

## **Emergency Management and Response—Field Investigation**

### **Types of Data to Be Collected and Recorded**

Reconnaissance activities should provide a general description and preliminary analysis of the emergency response, including:

- Public and organizational response to warnings and predictions.
- Responses of key emergency agencies including local, state, and federal emergency management agencies, police and fire departments, and emergency medical and health care delivery systems.
- Performance of disaster-related tasks such as search and rescue and provision of emergency shelter.

To accomplish the above objectives, it is suggested that the following documents be obtained during field activities:

1. Local newspaper accounts, news videotapes.
2. Records from Red Cross shelters and the state and local agencies responsible for providing disaster statistics, such as Building, Housing, Emergency Services, etc.
3. Community disaster plans.
4. After-action reports from fire, police, other public safety agencies.

The following field investigation checklist contains a listing of the types of data that, ultimately, a good social science investigation of the emergency response to a major earthquake would include. It is highly unlikely that any single reconnaissance effort will provide information on all or most of the topics listed.

#### CHECKLIST

### **Emergency Management and Response**

#### **In General**

1. How effectively was the disaster effort managed? Did lines of communication and authority work well?
2. What agency(ies) had overall responsibility for the management of the response?

#### **Search and Rescue**

1. Were search and rescue operations carried out? If so, determine where, when, by whom, and under what conditions.
2. How did participants come to take part in search and rescue efforts? Were activities planned or emergent?
3. If those first on the scene were not official emergency personnel:
  - a. Determine how many local residents responded and what they did.
  - b. When did official search and rescue personnel arrive? What organizations were involved?

- c. Did the citizens first on the scene continue to work with emergency personnel?
- d. What was their working relationship? Was it characterized by hostility, competition, cooperation, problems, or special successes?
- 4. How, when, and by whom were priorities set for performing search and rescue operations?
- 5. Was there any problem evacuating victims from the area? If so, describe.
- 6. Was heavy debris removal required? If so, how effective was it? What problems were encountered?
- 7. If heavy equipment was used, from where was it obtained?
- 8. When and how were search and rescue activities terminated?
- 9. If participants had to do it over again, what would they change/improve?

### **Emergency Response**

- 1. Determine baseline organization of response.
  - a. Did an emergency plan exist? In each jurisdiction affected? Was it implemented?
  - b. Who was the first responder?
  - c. Who was in charge of overall response?
  - d. Who was in charge at each major disaster scene?
  - e. How was response coordinated? At local level? At regional level? At national level?
- 2. Develop chronology of key activities and actions.
  - a. Chart activities of key organizations in local, state, other governmental units, and the private sector.
  - b. Note key earthquake-related tasks, such as search and rescue, damage assessment, debris clearance, etc.
  - c. For each organization or task, indicate when each task began and ended. Indicate if there was a clear delineation of responsibility for the task.
  - d. Determine what problems each task group encountered and how they were solved.
- 3. What outside resources were provided? Regional? National? International?
  - a. Were outside resources requested?
  - b. Who was in charge of coordinating resources and their allocation?
- 4. Describe phasing of response and chain of responsibility from initiation of response through recovery and reconstruction.

### **Public Services**

- 1. Describe performance of medical services, including hospitals, public health departments, coroner's office, clinics, ambulance services, blood banks, and medical response by relief agencies.
- 2. Were there adequate resources available to meet emergency needs?
- 3. Document the activities of law enforcement agencies and fire departments.

4. If many organizations responded to the earthquake, describe their inter-organizational coordination.
5. What type of response was required from public works departments? Were roads generally passable? Describe street or road repair, refuse collection, sewage system problems, building inspection, and similar activities.
6. Describe the performance of public utilities and any consequences of failure.
7. Describe activities of relief agencies such as the Red Cross, Federal Emergency Management Agency (FEMA), Salvation Army, and local relief groups.
8. What was the role played by community-based, nonprofit agencies?
9. Did the military provide any assistance? If so, describe type and extent.
10. Document the degree of effectiveness with which emergency services (fire departments, emergency management organizations, emergency medical service systems, hospitals, etc.) responded in the post-earthquake period. Discuss planning, earthquake experience of individuals and organizations, size of event, magnitude of disaster-related demands relative to resources, etc.
11. Assess “hot lines” and other publicized information sources. Determine usefulness and accessibility.

### **Media Response**

1. How did the media respond?
2. Describe post-earthquake dissemination of information. Was it adequate? Responsible? Effective? Did the media use pre-recorded or developed messages?
3. What kind of coordination or communication existed between the media and government response agencies?
4. Did the media use other types of organizations (nonprofits, private firms) as experts in their dissemination of information?

### **Predictions and Warnings**

1. Were there official warnings of aftershocks or larger earthquakes?
2. What agency issued the warning?
3. What role did the media and the affected governments play in disseminating the warning?
4. Was there an identified reaction from the general populace?
5. Did people in areas without power receive these messages? How?

### **Lifeline Disruption and Response**

1. Which lifelines were interrupted? What was the duration of service interruption? What was the impact of such service disruption?
2. Were transportation systems disrupted or damaged? Was it necessary to develop alternate routes or methods of transportation?
3. Note transportation alternatives used and agencies involved in their development.
4. What methods were used to inform the community?

### **Damage Assessment**

1. What agency had responsibility for damage assessment in each jurisdiction?
2. Obtain numbers of damaged buildings, by category of use if possible, e.g., residential, commercial, etc.
3. How were the damage assessments performed? Were there standard forms, training provided, etc.?
4. Were additional resources brought in to assist with the damage assessment? Who (what agency) coordinated this effort? Where did these resources come from?

### **Damage from Fire**

Refer to Section 9, Lifelines—Field Investigation, for checklist.

## **Field Investigation Form—Emergency Management and Response**

Use this form for site-specific data collection to aid in making subsequent analyses. It is not meant to be substituted for the broader analysis of the emergency management system.

Name of Investigator: \_\_\_\_\_ Date: \_\_\_\_\_

Site location:

### **Emergency Response**

Describe effectiveness of emergency services:

Were search and rescue operations carried out? If so, describe. Note location, nature and extent:

Did communications problems occur?

If so, describe—e.g., hardware problems, social/cultural problems, interaction between two:

Was an emergency operations plan in place? Was it followed?

Were temporary measures necessary, e.g., backup generators, rerouting, etc.?

Use back of sheet for sketches and additional notes.

## **Recommendations for Further Research on Emergency Management and Response**

Does what occurred in this earthquake suggest new avenues for research in emergency management? What follow-up research is suggested in the near term?