Chapter XIII
Interorganizational Communications in Disaster Management

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ABSTRACT

In response to the lessons and criticisms over the recent large-scale disasters and relief activities during the disasters, many government organizations around the world have recently launched initiatives to improve their disaster management capabilities. While a revision of disaster management capability may entail transformation of organizational structures, business processes, and technical infrastructure across multiple organizations, the field of disaster management suffers from lack of theoretical foundation. With a special emphasis on information and communication technologies (ICTs), the chapter provides a review on various issues examined in the recent disaster management literature and develops a conceptual framework of the relationships between technological properties of ICTs and multiagency collaboration in disaster management. This chapter contributes to the theoretical foundation of the field by identifying major research issues in the disaster management communications and their relationships with relevant entities and environmental factors. Discussions on future research directions are also presented.
INTRODUCTION

A large number of government agencies around the world have recently launched initiatives to improve their disaster management capabilities, in response to the lessons and criticisms over the recent large-scale disasters and relief activities during those disasters. One of the most pressing issues for the initiatives is inter-organizational communication and coordination. During the 9/11 terrorist attacks\(^1\) (2001), the police and fire departments could not communicate with each other over the radio, and thus could not coordinate their rescue efforts in a collaborative manner. In response to Hurricane Katrina\(^2\) (2005), New Mexico’s governor offered troops to Louisiana State, but the actual dispatch was delayed by one week due to the lengthy paperwork process between the two states (Adams, 2005). Indeed, military rescue teams were not able to send helicopters into the disaster zone, in a timely manner, because the Federal Emergency Management Agency\(^3\) (FEMA) did not have the authority to allow it. While the logistics were being worked out and permissions obtained, valuable time was wasted and many lives were lost (Adams, 2005). The lack of inter-organizational communication and holistic coordination resulted in a chaos in the emergency response and relief operations, in addition to the already devastating aftermath of the disaster. Many government organizations, whether they were actually involved in the response and relief operations or had observed the past disasters, have been trying to implement what they have learned from the very expensive lessons, especially in the area of inter-organizational communication and information sharing among disaster management organizations (DMOs).

An important lesson from past disaster management efforts is that although the response activities undertaken by official first responder agencies (e.g., police officers, fire fighters, emergency medical crews) are crucial, those activities constitute only part of the big picture. Equally significant is the manner in which those first responders interact with and obtain support from non-government relief organizations, such as the Red Cross, private companies in the telecom and building industries, and financial companies (Kapucu, 2006). In that sense, success of disaster management is dependent upon effective sharing and use of valid and timely information among a large number of stakeholders in the society, including government authorities, non-government organizations (NGOs), private sector organizations, and the public. 9/11 provided a chance, in a sense, to recognize the needs of the private sector industries in the US, and now Corporate America\(^4\) is anticipated to communicate with their stakeholders more openly and more expeditiously than they would have done before 9/11 (Wright, 2002). Unfortunately, the response to Hurricane Katrina revealed that, 3 years after 9/11, DMOs were still ill-equipped with information and communication technologies (ICTs) that should have effectively supported various DMOs in times of crisis, as well as in day-to-day emergency response operations that required coordination between several different public safety agencies (Weiser, 2007).

Disaster management researchers have been working on ways to prepare for future disasters, natural or man-made. Many case studies that compare various ICTs and organizations have been conducted in order to organize the ideas about how to leverage ICTs in order to facilitate inter-organizational communication among DMOs. For example, Turoff (2002) summarized the requirements for an effective system and proposed major factors for a successful disaster management system. Moe (2006), developing a new approach to natural disaster management, highlighted the importance of having proactive and reactive strategies for natural disaster management. Weiser (2007) and Mendonca et al. (2007) examined a wide variety of ICTs to find out how ICTs are developed and used by DMOs and the challenges for them. While numerous studies have