

Social Barriers Faced in International Disaster Management

By

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Abstract

The disaster management has evolved over time, many studies, researches, plans, and strategies were proposed within disaster community, but without consider the social barriers faced to have an effective disaster management. This paper aims to identify the main social barriers to international disaster management filling the gap between disaster disciplines and the practical interest of the main stakeholders. This research uses qualitative research concentrating on the creation of knowledge through direct involvement with international practice grounded in four case studies in different periods and places. It is grounded in an exploratory study based on many different sources of data, such as interviews, focus groups, documentations, audiovisual materials. In addition, it was examined four cases of international disasters managed by INTERPOL and identified the main social barriers to disaster management. It also reveals how work multi-agency networks in the international setting as well as disclosed the pillars to build effective multi-agency networks for international disaster management.

Keywords: *Social barriers, international disaster, disaster management, multi-agency network.*

1. Introduction

What is an international disaster?

Researchers examine the concept of disaster based on different perspectives: social approach (Janssen et al., 2010; Verchick, 2010; Turner, 1976), approach based on impacts (Coppola, 2015; Benson and Clay, 2004; Taylor, 1987), and organizational approach (INTERPOL, 2014; UNISDR, 2005; IFRC, 2012; ICDRM, 2010; EMA, 2004). Independently of the different approaches to disaster people, organizations, and nations take action and intervene on disaster in different levels or dimensions. Figure 1 presents a taxonomy of disaster in four different dimensions: local, national, regional, international.

A rich picture of the complexity involving international disasters can be verified looking at the statistics. Firstly, the number of disasters over the past fourteen years (2000-2014) has already exceeded the number of disasters that occurred over the entire decades of the 1970s, 1980s, 1990s. Secondly, it is estimated that the number of deaths in international disasters over the past ten years (2004-2014) has already exceeded the number of deaths that occurred over the previous twenty years (1984 -2004). Thirdly, the economic cost of international disasters is another factor that cannot be forgotten. The total economic damage of disasters over the past ten years (2004-2014) has also already exceeded the damage of disasters that occurred over the previous twenty years (1984 -2004). Indeed, in today's current global landscape the detrimental effects on the socio-economic environments compound the problem further.

Furthermore, it is vital the engagement of disaster scientists and disaster managers in major crisis, mainly when involving international disasters. As argued by McNutt, "The engagement of the academic community has helped responders make critical decisions. A major problem to such engagement, however, is the cultural gap between academia reward system and that which prevails in the disaster response community" (McNutt, 2015). Thereby, this article intend to reduce this gap and provide the disaster community with a novel and broadly perspectives of the phenomenon under investigation – international disaster and its interrelated parts presenting several results and discussions, mainly related to the main barriers to, and facilitators of effective multi-agency networks.

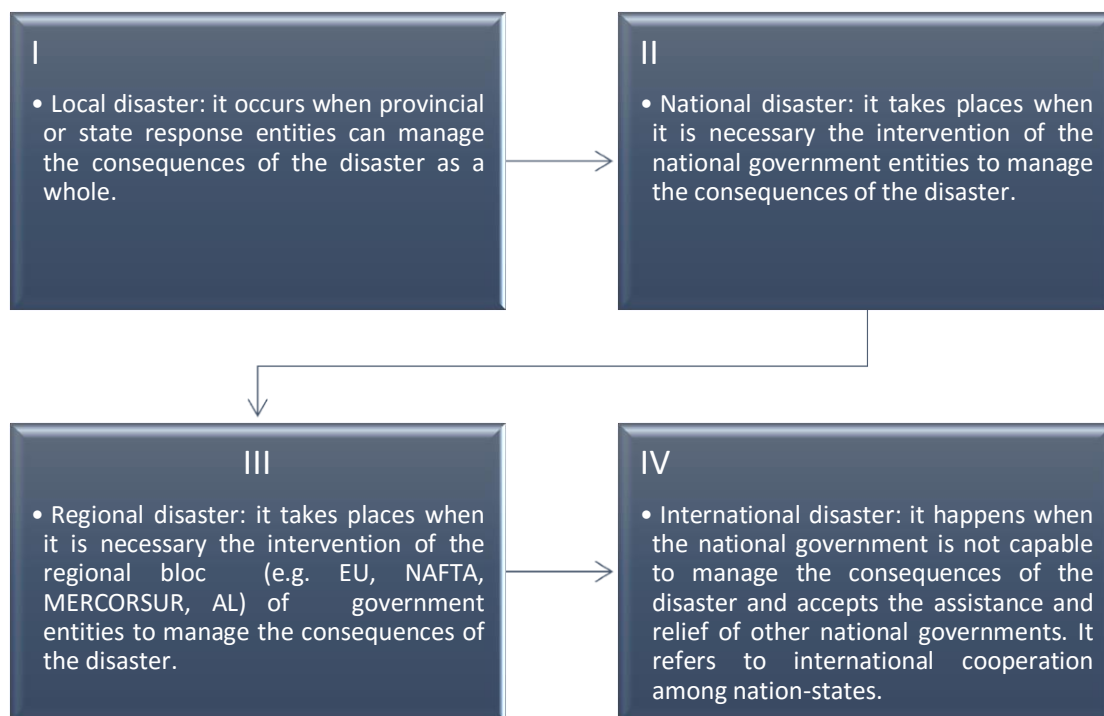


Figure 1 –The four dimensions of disasters

2. Method

The scientific methodology used was the qualitative research (Creswell, 2013; Yin, 2009; Stake, 1995) concentrating on the creation of knowledge through direct involvement with international practice. It was used case study as research strategy based on four case studies managed by International Criminal Police Organization (INTERPOL) in different periods and places: Case 1 – tsunami in the Indian Ocean, 2004; Case 2 – air crash of Air France flight 447 in Brazil, 2009; Case 3 – earthquake in Haiti, 2010; Case 4– typhoon Haiyan in Philippines, 2013. INTERPOL was chosen because it is the world’s largest international police organization and a leader in disaster management engaging its 190 member countries as well as it is participant of multi-agency networks around the globe. This research also used the data triangulation (Creswell, 2013; Easterby-Smith et al., 2012; Thorpe and Holt, 2008) grounded in five different sources: interviews, focus groups, documentations, participant-observation, and audiovisual materials.

The research material was collected when this researcher was the Forensic Director and Senior Manager at the Disaster Unit at INTERPOL.

It was carried out (period 2011–2014):

- 40 interviews one-to-one, 60-90 minutes each, with 40 participants from INTERPOL;
- 4 focus groups, 45-60 minutes each, with 32 participants from INTERPOL and its member countries;
- 160 hours in the site with 2 participant-observer specialized in disaster.
- 180 organizational and public documents comprised of memoranda, agendas, minutes of meetings, reports, archival records, peer reviewed articles, presentations, hypertext documents in Internet sites, and newspaper clippings collected on the cases.
- 290 photos of the site, destruction, infrastructure, resources, and activities developed.

- 25 institutional and public videos (10-72 minutes each) of site and activities developed.

3. Discussion

Disaster management

A number of scholars and researchers report rich pictures involving disaster management (DM) throughout the history (McNutt and Leshner, 2013; Coppola, 2011; Kapucu and Van Wart, 2006; Barkun, 1977; Quarantelli, 1954). Early history is focused on natural disasters that require emergency managing to unpredictable and complex events. For example, the story of Noah's ark is an emblematic example of the relevance of preparedness, response, and mitigation in DM; the towns of Herculaneum and Pompeii faced an unforeseen catastrophe when the volcano Vesuvius in AD 79 began the eruption; the urban fire in Rome, 2000 years ago when the city was nearly destroyed by fire. These historical events extol the importance of DM since the beginnings of the humanity and shows that the habitants of a community, nation, or country die and suffer with the absence of knowledge on how managing the incident, the lack of resources, the poor preparedness, and prevention on how to conduct an effective disaster management. In the modern and contemporary era, humanity still suffers with huge natural and man-made disasters, in terms of the urgency of globalized standards, the communication process, the exercise of authority, the development of coordination and the mobilizations of resources and services. However, there is not a unified conceptualization to DM since it encompasses various areas of knowledge and applications.

(I) Cognitive approach

In this approach, DM involves knowledge sharing and collective decision-making usually considered by a high level of complexity engaging different forms of knowledge scattered across time, space, and human resources (Butt, 2014; Chitakornkijasil, 2010; Below et al., 2009; Anderson and Woodrow, 1989). These authors also suggest that many international and national entities need to create cognitive models in order to allow effective DM activities.

(II) Processual approach

This approach provides a comprehensive view exploring the fact that DM implies in a number of activities, services, and actions to be developed as a process with different phases: before disaster happens, during the disaster, and after disaster takes place (Othman et al., 2014; Vitoriano et al., 2013; Coppola 2011; Janssen et al., 2010; Benson and Clay, 2004). Furthermore, these authors also reinforce that DM involves a series of actions distributed in phases or stages in order to permit a fast and effective response to unexpected events.

(III) International approach

A number of researches have been developed in this approach engaging the international environment (McMaster and Baber, 2012; Salmon et al, 2011). However, this study is particularly interested in the viewpoint of international agencies responsible for disaster management all over the world. The United Nations through its Department of Humanitarian Affairs sets out that DM is the set of policy and administrative decisions and operational actions that comprise the different stages of a disaster at all levels (UNDHA, 1992). A humanitarian view of DM is also provided by International Federation of Red Cross and Red Crescent Societies when it define DM as “the organization and management of resources and responsibilities for dealing with all humanitarian aspects of emergencies, in particular preparedness, response and recovery in order to lessen the impact of disasters” (IFRC, 2012). The Asian Disaster Preparedness Center explains that DM is a balanced approach of management to reducing the consequences of disaster by addressing prevention, mitigation, response and recovery services (ADPC, 2005).

Based on the aforementioned approaches, this researcher proposes the following concept to disaster management, adopted in all this study:

Disaster management is the set of organized steps carried out to administer and diminish the effects of a disaster in order to come back to normalcy and give continuity and sustainability to individuals, organizations, communities, and nations (Source: authors).

There are various phases involving DM and this requires more study and clarification. A typical disaster management includes preparedness, response, recovery, and mitigation (McEntire et al., 2002; EMA 2004; Kapucu and Van Wart, 2006; Unlu, et al., 2010; Janssen et al., 2010; ICDRM, 2010; Coppola, 2011; Vitoriano et al., 2013; Othman et al., 2014).

Preparedness: Preparedness is the phase to establish arrangements before disaster. It involves an incessant cycle of preparation, equipping, organizing, planning, training, exercising, assessing, and taking corrective actions. This process often covers several tasks such as identification of critical resources, stockpiling of supplies, training first responders, education and information to prepare the community to deal effectively with disasters, and development of necessary agreements among responding agencies.

Response: Response is a phase that provides emergency aid and assistance, to reduce or eliminate the impact of disasters, decreasing the risk of damage and minimizing their possible secondary effects. It provides emergency aid for victims (e.g. search and rescue, mass feeding, medical care). They also seek to reduce the probability of secondary damage (e.g. shutting down contaminated food and water supply sources, isolating and patrolling looting-prone areas) and to speed assessment operations (e.g. damage/impact reports). Thereby, it involves the immediate efforts to attend victims, prevent further suffering, and stop ongoing hazards. It puts in place the preparedness arrangements and plans.

Recovery: Recovery is a phase that involves the post-disaster activities to deal with the consequences of the emergency or disaster. It often begins after the immediate response has ended, and can persist for months or years thereafter. It assists the affected community in reconstruction of the basic services and physical infrastructure such as temporary settlement, debris clearance, provision of food and water, clothing, communication. It also provides restoration of emotional, social, economic, and psychological well-being.

Mitigation: Mitigation (also called as prevention) is a phase to eliminate or reduce the impact of disasters, reducing their susceptibility or increasing the resilience of the affected community. Therefore, in this phase measures need to ensure effective risk assessment and preventive actions.

According to Nogueira (2015), the disaster management phases evolve in a cycle according to Figure 2.



Figure 2 – Disaster management phases

Multi-agency network for international disasters

Agencies and organizations are generally working in isolation from one another. However, when an international disaster occurs its complex environment requires administrative strategies involving multiple actors to transform from individual, serial and autonomous entities to collective, collaborative, and interdependent decision-making teams. In the multi-agency environment, managers and leaders need to change their mindsets and leadership styles from centralized and individualist to decentralized and cooperative once working in international environments require the creation of networks in different levels of engagement across the organizational boundaries.

In the context of this research, *Network is a model of knowledge representation comprised of nodes and edges that helps academics and managers to understand the different actors and their relationships* (Source: authors).

As argued by Gerspacher and Dupont (2007) in their studies about international cooperation and international security networks, a network is regularly presented as an option to hierarchical structures of governance since it is more flexible, adaptable, and dynamic than hierarchies (p. 348). The adaptability, possibility of redundancy, and decentralized nature of networks can make them resilient to multi-agency efforts: removal of some members or even one part of the network will briefly impair the activities, but not prevent the operational work of the whole network.

Therefore, for the purpose of this study, *Multi-agency network is a group of interconnected actors (e.g. organizations, agencies, companies) with their respective members who work together and share resources, services, procedures, values, information, knowledge, and other relevant elements* (Source: authors).

Notwithstanding, the complexity of multi-agency networks can significantly vary from one scenery to another and come in all sizes and shapes since local partnerships and regional groupings until international organizations. For instance, past decades have observed a change into international cooperation toward crescent involvement of different types of actors, such as NGOs, multinational corporations, humanitarian organizations, and philanthropic foundations (Tallberg et al., 2014; Payler and Georgeson, 2013). In fact, the globalized world is characterized by multi-agency networks and their inter-organizational relationships that engages many nation-states, civil and military actors, and various actors are connected in a global dimension (Chatzigianni, 2006; Babiak, 2009; Ergun et al., 2014). This demand for world-wide networks is reinforced by Happaerts et al. (2011) when they argue that in the global context an international multi-agency network plays a noteworthy role influencing actions and decisions of nation-states and forming a multilateral structure to foster cooperation based upon common interests, needs, and aspirations.

Even in the multifaceted scenery of international disaster management, it is possible to recognize four pillars to facilitate the creation of multi-agency networks, as presented in Figure 3.

These pillars (i.e. cooperation, reciprocity, mutual trust, and willingness) are used to share resources, services, information, knowledge, and values among diverse actors. The potential versatility of multi-agency network also facilitates the exploration of new opportunities swiftly and at low cost, which is quite different from slower moving at hierarchical governmental organizations whose bureaucracies are not so receptive to changing.

Barriers

The creation of multi-agency networks for international disasters is not a peaceful activity; there are problems and barriers already identified by several researchers and scholars (Turner, 1976; O'Keefe et al., 1976; Kapucu and Van Wart, 2006; Smith and Elliott, 2007; Gerspacher and Dupont 2007; Luo et al., 2010; Salmon et al., 2011; McMaster and Baber, 2012; Betts, 2013; Nogueira, 2015). Hence, the major

barriers to build multi-agency networks for disasters are presented in Table 2.1, categorised by levels (operational, tactical, or strategic) and types of adjust (time, complexity, and action).

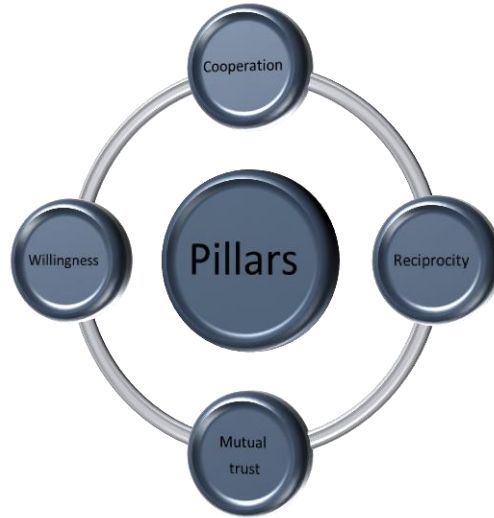


Figure 3 – Pillars to build multi-agency networks for international disaster management

Table 2.1 – Barriers to build multi-agency networks for international disasters

Level	Barriers	Adjusts
Strategic	<ul style="list-style-type: none"> - Rigidity in institutional beliefs - Rigidity in legal frameworks - Non-alignment between organisational priorities - Multiple objectives between agencies - Lack of coordination between agencies - Lack of shared responsibility - Network infidelity - Institutional competition between agencies - Distrust between agencies - Different interests between agencies - Failure to fully integrate civil and military forces in all disaster phases - Weak interaction and engagement between disaster scientists and disaster managers 	Time: - Long term Complexity: - High Action: - Non-routine
Tactical	<ul style="list-style-type: none"> - Lack of common assessment - Lack of knowledge on the roles and core values of other agencies - Tendency to minimize emergent danger - Neglect of outside complaints - Failure to integrate existing systems and databases - Lack of integrated systems 	Time: - Medium term Complexity: - Medium Action: - Non-routine
Operational	<ul style="list-style-type: none"> - Use of ad hoc teams - Lack of knowledge on the responsibilities and competencies of each agency and its actors - Difficult to comply with norms and regulations - Ineffective communication and warnings - Response systems crushed by the scale of the emergency - Difficulties in information handling - Lack of systematic monitoring of data - High staff turnover 	Time: - Short term Complexity: - Low Action: - Routine

In addition, some of the aforementioned barriers are crucial to create an international multi-agency cooperation network. Firstly, there is a serious barrier/limitation in thinking international cooperation only at the strategic level. For example, Luo et al. (2010) contends that international cooperation refers to strategic cooperation between international agencies and local agencies in international business. However, an effective international cooperation does not only arise in the strategic aspect, other degrees of cooperation need to be established across the different levels of management. Secondly, there is a barrier to integrate different agencies, especially in terms of civil–military cooperation. Civil organizations traditionally have resistance to directly cooperate with military forces (Coppola, 2015; Ergun et al., 2014) due to different reasons. For instance, they have consternation that such cooperation can corrupt their core values and principles, including the perception of impartiality (neutrality) and independence; they have fear that military forces attempt to take over the relief and aid operation, impeding them from aiding the target communities; they simply have bias to work with the military, based on their negative past experiences, ideological or political differences. Nonetheless, many civil organizations have realized that there are important resources and services that only the military can provide. For example, the military has heavy equipment (e.g. ships, airplanes, helicopters) to transport response and recovery supplies and materials, as well as employees of civil organizations, to the affected areas. The military also has the technological resources and advanced mobile communications capacity in situations where infrastructure is damaged, broken, or destroyed. On the other hand, the military often believes that civil organizations (mainly NGOs) are uninformed, ineffective, inefficient, and that only interfere without actually acting any valuable service. Therefore, these barriers between civil organizations (public, private, and non-governmental) and military forces need to be overcome to have an effective and efficient cooperation in international disasters.

Thirdly, despite the advances in cooperation, there is also a lack of knowledge on the roles, responsibilities and competencies of each actor acting in a crisis or disaster. This fact has often generated attritions and conflicts, and should be eliminated during the preparedness phase. For instance, the DVI in routine disasters is often carried out by local agencies, however when an international disaster occurs with victims from foreign countries the DVI services need to be carried out by accredited international organizations such as INTERPOL, ICMP, UN, and international forensic institutes. Consequently, without the results of these accredited international actors some governmental organizations and private companies cannot give full assistance to the family of victims, such as repatriation of bodies, life assurance, and social benefits.

4. Conclusions

This article provided a number of advances in the disaster community as well as a better understanding upon international disaster management. Several important implications emerged from this applied scientific research. It provided taxonomy of disasters taking into account four dimensions: local, national, regional, and international. It depicted disasters and their major impacts throughout the last decades. It revealed the disaster management based on its origins, approaches, and phases. It identified the pillars to build multi-agency networks for international disaster management. Four case studies were studied as part of the applied research: case 1 – tsunami in the Indian Ocean, 2004; case 2 – air crash of Air France flight 447 in Brazil, 2009; case 4 – typhoon Haiyan in Philippines, 2013. A better understanding on multi-agency network was also evidenced based on these case studies. Ultimately, a significant contribution to the disaster prevention and management advances was obtained in this research through the identification of the main barriers involving international disasters. These barriers can help academics, representatives of the civil society, policymakers, and practitioners around the world to establish solid studies on disaster prevention and management.

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