



The management of spontaneous volunteers: A successful model from a flood emergency in Italy[☆]

Claudia Paciarotti, Angela Cesaroni^{*}, Maurizio Bevilacqua

Dipartimento di Ingegneria Industriale e Scienze Matematiche, Università Politecnica delle Marche, via Brecce Bianche, 60131 Ancona, Italy



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ABSTRACT

This paper presents an analysis of the management of spontaneous volunteers, mainly led by a local non-profit organisation, during the flood emergency that occurred in Central Italy in May 2014. The purpose of the study is to identify the strengths and weaknesses of the aforementioned management, in order to elaborate on a model that may be developed further through comparisons with other case studies and applications in the context of other emergencies. This case study reiterates the importance of spontaneous volunteers during emergencies, and their appropriate management is crucial in achieving an efficient and effective volunteer service, even though it may be administered by a non-official responder organisation.

In this study, the management of spontaneous volunteers was firstly investigated through a brief literature review. Thereafter, a case study was modelled by the application of the type zero method of integration definition for function modelling language, and conduct of interviews and surveys. Finally, the built model was evaluated according to major guides and manuals on this topic. Consequently, the result of the study may be adopted and utilised by other organisations engaged in similar emergencies. Moreover, it can serve as a starting point for further research and development of policies and guidelines for emergency response.

1. Introduction

The interest on the role and importance of spontaneous volunteers (SVs) during emergencies is increasing among researchers and practitioners. However, emergency management plans that fully harness the potential of SVs remain limited [1], and research on their management are deficient [2]. Currently, spontaneous volunteerism is considered an inevitable phenomenon that occurs during disasters [3], such as earthquakes, floods, and terrorist attacks, which are unplanned and unpredictable situations that hinder their measurability and manageability [4]. Through the analysis of a small-scale event, such as the flood that hit the Senigallia area, East-Central Italy, in May 2014, this study is aimed at chronicling the contribution of spontaneous volunteers who helped affected populations within the first two weeks of the emergency. A second aim is to evaluate the spontaneous volunteers' management (SVM) organised by the Catholic humanitarian organisation Caritas Senigallia in order to identify key elements of the so called "Senigallia model of SVM," which had been appreciated by the then Italian Prime Minister.

This paper commences with a brief literature review in Section 1 in order to identify those who were typically regarded as spontaneous

volunteers and how perceptions regarding them changed through time. The review presents the development of information and communication technology (ICT) in relation to the management of spontaneous volunteers. Apart from reviewing scientific papers, which examined the function of spontaneous volunteers, guides and manuals of some of the most important agencies for emergency management were analysed as well. In Section 2, the concepts of volunteer convergence and the paradox of spontaneous volunteers are presented. Section 3 discusses the methodology adopted for the analysis of the case study, specifically, SVM during the flood in Senigallia. The case study was first modelled by applying the type zero method of the integration definition for function modelling (IDEFO), which is the most appropriate tool capable of providing a wide overview of the entire managing process of SVs with the use of a series of hierarchical diagrams. Furthermore, the survey that was conducted on the representation of SVM through IDEFO, involving volunteers, beneficiaries who received some type of help during the flood emergency, staff of Caritas Senigallia, official responders, and representatives of the local government are reported. In Section 4, the analysis of the case study, which contextualised the flood emergency and the function of Caritas, is presented. The model created with IDEFO and results of the survey are reviewed and explained as well. Section 5

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^{*} Corresponding author.

E-mail addresses: c.paciarotti@univpm.it (C. Paciarotti), a.cesaroni@pm.univpm.it, cesaroni.angela@gmail.com (A. Cesaroni), m.bevilacqua@univpm.it (M. Bevilacqua).

focuses on the evaluation made on the SVM implemented during the Senigallia flood emergency, based on the survey results and comparison of the model with the most prominent guides, manuals, and similar case studies found in recent literature.

2. Spontaneous volunteers

Some figures on the arrival of SVs, ready to extend assistance, in disaster sites clearly indicate that the magnitude of this phenomenon necessitates better plans and management systems. In 1995, in Japan, approximately one million volunteers rushed to the Kobe disaster area to rescue victims of a devastating earthquake that hit the sixth largest city of the country. This event was considered as “the first year of voluntary activities in Japan” [5]. In China, 20 years earlier, 300,000 spontaneous volunteers arrived after an earthquake in Tangshan [6], and in 1985, in Mexico City, over two million people wanted to assist the earthquake victims [7]. More recently, in the United States, the response of the population to the Loma Prieta earthquake was enormous: 60% of San Francisco’s population and 70% of Santa Cruz’s population wanted to help the victims [8]. Earthquakes are not the only emergencies that rouse people’s willingness to help. In 2011, 10,000 spontaneous responders arrived on a tornado site in Alabama [7], and after Hurricane Katrina struck New Orleans, 8000 spontaneous volunteers registered in the first 24 h [3]. The 9/11 2001 terrorist attacks in New York City were extensively analysed by various researchers to investigate the SV phenomenon, whose figures are impressive and practically non-estimable. Reportedly, there were 40,000 spontaneous volunteers at a minimum [7], and 15,570 volunteers were processed by the Red Cross from among the 22,000 who offered assistance [9], which were numbers more than that ever seen in the history of the National Red Cross up to that time [10].

2.1. Definition

At the time, the definitions of volunteers were multiple and varied, from the strictest to the broadest, with a wide range that encompassed four principal dimensions: free choice, remuneration, structure, and intended beneficiaries. The strictest among these defined a volunteer as a person who offered services without any coercion and remuneration through an official organisation and without any link with beneficiaries of the activities of the volunteer. The broadest definition considered some form or remuneration (not only for reimbursement of expenses), coercion (volunteering activities as part of a wider program), or personal relationship with beneficiaries.

Typically, in emergencies and disasters, volunteerism is broadly defined because the focus is set on the activities of volunteers and their outputs [11]. Nevertheless, numerous definitions exist. The classifications are mainly based on the volunteer’s type of affiliation with any official responder agency. Thus, volunteers who want to act independently without having planned any such action in advance are excluded.

In literature and manuals, this latter type of emergency volunteers could be identified with different terms and definitions, such as spontaneous, not affiliated, convergent, emergent, walk-in volunteers, unofficial, unaffiliated, informal [7] or episodic [6]. Nevertheless, the definition with a wider consensus and more users describes *spontaneous volunteers as those who seek to contribute on impulse and offer assistance following a disaster but are not previously affiliated with recognised volunteer agencies and may or may not have relevant training, skills, or experience* [12].

The United States Federal Emergency Management Agency (FEMA) and Emergency Management Australia distinguish spontaneous volunteers from regular volunteers as unaffiliated with any part of the existing official emergency management and individuals with no particular training or experiences and willing to help [13]. The Ministry Civil Defence Emergency Management (MCDE) of New Zealand adds

another important feature by defining a spontaneous volunteer as one not responsible or accountable to any given organisation [14].

Whittaker et al. [11] well emphasises the heterogeneity of what they define as informal volunteerism: “*The activities of people who work outside of formal emergency and disaster management arrangements to help others who are at risk or are affected by emergencies and disasters. Such volunteerism may take place before, during or after an event. Informal volunteers may participate as individuals or as part of a group, on a short or longer-term basis, regularly or irregularly, and in situ or ex situ. Their participation may be spontaneous and unplanned, or deliberate and carefully planned.*”

Organisations responding to a disaster can be categorised as well as established, expanding, extending, and emergent organisations [15]. An *Established organisation* performs disaster response according to their mission (paramedic organisations, and civil protection and fire departments) and are part of the official emergency response system. *Expanding organisations* help people in need because of their mission, but not necessarily during emergencies. They can often rely on numerous volunteers [7]. These organisations operate regular tasks and help people in seeking assistance through new and ad hoc structures. It is similar to the case of an organisation analysed in the following paragraph. *Extending organisations* perform new tasks outside or beside the official emergency management and employ the same existing structures. An example of an extending organisation is a private company that donates some of its products as support or relief equipment. *Emergent organisations* are similar to expanding organisations, but they are less structured, often not experienced and more informal. These organisations may have a crucial role because of their proximity to the disaster-hit area and victims. Indeed, they often are the first to arrive on the emergency site [7].

In addition to all the above-mentioned categories of spontaneous volunteers, recently, another type of volunteer has emerged and rapidly increased its function—the digital volunteer. Digital volunteers are spontaneous volunteers themselves but instead of physically supporting disaster victims, they provide assistance in various ways using new technologies. The information and communication technology, and social media have potentially enabled any individual located thousands of kilometres away from the disaster site to be part of the emergency and disaster response [16] and invest any amount of time in volunteering [11]. The widespread use of ICT, particularly the social network, significantly increases the potential involvement of communities in disasters and may even foster social resilience [17]. In fact, digital volunteering can be performed in various ways, such as social networks by web-based mapping software and creating ad hoc software to produce, share information, and support rescue operations. The case of the missing Malaysian Airlines flight demonstrated the potential of information technologies in mobilising mass, spontaneous volunteers who are willing to help during emergencies. In March 2014, 2.3 million people searched the missing flight, MH370, using the Tomnod website. Their main task was to scrutinise satellite images. Accordingly, they scanned an area covering 24,000 km² [18]. Indeed, spontaneous digital volunteers can even be more effective than official agencies, such as during the Haiti earthquake emergency, when digital volunteers managed to collect more information in 48 h than the United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA) did during the first week [19].

Despite its recognised and demonstrated potential, digital volunteerism and the use of ICT by citizens are still at an early stage [19]. Furthermore, the technology utilised is rarely integrated into the official response systems [16]. For instance, existing innovative software allowing citizens to report or map remains extremely underused in emergency management because of a mismatch between the real needs of professional responders and ICT community that created those software [20]. Accordingly, the social media used during emergencies has to be supported and better developed in order to find ways of using them that could match the expectations of citizens and requirements of emergency services [17].

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