profile Norwegian climate policy. Squaring this circle became a more complex exercise in the years that followed.

By 1996, Berntsen and Stoltenberg (now minister of energy and industry) had become two of the most active advocates of gas-based power stations in Norway, and thus held positions diametrically opposed to those they held in 1990 (Nilsen, 2001, p. 198). This was a case of two central, national politicians (Berntsen being the deputy leader and the 'grand old man' of the Labour Party, and Stoltenberg later becoming prime minister and leader of the Labour Party), changing their minds on arguably the most important and controversial environmental issue in Norway in the 1990s. Neither had abandoned their environmental concerns, and both were advocates of an active Norwegian policy on climate change. What made gas-based power part of such a policy in 1996, but a threat to such a policy in 1991?

National Book-Keeping as an 'Incantation'

During the early 1990s, representatives of the Norwegian petroleum industry argued that rather than securing reductions in national emissions, Norway could contribute through making environmental investments in Eastern Europe. It was also claimed that the export of Norwegian gas could be recognised as a measure of emissions reduction. On a short-term basis, the best Norway could do, therefore, was to sell natural gas on a commercial basis to the European market (where gas would replace coal) (Aakvaag, 1990). Soon after, central politicians began to shed doubt on the value of the 1989 stabilisation target. In 1991, Finn Kristensen, the Labour minister for petroleum and energy affairs, referred to the international context and argued that oil and gas expropriation could not be limited on environmental grounds (quoted in Nilsen, 2001, p. 160, our trans.):

> We cannot be occupied with national book-keeping to a degree that we do not do our utmost to achieve the best possible international effect. We should export as much gas as possible ... and even our oil is more environmentally friendly than other oil that it could replace on the world market.

As pointed out above, Berntsen initially maintained a commitment to the stabilisation target. Later, however, he shifted towards a much less committed position: 'the stabilisation target should not become an incantation [*besvergelse*] requiring disproportionately greater efforts from Norway than from other nations' (Nilsen, 2001, p. 164, our translation). This statement of May 1992 clearly signalled a less committed attitude from the ministry of the environment towards the stabilisation target. Moreover, and perhaps more importantly, it classifies those who wished to maintain the 1989 target as viewing the target as an 'incantation'. In Norwegian, this word '*besvergelse*' brings associations with an honourable, but not necessarily rational, approach whereby one does something because one has promised or sworn to do so and not necessarily because it is the rational and sensible thing to do.

Gro Harlem Brundtland – dubbed by Norwegian media the 'global minister of the environment' – appeared to perform exactly the same shift from the NA discourse to the TG discourse. By the end of 1990, Brundtland, as prime minister, began to signal the importance of cost-effectiveness. She argued that the traditional approach of insisting on equal national quantified targets was 'antiquated' and that a cost-effective policy internationally could mean that Norwegian emissions may increase if it leads to reductions in emissions elsewhere (*Aftenposten*, 1990). The rhetoric involved here is not unusual – those who disagree are 'old fashioned'. A year later, in the midst of the Heidrun controversy, Brundtland gave a speech to a Labour youth environment conference (Brundtland, 1991). In this excellent example of discursive manoeuvring, Brundtland concentrated fully on the overarching premises for the debate and its linguistic references. Almost the entire speech concerns the importance of cost-effectiveness and the positive international results of increases in Norwegian emissions, and the speech did not contain a single reference to the Heidrun project as such, and only a very brief mention of the 1989 stabilisation target – the official government climate policy at the time.

Finally, two official and much-referenced reports from government ministries were published in 1990 and 1992, coming out very strongly in support of an international orientation to climate policy (MoE, 1991; Government of Norway, 1992, pp. 33, 35). The importance of cost-effectiveness was stressed, and abandonment of the two-and-a-half-year-old 1989 stabilisation target was recommended. This overall shift in orientation meant that gas-based power stations emerged as a real alternative in Norway.

Thinking Globally: Gas-Based Power Stations as an International Abatement Measure

In August 1994, plans were drawn up to build gas-based power stations in Norway. The business idea behind Naturkraft – the company behind the plans – was not just to build gas-based power stations. Auke Lont, director of Naturkraft, argued

that 'We believe that the emission reductions among our neighbours more than cancel out the increase in Norwegian emissions. We cannot view this in such a narrow manner and not see the Nordic region as one' (cited in Nilsen 2001, p. 177, our trans.).

The logic, following Kristensen a few years earlier, was that Norwegian gas-based *electricity* would replace coal-based electricity in the Nordic region (Norway has no fossil fuel power stations on-shore). Naturkraft claimed that the idea of using such power in Norway had 'never struck their minds', and Norwegian gas-based power was therefore only for export that would make coal-based power abroad superfluous (Nilsen, 2001, p. 176).

Stoltenberg, now minister of industry and business, had been opposed, while working in the ministry of the environment in 1991, to the building of gas-based power stations during the Heidrun debate on the grounds that it would compromise the 1989 stabilisation target. However, by 1994 he had clearly begun to question the extent to which gas-based power in Norway was environmentally problematic: 'Environmentally, such a project is very interesting, not least because it will reduce the polluting emissions in our neighbouring countries by replacing coal and oil' (cited in Nilsen, 2001, p. 177, our trans.).

These arguments were given a more formal status when White Paper 44 (1994–1995) stated that Norwegian gas-based power would be an alternative to building coal-based power stations in the Nordic region (MoIE, 1995). It was drawn up by the ministry of industry and energy affairs, by then headed by Stoltenberg, who had been promoted from his position in the ministry of the environment. It presents an environmentally based argument for the continued export of gas and the use of gas for power generation domestically: 'Norwegian gas exports that replace oil and coal in Europe, give considerable GHG emission reductions' (MoIE, 1995, p. 10, our trans.).

By 1995, this was not only the view of the petroleum industry, therefore, but official government policy. At the same time, the government took the controversial decision to abandon the stabilisation target of 1989 (MoE, 1995). By 1995, the NA discourse had received a double whammy – the stabilisation target was abandoned and the government was in favour of building a gas-based power station because this would lead to internationally cost-effective reductions in GHG emissions. The shift away from the NA discourse could hardly be more evident.

In this period, therefore, we see how politicians, with reference to macro-economic research, begin to refer to the international dimension in order to re-frame the climate issue, and thereby justify both the expansion of Norwegian petroleum operations and the building of gas-based power stations. This is the making of a new discourse coalition around climate policy, which is *not* primarily based on shared interests, let alone shared goals, but much more on shared *concepts and terms* (Hajer, 1995). In this discursive shift, certain aspects of the policy problem are included and others are left out. For example, the 1989 stabilisation target is abandoned and thus weakened as a central reference point in the debate (Hovden and Lindseth, 2002a). At the same time, the underlying concern about climate change and the view that Norway should play an important role is unchanged. However, the way

this view is translated into politics changes as the international context becomes a central reference point – taking the place of the national obligation to meet a national stabilisation target. There are, by the mid-1990s, fewer and fewer references in government sources to the idea of 'leading by example' in reducing emissions. Rather than being exceptional by progressive domestic climate policy, the emphasis shifts to Norway as part of the international community. The maintenance of this discourse was central if gas-based power stations were to be built.

Mobilisation around National Action

The TG discourse was by no means sovereign, however. The environmental NGOs mobilised heavily in order to make visible the consequences of expanding petroleum production and increased emissions, in order to put pressure on Norway in the upcoming negotiations in Kyoto (Bang, 2003; Tjernshaugen, 2001). Opposition to gas-based power intensified, and in May 1997 opinion polls showed that as much as 44 percent of the population were opposed to the building of gas-based power stations, with only 28 percent in favour – a doubling of the opposition to gas-based power stations in one year (*Aftenposten*, 1997a). Given the fierce opposition, Thorbjørn Jagland, the Labour prime minister, led the partly state-owned com-pany behind the plans to postpone the building of the power stations (Nilsen, 2001, p. 226). Consistently low prices for electricity also meant that the gas-based power stations would not be commercially viable.[6]

The nature of the mobilisation against gas-based power is important. For example, the 'Climate Alliance' (*Klimaalliansen*, an alliance of organisations opposed to the gas-based power stations) argued with numerous implicit references to the NA discourse, which is used effectively to form the framework within which the discussion takes place. For example, in one publication, the Climate Alliance argues that 'The question is really quite simple: does Norway intend to fulfil its climate objective?' (Klimaalliansen, 1996a). This is thus commonsensically presented as the paramount and all-important question. Once this is established, it is rather difficult to argue for a radical increase in national CO_2 emissions. Furthermore, the national stabilisation target is presented as the most central focus of the debate, and the building of gas-based power stations does not reduce the already considerable challenge presented by the stabilisation target.

A petition (Klimaalliansen, 1996b) against gas-based power stations collected 100,000 signatures in 1996, and the petition is also a very good example of how the NA discourse was mobilised. The headline says, 'Say "No" to gas-based power stations – Save energy!' Already in the headline of the petition, therefore, the *premise* is given: either build gas-based power or save energy. The energy *relativism* typical of the Brundtland Report – the need to produce more with less – is brought to the fore. Furthermore, in the text, it says that 'The gas-based power stations will increase the Norwegian emissions of the greenhouse gas CO_2, equivalent to the emissions from half of all of the country's cars. The gas-based power stations are breaking with our international obligation to stabilise CO_2 emissions' (our translation). The focus is directed at Norway's international obligation to reduce emissions (although the existence of such an obligation at the time is doubtful). The theory that gas-based power would reduce emissions internationally is not

considered credible, and the petition text points to the possibility that emissions from the gas-based power stations will be in *addition* to already existing emissions internationally, rather than replacing more damaging emissions elsewhere. With the petition, the opponents to gas-based power mobilised a significant portion of the Norwegian population around the NA discourse. The important aspect of this particular development is that the ENGOs based their argumentation on the NA discourse. The ENGOs argued that Norway had an obligation to reduce its own emissions and that there was great potential for energy saving and development of new renewable energy sources which could make gas-based power superfluous. The ENGOs worked to make specific linguistic references unavoidable in the debate, linguistic references which framed the debate in such a manner that gas-based power became almost indefensible.

It is worth noting that the NA discourse had, and still has, a significant rhetorical advantage in terms of the complexity of the arguments presented. Karen Litfin has shown the importance of translating science into a language and a context that policy makers can use (Litfin, 1994). For the NA discourse, the 'brokerage' involved is very modest: it uses the simple and powerful logic that there is too much GHG in the atmosphere and so everybody has to reduce their emissions. The TG discourse has to 'broker' the complex macro-economic reasoning behind cost-effectiveness and the Kyoto mechanisms. It is quite clear that the challenge of 'brokerage' here is of a completely different magnitude than that of the NA discourse. To put it simply: contemporary climate policy is so complex that it is becoming increasingly incomprehensible for the wider population who generally spend very little time on the detail of the politics of climate change. In contrast, the NA discourse, with an emphasis on the national target for reducing emissions, is more easily comprehended. This gives the NA discourse a significant advantage in the public sphere, and this may well be a contributing factor to its successful mobilisation.

Discursive Struggles and the Resignation of the Bondevik Government

In 1998, gas-based power again emerged on the national political agenda. New technological solutions opened up the possibility of replacing the conventional power stations with stations that were virtually free of CO_2 emissions. Parliament had to consider whether or not use of this new and rather expensive technology should be a condition for the building of gas-based power stations. However, since this technology was, and still is, some years away, a decision to require this new technology to be used would in effect put an at least temporary stop to any building of gas-based power stations.

A year earlier, the government had changed from a minority Labour government in favour of conventional gas-based power stations, to a minority centre coalition government opposed to the building of conventional gas-based power stations. The new prime minister, Kjell Magne Bondevik of the Christian Democratic Party, made it clear that he was not prepared to accept the building of conventional gas-based power stations as this would lead to unacceptably high CO_2 emissions and make fulfilment of Norwegian commitments to reduce GHG emissions correspondingly

harder. The opposition, led by Stoltenberg – who had been minister of industry and energy affairs until 1997, and who in 1991 had opposed gas-based powers stations – argued that building gas-based power stations in Norway, whatever technology was used, would reduce CO_2 emissions globally, even if national emissions should increase.

The Bondevik government argued that one should take responsibility for national emissions and the idea of buying quotas to compensate for increased national emissions was presented almost as a morally inferior course of action. The Christian Democratic Party clearly used this rhetoric in their discussion of gas-based power, as evident from their web pages (CDP, 2002, our trans.):

> It may be tempting to buy yourself out of the problem; however life is not that easy. If only money could buy us out of environmental problems. Our 'no' to gas-based power is based on a 'yes' to taking responsibility for our polluting emissions.

This is an extraordinary reasoning, ripe with moral undertones of temptation and condemnation (perhaps not surprising coming from a political party with roots in the Lutheran Protestant movement). It implies that those not in agreement are morally inferior, as they believe any problem can be solved by money, when the real solution lies in increasing the feeling of 'responsibility' for our emissions. Our point here is not to determine who is right or wrong, but rather to see how the NA discourse is employed to gain a rhetorical upper hand in a controversial and difficult debate. The emphasis is on the intrinsic problematic nature of emitting GHG into the atmosphere – a deontological orientation to the dilemma. This is in contrast to the TG discourse, which relies on a consequentalistic reasoning focusing on the global consequences of its preferred policy option, rather than its intrinsic qualities (Westskog, 2002, pp. 101–2).[7] Once the Bondevik government secures a deontological framework for the debate, the conclusion can more or less be drawn. If you *don't* accept these premises, the outcome of the debate is less predictable.

The Labour Party, on the other hand, alludes to the naivety of thinking that the demand for electricity will stabilise or that we can solve the climate problem by acting nationally, and that the deciding factor should be the effect on global CO_2 emissions: 'Whatever we do, the demand for power will increase. We can choose between increased imports or increased national production'.[8] Furthermore, Labour spokesperson, Olar Akselsen, argued that: '[In Norway] we use more electricity than we produce in an average year. This deficit will increase in the coming years. I do not know of anyone who will turn out the lights'.[9] Whatever the Brundtland Report may have wished for, in other words, there will be increased demand for energy in Norway.

In March 2000, the Bondevik government resigned after the parliamentary majority voted in favour of building gas-based power stations using currently available technology. Stoltenberg formed a new minority Labour government immediately afterwards.

The debate on gas-based power shows how the two discourses, TG and NA, conflict with respect to the relationship between Norwegian petroleum production

and climate policy. For the NA discourse the petroleum operations represent a significant problem for Norwegian climate policy, whereas for the TG discourse the petroleum operations *are* a form of climate policy. Whether through the direct export of oil and gas, the direct export of gas-based electricity or as domestic use of gas-based electricity, the arguments of the TG discourse essentially revolved around the same line of reasoning: *since Norwegian petroleum products are internationally relatively clean, Norwegian oil and gas production is good climate policy internationally*. Furthermore, the energy-relativistic perspective that was so central in the WCED is supported by the NA discourse, but has seemingly been abandoned – and even ridiculed – by the TG discourse. Central in this discrediting of the energy-relativistic perspective of the Brundtland Commission was the Labour Party, which – ironically – held power in Norway with *Brundtland* as prime minister in the period 1990–1996.

Norway and the Kyoto Protocol

The Kyoto protocol of 1997 marked a fundamental break with the past as far as international environmental agreements go. For the first time, national quantified targets were differentiated so that each signatory had different and more cost-effective obligations. Further, flexible mechanisms – quota trade, clean development mechanisms and joint implementation – were introduced and could be employed as cost-effective 'supplements' to national action for abatement.

While there had been a debate nationally about whether national stabilisation of CO_2 emissions was a sensible way forward, Norway had long worked for an international climate change treaty with exactly these types of characteristics (Hovden and Lindseth, 2002b, pp. 149–51). Even a change of government in October 1997 did not affect the Norwegian position noticeably. This is quite extraordinary, given that the incoming government had been active proponents of the NA discourse and opposed the building of gas-based power stations. The new minister of the environment, Guro Fjellanger, was no less than a former head of the biggest ENGO in Norway (*Naturvernforbundet*, Norwegian Friends of the Earth). However, the Norwegian negotiating mandate in Kyoto was not changed, and Norway still worked for a protocol that was as flexible as possible. Hence, one could argue that as far as the international arena goes, the Norwegian view was firmly placed within the TG discourse, so much so that even an ardent NA minister of the environment could not change this.

The Norwegian delegation came to the negotiations with a clear mandate to secure an as flexible protocol as possible. This was one area where Norway sided with the US against the EU and most of the G-77, and as such Norway placed itself at odds with its Nordic and European neighbours. Norway also distinguished itself by being one of only three developed countries without a national target for reducing GHG emissions (the others being Australia and Iceland). This generated fierce criticism from Fjellanger's former colleagues among the Norwegian ENGOs (*Aftenposten*, 1997b, c).

The conclusion of the protocol was, at first sight, a new devastating blow to the NA discourse and its proponents. With the Kyoto protocol in place, the entire

'game' of climate change politics changed. The very concept of a national target became contested, and international cost-effectiveness gained the importance that Norway had wanted all along.

Before the ink had dried on the Kyoto protocol, Bondevik, who led the centre coalition government that had taken over in October 1997, declared that it would be 'distinctly unwise' to proceed with the gas-based power stations that would increase national emissions of CO_2. He argued that for Norway to build gas-based power stations and at the same time comply with the protocol, one would effectively have to cease all road traffic in the country (*Aftenposten*, 1997d). In other words, as soon as the Kyoto protocol was concluded, a central NA actor in Norway entered the public arena with a powerful defence of national action, effectively trying to gain legitimacy for the NA discourse by 'appropriating' the Kyoto protocol as an intrinsic part of it.

Not surprisingly, Jagland, the leader of the Labour Party, quickly responded with an equally powerful defence of the TG discourse. The Kyoto protocol was exactly the type of protocol Norway would want, he argued, because it opened opportunities for burden sharing, quota trade and joint implementation. With these options available, it would be possible to build gas-based power stations *and* fulfil Norway's international obligations. Bondevik and Jagland each commented on the Kyoto protocol with exclusive reference to 'their' discourse: Bondevik focusing exclusively on the Norwegian emissions target, and Jagland equally preoccupied with burden sharing and quota trade. On could be forgiven for thinking the two politicians spoke of two different protocols (*Aftenposten*, 1997e).

While it is today generally accepted, even by many ENGOs, that Norway will make *some* use of the Kyoto mechanisms, the *extent* to which these mechanisms will be used is a moot point. The Stoltenberg government of 2000–2001 (Labour) argued that a 'reasonable' share of the obligation should be met with domestic action (MoE, 2001). 'Reasonable' could of course almost mean anything; there is even no guarantee that 'reasonable' amounts to any national action at all. However, the government that took over in 2001 (a new centre–right coalition government led by Bondevik) argued that a 'significant' amount of the obligation should be met through national action (MoE, 2002a). With this most recent policy modification, it is clear that the NA discourse still maintains a strong position within the ministry of the environment. Børge Brende, the current minister, has been very clear in arguing that the way in which his policy differs from that of his Labour predecessor is by placing greater emphasis on national action to reduce GHG emissions. In addition, it is quite clear that the rhetoric is NA-inspired, as it again contains references to being an environmental pioneer and to lead by example (Brende, 2002a; MoE, 2002b). This rhetoric was considerably weaker with the preceding government (*Aftenposten*, 2000b).

The interesting point about Norway and the Kyoto protocol is that the protocol is, at first sight, a full vindication of everything that one of the two discourses – the TG discourse – stands for. In addition, large parts of the environmental administration, most political parties, trade unions and, last but not least, the entire business community and petroleum industry are ardent supporters of the TG discourse and the maximum use of the Kyoto mechanisms. Despite all this, the NA discourse

manages to keep its place as a reference point in the debate, and thereby provides a basis for Brende's proposals for more national action to cut GHG emissions.

Conclusion: Discourses and Climate Policy

In Table 1, we have attempted to present the two discourses through a number of key characteristics. This is, necessarily, a very 'blunt' instrument for describing the discourses, but nevertheless gives a more comprehensive overview of the discourses and the key points of conflict between them. The aim of the two discourses is the same – although for the NA discourse the focus is on curbing national emissions, whereas for the TG discourse it is explicitly the international emissions that are targeted. The motive for the NA discourse is to lead by example, invoking moral imperatives to lead the way and do one's share of the work; for the TG discourse, the motive is to achieve international reductions in emissions as cost-effectively as possible. The policy focus is consequently international for the TG discourse, whereas for the NA discourse it is national (albeit as an intrinsic part of honouring international obligations). The actors associated with each discourse can also be identified quite easily, as discussed above: ENGOs, youth political parties, the Socialist Left Party, the Centre Party, the Liberal and Christian Democratic parties, as well as elements of the Labour Party actively employ the NA discourse, whereas the petroleum industry, the business community, trade unions, the Conservatives and the majority of the Labour Party actively employ the TG discourse. In terms of policy instruments, too, each discourse appears distinct: the TG discourse wishes to make extensive use of the Kyoto mechanisms, whereas the NA discourse views this as a mere supplement to substantial national action to curb national GHG emissions. The complexity of the arguments employed by the two discourses is very different, with the TG discourse relying on macro-economic reasoning and the NA discourse employing a much simpler and thus more powerful logic of national reductions in emissions. This means that the TG discourse is dependent on a continuous process of 'knowledge brokerage' to make the discourse comprehensible, whereas the NA discourse simply relies on a popular understanding of GHG emissions as something negative (a point that has been 'brokered' a long time ago). Finally, the NA discourse relies on a deontological ethics emphasising the intrinsically problematic nature of GHG emissions, whereas the TG discourse employs a consequentialistic ethics that focuses on the ultimate effects of Norwegian climate policy on global GHG emissions.

These very characteristics also reflect the way in which the TG discourse is associated with a different phase of climate policy-making than the NA discourse. This is in accordance with Weingart *et al.* (2000), who have argued that, initially, a basic understanding of the underlying science and the cause and effect of climate change is established, which is then translated into responsibilities of different actors and corresponding policy options. In the later phases, the climate field becomes more technical and 'removed' from the original problem formulation. As we have shown, the TG discourse became the dominant one in this late phase in Norway, where business and the petroleum industry have entered the stage emphasising cost-effective solutions and hence more complex policy choices. As a form of ecological modernisation (for example, Dryzek, 1997; Hajer, 1995), the TG discourse

Table 1: Core Elements of the *National Action* and *Thinking Globally* Discourses

	National Action	*Thinking Globally*
Aim	Curb (inter)national emissions	Curb international emissions
Motive	National moral obligation to lead by example	Cost-effective reductions in emissions internationally
Policy focus	National/international	International
Principal actors	ENGOs, Socialist Left Party, Centre and Christian Democratic Parties, youth parties	Business, trade unions, Labour Party, petroleum industry
Main policy instrument	National instruments for reductions in GHG emissions	Kyoto mechanisms
Complexity	Low (e.g. reduced national emissions)	High (e.g. increased national emissions lead to decreased international emissions)
Brokerage	High and completed	Low and unfinished
Ethics	Deontological	Consequential

allows the main institutional arrangements of society, such as the petroleum industry, to remain while addressing the environmental problem at hand. This makes the TG discourse, of course, a rather attractive discourse, and the NA discourse suffered loss after loss in the late 1990s and is seemingly without grounds for existence after the Kyoto protocol.

However, the deontological premises that were more dominant in the early policy phase have the advantage of being able to more easily relate back to the original concern: there is too much GHG in the atmosphere, and Norwegians therefore need to reduce their emissions. Bulkeley (2001) suggests that civic mobilisation around the climate issue will only occur on the basis of a discourse that provides explicit means through which people feel they can collectively respond. While the jury may still be out on that question, the Norwegian case certainly provides food for thought with respect to the link between discourses and civil mobilisation around climate policy. Despite the beating the NA discourse has received in the 1990s, the current Norwegian minister of the environment can still stand up in 2002 and present the climate change issue as a question of responding to the special moral obligation Norway has as a vastly affluent oil nation to lead by example and show the way ahead for others (Brende, 2002b). It may not be, as Brundtland argued back in 1991, simply a matter of achieving the greatest amount of international reductions in GHG emissions per dollar.

The tensions between these two views of the climate issue will remain at the centre of climate politics, not only in Norway, but also internationally. As Westskog (2002, pp. 101–2) has argued, it is quite possible to see the international dispute on

whether to place quantitative limits on the use of flexible mechanisms as a reflection of a conflict between a consequentialist ethics based in the US tradition and a deontological ethics based in the European tradition.

Discourse analysis may be applied in a number of fields. However, it is in many ways especially well suited to the study of the politics of climate change. Fundamentally, climate change is a problem that is clearly depicted as a serious challenge, but it is a problem that cannot be seen or touched, which is global in character (not affecting one's immediate surroundings any time soon) and which will not become a threat for many years to come. Climate *change* cannot be established as an environmental problem by its own force: it needs to be represented through concepts, terms and the communication of scientific knowledge. Climate *policy*, therefore, depends not only on actors and interests, but also on the power of the various discourses that emerge from the representations of the climate issue. Our purpose has been to supplement the more actor- and interest-based accounts already available and to provide another pair of lenses through which the developments in this policy field may be viewed and which can broaden our understanding of the processes at work. We have shown how the NA and TG discourses are two types of representation from which policy options can be derived. We have shown how they conflict, and how the TG discourse came to take over from the NA discourse in the second half of the 1990s as the dominant discourse. Yet the NA discourse has by no means disappeared.

Lastly, as Hajer (1995) argues, a distinction can be made between discourse structuration (the ways in which certain ideas have to be referred to in order to convey legitimacy on actors) and discourse institutionalisation (the way in which particular understandings of policy problems become routinised in policy practices and institutions). In trying to sum up the discourse analysis in this paper, it is clear that both the TG and NA discourses have structured the debate, in that virtually all climate policy debate has implicitly referred to the discourses. As regards the level of institutionalisation, we would argue that the NA discourse was institutionalised with the 1989 national target for the stabilisation of emissions. However, the abandoning of the same target in 1995 and the lack of any new national target for reducing emissions effectively represented a de-institutionalisation of the NA discourse and a corresponding institutionalisation of the TG discourse. Internationally, we would argue that the Kyoto protocol institutionalises both the NA discourse (through national targets) and the TG discourse (through the flexible mechanisms). As the time of writing, it is still unclear how this international reference point will be translated into Norwegian climate policy – in other words, to what extent one will rely on the flexible mechanisms to fulfil the national obligation. It seems evident, however, that the key challenge in Norwegian climate politics will continue to be to combine an expansive petroleum industry with an active and progressive climate policy worthy of a self-proclaimed environmental pioneer. With an expected 90 percent increase in the GHG emissions from the petroleum industry from 1990 to 2010, the TG discourse is the only discourse capable of squaring the circle, and it is likely to appear more and more attractive for policy-makers.

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Notes

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1 The Kyoto protocol requires industrialised countries to reduce their GHG emissions by an average of 5 percent by 2008–2012.

2 Discourse analysis can take many forms. Following Foucault, our main purpose is to uncover the structures of the discourse, the rules for what can be said and for what is 'true' and 'false' (Foucault, 1972; Phillips and Jørgensen, 1999). The search for underlying interests and motives is thus not of central importance, as the discourses as such and their development are the subject of our analysis.

3 A more detailed description of the emergence of the NA discourse can be found in a previous version of this article (Hovden and Lindseth, 2002a).

4 Previous environmental debates in the 1970s and 1980s concerned the danger of oil pollution in an environmentally sensitive area, and not climate change.

5 In the Norwegian political system, a 'state secretary' is the highest political office in a ministry below the cabinet minister.

6 At the time of writing (July 2003), there are still no concrete plans to start the building of gas-based power stations in Norway.

7 Broadly speaking, a deontological ethic emphasises a personal responsibility to abide by moral rules, whilst a consequentialist, or utilitarian ethic, places emphasis on acting to maximise good consequences, even though the acts themselves may be unethical.

8 Olav Akselsen, minister of petroleum and energy affairs, cited in *Aftenposten* (2000a).

9 Olav Akselsen, cited in Norwegian Parliament (2000).

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ARTICLE

The Cities for Climate Protection Campaign (CCPC) and the Framing of Local Climate Policy

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ABSTRACT *The paper contributes to the research on understanding local global warming politics. Strategic documents from The Cities for Climate Protection Campaign (CCPC) are analysed to show how CCPC has constructed climate change protection as a local issue. The paper's premise is that the climate change issue must be translated or framed to enable actors to work with this problem in a local context, and that successful framing requires establishing a coherent method of describing social reality. CCPC emphasises that the different elements of local and global sustainable development agendas can be mutually reinforcing, and that climate change protection can be reconciled with local priorities and initiatives that reduce greenhouse gases (GHG). It is argued that this framing of climate change makes it difficult to see why and how climate change should be an important concern for local communities. The modest reductions of GHG in CCPC cities thus far highlights that finding meaningful new ways of linking the global and the local should be a core concern of CCPC.*

Introduction

The Aim of the Paper

The climate issue is conventionally seen as the province of nation states and international organisations and negotiations. Global agreements, such as Kyoto, and national policies can encourage or require greenhouse gas (GHG) abatements. However, the actions taken to reduce GHGs are never really global. They are, and will remain, mostly local efforts by local institutions, communities and individuals (Agyeman *et al.*, 1998, p. 245).

Data from numerous countries show that local authorities control policy measures that deal with 30–50% of national GHG emissions (Groven & Aall, 2002). Local authorities are generally responsible for local transport and development planning, and for energy management (Coenen & Menkveld, 2002; Bulkeley & Betsill, 2003). Policy space for local climate policy is dependent on

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institutional and political conditions at higher government levels. Many matters such as the liberalisation of energy markets, lack of funding for research on renewable energy and the failure of national governments to prioritise climate politics, can hinder local work to reduce GHGs. Nevertheless, cities take the climate challenge seriously, and there are numerous examples worldwide of community-level climate protection initiatives.

This paper looks at the local climate protection issue and, more specifically, the Cities for Climate Protection Campaign (CCPC). A constructivist approach is used to indicate that the problem's actual severity does not alone determine whether it becomes politically important. To initiate action, the political discourse must also frame the issue in a way that makes the problem solvable. The analysis focuses on how CCPC has constructed the local level as a relevant geographical space for climate protection, and assesses to what degree climate protection can be organised and cities motivated around the frame established by CCPC. The paper aims to bring forward knowledge about core problems and the prospects of translating into local action the climate issue's global dimensions and seriousness.

The Cities for Climate Protection Campaign

The CCPC grew out of the International Council of Local Environmental Initiatives (ICLEI), and its forerunner was ICLEI's Urban CO_2 Reduction Project (1991–93), which brought together American, Canadian and European cities at six working meetings to develop a municipal planning framework for GHG reduction and strategic energy management. The participants at the international summit of municipal leaders (New York, 25–26 January 1993) established CCPC. They invited local authorities to work together and with national governments and international agencies to develop and implement strategies to reduce GHG emissions and to protect the biological environment's ability to remove CO_2 (ICLEI, 1993a, p. 1). The four stated goals of CCPC are: (1) Strengthening local commitments to reduce urban emissions of GHG; (2) Disseminating planning and management tools to facilitate development of cost-effective CO_2 reduction policies; (3) Research and development of best practices, and development of model municipalities that lead by example; (4) Enhancing national and international ties so that municipal-level actions are included in national action plans and international deliberations (ICLEI, 1993b).

To become a CCPC member, an appropriate local authority must adopt a resolution. Once inducted, the local government should complete *five performance milestones* (see ICLEI, 2004). The milestones are a methodology helping local governments to understand how municipal decisions affect energy use, and how reductions in energy use can mitigate global climate change while improving the quality of life. CCPC also designed GHG emissions software for municipalities, which streamlines emissions analysis. Today, CCPC is a transnational municipal network constituted of 579[1] cities, and organised with international and regional campaign offices.

This paper chooses to see CCPC (organisation) as an actor trying to mobilise and persuade cities to work on climate protection. Rather than summarising the work in all member cities, it concentrates on several strategic documents from

CCPC and ICLEI[2] organisations, in which are laid out their positions and perspectives on climate change protection. The paper's reference point is not the tools available to better attack climate problems, but rather an examination of how the climate change protection issue is understood in the first place. In order to understand CCPC's results, developments and focus, it is vital to recognise that the climate change protection issue has a history, and that the issue is already framed. Thus, this paper's empirical material is mainly from CCPC's early phase (1993–97), when the campaign's framework was established. Materials used in sketching out CCPC's framework are: local leaders' declarations at summits (ICLEI, 1993a; 1995a; 1995b; 1997a) where actors from 150–200 municipalities worldwide developed CCPC's position on climate change protection (A. Waldmann, 2003, personal communication); and two key documents from ICLEI's World Secretariat (ICLEI, 1993b; 1993c) that present a municipal action agenda. Based on this framework established in CCPC's early phase, the remainder of the paper uses results from the campaign, from the CCPC organisation and from other researchers' studies of CCPC, and discusses the campaign's profile.

The next section presents the paper's theoretical perspective and assesses how CCPC initially framed climate change. The third section looks at CCPC's results. The following section discusses the problems of implementing climate protection action in relation to CCPC's frame. The final section concludes the paper.

Constructing Climate Change as a Local Issue

Framing Local Climate Policy

A 'frame' is an idea through which political debate unfolds, and political alignment and collective actions take place (Pan & Kosicki, 2001, p. 39). The word 'framing' emphasises that reality always needs to be represented. Framing means that some aspects of a perceived reality are selected and made more salient, so as to promote the definition of a particular problem, causal interpretation, moral evaluation and/or recommended treatment of the issue described (Entman, 1993, p. 52). Using the word 'framing' emphasises that climate change rests on scientific facts, but that science is an encoded form of knowledge requiring translation. Moreover, climate change is a diffuse 'problem of the common', and if the local level is to contribute constructively in climate change work, it is important to clarify the 'in between' substance linking the local and the global (Høyer & Aall, 1995). In this context, framing translates climate change into understandable categories; both providing an explanation for why climate change is important, *and* showing how cities can work with this issue. Therefore, frames matter because they define the boundaries of the discourse of an issue (e.g. climate change) and categorise relevant actors based on an established scheme of social classifications. Framing makes an issue more noticeable, meaningful and memorable to audiences (Entman, 1993). Framing can be seen as a means of community building (Pan & Kosicki, 2001, p. 41).

As do Pan and Kosicki (2001), I see framing as a strategic action in a discursive form, involving political actors making sense of an issue and participating in public deliberation. The key to success for a network such as CCPC is twofold (Latour, 1987): to enrol others in the campaign, but also to control their behaviour in order to make their actions predictable. If local-level action is to matter, more communities must be enrolled, but at the same time it is important that their actions actually contribute to reducing GHG emissions. Framing is thus a continuous task that must be carried out as the campaign develops and as the results of the campaign become evident and are communicated. Despite increasing salience, using a frame does not guarantee that an audience's thinking will be influenced (Entman, 1993). As more cities and actors get involved in CCPC, strategic framing becomes less manageable; it becomes a multifaceted process of public deliberation in which influences travel in different directions. Frames are continually in the process of gaining or losing organising value, being adopted or abandoned accordingly (Reese, 2001, p. 15). As CCPC develops, framing thus involves interpreting political activities and statements to construct the reality.

The discursive approach argues that frames shape action. Successful framing requires establishing clear boundaries separating ideas, perspectives, images—whatever is the frame's core aspect. The next section addresses the frame into which climate change has been set by CCPC.

Motivation for Climate Change Protection

According to CCPC the need for local action has many justifications. Cities are seen as vulnerable to climate change—part of both the problem and the solution. They can also benefit from climate change protection.

The 1993 briefing book *Saving the Climate—Saving the Cities* contains a thorough overview of the GHG problem and the effects of climate change. Scientific evidence and the focus on threats facing humanity are themes repeated in later ICLEI documents. According to CCPC, public acceptance of the causes of the greenhouse effect has reached such a high level that lack of knowledge is no longer a sufficient reason for (political) inaction (ICLEI, 1993c, p. 29). The threats to humanity of climate change are situated in a local context and threaten city dwellers: "Cities and communities are where people live and hence are urgently threatened by climate changes" (ICLEI, 1993c, p. 13). Cities are part of the *problem*. Urban areas are a major source of GHGs. The heating and cooling of urban buildings, consumption of electricity by local industries and businesses and energy-intensive activities producing GHG and other noxious emissions affect urban quality of life (ICLEI, 1993b, p. 1). But cities are also part of the *solution*. Involving the local level is necessary since it is the level closest to the people. The success of climate change action will depend on concerted local support (ICLEI, 1995a; 1995b). Furthermore, CCPC points to the possibilities local governments have because they exercise key power over many activities which create sources and sinks of GHG emissions such as decisions governing urban form; transportation; energy use, production and distribution; waste and waste-water management, and forest protection (ICLEI, 1995a, p. 1). Finally,

cities can also *benefit* from saving the climate. Some benefits are environmental, emphasising the clear links between solving global and local problems. Such links include better air quality and improvements in public health, and reductions in traffic congestion and greater urban liveability. Other benefits are focused on economic issues such as lower costs of municipal operations, and local job creation (ICLEI, 1997a).

The CCPC Frame

Two aspects of the frame into which CCPC has put climate change should be highlighted: First, the problem is established and made relevant through scientific knowledge explaining that we will increasingly notice the effects of climate change. City dwellers are at risk from climate change and therefore should cut emissions. Second, motivation for action is based on the assumption that local and global issues are linked. The briefing book *Saving the Climate—Saving the Cities* clearly suggests, even in its title, that local entities benefit from climate change protection work.

CCPC focuses on local problems, like air quality and related health problems, to generate concern about climate change, because people actually feel in their bodies its local effects. Rather than saying that traffic is mainly a local problem, CCPC says that reducing traffic will solve both local and global problems (see for instance ICLEI, 1993c). A closer examination of CCPC must thus concentrate on determining to what degree the different elements of local and global sustainable development agendas can be mutually reinforcing, and whether climate change protection can be reconciled with local priorities and initiatives that reduce GHG.

The Profile of CCPC

The 1997 Milestone Survey

In 1997 a Milestone Survey was sent to all participants to ascertain which milestones they had completed (see ICLEI, 2004 for an overview of the milestone methodology). This survey's purpose was to provide preliminary data and insights drawn from local government efforts to reduce GHG emissions (ICLEI, 1997b). ICLEI also issued a report with in-depth case studies of the most successful local government initiatives (ICLEI, 1997c). By 30 June 1997, CCPC had surveyed 174 local governments representing 100 million people worldwide. The survey's most important numbers are:

- 65 CCPC participants formally adopted reduction targets and timetables for their achievement.
- 31 CCPC participants completed all five milestones and were well on their way to implementing policies and measures to reduce CO_2 emissions.

By 1997, of CCPC's 174 cities, 53 had established reduction targets, most of which pledged to reduce emissions to 1990 levels (in some cases 1988 levels) by 2010. Urban CO_2 emissions in these 53 cities accounted for about 5% of total

global CO_2 emissions. The survey stated that most CCPC participants appeared to follow through on their political commitments. Furthermore, participants usually set and adopted targets and timetables after thoroughly analysing local energy use and emissions, as well as quantifying the potential for reducing local energy use. Many cities as a first step began immediately to implement measures to build public support and to gain initial experience in energy efficiency retrofits before considering more comprehensive measures (ICLEI, 1997b). The case study report stated that the key to success in cities had been the development of partnerships with state, provincial, and national governments, as well as with private financial institutions, all of which enabled cities to raise significant capital for climate projects. Other successful initiatives included recycling, reuse and reduction of solid waste. The report also stressed the importance of a city owning and operating its own energy utilities (ICLEI, 1997c).

The Milestone Survey portrays this level of concern and interest as a promising start for CCPC's local climate change protection work. It became evident, however, that although cities strive to set ambitious goals, climate change protection planning is difficult and requires broad cooperation between many social sectors. According to CCPC, over the long term, the most effective local initiatives in reducing transportation energy consumption will require more overall planning and the use of physical instruments in order to design communities that are more compact and energy efficient (ICLEI, 1997c). The CCPC report, however, rather than recommending these tougher measures, stressed instead the multiple benefits derived from climate change protection work (ICLEI, 1997b, p. 3).

Local Benefits of Climate Change Protection Work

Since 1997, no comprehensive surveys of CCPC have been conducted. However, today CCPC consists of 579 cities, generating 8% of the world's GHG emissions. CCPC could be seen as a success because the network has managed to extend itself and cities have taken up the idea of climate change protection work. Although it is difficult to get an overall picture of how cities are doing today, there exists data from regional CCP campaigns (see ICLEI, 2000; 2003a; 2003b), and also studies of CCPC by other researchers (Betsill, 2000; 2001; Bulkeley, 2000; 2001; Bulkeley & Betsill, 2003; Slocum, 2004a; 2004b).

After over 10 years in existence, there are in CCPC cities many projects and initiatives portrayed and 'labelled' as climate protection work. Recent studies of CCPC cities in Europe (ICLEI, 2003a) and Australia (ICLEI, 2003b) contain good examples of ongoing initiatives and projects. However, CCPC is premised on the belief that local efforts to mitigate the effects of climate change will have cumulative effects contributing to global efforts to control GHG emissions. In this regard, CCPC has little to show for its work. Even if cities were to reduce emissions, it is clear that many emission reductions reported by CCPC communities were realised by including reductions from policies and programmes that existed prior to CCPC (Betsill, 2001). Europe, the US and Australia show only minor emissions reductions due to CCPC. The Australian campaign claims to be the most successful (ICLEI, 2003b). There are 164 councils in the Australian

CCPC, representing more than 65% of Australia's population. CCPC Australia reported that CO_2 –e abatement increased from 225,000 to 664,000 tonnes in the period 2000–2002 (ICLEI 2003b). However, the abatement total is in stark contrast to the overall national emissions total, which shows Australia emitted 542.6 million tonnes CO_2 –e in 2001, and that from 1990–2001 emissions in most sectors increased significantly (AGO, 2003). The US campaign estimated in 2000 that US CCPC communities reduced their annual GHG emissions by 7.5 million metric tonnes (an average of 100,000 tonnes per city). This is a fraction of the 1,800 million metric tonnes of GHGs emitted by the US each year (EPA, 2001 in Betsill, 2001). The European survey had no overview of emission reductions in individual EU CCPC cities; however, EU estimates for the whole EU region show that emissions rose during 1990–2001 in most member countries (EEA, 2003).

The Australian and European surveys (ICLEI, 2003a; 2003b) confirm the 1997 Milestone Survey results (ICLEI, 1997b; 1997c), that cities' main environmental priorities with regard to tackling climate change are energy efficiency, waste reduction and recycling. Betsill (2001) and Betsill and Bulkeley (2003) point out that stressing co-benefit, such as focusing on energy efficiency, often implies that that cities are merely repackaging existing efforts as 'climate' initiatives, and not going beyond business as usual. Bulkeley (2000), in a closer look at the Australian campaign, points out that attempts to secure support for the programme primarily stress the monetary benefits gained from emissions reductions. Furthermore, she argues that the programme's non-calculable and non-monetary benefits tend to get sidelined in a discourse that stresses the need for quantification and concrete outcomes. Slocum (2004a; 2004b) has studied the US CCPC. She states that CCPC frames the problem as one of win-win approaches to economic development and environmental protection. CCPC is selling climate protection as energy efficiency and constructing the public as energy consumers. The CCPC approach does not address values and structural change.

The research done on CCPC, together with CCPC's own surveys and their interpretations of the results, reinforces the climate change frame prevalent in the 1997 report, i.e. that there is overlap between local and global problems and that this is the basis for local climate change protection action.

Implementation as a Dispersed Discourse

The Added Value of Climate Change Protection Work

Bulkeley and Betsill (2003, p. 173), writing about CCPC, state that "climate change has been added to other rationales for energy conservation, rather than providing a justification for policy action in and of itself". CCPC has localised the *policy* of controlling GHG emissions (which happens to be the primary response to climate change) rather than the *problem* of climate change (Betsill, 2001). Slocum (2004a) emphasises that CCPC discusses climate without reference to climate change or the harm it causes nature, but with reference to local

benefits and the need to appeal to many diverse interests. Slocum states that CCPC promoters are at a loss as to how to convey their message in the cities.

These writers stress the definition of the climate issue and the question of how people can find ways to understand the importance of climate change. Climate change is certainly a local issue because it entails local actors working with local projects to reduce GHG emissions, but at the same time, the motivation for action at the beginning of CCPC had an element of global awareness: CCPC emphasised scientific evidence, risks and moral concerns outside the time perspective and space location of people that were encouraged to take action. This idea of climate change as a moral responsibility and risk issue requiring immediate action was lost as CCPC entered the phase of local implementation. Today one can read in the section about CCPC's background on its web page the following (ICLEI, 2004):

> … Technical tools and information, training workshops, and overall assistance have been designed to link the global issue of climate change with air quality and other local issues such as energy costs, traffic congestion, waste management and community liveability. It is such links—the overlap in the causes of air pollution and global warming pollution and the adverse impact rising local temperatures have on smog formation, for instance—that *primarily motivate* local leaders to participate in a Campaign focused on climate protection. (my italics)

It could be that CCPC takes the moral and ethical aspects for granted; that it believes that these have become accepted truths, which do not need to be articulated. However, Betsill (2001) states that in most US CCPC cities, local politics and programmes to control GHG emissions are motivated by co-benefits rather than by concern about global climate change. Indeed, ICLEI officials often emphasise co-benefits first, and point to climate protection as a secondary consideration (Betsill, 2001).

The Challenge of Extending a Network

Latour (1987, p. 208) shows that the simplest way to spread a statement is to leave a margin for negotiation to each actor involved. It is easier to interest more people in the claim since less control is exercised on them. CCPC could be viewed this way; it is attempting to assure that climate change protection action is understood in its broadest sense, as encompassing many measures, and the means to link them to local issues. Latour (1987, p. 208) states that this approach has a price. Once less control is exercised over a statement or idea (the definition of climate change protection), the original statement is transformed and adapted to local circumstances as one sees fit. Everyone will adapt the statement to his or her own experience and context, resulting in the original idea (of climate change) being modified (cf. Latour, 1987).

As CCPC grows, the task will still be to make many act as one; to establish wider networks while still keeping one's "informants by your side while they are far away" (Latour, 1987, p. 234). The CCPC programme, initially coordinated by

ICLEI's international headquarters staff in Toronto, has become decentralised and very widespread geographically as new members have joined. Today, local and regional campaigns have developed close partnerships with a number of national governments (Bulkeley & Betsill, 2003). Latour (1987, p. 209) states that a network could try to increase its control over its actors by forcing them to adhere more closely to the campaign's original focus (e.g. you should reduce your GHG emissions because otherwise the earth, your country and your city will be severely affected). The danger in this approach is that fewer people will be interested, and that many resources will have to be utilised to persuade cities about the seriousness of climate change. As mentioned earlier, CCPC emphasises the co-benefits that are involved in climate change protection action, rather than emphasising the issue's seriousness, or increasing control over actors within the network (cf. Latour, 1987). CCPC has understood that giving priority to options with clear co-benefits is helpful in persuading groups that would otherwise not be persuaded to adopt innovations. From the perspectives of businesses, consumers and local authorities, this might seem wise. By integrating climate change into the broader sustainability debate, the window of opportunity is bigger and more actors can be a part of the process. However, CCPC's lack of results brings into question whether the co-benefit strategy has sufficient potential to reduce emissions (see section on *Local Benefits of Climate Change Protection Work*).

From Global Awareness to Local Action

The CCPC case illustrates the problems and prospects of organising climate initiatives to represent a global awareness. I argue that at some stage we are no longer talking about climate change policy per se, but about integrating climate concerns in other sectors of local policy, such as traffic, economic development, urban and land-use planning, housing, tax policy, etc. This entails recognising that the environmental sector alone will not be able to secure climate objectives, and that each sector must therefore take on board climate objectives if these are to be achieved (Lafferty & Hovden, 2003). As such, CCPC's focus on co-benefits is a form of policy integration. However, there is a danger that the sector having responsibility for climate change protection action will not be given the principle authority and will therefore lose out to other sector interests. One is bound to question whether CCPC's focus on co-benefits, technical tools and performance-based indicators (the milestones), could manage to achieve their goal of portraying climate change as a serious issue requiring immediate action. My argument is that CCPC has not explicitly shown how climate change is an overarching responsibility rather than just a number of more or less loosely connected projects. CCPC does not argue strongly that prioritising climate change is also about saying 'no' to unsustainable development, and about restricting practices and policies in other sectors of society.

Bulkeley (2001) suggests that a civic subpolitics of climate change will emerge by providing explicit means through which people feel they can collectively respond, and assuring that the responsibilities of other actors and

institutions are acknowledged. The criticism of CCPC opens up a discussion on other ways that climate change protection action could be framed. The risk dimensions were central in the initial CCPC framing and CCPC did try to construct a picture of the vulnerability of city dwellers. However, using risks as a basis for local climate protection action is not easy. No clear link exists between a city's emissions and their impact on climate change. Beck (1999) states that we are living in the age of 'second modernity', and that the consequences of our actions have no limits. We are constantly confronted with opposing perspectives of the nature of risks, and no one, neither the layperson nor the expert, can predict the consequences with any certainty. In the words of Ehrlich and Ehrlich (1996, p. 44): "If the need for change is justified by environmental changes people don't understand and can barely perceive, they will be susceptible to a contrary view that assures them all's well with the world". Studies show that people do not define global climate change as an issue that represents personal risk, mainly because there are weak linkages between cause and effect (Davidson *et al.*, 2002).

This paper has commented on how CCPC has framed climate change. Snow and Benford (1992) argue that empirical credibility is of vital importance to the mobilising potency of a particular frame. In this regard the climate change issue, due to its extreme complexity, might not lend itself to being portrayed in a way that is empirically credible to those who need to be mobilised. This paper contributes to the debate on how to address an environmental problem institutionally, on a scale that corresponds to the geographical dimensions of the problem (Cash & Moser, 2000). In this regard, constructing climate change as a local issue might pose a problem because it creates the impression that climate change matters can be solved locally.

Conclusion

The discursive perspective in this paper has highlighted that CCPC has not managed to build an ideational framework around the issue of climate change through which local actors can collectively respond. CCPC has framed climate change pragmatically; it is about solving problems locally and enjoying local benefits. I have argued that such an understanding of climate change makes it difficult to see why and how climate change should be an important local concern.

It might be that CCPC is failing to use all its potential or that other strategies could bring about more emissions reductions (within the cities' available policy space). Finding new and meaningful ways of linking the global and the local should be a core concern of local climate change protection action. This paper emphasises that frames matter. Successful climate change protection planning will thus require knowledge about the context into which the climate issue has been placed, and how local actors come to understand the various dimensions of climate change. CCPC administrators and local actors involved in CCPC could benefit from learning more about how frames structure action and how different discourses can become resources in planning climate change protection action.

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Notes

[1] As of 18 March 2004.

[2] CCPC has its own staff and its own campaign organisation. However, CCPC grew out of ICLEI and is a campaign under ICLEI's organisational umbrella. Thus there will be made no effort to distinguish between the two.

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Local Level Adaptation to Climate Change: Discursive Strategies in the Norwegian Context

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ABSTRACT *Thus far, climate impacts and adaptation initiatives have not realized the added value of climate adaptation. Adaptation often appears as an afterthought, with an emphasis on technological solutions. Lacking is a consideration of the* process of adaptation*: how adaptations will be implemented, by whom and why. The aim of the paper is to show how climate adaptation can be further developed in Norway through a discourse approach. Three specific discursive strategies – a* scientific–economic, communicative–economic, *and* scientific–communicative discourse *– are presented. The paper portrays how specific institutions operating at the local level in Norway can convey or 'carry' these discourses and thus how actors, placed within these institutions, can use discourses as* resources *when planning for climate adaptation. There is clearly a need for further studies that aim to demonstrate how insight from discourse analysis can be used as a tool for planning. The present paper is a step in this direction.*

KEY WORDS: Adaptation, climate change, discourses, institutions, local level, Norway, planning

Introduction

Climate change adaptation ('climate adaptation') is a relatively new issue in both science and politics. Adaptation aims at moderating the adverse effects of climate change through a wide range of actions that are targeted at vulnerable systems. Concern about climate impacts and adaptation has focused on developing countries, largely because they are recognized as being both the most vulnerable to climate impacts and as having less capacity than the developed world to adapt. Furthermore, the debate on 'who suffers what' often focuses on the differential effects of climate change on nation states, because the impacts of climate change are typically discussed at the global, continental or national levels (Paavola & Adger, 2002, p. 2).

However, the Intergovernmental Panel on Climate Change (IPCC) emphasizes that climate adaptation must be a task for all levels of government (IPCC,

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2001, p. 902): 'Because the vulnerabilities of climate change occur at various scales, successful adaptation will depend on actions taken at a number of levels.' While climate change is a global concern, it is manifested locally through changes in weather patterns. Still, the idea that the *sub-national level* should play an important role in adaptation is an idea only in its infancy. We are in a situation now where the adaptation agenda competes, substitutes or exists alongside the mitigation agenda. Relevant questions concern how broadly we should think about adaptation (e.g. should mitigation also be included in the adaptation agenda?) and how far local responsibility should extend. Although there are examples of regions and municipalities that have started thinking about adapting, there are few concrete examples of climate adaptation initiatives that have been carried out (see IPCC, 2001; Lindseth, 2003; O'Brien *et al.*, 2005 for an overview). Lacking is an inherent understanding that communities are (or will be) faced with *extraordinary* impacts from climate change. It is thus the business of applied social science to analyse climate change adaptation in such a way that the knowledge produced leads to positive change in the form of greater community resilience (Lafferty *et al.*, 2002).

This paper looks at how Norwegian municipalities can plan for climate adaptation.[1] Norway has as yet no comprehensive strategy for climate change adaptation. The aim of this paper is to show how climate adaptation can be further developed in Norway through a *discourse approach.* The paper is based on Rydin (2003) and her institutional discourse approach. Through an application of this approach the paper shows how specific institutions, operating at the local level in Norway, can convey discourses, and thus how actors placed within these institutions can exert *power in discourse.* Different discourses can be used as a resource to strategically reach certain goals in the climate adaptation process. 'Discourses', as used in this paper, are to be understood as broader frameworks of meaning, which shape and enable communication between different actors.

The structure of this paper is as follows: the second section explores what climate adaptation is about. As a background for discussing climate adaptation in Norway, it draws from studies of climate adaptation at the sub-national level in the developed world. It will be argued that there is a need for alternative approaches to climate adaptation. The third section discusses how discourses are important in the planning process and how the concept of institutions fits with the discourse approach. The fourth, fifth and sixth sections discuss how three specific discourses – a *scientific–economic, communicative–economic*, and *scientific–communicative discourse* – can be used strategically in the planning of climate adaptation responses in Norway. The seventh section concludes and brings forward perspectives for future research.

Climate Adaptation

What is Climate Adaptation?

By far the most extensive overview of existing knowledge on adapting to climate change is the IPCC's *Climate Change 2001: Impacts, Adaptation and Vulnerability* (2001). This volume, which forms part of the Third Assessment Report (TAR), has been produced by Working Group II (WGII) of the IPCC, and focuses on the environmental, social and economic consequences of climate change, and on

potential responses in adapting to it. According to the IPCC (2001, p. 881) *adaptation* is:

> . . . adjustment in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts. This term refers to changes in processes, practices, or structures to moderate or offset potential damages or to take advantage of opportunities associated with changes in climate. It involves adjustments to reduce the vulnerability of communities, regions, or activities to climatic change and variability.

Adaptation to rapid anthropogenic climate change may be a new challenge, but individuals, societies and economies have adapted to environmental changes throughout history. Adaptations come in many forms; however, a common classification distinguishes between autonomous and planned adaptation. *Autonomous* adaptations are those that take place – invariably in reactive response to climatic stimuli – without the direct intervention of a public agency. Autonomous adaptations are initiatives by private actors rather than by governments, usually triggered by market or welfare changes due to actual climate change (Leary, 1999, in IPCC, 2001, p. 884). *Planned* adaptations can be either reactive or anticipatory (undertaken before impacts are apparent). Planned adaptations are the result of a deliberate public policy decision, based on awareness that conditions are changed or about to change, and that action is required to minimize losses or to benefit from opportunities (Pittock & Jones, 2000, in IPCC, 2001, p. 884).

Studies of Climate Adaptation

Research on adaptation to climate change has largely focused on hypothetical issues (the impacts resulting from a specific climate change scenario) and on empirical differences in adaptive responses (IPCC, 2001; Paavola & Adger, 2002). It is clear from the IPCC's (2001) report that the first in-depth studies of climate adaptation processes at the sub-national level (in the developed world) have been carried out in North America. North American nations have, in recent years, undertaken intensive region-specific assessments of impacts and vulnerability (Canada Country Study, US National Assessment, regional case studies). In these pioneering projects[2] researchers and various stakeholder groups have come together to explore how to adapt to a changing climate. These actors have relied on climate and hydrological scenarios from national climate assessments, like the Canadian Climate Centre (CCC) and General Circulation Models (GCM) of the atmosphere (Lindseth, 2003). The models are dynamically downscaled to project different scenarios of climate change for regions within North America (see NAS, 2000). These first projects have aimed at assuring confidence and trust in science. It has been assumed that before adaptation takes place actors must work from a common understanding and acceptance of underlying science. Thus, most impact and adaptation projects to date have been based on climate change scenarios that provide a limited range of possible future climates – invariably specified as average annual temperatures and levels of moisture (IPCC, 2001). These scenarios are often concerned with understanding changes in natural and socio-economic systems due to climate change. Some scenario-based projects focus primarily on limited aspects of physical impacts

on natural processes, whereas other projects also incorporate impacts on social and economic systems. Even though the downscaling technique should improve, the vital problem remains that of *uncertainty.* There are substantial uncertainties both in the existing climate scenarios and estimates of future climate-related socio-economic conditions, and these uncertainties cascade forward into the assessments of local and regional impacts. As such Burton *et al.* (2002) argue that it is practically impossible to specify with sufficient precision or in any meaningful way what it is that must be adapted to.

Recently, however, as climate adaptation has become a more prominent issue also in other parts of the world, one is seeing a gradual shift from science-driven (positive) assessments that estimate potential impacts, to policy-driven (normative) assessments that recommend adaptive measures (Burton *et al.*, 2002). This shift is best characterized in terms of a shift from impacts to vulnerability. The policy-driven projects focus more on a society's vulnerability and sensitivity rather than relying on (uncertain) scenarios. They include evaluations of potential impacts on goods and services that are important to society (Füssel, 2002; Burton *et al.*, 2002). Considering vulnerability as the focal point of analysis stresses the importance of underlying causes of vulnerability, and emphasizes the role of economic, social and cultural context. Furthermore, focus is shifted more to bottom-up processes and the need for locally specific information regarding exposure, sensitivity and adaptability (Sygna *et al.*, 2004, p. 5). Still however, adaptation does not take place automatically as assumed in many impact studies. For example, recent European assessments – such as a 2003 study by the European Environment Agency – have assessed sectoral climate change impacts and considered the long-term implications (EEA, 2003). Although this and other recent assessments identify numerous potential adaptation measures, adaptation often appears as an afterthought, with an emphasis on technological solutions. These assessments do not result in strategic and long-term planning for climate adaptation (O'Brien *et al.*, 2005).

The capacity to make adaptations is highly socially differentiated as it depends on a number of social, economic and demographic factors (Sygna *et al.*, 2004, p. 24). There seems to be agreement in the climate adaptation literature that institutional factors are crucial in forcing and determining adaptation. Institutions both affect the social distribution of vulnerability, as well as determine the management of climate-sensitive aspects of society (Næss *et al.*, 2005). However, what is lacking in the climate adaptation literature is consideration of the *process of adaptation*; how adaptations will be implemented, by whom and why (cf. IPCC, 2001; Paavola &d Adger, 2002; UKCIP 2004). Arguably, an even more important prerequisite than institutional factors is people's perception of climate change, i.e. how local stakeholders can come to appreciate the added value of climate change adaptation.

The Need for Alternative Approaches

Perhaps the core issue in local environmental policy and planning in general, and climate adaptation specifically, is the degree to which people in a local context can make sense of global changes (see Bush *et al.*, 2002). A cautious hypothesis is that stakeholders might be more easily mobilized if global climate change impacts can be demonstrated locally, in familiar locations. There is arguably an insuffcient sense of urgency about climate change. Shackley and Deanwood (2002)

conclude – from interviews and three workshops with a wide range of stakeholders in two English regions – that local and regional impacts are of *considerable* interest to regional stakeholders. However, their ability to respond through adapted policy and practice depends upon their understanding of the policy and decision-making systems, and the operation of institutional processes and mechanisms. So far, these stakeholders do not see climate adaptation as an extraordinary task that requires new measures and new ideas. In line with this, Næss *et al.*, (2005) conclude from a study of flood management in Norway that perceptions on climate change are filtered by the existing local power structures.

The general perception about climate change is that it is 'uncertain, controversial, way into the future, and out of the public's hands' (Moser & Dilling, 2004, p. 37). However, the lack of urgency about the problem cannot be attributed to the nature of the climate problem and that of human beings alone. Thus far, politicians and researchers (and everyone that communicates climate change, for that matter) have failed to create a solid public understanding of the causes of anthropogenic climate change and hence of the solutions (Moser & Dilling, 2004, p. 36). As demonstrated by Shackley and Deanwood (2002) many stakeholders have been involved in the discussions about adaptation measures and have a vast amount of knowledge, but still little appreciation of the added value of climate adaptation. The reason for this is that people try to absorb new information through pre-existing *frames* of references. Frames are to be understood as cognitive tools to order information (Moser & Dilling, 2004, p. 36). One should thus have no illusions that a broad consensus about global warming among researchers and scientists is sufficient to initiate action. More important than 'objective' facts, is the public's or the decision makers' *subjective* perceptions of the problems. This paper argues that before planning for adaptation, the planner(s) must understand how the issue of adaptation or vulnerability is framed before being able to select tools for the planning process. This paper presents a discourse approach as an alternative way to further climate adaptation planning.

An Institutional–Discourse Approach

Discourse as a Means of Planning

Within a broad range of different discourse analytical perspectives, a natural point for departure is Michel Foucault. With his development of theories and concepts, and through empirical research, he could be labelled the founding father of discourse analysis. In Michel Foucault's (1972) *The Archaeology of Knowledge*, he takes as a starting point the premise that there are a set of practices that renders possible production and maintenance of a set of assertions: *an archive.* Foucault is interested in those rules that lie behind the expressions that are accepted as meaningful and truth-worthy in a specific historical epoch. Foucault (1972, p. 117) defines a discourse in this way:

> We shall call discourse a group of statements in so far as they belong to the same discursive formation. [. . .] It is made up of a limited number of statements for which a group of conditions of existence can be defined.

Foucault places himself in the tradition of social constructivism when he says that the truth is a discursive construction, and that certain regimes of knowledge point out what is true or false. Foucault's object is to uncover the structure in these

different regimes of knowledge; the rules for what can be said, what can not be said, and the rules for what is truth or false. Most of today's discourse analytical perspectives follow Foucault's view on discourses as something relatively regular, that define what is meaningful – and they bring forward the idea that truth is something that is created discursively.

A social constructivist perspective on the environment emphasizes that environmental problems do not materialize by themselves. Social constructivists, therefore, analyse the social processes and mechanisms that lead to the agreement on what constitutes an environmental problem (Bäckstrand, 2001, p. 32). Quite a few studies have used a discursive approach to environmental policy analysis (e.g. Hajer, 1995; Dryzek, 1997; Darier, 1999). One of the few broad, in-depth studies of a *planning process* using a discourse perspective is Bent Flyvbjerg's study of traffic planning in Aalborg, Denmark (Flyvbjerg, 1998). Flyvbjerg builds on Foucault and claims that one of the most useful ways of understanding communication in a discourse perspective is to realize the *power* aspects of communication. Power is more than political or economic power; it is also the owning and possessing of knowledge. Flyvbjerg argues in his study that 'power speaks truth to rationality': power defines what is rational or what comprises knowledge in any situation. He argues that the power that lies in using hegemonic rationalities or forms of science (e.g. technical–rational) and hegemonic knowledge (facts) as a means to define 'reality'/'truth', must be looked upon as means to reach certain goals. Flyvbjerg (1998) argues that the she who has the power to decide what is legitimate science and fact, also holds the planning power. More important than understanding who has the power in a given situation, however, is to understand that power always exerts its influence in complicated strategic situations. *How* it does so should therefore be the focus of attention. This implies that a planner must understand an issue and how it is framed before being able to select tools for the planning process.

Flyvbjerg's conclusions provide a valuable corrective to our current understanding of how planning processes actually play out. However, Flyvbjerg does not present an analytical framework, which planners could use in order to reach their objectives. Sharp and Richardson (2001) argue that the Foucaldian tradition has the potential to engage with the complexities of policy making in ways that other approaches do not. They question, however, whether specific recommendations are an appropriate expectation of all research. Just as Foucault does not presume to provide a theoretical judgement about what should be done, so do Sharp and Richardson (2001, p. 207) not presume to make similar judgements about the various contexts in which practioners are operating. They hope, however, that critical analysis of one context will stimulate critical thought about another. Rydin (2003, p. 26) points out that the problem with a Foucaldian perspective is namely this lack of understanding of how planners could use discourse as a resource; it leaves out 'agency' and actors' strategies to create change. In line with this Darier (1999, p. 27) writes that a Foucauldian discourse perspective is most helpful in understanding the construction or deconstruction of an issue or subjectivities. But it cannot, Darier continues, be a primary resource in understanding the process of environmental planning as a whole.

To date, Yvonne Rydin's book (2003) *Conflict, Consensus and Rationality in Environmental Planning. An Institutional Discourse Approach* remains one of the few attempts to show how a discourse perspective can be a tool for environmental planning. Rydin's perspective provides a fruitful entry point for

understanding how discourses could result in better climate adaptation planning in Norway.

Rydin's Institutional–Discourse Perspective

Yvonne Rydin (2003) presents a way to understand how issues within environmental planning and politics are framed. She discusses the prospects for developing and embedding a sustainable development rationality.[3] In this book, she considers the nature of a sustainable development discourse that could effectively be used to legitimate policy. There is considerable literature that discusses the concept of sustainable development and how it should be defined. Rydin (2003, p. 167), however, states that the interesting question from a discourse perspective is not how this concept might or *should* be defined, but rather 'how a sustainable development rationality *can* be generated, developed and embedded to support policy and planning practice'. Rydin provides an answer by drawing attention to three specific rationalities. She states that in the case of environmental planning there appear to be three main sources of rationality that are used to legitimate policy and decisions: scientific, economic, and communicative. Rydin's perspective on environmental planning can easily be applied to the more specific issue of climate change. Climate change is often recognized as one of the most important aspects of sustainable development and climate adaptation can be seen as a form of environmental planning.

Each of the rationalities influences the environmental policy agenda differently (see Table 1). Whereas scientific rationality sees nature as a physical reality and economic rationality sees nature as a resource, communicative rationality highlights how people come together to develop an understanding of what constitutes the environment. This has consequences for how environmental problems are viewed and solutions developed. Science believes in precise knowledge,

Table 1. Comparing and contrasting the three rationalities in environmental planning (Rydin, 2003, p. 111)

	Scientific rationality	Economic rationality	Communicative rationality
View of the environment	Physical reality Object of scientific inquiry	Resource Object of consumption Context for economic processes	Socially constructed Interface of the physical and social Quality of life
Nature of environmental problems	Arising from lack of understanding and knowledge; leading to poor management	Arising from unpriced, overused resources, and lack of property rights; not incorporated in economic decision making	Arising from inadequate stakeholder involvement, rejection of lay knowledge, and insufficient environmental education
Preferred environmental solutions	Based on sound science Knowledge-led	Market-based instruments Introducing property rights and quasi-market pricing	Consultation with stakeholders Visioning, etc. Consensus building

whereas economic rationality favours using price mechanisms and property rights to 'value' nature more precisely. Communicative rationality claims that environmental solutions should be found through consultation with stakeholders, and consensus building processes.

Since the scientific, economic and communicative rationality are the three main rationalities that are used to legitimate policy and decisions in environmental planning, a discourse perspective on environmental planning must take into account, and build on, how these rationalities work to develop and frame an issue. Rydin (2003, pp. 166–182) shows how the three rationalities can be combined to arrive at different sustainability discourses. She develops three distinctive discourses: a scientific–economic, communicative-economic and scientific–communicative. Rydin's rationale for combining these rationalities is to take into account the holistic nature of sustainable development[4], and to show that, if we draw on established rationalities in a new and creative way, planners and local actors can be given new discursive tools in planning for a sustainable development. She does not seek to decide whether the different rationalities can be combined logically, in terms of their content or assumptions. Rather, she considers how the discursive structure of these rationalities affects their potential for being combined and, therefore, used in discursive strategies for planning (Rydin, 2003, p. 168). Furthermore, it is a key characteristic of the discursive domain that local actors will use multiple ways of trying to legitimate policy. Thus, any tool kit for a local planner must contain several discursive strategies that can be applied in changing contexts and situations. Through combining the rationalities, Rydin aims to contribute to the ongoing process by which a stronger justification for environmental and sustainable policy can be built (Rydin, 2003, p. 168). In particular, these discourses have the potential of facilitating action through the creation of new actor constellations. Actors act within the framework of discourses; however the role of actors should not be underestimated, as is the tendency in many discourse analytical approaches. By showing how discourses can become a resource for planners, Rydin introduces *agency* into discourse analysis.

Actors are vital to the power of discourses. Without actors identifying, struggling over and promoting them, discourses would not exist (Litfin, 1994). Actors can use discourses as specific strategies for climate adaptation: In the way that actors take into account the *power of discourse* (the structural constraints determined by the linguistic frame of reference in a debate), they can try to exert *power in discourse*, e.g. design their text and speech in line with the assumed expectations of their audience in order to be more forceful (Holzscheiter, 2005). However, in order to exercise power in discourse, it is important to take into account the concept 'institution'. Institutions mean different things in different contexts. For the purpose of this paper, an institution will be seen broadly as a routinized set of working practices and everyday operational activities associated with norms and values (Rydin, 2003, p. 39).

The aim of Rydin's book (cf. 2003) was to link (1) the nature of a sustainable development discourse that could effectively be used to legitimate policy to (2) the institutional arrangements for embedding such a discourse in incentive structures that are relevant to key actors. As emphasized in the literature on impacts and adaptation, institutional factors are crucial in forcing and determining climate adaptation (Næss *et al.*, 2005). More research, however, is required to understand how institutional capacity will lead to successful adaptation. Through combining

institutions and discourses, Rydin's perspective could bring valuable insights to this problem.

From a discourse perspective, language is the purposeful activity and the tool in the planning process. However, any actor within a local authority will find him- or herself subject to the prevailing norms of working practice, and may well face overlapping and even competing norms. These norms represent institutions. In order for a skilful actor to use available resources in an appropriate manner in the planning process, he/she needs to take into account the planning *context.* This is where the concept of institutions is pertinent. Institutions provide an account of the context within which language occurs (Rydin, 2003, p. 52). Indeed, studies have shown that the understanding of risk and climate change is largely determined by the institutions forming the context of individuals' everyday lives (Keskitalo, 2004, p. 428). Before deciding what discursive strategies to apply, an actor will need to consider the requirements of both his/her own institution and those of other institutions in society. This is the case whether actors are pursuing their agenda through co-operation with an institution, or if they are seeking to change that institution (Rydin, 2003, p. 52). In sum, the understanding of climate change may be problematical largely as a matter of communication and different types of institutionalized knowledge (O'Riordan & Jordan, 1999 in Keskitalo, 2004, p. 428). The next section continues with consideration of the institutional context for climate adaptation in Norway.

The Case of Norway: Institutions for Climate Adaptation

Norway has as yet no comprehensive strategy for climate change adaptation. One reason for this is, arguably, that Norway seems robust and resilient to climate change. In the short term Norway might even benefit from climate change. Important sectors. including hydropower, fisheries and aquaculture, agriculture and forestry. are likely to experience net gains (O'Brien *et al.*, 2004). However, in a country such as Norway, with an intricate topography including an extensive coastline, long fjords, high mountains and deep valleys, climate change is likely to manifest itself differently over relatively short distances (see Table 2). Moreover, impacts are determined by both the ecological sensitivity and the social vulnerability. Vulnerability and adaptation are dynamic characteristics that can and will change over time due to the interaction between socio-economic, political and physical processes. An emphasis towards direct sectoral impacts ignores synergies and misses some of the larger and perhaps more serious impacts (O'Brien *et al.*, 2005).

A number of recent studies have discussed climate adaptation in the Norwegian context (Norland *et al.*, 2005; Næss *et al.*, 2005; O'Brien *et al.*, 2004; Aall & Norland, 2004; Aall & Groven, 2003). The studies all more or less rely on an institutional perspective and in so doing they provide valuable insights into the specific conditions that are important to climate adaptation in Norway, both nationally and locally. Næss *et al.* (2005), for instance, suggest that there are few incentive structures locally in preparing for climatic events in Norway. Aall and Groven (2003) argue that there are a number of relevant local level institutions that *might* play a role in climate adaptation. These institutions have other specific aims and goals today, but they have internalized values, norms and practices that enable them to handle climate adaptation. As such a key challenge is to investigate

Table 2. Potential impacts of climate change in Norway (O'Brien *et al.*, 2004)

System/sector	Examples of impacts
Ecosystems	– Reduced habitats for some species and ecosystems (mountain ecosystems, Atlantic and North Sea, Norway spruce) – Expansion of species and ecosystems (boreal) – Invasion/migration of species (Barents region)
Agriculture	– Longer growing season – Expanded areas suitable for agriculture – Increased crop yields – Increased erosion and nutrient leakage in flood-prone areas – Increased occurrence of pests and diseases
Tourism	– Increased coastal erosion – Less snow during the winter season (more precipitation as rain)
Water resources	– More winter floods, less spring floods (earlier peak of spring floods) and increased frequency and magnitude of autumn floods – Higher hydropower production potential (regional differences) – Increased magnitude and frequency of autumn floods – More lashing rains trigger dumpiness and material exhaustion
Energy	– More hydropower production – Less demand for electricity for heating during winter
Human health	– Local outbreaks of diseases due to contamination of drinking water during floods
Infrastructure (buildings, roads etc.)	– Infrastructure damage following floods and storms – More heavy precipitation, increased damage to buildings and other structures – Increased risk of landslides

the positive and empowering aspects of institutions; how specific local institutions can *enable* climate adaptation in Norway.

Young (1999) states that institutional influence can be either *direct* or *indirect*. The most obvious link is that of informal and formal institutions dealing directly with climate impacts. Institutions that have no direct or obvious connection to climate change, but which still have a major bearing on society's vulnerability and capacity to adapt, might have indirect influence. By establishing local authorities as key actors in local-level assessments, the potential for an optimal 'fit' between information supply (cf. Table 2) and the municipality institutional systems may be strengthened. Locally based assessments have a particular important role in framing climate change in a format that fits the existing policy instruments and structures (Norland *et al.*, 2005). Aall and Groven (2003) have identified four strategic institutional systems in Norway that are both relevant for climate adaptation *and* which are represented at the local level. The first two, *civil protection* and the *insurance system*, deal directly with climate changes, whereas the other two, the *municipal master planning* system and the *environmental authorities*, are examples of institutions indirectly working with climate changes. In order to further climate adaptation in Norway, these four institutions can all come to play strategic roles; they identify what is socially possible or acceptable. As documented by Aall and Groven (2003), none of the institutions work specifically with climate adaptation today. Their challenge is to assess and appreciate the value of climate adaptation.

In the following discussion I appreciate the work Aall and Groven (2003) have done and I agree with these authors that institutions can play an important role in climate adaptation locally. However, I differ from Aall and Groven (2003) in the sense that they do not account for how the use of language and communication affects the role institutions can play in climate adaptation. My aim in this discussion is primarily to draw attention to the discursive nature of knowledge and to show how locally based institutions can play a role *within* a discursive framework. As such, Hajer makes an important distinction between an institutional and a discourse approach:

> [D]iscourse analysis is not to be counterposed with institutional analysis, but is rather a different way of looking at institutions that is meant to shed new light on the functioning of those institutions, how power is structured in institutional arrangements, and how political change in such arrangements comes about. (Hajer, 1995, p. 264)

Similar to Hajer, my objective is to bring out the institutional dimensions in discourse. I will show how different discourses are relevant in different institutions and how these institutions can become conveyers or 'carriers' of specific discursive strategies for climate adaptation.

A community perspective on climate adaptation will require different policies and strategies depending on the expected impacts (see Table 2). Instead of recommending a specific response, this paper acknowledges the need to investigate and discuss different approaches throughout Norway. In the following I will assess and discuss the structures of the three different discourses presented above and show how a climate adaptation agenda will look quite different according to which discursive strategy is chosen.

Strategy 1: A Scientific–Economic Discourse

Presenting the Discourse

In this discourse, the role of scientific rationality lies in identifying the limitations that exist to the uninterrupted continuation of economic processes, as envisaged by economic rationality. These limitations are linked to the physical environment and ecological processes, as revealed by scientific knowledge (Rydin, 2003, p. 169). Several authors point out that the scientific discourse alone is no longer generally persuasive (Gibbons *et al.*, 1994; Latour, 1999; Rydin, 2003). Science is no longer regarded as a rational neutral and value-free activity, separated from other realms of society. In this view, the new role of science is to shape society as well as being shaped by it, creating a 'seamless web' (Hess, 1997, p. 83). It sees increased use of scientific rationality alongside other bases for legitimation, particularly in the environmental context (Rydin, 2003, p. 101).

While scientific rationality has been the subject of significant challenge, economic rationality remains a strong and even growing presupposition within the policy process as a whole (see Dryzek, 1997; Hajer, 1995; Flyvbjerg, 1998). Rydin (2003, p. 170) thus emphasizes that an alternative, more realistic engagement between the rationalities could be one that starts from the perspective of economic rather than scientific rationality. This discourse seeks to incorporate the knowledge generated by environmental science into the prevailing economic models. The two rationalities can easily complement each other since they both use the

rhetoric of the expert and can speak with the expert voice (Rydin, 2003, p. 170). Such a discourse could be used to identify the potential for finding solutions that are both technologically feasible and economically viable in real-world situations.

Climate Science in Norway

Scientific rationality informs us that we are vulnerable. In the studies of planned adaptation in the North American context one can see how climate scenarios are important tools in the planning process (Cohen *et al.*, 1997; Cohen *et al.*, 2000; Mortsch & Mills, 1996; Fisher *et al.*, 2000; MARA, 2000; NAS, 2000). In Norway, information on climate impact is primarily available through the RegClim project, which is a co-operative research project involving six Norwegian institutions.[5] Before its start up in 1997, regional climate modelling in northern Europe had been practically absent (RegClim, 2005). The RegClim model presents climate change scenarios for 55 km^2 grids and, although this gives a basis for estimating regional impacts, it is unlikely that the model will capture all local variations in a country with the intricate topography of Norway (O'Brien *et al.*, 2004). Furthermore, a general characteristic of the climate scenarios themselves are that there is uncertainty attached to them. With Norwegian climate modelling still in its infancy, there is a long way to go before it can provide local decision makers with credible (or at least more relevant) information for planning.

The uncertainties and the long time scale of climate change will limit adaptive responses from this scientific–economic discourse. Formulation of an action strategy might begin by asking how possible impacts will affect businesses, jobs and the basis of existence as provided by nature. Distribution of the costs might be one focus. An objective should then be to identify *no regret* climate adaptation options. Such options would be expected to deliver benefits under any foreseeable climate scenarios, including present day climate (Wilbanks *et al.*, 2003). Of the four institutional systems (cf. Aall & Groven, 2003), the *insurance* system seems the most appropriate to conduct this discourse.

The Insurance Industry as Carrier of the Scientific–Economic Discourse

Locally, the *insurance* system consists mainly of local insurance offices. However, in addition to the commercial insurance system, a public natural disaster fund also exists in Norway. It has been in place since 1962 to address climate related changes (floods, avalanches, landslides and storms). Compensation for damages that cannot be insured against is rendered by the public in accordance with the nature relief law. In practice this means damages to cropland and forest, and buildings and infrastructure such as garden constructions, roads and bridges (Aall & Groven, 2003, p. 54).

In the event of extreme natural disasters, the commercial insurance industry would have to pay out more compensation, causing premiums to rise. This functioning of the price mechanism will inform the insured that risks are increasing. Still, they might not connect the rise in premiums to climate change. Through combining a scientific and an economic rationality, however, the insurance industry can convincingly communicate that there is an important connection here: the industry can refer to existing climate data to price premiums according to the vulnerability of the insured. Such pricing might contribute to promoting disaster

preparedness initiatives among both municipalities and the insured (Aall & Groven, 2003). In case of climate related natural disasters, there are also linkages between the insurance industry and local authorities. Paragraph 22 in the act concerning damages caused by nature gives municipalities the right to prohibit building on properties exposed to damage by natural disasters. The insurance industry in Norway has, on several occasions, stated that in future it will demand refunds of claims payments from planning authorities that have not abided by the law in issuing building permits (Aall & Groven, 2003, p. 59). Also, a scientific rationality might be helpful here in bringing attention to the increased risks posed by future climate changes. In this way, the insurance industry will also come to interact more closely with the *municipal master planning* system. Climate change is not yet explicitly on its agenda, but the system works with building permits, infrastructure and emergency planning. This system is thus very important in co-ordinating efforts for climate adaptation and emission reduction as well.

Future natural disasters can result in changes to both the municipal system and the commercial insurance system. A likely scenario is that the insurance industry will demand that municipalities assume greater responsibility for damage caused by natural disasters. Indeed, the international insurance industry has long shown an interest in linking climate change to natural disasters. Some companies also think proactively in the use of climate models. The re-insurance company Munich Re is one of the leaders in this field, with its longstanding work in placing climate questions on the agenda. The company Swiss Re is a pioneer in developing insurance products that are adjusted to the climate issue. Swiss Re (2002 in Aall & Groven, 2003) employs a scientific rationality when they argue that adequate climate adaptation is a precondition for being able to offer insurance against future weather related nature catastrophes.

A scientific–economic discourse employs the language of the expert. Since it emphasizes people's economic self-interest, its focus will, in a climate change context, primarily be on short-term, extreme events affecting local businesses. It is questionable whether the insurance industry can manage to create a *long-term* perspective on climate change. As stated by Tol (1998), climate change is so extensive, both in time and space, that it is impossible to spread the risks. The role that the insurance industry can play is to collect more local knowledge on the effects of climate change. Through its contact with the customers and by raising the premiums, the industry can employ a scientific rationality to create an understanding that the climate is changing. The everyday economic discourse of spending and investing money is the way in which most people currently interface with economic rationality, and thus there is a potential for increasing awareness through raising the premiums (cf. Rydin, 2003, p. 104). The insurance industry can also give input to, and inform, the other institutional systems. They could demand that the municipality should bear more of the responsibility for damages when natural disasters occur, and they could also require that public planning (the municipal planning system) incorporate climate considerations to a greater degree.

Strategy 2: A Communicative–Economic Discourse

Presenting the Discourse

Economic rationality is criticized from the perspective of communicative rationality for not sufficiently including different groups and actors in economic

decision making (Rydin, 2003, p. 171). At the core of economic rationality is the autonomy of market decision makers. Communicative rationality, on the other hand, emphasizes the importance of a wide range of stakeholders being involved in the decision-making process. As such, the communicative challenge to economic rationality is therefore to find a way of 're-expressing economic expertise that meshes with the rights of people to become involved in decision-making that affects them, their livelihood, and their quality of life' (Rydin, 2003, p. 173). It would involve seeing the community as the site where economic processes are both constituted and experienced. This would be a discourse of community economics, rights and values. A language constituted of rights and of a common subject ('we' not 'I') would structure the discourse (Rydin, 2003, p. 173).

Such a communicative–economic discourse is a significant challenge to economic rationality and is likely to face considerable resistance. In particular, it is questionable to what degree actors actually manage to come together and free themselves from their self-interests (Zwart, 2003). Although criticized, a communicative discourse is emerging by embedding itself in many local institutions (Rydin, 2003, p. 174). The argument in favour of this discourse is that public deliberation garners creativity, collective will and commitment. There is room for science in this discourse, but scientific rationality would need to be expressed with some humility so that the all-knowing scientific expert easily can be dispensed with (Rydin, 2003, p. 174).

Building on Experiences with Local Agenda 21

A communicative–economic discourse is closely related to Local Agenda 21 (LA21). The idea of LA21 is to take a global view of environmental problems and start planning with a long-term perspective. According to Chapter 28 in Agenda 21, local authorities should undertake a consultative process with their inhabitants in order to arrive at a consensus on an action plan or a 'Local Agenda 21' for the community (UN, 1993). LA21 involves utilizing the communication between actors in the local society in order to create change. An economic rationality will, however, highlight that it is not just a question of invitation to a consultation process that is as broad as possible (cf. UN, 1993). If the process should gain legitimization, and if policy should have a chance to be carried out, it is important that actors representing important economical interests have more of a say than others. Such an understanding is supported in the idea of stakeholder democracy or co-operative management regimes (CMR), where a number of strategic interests meet to solve a particular environmental problem (Lafferty & Meadowcraft, 1996, p. 257). Because the co-operation in these regimes is voluntary, they must, in a certain sense, reflect deliberative ideals, yet the implementation focus is usually stronger and the processes less open-ended than in most projects involving the public (Bjørnæs, 2005).

Experiences with LA21 work in Norwegian municipalities do indeed show that many local authorities already have promoted a communicative–economic discourse, through its involvement in partnerships with businesses and organizations. Bjørnæs (2005, p. 17) reports from two national surveys of LA21 in Norway and documents a new trend in local environmental governance; the role of the authorities is more and more that of being partner in environmental projects rather than being a regulating institution. LA21 has thus built up new capacity for handling environmental problems and created an understanding that environ-

mental policy is something that involves the whole community. Norwegian municipalities, when taking on a greater responsibility for climate adaptation, already have institutional capacity and actor networks available to build upon (Aall *et al.*, 2001).

Extending the Sustainability Agenda to Include Climate Adaptation

It is the *environmental authority* that has been the main institution facilitating LA21 in Norway. The key challenge for this authority is now to extend the sustainability agenda to also include climate adaptation. While LA21 effort might be useful as an entry point, the focus needs to be expanded in order to reflect the wider coverage. As argued by the IPCC (2001) there is a need to bring forward and establish an understanding that climate adaptation and sustainability goals *can* jointly be advanced. It is here that a communicative–economic discourse based on community rights, economics and values (cf. Rydin, 2003, p. 173) is particularly helpful. This discourse would emphasize that integrated policies can lessen pressure on resources, improve management of environmental risks and enhance adaptive capacity. The rhetorical strength of the discourse is that it can portray climate change as something that makes the community more economically *vulnerable* and the task seen as investing in human capital to become a more robust and resilient community. In such a strategy communicative rationality informs economic rationality that stakeholders are important in order to link both current and future vulnerability to climate variability, and in order to formulate and evaluate responses. As Keskitalo argues (2004, p. 431), an extended stakeholder dialogue should provide a full contextual account of the state of the community and its vulnerability. The essential starting point would be the present. From such a vulnerability perspective it is clear that present-day climate has economical impacts, both positive and negative. Policy making starts with recognition of the need for policy innovations or changes in existing policy (cf. Burton *et al.*, 2002). Even though climate change will affect various sectors and actors differently, the aim of this discourse is to come to an agreement on how the community as *a whole* should prioritize this issue. A goal that might be reached through promoting such a communicative–economic discourse is to develop a baseline understanding of the areas and sectors that would need to be prioritized.

There is a clear role for local environmental authorities in this discourse. Local leadership is particularly needed if adaptation measures are to be integrated in already existing policies. Such a strategy recognizes that the inclusion of climatic risks in the design and implementation of development initiatives is necessary to reduce vulnerability and enhance sustainability (cf. IPCC, 2001).

Strategy 3: A Scientific–Communicative Discourse

Presenting the Discourse

Scientific rationality continues to play an important role in legitimating environmental planning. However, wherever it is based, scientific rationality continues to assert the existence of a knowledge gap between expert and lay groups (Rydin, 2003, p. 175). The critique of communicative rationality is based on lay ignorance, with scientific rationality being the route to filling the knowledge deficit. However, separating the role of scientific and technical expertise in the

policy process causes policy formulation to become increasingly technocratic, with science given a major role and the lay people often labelled as ignorant or incapable of handling scientific complexities (Keeley & Scoones, 1999).

Communicative rationality offers a view of knowledge as pluralistic, in the sense of non-scientific voices having a legitimate role. Such a position can lead to the notion of knowledge becoming diverse and inclusive, rather than exclusive, so that a number of different communities may develop their own criteria for knowledge generation. The emphasis then shifts to an open and inclusive communicative process that covers the full range of knowledge claims (Rydin, 2003, p. 175).

Climate Change and Public Perceptions

Several studies emphasize that lay people tend to confuse global warming with other environmental problems, such as ozone depletion (Thompson & Rayner, 1998; MARA, 2000; Andrey and Mortsch, 2000). Furthermore, most studies of public risk perceptions and responses show that the public bring more to their definitions and evaluations of risks than is recognized as appropriate by the reductionist framing of experts (Wynne, 1996, p. 58).

A scientific–communicative discourse will not imply that there are no real risks or that people do not think instrumentally and care about risks. However, according to Wynne (1996, p. 56), the same basic social dynamics could be occurring whether or not risks actually exist. Risks do not necessarily have to be presented in a way that is demonstrable scientifically, and it is not necessarily sufficient and accurate information about a problem that motivates people to act. Studies show that climate change does not become truly interesting to stakeholders until the impacts of droughts, floods, intense rainfall, fires and storms become evident (Shackley & Deanwood, 2002; IPCC, 2001). The belief in anthropogenic climate change by stakeholders is coupled with the experience of short-term variations, even though the scientific case for such a connection is far from persuasive (IPCC, 2001). The climate issue is characterized as an issue where there are weak linkages between perceptions of cause and effect (Davidson *et al.*, 2002, p. 10). Thus there should be an opening for local institutions and networks – as creators of beliefs and perceptions on environmental issues – to play a central role in determining the means by which individuals access, process and act on information.

Civic Science

The role of scientific rationality in this discourse is to bring forward the idea that the perceptions that the climate is changing must depend on scientific, yet uncertain, facts. The communicative rationality will then emphasize that these facts should be recognized as being embedded in broader moral discourses about who we are and our place in nature. The scientific evidence provides good strategic and explanatory *opportunities* for stakeholders and citizens, but its precise meaning is constructed within dominating perceptions of society and institutional values. This makes a strong argument for better understanding not just what danger and risks are as 'objective' measurements but also for understanding the *perceptions* of danger held by the public and different stakeholders. This scientific–communicative discourse will stress the need for involving stakeholders in

designing and undertaking research so that researchers and stakeholders can learn from each other, and so that researchers ask the questions to which people are seeking answers.

Such a dialogue can give voice to a type of knowledge that can be labelled civic science or civic expertise (cf. Bäckstrand, 2004; Agyeman & Angus, 2003). This phrase signifies the ascendancy of a participatory paradigm in science policy. The notion of civic science prompts us to rethink the relationship between science, knowledge, democracy and environmentalism. In the wake of the legitimacy crisis of scientific expertise, civic science has been advanced as a solution to reverse the growing public distrust in science (Bäckstrand, 2004). Civic science as democratization suggests that scientific norms, institutions and procedures need to be reformed in accordance with democratic principles. In a climate adaptation context some of the most urgent questions that arise would then be:

- What are the boundaries between scientific expert knowledge and lay knowledge? Is it defensible to favour scientific knowledge over other forms of knowledge?
- Should citizens be invited to discuss the climate models or their scientific basis?
- Should citizens participate in the formulation of scientific problems or assessments, or should the role of the citizenry be confined to deliberations about the *use* of scientific knowledge on climate impacts?

We are seeing a proliferation and a revival of participatory procedures to scientific inquiry, such as citizen juries, participatory technology assessments and consensus conferences (Smith, 2003 in Bäckstrand, 2004). Answers to the above questions – and to other similar question – could be sought through such institutional arrangements. Actors from the *civil protection* network in communities are particularly suited to facilitate a broad dialogue on these matters.[6] This is the local-level institutional system that most of all works with climate changes, although independent of climate policy references. This system works *proactively* in the prevention of crisis and damage reduction, and *reactively* in the management of crisis. Concerns, such as state of readiness and manning levels, are especially linked to the area planning function through risk and vulnerability analysis (Aall & Groven, 2003, p. 97). One important matter here is to map unwanted incidents that represent a danger to people, the environment, economic values or important tasks and functions in the society. As such it is of key interest that the newly created national Directorate for Civil Protection and Emergency Planning (DSB) ambitions to complete a full overview of risk and vulnerability for society in general, to promote measures which prevent accidents, crises and other undesired incidents and to ensure sufficient emergency planning and efficient management of accidents and crises (DSB, 2004).

The civil protection system consists of both public and private actors. Whereas the public has a specific responsibility for organizing civil protection operations, the voluntarily humanitarian organizations are also an important part of the civil protection network. They provide an arena where the average man and woman can participate in civil protection and emergency planning and thus constitute an important participatory element in civil protection (Aall & Groven, 2003). The Norwegian Red Cross is the most important voluntary organization in Norway and the General Secretary, Jonas Gahr Støre, gives the

following description of what the contribution of volunteer sector in disaster preparedness and civil protection is:

> My answer is simple: Our contribution is people. We have the people who chose to share their time and experience to assist other people.[. . .] The Norwegian Red Cross has 12 000 volunteers organised in 350 rescue groups, trained for action and assistance when needed. (Gahr Støre, 2005, p. 3)

The key challenge for the Norwegian Red Cross and the civil protection system in general is to organize a dialogue where climate adaptation and impact are more explicitly on the agenda. As such the Red Cross seems ready to take on new and greater responsibilities. Gahr Støre (2005) states that 'we need to move on further to a broader vision of volunteers in safe communities.' He continues:

> We must strengthen the ability of the individuals in a community to act efficiently when need be. We must understand what enables people to cope with, recover from and adapt to the risks they face. We must build our responses on the community's own priorities. We must focus on how to build on and strengthen local knowledge. And we must empower people to take responsibility for the safety of their own community. (Gahr Støre, 2005, p. 5)

It seems evident that in the climate planning process, the Norwegian Red Cross and other humanitarian organizations can come to act as the connecting link between inhabitants and the bureaucracy in the municipality. The local branches of the humanitarian organizations can gather knowledge and facilitate dialogues in the communities. This would, in practice, entail a bottom-up perspective on climate adaptation where forecasting of the probability of new events could build upon knowledge about local conditions, experiences of local people, statistics and other relevant information. In a report from Aall and Norland (2004) the authors start from a local point of view and try to contribute to the discussion on local climate policies in Norway by posing questions related to what to adapt to, and how this can be assessed in a local context. The aim of their study is to create a 'vulnerability indicator' model for local-scale assessment incorporating different sectors and vulnerability issues. In addition to acknowledging the need to take into account local data, they emphasize that these data must be combined with 'top-down' indicators through downscaling data for global and national climate change models, and national statistics to local scale. Aall and Norland (2004) in this way exemplify how expert and lay knowledge can play together in providing a better foundation for local climate adaptation. Such kind of expertise could result in a community as a whole designing a *risk matrix* that combines forecasts of probability and consequences.

Conclusion and Further Research

This paper has discussed a matter that is often lacking in the climate adaptation literature, the *process of adaptation*: how will adaptations be implemented, by whom and why? It presents an institutional–discourse approach as an alternative way to further climate adaptation planning. The paper has sought to bring forward an understanding that before the climate adaptation planning process starts, planners must realize that they, in their capacity of being situated within

certain frames, will represent reality in a certain way. In the paper it is proposed that discourses are *resources* in planning for climate adaptation. Three general discourses: scientific–economic, communicative–economic and scientific–communicative have been presented. The paper portrays how each of these three discourses frame the climate adaptation agenda.

The paper's aim is to discuss how to further the development of climate adaptation in Norway. A community perspective on climate adaptation will require different policies and strategies depending on the expected impacts. The paper does thus not favour one over the other, but instead acknowledges the need to investigate and discuss different approaches throughout Norway. Furthermore, the contextual nature of knowledge and local climatic and social conditions will result in unique ways of legitimating climate adaptation policy in each community. The paper, instead of recommending a specific response, primarily tries to assess the structures of the different discourses and to show how a climate adaptation agenda will look quite different according to which discursive strategy is chosen. A brief summary of the three discursive strategies follows below:

A scientific–economic discourse will emphasize that:

- Knowledge generated by environmental science must be integrated into the prevailing economic models and understandings.
- A strategy for climate action is to start with asking how possible impacts will affect businesses and jobs, and the basis of existence as provided by nature.
- The *insurance* system stands out as the core system to carry this discourse.
- Through the use of the price mechanism, the insurance industry can inform the insured that premiums are being raised because of increased climate change risks.
- The insurance industry is already interacting with the *municipal master planning* system. The industry can bring attention to climate change through increased responsibility on the part of municipalities in how they conduct zoning.

A communicative–economic discourse will emphasize that:

- The community is a site where economic processes are both constituted and experienced and its aim is to come to an agreement on how the community as *a whole* should prioritize climate adaptation.
- In Norway, such a discourse has already been facilitated by the *environmental* authorities through the work on LA21.
- The key challenge for these authorities is to extend the sustainability agenda to also include climate adaptation.
- The rhetorical strength of the discourse is that it can portray climate change as something that makes the community more economically *vulnerable* and the task seen as investing in human capital to become a more robust and resilient community.

A scientific–communicative discourse will emphasize that:

- Communicative rationality offers a view of knowledge as pluralistic.
- The role of scientific rationality in this discourse is to bring forward the idea that forecasting climate change rests on scientific (but uncertain) facts.

- There is a need to involve stakeholders in designing and undertaking research so that researchers and stakeholders can learn from each other, and so that researchers ask the questions to which people are seeking answers.
- Many different institutions could play important roles here. *Civil protection* is a particularly relevant system. This is the local institutional system that most of all works with climate changes.

The paper has relied on Rydin's (2003) work on institutions and discourse. The Foucauldian discourse tradition is sceptical to generalize or provide answers to how things could have been done differently. Rydin is one of the few authors that has tried to use discourse analysis as more than such an analysis technique. She has aimed to provide a normative theoretical basis that shows how discourses can be used as a tool for planning, thereby bringing a discursive dimension to the institutional approach. She argues that this provides a fuller understanding of how discourse, communication and language play a role within the policy process (Rydin, 2003, p. 53).

Rydin's approach is not without difficulties however. She brings in actors, interests and incentive structures of organizations and institutions and tries to show how discourses play out within an institutional structure. There is a fine line her between saying that discourses matter or that institutions matter. One could state that such an approach reflects a more positivist epistemology by treating ideas as an additional 'variable' (Bäckstrand, 2001. p. 37). However, for many years now, discourse analysts have been met with the criticism that they are not really answering the 'so what?' question: What does the insight from this study actually mean, for improving our understanding of environmental politics, or for providing insights on similar cases in different contexts? If discourse analysis is to be used in applied social science, there is clearly a need to set limits to the metaphysical aspects, and concentrate on the added value that discourses and discourse analysis bring forward. Further research would then have to discuss: to what degree can specific rationalities, discourses and knowledge systems in one case be transferred to other contexts, situations and cases without compromising the strength and the fruitfulness of the discourse approach? And, more specifically, what are the necessary steps that must be taken in order to develop a discursive theory of local environment politics and, more specifically, climate adaptation? There is clearly a need for further studies that aim to demonstrate how insight from discourse analysis can be used as a tool for planning.

The present paper is a step in this direction. I have found Rydin's perspective fruitful in differentiating among alternative discourse frames in setting climate adaptation on the agenda in Norway. This paper has taken Rydin one step further showing how an economic, scientific and communicative rationality can be combined in local discourses on climate adaptation in Norway. The analysis suggests how this could be done *if* local actors in local institutions should realize the potential that lies in discursive planning. As such the paper tries to find an analytic perspective that is constructivist without being either ideographic or positivist. By studying alternative climate adaptation positions in Norway as competing discourse frames, the paper attempts to demonstrate how discursive processes 'matter' in staking out normative symbolic positions on climate change.

Rydin's perspective is an attempt to systematize local discourses on the environment in such a way that they can become useful for environmental planning. In further research it will be a challenge to see if the same types of discursive

interaction take place in different community settings. There is hope that this could result in a more analytical stringent theory on discourses and local environmental policy.

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Notes

1. This paper forms part of a co-operative project between the Center for International Climate and Environmental Research Oslo (Cicero), Western Norway Research Institute and the Program for Research and Development for a Sustainable Development (ProSus) on the institutional dimensions of climate adaptation (see Lafferty *et al.*, 2002).
2. See especially, *Great Lakes – St Lawrence River Basin* (Mortsch & Mills, 1996), and *The Mackenzie Basin Impact Study* (Cohen *et al.*, 1997) for two pioneering impact and adaptation projects in Canada.
3. Rydin uses the phrase 'a sustainable development rationality'. A sustainable development *rationality* signifies a specific rationality (i.e. possession or exercise of reason), specifically connected to underlying goals and principles. However, Rydin attempts to bring forward a new understanding of sustainable development, and one could argue that the word 'rationale' is more adequate than rationality in this context. A sustainable development *rationale* signifies a body of statements and reasons that are internally consistent with an underlying logic; but a logic which is still in its shaping and not yet established. In this way a rationale could consist of rationalities that are combined in a (new) sustainable development *construction.*
4. The distinctive content of sustainable development lies in its holistic character: the ways in which it seeks to combine the environmental, the economic and the social. Rydin (2003, p. 167) explains how these three dimensions are closely related to the rationalities: 'Scientific rationality supports the claims of environmental sustainability; economic rationality relates directly to the economic dimension; and communicative rationality justifies the involvement of a broad range of actors and considerations of a wide range of perspectives, a key link to social sustainability.'
5. RegClim has two main aims. The first is to estimate probable changes in the regional climate in northern Europe, its maritime areas and major parts of the Arctic in light of global climate change. The second is to quantify, to the degree possible, uncertainties in these estimates, inter alia, by investigating the significance of regional scale climate forecasting pertaining specifically to Norway's region (RegClim, 2005).
6. The environmental authorities could also play a role in such a dialogue. However, the civil protection system has the advantage that its main concern is that of dealing with current and future risks. Since the civil protection system also incorporates a number of volunteers, the system founds an appropriate basis for discussing how to combine scientific knowledge with local knowledge.

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Scalar strategies in climate change politics: debating the environmental consequences of a natural gas project

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Abstract

In this article it is argued that environmental policy research could gain from developing an understanding of how the concepts of 'scale', 'scalar strategies' and 'struggles over scale' play out empirically in processes of environmental policy-making and planning. I emphasise how scale, as an issue in environmental governance, is not merely an independent variable causing specific outcomes; rather it is negotiable, allowing actors to adopt different strategies in order to pursue their varying agendas. In this article it is shown how a local struggle can be represented as a global struggle. The case concerns the domestic use of natural gas in the Norwegian city of Stavanger, and how this metamorphosed into a struggle as to what was the appropriate geographical scale at which the environmental and climatic consequences of a natural gas project should be assessed. By framing climate change as a global issue, local actors were able to portray the natural gas project as environmentally friendly. The article argues that the realisation of this natural gas project should be seen

in light of how strategies over scale – that were developed in the debate – fitted with climate discourses institutionalised in national policy and politics.

1. Introduction

A key characteristic of climate policy making is its multi-scalar nature (Bulkeley and Betsill, 2003). The climate change *problem* can be seen as both global and local. – Global because the triggering factor of man-made climate changes, the increase in greenhouse gas concentrations in the atmosphere is globally dispersed, and because the processes that cause greenhouse gas emissions are distributed over the entire planet. At the same time, the problems can be seen as local in the sense that the effects of climate changes will vary dramatically due to local conditions, and because emissions in reality always will occur locally.

The *governance* of climate change has primarily belonged to the national and international level, the Kyoto agreements being the main institutional apparatus for handling the problem. However, during the nineties local climate policy and planning has been established as a distinct policy field of its own and it has become evident that local level action can be an important supplement to climate change actions on other levels of government (Bulkeley and Betsill, 2003). Local climate policy can thus be seen as an example of *rescaling of environmental governance* (cf. Gibbs and Jonas, 2001, p. 271). When one of the leading international climate network of local governments, the Cities for Climate Protection campaign (CCP), argues that cities are both part of the climate problem and of the solution, this can be seen as a way to actively

'reframe' or 'rescale' climate change from being a global to a *local* issue (Lindseth, 2004).

This multi-scalar nature of climate policy and planning makes it a contested policy field open to various social constructs. The role that scales play in climate policy making depends, however, on what we mean by scale. In this article scale will be seen as socially constructed. Swyngedouw (1997) suggests that rather than take a geographical scale as ontologically pregiven, one should investigate how and why particular scales are privileged in socio-political struggles. A number of authors have emphasised how scale and scalar configurations have been used strategically by groups to pursue a particular agenda (Brown and Purcell, 2005; Randles and Dicken, 2004; Cowell, 2003). The issue at stake in this article is how locally based actors used such scalar categories in the political struggle over a natural gas project in the Norwegian city of Stavanger. Stavanger is selected as a case on the basis of the role it plays as 'best practice' in urban sustainability. In Norway, the conflict between the use of natural gas and climate protection has never been as apparent as in Stavanger. Stavanger is thus a pioneering case in showing how local actors come to debate and negotiate the environmental and climatic consequences of domestic use of natural gas.

The structure of this article is as follows. Section two explains how the scale concept is relevant in the study of climate change politics. Section three lays out the policy context – both how climate change politics has been debated at the national level in Norway and how the city of Stavanger has engaged in climate

protection work. Section four presents the Stavanger case study. This section analyses the conflict between the use of natural gas and climate protection through the lens of scale theory. Section five concludes and points to a need for further research on scalar re-framing as a strategy in local environmental conflicts.

2. Scalar struggles and climate policy

In recent years the idea that geographical scale is socially constructed and thus historically changeable through socio-political contestation has been repeated over and over in scientific articles (Brenner, 2001). Moreover, a second insight from the scale literature is that since scales are socially produced through political struggles, scales and scalar arrangements are both fluid and processual (Brown and Purcell, 2005, p. 609). According to Swyngedouw and Heynen (2003, p. 913) there is a constant societal struggle going on to define who has control over a particular scale. It is important, then, that the priority both theoretically and politically focuses on the socio- ecological process through "which particular social and environmental scales become constituted and subsequently reconstituted" (Swyngedouw and Heynen, 2003, p. 912). Although considerable work has been undertaken to understand scale as a theoretical and methodological concept, less work has concentrated on scale as an explicit object of analysis (Brown and Purcell, 2005; Hu, 2005). Moreover, there are few references to scale and the politics of scale in studies of environmental policy and planning (Bulkeley, 2005). To the degree that scale is mentioned in this literature, it fails to recognize scale as socially constructed. Scale is rather taken for granted as synonymous with the "nested territorial containers within

which social and political life takes place" (Bulkeley, 2005, p. 876). When there is nothing ontologically given about scale, it follows that that results of a political struggle can not be explained based on the inherent qualities of particular scales themselves (Brown and Purcell, 2005). In this article I will emphasise how scales within environmental governance are not primarily an independent variable causing specific outcomes; rather they are a strategy that actors can use to pursue a particular agenda (cf. Brown and Purcell, 2005, p. 608). A *scalar strategy* can be denoted as a political strategy that frames reality in terms of scale (cf. McCann, 2003, p. 160). Outcomes of a given scalar arrangements, it will be argued, are then to be found in the "political agendas of the actors and organizations that produced and are empowered by the arrangement" (cf. Brown and Purcell, 2005, p. 608).

Recent work has begun to address how the concepts of 'scale', 'scalar strategies' and 'struggles over scale' play out empirically in issues of sustainable development and the environment. Bulkeley (2005), for e.g., depicts how the Cities for Climate Protection (CCP) campaign is a case well suited to comprehend how the "new geographies of environmental governance are taking shape" (Bulkeley, 2005, p. 897). She argues (Bulkeley, 2005, p. 897) that through this network the nature of the state is being rearticulated and rescaled, while at the same "a new networked arena within which climate change is being governed is emergent". Boyle (2002) shows more explicitly how the concepts of 'scalar strategies' and 'struggles over scales' can be useful in studying ecological projects. The scaling of environmental governance can be both a medium for and an outcome of concrete environmental projects (Boyle, 2002, p.

173). Similarly Cowell (2003) seeks to demonstrate how relations of ecological and political scale framed the 'decision space' in a study of the development of an amenity barrage in Cardiff Bay. In particular, Cowell discusses the issue of substitutability, i.e. the extent to which forms of capital (environmental, economic) might be substitutable, and how scalar constructs were deployed by various actors actively in compensating the loss of wildlife habitat. A key question was: should the measures provided for compensation primarily create value of international, national or local importance (Cowell, 2003, p. 352)? In a climate change context, this struggle entails both defining how far local climate responsibility should extend, and what sustainability actually means in a local context. In the case study presented in the present article this problematic is exemplified by how the introduction and use of natural gas in the city of Stavanger challenged the city's climate protection commitment. Piecing together different mitigation options and balancing economic interests and nature preservation is an exercise in scalar politics, problematising the 'optimum scale' for pursuing sustainable development (Cowell, 2003, p. 356).

The literature summarised in the previous section provides intriguing examples of scalar constructions in environmental politics. Cox (1998) adds to this literature an analytical 'tool' that help us more explicitly comprehend what actors do when they construct scale and how scalar strategies are used in political struggles.[1] He makes the analytical distinction between 'spaces of dependence' and 'spaces of engagement'. Cox (1998) emphasises the intersection between local politics and a constructed concept of scale: Local

[1] Cowell (2003) do, however, to a certain degree make use of Cox (1998) methodology.

interests, identities, conditions, and agents constitute a ‘space of dependence’; the somewhat fixed local arenas upon which more or less ‘immobilized’ actors depend for sustenance (see also Smith, 1998). A space of dependence may for instance be a local labour market surrounding a localised core industry. These spaces of dependence are inserted in broader sets of relationships or structures, which for example can be local government, national press or even global institutions or actors. Cox (1998) calls these the ‘spaces of engagement’; the spaces that local actors construct in order to secure the conditions for the continued existence of their spaces of dependence.

Cox’ methodology is not without difficulties, however. Cox (1998) emphasises that a number of socio-spatial relations are not possible to substitute for another. Spaces of dependence are these social relations and the interactions that can only be undertaken locally. This immobilisation in particular spaces of dependence – like local economies or local government jurisdiction – is something that is *shared* among the locally based actors (Cox, 1998, p. 5). It is not easy, however, to decide how these local social conditions are to be defined or circumscribed. Smith (1998, p 36) argues that Cox’ definition of spaces of dependence, brings to mind question such as: “What local power relations are embedded in this ‘preservation’ of local objects, relations and purposes? Who is dependent upon what or whom in these localized networks?” These questions engender another key issue: where does a space of dependence end and where does a space of engagement begin? Cox (1998, p. 17) states that the relation between spaces of dependence and spaces of engagement is a contingent matter, and to complicate things further, in certain cases spaces of engagement may

actually be smaller than spaces of dependence[2]. As such, Cox' methodology is not always easy to employ in nesting out particular political struggles. However, even though the distinction between the two concepts is not clear cut, Cox has made an important contribution to the scale debate through pointing to the great variety of ways that scale can be constructed (Jones, 1998, p. 25). The key issue is that locally based actors do not necessarily only practice local politics. – Spaces of dependence are the locally fixed arenas where actors are based and upon which they depend if they want to realise their project. However, through involving the concept of spaces of engagement, Cox shows how actors construct networks of associations *more* global than the local. Whereas Cox (1998) in his case studies concentrates on how local actors or groups build *actor-networks* with centres of power more global than the local, Jones (1998) primarily brings attention to the *discursive* resources that actors use. By building networks, local groups practice politics by reshaping discourses; these local groups discursively re-present their political struggle across scale (Jones, 1998, p. 26). Moreover, actors in such networks do not necessarily know each other, or may not even have met. They do, however, share a specific way of framing and presenting a particular issue. Hajer (1995) calls such networks or associations *discourse coalitions*; they are not primarily based on shared interests, let alone shared goals, but much more on shared concepts and terms. In this article, I align myself with Hajer (1995) in investigating the discursive resources that actors use, not the actor-networks in themselves.[3] It will be shown how the 'local',

[2] An example of this in Cox' article is the case of a local development network where the space of dependence is a service area. Cox (1998, p. 18) states that "for the local actors much of their local economic development activity has to be fought out in the jurisdiction of the local governments into which that space of dependence is subdivided so that the spaces of engagement are at a smaller scale."
[3] This is not to say that actor-networks in themselves are not important (see Keeley and Scoones, 1999. for an overview of different approaches to environmental policy processes). A discursive approach

'national' and 'global' must be understood not just as arenas where political struggles play out, but as discursively constructed concepts that consciously and unconsciously are used as a means of power in political processes. Through building discourse coalitions and designing their texts and speeches in such a way that the benefits of viewing a problem at a particular scale is made visible, these actors can become more forceful (cf. Holzscheiter, 2005). They can e.g. promote certain kinds of intervention and foreclose others, and legitimate certain solutions (Boyle, 2002, Cowell, 2003, McCann, 2003). By scaling environmental problems in a specific way they are thus employing a *scalar strategy*, where the goal is to determine which scalar frame of reference within which the debate should take place.

3. The policy context: debating climate change in Norway

Norway is a major producer of oil and natural gas, which is reflected in the fact that Norwegian greenhouse gas (GHG) emissions from petroleum operations (stemming from the burning of gas in turbines and flares, as well as the burning of diesel) accounted for 25 per cent of all GHG emissions in 2003 (MoE, 2005).[4] The environmental debate in Norway from the 1990s and onwards has circled around how Norway's petroleum production can be assessed from a climate change perspective. There is little discussion in Norway about whether

will, however, in highlighting the discursive manoeuvring around political considerations emphasis other factors which are often overlooked in a more traditional actor-network or interest based analysis. See conclusion for more discussion on this.

[4] The other sources of GHG emissions in Norway are: Road traffic (19%), industrial processes (18 %), combustion (15%), agriculture (8%), coastal traffic and fisheries (7%), waste (4%), other mobile (4%). The total emissions of GHG increased with 9 % in the period 1990-2003 (MoE, 2005).

petroleum should be extracted or not, it is given that we should do this; rather, the discussion is about *how* it should be extracted, i.e. the rate and place of extraction.

Norway has to date not used its oil and gas production domestically, but exported it. Historically, Norway has based its industrial development on the provision of cheap energy from hydro-electric power (HEP). Norway's electricity production is virtually 100 per cent based on HEP (Hovden and Lindseth, 2002). However, with the increased level of energy in Norway, the national production has not been sufficient to cover domestic use, and Norway has imported electricity in recent years. In this context, the White paper No. 9 to the Storting[5] (2002–2003) *On Domestic Use of Natural Gas* considers it important to facilitate increased use of natural gas in domestic value creation (MoPE, 2003). Considerable interest now exists in making use of natural gas in Norway. Increased use of natural gas domestically will add more fuel to the discussion concerning whether Norway should take 'national action' or 'think globally' (cf. Hovden and Lindseth, 2004). The national action (NA) discourse in Norwegian climate policy emphasises that national climate policy should be based on reductions in *domestic* greenhouse gas (GHG) emissions in order to fulfil an international obligation and demonstrate willingness to be an environmental pioneer. The thinking globally (TG) discourse shares with the NA discourse a concern for climate change, but it emphasises the need to think globally and to help secure the internationally most cost-effective reductions in GHG emissions. Such an understanding limits the need for domestic reductions:

[5] The Norwegian Parliament

Rather than prioritising unilateral emission reductions, Norway could through its (relatively clean) petroleum activity contribute to reducing the total *global* emissions (Hovden and Lindseth, 2004, p. 66).

These two discourses have dominated the national debate concerning climate change. In Norway petroleum operations have gone from representing a significant problem for national climate policy in the beginning of the nineties, to becoming a form of climate policy today. Whether through the direct export of oil and gas, the direct export of gas-based electricity, or as domestic use of gas-based electricity, the arguments essentially revolved around the same line of reasoning: since Norwegian petroleum products are internationally relatively clean and could substitute more polluting fossil fuel, Norwegian oil and gas production is good climate policy internationally (Hovden and Lindseth, 2004). As it is becoming more and more attractive for municipalities in Norway to use natural gas as an energy source, the national discourses on climate change and the problems and challenges of coordinating climate engagement and gas production are now filtered down to the local level of governance.

The *local* level has almost been neglected as a site of its own for climate protection in Norway. Long into the nineties the national authorities did not foresee any role for local authorities in climate protection work, nor were there any examples of local authorities taking climate protection initiatives on their own. In the aftermath of the Kyoto agreements in 1997, the parliament, however, started discussing what responsibility that could be placed on the local and regional authorities. This discussion led to a Government allocation of 7 million NOK in 2000 (approx. 900.000 Euros) for testing local climate planning

in a limited number of municipalities. As a part of this allocation the city of Stavanger was given money to draw up its own climate plan.

Stavanger is regarded as one of Norway's leading municipalities in sustainable development and climate protection. The municipality has participated in several state-financed environmental and sustainability projects. In 2001 Stavanger was awarded a prize for being the most sustainable community in Norway. In June 2002 the Municipal Council in Stavanger approved a Climate Plan for the municipality (Stavanger, 2002). The Plan is part of the Municipal Plan and it is connected to the city's Environmental Plan. The Municipal Council saw great challenges to reducing CO_2 emissions in Stavanger: Emissions between 1991 and 2000 had increased by 8. 4 % (exclusive of emissions from air transport), and it was expected that emissions would be 23. 3 % higher in 2010 compared to the 1991 level.[6] The Climate Plan proposed to reduce emissions from mobile, process and stationary sources. One of these reduction objectives came to be highly relevant in the debate that was to follow in Stavanger: *local GHG emissions from stationary energy use should be reduced by 30 % by 2010* (compared to the 2000 level).

At the time the Municipal Council had committed to work for climate protection, the energy company *Lyse Energi* was well en route to planning the introduction of natural gas in the Stavanger Region.

[6] The total GHG emissions for Stavanger in 2000 were 337.923 tonnes CO_2 equivalents (Stavanger, 2002). Mobile sources accounted for 60 % of these emissions, process sources for 27 % and stationary sources for 13 %.

4. The Stavanger case

4.1 The Rogass project

In the summer of 2000, Lyse Energi[7] decided that they would implement their plan to bring natural gas via a pipeline in the Bokna Fjord to North Jæren, and in September 2000 *Lyse Gass* was established as a subsidiary of Lyse Energi AS. The company's aim is to build and operate transportation and distribution facilities for natural gas in southern Rogaland County (Lyse, 2004). In September 2001 Lyse decided to invest 500 million NOK (approx. 60 million Euros) in a natural gas pipeline that would provide Stavanger and the surrounding area of Jæren with natural gas. Lyse's owners said in September 2001 that their commitment to develop the use of natural gas for energy would create new business structures and strengthen existing businesses (Lyse, 2001).

Figure 1: Map of Norway, Rogaland County and the gas pipeline grid

[7] The owners of Lyse are 16 municipalities in the southern part of Rogaland County. The two biggest owners are Stavanger, with 43 % of the shares, and Sandnes, with 19 %.


Kårstø
E39
Boknafjorden
RYFYLKE
Gas pipeline grid
Stavanger
Risavika
Sandnes
NORWAY
Rogaland
JÆREN
Bryne
E39

This would, if realised, be a pioneering project; the first inland natural gas pipeline in Norway. The peculiar thing about the *Rogass* project, as it came to be called, is that it brought about a vocal and intense debate over the environmental consequences of the use of natural gas. Such a debate would arguably not have occurred in many other Norwegian cities, where climate commitments are rather low (Lindseth and Aall, 2004). The use of natural gas in the Stavanger Region would be a severe challenge to the role Stavanger plays as 'best practice' in urban sustainability. It would thus make it more difficult to reach the climate objectives, in particular the goal of reducing GHG emissions from stationary energy use with 30 % by 2010 (compared to 2000 level).

During autumn 2001, the planning process started. In August 2002, it was decided to expand the gas pipeline grid to South Jæren, and Lyse started making contracts with companies about the delivery of natural gas. In January 2003 Lyse continued with the building of the *onshore* pipeline and the distribution of natural gas was extended to municipalities in a part of Rogaland County called Ryfylke. Although the debate on Rogass, both the economical feasibility of the project and the environmental consequences of the project, had been going since the beginning of this decade, it was not until the autumn of 2003 that it was to be decided whether the project would be realised or not. Three events came to be crucial in the Rogass debate. *First*, the decision that Stavanger Municipal Council made in September 2003 when they approved Lyse Energi's natural gas project. *Second*, the application in August 2003 from Lyse Gass for a permit to supply and distribute natural gas in accordance with the National Pollution Control Act and the formal complaint against the Rogass project with the State

Pollution Control Agency (SPCA) lodged by Friends of the Earth Norway and Nature and Youth. *Third*, the SPCA approval, in November 2003, of Lyse's application. My following analysis will be organised around these three events; events that effectively show how Rogass came to be a debate over the 'scaling of environmental governance'.

4.2 Rogass as a local struggle: Rogass confronting the Climate Plan

The majority of the Municipal Council on September 22, 2003, gave its approval for Lyse Energi to deliver natural gas to the city (Stavanger, 2003b):

"The Municipal Council is positive to the plans from Lyse Energi and content with the environmental account that shows that the use of natural gas will not conflict with the municipality's Climate and Energy Plan."

However, not everyone agreed with this conclusion. Stavanger's environmental officer stated that the Council's statement deviated from the goals agreed on in the Climate Plan (Miljøstrategi, 2003). Several politicians in the Municipal Council stated the same. The organisation Nature and Youth (NY) uttered that Lyse Energi dictated Stavanger's Climate Plan. NY spokesperson Marit Hepsø said (Aftenbladet, 2003c):

"When we finally get the municipality to assess the natural gas project in relation to its own climate objectives, the Council in reality ends up abolishing its climate objectives."

The debate continued in the local newspaper Stavanger Aftenblad in the weeks and months to come. The question in point was how the emissions from the Rogass project ought to be seen. Since natural gas is a *fossil* energy source, this

new project would result in CO_2 emissions. However should these emissions be seen as benefiting the environment or as an environmental liability?

The key issue in deciding this matter was that of which scale these emissions should be seen in relation to. Prior to the decision in the Municipal Council, the environmental consultancy Ambio (2003) presented an emission account for the Rogass project. It was on this report the Municipal Council based its decision that the Rogass project was compatible with Stavanger's Climate Plan. A number of arguments were presented in support of the environmental benefits of the project (Stavanger, 2003a; 2003 b). *First*, the Council argued in its decision that natural gas would replace energy sources in the Stavanger region that pollute more. Lyse claimed that based on its contracts with customers, the use of natural gas would replace a total of about 200 GWH that were being generated from other energy sources. The substitution would be: 56 GWH from electricity; 12 GWH from wood fuel; 71 GWH from propane and 59 GWH from (light) oil. The Rogass project thus demonstrated the benefits of replacing oil with natural gas. The argument is that since it was taken for granted that the region would need more energy, it would be better if energy came from natural gas than oil. The logic here is that it would be a 'benefit' compared to the business-as-usual scenario; as long as one assumes that energy consumption would increase, and that this increase would be based on other fossil fuels, natural gas would then make the emissions rise *less* than oil would.[8] *Second*, although it was stated (Stavanger, 2003a) that total local emissions would increase, Lyse's project, it was argued, would result in an overall reduction of *global* CO_2 emissions. Using

[8] It would still, as the environmental movement argued, result in increased emissions – and thus make it more difficult to reach the climate objectives.

natural gas would contribute to reducing Norwegian imports of oil and coal, and would therefore reduce the global emissions related to such imports. *Third*, the local climate commitments were downplayed by the Council. Ambio (2003) stated in its report that municipalities in the Stavanger region would achieve their share of the Norwegian *national* emission reduction target. In this way, the Ambio report alluded to a fairness principle: Seen in a national context, the Stavanger region is not a major committer of CO_2, and it is already taking its share of the Norwegian Kyoto commitments (Ambio, 2003, p. 9). *Fourth*, the local emissions were portrayed as marginal in a *regiona*l context. Ambio stated in the report that the Rogass project would increase local emissions by 2000 metric tons/year, a number that is marginal in relation to the total annual CO_2 emissions regionally, in Rogaland County, of 2.694.000 metric tons (Ambio, 2003, p. 7). Likewise, the chairman of Lyse's board stated that the environmental movement's criticisms were exaggerated. He argued that based on already signed contracts, Lyse's gas project will emit as much CO_2 in one year as the Stavanger Airport, Sola, emits in two days (Aftenbladet, 2003a). The chairman is here downplaying the consequences and disregarding the local climate responsibilities – in reality disregarding the local scale as a valid site for climate protection.

Cox' (1998) idea of spaces of dependence and spaces of engagement provides a good lens through which to view how this conflict unfolded. Within the territory of the Stavanger-region local actors like Lyse and the local politicians are embedded in and dependent on a number of place-specific conditions (cf. Cox, 1998, p. 2) that constitute a 'space of dependence'. What is at stake in this case

is a local interest: Lyse's plans to realise the Rogass project. Harvey (1982) emphasises how capital is mobile (it can always be reinvested other places), however it can only realise its potential for appreciation by transforming itself into immobile forms: Lyse could not relocate the Rogass project easily. The most important socio-political condition that Lyse and local politicians had to face was an obligation on the part of the municipality of Stavanger to take its climate commitments seriously. The ability to realise the Rogass project became dependent on whether they could influence the municipal council, and the broader community for that matter[9], that Lyse's project was acceptable from an environmental perspective. Lacking local leverage to gain acceptance for the project, a network of associates that could promote Rogass was needed. This relationship can be understood as a 'space of engagement'. A network consisting of politicians, primarily from the Labour and Conservative party, Lyse and Ambio Consulting was formed as a discourse coalition (cf. Hajer, 1995); i.e. it was based on a shared way of framing and presenting the environmental consequences of the project. This set of relationships was established in a fixed space of dependence (the Stavanger region), however, the space of engagement was *discursively* extended to a higher geographical scale: The majority of the politicians in the Municipal Council argued that if one were to view the climate change problem as belonging to a *more* global scale (cf. Cox, 1998), Lyse's project would be environmentally friendly. The emissions from Lyse's project would be marginal in a regional and national context,

[9] Although the debate mainly took part in the municipal council, and in the local press, a broader community based campaign was also started. Nature and Youth (*Natur og Ungdom)*, Friends of the Earth Norway (*Naturvernforbundet*) and the Environmental Home Guard (*Grønn Hverdag*) started a campaign called "Fire Lyse!" [*Gi Lyse sparken*!], which had the goal of hindering Lyse's project. They encouraged all consumers to shift to a more environmentally friendly electricity supplier (Aftenbladet, 2003d).

whereas in a global context they would even contribute to a total reduction of global emissions. The local struggle was effectively represented as a global struggle, and in choosing this representation it stroke a chord with local politicians that argued on its behalf (cf. Jones, 1998). In this way one could say that the politics of securing a space of dependence for Lyse unfolded discursively on a global scale. The Rogass project was presented in a way that increased the possibility for local politicians to overcome "the contradiction between mobility and fixity" (cf. Cox, 1998, p. 6).

By scaling climate change globally, Lyse and the local politicians saw no reason to pay attention to the 30 % emissions reduction objective that the Municipality had committed to.[10] Instead, the Council took into account how the contracts already signed, in the Stavanger Region, showed that natural gas would replace other, more polluting energy sources. Those in favour of Rogass could not effectively dispute NY's argument that Rogass would make it impossible to reach the local climate objectives. Rather than accepting this premise for the debate, they instead downplayed the negative consequences of the Rogass project. The debate was 'reframed' or rescaled in such a way that it became difficult, or even irrelevant, to raise the issue of local climate commitment (cf. Hajer, 1995, p. 49). The actor network in favour of Rogass – consisting of Lyse, local politicians and Ambio consultancy – had chosen their discursive space of engagement (cf. Jones, 1998) as first and foremost the global scale.

[10] Although most of the GHG emissions in Stavanger come from process (mainly waste deposits) and mobile sources, it was the goal of reducing stationary energy use by 30 % by 2010 that primarily would be challenged by Lyse's natural gas project.

4.3 Rogass as a national struggle: Rogass meets the National Pollution Control Act

4.3.1 Application from Lyse and the response by NY/FEN

Cox (1998, p. 7) emphasises how local interests are critically conditioned by the ability to exercise territorial power, and that the most obvious candidate for control over a geographic area is the various agencies of the state. The realisation of the Rogass project became critically dependent on state power, when in July 2003 the State Pollution Control Agency (SPCA) decided that Lyse's plans for the pipeline had to be evaluated according to the National Pollution Control Act. It was the organisation Nature and Youth (NY) that lodged a formal complaint against the Rogass project. They wanted to stop the Rogass project by appealing to national government on the basis of The National Pollution Control Act. Lyse, however, continued with the building of the *onshore* pipeline, while awaiting the State Pollution Control Agency's (SPCA) verdict.[11] With the case handed over to the SPCA, the local issue was now also fought nationally. In order for both Lyse and the environmental organisations to secure their local interests in the case, they where now relying on how Rogass was evaluated at the national scale: Lyse had to show more explicitly how their project could be seen as environmentally friendly, and NY/FEN on their part hoped that the act would stop the project.

[11] NY charged that "Lyse's tactic is apparently to finish as much as possible in order to make it difficult for the SPCA to stop the project" (Aftenbladet, 2003b). The SPCA did not, however, want to stop Lyse's building work while it was dealing with the case. In the middle of August, Lyse started laying the *underwater* pipeline, and on August 27, the 48 km from Kårstø to Risavika across the Bokna Fjord were finished.

On August 8, 2003, Lyse Gass applied for a permit to supply and distribute natural gas in accordance with the National Pollution Control Act (Lyse, 2003). The application is a thorough presentation of the environmental consequences of the Rogass project. September 8, 2003 NY and FEN filed their joint submission. The two organisations stated that the Rogass project, if realised, would be the first great gas pipeline project in Norway. Therefore, how the SPCA managed the case was very important, they argued, because it would set a precedent (NY, 2003). NY/FEN made several comments about Lyse's application. Similar to the local dispute presented above, Lyse's application and the submission by NY/FEN can be read as a *struggle over scale*. However, this dispute is first and foremost a contestation of how Lyse's project will effect *national* climate commitments.

Lyse and NY/FEN view national climate commitments diametrically different. A key assumption for NY/FEN is that Lyse's gas project must be stopped because it would violate Norway's *Kyoto commitments.*[12] Lyse, however, tried to reframe national climate obligations. They did not use the Kyoto commitments as their key reference, but argued instead that national emissions would be higher if the project were not built. A key assumption for Lyse was that if Norway does not produce more electricity, Norway would have to 'import emissions' from abroad. With reference to The Norwegian Water Resources and Energy Directorate (NVE), Lyse (2003, p. 18) argued that the total of such emissions imports in 2015 would be 15 TWH. Since electricity produced abroad for the Norwegian market to a large degree comes from coal,

[12] The national climate target that was given Norway in Kyoto 1997 was that CO_2 emissions should not be increased by more than 1 % by 2010, compared to 1990 level.

the use of imported electricity would increase *Norway's* total global emissions. The company cited (2003, p. 18) NVE and the Ministry of Oil and Petroleum (MoPE) in arguing that coal power would continue to be, in the short term, the marginal production in the integrated North European market. Furthermore, some studies show that natural gas-based power will become the most important marginal electricity source in this market (ECON, 2002 in Lyse, 2003, p. 18). Based on these conditions, Lyse showed how the contracts they already had entered into would result in a global reduction of CO_2 by about 26.000 metric tons/year due to substitution of electricity from more polluting fossil fuels.

Lyse brought forward strategies that 'jump scale' (cf. Smith, 1996; Cox, 1998): local interests in spaces of dependence are related to the global scale. Moreover, Lyse successfully formed a *discourse coalition* with other centres of power. By *citing* a state agency (MoPE) directly the company is trying to influence state agencies. They also cite important national resource and development institutions (like NVE and ECON[13]) that can exercise some indirect influence over these agencies (cf. Cox, 1998, p. 7). While these institutions did not actively participate as strategic partners in Lyse's campaign, they were nonetheless drawn into it and used to legitimise Lyse's arguments, which attributed the campaign more leverage.

NY/FEN on their part argued that the Rogass project would lead to a significant *increase* in GHG emissions (NY, 2003). First of all, they disputed that coal power would come to be the marginal production in the future power market.

[13] ECON is a leading Norwegian economic knowledge-based firm. Climate change has been an important area of work for ECON since 1990. ECON have performed a series of studies of policy instruments to address climate change, such as taxes, tradable emissions quotas and negotiated deals.

Moreover, NY/FEN argued that there are alternatives to natural gas, such as renewable electricity, biomass and increased energy efficiency. NY/FEN also disagreed with what was denoted as an environmental 'benefit'. For Lyse the project was environmentally beneficial in comparison to the business-as-usual scenario, given the assumption that energy consumption would increase, and that this increase would be based on other fossil fuels. Natural gas would then contribute to a lower rise in emissions than what could be expected with oil. For NY/FEN a fossil free solution was the only environmentally beneficial resolution, involving the substitution of petroleum with renewable energy.

However, NY/FEN did not just aim to reframe national commitments; they continued their mission to *rescale* climate commitments. As they did in the local dispute over the Climate Plan, they insisted in their complaint with the SPCA that the consequences of the project should be assessed at the *local* and *regional* scale. An important reference for NY/FEN was the Energy Plan for North Jæren region[14] (cf. Farsund and Storås, 2000). The two organisations brought attention to an energy scenario presented in this plan, The Environmental Energy Alternative. According to this scenario a commitment to energy efficiency and renewable energy could secure the region's necessary amount of energy without using fossil fuel, while at the same time replacing most of the heating generated from burning oil. Therefore, the region could manage well without Lyse's natural gas project, NY/FEN argued. They also referred to a report about the use of natural gas in North Jæren by the consultancy Asplan Viak (cf. Asplan, 2003) on a commission from the SPCA. The report stated that emissions would

[14] The geographical area surrounding the city of Stavanger. See Figure 1

increase by 30 % to 85 % by 2020, if Lyse would get permission to distribute natural gas in the region (NY, 2003. p. 9). Lyse, on the other hand, downplayed the level of local emissions that would be generated by the project, and it was taken for granted that Norway would simply need more energy. Thus NY/FEN had a diametrically different view from Lyse. NY/FEN saw great potential in alternative energy sources, whereas Lyse downplayed such potentials. The two sides used different facts and expertise to support their respective claims.

4.3.2 The SPCA's decision

The National Pollution Control Act was written with end users who polluted in mind. However, in the Rogass case Lyse was not an end user, it did not burn the natural gas itself. Instead it simply would distribute it via a grid to end users. However, in this case, the Law Division in the Ministry of Justice and the Police concluded that the act also should apply to the Rogass project. They argued that although Lyse did not itself pollute, the company was responsible for emissions by virtue of delivering the natural gas to end users that pollute (SPCA, 2003). In late November 2003 the SPCA approved all aspects of Lyse's application. What were the SPCA's grounds for approving Lyse's Rogass project? Their approval was based on §11 cf. §16 of the National Pollution Control Act. This clause states that:

"…the state pollution authority can, after an application is filed, give permission to activity that can entail pollution […]. When the pollution authority decides whether to give permission, it should be given importance to both the negative consequences of the pollution as well as the advantages and disadvantages the initiative will entail in a broader societal context."

The SPCA concludes as follows on Lyse's application:

•There are many uncertain factors in this case, and it is thus difficult to decide the total environmental consequence of the Rogass project.

•The SPCA, however, states that natural gas in the region – as pinpointed in the application – first and foremost will be a direct competitor to other fossil fuels, mainly (light) oil and propane that are used today by businesses in the region.

•The SPCA therefore declares that:

"the natural gas infrastructure is in accordance with the preconditions in the Government's report On Domestic Use of Gas, and will therefore give permission to the initiative."

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What is striking about this decision[15] is that there was no specific reference to the *national* scale, not to the national climate commitments or whether the Rogass project would make it more difficult to reach the national Kyoto goal. The SPCA concludes that Lyse's already signed contracts will result in lower global emissions, than would have occurred in the absent of the contracts. Anne-Grethe Kolstad, an SPCA section leader, pointed out that, the Rogass project will lead to increased emissions nationally. However, she considered the emission consequences as marginal, and therefore not severe enough to justify stopping the project (Kolstad, 2004). The decision marks effectively that climate commitments must be seen in relation to other national goals and values. The SPCA effectively bought the way of framing national climate commitments that Lyse used.

[15] After SPCA approved all aspects of Lyse's application, NY appealed the decision, arguing that the case had not been treated in a satisfactory manner from an environmental perspective (Aftenbladet, 2004). To date, the SPCA's decision stands unchanged.

The SPCA decision was the first of its kind; it was an evaluation of how domestic use of natural gas would be seen in a national climate context. By its decision to permit Rogass, the SPCA effectively institutionalised the *relationship* between domestic use of natural gas and climate change. Hajer (1995) makes a distinction between discourse structuration (the ways in which certain ideas have to be referred to in order to convey legitimacy on actors) and discourse institutionalisation (the way in which particular understandings of policy problems become routinised in policy practices and institutions). Referring to Hajer, it is evident how the thinking globally discourse challenged the established climate protection discourse, and it came to *structure* the Rogass debate; the benefits of substituting more polluting fossil fuel with natural gas was argued over and over again in the local debate. The decision from the SPCA marks an *institutionalisation* of the thinking globally discourse with regard to domestic use of natural gas. By permitting the continuation of the Rogass project, the national authorities in effect established that national climate commitments were not severe enough to stop such activity.

5. Conclusion and discussion

There is a lack of studies that aim to understand how the concepts of ‘scale’, ‘scalar strategies’ and ‘struggles over scale’ play out empirically in case studies of sustainable development and the environment. The aim of this article has been to show how scalar constructs are actively used in the politics of climate change. The article depicts how scalar categories like the ‘local’, ‘national’ and ‘global’ are conceptually constructed to be used as means of power in political

processes. Even though the political struggle studied here was primarily 'localised' in the city of Stavanger, the article argues that the process in question cannot be reduced to neither 'local' nor 'global', and that we often misunderstand environmental politics if we aim to use bipolar categories (see also Shaw, 2004, p. 385).

The article demonstrates how a local energy company felt compelled to use environmental arguments to win positive acceptance within an established local climate protection discourse. Given that the controversy was from the outset framed as a local climate protection discourse, the company had to make its points within this discursive context. This article demonstrates how Lyse framed the debate in terms of what is good (or bad) for the environment by constructing a 'space of engagement' (cf. Cox, 1998) that brings in the global scale, pointing to the decrease of global emissions that would result from the Rogass project. Parallel to this, the company also chose to overlook Stavanger's Climate Plan. The local case was thus reframed to shift attention from local responsibilities. The article shows in this context how Lyse drew in other centres of social power – both locally and nationally based actors – and formed a *discourse coalition* (cf. Hajer, 1995), to achieve its preferences. Ultimately it was the State Pollution Control Agency (SPCA) that decided in favour of Lyse's Rogass project. The realisation of the project can thus be seen in relation to how it fitted with an already established climate discourse at the national level. The way in which Lyse framed the project, and the approval of the SPCA, bears clear resonance to the thinking globally discourse that was developed during the climate debate in the 90s in Norway. The claim that the effects must be seen

assessed with reference to the global scale, enlarges the ‘decision space’ within which trade offs can take place (Cowell, 2003, p. 347). If the discourse on local responsibility were to win through, the impacts of development and impacts of climate protection would have been brought much closer together and thus it would have restricted the options available. By contrast, the thinking globally discourse makes the petroleum industry remain while addressing the environmental problem at hand (Hovden and Lindseth, 2004, p. 77).

By analysing the case in terms of the issue of scale, I have shown how Lyse’s corporate purpose to advance an economic agenda can also accommodate ecological issues. Lyse having invested a total of 700 million NOK (approx. 90 million Euros) in the project, clearly had an industry-economic rationale of seeing the project realised. A more actor- or interest based study of this dispute would have emphasised these material interests first. However, an interest based approach would have failed to see how Lyse was able to employ an environmental discourse to gain legitimisation and acceptance for their plans. By referring to climate change as a global issue which demands global solutions, Lyse used a scalar strategy that ultimately managed to undermine alternative local climate-change objectives. The discursive approach used here has proved to be particularly helpful in terms of revealing how a local energy company could use the old environmental slogan ‘think global, act local’ to its benefit.

This finding also has more general implications for the understanding of environmental governance. Pressures from increasing flows of people and

resources have placed the environment more centrally in urban politics. A new global/local environmental politics is emerging, with cities increasingly taking on global environmental issue such as climate change, transport and energy (Bulkeley and Betsill, 2003). A key question becomes how these issues of environmental management are incorporated and come into conflict with other forms of urban governance. While et al. (2004, p 550) argue that cities are increasingly searching for a 'sustainability fix': "A selective incorporation of environmental goals, determined by the balance of pressures for and against environmental policy within and across the city". The idea is particularly relevant in a situation where a growing volume of international environmental agreements, like the Kyoto protocol, are 'brought home' for implementation by national authorities, with clear obligations to be posed on to subnational authorities (cf. Bulkeley and Betsill, 2003). The present case demonstrates how local actors are in need of re-scaling sub national governance in search for a 'sustainability fix' (cf. While et al., 2004) that can accommodate a new and demanding ecological challenge like climate change. However, in negotiating such a fix, it has become evident how a fundamental dislocation between competing interpretations of climate protection can emerge. The jury is still out on the question of who is the most environmentally friendly in this case – Lyse or the environmental movement in Stavanger. There are no generally accepted rules and norms according to which local sustainable development politics is to be conducted and policy measures to be agreed upon. However, through the translation of the 'thinking globally' discourse into concrete politics [the building of the gas pipeline], the nature and interpretation of local climate protection as a policy problem in itself has been challenged and reframed (cf.

Schön and Rein, 1993; Bulkeley, 2004). The idea that communities have a *democratic* responsibility to take on climate commitments at the local level appears to have lost resonance relative to the idea that climate change is a global issue requiring global solutions. Stavanger can be seen as one of the "few islands of best practice surrounded by a sea of 'business-as-usual'" (Cf. Bulkeley, 2000, p. 27). If a leading climate municipality in Norway cannot maintain the idea of 'differentiated responsibility' – with specific ameliorative burdens being taken on by local-community interests – how and why should other municipalities in Norway be expected to take on such commitments? With expected growing ecological problems, like increased global warming, it is hard to see how nation states will manage without a strong cooperation from local communities (Bulkeley and Betsill, 2003). In this context much more needs to be known as to how the emerging multi-scaled politics of climate change policymaking is shaping the conditions for urban environmental management. In particular, the results of the Stavanger case study indicates a growing need to critically explore the normative implications of scalar re-framing as a discursive technique in local environmental conflicts.

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Multilevel governance and local climate planning in Norway

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Abstract

One of the key features of the post-Rio era has been how global environmental governance is mediated between local, national and global scales. In this article we draw on experiences from local climate planning in Norway in order to discuss the ways in which climate change enters into a multilevel policy setting. We highlight that local actors can both play the role as a *structure* for the implementation of national or international climate objectives, as well as that of being a policy *actors* taking independent policy initiatives. Based on the Norwegian case, supplemented with knowledge gained from international knowledge review, we present a typology of six different categories of local climate policy. We emphasise how the relationship between national and local authorities is a crucial factor if climate policy as a specific local responsibility should be further strengthened.

Introduction

Local climate planning may be understood in different ways: In its most *explicit* form it may be a planning process specifically devoted on reducing greenhouse gas (GHG) emissions. Still, more common is the *implicit* form, in which local climate planning can have a wide range of formats. It can be in the form of local *energy* plans, dealing with both the production (most common) and consumption side of energy; it can be in the form of *transport* planning, and it can be in the form of *land use* planning – all examples of local planning processes with clear connections to climate policy. The focus in this article is on the *explicit* form of local climate planning. An explicit focus can also capture different approaches. A *narrow* approach would only focus on the GHG emissions from local public services like schools etc, whereas a *broad* perspective would target in principle *all* local sources of GHG emissions. Our discussion will relate to a *broad* perspective on local climate planning. Furthermore we will restrict our discussion to climate change *mitigation* and not include the issue of climate change adaptation.

Global agreements to reduce GHG emissions, and national regulations and incentives to stimulate mitigation activities, can encourage or require local action. Still, many scholars and politicians think of climate change as an area of politics with relevance mostly for the *international* and *national* level of government, and with only *little* room for local initiatives. In this article we will show how climate change enters into a multilevel governance chain, and what role the local level plays in this chain. We will address the following three research questions: (1) How can climate change be described as multilevel oriented? (2) What are the experiences with local climate planning in Norway? (3) How can we assess policy space for local climate policy? By local we mean subnational governments, and in Norway this means municipalities and counties. Although our

emphasis is on Norway, we will also relate to the experiences internationally, and in this way discuss local climate policy more generally.

Multilevel governance and climate protection

Multilevel governance

Multilevel governance has become something of a catchword in the academic and political debate on environmental policy, and is often presented as an alternative and opponent to the traditional hierarchical top-down system of international-national-local government relations (Eckerberg and Joas, 2004). Others state that multilevel governance is not a normative choice, but rather a "reality" of contemporary governing processes. Still, we will argue that there is a choice as to what extent and how one should include the *local* level of governance in any kind of governing process; be it a traditional hierarchical top-down system or a more modernistic multilevel governing process. The perhaps most important question in this context is what role the local level of government should play: merely a *structure* for national government policy implementation or (also) the role of an independent policy *actor.*

The development of the multilevel system has, according to Eckerberg and Joas (2004), been through both a vertical and a horizontal shift. The *vertical* shift implies a movement of political power up to a trans-national level of government and at the same time a movement down to local authorities. In this version of multilevel governance the nation-state will still remain a central actor in processes of governance and government, although its' possibility to govern has become more restricted. The *horizontal* shift implies a movement of responsibilities from governmental towards non-governmental actors. Hajer and Wagenaar (2003 p. 1) argue that the shift from government to *governance* signifies "changes in both the nature and topography of politics. A new range of political practices

has emerged between institutional layers of the state and between state institutions and societal organisations". Within environmental politics this shift entails a much wider involvement of interested parties, both in policy formulation but also implementation processes, than before (Rydin 2003, p. 5). This development can be noted on all societal levels ranging from the sub-national to the supranational level (Lundqvist, 2004). As such Bulkeley and Betsill (2003, p. 18) argue that the concept of multilevel governance is well suited to capture Western politics of today.

The multi level character of climate policy

Within this multilevel governance chain, climate change can be presented as in figure 1 below.

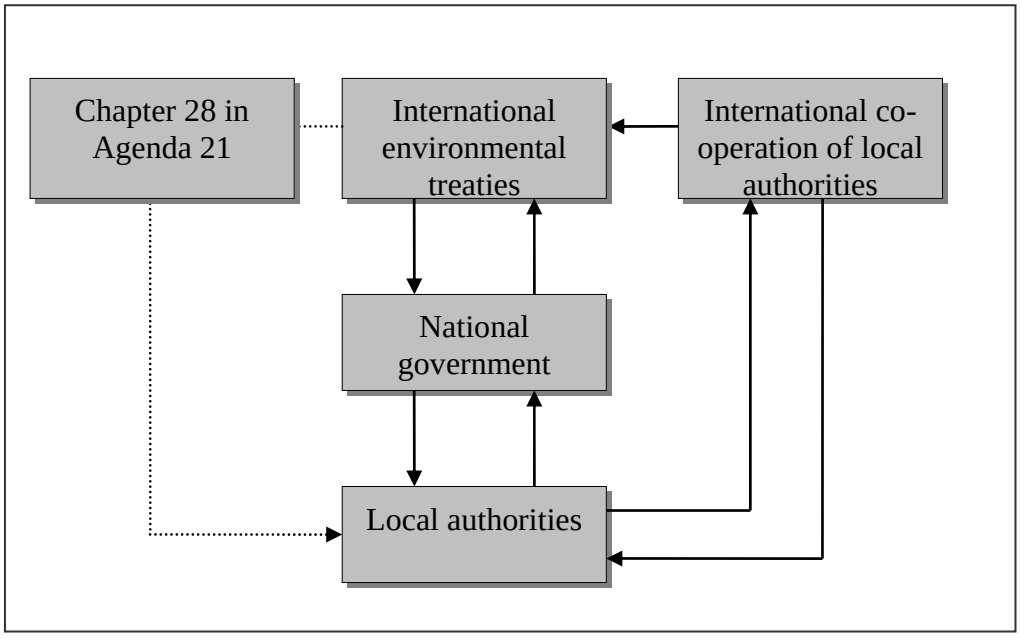

Figure 1 *Elements of multi-level governance in climate policy*

At the "top" we find the international climate agreement and climate negotiations taking place between states. International agreements are then either implemented, or ignored, by national governments, "with consequent local level obligations" (Bulkeley and Betsill 2003, p. 5). This constitutes a traditional hierarchical view of how politics is conducted. However, internationally there are examples not only of regional and local authorities functioning as *structures* for implementing national climate policy; we also find examples of them acting as policy *actors.* Local and regional authorities take independent policy initiatives and send political signals to the national level. Such "upward signals" are often in the form of clarification questions on what is expected of local and regional climate policies. Moreover, they are often a quest for stronger horizontal integration at the national level: i.e. a recognition that the environmental sector alone will not be able to secure climate objectives, and that each sector must therefore take on board climate objectives if these are to be achieved (Lafferty and Hovden, 2003).

Of particular interest in climate change policymaking are the lines of communication between the local and the supranational. These lines often bypass the national authorities. Through the formation of different inter-municipality collaborations, like the Climate Alliance and the Cities for Climate Protection (CCP), international concerted action for climate policy locally has been given an institutional foundation. An interesting feature is the assertive role that these organisations have taken towards the international climate policy negotiations. The CCP has communicated to the international climate policy negotiations a wish for more ambitious and binding GHG reduction goals. The network has emphasised that legally binding national commitment to reduce greenhouse gas emissions, if agreed-upon targets and timetables are ambitious, would significantly enhance and amplify local initiatives, and that weak national commitments risk undermining local government initiatives (Lindseth, 2004).

Although there are no direct political signals established the opposite way, from the supranational to the local level, there is an *indirect* link through Local Agenda 21. Chapter 28 of UN's Agenda 21 (UN, 1993) urges local authorities to undertake a consultative process with their inhabitants in order to arrive at a consensus on an action plan or a "Local Agenda 21" for the community. Since Local Agenda 21 (LA21) has historically played an important role for cities in developing local climate policy, it can be argued that indirect political signals on climate policy from the supranational to the local level have been established through LA21.

Another characteristic feature is that local environmental policy in a way has developed inside a national political vacuum. The pioneer municipalities are not only pioneers in comparison to other municipalities; to some extent they are also pioneers in comparison to

their respective national authorities (Lafferty and Eckerberg, 1998). This is also the case in climate change politics, the situation in USA being perhaps the most striking case in point in which frontrunner local communities has an important role in influencing also the *national* climate policy debate (Betsill, 2000; 2001).

The potentials of multilevel governance

There are several factors indicating that the local administrative level ought to play an important role in a multilevel climate governance regime. Not only are subnational governments already important actors in climate governance (Bulkeley and Betsill 2003, Lindseth 2004, Coenen and Menkveld 2002), the climate change problem are also indeed *both* global *and* local. *Global* because the triggering factor of man-made climate changes, i.e. the increase in greenhouse gas concentrations in the atmosphere is globally dispersed, and because the processes that cause greenhouse gas emissions are distributed over the entire planet. At the same time, the problems are also *local* in the sense that the effects of climate changes will vary dramatically due to local conditions, and because emissions in reality always will occur locally. Local authorities can here play a central role in *translating* the climate change problem and making it comprehensible and relevant for local action. The foremost challenge in climate politics will thus not be to ”think globally and act locally”, as frequently stated in the debate on sustainable development, but rather to adopt a “local perspective on global environmental problems” and to clarify how the global and the local levels are interconnected, in both nature and society (Hägerstrand, 1991; Kates et al., 2003). This entails transforming the global into a local problem and it concerns clarifying the importance of local actions, measures and choice options (Corell, 2003). To accomplish this there is a need to develop concepts and utilize metaphors (Aall, 2000). Since local authorities make up the front-line service of public administration, the

municipalities can also play an important role as *sounding board* and *discussion partner* within the framework of a national policy debate. This is particularly significant when dealing with contentious and complicated policy areas like climate change, where it is essential to ensure legitimacy for proposed (national) goals and measures while at the same time be open for local adaptations in order to ensure effective implementation. However, as illustrated in particular by the CCP network (Lindseth, 2004), local authorities can not only act as *implementers* of national policies, they can also play an important role in taking independent climate policy *initiatives* both locally and in collaboration with national authorities (Groven and Aall, 2002).

Below we consider what the particular case of Norway can tell us about the nature, potential and pitfalls of local government action on climate change.

How do Norwegian municipalities work with climate planning?

The emergence of local climate planning in Norway

Very few Norwegian municipalities have taken part in either of the two international networks on local climate policy The Climate Alliance and CCP. Hence *local* initiatives, for instance from NGOs or from local elected representatives, and *national* government initiatives have played a more important role in Norway as compared to many other countries when it comes to putting climate policy on the local agenda. Local climate policy as an explicitly formulated policy area entered the *national* political agenda in Norway when the Parliament passed the Government White Paper on the Kyoto protocol in June 1998. The Government White Paper was followed up in a circular from the Ministry of Environment (1998) in September 1998, stating that: "[M]unicipalities, in co-operation with the county and regional government authorities, should make local climate plans

aiming at reducing GHG emissions and increasing carbon sequestration by afforestation". This steering signal was followed up in 2000 by the Ministry of Environment (MoE) which granted NOK 7 million[1] to stimulate local climate planning in Norwegian municipalities and counties. 26 projects were supported, involving a total of 37 municipalities and 8 counties out of a total number of 435 municipalities and 19 counties. In addition to government grants, the municipalities were also offered help through the use of a web-based information source, which among other facilities allows you through a "one-click" device to produce a local GHG emission account.[2] This trial activity constitutes the main empirical basis for the study that this article is based upon.

Background and methods applied

Our study covers all municipalities in Norway involved in comprehensive local climate planning at the time of the study. The study consists of two surveys; one during spring 2002 (Groven and Aall, 2002), and a follow-up study during winter 2003/04 (Lindseth and Aall, 2004). The second survey was a follow-up, in the sense that we focused on the implementation stage of the planning process. In both surveys we received a 100 percent response rate. For most of the municipalities we have also carried out document analysis, studied planning documents, background reports prepared under the planning process, minutes from working groups, decisions in municipal bodies, press clippings and internet presentations. In addition we have done in-depth studies in three cases: the cities of Stavanger and Kristiansand and the county of Sogn og Fjordane (Groven et al., 1999; Farsund et al., 2001; Groven, 2001; Lindseth and Aall, 2004, Lindseth 2005 submitted). In order to contextualise the national study, we have also carried out two international studies: A study of international networks on local climate policy (Groven et al., 1999; Lindseth,

[1] Approximately 850 000 €

[2] http://www.sft.no/arbeidsomr/prosjekt/klima/verktoy/klimakalkulator/index.asp

2004) and an international knowledge review on research on local climate planning and policy (Teigland and Aall, 2002).

The municipalities and counties studied here can be divided into four types of actors or actor constellations involving a total of 44 units: Single municipalities (24 municipalities); co-operating municipalities (three groups of all-together 13 municipalities); single counties (4 counties); co-operating counties (one group of 3 counties). Amongst the municipalities that have made a climate plan, larger cities are overrepresented at the cost of rural municipalities. The MoE also preferred, in their selection of municipalities to receive grants, previously environmentally active municipalities and municipalities with their own environmental policy officer (Groven and Aall, 2002, p. 37). However, in total the sample of municipalities represent a broad variety of different "municipality-types" in Norway.

The status of the planning process

Our study reveals that 83 per cent (36 of the 44 units) of all planning processes led to a politically adopted *planning document* (cf. Figure 2). The question of whether to formally *embed* the plan in the Planning and Building Act can be important from the point of view that this would increase the likelihood of the plan being followed up with concrete measures. 69 per cent of the municipalities and county municipalities (25 units) that have a plan have entrenched it either by integrating it into their municipal/county plan or by adopting a separate municipal/county sub-plan. Looking at the resolutions to *implement the plan on a rolling basis*, the number drops to 17 out of 44 municipalities (27 per cent). The decision taken on implementation on a rolling basis can be interpreted as a strong indicator of what kind of priority that is attached to climate policy planning. In this respect it is

surprising that such a large proportion of the municipalities have decided to implement the plans on a rolling basis, given that this must be done without government grants.

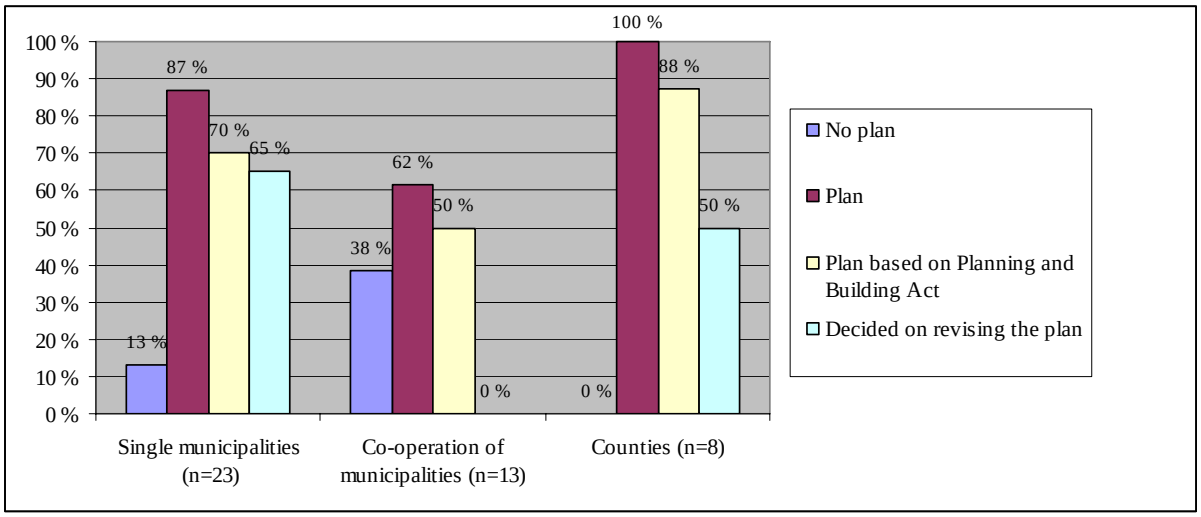

Figure 2 The primary outcome of the planning process

Local and national goals

The overall impression regarding *climate goals* is that a rather high percentage of the local climate plans have been passed *without* setting a concrete goal for GHG reductions. Furthermore, those plans containing such quantified goals in most cases do not provide arguments to justify a specific level of ambition. 17 of the 35 climate plans and plan proposals contain a quantified goal for GHG emission reductions. The level of ambition in the municipalities corresponds well with the national climate goal of Norway. In 9 out of 17 climate plans with a quantified reduction goal, this has been based on the national Kyoto target (i.e. CO_2 emissions should not be increased by more than 1 % by 2010, compared to 1990 level). Two municipalities have failed to relate their goal to a reference year, hence making it impossible to audit the target. The remaining six municipalities have higher ambitions; the most ambitious one is Norway's second largest city, the city of *Bergen*, where the politicians repeatedly have committed themselves to reduce CO_2-emissions by 20 per cent by 2005 with 1991 as the reference year, while the reduction goal

for all GHG emissions is set to 30 per cent within the same period. Other examples are Sarpsborg and Trondheim, both with a goal of 20 percent reduction.

Local measures

In the follow-up survey carried out during winter 2003/04 we asked the municipalities to report on what concrete measures mentioned in their climate policy plans that had been followed up. Based on the answers received in the survey, we sorted these measures into two main groups: measures implemented within the energy sector, and those implemented within the transport sector. An overview of the measures implemented reveals that concrete follow-up of climate policy plans were for the most part concentrated on measures within the *energy* sector, wherein the installation of district heating was prevalent. This was the case for measures implemented in both municipal buildings and in the local community as a whole. Only the larger cities – like Bergen, Trondheim and Oslo – have reported implementation of measures within the transport sector, in which structural measures and investments in public transport are the dominant. A probable reason for why we found implementation of transport measures only in the larger cities is the relatively higher importance of public transportation as compared to the more sparsely populated areas of Norway.

A change in policy focus

It is to note that the municipalities clearly have shifted their focus from climate *and* energy to *mostly energy* during the period of time from the plans were drafted, in 2000, to the time when the follow-up survey was carried out, during winter 2003-04. There are several possible reasons for this shift.

In the survey carried out during the winter of 2003-04 we did not ask for the reasoning behind the actual choice of measures. We did, on the other hand, ask for general comments on how work on climate policy in the municipalities was put into practice. About half of the municipalities provided such comments. A common feature was the reporting of a *decline* in commitment to and interest in climate issues. While there was considerable commitment attached to the planning process itself, it clearly declined once the plans were in place and ready to be implemented. This reported decline mirrors the general trend in Norway of a marked decrease in concern about the greenhouse effect and climate changes. Whilst 40 per cent claimed in 1989 to be very concerned, the same concern was expressed by just under 10 per cent in 2001 (Hellevik, 2002, p. 9). At the same time, there has been a general increase in the attention given to energy issues due to the periodically large price increase (in Norwegian terms) of domestic electricity. In 2003 the average price of hydroelectric power in Norway was 45 per cent higher than in 2002. This was due to a combination of little rainfall and subsequently a lower production of hydroelectric power, combined with greater opportunities to export hydroelectric power.

A more pragmatic possible reason for the shift from climate to energy might be that the municipalities choose to take the line of least resistance. Proposed measures within the energy sector will often prove less controversial in the sense that they can entail the possibility of financial savings, at least in a long time perspective. There is often also a great number of energy saving measures that can be carried out in municipal buildings. Such measures often prove easier to get approval for than, for example, emission reduction measures in the transport sector. Apart from a small group of industrial municipalities, the greatest challenge facing most of the municipalities is to reduce mobile emissions. In our last survey, however, only six of the municipalities reported to have climate policy

measures directed at the transport sector. The consequences of a shift towards focusing on energy in the municipalities might thus lead to a distraction of the climatic challenges in the transport sector.

The scope of action for local climate policymaking

The experiences with local climate planning in Norway show that municipalities rarely put climate change at the forefront of the political agenda. It seems evident, however, that the municipalities are not solely to blame for this. – As argued in this paper, the opportunities and constraints for local climate action are constructed through the emerging forms of multilevel governance (cf. Bulkeley and Betsill, 2003). In this governance chain, national government continues to play an important pre-requisite for local climate protection. This is particularly true in Norway, where municipalities over the last two decades have been part of numerous state financed trial projects, and thus can be seen as a "laboratory" for the implementation of national political goals (Aall, et al., 1999). According to Lafferty and Coenen (2001), local sustainable policy is dependent on national authorities as committed collaborators, not least in order to provide local authorities with new policy measures as required, as well as to ensure the necessary national coordination of conflicting interests and the integration of climate considerations in important sectors such as transport and communication and energy. The need for such type of national support is further reinforced by our analysis (Groven and Aall, 2002; Lindseth and Aall, 2004). Moreover, an important conclusion supported by numerous scientific studies is that if you are to involve local authorities in solving conflicting environmental problems, this implies sectoral integration at the national level of government (Hovik, 2000). This in turn presupposes that climate politics are sufficiently entrenched at the national level.

As a way of summing up, we thus below present six different categories on local climate policies based on international knowledge review and the experiences we have gained from our own empirical studies in Norway: (1) business as usual; (2) policy redressing; (3) picking the low-hanging fruit; (4) symbolic climate policy; (5) local authorities as policy structure; and (6) local authorities as policy actor. In the discussion and the categorisation below we will in particular emphasise the following two factors: a degree of local initiative and national involvement.

On the *lowest* level of commitment is what can be denoted as '*business as* usual'; i.e. *no* local initiatives and *no* national involvement.

The first level of any real activity is here referred to as '*policy redressing*'; i.e. redressing existing policies in a new climate policy context. A number of examples of this strategy can be found in European and American cities, where old programmes to mitigate local air pollution are renewed by linking them up to new climate policy initiatives. This is done either by using climate policy considerations to reinforce arguments for reducing local emissions (from, for example, the transport sector), or by pointing out that proposed mitigation measures would also have a positive effect on the reduction of local air pollution (Bulkeley and Betsill, 2003). In these cases we often find a combination of high local and little, to moderate national involvement.

The next level is referred to as '*picking the low-hanging fruit*' and refers to those types of measures that are lucrative and un-contentious and thus easy to implement. A typical example is the conversion from coal and oil to gas-powered heating. This is a conversion

which in the majority of cases is quite profitable, both for companies and private households (ICLEI, 1997). In reality this often entails reaping the benefits of work done by others; i.e. measures and amendment process that would probably have happened anyway. Here too, the presence of government authorities is not crucial.

The level '*symbolic climate policy*' applies to the type of strategy where local authorities try to establish a local climate policy that oversteps the threshold of the uncontroversial and simple, an initiative often linked to more non-committal requests from government authorities. The point here is that in such situations local authorities are still quite restricted with regard to what they can actually accomplish, except from the measures that are uncontroversial and simple. This strategy will therefore be characterised by 'soft' measures such as planning and informing, most likely combined with a formal request to government authorities for more committed cooperation in climate policies. The majority of Norwegian municipalities that have been involved in climate politics can be found on this level (Groven and Aall, 2002).

The two final, or 'highest', levels of commitment presuppose a state that tries to draw local authorities actively into climate politics. At first the local authorities can fill the role of being a *structure* for implementing national climate politics. One example is Canada (CNCCIP, 1999; Robinson, 2000). The national strategy in Canada intends that all types of municipalities can be able to participate. An important national means of involving municipalities is the introduction of a national grant and loan scheme and the preparation of information material. Similar schemes have been introduced in Sweden and the Netherlands (Swedish Environmental Agency, 2002; Coenen and Menkveld, 2002).

The most ambitious scope of local commitment is the role where local authorities play the role as *policy actors* beyond government defined minimum standards for climate policy. Members of the international network of local authorities working with climate policy are examples of this category. We also find some examples in our surveys from Norway, Kristiansand being one. In this city the local authorities have on several occasions proposed regulating and imposing taxes on passenger car consumption. Thus far, the city has not managed to win acceptance for the most controversial proposals, but there still seems to be political will to initiate such measures (Lindseth and Aall, 2004).

Conclusion and future prospects

Multilevel governance is today a reality that local level actors will meet in their aim to work for climate protection. This situation is both a hindrance and an important window of opportunity for local climate protection. We will argue that there is a choice as to what extent and how one should include the *local* level of governance in any kind of governing process. First of all, despite the limited scope and the many hindrances that local actors experience, several authors point out that the local administrative level still has relatively strong powers of influence on climate policymaking, and that the importance of local action is expected to increase (Mäding, 1996, Coenen and Menkveld, 2002). It is hard to see how nation states will be able to meet their international commitments for addressing climate change without including a strong cooperation with local authorities (Bulkeley and Betsill, 2003). Furthermore, Coenen and Menkveld (2002) argue for the importance of bringing the local level in, in order to legitimize and improve the efficiency of climate initiatives. Through acknowledging the important role local actors can play, a more focused and effective climate policy globally is achievable.

Secondly, however, in a globalized world the major hindrances are that local authorities are dependent on actions on higher level of governance. As one of the major international climate change network at the municipality level, the CCP campaign has emphasized, cities *do need help.* Weak national commitments risk undermining local government initiatives (ICLEI, 1997). In the Norwegian case, we have seen in particular how the *national* authorities have been pivotal in facilitating local climate protection. The stately funded project with local climate protection in Norway follows a tradition within environmental policy and planning; namely that of initiating *pilot* projects. The Norwegian authorities, by means of White Papers and guidelines, have clearly stated that the municipalities do have a role to play, also with respect to global environmental problems. However, after the pilot projects end, municipality activity and initiatives drops and goes back to concentrate on more locally oriented environmental problems like waste treatment, noise and air pollution (Aall et al., 2002).

The Norwegian experience with local climate planning gives further food for thought as to how the communication lines and responsibilities between local and national level should be ordered. It seems evident that unless national commitments are strengthened, it is not likely that local climate policy will become more than a policy area for the few front runner municipalities; which again in a larger context will only represent symbolic contributions to the global quest of reducing GHG-emissions. There is even a danger connected with the promotion of front runner municipalities. We might end up – as stated by Bulkeley (2000, p. 27) - in a situation "in which islands of 'best practice' are surrounded by a sea of 'business-as-usual'", and thus also serve as a 'lightening rod' to distract attention from a passive national policy (Bulkeley, 2000; Aall, 2000).

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Article 6:

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THE URBAN GOVERNANCE OF TRANSPORT AND THE ENVIRONMENT IN THE CITY OF KRISTIANSAND

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ABSTRACT

This paper studies local institutions established for better co-ordination of environmental and transport policies. The empirical case is an institution called the Land-use and Transport forum (ATP) in the city area of Kristiansand in Norway, where municipal, county, and state organisations have been brought together in decision-making and implementation processes. ATP's relationship with private business organisations is also analysed. We argue that the case is an example of how actor constellations and partnerships can shape new discourses. The paper shows that urban governance relations are changing from a sectorally focused mode of governance to a more open and inclusive style in Kristiansand.

1. INTRODUCTION

The Western post-war transport political discourse has been dominated by the idea of the 'car city' to a large degree. Globalised automobility is a phenomenon with characteristics typical of a social dilemma (Steg & Gifford, 2005, p. 61): the individual short-term interests of owning and driving a car contrast with collective qualities of life, such as protecting the environment and the climate. Indeed, Høyer (2001, p. 136) argues that globalised automobility is perhaps the most serious threat facing global ecology: car use is not just causing immediate local environmental problems, but the dimensions and patterns of car use are themselves a global problem.

Even though the need for policy change is acknowledged, an important factor hindering this process is the lack of integration between policy areas and divergent agendas (Hull, 2005). Much environmental transport planning has failed due to a limited understanding of the complex and transient context in which decision-making takes place. In particular, the integration of environmental arguments into the transport political context is often hindered due to pre-existing frames into which issues of transportation are placed (Richardson & Haywood, 1996, p. 43). Pemberton (2000, p. 296) argues that the nature of the transport sector leads to a

> [f]ocus on the importance of institutions, key actors within them, policy discourses – the nature and content of discussions, policy communities, arenas for policy discussions, and the formal and informal networks that exist between the institutions/key actors involved (2000, p. 296).

In this paper, we study the micro-processes of a coordinated environmental and transport political project aiming at policy change. It is at the local level that most attempts towards an environmentally adapted transport system have been seen (Banister, 2005, p.57), and if transport is to be made more sustainable or environmentally sound, a number of different local policy sectors such as land use policy, transport policy, parking policy, and environmental policy must be coordinated (Hompland, 2001, p. 206). Sustainable or environmentally adopted transport politics thus often take place in a fragmented institutional landscape. Building on the experiences with transport planning and politics and the need for organisational and policy sector integration (cf. Hull, 2005, p. 3), this paper aims to study institutional settings where transport and the environment are explicitly brought together.

The empirical case in this paper is the Land-use and Transport forum[1] (ATP) in the city area of Kristiansand. In this forum political and administrative representatives from Kristiansand, five surrounding municipalities and two counties have been brought into the process together with the State Road Administration. We also analysed ATP's relationship with private business organisations in the 'City forum' in Kristiansand. Kristiansand has shown a commitment to communicative rationality, and has attempted to mesh deliberative forums of decision-making into the governance of the environment and transport. This paper seeks to understand how different discourses about transport and the environment are presented and argued in new cooperative institutional settings. We argue that this institutional setting can be seen as an attempt to integrate transport with environmental objectives, mirroring a wider trend of a shift from 'government' to

'governance' characterised by the involvement of interested parties in policy formulation and the implementation processes (Rydin, 2003, p. 5). The critical question is how this kind of governance manages to shape the established discourses and practices of 'mainstream' transport policymaking.

The empirical materials collected are policy documents about the ATP case in Kristiansand municipality (2002 – 2006) and interviews with key participants in the ATP process and representatives for private business organisations. The paper is divided into six parts. In the following section we develop our theoretical framework. We then present the background of the project in the third section, and describe the processes of governance in the ATP forum and its relationship with the business sector in the fourth section. Our discussion is contained in part five, and in we conclude our remarks in part six.

2. GOVERNANCE AND DELIBERATIVE POLICY ANALYSIS

Numerous definitions of "governance" are found in the literature; what the concept stands for is still under debate (Rhodes, 1997; Pierre & Peters; 2000; Berger, 2003). Most often governance refers to a set of practices where stakeholders and civil society organisations are involved in addition to government bodies and experts in policy formulation and implementation (Hajer & Wagenaar, 2003; Berger, 2003). Some emphasise this greater involvement of non-governmental actors, while others emphasise how governance is

about how new types of institutions (with or without non-governmental participation) are created or configured in order to better address the changing reality of a more complex and interconnected world (cf. Bulkeley, 2005; Hajer & Wagenaar, 2003). Examples range from cooperative, networked community sectors in major US cities (Morris in Innes & Booher, 2003, p. 57), to transnational networks of cities that work for climate protection (Lindseth, 2004) to the UN Global Compact (Kell, 2003). In sum, governance refers to a "discussion on how to steer the society and how to reach collective goals" (Berger, 2003, p. 220).

A development from traditional state centred government towards more inclusive policy-making and collaborative governance can be observed on all societal levels from the sub-national to the supranational level (Lundqvist, 2004). Mirroring this general shift in society and politics, governance has become a key concept for comprehending policy-making and implementation in environmental politics. Sustainable or environmentally adopted transport is an illustrative example of the changing conditions of politics. Hajer & Wagenaar (2003) argue that policy analysis has to be interpretative to be able to capture changes in the nature and topography of politics; it must be practice-oriented and deliberative. It is *interpretative* since meanings are constructed in particular contexts and *practice-oriented* since solutions are not so much formulated as haltingly and tentatively arrived at in the situation at hand; thus "knowledge, knowledge application and knowledge creation cannot be separated from action" (Hajer & Wagenaar, 2003, p. 20). Finally, it is *deliberative* since policy issues by definition are always contested, and it is

through collective, interactive discourse that deliberative judgement emerges (Hajer & Wagenaar, 2003, p. 23).

In this paper, the role of governance structures in processes of change is analysed by combining discursive and institutional aspects of policy-making. A crucial feature of institutions is their power of privileging access for some actors and interests at the expense of others, thus influencing policy selection (Hall & Taylor, 1996, p. 937-38). As emphasised by Hajer (1995, p. 60) however, although institutional arrangements are seen as preconditions for the process of new discourses, institutions need discursive 'software'. Meanings and actions are actively constructed and reconstructed in discursive social contexts, and not only the process of construction itself, but the institutional framework within which they take place must be included in the analysis. Institutions provide the context in which language and discourse occurs (cf. Rydin, 2003).

Considering both discursive and institutional elements in our theoretical framework this paper builds upon Healey et al. (2003) and their view of governance processes as institutional capacity-building. The ability of a discourse change through deliberative forums can be seen as a result of three dimensions of capacity building according to this perspective:

1) knowledge resources,

2) relational resources, and

3) mobilization capacity (Healey et al., 2002, p. 62).

Knowledge resources are closely related to discursive elements of policy-making, in particular the micro dimensions of discourse development (Hajer, 1995; Healey et al., 2003). Central elements here are the range of knowledge resources, explicit and tacit, systematized and experiential, to which participants have access, and the frames of reference which shape conceptions of issues, problems, opportunities, and interventions, including conceptions of place. The extent to which the range and frames are shared among stakeholders and the capacity to absorb new ideas and learn from them is also important.

The second and the third dimensions in the scheme relate to the institutionalised relationships between various participants in the processes of governance. *Relational resources* are the networks or webs of relations within which governance actors are embedded (Healey et al., 2003). They include the range of stakeholders involved in relation to the potential universe of stakeholders in the issue, and the morphology of their social networks in terms of density and the extent of integration of the various networks. The location of the power to act, the relation of power between actors and the interaction with wider authoritative, allocative, and ideological structuring forces must also be taken into account. Finally, the *mobilization capacity* relates explicitly to the institutional features of political areas such as the institutional arenas used and developed by stakeholders to take advantage of opportunities, the repertoire of mobilization techniques used to develop and sustain momentum, and the presence or absence of critical change agents at different stages.

Building on these three dimensions developed by Healey et al. (2003), this paper analyses how processes of governance in the ATP forum and its relationships with business organisations in Kristiansand can be seen as processes of institutional capacity building. Our focus is on the extent to which these processes have benefited or been hindered by the institutional capacities of its context (cf. Healey et al., 2003, p. 74). We study how this affected the frames of reference or discourses through which meanings are arrived at and mobilised. We begin with the background of the case.

3. BACKGROUND

Kristiansand (72,000 inhabitants) has a fifty-year-old reputation of being a 'front-runner' in city planning (Langeland, 2001). It was one of the first cities in Norway to make a General-plan, in 1969 (Langeland, 2003). This comprehensive plan was the first after the new planning law of 1965 and became the example in Norway. The plan did not, however, take into account environmental consequences of transport but paved the road for a discourse that argued the need to plan for a strong growth in car traffic, and the solution of transport problems with road investments (Langeland & Tveide, 1999). A change in perspective was visible in the City Centre-plan of 1978. This plan was pioneering in that it laid out a policy for curbing car traffic in the centre through both building-regulations and parking policy. It was very advanced for the time. It also laid out several pedestrian streets and removed cars from the market place (Langeland, 2001). In the years that followed a number of initiatives were carried out, most impressive the commitment to develop bicycle lanes, which resulted in Kristiansand becoming the number one bicycle city in Norway at the beginning of the 1980's. However, the

pendulum swung back and focus was once again set on car usability and better parking. Langeland & Tveide (1999, p. 111) state that 1984 marks a new period in transport planning and implementation in Kristiansand. In the remainder of the 1980's the municipality was no longer in charge of casting new ideas and finding solutions: urban sprawl and commuting continued, and road projects were prioritized.

Later in the decade and into the 1990s new initiatives were taken to develop more environmentally friendly transport policies. Kristiansand Municipality made its first Environmental Plan in 1988 and a revised and more comprehensive plan was created in 1994 when Kristiansand became a participant in the state initiated Sustainable City programme.[2] There was now an increased awareness among national authorities on the problems of automobility and a number of pilot projects for environmental transport were initiated. Kristiansand took part in the TP10 (Transport Plans for the 10 biggest towns) project from 1989-1992. There were great expectations for TP10 in Kristiansand, because the growth of traffic increased much faster than the increase in traffic capacity. The planning of roads and land-use were insufficient. Rush hour congestion developed in the eighties, and pressured politicians (Langeland, 2001). TP10 was shelved however; as the director for planning and environment in Kristiansand said: "I had great expectations to TP10, but it only became words" (Langeland, 2001, p. 8). Nielsen (2001, p. 93) writes that the intended integration between traffic and environment did not happen in the project cities; instead it was the transport plans that dominated. In the end, politicians chose the road strategies.

Another important planning process in Kristiansand during the 1990s was the construction of the new main road E 18; it began in 1992 and ran parallel to the Sustainable City programme. This process of planning and building went on without any connection to the Sustainable City programme – they were a 'world apart'. Evidence of this was that no interview mentioned the Sustainable City programme directly as an important plan. Indirectly several adopted the Sustainable City programme through land use policy, densification, PT, etc, but all interviewed saw the E18 as the primary project (Langeland, 2003, p. 6). The land use planning system realised the major goal of building E18. As a part of this planning process local politicians (Langeland, 2001, p. 18) managed to get public support for a toll road system in Kristiansand.

In 1997 Kristiansand began a Local Agenda 21 process and as a result the city administration took the initiative to establish a climate action plan. A climate group with political, administrative, business, and NGO representatives was established to prepare the Climate Plan. Kristiansand Municipality was the first municipality in Norway that aimed to reduce climate emissions from both stationary and mobile sources (Groven et al., 1999). When the proposal for The Climate Plan was presented in spring 1998 it contained a number of controversial and ambitious measures. In particular were suggested measures aimed at limiting private motoring, such as road-pricing, parking restrictions, increased toll-road prices and the removal of the annual ticket (Kristiansand, 1998). However, little political support was obtained for the plan in the Municipal Council. The Council stated that it "would actively contribute to the development of positive initiatives to reduce people's transport needs. Road-pricing, restrictive initiatives

like toll-road and parking restrictions are not current initiatives to reduce car traffic in Kristiansand" (Kristiansand, 1999). In the final plan document many of the more radical suggestions were removed, and the municipal council approved a plan far less provoking to car owners in Kristiansand. The Municipal Council thereby did not support the policy of managing demand through restricting the need to travel set out by the climate group.

The historical lines in Kristiansand give witness to a city engaged in a number of different local projects aiming to better realise environmental objectives. Actual policy integration of environmental and transport political issues still have had minimal impact in these various projects.

4. THE CASE: CO-ORDINATED LAND USE AND TRANSPORT PLANNING

4.1 Horizontal networks of governance

As a part of the process of developing a National Transport Plan for 2006-2015, Kristiansand and five other major cities in Norway were invited to develop strategic analyses for their city areas and were encouraged to experiment with alternative organisations of transport management. The aim pursued by the Ministry of Transport and Communication was to obtain better coordination of land use and transport policies in the city areas, and a better use of public resources across different levels of administration within the transport sectors. More generally, pilot projects were intended as a tool for developing new organisational solutions to problems related to the

environment and transport passability in a more effective and overarching manner (Kristiansand, 2002b).

Kristiansand accepted the invitation to participate in the project. The project was further discussed in a detailed statement to the national authorities on the land use and transport political challenges in the region, and the geographic scope was extended (Kristiansand, 2002a). In October 2002 an application for participation was sent in by the municipalities in the Kristiansand region, the counties *Aust Agder* and *Vest Agder*, and the Norwegian Public Road Association (*Vest Agder* department). The application argued that the broader city region of Kristiansand should constitute the geographic area for the pilot project (Kristiansand, 2002b). In June 2003 the application was approved (Kristiansand, 2003).

An important feature of the project was to establish horizontal structures of governance by means of a new political and administrative body. An ATP forum was established for the municipal and state actors to jointly find a more suitable way of dealing with transport and environmental problems. The forum has political and administrative members from the six municipalities, the two county municipalities, and one member from the Norwegian Public Roads Administration. The environmental officer in Kristiansand is the project manager and the leader of a small project secretariat.

The ATP organisation took responsibility for local roads from the municipalities, and for regional roads from the county councils. The ATP project was given responsibility for

policy areas which had earlier been divided between the different levels of governments: public transport infrastructure, traffic safety actions, and bicycle facilities. There are also issues that fall in a grey area between the ATP project and the city councils of the different municipalities (Kristiansand, 2004a). A cooperation agreement was signed for these cases, such as parking policy and public transport. In practice this often means that the ATP forum makes a decision that is sent to the different committees of the city councils for a final review (Riseng, 2005).

During 2005-2006, structures of governance involving business interests have become increasingly important in the ATP project. In October 2005 central business actors took the initiative to establish a City forum where the leader of Kristiansand Chamber of Commerce[3] and *Kvadraturen*[4] meet key persons from the municipal administration. The business actors wanted to develop a better dialogue with the municipality, especially on issues of land use and transport matters with the technical sector. The ATP secretariat is also acting as the secretariat for this newly established forum.

The ATP project is financially supported by a grant from the Norwegian Ministry of Transport and Communications. In 2004 the Kristiansand region was given 10 million NOK (approx. 1.25 million Euros) (MoTC, 2004a; MoTC, 2004b). In addition to state money, financial resources have also been transferred to the ATP forum from the municipalities, the counties, highway funds, and funds earmarked for the city bus-metro. The total expected income of the project for the four year period is 170 million NOK

(approx. 21 million Euros)[5]. The project administers these funds and decides what they will be used for (Kristiansand, 2004b).

4.2 Incremental but increasingly important policy changes

The ATP project objectives are stated in an action plan developed for 2005-2007 (Kristiansand, 2004b). The plan contains a number of suggestions for limiting private automobility such as bus-prioritization at the sacrifice of car traffic, parking restrictions, traffic payment, and traffic refurbishing. There are also initiatives for improving safety and local air pollution and how to improve alternative transport (such as EL-cars).

In the first phase, the ATP goals were met with opposition in municipal planning processes. When the Kristiansand municipal plan for 2005-2016 was approved by the city council in September 2005, road projects and central city parking facilities were given priority at the expense of cyclists, pedestrians, and public transport (Kristiansand, 2005b). These policy principles opposite of the ATP goals, were proposed by the right wing Progressive Party and supported by the Conservative Party and the Christian Democratic Party as part of a political horse trade (cf. interviews with key actors in the decision making process). Reactions against the council's decision were strong among central participants in ATP process (Fevennen, 2005a).

The debate on the status and momentum of the ATP project continued. Late autumn 2005, the process in the ATP forum of preparing a new application for a grant from the Ministry of Transport and Communication began. The Progressive Party argued that the

ATP process was developing in the opposite direction of the newly decided municipal plan, and invited the forum to support a proposal stating that,

> [w]ith reference to the newly approved municipality plan for Kristiansand, some of the suggestions that clearly deviate from this must be adjusted or removed.(Kristiansand, 2005c).

No one in the forum supported the proposal. 15 February 2006 the executive committee of the Kristiansand council approved the application and once again turned down the suggestion from the Progressive Party to adjust initiatives in light of the newly approved Municipality Plan (Kristiansand, 2006b). One could argue that the decision made in the municipal council in September did not have the severe consequences for the ATP project that could have been expected.

The ATP project also seems to have had some effects of the attitudes of business interests. In the beginning of the project period, these interests feared that the quest for a more environmentally sound transport system would result in a city where cars were no longer welcome (Tvedt, 2005). On several occasions, business representatives reacted strongly against the plans to prioritise bus traffic at the expense of automobiles in the city.[6] The Kristiansand Chamber of Commerce and the business association, *Kvadraturen* in particular argued against the removal of curbside parking, bus prioritisation, and the extensions of pedestrian lanes.

However, signs of a changing climate could be observed in a seminar 10 November 2005 arranged by the municipality about bus prioritization in the city centre. The seminar had

broad representation from the ATP forum, politicians and administrations, and local business. Two researchers were invited to explain how business and environmental objectives could co-exist. At the beginning of the meeting a survey was presented that showed how more people than expected use public transport when shopping in the city and that these people were also willing to walk quite a bit to shop (TNS Gallup, 2005). Both the Kristiansand Chamber of Commerce and the *Kvadraturen* responded positively to this new information.

A few weeks after the ATP seminar on bus prioritisation, the mayor and the leader of the city development committee in Kristiansand stated that they want an extended pedestrian precinct in the city (Fevennen, 2005b). There have been no significant reactions from the business community, possibly indicating that there truly is a different understanding of how the business interests think about how city space should be used. The Chamber of Commerce has signalled that business interests are now willing to accept both the removal of parking spaces and better conditions for public transport including one street solely preserved for public transport (NRK, 2005). This is particularly interesting since similar suggestions had been offered earlier in relation with the start of the bus-metro, without getting any acceptance.

The slow but incremental changes in attitudes on transport and land use issues in the city are also reflected in the final version of the application to the MoTC (Kristiansand, 2006a) where it is stated that the municipality has already undertaken restrictive measures. Moreover, it is stated in the application that what remains now is a stronger

focus on traffic passability in the city centre with prioritizing buses ahead of cars in selected streets. It is argued that the application‘s main focus is on structural and restrictive measures, and continued pursuit of initiatives financed earlier through the reward grant. It is argued in the application that results of the work are finally becoming evident. However, it is also stated that there are many things that are still unfinished, and it is important that the reward grant is still pursued at a high level, if the municipality should be able to change the traffic development in a more sustainable direction (Kristiansand, 2006a).

There is still one matter of concern and disagreement: the question of a new parking house in the city centre. *Kvadraturen* and the Kristiansand Chamber of Commerce have wanted a parking garage centrally placed in the city for a long time. Even with the change in opinion about environmental and public transport issues, the desire for a big parking garage remains. The Conservative Party has also suggested a big parking garage under the city marketplace, but in the executive committee meeting of the local council (Kristiansand, 2005a) this idea had been put aside for a time. Instead, the council is investigating two other alternatives with less capacity. It is still undecided whether the suggestion of a major parking garage will finally be shelved.[7]

Additionally, there is still car traffic growth. In 2004 growth was particularly high (3.6 %), due to among other things, the opening of highway road E 18.[8] In 2005 the growth in car traffic was 1.7 %. The goal in the ATP project is for 2008 that growth in car traffic is to remain lower than the population growth (ca 1%) in that same year. In the application,

the goal is for the restrictive measures and bus prioritizing to contain traffic growth to half of what it was in 2005, and in line with population growth (1%) (Kristiansand 2006a). In terms of public transport, there was a growth of 8.5 % (in number of passengers) from 2003 to 2004[9], and an increase of 2.9 % (in number of cars) (pr. October 2005) from 2004 to 2005.

5. ATP AS A PROCESS OF INSTITUTIONAL CAPACITY-BUILDING

As argued in Part two, both discursive and institutional elements are important when studying the ATP process as a process of institutional capacity-building. We now proceed to our analysis, building upon the three dimensions developed by Healey et al. (2003). The first dimension in Healey et al.'s scheme, knowledge resources, is closely related to discursive elements of policy-making, in particular the micro dimensions of discourse development. The second and third dimensions relate to the institutionalised relationships between various participants in the processes of governance.

5.1 Knowledge resources

The ATP forum could draw on knowledge from more than a decade of work to coordinate transport and environmental problems in Kristiansand. The ATP secretariat is constantly giving the forum updates about recent bus and car traffic trends. The group as a whole has also been on study trips to other cities. Increasingly, information about sustainable transport has been given to the local business community as they are drawn into the project as discussion partners. Information and new knowledge seem to have played a vital role in shaping opinions – also among actors adjacent to the forum's work.

One example is the TNS Gallup survey in November that was met with surprise and caused leading persons to talk in more environmental rhetoric than earlier. Another new example is that a consultancy company is currently evaluating the passability of public transport in the city; the business life is oriented and part of this project.

The frame of reference for the project was provided by the national authorities that had given Kristiansand money to stimulate public transportation and delimit car use in the cities. Everybody in the forum agreed on the need to prioritise the bus. On a deeper level, there was not a shared understanding of how the goals of the project should be reached. The parties to the right, most visibly the Progressive Party, have primarily seen this as a project where the goal is to secure better passability for transport. The representative from the Progressive Party in the forum states that there has been too much talk about the environment and too little about road building (Rasmussen, 2005). On the other side, the ATP secretariat stresses the environmental consequences and the public transport first. A tension between traffic restrictions and the need to prioritise the environment has been evident.

The confrontation never really surfaced before the municipal council meeting in September 2005 as described. although some members of the ATP forum saw this decision as the direct opposite of what the ATP co-operation prioritised – a break with the ATP agreement– others in the forum downplay this decision and see it as something they had to sacrifice or offer in a political horse trade, and that it would not conflict with the goals of the ATP project. Indeed, when the application to the Ministry of Transport

and Communication was approved in February 2006, the Municipality did not pay attention to the decision in the municipal plan in September 2005: an indication that the ATP project still has political momentum. Moreover, actors had a good working climate from the start and the potential for learning was present. All interviewed emphasise the importance of this forum. In particular, they noted learning to work with each other across municipal borders. The mayor from the municipality of *Søgne*, states that,

> The understanding in the forum is that we need to see the region as a whole. Even though our problems and needs are different from Kristiansand, we have understood that many of the problems origin fro the city. Thus we need to fix the problem in the city first (Løite, 2005).

Processes of reframing are also taking place within the business sector. The business community has increasingly begun to realise that there are solutions that are good for both shopping and the environment. The changing relations within the business community can be seen as a discursive reframing in terms of how to view the bus in the city. Whereas the bus was seen as an enemy set up as a competitor to the car, it is now seen as an asset in the city centre. Through new information and surveys on bus-use among consumers and shop owners, a new understanding taken place among the business representatives in the city.

5.2 Relational resources

The ATP forum had broad political and administrative representation; a representative from the National Road Associations was also members of the forum. In addition to these regular members representatives from public transport have also occasionally met in the

forum. Most importantly, all the mayors from the different municipalities around Kristiansand sat in the forum. The most important politicians from the different parties in Kristiansand were represented, except in the case of the Progressive Party, where a lesser profiled person took part. The network morphology were primarily inter-municipal and inter-county. There was also an important link to the national authorities through the reward grant from the MoTC. The atmosphere in the forum was good from the beginning. The forum was grounded on positive experiences with cooperation in this field between the municipalities, in particular around the bus-metro.

In the beginning of the project period the forum had little or no contact with the local business community. During autumn 2005 however, relationships with business interests improved due to the establishment of the 'City forum'. Although these actors were not formally integrated in the forum, this new City forum is an example of how one kind of new governance structure (ATP) can create a need for better integration and inclusive governance between other actor constellations. Taking into account that the communication between business interests and the municipality were almost nonexistent prior to the ATP project, this City forum is an example of how new practices can change the character of the political game (cf. Hajer & Wagenaar, 2003, p. 5).

The actors in the ATP forum clearly had the power to act, through a formal right to make decisions when it came to specific issues as well as in designing policy. At this stage, compared to earlier processes aimed at integrating transport and environmental objectives, the environmental problems of transport were better understood and

sustainable transport was established as a policy focus. The forum also had the financial resources to allocate to different projects. It was stated from the beginning that the group was a coherent team, and actors supported the work. The initiative was built on positive experiences with cooperation between several of the partners (the *Buss* metro project for example) and the project had a common understanding that cooperation was the best way to solve future transport challenges in.

5.3 Mobilisation capacity

The forum clearly had opportunity structure and mobilization potential. The way the project originated and the relationship with the city councils gave it solid backing. The reward grant from the MoTC provided actors in the forum with an important argument and a key opportunity structure for pursuing policy changes in transport politics. An important debate in Kristiansand was how to interpret the intentions and the meanings behind this reward grant: What kind of measures would be needed in Kristiansand in order to release the reward grant from the MoTC? Although it was cast doubt on the necessity of initiating restrictive measures to release state money, the development has headed towards increased support for and the introduction of similar new measures. This is emphasised in the 2006 application to the MoTC and the hearing proposal for a new climate and energy plan for Kristiansand (Kristiansand, 2006c)

The forum had no significant mobilization from below, but was linked to the other municipal arenas in the different municipalities and counties. Stakeholders could pull strings in the sense that the major politicians all sat in the forum. The question is whether the forum had enough critical change agents present. From the beginning the forum

seemed to have too strong a focus on consensus, and it was very seldom that the major debates about course adjustments were taken in the forum. Making sure that the environmental movement and the business community were present in the forum could possibly have created a more critical and intense debate – and made the forum not just consensual. Still, it seemed that the dialogue with the business community was finally evolving. The seminar in November with local businesses, where researchers talked about the need to prioritize the bus, really showed that the business community was beginning to change their attitude towards this problematic. As one representative from the ATP forum said; "We were almost shocked by the positive response from the local business".

6. CONCLUDING REMARKS

In line with Hildén et al (2004) in this paper we have sought to emphasise that transport planning and politics is often best described as a social struggle over problem definitions and future choices. To understand the transition to a more environmentally sound transport system we chose to pay attention to the behavioural aspects and social processes in a specific land use and transport project (cf. Himanen et al., 2005, p. 25) through studying new relations of governance as they are played out in Kristiansand. We have studied how these relations shape the discourses and practices of established transport policy-making. Building upon Healey et al., (2003 p. 64), we studied,

> [H]ow far, through the flow of these resources and capacities, wider discourses which structure policy agendas and routinised practices are being reinforced or changed.

We have used Healey et al's., scheme as an evaluative framework for studying the development in Kristiansand. The design has relied on a relational view of institutional capacity, emphasising that meaning and action are constructed in social contexts through relational dynamics. We focused on three dimensions of capacity building:1) knowledge resources 2) relational resources and 3) mobilization capacity (Healey et al., 2003, p. 64).

Although the ATP project only began in early 2004, the ATP forum can already be characterised by an evolving new institutional arena in which a new agenda is being set, in a situation where the institutional dynamics of the wider governance context are themselves in flux (cf. Healey et al., 2003, p. 74). The long history in Kristiansand tells a story of a city where environmental and transport political objectives have rarely been coordinated. We provide evidence that the ATP project is slowly starting to change this situation and in terms of *relational resources* we would like to emphasise that: the forum set up new channels of communication, was answerable to several municipalities, the county administration and the national authorities, and focused on the quality of an area rather than the delivery of a service. In this way ATP challenges the council's established discourses and practices. The ATP forum became integrated with business interests in the City forum. The case can be seen as an example of how one kind of new governance structure (ATP) creates a need for better integration and inclusive governance between other actor constellations.

In relation to the *mobilization capacity* the institutional anchoring at the national level with the reward grant from the MoTC as a 'carrot' have been instrumental in giving the ATP project political momentum. In order to release government money for future plans and projects actors saw the need to prioritise restrictive measures. Still the key development that made this project move further was the involvement of the business community. With the involvement of the Kristiansand Chambers of Commerce and the *Kvadraturen* association, the project came to include key change agents important for pulling strings in the city.

Concerning *knowledge resources* it seems evident that the ATP forum became an important arena for the dissemination of new information which has resulted in learning. An environmental discourse has structured the work in the forum and is being reproduced as the work continues. It seems that the key political actors in Kristiansand agree that curbing traffic is a necessity. There are still however possible to identify different local discourse coalitions in Kristiansand, where some actors prioritise environmental concerns first and some road and traffic passability. The project has not managed to completely settle the tensions between those that see the project as a way to get more money to road building and those that want to restrict car use in the city centre. Challenges and critical comments, most visible from the Progressive Party and the business community in the city, have not led the ATP forum to downplay the environmental problems of car-use.

The core question that must be asked however, is how rooted this discourse on transport and the environment is. It seems evident that the debate in Kristiansand has not managed

to take into account the global dimensions of transport. Climate change was not a reference in the debate and environmental concerns has primarily been discussed in relation to local environmental problems. Transport policies often focus on reductions of commuter routes and in the city centre, which may lead a reduction in congestion and localised air pollution. However, such a policy often has little impact on reducing overall levels of traffic or rates of traffic growth (Bulkeley & Betsill, 2005, p. 55). Indeed in Kristiansand, there was a growth in car traffic in 2004 and in 2005. These numbers reveals that the policy changes we have pointed to in this paper are still somewhat short of tackling the major challenges in traffic development in Kristiansand.

We would like to conclude however, that this case is a good example of how actor constellations and partnerships can shape new discourses. The project gives clear evidence that urban governance relations are changing in Kristiansand from a more paternalist and sectorally focused mode of governance to a stronger place-focus and a more open and inclusive style. In line with this Mouffe (1996 in Hajer, 2003, p. 99) argues that, “policymaking should not just be evaluated according to whether it gets implemented or not, but also as a place where differences and conflicts are articulated”. The interaction can be seen as a process where actors come to define what is worth striving for and what needs to be done.

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Rasmussen, R. (2005), Member of the ATP committee and Municipality Council representing the Progressive Party

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[1] In Norwegian: 'Areal og Transport Prosjektet'.
[2]Kristiansand was appointed in the autumn of 1992 by the Ministry of the Environment in Norway to participate in the Sustainable City programme. The aim for the Sustainable City programme was to direct development in a more environment friendly direction where the long-term perspective produces models for a sustainable city development. The programme lasted from 1993-2000.
[3] This is the association that brings together different business and industry organisations in Kristiansand.
[4] *Kvadraturen* is a stock company with the aim to market the city as an active and exciting centre for commerce and trade.
[5] The total expected income is divided between the following sources: 71 million NOK from national highway funds; 29 million NOK from the two counties; 14 million NOK from the municipalities; 10 million NOK earmarked funds to the bus-metro; and 46 million NOK from the reward grant from the national authorities.
[6] See for instance mail communication 11 May 2004 from *Kvadraturen* to the environmental officer and letter concerning the ATP project from *Huseierforeningen* 3 June 2004 to Vest Agder County.
[7] According to Raymond Solås in the parking company (25 January 2006), a report is being written on different alternatives which will be presented to the politicians at the earliest this summer.
[8] During the 1990s there had been improvement on the E 18, but the need to improve the main road system (E 18 and E 39) has continued to be a key issue in the beginning of this century. In particular, the discussion has centred on how to finance the new roads and what to do with the existing toll road system. In this paper we have not focused on this discussion. It has arguably important consequences for traffic development in the city, but the issue has not been part of the ATP project to any major degree: it has been seen as a matter of more national and regional political characteristic. All parties in Kristiansand are

generally supportive to building these new roads. These roads are seen as important passages connecting several counties in the region.

[9] The rise was particularly high this year due to the introduction of the bus metro.