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EMERGENCY AND CRISIS MANAGEMENT

The Soma mine accident case, Turkey

Fatih Demiroz and Naim Kapucu

Introduction

On May 13, 2014 Turkey was shaken by a disaster that claimed hundreds of lives in Soma district of Manisa province (528km southwest of Istanbul). An accident in a coalmine in the Eynez region of Soma trapped hundreds of miners 1,300 feet below the surface. The incident was breaking news not only in Turkey, but also across the world. Four days after the accident, the Minister of Energy Taner Yildiz officially announced 301 miners were killed.

The accident was the deadliest mine and work accident in the history of Turkey. Despite the fact that all disasters urge public sensitivity and have political implications, the Soma mine accident was disputed mainly because of pre- and post-disaster management practices. Public scrutiny focused specifically on the government practices that had allegedly paved the road to disaster and the mismanagement of the incident. The elected government was criticized due to its licensing and regulation of mines, contract management in public–private partnerships (PPP) with the mining industry, crisis leadership and communication in the aftermath of the incident. Although contracting-out services, PPPs, and collaborative public management are widely used governmental tools or tools of the government; poor execution can create undesirable outcomes. The purpose of this chapter is to explore the management of the Soma mine disaster using a collaborative public management framework. Application of collaborative public management in the context of disasters is discussed as collaborative emergency management (Demiroz and Kapucu 2015; Kapucu, Arslan, and Demiroz 2010). The first term will be used for understanding overall cross-sector partnerships in Turkey, whereas the second term will be applied to discussing the management of the mine disaster.

The chapter aims to answer the following questions: What role does collaborative public management play in the success or failure of policies related to the Soma accident? What role did leadership play in collaborative governance in the context of the Soma accident? This research is valuable since the disaster reflects the nature of policy formulation and implementation in partnership with the private sector when accountability and transparency is lacking. In addition, the leadership of top elected officials and ministers, first responders and experts in the mining industry is integral to the successful management of a disaster. In essence, leaders’
attitudes in the aftermath of the disaster hold a mirror to citizen–government relationships in the context of citizens’ grievances.

The chapter is organized as follows. First, the theoretical framework of the chapter is laid out. This section explains collaborative public management, how it is used in service delivery in general and for disaster management specifically (i.e. collaborative emergency management). Additionally, Turkey’s governmental and disaster management systems are briefly explained. Second, a detailed account of the Soma mine accident is presented with some information about the mining industry in Turkey, management of the Soma mine, government–mining industry relations (i.e. PPPs), and management of the disaster. The final section will discuss implications of the accident and provide conclusions.

**Collaborative public management**

Public management is a broad concept that can be defined in various ways (Lynn 2007). Hill and Lynn (2009) use public administration and public management *interchangeably* and develop a three-dimensional approach (structure, culture, and craft) in their analysis of public management. Hughes (2012) has a different perspective and views on public management as a transition from the traditional (hierarchical) public administration (which is established based on Max Weber’s bureaucratic theory, Woodrow Wilson’s politics–administration dichotomy, and Fredrick Taylor’s scientific management) towards a managerial approach, as a result of reform movements that started in 1980s. Traditional public administration is about following the procedures to the letter, whereas public management is about taking responsibility and achieving results. Public management practices include various government tools for solving complex policy problems (Salamon 2002). Collaborative public management can be considered as one of the service delivery tools under Hughes’ conceptualization of public management.

In simple terms, collaborative public management is defined as delivering services to the public through the collaboration of public, private, and nonprofit sectors. The evolving nature of governance inevitably brings change in the delivery of services (particularly after 1980s) (Hughes 2012). As the traditional bureaucratic government entities recede, private companies and nonprofit organizations replace government in the production of goods and delivery of certain services. The relationships between public, private, and nonprofit organizations encapsulate different characteristics depending on specific policy issues. For example, government can form a PPP for relatively simple policy questions, such as building a bridge or to contract out maintenance of high-tech military systems. However, complex social problems, such as catastrophic disasters, healthcare delivery, or refugee inflow from a neighboring state, require a different type of cross-sector relationship (Kapucu 2009). Policy makers seek to utilize community resources via inter-organizational and cross-sector networks for managing complex issues.

Disaster management is a complex and multidimensional policy problem and benefits from various types of governance forms. There are four fundamental phases of a disaster, which are preparedness, mitigation, response, and recovery (see Table 19.1). Public management solely for disaster response is a limited approach, although response is the most visible phase to the public. Management of all the phases of disasters generates much better results, although this approach requires greater resources. The next step after managing all the phases of disasters is to build disaster-resilient communities. Disaster resiliency can be defined as efforts to link a network of adaptive capacities in a community (Norris et al. 2008). These adaptive capacities are economic development, social capital, information and communication, and community competence. Thus, building disaster-resilient communities (i.e. linking these adaptive capacities) requires a *whole community* approach. The *whole community* approach means bringing together
Table 19.1 Four phases of emergency management

<table>
<thead>
<tr>
<th>Disaster Management Phase</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Preparedness</td>
<td>State of readiness to respond to a disaster</td>
</tr>
<tr>
<td>Mitigation</td>
<td>Sustained action to reduce or eliminate risk to people and property from hazards. (e.g. insurance, land-use planning, enforcing building codes)</td>
</tr>
<tr>
<td>Response</td>
<td>Actions taken to save lives and property in the immediate aftermath of a disaster (e.g. fire suppression, search and rescue, evacuation)</td>
</tr>
<tr>
<td>Recovery</td>
<td>Actions needed to help individuals and communities return to normal</td>
</tr>
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Source: Haddow, Bullock, and Coppola, 2011

government agencies, private businesses, nonprofit organizations, and individual citizens to reduce vulnerabilities and build adaptive capacities. The role of the government in this approach is to: (1) carry out preparedness, mitigation, response, and recovery efforts with the resources at their disposal and different tools of government; and (2) facilitate, maintain, and manage partnership networks for building adaptive capacities in communities (see Chapter 23 by Bovaird and Quirk in this handbook).

First, there are a variety of government tools that can be instrumental in managing each phase of disaster management. For example, a government can contract out recovery of a disaster-stricken area (principle–agent relationship), form PPPs for implementing a local mitigation strategy, or develop a collaborative network (equal partners) for responding to disasters.

Collaborative networks are widely used in disaster response, particularly in the United States. Bardach (1998: 8) defines collaboration as “any joint activity by two or more agencies that is intended to increase public value by their working together rather than separately”. Relationships in collaborative networks function based on trust and commitment in a nonhierarchical (i.e. horizontal) structure (Mandell and Keast 2007). Governance of collaborative networks is complicated due to their political, configurational, and loosely coupled nature (Lynn et al. 2000). Policy mandates, laws, statutes, and administrative and institutional rules either constrain or enable provision of goods and services for the public interest (Kapucu 2015).

During disasters public, nonprofit, and private players are expected to share resources and collaborate extensively to ensure that the crisis is managed well. However, as Kapucu (2008: 256) states, “organizing a cooperative effort … is almost as difficult as the problems that the initiative is created to address”. Lack of coordination between different players is the most obvious failure of disaster management networks. A key strategy to overcome this is to create interoperable systems and standardize communication protocols. In addition, collaborative emergency management is effective when there are pre-existing relationships and trust (i.e. social capital) between public, non-profit, and private organizations, strong relationships with the media, and elected officials with strong leadership skills (Kapucu 2005, 2008, 2015).

Second, government agencies serve as leading agencies (players) or facilitators of community partnership networks for building community adaptive capacities. Economic development policies for diversification of local and regional economies (Godschalk 2003; Rose 2004, 2005), building robust, redundant, and readily available infrastructure (e.g. information communication technologies, alternative roads, etc.), developing continuity of business plans, and fostering
community-level social capital are some critical tasks that government agencies of all levels are expected to perform for building disaster-resilient communities.

Both tasks (managing four phases of disasters and facilitating, managing, and maintaining community networks) overlap with each other to a certain extent. Managing four phases of disasters requires community resources and collaboration with community partners. Moreover, developing and managing community networks creates results that are vital inputs to four phases of disaster management. Both tasks rely heavily on collaborative governance networks, and a key issue of interest in collaborative governance is how governance succeeds when involved stakeholders hold conflicting, diverse ideas and views about policy objectives. This leads us to exploring the literature on good governance practices.

Bovaird and Quirk in this volume (Chapter 23) suggest that transformation in public management practices creates risks for government and risks from government. One particular risk from government that we would like to highlight in this chapter is lack of good governance, poor quality of government, and the failure of leadership for using appropriate government tools for achieving the aforementioned two tasks.

A government’s transparency, accountability, rule of law, and administrative competency are indicators of a good governance and quality of government (Kapucu 2010). In his book on comparative governance reforms, Kapucu (2010) presents a framework of four pillars of good governance, which cover accountability, transparency, rule of law, and citizen participation. He also considers a strong civil society to be the foundation of the four pillars of good governance. In case of disasters, issues such as corruption, lack of transparency, and insufficient leadership can create two critical outcomes that possess risk for people. First, these conditions can undermine government’s regulatory capacity. If government loses its technical or managerial capacity to regulate risky businesses (e.g. mines, water treatment facilities), or if corruption creates an environment in which business owners can easily evade costly safety precautions, risks increase dramatically for those who are influenced by these industries.

A recent example is the lead poisoning scandal in Flint, Michigan, US. In 2014, the City of Flint decided to switch from the City of Detroit’s high-quality water to a newly established pipeline system in order to reduce the water bills. City officials decided to use water from the Flint River until new pipes were established. The State Department of Environmental Quality made a decision not to add chemicals to the water to avoid corrosion of the pipes, which in turn caused lead to leach from the pipes into the water. Later, public officials did not take any precautions, despite the fact that they found out that the water from the Flint River was not safe to use (New York Times 2016; Milbank 2016). Poisonous water leads to irreparable damage to children’s health, as well as other health costs for the residents of the city. A second outcome is that poor quality of government undermines the capacity of the government to handle incidents. Consequently, the need for involvement of nongovernmental actors (i.e. private and nonprofit organizations) becomes apparent. Regardless of the government capacity, political leadership is imperative in effectively managing disasters. Leaders are expected to make accurate decisions under stress, play the honest broker role among equal partners handling a disaster, and facilitate collaboration between partners from different backgrounds (Ansell and Gash 2008; Vangen and Huxham 2003). Lack of capacity to carry out these operations impedes the success of disaster management.

Leadership and collaborative governance in managing disasters

Crisis leadership can take the shape of sympathizing and empathizing with victims, facilitating and leading response and recovery, coordinating between different response entities, providing
Correct and reliable information in disasters, and conducting timely communication with citizens (Kapucu and Ozerdem 2013). The concepts of crisis and leadership create an important relationship requiring a thorough study.

The common way to study leadership in the context of disaster situations is to focus on the presidential and political leadership of individuals or emergency managers. During disasters, the public generally look for leaders to make responsible and intelligent decisions to mitigate risks and threats. Uncertain and confused feelings during crises encourage the public to look towards a strong, transformational leader and alter their leadership expectations (Bligh et al. 2004). Boin and ‘t Hart (2003) studied President Bush’s and Mayor Rudolph Giuliani’s post 9/11 leadership. Their study shows Bush and Giuliani’s approval ratings and personal reputations improved tremendously after their response and proposed plans to the disaster. According to Boin and ‘t Hart (2003: 544), “successful performance in times of collective stress turns leaders into statesmen. But when the crisis fails to dissipate and ‘normality’ does not return, leaders are obvious scapegoats.” Thus, poor disaster management perpetuates a move to find leaders to blame and, as critics suggest, advocates reform by leaders post-crisis. These are interpreted as common tools or strategies to circumvent public criticism and blame.

A leader’s communication with media and public is critical for success in disaster management. Timely, accurate, and constantly flowing information from public officials prevents circulation of inaccurate information, agitation of victims and their families, and loss of trust of public authority. It also builds trust between government and citizens. A successful communication in a crisis has four main components. First, a public leader (be it an elected official or the head of a government agency) should tell the public the truth. If the leaders fail to do this, incorrect information would invade all the news sources and cause significant disruption in the society. Additionally, not telling the truth compromises public trust in government in future press releases. Second, a complete message should be given. The entire truth must be spoken and no information should be hidden if its accuracy is confirmed. Third, the message must be given immediately, as other sources of information will fill the gap if public leaders fail to provide timely information to the public. Finally, leaders must work hard to fix the problem and communicate their efforts to the public in appropriate ways.

**Soma mine accident**

Coal mining is a critical industry for the Turkish economy. Coal is used for heating millions of households and produced 26.3 per cent of the country’s electricity in 2013 (TKI 2014). Moreover, the Ministry of Energy and Natural Resources has distributed over 17 million tons of coal to low-income families within the last ten years. The distribution of free coal to families raised public disagreement, especially from the political opposition. Oppositional parties accused the government of distributing free coal and food to low-income families to secure their votes. Further, government critics claimed that the government was signing contracts with certain business groups, excluding those deemed to dissent from it politically (Taraf 2013).

**Coal production**

Publicly owned corporations and the private sector are the leaders of coal production in Turkey. Turkıye Komur İşletmeleri (TKI) and Elektrik Üretim A.S. (EUAS) are the two state-owned corporations (state economic enterprises) controlling the majority of coal production. TKI’s share in coal production was reduced from 85 per cent to 38 per cent in the last 20 years, mostly as a result of privatization or transferring operations to EUAS. In addition, in 2014, EUAS
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accounted for 42 per cent of total coal production (TKI 2014). Both organizations produced coal either in their own right or through contractors. The accident occurred in a mine owned by TKI in the Soma district of Manisa province. The private contractor Soma Komur A.S. has operated the mine since 2010.

The mine had initially been contracted to Ciner Holding in 2006 and classified in the high-risk category because of methane gas and fire potential. As a result, the first contractor gave up production and Soma Komur A.S. took over the mine in 2009 (TMMOB 2014). The first contractor produced 50,000 tons of coal in 2006, 270,000 tons in 2007, 230,000 tons in 2008, and 300,000 tons in 2009. After Some Komur A.S. took over operations, annual production increased dramatically to 2.6 million tons in 2010 (TMMOB 2014). According to the agreement between TKI and Soma Komur A.S., TKI was obliged to buy all the coal produced by Soma Komur A.S. The incentive led to overproduction and work overload in the mine (TMMOB 2014). In an interview published in the *Hürriyet Daily News* paper in 2012, the owner of Soma Komur A.S. reported that they reduced the cost of coal per ton from $140 to $23.8 (Hurriyet 2012).

The management of the contract between Soma Komur A.S., TKI, and the Ministry of Energy and Natural Resources was problematic. TKI was ready to buy all the coal produced without any restrictions on the quality and quantity. It is stated in the Court of Accounts (Sayistay) report that the company delivered coal deemed below the designated standard to TKI and paid for the shipment regardless of the quality (CNN Turk 2014; Sayistay 2014). In addition, the reports about the accident demonstrate that most of the cost reduction from $140 to $23.8 was achieved at the expense of employee safety. The report prepared by Bogazici University (BUSAG 2014) identified numerous safety problems in the mine which put the lives of miners in danger, such as lack of proper air circulation, increasing the number of miners to work in each shift above the mine’s capacity, lack of proper equipment to monitor methane (CH₄), carbon monoxide (CO), and carbon dioxide (CO₂), lack of early warning systems against dangerous gases, lack of proper guidelines for mine evacuation in case of an emergency, and lack of safety rooms for miners’ refuge in an emergency situation. Nevertheless, Soma Komur A.S. passed all the government inspections before the accident. The last inspection in the mine was made four months before the accident (T24 2014a). Nine months before the accident, on July 9, 2013, the Minister of Energy and Natural Resources Taner Yildiz visited the mine and praised the safety and technology used there (Internethaber 2014).

**The accident**

In the early afternoon of May 13, 2014, the mine accident started to make headlines. The accident was initially announced as the explosion of a power distribution unit in the mine as a result of which 17 miners had been affected. Subsequently, conflicting announcements about the cause of the accident and number of miners impacted continued to be made throughout the day. According to the report prepared by Bogazici University’s Soma Solidarity Team’s report (BUSD 2014), the accident happened because of a wall collapsing in the mine. One of the walls in the mine gallery failed, exposing tunnels to self-burning coal and its gases caused a fire to spread in the tunnels in which the miners were working. On the day of the accident, no one knew exactly how many miners were present because the incident happened during a shift change. Moreover, there was no system in place to track miners in the tunnels. Several hours after the accident, Minister Taner Yildiz announced 205 miners lost their lives with more to be discovered. According to official records published long after the accident, there were 787 miners underground when the event happened. Four days after the accident, Minister Yildiz announced that 301 workers had lost their lives. According to the investigative expert’s report,
the autopsies of the deceased miners showed that 70–85 percent of the miners lost their lives as a result of carboxyhemoglobin (COHb) poisoning (Soma Bilirikisi Raporu 2014).

### Political leadership in response

The response to the accident can be analyzed in two ways: (1) the response of professional search and rescue teams and emergency response agencies, and (2) the response of elected officials (i.e. leadership). AFAD is the primary government agency responsible for responding to disasters; however, they mostly held support roles during the incident. Miners and private rescue teams carried out search-and-rescue operations underground. AFAD teams and other volunteers assisted the main operators. Nasuh Mahruki, director of AKUT, a volunteer search and rescue organization, reported the rescue operations should not be deemed unsuccessful due to the death of 301 miners because when the rescue teams arrived on the scene there were very few things they could do to save lives (HaberTurk 2014). Most of the deaths occurred in the first few minutes of the accident. On the other hand, the length of the rescue operations drew significant media attention and upset the families of victims as well as the broader public.

The political leadership portrayed a completely different view of the Soma disaster to what was needed. Minister Taner Yildiz went to the mine area and tried to oversee the rescue operations. Prime Minister Erdogan visited Soma and made a press release stating that accidents are part of the process of mining and gave examples of 19th- and 20th-century mine accidents in other countries (T24 2014b). This led to significant public outrage. Erdogan faced major protests when he visited the town and walked through the streets. Accompanied by his security guards, Erdogan found refuge in a grocery store, where, according to cellphone footage, he beat a citizen. Prime minister’s aide Yusuf Yerkel was photographed kicking a miner who fell when apprehended by law enforcement forces (T24 2014c). In the following days, police suppressed protests by using rubber bullets, pepper gas, and water cannons (T24 2014e). As the work conditions in the mine and details of the accident were revealed by the media, the Ministry of Employment and Social Security and the Ministry of Energy and Natural Resources blamed each other for the death toll (T24 2014d).

### Lessons learned

Building resilient communities involves combined efforts from government agencies at all levels: the private sector, nonprofit organizations, and individuals. Poor quality of government and lack of governmental capacity are a source of risk. In the case of the Soma disaster, several government practices (or lack of them) undermined the capacity of the community as well as its resiliency, increasing the risks to miners and the townspeople. First, the local town economy lacked any diversity and relied heavily on mining. The Soma region is very fertile and particularly suited to olive farming, but poor agricultural policies discouraged people from agricultural production, and mining became the primary source of employment in the region. Second, the government failed to inspect and regulate the mining industry. The Minister of Energy and Natural Resources visited the mine nine months before the accident and praised its safety and technology. This situation incentivized private contractors to press for efficiency at the expense of safety, which increased the risks for miners.

Response to disasters depends a great deal on the onset of the incident. Interviews with search and rescue teams show that the majority of the miners were killed immediately after the accident, causing rescue efforts to focus on finding the bodies of dead miners. Additionally, the resources and skills required during a mine accident are quite different from those relating to
earthquakes or other common disasters in Turkey. In the case of the Soma mine, much had to be done before the accident happened. The private contractor operating the mine did not take actions pertaining to prevention, mitigation, and preparedness. The government also failed to ensure the safety of the mine via faulty inspections, poor contact management, and letting the contractor over-produce at the expense of employee safety.

Leadership and governance are two concepts very central to disaster management. The case study in this chapter is an example of leadership failure in managing pre- and post-disaster conditions. Politicians’ understanding of leadership was limited to representing government authority and normalizing the accident rather than conducting a speedy and effective response and showing sympathy to victims’ families. The government officials’ post-accident communication was far from satisfactory. The Minister of Energy and Natural Resources’ first press release came hours after the accident. In the mean time, conflicting information about the scope of the accident and the death toll was in circulation. As the minister was supervising the search and rescue operations, his praises of the technology and safety of the mine nine months earlier were being aired on the evening news. The contrast between the messages from his visit to mine in July 2013 and the scene of the disaster gained significant attention and harmed the credibility of the Minister as well as the government.

The Prime Minister’s visit to Soma and the press release comparing the accident in Soma with 19th- and 20th-century mine accidents in other countries was counterproductive. His words further distressed the shaken townspeople, causing protest to erupt. The miners’ families were suffering from the working conditions in the mine and did not have an alternative industry in which to find employment. The government’s pseudo-inspections of the mine and the contractor’s aggressive push to lower production costs deteriorated the mining conditions, significant increasing pressure on the workers. The government’s poor contract management with Soma Komur A.S. fueled more controversies, as they concentrated on the provision of free coal for low-income families.

Conclusion

Disaster management is a collaborative effort and governments must involve public organizations at all levels, private actors, and nonprofit organizations in each phase of disaster management. The relationship between governmental and nongovernmental actors may be different in each phase. Resources needed for recovery are different than the requirements of mitigation, response, and preparedness. Government may rely on private contractors for recovery purposes, while also utilizing collaborative ties with equal partners from private and nonprofit sectors. Managing contracts with private vendors and ensuring the safety of employees in certain industries through regulations and inspections are an integral part of the government’s responsibilities in managing disasters (i.e. their prevention and mitigation).

The tragic accident in Soma has numerous implications for disaster management professionals, as well as policy makers. The government’s inability to enforce safety regulations in the mines was the primary reason behind the accident and the scope of the disaster. First, the government failed to inspect the mine appropriately and ensure that miners were working in safe conditions. Second, the contract with the private company was not managed effectively, leading to excessive production and work overload. This eventually undermined the working conditions in the mine.

After the accident, political leadership failed. The public was not informed in a timely and accurate fashion. The relationship between the government and the coal industry undermined leaders’ credibility. Finally, the Prime Minister’s aggressive display in Soma led to greater
disruption in the town. The victims’ families found none of the sympathy they expected and were further distressed by the government’s attitude to protests.

As reflected in our discussion, government responsibilities in relation to managing disasters vary to a significant extent. The government is not only expected to carry out traditional response roles, but must also prevent disasters and mitigate their impact through effective enforcement of policies such as land use, building codes, safety regulations and inspections. Moreover, during disasters leadership needs to be multi-dimensional and reflect the government’s ability to keep the disaster under control, to effectively disseminate information, and to express sympathy for victims and families.

References


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