



Disaster and emergency management systems in urban areas

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ABSTRACT

This article focuses on the factors shaping and constituting governance in urban/metropolitan emergency management. The main focus of the article is the multi-faceted inter-organizational relationships producing shared goals that are practiced at the local level, and specifically within the context of county-level metropolitan emergency management. The article presents a conceptual understanding of the governance concept, a brief summary of related research in the context of emergency management, and an example of the Orlando Metropolitan Area in the State of Florida for practical purposes.

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Introduction

The way public service is delivered today has dramatically changed over the last decades. While there has been a change in the range of actors delivering those services, the most important reform has been observed in the tools and forms of service delivery. Today public agencies are not the only providers of services that traditionally used to be or were considered ‘public’: non-profit and for-profit agencies as well as ordinary citizens have become the stakeholders and actors taking on the roles and responsibilities of service provision at all stages of the process. The notion that embraces the processes and activities of all those inter-dependent actors is known and advocated today as governance.

The term governance, by simplest definition, entails inter-sector and inter-governmental collaboration which delivers specific services to the citizens. Governance has become one of the main tools to address complex and multi-faceted societal issues today. One of such fields is emergency management, which has experienced substantial changes over the past years especially due to the increased impacts of disasters on the society. It is impossible to imagine emergency management today as a field comprising agencies acting on their own; governments at all levels seek and establish partnerships, whether formal or informal, to tackle issues of complex nature. This article briefly describes the notion of governance and how the concept is practiced in the field of emergency management in the context of urban/metropolitan environments. An example of the Orlando Metropolitan Area in the State of Florida is provided to show how governance has become an indispensable part of today’s emergency management practices.

Disaster and emergency management in urban areas

The term governance has been used in the literature in several forms varying from collaborative governance to collaborative public management. While the nuances are there depending on the focus and of location of the issues addressed, the term governance coincides or overlaps the concept describing network relationships and partnership arrangements among several actors, representing different sectors and levels of government that come together to address a common goal and produce shared results. Specifically, it is a consensus-oriented and deliberative process (Ansell & Gash, 2007) with shared decision-making (Freeman & Peck, 2007) directed towards shaping and influencing a public policy (Klijn & Koppenjan, 2000).

Governance refers to the management of networks that are formed and maintained to solve complex problems (Peters & Pierre, 1998; Salamon, 2002). Governance networks require organizations to work collaboratively to solve common problems and reach convergent organizational goals. This may lead to fuzzy organizational boundaries (Stoker, 1998). Additionally, organizations operating in governance networks strengthen their connections with multiple relationships (Milward & Provan, 2000; Rhodes, 1996). Collaborative relationships are products of joined efforts for reaching common goals, combined resources, shared decision making, and accountability for final product (Kamensky, Burlin, & Abramson, 2004). In the simplest sense, collaboration is a set of activities directed towards the achievement of “common goals, often working across boundaries and in multi-sector and multi-actor relationships” (Agranoff & McGuire, 2003, p. 4).

Feiock (2004) argues that metropolitan governance today is in practice across many fields and disciplines, and existing research has focused only on competition, thus undermining the importance of cooperation. In fact, he claims, cooperation is a stronger aspect of metropolitan governance that researchers should focus

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on, which is the binding glue of all inter-organizational relationships at the metropolitan level. Ahrens and Rudolph (2006), in turn, argue that governance should be applied across all levels of government including community and local levels, with specific focus on the capacity-building of respective governments. Effective disaster management at these levels is argued to be possible through the implementation of governance elements including accountability, participation, predictability, and transparency. These aspects of governance should be the main factors shaping and determining inter-organizational relationships among the different sectors and levels of government. Overall, though, all these values and capacities should be the contributors to disaster resilient urban communities that, according to Pierce, Budd, and Lovrich (2011), should be able to absorb change-producing disturbances comprising including natural disasters and emergencies.

Networks and urban emergency management

Emergency management is historically collaborative. Since the beginning of 20th century, multi-sector collaboration was prevalent in the field (Kapucu, 2008; Rubin, 2007). The September 11 attacks showed the limits of government organizations in emergency management (Comfort, 2002). Public organizations from different levels of the government, private sector organizations, nonprofits, individuals and community organizations have been components of the emergency management system. However, there are distinctions between rural and urban environments which require different resources and knowledge in each setting. The complexity of urban settings requires; additional attention and a denser set of relationships between stakeholders of the emergency management mechanisms, more in depth analysis of conditions before, during, and after a disaster, and creates further complication in the decision making mechanism (Comfort & Kapucu, 2006; Petak, 1985). Citizens, advocacy groups, private organizations, nonprofits, and public organizations from various backgrounds are part of the system, which adds complexity while providing a larger amount of opportunities for public managers to use in effective management of emergencies (Kapucu & Ozerdem, 2011).

Comfort (2002) examines emergency management system through the lens of complex adaptive systems. Her approach requires a sound, appropriate, and flexible information infrastructure in maintaining organizational tasks. Information infrastructures and networks are critical to making timely decisions. Lack of information networks and a clear flow of information inevitably lead to the collapse of sense making (Weick, 1993). Complex systems also refer to emergent and self-organizing groups such as individual responders and nonprofits. Effective information sharing in times of disasters is critical for managing self-organizing groups and channeling them in the appropriate tasks. Complex systems embedded in cities, and the potential scope of emergent groups, during disasters draw significant attention to urban emergency management systems.

Citizen behavior and emergent groups are not limited to individual efforts in disaster response. Civic engagement and citizen initiatives have an important role in multiple aspects of managing emergencies in the metropolitan setting. They are not only involved in preparedness and response efforts, but also provide cash support and donate blood in the aftermath of catastrophes (Stallings & Quarantelli, 1985). For example, in the aftermath of the September 11 attacks, Kirlin and Kirlin (2002) noted that civic community makes three major contributions in response to terrorism. First, it establishes bridges between citizens and leaders which create the public judgment necessary for commitment to fight against terrorism and also other emergencies. Second, it

promotes listening, tolerance and diversity in ideas. Third, citizens are more involved in emergency management efforts.

Mushkatel and Weschler (1985) similarly state that the governance of emergency management should be shared across different levels of the government and among different sectors, thus, reducing the burden of any single agency. In turn, local and regional capacities should be enhanced, since it is mostly at this level that metropolitan emergency management is based and operates. Metropolitan emergency management is and should be an arena for inter-organizational arrangements directed towards the collaboration and coordination of disaster and emergency management activities. With overlapping claims, Andrew (2009) argues that the nature of inter-organizational networked governance is mostly the function of the characteristics of services and goods sought to be collaboratively delivered. Simo and Bies (2007) use the collaborative public management paradigm and cross-sector collaboration to examine role of nonprofits in Hurricane Katrina. They used Bryson, Crosby, and Stone (2006) framework for cross sector collaboration to examine the nonprofits' behavior in response to Katrina. In their research, they found that nonprofit involvement in cross-sector collaboration was critical particularly important when administrative failures were overwhelming and there were difficulties in meeting the daily needs of citizens during and after the disaster.

Waugh and Streib (2006) argue that governance in emergency management relies heavily on the local capacity, thus, emphasizing the role of communities and agencies in the metropolitan context. Similarly, Williams, Batho, and Russell (2000) point to the importance of local capacity building and related inter-organizational networks when analyzing the case of the June 1996 bombing in the City of Manchester, UK. Partnerships were instrumental in the ultimate success of emergency management during and after this disaster. Local capacity, however, is mostly concentrated within county-level governments (Waugh, 1994). Waugh (1994) argues that county-level metropolitan governance is the most suitable system for dealing with disasters, especially due to its proximity to sub-level and upper level government, a larger pool of resources, and the use of forums for inter-organizational arrangements at the local level. In addition, such mechanisms are clear of command-and-control structures and favor a more collaborative and cooperative perspective to disaster and emergency management (Kapucu & Ozerdem, 2011).

Beyond the above-mentioned conceptual discussion on metropolitan/urban governance in emergency management, several studies applied the concept to urban settings as well. Keil and Ali (2007), for example, examined the 2003 Severe Acute Respiratory Syndrome (SARS) outbreak in Toronto, Canada, and analyze the factors that constitute urban governance today. Their research shows that human mobility is weaker than the mobility of pandemic diseases, which in turn causes significant threats to the public health. In these kinds of cases mobilizing all the necessary resources in a timely manner is critical, effective network management is a key aspect of this task.

The need to mobilize resources and experience has also proved evident in the implementation process. Based on the study of metropolitan homeland security, for example, Chenoweth and Clarke (2010) find that cities with advanced, multi-level and formal governance arrangements are more effective in terms of the implementation of specific DHS initiatives. Their study points to the importance of previous experience, in terms of collaborative practices, for producing more effective results. On the other hand, considering a study on the urban governance of emergency and disaster management of bushfires in Sydney, Australia, Gillen (2005) finds that emergency management governance is effective to the extent that it is inclusive and participatory. Accordingly, it is not only institutional arrangements but the extent to which

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