

CHAPTER 6

ORGANIZATIONAL RESPONSE DURING THE REST OF THE EMERGENCY PERIOD

The initial three day crisis period extended through the weekend. However, on Monday morning, September 23, the first steps toward a return to organizational normalcy occurred. Government ministries, agencies, banks, public transit systems, and many businesses once again began operations, in some cases of a very normal nature. There were major exceptions. For instance, schools remained closed, with some in eight of the delegaciones not opening for another week, and others remaining closed for much longer. The massive organizational and volunteer response to the earthquake also continued. But it was now highlighted by changes in priorities, greater coordination, clearer task allocation, and a consideration of longer range problems.

From approximately the third day until the end of the two week period, coordination among responding units increased steadily. By the third day, the CME was functioning. It was publicly announced that major responsibility for coordinating the response within the city resided with the DDF. On September 23, the CME established the Executive Coordinator to take charge of the government of the DDF. Nightly meetings were held within the National Palace as the various subcommittees of the CME gathered to exchange information and coordinate activities.

The initial tasks remained the same, i.e., search and rescue, damage assessment, casualty care, emergency sheltering and the restoration of essential services. For the remainder of the first week these problems continued to receive the highest priority. Soon, however, other concerns came to receive increasing attention. These included handling the massive convergence of aid that flowed into the city both from within the country and from foreign countries, the integration of foreign rescue teams into the ongoing and formal search and rescue effort, the development of plans for long term sheltering and housing, and the eventual issues related to reconstruction.

With the increasing restoration of communication facilities and more comprehensive and accurate knowledge of the extent of the devastation, the coordination of activities improved. While some organizations, such as PEMEX, continued to operate autonomously, the integration of various units and the allocation of specific activities were heightened. Furthermore, the emergent, informal, individual volunteer action that epitomized the first few days of

the response was steadily superceded by formal, organizational activity. However, one should not assume that a centralized "command and control" model of emergency management evolved after the third day. At the level of operations, the response continued to be relatively decentralized. The broad scope of the event, the extensive demands that it created, the momentum of ongoing organizational activity, and the extensiveness of organizational involvement at the federal, district and delegaciones levels resulted in continued fragmentation. The DDF and CME were not "commanding the response" even after the first three days. They served more in the role of "brokers" for the ongoing organizational activities.

Initial Organizational Tasks

In order to better comprehend the variety of tasks and activities that were occurring during the two week period, we will describe a few of them in more detail. The following discussion will briefly consider some of the major tasks that were being performed and also note some of the problems associated with their completion. For purposes of exposition we describe twelve kinds of organized activities usually necessary in any major disaster:

- (a) doing damage assessment;
- (b) undertaking search and rescue;
- (c) providing emergency medical care;
- (d) maintaining security and access control;
- (e) distributing information;
- (f) drawing up lists of missing persons;
- (g) handling the dead;
- (h) restoring public utility services;
- (i) sheltering and feeding victims;
- (j) requesting and handling aid;
- (k) integrating volunteers into organizational actions;
and,
- (l) coordinating organizational response.

The list is not exhaustive and the discussion of each of the tasks is not comprehensive. It is presented as a heuristic display of the critical areas and issues that more prominently appeared during the full emergency period.

a. Doing Damage Assessment

In the initial aftermath of the earthquake, literally hundreds of organizations engaged in damage assessment. For the vast majority of these agencies, the assessment was limited to their own resources and personnel. For example, information was gathered within the various Secretariats and departments of the federal and district governments. But this effort was very decentralized, and the sharing of information and the development of an overall

picture of damage was not facilitated very much by these decentralized and limited efforts at damage assessment.

Initial attempts at overall damage assessment were given in reports presented by officials at an emergency meeting of the Federal Cabinet on the day of the earthquake. It is certain, given what we know of the limited knowledge that almost all organizations initially had about the disaster, that the information could not have been other than incomplete and inaccurate in some respects. In later days, the CNE and CME would receive nightly updates. Nevertheless, it would not be until several days before a fairly accurate overall picture of the extensiveness of the problems created by the earthquake was available. But even to this day, certain important kinds of information, such as the actual number of the people who were killed, remains unclear.

Within the DDF, two agencies independently worked on the problem of general damage assessment, especially to buildings. The Department of Public Works and the Office of Civil Protection both undertook the task. However, it appears that they did so somewhat independent of one another, although the former seemed more involved in this task than the latter group. Representatives of these organizations in their interviews made no reference to the work of the other. Given the magnitude of the event, the problems of communication, the difficulty of physical movement in the damaged areas, and the decentralized nature of response activities, this situation is understandable.

Apart from overall damage assessment, there was the matter of specific damage assessment. That is, hundreds of sites had to be evaluated because in many cases it was thought that people might be still buried alive in the debris and rubble. In these cases often an engineer or architect from the private sector had a role in the damage assessment of particular buildings.

The actual amount of damage assessment of buildings that was carried out is unknown. However, one report states that there were a total of 7,924 separate studies made. Partly as a result of the analyses made, 613 evacuations of still standing buildings were ordered as well as the evacuation of an additional 99 buildings because of problems in neighboring structures (Perez, 1987).

b. Undertaking Search and Rescue

Search and rescue activity began immediately after the earth ceased shaking. As we have noted previously, thousands of individual and group volunteers and many organizations eventually engaged in this task. The activity continued for about two weeks at a variety of sites; however on September 26, the CME announced there was no possibility of finding more survivors. Of course as in almost all disasters the vast majority of those who survived, were rescued during the first hours in the first day.

This activity involved a rough sequential convergence of three different types of volunteers. The initial search and rescue was undertaken by individual survivors around buildings that had undergone the heaviest destruction. A few military groups who were near the spatial points of heaviest destruction also quickly joined in the activity. In the first few hours, in addition to individual citizens and military personnel, small groups made up of workers, students and others who had preimpact social ties with one another, joined the effort at search and rescue. One informant from a large preimpact organization of tenants described the situation as follows:

All the people, according to their abilities began to organize themselves and attack the rubble. But this was mostly determined based upon concrete needs, and the perception of what could be done in the immediate area. In other words, with regard to rescue the authorities could not say, "This is the one who will coordinate the matter." It was more determined on the basis of who had the best feel for the actions they proposed. If you had to move some tiles, or pile of rubble, whatever, if a suggestion made sense then that group of people would organize itself with those persons that had a certain knowledge or practical ideas on how to attempt the task. At this time there was great participation by residents and citizens. It started to become organized when machinery and different kinds of resources began to arrive. These came from authorities and various companies, like PEMEX.

This almost classic example of emergent, collective behavior epitomized the initial search and rescue activities. Through time, however, the task took on greater formal organizational involvement and coordination. As we previously noted, many federal and district agencies, such as PEMEX, the Department of Transportation, the Fire Department, the Metro System, The Institute for Security and Social Services for State Employees, the Secretariat for Urban Development and Ecology, and of Public Works, selected specific work sites and attempted some integration of the rescue efforts at those locations. In addition, the MOLES (a team of volunteer miners who are trained in rescue in cramped quarters) assisted in specialized rescue activities.

The nature of high rise urban rescue created the need for heavy machinery and equipment (Olson and Olson, 1987). Private contractors who worked during nondisaster periods with the various agencies supplied these needed resources including operators for the machinery (e.g., fire department personnel did not man the

borrowed heavy equipment). Coordination of these efforts was generally intraorganizational in nature, with each group working basically autonomously or independently of one another. However, as we discussed earlier, the Army (which had responsibility for security and access control to the sites) did coordinate its activities with groups such as PEMEX and the MOLES.

In the following days, the voluntary search and rescue activity changed from being a primarily individual or small group and informal mass assault, to a more formal and organized effort undertaken by organizational personnel and group volunteers. The brigades of workers from the various agencies collectively undertook the task under the supervision of construction and design experts from their units. By the end of the third day, this pattern of formal rescue had supplanted the original, individual and informal response.

In addition to the usual problems of logistics as well as a more atypical problem of searchers being killed in doing later rescue efforts, the search and rescue tasks involved some problems of integration and also disagreements over rescue strategy and techniques. In particular, difficulties arose in integrating the original volunteer activity with the developing organizational response and in integrating the efforts of foreign rescue teams (and personnel from domestic fire departments such as from Vera Cruz, Jalapa City and Puebla City who came to the capital city). Conflict erupted at some sites as persons who had initially engaged in attempting to rescue their friends or co-workers were denied access by the arriving official units.

The foreign rescue teams came from a number of countries, including France, Switzerland, Canada, Italy, Brazil, Germany, and the United States (e.g. see Frisch, 1986). Because of logistical problems, they were not able to arrive on scene until after the huge majority of the survivors had been rescued. The foreigners did possess special skills and specialized resources and worked long days in searching activity. They found some bodies and helped locate a few buried survivors (including the most famous, namely some of the 22 babies found buried alive in the debris, 19 of whom were still alive two years later). But their contribution was rather minor when seen in the context of the massive search and rescue efforts that were undertaken by the Mexicans themselves and which were initiated right after the earthquake impact. In fact, there was some expression of resentment and anger in Mexico that the international mass media attention on foreign rescue teams with dogs seemed to imply that little search and rescue had been undertaken before their arrival; the Mexicans of course knew that their own survivors and the local population had been the prime rescuers in pulling and digging out thousands of victims right after impact.

Moreover, integrating the foreign effort with the ongoing local rescue work was at times problematical. Problems of gaining access to sites and of authority and control of operations at sites, and disagreements over strategy sometimes occurred (see e.g., Montoya, 1987). Perceived ethnocentric attitudes of some foreign rescue workers at times contributed to tension in interactions between Mexican officials and outsiders. Finally, disagreements over the strategy of rescue arose on occasion between those favoring different techniques such as the use of dogs, electronic listening devices, and heavy equipment.

One consequence of this overall multiple assault on the problem is that there was unevenness in the search and rescue activities. Some specific sites were searched repeatedly by different groups. But there were also seeming instances where no systematic search and rescue was undertaken after the immediate initial effort at finding survivors. Figures vary widely as to how many victims were rescued alive who had been deeply buried in rubble; in his State-of-the-Union address a year later, the President of Mexico cited a figure of 3,226 (de la Madrid, 1986: 5); most other reports give lower figures.

In summary, search and rescue activity evolved over the two week period. At first it was mostly individual and small group efforts. Then the task was taken over by more formal groups who tended to operate autonomously at a variety of sites. No one organization ever assumed overall control or supervision of these efforts.

c. Providing Emergency Medical Care

As was previously noted, the health sector was severely impacted by the earthquake. Three of the largest hospitals in the city were destroyed and about 4,900 hospitalized patients had to be relocated to new quarters. However, it must be noted that there was no shortage of hospital beds for the injured, nor was there a shortage of medicines. The existing system was large enough to absorb the losses and still provide adequate medical care.

On an everyday basis, there are several emergency medical systems (EMS) for getting accident victims to hospitals. Although some officials reported shortage of ambulances for this purpose, this did not seem to be a correct overall perception. Ambulances were available from a number of agencies, including the Red Cross, the Green Cross, DDF, PEMEX, IMSS (Social Security) and private agencies--in all, there were more than 600 EMS units available. Furthermore, some victims arrived in private vehicles and many more walked to aid. The choice of which specific medical facility to go to appears to have been based mostly upon proximity and by ambulances taking victims to their own home hospitals. In addition, the Red Cross and other federal and municipal agencies established at least 281 first aid field stations (Perez, 1987: 7)

who treated over 16,000 for medical problems. As noted by one medical authority:

Selection of treatment was by closeness to some unit that was not affected. If there was some spot or place or method of attending to patients, they went there. If it wasn't that central, it was the next nearest that had space. Yes, there was some duplication of effort, and there was concentration of resources in the affected zone of more than was needed. There were sufficient resources, but they were not distributed well at first. After the first few days, this improved.

Given the debris clogged conditions of the streets, it is noteworthy that there was little difficulty reported in transporting victims to medical care. But while transportation of victims did not occasion major problems, there was a lack of triage at most disaster sites. What happened was what typically happens in most disasters. As one official from a medical organization noted:

Well, in transporting the hurt people, we lacked adequate triage. It was not done in the majority of places. They were triaged only at the place where treatment was given.

Part of the problems faced in providing emergency medical care were a lack of prior planning and adequate interaction among the responding units.

The problems were in knowing those in charge of handling disaster medical aid, because we did not know them before. There wasn't any pre-disaster communication. We knew that each institution had its department for emergency response, but we were ignorant of many contacts, and of many decisions being made.

In addition, even on an everyday basis there is no radio system linking the different hospitals. With phone service erratic at best, communication was sometimes a problem. Many personal messengers were used to get around this difficulty.

Entry into hospitals, which numbered in the low thousands, peaked about five days following the earthquake and then fell below normal levels. Through time, the overall coordination of the health sector was undertaken by the Secretary of Health and the Secretary of Public Health. As part of interorganizational actions, the IMSS provided over 12 tons of drugs and treatment material to the Mexican Red Cross and the General Hospital (Perez, 1987: 7). In general, however, the emergency response was decentralized. After

the first three days the nature of the tasks and coordination shifted to issues of long-range restoration of health facilities, since whatever survivors were being found after that time were so few in number that they could be handled in the usual way in such a large metropolitan area as Mexico City. Also, about 1,000 medical personnel with 150 supervisors were formed into brigades to provide mental health care for the general population

d. Maintaining Security and Access Control

After being quickly relieved of overall responsibility of the emergency response, the Mexican Army was assigned the task of security and the cordoning of areas around damage sites (along with the police). This activity began on the first day of the earthquake and continued throughout the emergency period.

In many disasters, the matter of who should have access into secured areas, often results in disagreement and conflict. This disaster was no exception. There was no overall official "pass system" of any kind established; limited attempts to use such a procedure were made only in certain areas. Entrance was left to the discretion of the soldiers at the scene with cars being more often blocked than pedestrians. As one official involved in the activity noted:

There was a system where a person had to show a document. It could be a license, a rent receipt or electric bill; something that showed that they lived in that place. Now there were two types of risks that decided who would gain entry. In high risk areas, where buildings were on the point of falling, they did not permit anyone to enter. In the areas where there was a medium risk of falling objects, there was a possibility to enter based on ownership to remove belongings. It was the second or third day before this system was established. At the beginning, it was a mess.

While some organizations such as PEMEX, and formal groups such as the MOLES, reported good working relationships with the military at rescue sites, other groups expressed some dissatisfaction with the security measures. Certain organizations, such as the electrical power department, issued passes to their own personnel that were however not recognized by the Army. We noted earlier that one delegacion had to disguise its workers as stretcher-bearers to gain entry to areas to conduct a census of missing persons.

But after the initial three days these interorganizational problems seemed to lessened. It is possible that in the later phases of the emergency period, there was less reason for groups to seek entry

into blocked off areas. In any case, while no formal pass system was ever established, access controls became normalized and routinized.

As we shall note later, while some organizations had problems with the military in getting access to certain disaster sites, citizens seemed less disturbed by the control measures instituted. Our survey data indicted that few residents of Mexico City saw this as a major disaster related problem.

While it can not necessarily be attributed to the security measures undertaken, there does appear to have been very little looting. However, numerous stories about such behavior did circulate including some attributing the behavior to the police and the military. And foreign news stories about the disaster implied looting was a problem. For example, the Newsweek story of the earthquake incorrectly said that:

The earthquake brought out the best and the worst of the Mexican system. Armed forces and police quickly implemented a longstanding disaster plan. While about 30 army helicopters hovered overhead, 600 motorcycle cops fanned out over the hardest-hit areas of the city, joining both Army and Navy foot personnel to combat looting (Anderson, 1985: 20).

But actual instances of looting behavior in damaged localities were apparently few in number. Extremely few of our survey respondents mentioned it as a disaster related problem even when specifically asked about the matter. There were more clearly authenticated instances somewhat later of profiteering with a few merchants raising prices between 300 and 400 percent or the selling of water (Palacio, 1986: 32).

e. Distributing Information

Obviously, the earthquake occurred without warning. However, in the days immediately following the impact there was a massive demand for information on the part of both organizations and the public. Information was needed about such issues as the extent of damages, the availability of services, the well being of relatives and friends, whether certain places of work had reopened, the possibility of further earthquakes, the safety of the water supply, other secondary threats to life, and where aid and assistance could be obtained (some of what individuals wanted to know will be discussed later in Part III). In addition, some organizations had certain announcements and requests that they wanted to reach citizens. So the problem in distributing information was in both directions: from groups to citizens as well as the reverse.

During the initial few days there was no centralization or coordination of the distribution of information. But there was an intense search for it. There were two major channels for information distribution: interpersonal networks and mass media reports. Persons turned to their friends, relatives and neighbors to find out what was happening. They also, as we will depict in Part III of this report, became very heavy consumers of mass media accounts, particularly those from television and radio. Now these channels were not only used just by citizens; organizational officials also relied heavily upon mass media accounts and stories. As one representative from a delegacion noted:

What I learned, I got from the radio. The media people were coming to me and asking for information, but all I really had was what I had just heard from them.

Of course some organizations were distributing information. The Red Cross, for example, made many public announcements regarding sheltering, medical care and health threats. Workers in the various delegaciones presented information to reporters from the mass media. Public health authorities tried to distribute information about health concerns and threats as well as making announcements about boiling water to be used for drinking purposes. However, there was no overall coordination of this output of information and widely varying damage accounts, death totals, instructions and conflicting directives were distributed.

One official in the health sector described these problems in the following manner:

The Secretary needed information. We sought information about the number of injured, dead, victims, trapped persons, and so on. There was some confusion that we noted in the management of information. For example, the Red Cross indicated that they alone had transported around 10,000 cadavers; this never appeared in any later data...We thought that various organizations were withholding information, so we had to look for different ways to get it. The other major problem was that the numbers were different on all sides. The newspaper gave some numbers, we collected others, and the official numbers were different too. So, we didn't have an exact idea or even a close approximation of the magnitude of the problem.

Given this situation, two patterns often observed in other disaster settings appeared. First, after the earthquake and particularly during the first and second days, some of the television and radio stations turned into channels for interpersonal communication.

They spent considerable time in relaying personal messages to their audiences. Second, in addition, rumors spread through the networks of interpersonal relationships. As Shibutani (1966) has noted, in the absence of important information and at times of crises, rumors are a form of improvised news that aids in structuring the situation. Rumors about another earthquake, the likelihood of an epidemic, the exploitation of victims, and many other issues flourished.

Within the DDF, an early attempt was made to centralize the distribution of information in the office of a Public Information Officer. By about the second day, workers in the delegaciones were told not to distribute public announcements and that all official information would come from the DDF. However, with the decentralized nature of the response activities this attempt was less than successful because the information office knew little about much of what was occurring all over the metropolitan area of Mexico City.

During the later part of the emergency period with the organization of the CME and the legitimacy conferred upon the DDF, more formal sources of "official information" developed. According to one account, there were at least 263 official bulletins, 120 public announcements, over a million flyers, etc. in a massive paper flow from the Mexican government (Zinser, Morales and Pena, 1986: 91). Another report states that 112 information booths were installed in different parts of the city where 642 representatives of a dozen agencies answered inquiries of over 168, 535 people (Perez, 1987: 5). Of course, as in all collective emergencies, the distribution of all information was not fully centralized. Multiple sources of information continued to be utilized by mass media personnel, and citizens naturally did not stop talking to one another.

f. Drawing Up Lists of Missing Persons and Victims

During the initial two to three days, there was no coordination whatsoever in the efforts made to establish a listing of victims. Many different organizations began compiling their own lists. Workers in the delegaciones, employees at hospitals, members of the Red Cross and many other organizations independently assumed this task. In addition, a rather elaborate system of informal notices placed in public areas by citizens also emerged. The task, obviously, was difficult, given the parameters of the event. An informant in the health sector described the problem:

We were gathering information in selected areas. Much of it was done through the mass media. It was at first locally done. For example, in Juarez Hospital and General Hospital they put down persons "that were working in the quake." Also, there was a list of persons "that didn't appear," and that had

not returned home. Additional lists for those "people who were found and identified," "identified cadavers," and "unidentified cadavers." So, sometimes there was some information, but it was localized at that center. The Secretary of Health did not at that time have a specified department to give out and collate this information.

After the initial period, the task was officially assigned to LOCATEL, the Bureau of Missing Persons within the DDF. Information from the various delegaciones were submitted to them and a daily census of victims was constructed. With the increasing general legitimacy accorded to the disaster role of the DDF, the task became better managed. However, as we indicated earlier not even all organizations had ready access to LOCATEL which handled over 144,000 inquiries and distributed lists in 42 information and inquiry centers.

It is difficult to assess how well this activity was carried out. From an organizational point of view, many officials felt pressure from relatives and friends who sought missing persons. However, our survey respondents did not list the question of missing persons as a very important problem in the aftermath of the disaster.

g. Handling the Dead

While the exact number of dead from the earthquake remains unknown to this day, it was at least 5,000 to 7,000. During the first three days the recovered dead were placed in a number of scattered locations. For example, cadavers were initially brought to headquarters of delegaciones, some hospitals, and other sites. Later a central morgue location was established.

Responsibility for handling the cadavers was rather quickly assumed by the DDF and the equivalent of a Coroner's Office in the United States. One official reported what was partly done:

The movement of cadavers was carried out by the DDF. They are the agency who should have been in charge, because they have a sufficient number of medical students to have a center for the collection of cadavers. But this center was insufficient. So it was decided to use the Seguro Social Park (a baseball stadium) because it was in a central zone. In that part of the delegacion most affected, that contributed the most cadavers. It was near hospitals and many affected homes.

The centralization of morgue facilities, however, did not occur until the third day and the task presented a number of problems.