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Abstract

Sustainable Energy and Climate Strategies: lessons from planning processes in five municipalities

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Abstract

Swedish municipalities have traditionally had significant powers and played a major role in implementing national energy strategies. This paper describes the factors influencing development of municipal climate and energy plans in five Swedish municipalities and assesses the relevance and importance of these factors from theoretical and practical perspectives. The questions raised in the paper are: what are the characteristics of municipal climate and energy planning processes in the five municipalities, do these municipalities include stakeholders in the process, if so how? Results suggest that a number of factors influence the development of municipal climate and energy strategies and their content. These include the importance of a clear, shared vision and engaged politicians; the size and organisational structure of the municipality and its willingness and capability to act; the organisation of the process and extent to which stakeholders have been involved; the need for clarity about financial aspects, such as planned financing of implementation; and the need for greater clarity concerning selection of targets and their relevance to global climate and energy trends. The study and its results may be used to inform policy-makers on the national and local levels about factors influencing municipal energy planning and also contribute to a discussion on benefits and problems of involving stakeholders and citizens in the strategic work to reduce climate impacts and energy consumption.

Key words: Energy and climate strategies, municipalities, stakeholders, planning processes

Sustainable Energy and Climate Strategies: lessons from planning processes in five municipalities

1. Introduction

In a rapidly urbanizing world, the ideal of sustainable urban development has emerged as an influential phenomenon, observed on many levels (Rydin, 2010; UNCSO, 2012). Significant bodies of literature emphasize the significance of sustainable urban development in the context of large cities, yet forecasts from UN-Habitat suggest that around 75 percent of the global population will live in conurbations of less than 500,000 residents in 2020 and beyond (UN-Habitat, 2011).

As such, planning for sustainable development in these conurbations represents a critical challenge. Municipalities are often described as having a key role in planning for sustainable urban development (UN, 1992). This paper presents the results of a study of methods used by five Swedish municipalities to develop and implement climate and energy strategies. The study was part of “Sustainable Energy and Climate Strategies”, a research project assessing various aspects of the Swedish Energy Agency’s “Sustainable Municipality” programme (Swedish Energy Agency, 2011).

Swedish municipalities have traditionally played a major role in implementing national energy strategies (Aall et al., 2007; Betsill & Bulkeley, 2007; Palm, 2006). Since 1977, Swedish law has obliged municipalities to prepare municipal energy plans and many municipalities are owners of, or own stakes in, local energy and property companies (Palm, 2006). Municipalities can thus exert influence over both energy supply and demand. This study explores how five municipalities of varying size address the challenge of preparing energy and climate strategies and identifies common traits, despite the variation in organisational complexity and contexts.

The paper considers the following questions: what are the characteristics of municipal climate and energy planning processes in five Swedish municipalities, do these municipalities include stakeholders in processes, and if so, how? In particular, the paper explores the ways in which municipalities organised processes to develop climate and energy strategies using rational or communicative approaches, and the ways that the selected approach influences the form and scope of processes.

1.1 Theoretical framework

This study will scrutinise the process of energy and climate planning in five municipalities and the role of the Sustainable Municipality programme in assisting municipalities with this strategic task, by referring to recent advances in our understanding of public planning processes and reflecting upon the process of energy and climate planning in particular. Strategic planning in Sweden has historically been based on rational approaches, but in recent years, academics have observed a general trend in strategic planning, with a transition from rational planning models to more communicative models (Albrechts, 2004; Fredriksson, 2011; Healey, 2009).

Rational planning is often described as a linear process, in which a clearly defined series of steps are taken from problem formulation through analysis, selection and implementation to evaluation and feedback (Khakee, 2000: 25f). In such models, there is a clear division between the roles of politicians and planners, with politicians taking decisions and planners serving the common good (Campbell and Fainstein, 2003). Similarly, classical implementation theory portrays a top-down, rational process

governed by control, direct intervention and regulation. Implementation is assigned to public servants who are assumed not to influence the process.

However, differences between the theoretical model of implementation proposed by rational planning and the observed practice have long been the focus of analysis. For example, Pressman and Wildawsky (1973) claimed that the actual process of implementation helps to form policy and solve political problems, with both public and private actors participating in policy development. This bottom-up perspective makes it difficult to define or specify the steps that will be taken during a process. Subsequent research into “street-level bureaucrats” has shown that officials often have influence over how policy is put into practice and that, in some contexts, both actions and decisions influence policy development (Lipsky, 1980).

In contrast to the rational perspective, the communicative planning model suggests that all stakeholders affected or influenced by a planning strategy should participate in dialogue to clarify pre-conditions, interests and reach consensus on proposed actions (Innes & Booher, 2004). This increases the role of citizens and private stakeholders. In its ideal form, participation of citizens occurs in a consensus-seeking decision-making process, the participation taking the form of deliberation or dialogue (Bishop and Davis, 2002; Few et al., 2007; Hamilton and Wills-Toker, 2006; Hendriks, 2002; Levine et al., 2005). Deliberative communication is a problem-solving form of communication that involves problem analysis, formulating evaluative criteria, and identifying and weighing alternative solutions (Habermas, 1998).

The idea is to involve all participants, combining influence, inclusiveness, and deliberation, embracing democratic values such as citizens’ rights to information, justice, and participation (Palm and Thoreson, 2013). Deliberative participation has a bottom-up view of participation, where the goal is to redistribute the power over decisions from governments and officials to citizens. In its ideal form, deliberative participation should be initiated, owned, and controlled by citizens. The focus on participation reduces the perceived importance of clearly defining each stage in the process - continuous interaction means stages may occur in parallel or different orders - with the result that communicative planning processes are sometimes seen as relatively unstructured.

The transition from rational to communicative models implies a shift from “government” to “governance” and increasing plurality, in terms of both the actors involved and the levels of awareness about the complexity or interdependency of the issues being discussed. ‘Government’ implies that governments govern through their formal institutions, and the state’s monopoly on the use of legitimate coercion is in focus (Boyer, 1990; Stoker, 1998). In contrast, ‘governance’ allows self-organising networks to be established; these networks are not fully accountable to the institutions of Government. Cooperation and coordination make governance horizontal, even if the state may take on a hierarchal role to express power (Wihlborg and Palm, 2008).

Reflecting this, broader forms of governance structures have emerged in strategic planning to mobilize actors (and their resources) outside of their formal contexts to formulate and implement public policy (Considine, 2005). Network-oriented decision-making changes the role of local government and local governments’ perceptions about their perceived scope of influence, by making municipalities one actor among many (Pierre and Peters, 2000). Several studies of municipal climate and energy policy, planning and implementation have noticed that a certain amount of governmental involvement is good for local action, e.g. by providing clear guidelines and funding (Baker and Eckerberg, 2007; Fleming and Webber, 2004; Neves and Leal 2010; Nilsson and Mårtensson, 2003; St. Denis and Parker, 2009).

Transition management literature usually emphasises that it is possible to stimulate a transition and to influence its direction and speed. In this perspective, power is distributed (although not necessarily evenly) rather than being directed in a top-down manner, and many actors need to play a part in shaping transition (Smith et al, 2005; Teisman and Edelenbos, 2004; Van de Kerkhof, 2004). A wide number of actors should therefore be involved in a process, because it is hard for a small group to represent all different views (Arnstein, 1969; Hartley and Wood, 2005; Rotmans et al, 2001). One important benefit of participation is that it increases trust between the governed and the government; this may increase acceptance for decisions, which in turn will benefit implementation of what is decided (Bayley and French, 2008; Irvin and Stansbury, 2004). The mix of actors within systems differs, resulting in different forms of interaction and transition.

In sum, there is a debate in the literature on the form and structure of organisational processes and the extent to which they are rational/communicative, top-down/bottom-up, linear/non-linear, regulatory/voluntary, and the impact of this on power, networks and the roles of participants. In order to better understand the difference between the two models, we suggest that a systematic approach is needed (see Figure 1).

This paper uses results from the study of the process of planning energy and climate strategies in five municipalities to consider the relevance of these ideal models. This informs analysis on the extent to which differences in approach influence the local strategic process and final strategy document. As such, the article aims to improve understanding about the ways in which communicative or rational approaches may influence strategic planning in municipalities.



Figure 1. Different characteristics of the rational and communicative models that may be observed in strategic planning processes. Illustration inspired by various sources, e.g. Khakee, 2000; Campbell and Fainstein, 2003; Albrechts, 2004; Healey, 2009; Fredriksson, 2011.

2. Methodology

The study formed part of a larger research project, “Sustainable Energy and Climate Strategies” and the research process is illustrated in Figure 2. As part of this research project, a survey was sent to all municipalities participating in the Swedish Energy Agency’s Sustainable Municipality programme. Based on the survey results, ten municipalities were subsequently selected for additional study and

participated in telephone interviews (Gustafsson et al., 2011). The results of these interviews, together with the survey results, were then used to narrow the scope of the research.



Figure 2: The three phases of the “Sustainable Energy and Climate Strategies” project. This paper presents findings from the third phase.

Five municipalities were selected to be the focus of Case Studies, on the basis of their different sizes, approaches and levels of experience. The five appeared broadly representative of the wider group of municipalities participating in the Sustainable Municipality programme, and more generally, of other Swedish municipalities. A basic overview of the five municipalities is provided in Table 1 (full case studies can be found in Fenton et al., 2012). Municipalities A and B are classified as Large Towns and have comparable population sizes of approximately 130,000 residents living predominantly in urban areas. Municipality C is classified as a Medium-sized municipality, with a population of around 40,000 living in a large, predominantly rural and geographically-isolated location. Municipalities D and E are classified as Small municipalities, having populations of around 10,000 residents or less.

The Case Studies were prepared during autumn 2011 - spring 2012 using a combination of qualitative research methods, including document study, interviews and observation. The purpose of conducting multiple case studies was to analyse lessons and experiences from the process of developing energy and climate strategies, both in terms of each individual case and between cases (in the manner proposed by Eisenhardt and Graebner, 2007). Multiple case studies enable comparison of events and the behaviour of actors, as well as problems and opportunities when developing strategies, enabling identification and analysis of patterns and differences in different municipalities (Van Evera, 1997; Yin, 1994).

Table 1. Overview of municipalities by category, type of strategy/plan produced, document length, period covered and date(s) of adoption.

Municipality	In this study	SALAR definition	Type	Length (pages)	Baseline > Target	Strategy / Plan adopted
A	Large	Larger towns: population is 50,000 – 200,000 and over 70% of the population live in urban area	Separate Strategy & Plan	68 & 48	2009-2035; Plan 2011-2013	Strategy - January 2009; Plan - September 2010
B	Large	Larger towns: population is 50,000 – 200,000 and over 70% of the population live in urban area	Separate Strategy & Plan	20 & 48	2009-2030; Plan 2011-2014	Strategy - March 2009
C	Medium	Low density region: less than 300,000 people live with a radius of 112.5 km	Integrated Strategy & Plan	84	2008-2020	December 2010
D	Small	Commuting municipality: more than 40 percent of the residential population commute to another municipality to work	Separate Strategy & Plan	12 & 14	2009-2020	Strategy & Plan - February 2009
E	Small	Goods producing: more than 34% of the residential population aged	Integrated Strategy &	35	2011-2015	November 2011

16-64 employed in mining, production, manufacturing, energy, etc	Plan
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For the **document study**, materials – in the form of strategic documents – were gathered and recorded in a log book and timeline for each municipality. These materials were publicly-available documents downloaded from the subject municipality’s website, with relevant supplementary information downloaded from the websites of other organisations. Documents and results from previous research projects were also used where available. Documents were selected only if they were considered to relate to the planning or implementation of energy strategies, organisational structures and management systems (including guidelines and budgets), climate strategies, Local Agenda 21 processes, the Covenant of Mayors, the Aalborg Charter and Aalborg Commitments process, and related action plans addressing, for example, sustainability, transport or waste. On average, 25 documents per municipality were gathered, ranging from 8 documents for Municipality E to 43 documents for Municipality B.

Individual and group interviews were used to deepen understanding of each case and confirm or refute issues identified in the document study. For each case study, the municipal contact person listed on the Sustainable Municipality website was contacted. The contact persons were asked to invite to group interviews only those persons they considered to have played an important role in the energy planning process. Five one-hour group interviews were held, one in each municipality, during the period September-November 2011. Each group interview was attended by on average 2.4 researchers and 4.8 municipal representatives and other invited stakeholders.

Group interviews addressed issues related to the municipal energy planning process, including the organisation of the process, the actors involved in the process, steps in the process, plans for monitoring and evaluation, and the financing of the process. Although the researchers attempted to follow a basic format, participants were encouraged to “tell their story” in a roundtable setting and as such, the content of the interviews and themes discussed varied. At the end of each interview, the participants were asked if any other actors (who were not present at the group interview) had played a significant role in the process and should be contacted for follow-up interviews. Subsequently, 10 additional interviews were held (8 by telephone and 2 in person), an average 2 per municipality. This means that, on average, 6.4 individuals per municipality were interviewed (for more information on the approach used, see Fenton et al., 2012).

All interviews were recorded, transcribed and their contents, together with the empirical data gathered and recorded in the log books, were summarised under thematic headings (e.g. organisation, planning process, status of energy plan, contents, monitoring, role of the Sustainable Municipality programme, etc). The researchers’ own observations, concerning issues such as group dynamics - made and noted during interviews - were discussed by the research team.

The researchers made a preliminary qualitative assessment of the raw material for the case studies in order to identify strengths, weaknesses and other positive/negative issues identified by participants or implied by the process. Case studies of each municipality were then written, elaborating on the questions posed during the interviews and the basic structure of the log books. In this paper, results from the case studies are presented and compared, to illustrate variations between the municipalities. Throughout the discussion, the five municipalities and all respondents remain anonymous, as this was a precondition for conducting the workshops and interviews.

3. Results

This paper aims to identify the characteristics of municipal climate and energy planning processes in the five municipalities and consider if and how stakeholders are involved. For this reason, the paper uses a comparative approach and focuses on generalisable findings and observations from the five cases, rather than presenting detailed information on each case that may be highly context-specific.

The results present the reasons given by municipalities for developing a strategy; the ways in which the municipalities have organised processes to develop strategies, both in a structural and procedural sense; and the scope of strategies. The results do not present normative judgements concerning the measures contained single strategies, nor attempt to provide a comprehensive account of each of the 15 group and individual interviews conducted for the study (comprehensive accounts and single case studies can be found in Fenton et al., 2012; analysis of stakeholder experiences of participation is made in Fenton et al., forthcoming).¹

3.1. Purpose of municipal climate and energy strategies

The municipalities emphasised different reasons for preparing a Strategy and different aspects of sustainability (see columns “External influence”, “Key Driver” and “Related Ambition” in Table 2). Two municipalities (A and C) explicitly link their Strategy to their overall municipal visions of becoming an attractive and sustainable community and leading example in Sweden. These municipalities emphasise the geographic zone of the municipality more strongly than the other three municipalities, which emphasise the municipality’s own organisation and internal routines.

Several other purposes are identified by the municipalities. These include: the legal requirement for an energy plan; the need to describe what the municipality has done in the past; the need to address an absence of policy; the need for information/baseline data; the aim to support decision-making; the need to improve cooperation between stakeholders; and the need to *show* that the municipality is working on these issues; and the need to contribute to national/regional targets.

The word *show* has been emphasised – municipalities A and C stated a desire to strengthen their profiles and market their municipalities. This desire to proactively generate and demonstrate good practice can be contrasted with municipality E, which was obliged to act following a larger chain of events (described in section 3.2.). Municipality B emphasised the need to practice as it preaches, an approach that could be said to have both proactive and defensive connotations.

¹ **Presentation of Results.** Background information about the municipalities is provided in Table 1, whereas Table 2 provides information on the municipalities' motivations and the scopes used in strategies. In contrast Table 3 presents a comparison of different steps taken during the process by each municipality. This complements Figure 3, which illustrates the type of organisational structure used by the municipalities during their processes. Taken together, this information provides a general overview of the different characteristics of the five municipalities and variations in their contexts, intentions, and processes. Such information helps inform the comparative analysis presented in this paper.

Table 2. Overview of the scope of municipal strategies/plans, the type of measures planned and implementation period, relationship to other initiatives, and drivers/motivations for municipal energy planning. Measures indicate investments in “hard” physical infrastructure or “soft” non-physical measures, e.g. campaigns or reorganisation.

Municipality	Scope	Measures	Delivery	External influence	Key driver	Related ambition
A	Geographic zone	Mix of hard & soft	Strategy medium-term; Plan near-term		Energy (efficiency & renewable)	Attractive community; be a leading example
B	Municipal organisation	Mix of hard & soft	Strategy medium-term; Plan near-term	Regional initiatives/targets	Energy (efficiency & renewable)	
C	Geographic zone	Mix of hard & soft	Short-term	Regional initiatives/targets	Sustainable development	Attractive community; be a leading example
D	Municipal organisation	Mainly soft	Strategy short-term; Plan near-term	Regional initiatives/targets	Climate change	
E	Municipal organisation	Mainly soft	Near-term	Regional initiatives/targets	Climate change	

3.2. Organising the strategy planning process

The five municipalities organised the process to plan their energy strategies in similar ways, as illustrated in Figure 3. Each municipality established a Working Group, a Steering Group, and four municipalities also organised Reference Groups.² However, the precise role of these entities varied in each municipality, as did the steps taken at different stages of the strategy planning processes (see Table 3).

The organisation of work to develop the strategies and action plans, and the steps taken, were similar in the two “large” municipalities. One notable difference between Municipalities A and B was that **Municipality A** had a Management Group comprising managers of municipal departments and

² In *Energy planning as part of public planning*, Rydén states that “as a general rule, an organisation consisting of the following working groups should be established”. He defines the groups as a “Management Group” comprising “decision-makers and the Head of Planning”; a “Working Group” comprising “the Head of Planning and important key persons, and also possibly consultants”; and a “Reference Group” including “experts from local companies, organisations and interests” (Rydén 2006). Rydén states that the exact nature of the relationship and roles between these groups varies depending on a municipality’s size, but a “Working Group” is an active, operational entity whereas a “Management Group” is not involved in daily work, but provides leadership and makes decisions based on the Working Group’s proposals or actions.

In this paper, what Rydén (2006) calls the “Management Group” is referred to as a “Steering Group”, as this more accurately reflects the categories proposed in Sustainable Municipality programme and the operational titles used by the municipalities studied. Moreover, in this paper, the term “Management Group” exclusively refers to a group of managers active in Municipality A’s energy planning process that was specifically known as a “Management Group”. In addition, it should be noted that in the energy planning processes of the five municipalities studied, the Head of Planning was not (in all cases) a participant or chair of Working Groups, as the responsibility for coordinating Working Groups was allocated to designated Coordinators.

companies also represented in the Working Group. The Management Group was responsible for providing strategic direction, whereas the Steering Group was responsible for making decisions. Municipality A also sub-divided its Working Group into four multi-stakeholder sub-groups. These groups met to discuss targets, using other strategic documents and assessments of potential as a basis for their proposals.

In contrast, the Coordinator (with support from external experts) in **Municipality B** had a more central role by conducting an analysis of the status quo and studying numerous other energy strategies. The Working Group prepared a draft strategy, which was submitted to the Steering Group, which consisted of members of the municipality’s Social Development Committee. A similar process occurred for the Action Plan. According to the Coordinator, larger departments were expected to form sub-groups to select targets and plan implementation in their respective organisations, although it is unclear to what extent this took place.

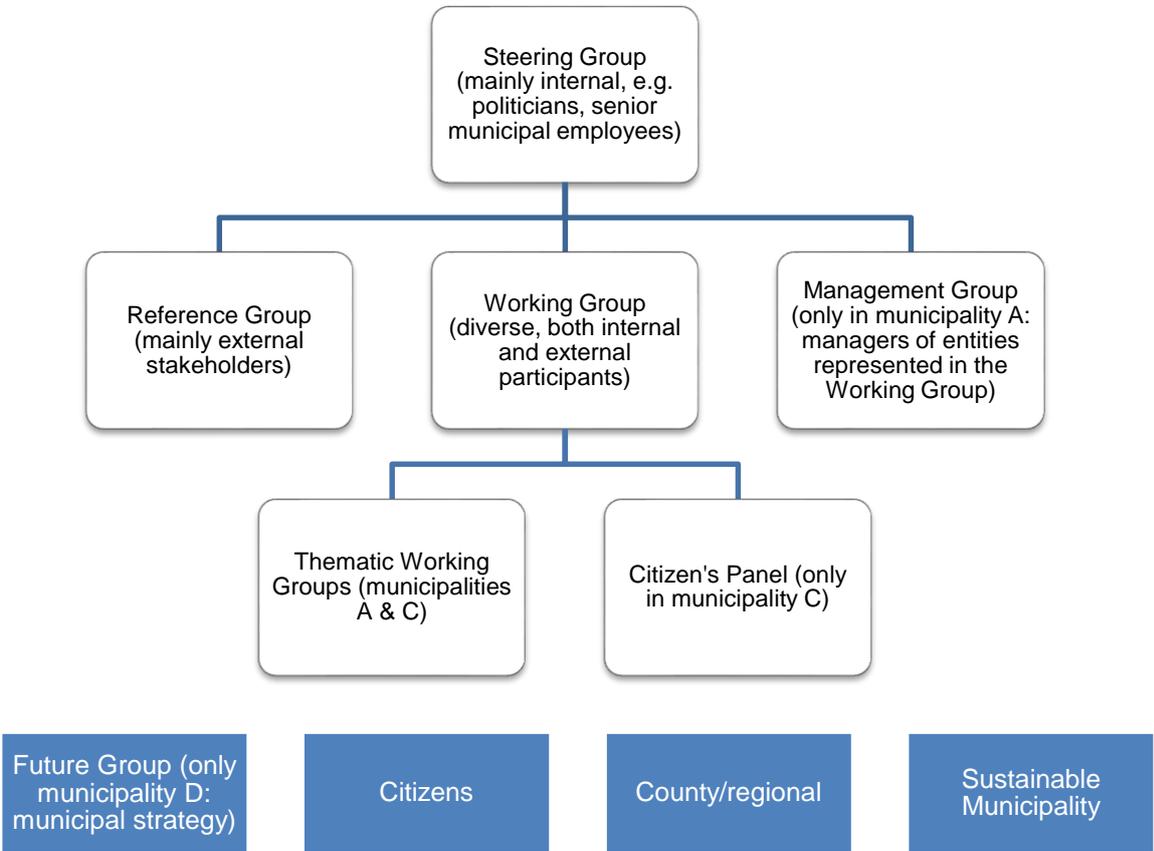


Figure 3. Organisation of planning processes in the five municipalities. Other influences are presented in the boxes below the figure.

In **Municipality C**, an internal organisation comprising a Working Group and political Steering Group was established, with the two groups working in parallel. The Working Group included the Coordinator plus the chairs of four multi-stakeholder thematic working groups, which were created following consultations with the “Citizens’ Panel”.³ The thematic working groups developed goals and proposed measures for their respective topics.

³ The “Citizens’ Panel” is a group of 200 citizens that on numerous occasions has been invited to provide input to municipal processes, often at a very early stage. In the energy and climate strategy planning process, there was clear evidence of interest among citizens and a willingness to engage and participate. A first meeting was

In the two “small” municipalities, there were some significant differences in organisation of the planning process and the steps taken. In **Municipality D**, the process was organised in a similar way to municipalities A-C. The Coordinator led a Working Group comprising different municipal entities, with a Steering Group formed of politicians and representatives of the municipal energy and housing companies providing overview and guidance. The Steering Group continues to monitor implementation of the Strategy. Municipality D’s “Future” group makes strategic decisions on overall developments in the municipality.

In **Municipality E**, the Guidelines for the Municipal Executive state that the Municipal Executive should – amongst other things – lead and coordinate energy planning and promote energy efficiency and ensure implementation of work with Local Agenda 21 in all aspects of the organisation. As such, the Municipal Executive had overall responsibility for the municipality’s participation in the Sustainable Municipality programme, with the Municipal Executive Committee acting as Steering Group. The Municipal Executive in Municipality E established a Working Group composed of individuals from different municipal departments. As in the other municipalities, the individual appointed to coordinate the process was a specialist on environmental issues. However, as this person was on parental leave during the planning process, much of the practical work to draft the Strategy was done by another team member. No budget was allocated to the project.

Table 3: Simplified map of key stages in the planning process of five municipalities, chronological order from top to bottom.

Step taken by municipality	A	B	C	D	E
Participation in regional project				X	X
Establish internal organisation	X	X	X	X	X
Commission external energy analysis			X		X
Hold internal conference			X		
Consultation with citizens			X	X	
Creation of thematic working groups			X		
Working Group (and sub-groups) make proposals	X	X	X	X	X
Working Group (WG)/ Coordinator (C) prepares draft strategy	WG	C	WG	C	C
Open consultation (OC); with Management/ Steering/ Reference Groups (G)	G	G	OC	OC	OC
Revision of draft	X	X			
Consultation with all municipal departments/companies	X	X			
Revision > final proposal	X	X	X	X	X
Approval	X	X	X	X	X

One notable difference between Municipalities D and E is that Municipality D was already engaged in a regional project⁴ to develop local climate strategies and energy plans was well underway by the time the municipality joined the Sustainable Municipality programme in summer 2008. As such, the programme represented a continuation of the previous activities and an opportunity for long-term

held in May 2009 and the output of this meeting was the proposal of the four themes on which the thematic working groups subsequently focused.

⁴ The County Administrative Board received a grant from the Swedish Environmental Protection Agency to work with municipalities in the region and support the development of local climate strategies and energy plans. This programme stipulated that municipality nominate a contact person and form a working group and political steering committee for their project.

planning beyond 2011; it presented no organisational or budgetary problem. The municipal contact person for both projects was the Coordinator of the Working Group. In contrast, Municipality E was invited – along with all other municipalities in its County – to join the Swedish Energy Agency’s Sustainable Municipality programme and form a regional Cluster. The Municipal Director received a letter inviting the municipality to join the programme and then delegated tasks to the responsible civil servants. The proposal to join the programme was then submitted to the politicians for approval. The unplanned nature of this process meant tasks had to be squeezed into existing budgets and plans.

3.3 Scope and content of municipal climate and energy strategies

In each case, the five municipalities claim to address both the municipal organisation and the municipality as a geographic zone (see Table 2). Nonetheless, the specificity of targets and the extent to which measures represent ambitions or actual plans, particularly when targeting sectors that are not directly influenced by the municipality, varies. There also appears to be variation within the municipalities’ own organisations.

Two documents stand out for being particularly explicit about the role of different municipal entities in the process to plan, implement and monitor/evaluate their strategies. Municipality A has produced economic analysis including cost-benefit scenarios for the proposed measures and estimated budgets for implementation. Municipality B has mapped linkages between municipal policies in a clear way.

Three of the five strategies - municipalities A, B and C - contain a mix of hard (e.g. investments in physical infrastructure) and soft measures (e.g. awareness-raising or training). The other two strategies - municipalities D and E - mainly focus on “soft” measures, although some notable investments in infrastructure are included in Municipality D’s Strategy (see Table 2). Four of the municipalities (B, C, D, E) make reference to regional initiatives that influenced their choice of baseline or target. None of the municipalities has chosen to adopt a long-term goal (i.e. 2050). Municipalities A and B have selected medium-term goals (2030, 2035), municipalities C and D have chosen the short-term 2020 and municipality E the near-term 2015. All Action Plans specifying measures address the near-term.

There is some degree of variation in content, depending partly on contextual factors (e.g. the perceived need to explain different issues) and partly on the choice of format. Only one of the municipalities – Municipality E – based their plan on a template provided by a municipal association (Climate Municipalities). However, individual strategy documents in municipalities A, B and D have broadly the same format as that of the template. Broadly speaking, these four municipalities structured the contents of their documents in a similar way - introduction, background information, statement of purpose, information on regional/national initiatives, information on the municipality’s strategic vision, the local process, targets, measures and plans for monitoring and evaluation. The fifth municipality (C) split its contents into two parts which could broadly be categorised as a) targets and measures, b) context, baseline and forecasts.

4. Discussion

The five case studies provide an illustration of how different types of municipality organise strategic planning processes, with focus on energy and climate strategies. Comparison of the case studies show that significant variations exist between the municipalities, variations that are not limited to contextual factors such as a municipality’s geographic size, population, number of employees or organisational structure. Whilst contextual factors are undoubtedly influential, it is possible that some non-contextual variations may exert a stronger influence on processes. For example, municipalities make decisions

that influence the organisational form and scope of the process, such as the choice of methods and participants, the levels of interaction and exchange, focus on internal or external actions, etc. These decisions may have profound implications for the strategic planning process in question.

- *Does size matter?*

Evidence from the five case studies suggests that there is no typology that explains which municipalities will utilise different approaches in strategic planning. For example, municipalities A and B are categorised as large municipalities, but the form and scope of their processes vary considerably; the same trend is observed in municipalities D and E, even though both are categorised as small municipalities (see e.g. Table 3). The same is true if we look at the municipalities from a process perspective. Of the five municipalities, municipalities B and E are considered to have used more rational models than the others, as the processes in these municipalities were more top-down, less inclusive, had a stronger emphasis on formal roles and the municipal organisation, and were conducted in a more linear fashion, with a defined sequence of steps and clear division between the roles of politicians and planners (see Figure 1 for a comparison of rational and communicative models). Yet Municipality B is a large municipality, whereas municipality E is small.

A similar pattern is observed between the two municipalities using more communicative models, namely medium-sized Municipality C and small municipality D. In both of these cases, the planning processes appear to be more inclusive and bottom-up, with citizens playing an active, early role in the processes. In Municipality C, the role of politicians and planners appears to have been less hierarchical than in the other municipalities studied. Municipality A appears to have chosen a path between the other municipalities, with a fairly well-defined process with greater inclusion for external stakeholders than in municipalities B and E yet a narrower, more restrictive approach than municipalities C and D (see different steps taken by municipalities in Table 3).

It is possible that these variations reflect different ideological influences or other factors. For example, the municipalities have differing concepts and interpretations of their influence. This is partly reflected in the differing scopes of the strategies (this may in turn influence the interpretations). The scope of processes and strategies is narrower when a rational model is used and wider when a communicative model is used.

- *Moving from individual control to stakeholder participation*

It is also clear that, by expanding the scope of processes, activities become increasingly social and less individualistic (in terms of a single person or a single organisation being perceived as implementing a “project” or “owning” a process). Interestingly, this trend was observed in the municipalities studied in this paper, with evidence suggesting a greater feeling of co-creation and co-ownership for energy and climate strategies in the more communicative municipalities.

Inevitably, personnel changes impact upon processes, particularly if there is a lack of communication or inadequate routines. All five municipalities experienced personnel changes during their planning processes and an important lesson is to plan for the inevitable and assume the “unexpected” occurs - people are often absent from work or change jobs. In rational models, risks are minimised through definition of tasks and reduction of scope, but individualisation increases the risk of interruption should a person suddenly be absent. Conversely, communicative models are by nature flexible and knowledge is diffused across networks; it is challenging for all participants to understand the roles and expectations of others.

Another interesting observation was that municipalities with experience of working with systematic environmental management (e.g. Environmental Management Systems) in municipal operations were more communicative in their approach and placed greater emphasis on the importance of monitoring and evaluation in their strategies. This implies that use of tools and standards may have a subtle influence on how municipalities perceive both the scope of environmental problems and their own influence and role.

A good example of this was observed in Municipality D, the only of the five municipalities to have begun monitoring and evaluation. Interviewees in Municipality D remarked that a number of the measures that were first to be implemented had in fact originally been proposed by citizens during an initial consultation period that took place before the municipality discussed its own ideas and proposals. Moreover, these were measures that the municipality would not have proposed or implemented without the consultation. Thus, the communicative approach not only led to implementation generating direct, visible impacts for citizens, it also provided genuine additionality to the process.

- *Routines and resources as barriers – or opportunities?*

Of course, it is unclear to what extent the past use of tools and processes aiming for systematic environmental management and the use of communicative models in the five municipalities are linked. Likewise, the extent to which municipalities are prepared – or allowed – to involve stakeholders in processes may vary; traditions, routines and past experiences inevitably exert some influence on processes, not least as they form the basis for internal guidelines and procedures. In Municipality B, such guidelines mean that politicians and planners do not interact and that the municipality's strategy contains no detailed targets as these must be contained in an action plan. Municipality B also saw a multi-stakeholder Reference Group, established during strategy planning, disbanded during the action planning – it was unclear whether this was a consequence of changing politics, changing personnel, changing priorities or other factors. However, Municipality B was the only municipality which successively excluded stakeholders as the process went forward.

In practice, the seemingly rational model used by Municipality B left individual civil servants and entities isolated from one another. The allocation of functions within the organisation, together with the routines employed by the municipality, did not enhance understanding of the process within the municipality's own organisation. This may explain the decision to focus internally and limit the involvement of other participants. However, this also greatly limits the likelihood that the municipality will achieve its own targets. Municipal departments and entities select their own detailed targets for implementation, increasing the risks of deviation and lack of coordination.

In Municipality E, a lack of time and budget was cited as a major impediment to the planning process. Indeed, gaining access to resources was one reason for the municipality's involvement in the Sustainable Municipality programme; another was that the municipality was invited to join a regional project and felt obliged. As such, its participation was not planned in great detail, meaning responsibilities were allocated for a project (to develop the energy strategy) but no budget was allocated to departments to participate in the project or implement measures. Thus, the municipality benefitted from access to some resources on the regional level, but did not have sufficient human or financial resources to have a wide scope during its planning process.

In this context, it is perhaps understandable that Municipality E opted for a rational model. However, Municipality D, another small municipality, also initiated its process to develop an energy and climate strategy in the context of a regional initiative and with similar constraints, yet Municipality D chose a

communicative model. Both municipalities rely on specific individuals, often non-specialists, to fulfil multiple, complex roles, and often issues are not documented as informal networks are used to share information. As mentioned before, Municipality D has previous experience of working with systematic environmental management and it may be that this, together with other factors, goes some way toward explaining the disparity.

Use of external financing may add value to on-going work and provide a stimulus in municipalities where resources are scarce. Participation in projects or programmes may also provide a focal point for stakeholders or impact upon political will, a point noted by several interviewees in this study. However, there is a risk that use of external financing - and particularly project financing stipulating terms of employment on a project basis - may create or increase uncertainty and reduce or inhibit the effectiveness of long-term planning. This point was noted by several of the participants in this study and is significant, partly because the Sustainable Municipality programme is time-bound, but also because the municipalities received other types of funding (e.g. EU project financing, regional financing, national energy efficiency support) which they used in synergy. This either meant that individuals held multiple roles or that it was unclear to what extent municipalities were actually funding their own strategic planning processes. Perversely, this runs the risk of reducing the legitimacy of energy and climate planning, as municipalities may choose to link this strategic work to project financing, instead of integrating it into core processes.

5. Conclusions

This paper suggests that the choice of rational or communicative approaches has significant implications on both the organisational form of a municipality's process for developing energy and climate strategies and the scope and content of the output. Such choices are influenced by both contextual (e.g. municipality's size, population, etc) and non-contextual factors (e.g. choice of methods, participants, focus internal/external, etc).

For example, the study showed that the choice of a rational approach to strategic planning may be influenced by contextual factors (limited or uncertain budget, process imposed by external actors, etc) but is likely to result in establishment of a smaller project organisation, limited involvement of other stakeholders, and deliver outputs with a narrow scope. This in turn may impact on the ambition level of strategies, in terms of scope, targets and also the likelihood of their implementation. There is a risk that such processes neglect or fail to take advantage of potential synergies, burden-sharing or other potentials.

In contrast, the choice of a communicative approach may be influenced by other contextual factors, e.g. tradition or political commitment. Choice of communicative approaches is likely to result in a process characterised by early involvement of stakeholders (notably politicians, managers/executives and citizens), without preconditions; from this emerges a process and a larger project organisation, with continuing high levels of stakeholder participation and a wide scope and remit. Municipalities adopting communicative approaches suggested that the approach brings significant added value in terms of engagement, legitimacy, partnerships, etc; however, in certain contexts, the approach may also emphasise problems or undermine these benefits, if for example conflicts between stakeholders are left unresolved.

The research found that the size of municipalities does not strongly influence the choice of organisational form for the strategic planning process, but size may impact upon the choice of measures, their scope and implementation period. However, the reasons for the choice of different organisational forms are not always clear and may be influenced by other factors, such as level of political will, administrative routines, individual choices or other factors. Due to the limited number of cases in the study, however, this paper could not tease out which of these other factors were important.

Nevertheless, by illustrating the characteristics of the municipal climate and energy planning processes in five Swedish municipalities, this study makes a contribution to the research on local governments and sustainable development in general, and specifically to the growing literature on municipal climate and energy planning. The study highlights the impact that the choice of organisational form and methods used in strategic planning processes has on the scope and content of the process and its outcomes. The findings may help inform policy-makers on the national and local levels about the implications of choosing different approaches to organisation and process and pave the way for future research on the underlying reasons as to why municipalities choose different approaches and the ways in which different stakeholders can influence processes using different types of approach.

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