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Developing local emergency management by co-ordination between municipalities in networks: experiences from Sweden

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Abstract

Several extraordinary peacetime crises have put emergency management capacity on the agenda in Sweden. Evaluations have highlighted the importance of developing co-operation and networking among a range of actors, among which municipalities are fundamental in terms of function. With well-developed emergency management at the local level involving municipal sharing of resources, society is better equipped to manage crises. This study aims to increase our understanding of how co-operation in inter-municipality policy networks is established and maintained regarding emergency management. We discuss how a network of five municipalities emerged and took shape, focusing on four particular aspects: problem definition, contextual factors, growth and spread of a generalized belief, and co-ordination and control. Overall, we conclude that co-ordination and co-operation in municipal emergency management are probably relatively easy to develop, because it is easy for the involved actors to see the benefits. Sharing resources is seen as crucial when establishing and, not least, financing efficient, high-quality emergency management. The municipalities' lack of resources to provide effective emergency services, as required by law, makes them dependent on each other. Limits for co-ordination were connected to distance and other geographical factors. Other limits of equal importance were linked to factors such as culture/tradition, mutual understanding, size of partners and unwillingness to give up authority as well as a prior barrier for co-operation between small and bigger municipalities. In this case, the issues raised in the network can be directly connected to how emergency management policy is developed in the involved municipalities, for example the shaping of emergency plans and risk analysis and also how they communicate in crisis.

Keywords: policy, network, municipality, emergency management, Sweden.

Introduction

Several extraordinary peacetime crises have put emergency management capacity on the agenda in Sweden. Increased expectations have been expressed regarding the potential of government to meet the need to organise and lead in emergency situations, and attention has been drawn to society's emergency management capability. Sweden recently faced a powerful storm named "Gudrun" that caused devastation. With a wind force of 0,042 kilometres per second power lines were damaged and 150 millions trees were cut down which led to power cuts in most of the southern and central Sweden. After the storm 500 000 subscribers lacked power and 300 000 subscribers did not have any telephone. The cost of the storm is estimated to 20 billions Swedish kronor¹ (Skr) and the Swedish Power and Forestry committee regard it to be the worst storm in 100 years.(SALAR, 2005; PTS) Evaluating Swedish society's ability to handle this crisis, and others such as the Tsunami in 2004, have highlighted the importance of developing co-operation and networking among a range of actors, among which municipalities are fundamental in terms of function. (SEMA, 2005; Kaiser et al., 2004; SOU 2005:104). With well-developed emergency management at the local level involving, for example, municipal sharing of resources, society is better equipped to manage crises. Thus, there is an interest in studying how co-operation between municipalities develops in the emergency management field. Municipalities need to co-operate, and share and exchange resources, such as work force, material and financing, in networks with other actors. This creates the potential for conflict regarding different interpretations of how the emergency management system should be designed and developed.

Our aim is to increase understanding of how co-operation in inter-municipality policy networks is established and maintained regarding emergency management. We will examine how a network of five municipalities emerged and took shape in order to understand how networks are able to influence municipal crisis policy. We draw on policy network theory in doing this, with a focus on factors central to understanding how and why co-operation occurs in networks. Our empirical focus is on a network consisting of five Swedish municipalities, namely: Ödeshög, Boxholm, Ydre, Kinda, and Tranås.

The paper derives from municipal-level field studies of emergency management co-operation in these five municipalities located in Östergötland and Småland counties. Our research included the examination of written primary sources, such as government legislation, Swedish Government Official Reports (SOU), local and regional studies, minutes, and notes, as well as field work, for example, in-depth interviews with the chair of the municipal executive board and the official responsible for emergency management in each municipality.

The article is structured as follows; after introducing Sweden's emergency management system, we focus on a conceptual discussion of how co-ordination develops in policy networks and how various theories can complement network theory. The second part of the paper examines co-ordination in networks between five particular municipalities. We consider the factors that explain the existence or lack of co-operation between municipalities and the implications for society's emergency management capability. A discussion of conclusions and a brief look at policy implications wraps up the paper.

Emergency management in Sweden

Swedish emergency management is based on geographic area responsibility. Municipalities, county administrative boards, and the national government have geographic area responsibility at the local, regional, and national levels, respectively, which means that they

¹ 185 billion Euros

are responsible for co-ordinating actors at their level before, during, and after a crisis. They never assume the responsibility, however, that belongs to another actor.

In addition, three fundamental principles guide Swedish emergency management, namely, the principles of responsibility, parity, and proximity. The *principle of responsibility* means that the actor normally responsible for an activity retains the corresponding responsibility in the event of a crisis. The responsible actor will then co-operate with other actors to solve common issues and problems. According to the *principle of parity*, authorities' localization and organization will as far as possible remain the same during a crisis as under normal conditions. The *principle of proximity* means that a crisis should be dealt with at the lowest possible level, where it occurs and by those affected by and responsible for its consequences (http://www.krisberedskapsmyndigheten.se/templates/Page____715.aspx).

By law (SFS, 2006:544), in every new term of office the municipal administration shall formulate a plan for how to handle crises which have consequences for the local society's ability to function. Every municipality must also have a committee responsible for handling affairs in case of emergency, at which time the committee can take over decision making from other committees in the municipality's administration. The purpose of this is to establish an efficient chain of command and co-ordination system in the municipality. It is up to the crisis committee itself to decide when to assume responsibility for an issue. Another municipal duty is to analyse what measures should be taken to reduce vulnerability, increase security and safety as well as have continuous education of municipal politicians and officials.

Municipalities receive state funding to execute these duties. This funding covers the analysis of risks and vulnerabilities, geographical area responsibility, education, emergency exercises and drills, mandatory reporting, and administering states of alert. In practice this means that municipalities are compensated for the planning and staff connected with emergency management. In detail this means an annual compensation to all the Swedish municipalities of totally 25 millions Skr. The five municipality which are studied here all receive 250 000 Skr each per year. This basic compensation, which size depends on the municipality's population, shall provide municipalities with personnel who can co-ordinate the emergency management. In addition the state funding also include a compensation for the process of building up an emergency management – 2,80 Skr per year and inhabitant – and an activity compensation – 11,40 Skr per year and inhabitant – for analysis, plans, education etc. (SEMA, 2004)

Developing policy in networks

Swedish emergency management policies aim to develop a system that supports actors in preparing to handle serious crises. The municipal emergency management service is determined via local policy processes. In these processes, there is an interplay between national and local policies, the national policy regimes mainly providing an institutional setting for local policy making. Local policymaking is, however, an ongoing process that Hill describes thus:

Policy may sometimes be identifiable in terms of a decision, but very often it involves either groups of decisions or what may be seen as a little more than an orientation. The attempts at definition also imply that it is hard to identify particular occasions when policy is made. (Hill, 1997: 6)

Our policy analysis is based on Hill's (1997) process-oriented dynamic understanding of policy. Hill regards policy as 'a web of decisions taking place over a long period of time' and not as the product of one single decision. Policy as a concept refers both to the content and to

the process by which the actual content is formulated, since both change every time actors negotiate policy.

Policy-making will here be discussed as the result of activities among actors gathering in policy networks. Kickert et al. (1997) define policy networks as:

... stable patterns of social relations between interdependent actors, which take shape around policy problems and/or policy programmes. (Kickert et al., 1997: 6)

Most policy is formed and developed in networks in which actors meet and negotiate concerning various policy issues. The connection between the policy network and policy itself is that policy networks form the *context* within which the policy process takes place (Kickert et al., 1997).

Networks are considered as non-hierarchical arrangements of mutually dependent actors; the power relationships in them are uneven and they usually contain an open exit. Interdependencies and resource exchange are regarded as central to networks and are also decisive for which actors are included in or excluded from a network (Rhodes & Marsh, 1992).

Actors participating in networks have to exchange resources and negotiate shared purposes. Co-operation and co-ordination in networks are regarded as the best ways to achieve common interests (Börzel, 1998). Powell (1991) explains that these resource exchanges are intangible, taking place over a long period of time through a general pattern of interaction. This happens between individuals in networks who take part in joint actions; with repeated interaction institutionalization occurs, that is, common views, participation patterns, and interaction rules evolve (Kickert et al., 1997).

Kenis and Schneider (1991) view actors' inter-relationships as communication channels, and they emphasize that resources such as information, knowledge, and trust are exchanged between involved actors. The relationships differ, however, according to level of intensity, normalization, standardization, and interaction, and are important for the policy network's structure (Börzel, 1998). MacNeil (1987) discusses 'entangling strings', which implies that actors are entangled with each other by means of rumours, friendship, interdependency, etc. These are all important parts of a relationship.

In a network, individual actors lose some of their ability to influence or determine policy, and instead become dependent on the other actors in the network. In a network, no individual actor can impose its will on another. Solving policy problems in a network requires a co-ordination network. There often exist "managing cores" consisting of actors that for a delimited period are commissioned to lead deliberations concerning a particular issue. No single actor, however, can determine what other actors should do without the approval of other network members (Johansson, 2002). Policy development enforces co-operation and open networks, so no decision will be legitimate just by being so within one organization or institution. Legitimacy emanates from the interplay between legal interpretations, common understanding, and trust within a network.

Lars Carlsson (2000) argues that policy network theory is not yet fully developed and thus cannot completely explain political inquiry. He means that a change in focus is needed whereby networks are regarded as *explaining* different outcomes instead of just being a dependent variable. He is arguing that network theory needs to be incorporated into a broader theoretical framework. Carlsson has suggested that network theory would benefit from the discussion of collective action, with reference to the institutional analysis and development (IAD) framework. In this sense, policy networks should be understood as organized units and not organizations. This is because policy networks concern:

The distributing of tasks among different actors and the creation of an intelligent conformity, or co-ordination, to guide the activities performed. In other words, the types of multi-actor joint actions that are achieved through policy networks ought to be regarded as instances of collective action. (Carlsson, 2000: 508)

Though policy networks are about efficiently co-ordinating resources between actors, policy networks could be regarded as collective actions; collective actions are broadly defined as the actions taken by group members to promote common interests (Carlsson, 2000).

Analyzing policy networks: a conclusive approach

Like the network approach the IAD framework is problem oriented, meaning that it focuses on how individuals organize to solve specific problems. Central to the IAD framework is the notion of a central action arena that can be interconnected to a problem. One example of an action arena would consist of actors' co-operation and co-ordination concerning emergency management. According to the IAD framework, actors' behaviour and handling of a problem in the action arena thus formed are determined by factors such as physical conditions, institutions, and social culture. Action in action arenas is both enabled and restrained by rules, resources, and cultures. This gives actors special incentive structures, according to Carlsson (2000). The IAD framework emphasizes the importance of individuals, because they are the foundation of all collective units. The creation of a policy network can thus be understood in terms of individual behaviour, and the framework can help us recognize factors that are important for the creation of networks. From the IAD framework and collective action theory Carlsson (2000: 514–515) has formulated six hypotheses, covering six different aspects of networks. These are as follows:

1. Contextual factors: Policy networks emerge and are shaped differently in different contexts.
2. Problem definition: Policy networks emerge and are shaped differently depending on the definition of the policy problem solved.
3. Growth and spread of a generalized belief: Network coherence and thus the activities performed are dependent on the extent to which mutual understanding is achieved among actors. This can also be compared to the "shared mental model" which help actors to understand activities in a group and therefore also predict which conclusions and goals the group will reach (Volpe et al, 1996; Cannon-Bowers et al, 1993).
4. Precipitation factors: Policy networks deliberately shaped by political decisions are less likely to be problem specific than are more spontaneous ways of organizing.
5. Mobilization of actors: Self-organized policy networks are more likely to contain committed actors.
6. Co-ordination and control: The existence of control imposes a limit on the development of policy networks, i.e. it affects how fast and how far collective actions evolve.

We will discuss how the network of our five municipalities emerged and took shape in order to understand how networks can influence crisis policy in municipalities. In our research we soon came to focus on four particular aspects, while letting the other two remain at the periphery. Aspects four and five were set aside because we felt we would need to compare different networks to draw any conclusions concerning them. Thus, of Carlson's six aspects we chose to focus on these four:

Problem definition: networks are formed around a "problem" that needs to be solved. "Problem" is here seen as a wide concept and can for example contain needs and challenges. Did the actors in the network have a mutual problem definition?

Contextual factors: these refer to various types of factors, such as demographics, belief systems, and resources. Different local environments display different social and cultural qualities. From an IAD framework perspective one could say that local action arenas are always different, and framed by different resources and constraints. What were the relevant contextual factors in our case? How did contextual factors influence how our network emerged and took shape?

Growth and spread of a generalized belief: Actors in a network need a mutual understanding of what is perceived as good, bad, effective, desirable, and so on, if they are to prioritize their actions and organize a solution to a problem. How do the actors perceive the required prioritization?

Co-ordination and control: Networks are subject to social control that is in turn related to co-ordination. Control emerges from the processes of interaction between individuals. What kind of control are the involved actors discussing? How does this affect how fast and far the collaboration evolves?

We will now discuss how the network between the five studied municipalities emerged and took shape, with a focus on four aspects, namely, problem definition, contextual factors, growth and spread of a generalized belief, and co-ordination and control.

Developing an emergency management system: Swedish experience from the VÖKBYT municipalities

We have chosen to focus on five municipalities that are working to co-ordinate their emergency management activities. The municipalities' chosen are located in Östergötland and Småland counties in southern Sweden and have a previously established co-operation system, called VÖKBYT, in many different areas. VÖKBYT is an acronym built from the initial letter of each involved municipality: Vadstena, Ödeshög, Kinda, Boxholm, Ydre, and Tranås. However, Vadstena is not yet involved in emergency management co-ordination, so we have chosen to exclude them from the study. Vadstena's absence has resulted in a new acronym for the emergency co-ordination – KÖBYT. All these municipalities are small (see Table 1) and individually would be unable to organize local emergency management services.

The KÖBYT-network started in 2001 and includes several areas; one is emergency management. It is voluntarily for the municipalities if they want to participate in one, several or all co-operation areas. Some financial resources are put in to the network, but mainly the exchange of resources regards time, personal, information, policy formulations, basic data for decision-making and plans etc.

Table 1: The involved municipalities in KÖBYT and their populations

Municipality	Population
Ödeshög	5 500
Kinda	10 000

Boxholm	5 200
Ydre	3 800
Tranås	17 700

(Official Statistics of Sweden, SCB, 2006, http://www.scb.se/templates/tableOrChart____167883.asp)

Figure 1 Map showing the KÖBYT municipalities

(http://www.e.lst.se/e/Om_Lanet/lanets_kommuner.htm, our adjustments)

Hådal et al. (2005) studies on activities of municipal co-operation shows that the municipalities' of KÖBYT network have one of the highest co-operation activities among municipalities in the County of Östergötland. The co-operation activities include for example administration, i.e. economy, personnel and information technology.

Single municipalities within the VÖKBYT network also co-operate with other municipalities outside the network; those co-operation activities are not, however, in focus here.

Problem definition

To develop a policy network, the relevant actors need to agree that there is a problem needing a solution. In our case the overall problem was to develop properly functioning emergency management in all the municipalities. The actors in the municipalities expressed strong belief in co-operation and intensified co-ordination for this purpose. According to the actors, the co-operation had just started and was in the 'beginning phase'.

Tabel 2 Co-operation activities in KÖBYT (data from Hådal et al, 2005)

	Box	Kin	Tra	Ydr	Öde
Box		92	32	100	106
Kin	92		25	101	93

Tra	32	25		39	25
Ydr	100	101	39		95
Öde	106	93	95	95	

In the interviews, no obvious limits came to light as to what issues should be the subject of municipal co-operation. One rescue official said, ‘we can co-ordinate our work in everything or at least as much as possible. Because in an emergency you can’t stand alone’. Everybody mentioned plans, analyses of risks and vulnerabilities, exercises and drills, and taking courses together as central to the co-operation. According to the politicians, emergency management was regarded as an uncontroversial area for co-operation. This can largely be explained by the actors’ interest in and agreement regarding co-ordinating their respective activities. The involved municipalities have different political majorities in their municipal councils, but according to one interviewed municipal executive board chairperson, this was not a concern:

In Kinda the Centre Party has together with three other conservative parties the power in the municipality. In Boxholm, though, is the Social democrats in power which means that the conservative parties are in opposition. However, that is not a problem. In things like this [emergency management] we all work in the same direction.

Another explanation can be associated with the long-term co-operation between the municipals’ fire and rescue services – which are involved in the emergency management. Because of that tradition, co-operation within emergency management is not considered to be controversial. One example is Ydre, which have bought its rescue manager from Tranås since 1997. One more explanation can be linked to the personnel who work at the municipals’ fire and rescue services. Many of them have worked on the same place for a long time of period and thereby know each other well, for example both the officials responsible for emergency management in Kinda and Ödeshög started in the 1960s. However, despite the positive attitude toward co-operation, so far the municipalities had only done practice exercises together and had yet not and co-operated in an actual emergency.

Contextual factors

One important factor in co-ordination in networks is geographical factors. Located in between our municipalities is Lake Sommen, mentioned as a hindrance to the development of the network. Lake Sommen was a geographical hindrance to co-ordination between Boxholm and Kinda, which made co-ordination between Boxholm and Mjölby more “natural”. Geographical proximity was important when developing the network. The municipal manager in Boxholm stated, for example, that it was ‘not appropriate to co-operate with, for example, Vadstena, since it is so far away’. They instead co-operate with Mjölby because it is closer. For the same reason Kinda has more co-operation with Tranås than with Ödeshög or Vadstena. In general, no actor saw it as desirable to forge deeper co-ordination with a distant municipality. When it comes to sharing information, however, geographical distance was not a problem; information could be exchange regardless of geographical distance.

Physical geography was important but county borders were not. For example, Ydre bought rescue services from Tranås in another county, and Ydre’s SOS operator was also from Jönköping in a neighbouring county.

Some interviewees also mentioned that historical co-operation patterns were important. Good experience with earlier co-ordination in one area resulted in continuous co-operation in other areas.

One challenge to future co-ordination, expressed by the informants, was the risk that co-ordination could become all too comprehensive, resulting in the loss of individual municipal outlooks on conditions. Some stated that it was more suitable for municipalities of the same size to co-operate, than to include a larger municipality, such as Linköping with 138 000 inhabitants, because that would require a much larger organization. The actors feared that small municipalities would become submerged, losing their individual outlook in such a scenario. Others said that co-operation between one small and one large municipality was better than co-operation between two small ones, because the small municipality needed someone with 'muscles'. Mjölby with 25 000 inhabitants (not a member of the KÖBYT network) and Tranås are, for example, larger than Ydre and Boxholm, which effectively meant that Ydre co-operated with Tranås and Boxholm with Mjölby.

A larger municipality has more resources with which to organize emergency management, a fact emphasized by all parties. For example, officials in a larger municipality could spend more time on an issue than was the case in smaller ones. Smaller municipalities were also often forced to co-operate to be able to provide even a minimum of services. However, larger municipalities could also benefit from co-operation. For example, co-operation between Mjölby and Boxholm meant that Mjölby could hold a bigger organization, which was seen as positive. Another finding was that regardless of size, municipalities share the same problems, only at different scales. It was, however, easier to gain an overview of the situation in a small municipality; this made it easier to identify where problems occur, which also benefited the larger municipality.

Exchange of resources

Exchange of resources was seen as central to the functioning of the network. In the network, subgroups were responsible for different tasks: one group would focus on co-ordination benefits while another investigated possibilities for co-ordination concerning information technology. The focus in the IT group was on the web-based information system (WIS), deployment of which would let the municipalities share information through the web. The larger municipalities criticized WIS for being too simple. The County Administrative Board of Östergötland, however, emphasized that all municipalities could use WIS, precisely because of its simplicity, and encouraged involvement from all municipalities, regardless of size. By doing so the County Administrative Board kept together the parties to the municipal co-ordination efforts, by convincing even the sceptics of the system's usefulness.

Another example of resource exchange was the co-operation between Boxholm and the non-KÖBYT member, Mjölby, in accident prevention, education, and risk analysis. In this way Boxholm had access to material and competence both inside and outside the KÖBYT network.

By means of co-ordination, municipalities could exchange and mobilize both material and personnel in an emergency. Some municipalities had come far in their planning, while others had just begun preliminary discussions. In the end, however, all members of the KÖBYT network were included in the plan. Economic incentives were crucial to the co-ordination plans. Co-ordination could lower costs and also broaden the range of a municipality's competence. Several actors cited economic reasons for being engaged in the network.

Another way to exchange resources, mentioned above, was to share staff. Government funding can allow small municipalities to employ a half-time emergency manager,

responsible for crisis communication and risk and vulnerability analysis. Boxholm together with Mjölby have employed one such person.

Both the Swedish Emergency Management Agency (SEMA) and the County Administrative Board of Östergötland (CAB) were identified as important for the municipal co-ordination activities. SEMA was invited to the municipalities' network meeting to support their co-ordination efforts. Notably, it was the municipalities that had initiated the co-ordination, not SEMA or the county administrative board. National authorities, however, helped drive the co-operation forward; for example, it arranged education and training, exercises, and meetings at which various issues were discussed. SEMA was not regarded as controlling, but rather as communicative. For example, at the cited planning activities, SEMA did not ask controlling questions, but rather asked more constructive questions, such as 'How far have you come?', 'Do you need any support from us?', and 'Do you want us to arrange any seminars?' This attitude was appreciated and SEMA support was often used. SEMA never ordered co-ordination, but rather pointed out various issues to consider, an approach that led to co-ordination between the municipalities. However, the municipalities missed a more authoritative actor when it came to the analysis of risks and vulnerability, where they would like to see templates and check lists. Contact with the CAB was generally well developed as well. According to those interviewed, the CAB had a lot of competence that they were willing to share with the municipalities. When the municipalities lacked time to take part in information meetings, the CAB often drew their attention to the important issues.

However in the operate phase the municipalities were critical to both SEMA and the County Administrative Board of Östergötland because their inefficiency. Regarding the Tsunami several days past before the CAB took any serious actions.

The Tsunami, and other crisis, such as the storm Gudrun, a blizzard in 1995 and police murders in 2000, were mentioned as crisis that increased the municipalities' understanding of the importance of co-ordination concerning emergency management. This awareness made it easier to work on co-ordination efforts, as it was possible to refer to actual events. Thereby these crises also give actors a window of opportunities to act and develop or change policy. But just within a limited period (Kingdon, 1995). The understanding of timing and the short openings of opportunities for changes were known by the emergency managers in the municipalities. They meant that they only had weeks after a crisis to act on if they wanted a change in policy.

Common values and mutual understanding

According to theory, an important factor in network co-ordination is the ability to prioritize, which requires mutual understanding on the part of the involved actors, of which trust, confidence, and friendship are important parts. Did mutual understanding exist between the actors? Did they trust each other? Most of the network actors said that in the long run services and efforts would be better if the actors listened to each other. One municipal manager found that 'the discussions are serious and no one tries to hide information to serve his or her own purposes. It is open discussion in this way'. One rescue manager said 'I trust them, more like 110% than 98%'.

The actors meant that co-ordination led to better services and results, due to the comprehensive overview that resulted from co-ordinating with other parties with different outlooks. Personal "chemistry" was also mentioned as important for properly functioning co-ordination, that is, "the right" people should be involved in the network. Co-ordination was also said to be facilitated if the people already knew each other; it was easier to be spontaneous then, according to the interviewees. Sharing responsibility for prioritizing and planning was also important for the proper functioning of co-ordination; if one municipality

simply assumed that another municipality would handle those tasks, the network would not function, said the interviewees.

A specific culture/tradition among the actors

The actors stated that there was a culture or tradition of mutual help and idea exchange in the network. The intention was to avoid duplicating efforts. If one actor had already conducted a good investigation, there were no hindrances to contacting that person and making use of the results. The network members felt they could make use of each other's experience and efforts and only adjusting them to their local conditions. Such pooling of effort was regarded as intensely time saving. Both documents and ideas were shared, and the members often arrange meetings in which to debrief and share experiences. Problems occurring in everyday work were discussed between the actors. The rescue manager in Kinda, for example, had contacted Tranås to find out how they had designed their risk analyses. For such free exchange to work, every municipality had to be open and receptive when other municipalities asked for assistance or to examine various documentation. This trust can also depend on, as discussed above, the personals' long period of working at the same place of work. According to Powell (1991), such trust contributes to reducing the complexity of co-ordination efforts and to making work more efficient.

Co-ordination and control

One hindrance to deeper co-ordination in the KÖBYT network was the municipalities' protective attitude towards their own organizations. There was a fear that by co-ordinating their efforts, officials might render themselves redundant. The actors had to strike a balance between the need to make use of other municipalities' experiences and the fear for cut down in the own organization. One municipal chairman put it:

There is a tendency to protect one's own municipality and to build up an organization. ... It is a challenge to let go of that and to create a willingness to co-ordinate. ... If you start a properly functioning co-ordination, it might be questioned whether one's own municipal organization is needed.

This demonstrates a desire for co-ordination along with municipal self-interest, i.e. a willingness to protect one's own services could hinder co-ordination. The municipalities were concerned that they could lose decision-making authority over vital issues, so some, especially the politicians, felt that keeping some municipal independence was crucial. Co-ordination could ultimately mean that there would no longer be a rescue manager in each municipality. There had also been minor conflicts over where to post a worker: the question was which municipality would give up its own rescue manager. To have staff in one's own municipality was a deep desire expressed, for example, in Ydre. Ydre's former rescue manager had an accident in 1997, and since then Ydre had bought rescue management from Tranås, i.e. they shared the same manager. Despite this functional co-ordination, Ydres was according to their official, striving to employ a new rescue manager, stating, 'It feels as though you would like to have that competence within the municipality. To have one's own sovereignty'. To have personnel in the municipality was not only connected to working opportunities, but also to municipal self-government. Co-ordinating around a shared rescue manager was, in once sense, not desirable since it diminishes the municipality's freedom to make decisions on its own. Negative comments about co-ordination concerned the fear of staffing rationalisation and a desire to retain competence in the municipal organization: if

services were bought from other municipalities, then the competence established in a municipality would vanish.

Two municipalities that had difficulties working together were Kinda and Ydre. They had tried to establish some co-ordination but failed. The rescue manager in Kinda said, 'Ydre ... wants to manage on their own. There is an attitude that no outsider should come and interfere'. For that reason co-operation with Ydre was not as intensive as with the other municipalities. One example involved the exchange of material. The rescue manager in Kinda said, 'I don't think that Ydre has phoned me once. If I call, I call Ödeshög, Tranås, or Boxholm, but not Ydre'. The chairperson of Ydre's municipal executive board meant that the rescue manager in Kinda was too domineering. Ydre experienced lack of interest in co-ordination from Kinda and deepened their co-ordination with Tranås instead.

Willingness to compromise was also mentioned as required for co-operation. It was not seen as possible to form *joint* emergency management exactly as any single municipality wanted, but at the same time, having several actors involved meant greater possibilities to deal with several issues at once.

Another challenge mentioned was what to do if several crises should happen to occur simultaneously in the municipalities. Who should get assistance first? A shared prioritization system is needed, but this is still to be developed.

To summarize, trust and mutual understanding was evident between the actors, with some exceptions. This mutual understanding contributes, according to theory, to facilitating co-ordination between actors in a network. This was evident through the common understanding that everyone could win from co-ordinating his or her activities. Also, the close communication between actors meant it was easy to phone another actor to discuss shared problems. At the same time, not everyone always agreed, and some interviewees highlighted the problem of protecting of one's "turf": one's own organization could be threatened with redundancy and officials could fear making themselves obsolete. Despite these challenges, there is a consensus to develop co-ordinated emergency management involving all the network municipalities.

Conclusions

This paper examined the possibilities for co-ordinating local emergency management between municipalities, with a focus on problem definition, contextual factors, growth of general beliefs, and co-ordination and control.

The actors have a mutual problem definition by emphasising the importance of co-operation within emergency management between the municipalities. Among the interviewees there were a big consensus regarding the importance of increased co-operation to reach a sufficient emergency management. One reason for this can be a tradition of helping each other within the fire and rescue services, where the officials worked. Most of the officials had worked at the same place during a long time so they also knew each other well, which can be another reason. Co-operation in emergency management was also considered being uncontroversial. This can be explained not only by the actors' interest but also by the subject's topicality in Sweden. Several crises have occurred which can be used as concrete examples. In that way it is easier to show the importance of the field and increase an understanding between the actors.

As we have seen, several contextual factors were also of importance for how and why co-ordination took shape in a certain way. Geographical conditions were often crucial in shaping municipal co-ordination. One important geographical condition was municipal size, though opinions differed as to whether it was preferable to co-ordinate activities between municipalities of the same size or between a small municipality and a larger one. Another

important factor was distance. In an emergency it is better to co-operate with a nearby municipality that can dispatch staff or equipment at relatively short notice. Geographical factors were important in explaining existing co-ordination constellations. When it came to information preparedness, the actors claimed that distance was not a problem. In practice, however, the possibilities for co-operating in the information area with distant municipalities have not been exploited, and could be developed much further. At the same time, geographical closeness is not a sufficient condition for establishing co-operation, as exemplified by the case of Kinda and Ydre. For example, Ydre is co-operating with Tranås even though it is farther away than Kinda is, but Ydre and Kinda lack mutual understanding and trust. Other factors were the County Administrative Board of Östergötland, and SEMA's encouragement of the network's activities. Both these state actors were seen as driving forces of the co-ordination efforts, by means of their efforts at arranging education, drills and exercises, and seminars, and by doing so without being controlling. Although municipalities' general positive attitude they were critical to both SEMA and the County Administrative Board of Östergötland concerning their inefficiency in the operate phase.

Growth of general beliefs, i.e. mutual understanding and forging shared beliefs were also important factors affecting municipal co-ordination. The actors – both professionals and politicians – in the network generally trusted and had confidence in each other. They shared information and documents and used each other to solve upcoming problems. Many actors were also friends, which facilitated co-ordination between the municipalities. There was a culture or tradition of mutual help and idea exchange among the interviewed. According to theory, these are factors that enhance co-ordination and make it easier for people to act jointly in a real emergency. If these factors are missing, then co-operation is hard to accomplish, as we saw exemplified by Kinda and Ydre

Sharing resources was regarded as crucial to establishing and, not least, financing efficient and high-quality emergency management. The actors obviously depend on each other to be able to deliver municipal emergency services as legally required. The actors did not see any obvious limits to what or how much they could share with each other. Thus, it existed a general willingness among the network actors to co-ordinate their activities.

At the same time though, factors in co-ordination and control showed a different side. There were worries that job opportunities could disappear as co-operation advances and one's own organization is rationalized. The municipalities did not want to lose the competence and knowledge their own organizations had built up, and that was an important reason for scepticism regarding sharing personal. Another discussed problem was loss of autonomy and control over issues in one's own municipality: a municipal must give up some of its own sovereignty to be able to offer better *joint* emergency management service to its inhabitants.

Actors representing small municipalities expressed a fear of becoming too dependent on other actors. This can create difficulties while deeper co-operation can lead to personnel redundant, each municipal may not need a rescue manager.

Actors' relationships with each other were shown to be important in the study. Both physical relationships, such as the sharing of resources, and cultural relationships, such as a tradition of sharing knowledge, were equally crucial. Notably, municipal co-ordination of the emergency management system is still in an initial phase and has not yet been tested in a real crisis; how the system will work in practice remains to be seen.

The issues raised in the KÖBYT network are directly connected to how emergency management policies are developed in municipalities. So, in relation to Carlsson's (2000) comment that networks ought to be regarded as an independent variable to *explain* outcomes, we mean that in this case it is indeed possible to treat the network as an independent variable explaining policy outcomes in municipalities.

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