Enhancing Disaster and Emergency Preparedness, Response, and Recovery Through Evaluation

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Abstract

The authors offer a conceptual framework explicating how evaluation can enhance disaster and emergency preparedness, response, and recovery. The phases of preparedness, response, and recovery in any disaster situation are connected to who has responsibility for the evaluation and how the evaluation will be used. The complexity of the relationships among these diverse elements suggests that evaluation in this domain needs to be flexible and strategic to be beneficial. © Wiley Periodicals, Inc., and the American Evaluation Association.

Events such as the Balkan crisis and Rwandan genocide in the early 1990s, Darfur 10 years later, 9/11 in the United States, the Indian Ocean tsunami, Hurricanes Katrina, Rita, and Gustav, earthquakes in northwest Pakistan and Kashmir, cyclones Sidr (Bangladesh) and Nargis (Myanmar), and recurring emergencies in Haiti, including the January 2010 earthquake, have drawn considerable attention to disaster and emergency management. In these diverse contexts, issues of preparedness, response, recovery, and resilience are being scrutinized more closely from a variety of...
perspectives, highlighting a critical need for increased transparency, accountability, and learning in disaster and emergency management evaluation. At stake are millions of vulnerable people victimized by disaster, both in developed and developing countries. People should be able to rely on first responders and humanitarian assistance systems to deliver in a timely, effective, and appropriate manner, but results have often been mixed. Failures are readily reported in the media, and the challenge to aid providers is always “Do better!” This issue aims to encourage the close scrutiny of disaster and emergency management evaluation in international and domestic settings.

Surprisingly little has been written about evaluation of disaster or emergency management, although in recent years dozens of special journal issues in other disciplines have focused on disasters. In this New Directions for Evaluation issue, evaluators step forward and share their knowledge and experience in an effort to advance the theory and practice of evaluation in disaster and emergency settings. The authors whose work is presented in this issue represent a diverse set of individuals, organizations, backgrounds, content areas, and countries.

A Framework for Conceptualizing Disaster and Emergency Management Evaluation

Disaster and emergency preparedness, response, and recovery are complicated at the best of times, often chaotic, and driven by countless impulses and requirements. There is no precise blueprint for organizing the many facets of these activities. The respective life cycles of disaster and emergency response, performance management, and evaluation activities connect with and influence each other. It is possible to organize these many elements into multidimensional space. One way to represent this complexity is to organize the many elements into a multidimensional framework, as depicted in Figure 1.1. Each of the six sides of the cube represents attributes of disaster and emergency management evaluation. Importantly, it is not our intent to reify these attributes or this model; rather we hope that the framework will serve as common ground for dialogue and consideration of these critical issues.

Phases of Disaster and Emergency Management. Three general phases of disaster and emergency management activities (preparedness, response, and recovery) are represented in the framework on the far left side. These phases are linked to the evaluation strategy adopted, depicted at the bottom of the cube, and the extent to which evaluation efforts use an intra-agency, interagency (nongovernmental organizations, donor governments), or systemwide (United Nations) approach. Evaluation strategies are also coupled with the overall scope of an evaluation, which influences the complexity of evaluation processes. Moreover, the evaluation approaches employed are often closely tied to the physical scope of a disaster event itself, such as
in a micro (Hurricane Katrina), mezzo (Haiti), or macro (southeast Asia tsunami) context. These reflect disasters and disaster emergency activities that take place at local, regional, national, and international levels.

**Evaluation Strategy.** In terms of program response, organizations can choose to respond to a disaster either from a single agency perspective, with an exclusive focus on an organization’s planning, fund-raising, and operations capacity, or to coordinate their disaster emergency response with those of other organizations. The latter is increasingly becoming the norm, both within and between networks (Red Cross, United Nations, nongovernmental organizations, donor governments). Mirroring program operational response, this trend is also emerging in terms of evaluation strategy.

In the context of intra-agency evaluation strategy, a single organization, like Save the Children, might choose to limit its evaluation activities to their organization exclusively in examining performance. This would focus evaluation activities only on corporate efforts: disaster planning, emergency program operations, and other aspects of program support such as procurement, communications, finance, personnel, and informatics.

An interagency evaluation strategy might see two or more organizations, sometimes within the same network or across networks, collaborating around the evaluation strategy. One example of an interagency evaluation strategy would be the Katrina Aid Today national Case Management Consortium. On the international side, United Nations organizations such as World Health Organization, UNICEF, and World Food Program may
adopt a coordinated evaluation strategy with respect to health and nutrition initiatives. Both examples enable a harmonized evaluation approach within a common context and shared intent with respect to utilization of evaluation findings. Significant economies of scale may occur with respect to framing questions, data collection, and analysis. Interagency approaches also move beyond that of a single agency to consider recommendations at a systemic level, in areas such as needs analysis, capacity building, recovery, and emergency preparedness. Such approaches may also significantly reduce organizational and respondent fatigue, although new governance challenges can emerge.

Finally, an evaluation strategy can be a collaboration between responding systems. These systemwide evaluation efforts can be very sophisticated and comprehensive, and also time consuming. One example of a systemwide evaluation was the Tsunami Evaluation Coalition (TEC), which involved the nongovernmental community, Red Cross Movement, United Nations family, and donor governments coming together to undertake a joint evaluation.

**Intended Use of Evaluation Findings.** The intended use of evaluation findings, shown at the far right of Figure 1.1, is an important component of the evaluation framework. We use the broad terms of developmental, formative or real time, and summative evaluation to encompass the many management functions linked to performance management (scanning, strategic planning, policy development, program design, system alignment, program implementation, monitoring and measurement, and closing and reporting processes such as audit and evaluation).

Generally speaking, each of the three aforementioned dimensions in our framework (disaster/emergency phase, evaluation strategy, and especially intended use of evaluation findings) tends to dictate or at least influence the evaluation design and methods. Broadly, the methodological paradigms are experimental or naturalistic. Regardless of the methods used, consideration must be given to issues of accuracy (validity and reliability) as well as ethical concerns in implementing an evaluation design.

**Context.** Finally, of critical importance is an understanding that the dimensions depicted in our evaluation framework are further influenced by the overall context in which they occur, including social, political, economic, legal, environmental, and technological factors. Failure to recognize, accommodate, and address these factors is likely to result in an evaluation that produces results that are of little use or, perhaps even worse, evaluation findings that are ultimately irrelevant to key stakeholders.

**Considerations for Application of the Framework**

The proposed framework is a representational device for evaluating disaster and emergency activities that is dynamic, so that evaluation is not a static undertaking. Similar to manipulating a Rubik's Cube puzzle so that each of
the six colors are grouped on the same side, in order to address the challenges associated with these types of evaluation, one must keep the big picture in mind. Thus, there can and should be movement and action through time and across each of the different dimensions represented in the framework.

To be successful, the resolution of the toy puzzle mirrors emergency management response and its evaluation. It requires that one think or act not in a single move, but as a strategic collection of moves. There is no unique solution or algorithm. In any state of disarray, the cube can be solved in 22 moves or fewer. However, there is no general method for finding a solution of every variation of position. It requires planning ahead, constant monitoring, evaluating the results of a sequence of moves, and incorporating this knowledge and learning into the next set of planned moves. Simple or complex actions can sometimes require moving elements from one predetermined place without disturbing the other attributes. The trick to solving this puzzle is that a temporary state of disorder must be produced before bringing the cube back into a state of higher order.

Reflective recall is crucial for discovering, storing, and retrieving the effects of past moves associated with solving the brain-teasing puzzle. Such is also the case for agencies involved with disaster and emergency management; corporate memory, knowledge management, measurement, and learning are critical to performance as well as evaluation. Short-term information, such as that collected in developmental, formative, and real-time evaluation, tells stakeholders where they are in the sequence of moves, and long-term information (summative evaluation efforts) relays what results from a completed series of moves. Failure to link these different stages of information can result in chaos. In terms of evaluating disaster and emergency management, this too can very quickly become complicated and, again, each action is not completely discrete. They have elements and links not only within themselves, but also with their immediate neighbors, and other layers and connections—such as the contextual factors previously described—that are not always transparent. Each of the remaining chapters in this issue examines one or more components of the matrix presented in Figure 1.1.

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