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An international military perspective on information sharing during disasters

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Abstract

Military organizations are well suited to contend with the uncertainty of the operating environment and collection and analysis of large amounts of information after a natural disaster. However, due to their finely tuned decision-making processes, militaries tend to be isolated from other relevant actors in the humanitarian space, not always aware of the technologies developed to overcome the gap of information that humanitarian actors confront in face of natural catastrophes and complex emergencies. Analysis of the natural disasters that occurred in Thailand in 2004; Pakistan, 2005; Haiti, 2010; and Chile, 2010 and 2014 provide examples of best practices and lesson learned that can help improve future disaster relief operations. This is especially true when militaries are called to augment the existing civilian humanitarian response. It also highlights the prevailing role that the local Military community plays in humanitarian response. This paper highlights the need for the Military community must learn how to better incorporate their unique capabilities into the humanitarian space, and to find ways to more effectively share and assess information.

1. Introduction

Natural disasters normally have two unique characteristics as compared to other crises; they are unpredictable and there is a significant lack of information products providing details on the destruction of infrastructure and impacts on the affected society.

However, they also share characteristics that militaries are more familiar with; large-scale uncertainty, the fast-paced evolution of the situation, and the necessity to process large amounts of information. Militaries use a relatively standardized information process known as the intelligence process or cycle. The typical military information process is comprised of several steps; planning, to determine what and how information shall be collected; collection, related to the use of the proper asset and when/how to employ it; processing and exploitation of the collected information, in order to develop clear and concise information products for the decision makers, and finally, analysis and dissemination of the processed information.

Due to nature of military operations, the information process is a closed circuit, oriented to satisfy the requirements of a particular commander of an organization. A problem often arises in major humanitarian operations, such as natural disasters, when several military organizations from different countries must interact with many civilian organizations, both governmental, intergovernmental (IGO), and nongovernmental (NGO), each of them with their own set of priorities, means of managing and sharing information, and information communication technologies (ICTs) that enable collaboration.

The result of these complex interactions is often a lack of efficiency and efficacy in dealing with humanitarian emergencies. To better manage the situation, organizations in the humanitarian space have developed a number of innovative platforms for information sharing to increase situational awareness. While the humanitarian community has made great progress improving the interactions and coordination between NGOs and IGOs during disaster responses, additional measures must be taken by the

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military community in order to learn how to better incorporate their unique capabilities into the humanitarian space, and to find ways to more effectively sharing and assess the information needed so they can be more responsive in a timely manner.

2. Lack of information sharing; a common issue across the globe

The involvement of militaries as responders in natural catastrophes is not new. For example, the U.S. Navy participated in 17 responses to natural disasters in the 1950's. However, as the humanitarian space continues to evolve, tensions arise as the traditional military mindset is more action-oriented and task specific, where information sharing is not a common practice due to different sets of priorities. Relatively recent disasters provide outstanding examples of best practices and lesson learned that can help improve future disaster relief operations where militaries are called to augment the existing civilian humanitarian response.

2.1. Sumatra, 2004

The tsunami generated off the coast of Sumatra in December 2004 was the most devastating in recorded history, with more than 150,000 people killed. It affected coastal areas in Indonesia, Sri Lanka, Thailand, India, Malaysia, Myanmar, Bangladesh, the Andaman and Nicobar Islands, the Maldives, the Seychelles, Somalia, Tanzania and Kenya. Indonesia was the most heavily impacted country, with more than 125,000 people killed and more than 400,000 people displaced [1,2].

The military involvement in relief efforts was unprecedented; 35 countries contributed 75 helicopters, 41 ships, 43 fixed-wing aircraft and more than 30,000 personnel to the affected areas. The amount of infrastructure destruction, combined to the almost nonexistent local government apparatus in many rural areas, contributed to overwhelm the Indonesian government's capacity due to the massive influx of assistance. While it is recognized that military logistics were invaluable in accelerating the capacity and capability of the relief effort, not all military tasks performed were essential to the relief effort. Furthermore, not a single organization provided a coherent picture of requirements across all of the affected countries in order to advise the military forces on the best use of their available assets [3].

This major catastrophe highlighted the need for better civil-military exchange of information in order to achieve improved synergy in responding to the humanitarian priorities; however, the lack of interconnectivity of military communication systems due to their nature; and the lack of better understanding, resulting in less flexibility, of the military community in dealing with humanitarian organizations, tremendously hampered this objective [4].

2.2. Pakistan, 2005

The earthquake that struck northern Pakistan in October 2005 was especially challenging, killing more than 72,000 people and leaving approximately 2.5 million people homeless in a mountainous region where winter is particularly harsh.

While it is arguable that due to the characteristics of the affected region, the initial assessment of needs was hampered by the difficulty of accessing some of the remote areas [5], the reality is that after every major catastrophe, building situational awareness is particularly challenging; the unpredictability of certain types of disasters, such as earthquakes, and the overwhelming destruction produce a latency in all levels of authorities, especially in the first 48-72 hours, developing isolated and uncorrelated situational assessments that affects not only the efficiency of the relief, but also its efficacy.

The United Nations implemented the use of the "cluster approach" during the Pakistan earthquake relief effort. This represented a new framework for humanitarian coordination devised after the experiences of the Thailand Tsunami a year before. It consisted of multiple clusters to cover Food and Nutrition, Water and Sanitation, Health, Emergency Shelter, Early Recovery and Reconstruction, Logistics, IT Telecommunications, Camp Management and Protection, and Education. However, even as this approach sought improve the overall response coordination, communications issues between field staff and decision-makers hampered the results. Despite those challenges, the use of the cluster system resulted in a "step forward" compared with previous disasters [6].

There were still issues with assessment and information sharing, due to many organizations conducting assessments in parallel and the lack of a coordinated, systematic data collection/management system [7]. The systems used for information sharing were incompatible, like the *FalconView* software used by the U.S. military and *ArcView* (Now called ArcGIS), the software used by the U.S. Agency for International Development (USAID) [8].

The role of the Pakistani military was critically important during the overall response as it served as the main coordinating authority both during the initial response and during the recovery effort, providing logistical assistance and performing evacuation, transportation, camp establishment, and food and shelter distribution in the relief phase [9]. Regarding information sharing, the Pakistani military used a system based on grids and sectors, making it nearly impossible to share information with the various NGOs who were working off of traditional maps. Steps were made to improve the process, but the lack of training and the inconsistent use of terms and formats remained an issue for merging data into an easily understandable and comprehensive manner [10].