

# RISK AND RESILIENCE REPORT

## **Volunteerism in Disaster Management** Opportunities, Challenges and Instruments for Improvement

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# Executive Summary

Collaborations of civic society and public administration play a key role for successful emergency and disaster management. In many instances, the tradition of organised volunteering in support of organised disaster management processes is a long one. However, new technologies, large scale disaster events, and a differently engaged population are some factors combining to bring new, spontaneous or emergent forms of volunteerism to official disaster management activities.

From the perspective of the authorities, these new forms of civic engagement often appear as unpredictable. Aligning spontaneous volunteers and professionals is a difficult challenge that many organizations are facing today. This study draws on a range of examples from different countries and hazard scenarios to demonstrate how “new” volunteers have successfully worked hand-in-hand with authorities. These cases also provide evidence of the way, though smart and proactive planning and training, obstacles that often complicate the collaboration between authorities and civic society can be overcome. It also shows how these activities contribute to raising societal resilience through the contributions of volunteers.

The report seeks to provide an understanding of the challenges and opportunities of integrating spontaneous and emergent volunteers in disaster management and civil protection. It details the relationships between state crisis management and the social environment in which these relationships take place. The study analyses several crises and disasters where ‘new’ volunteers have played a prominent role. The study aims to provide an overview of the various instruments available to support volunteerism in the context of disaster management and civil protection, and how these instruments can be employed to increase the efficiency and effectiveness of civil society engagement in disaster management.

In order to understand international developments in the evolving relationship between disaster management authorities and the public, the study used a mixed methodology. The authors combined a desktop analysis with expert interviews and workshops throughout 2018. This detailed methodology revealed the benefits and challenges associated with the integration of ‘new’ volunteers in established disaster management processes, which are briefly listed:

## Opportunities

1. Locals as first responders: Well-trained volunteers could provide first aid, start search and rescue actions in destroyed buildings, or clear debris.
2. Unburdening authorities: well-organised volunteers are a valuable resource in emergency management.

3. Building social capital: visible participation by parts of the society in the crisis management response can foster pro-social behaviour of affected and non-affected people.
4. Using new technologies: the ability of organisations to piggy-back on the public’s faster use of new communication technologies can yield consequential benefits in emergency and disaster management.

## Challenges

1. Operational challenges: Convergence (of volunteers, donations, etc.) can be overwhelming, if not channelled properly.
2. Legal challenges: effective engagement of volunteers requires water-tight legislation, which may not exist.
3. Political and cultural challenges: the emergent nature of volunteerism, coupled with changing societal characteristics, combine to challenge political and cultural processes and notions about the role of volunteerism in emergency and disaster management.

Balancing the opportunities against the challenges posed by the integration of ‘new’ volunteers into established disaster management activities is difficult. However, the research demonstrated some instruments that can help to find this balance. Establishing policies of encouragement by opening the system, establishing clear goals and principles, creating incentives, and removing obstacles can all support workable partnerships between the civil society and disaster management authorities. Creating standards and routines in volunteer recruitment, deployment, communication, resource management, and training will yield an operational basis for better partnerships. Lastly, the ability of these partnerships to be sustainably maintained over the long-term will likely be dependent on the establishment of intermediate organisations, between potential volunteers and authorities. During emergencies and disasters, it is often very difficult to interact directly with emergent groups or individual volunteers due to the pressure emergency events present. Such organisations could act as a trusted intermediate between potential volunteers and the authorities, but these must be established and operate between events.

Research conducted in this report has identified three major issues that ‘new’ volunteerism will raise for the future of emergency management. First, for a variety of reasons, authorities can no longer refuse the support of citizens volunteers, but must rather explore how volunteers can be best integrated into disaster management actions. Second, that integration of volunteers should be considered as an investment in improved emergency management. Last, that volunteerism is about partnership, and that in the modern age, formal disaster management authorities no longer possess a monopoly on the process.

# 1 Introduction

Effective disaster management requires the involvement of a multitude of diverse actors from the inside and outside of state bureaucracy. Especially on the local level, disasters are never managed by a single actor alone, but by complex networks of public, private and civil society organisations (Kapucu 2009). Collaborations between civic society and public administrations play a key role in successful disaster management. In other words, citizens are a key resource in coping with disaster. Nonetheless they are often regarded rather as obstacles by some professional disaster managers. Interestingly, also members of the public tend to expect that in cases of a disaster, citizens are likely to remain very passive, act chaotically, or even in an anti-social manner. Numerous studies of actual disaster events have debunked this negative picture of the public as a myth. In fact, the same research has found that social cohesion in times of disaster is even stronger than in normal times, and that many people are willing to engage for common good (Fritz and Mathewson 1957; Wachtendorf and Kendra 2004). For decision-makers in disaster management and civil protection, the question then is how to make best use of this rich resource and integrate volunteers into disaster management plans and practices?

This question is particularly prevalent in the face of social trends that lead to a decline of traditional volunteerism. Reflecting broader social trends, away from binding membership in hierarchical organizational structures towards new, more fluid forms of civic engagement, public participation during emergencies and disasters is becoming increasingly informal, spontaneous and self-organized (Schorr et al. 2014). From the perspective of the authorities, these ‘new’ forms of civic engagement often appear as unpredictable (McLennan et al. 2016).

Aligning spontaneous volunteers and professionals is a difficult challenge that many organizations are facing today. In this sense, the International Federation of Red Cross and Red Crescent Societies emphasizes, that “the success of relief efforts by those spontaneously offering their help depends on the capacity of agencies and authorities to integrate them quickly and effectively into a coordinated strategy” (IFRC, 2001, 146). This study draws on a range of examples from different countries and hazard scenarios to demonstrate how ‘new’ volunteers have successfully worked hand-in-hand with authorities. These cases also provide evidence of the way, through smart and proactive planning and training, obstacles that often complicate the collaboration between authorities and civic society, are being overcome. It also shows how these activities contribute to raising societal resilience through the contributions of volunteers.

## 1.1 Aims and Scope of Report

The study aims to contribute to a better understanding of the challenges of disaster management and civil protection in complex organisational settings, and to detail the relationships between state crisis management and the social environment in which these relationships take place. The study analyses several crises and disasters, in which volunteers have played a prominent role. Besides the challenges of involving volunteers, we also look at several opportunities that a successful partnership between authorities and volunteers can bring for public safety and resilience. Finally, the study aims to provide an overview of the various instruments available to support volunteerism in the context of disaster management and civil protection and how these instruments can be employed to increase the efficiency and effectiveness of civil society engagement.

The project builds on previous work by the CSS on new forms of public engagement in crisis management. Specifically, it builds on projects on emergent collaboration and participatory crisis mapping (Roth et al., 2013; Giroux *et al.*, 2013; Giroux and Roth 2012), comparative analysis of organizational adaptation in civil protection (Roth and Prior 2016; Prior et al. 2016) as well as on the migration crisis (Roth et al. 2018; Roth 2017).

## 1.2 Structure of the Document

The report is divided into seven sections. It is structured as follows: After this introductory section, section 2 provides a general background on the most central current debates around the topic of volunteerism in disaster management and civil protection, especially discussing the ongoing shifts in civil society engagement from long-term, highly organized volunteer work to more event-driven, emergent forms of volunteerism. We describe a basic conceptual framework of volunteerism, depending on their levels of organization, their relationship with authorities and their degree of locality or virtuality. This framework informs the empirical analysis in the subsequent sections. Section 3 summarizes the research design that guided the analysis. Sections 4 and 5 then examine the opportunities and challenges of volunteerism in the context of disaster management and civil protection. Based on these findings, section 6 presents a set of instruments that can be used to foster civic engagement in disaster management and civil protection, which can support fruitful collaboration between volunteers and professionals. This includes high-level policies to encourage

the involvement of citizens in coping with disaster risks as well as rather small, but effective changes in routines and standards in disaster management to allow volunteers to play a more active role. Further, we discuss how working with intermediate organizations can facilitate citizens' involvement. Section 7 concludes with several general observations and implications for policy-makers and disaster managers.

## 2 Background

### 2.1 A renaissance of civil society?

Over the last decades, many countries have witnessed a steady decline in traditional volunteerism, which has had an impact on the operations of aid organizations, fire brigades, and many other institutions of importance for disaster management. Previous research has identified multiple reasons for this trend: Increased mobility and urbanization of young people impede a continuous engagement in traditional organizations, which are typically based on regular in-person meetings, exercises, etc. (McLennan et al. 2016). Further, the replacement of class- and community-based identities by more individualistic life-styles is found to make memberships in traditional volunteer organizations less attractive. Finally, volunteer engagement often has to compete with changing expectations that people face in their work and family environments. Together, these factors put traditional volunteer organizations, whose operations have often depended on formal volunteer engagement, in a difficult position, especially in finding young talent (Roth et al. 2014).

Contrary to the pessimistic view, there are few signs that volunteerism as such is dying. While traditional volunteer organizations are struggling, new forms of volunteerism are becoming increasingly prevalent, and which are more attractive for many people. These new forms of volunteerism are characterized by three main points: First, the engagement of volunteers is clearly event-driven. Instead of long-term commitments, many people prefer working on concrete projects for a limited time (Balas and Glas 2015). Second, new types of volunteer groups possess rather low levels of organization (in comparison to existing forms, and the civil protection or-

ganisations to which they were attached). The structures tend to change quickly, with volunteers joining and leaving more freely than in traditional organizations, where members stayed engaged over decades. Finally, new volunteerism is enabled by new information and communication technologies (ICTs), like social media, virtual collaboration platforms, online training tools, etc. These technologies are being used to recruit, train, motivate and coordinate volunteers (Starbird and Palen 2011).

The rise of new volunteerism then raises important questions: can 'new' volunteerism fill the space left by declining traditional volunteerism? Does new volunteerism indicate a 'renaissance of civil society' (Beck 2016) in a modern, effective and inclusive fashion? While some observers argue that volunteerism outside of established structures is symbolic at best, if not counterproductive in the case of disasters and emergencies, others point to the huge capabilities and knowledge that rest within civil society and warn against dismissing the willingness of citizens to engage in the delivery of public safety and security (Harris et al. 2017).

Problematically, in these discussions, quite different forms of volunteerism are often confused and the terminology tends to be unclear. In order to assess the opportunities and challenges of volunteerism in civil protection, it is first necessary to delineate the different types of volunteers that are relevant in the context of civil protection and disaster management.

### 2.2 Types and dimensions of volunteerism

The terminology used in the context of volunteers is far from clear, differs between national contexts, and is sometimes rather confusing. 'Volunteer' is a very general term that describes any person that contributes unpaid workforce (Harris et al. 2017, 3). In the context of disaster, a volunteer can be the high school student that helps her community in the face of a river flood by filling sandbags, the local farmer who uses his tractor to carry goods, or the industry engineer that is also commander of the local firefighting brigade. Scanlon et al. describe the broad spectrum of volunteerism:

*"[Volunteers] can act as individuals without contact with emergency agencies. They can act as existing or emergent groups, again without contacting emergency agencies. They can act as individuals or groups with the awareness of, but without interference from, emergency agencies. They can act on their own or in groups, but their actions can be taken into account when emergency agencies develop plans. They can be co-opted by emergency*

agencies. They can initially respond on their own but be gradually integrated into emergency agency response” (2014, 45).

Just as the work of individual volunteers can take very different forms and functions, also the way in which volunteers organize themselves in response to a disaster differs significantly (Turner and Dynes 1975):

Type I – Established Organisations: existing disaster and emergency management authorities that were founded specifically for tasks related to disasters.

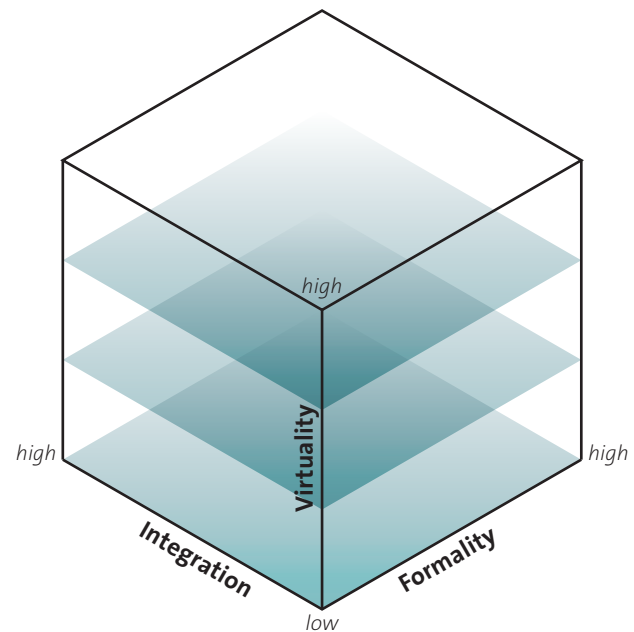
Type II – Expanding Organisations: established organisations with regular tasks that can be *expanded* through new structures. Often established volunteer organisations that can step up emergency response functions when required. For example, the Salvation Army taking care of people turned homeless by a disaster would be classed type II volunteer activity.

Type III – Extending Organisations: organisations with established structures, but which take on new or unexpected functions during disasters or crises. For example, an extending organisation can be a faith-based group or a sport club distributing food and clothing to disaster-affected people (Dynes 1990; Quarantelli 1966; Whittaker et al. 2015). The engagement of private companies in non-paid work also falls into the category of extending volunteer organizations. Examples of corporate volunteerism include the services that the logistical firm DHL offered in Southeast Asia in the aftermath of the 2004 tsunami (Chong 2009). An interesting case of spontaneous corporate volunteering occurred after the 9/11 attacks in NYC when private transport companies evacuated more than 200’000 people from central Manhattan (see Kendra and Wachtendorf 2016). While the expanding organisations mostly have no experience with disaster situations, their actions build on established routines and structures developed in other contexts. Therefore, it would be incorrect to regard the volunteers engaged in this kind of organisations as “disorganized”. Rather, their structures and processes have to be adapted to the specific requirements of disaster situations. Interestingly, the volunteer activities of private companies have gained recent attention, especially because of the increasing focus on corporate social responsibility.

Type IV – Emergent Organisations: those which emerge with new structures and functions when the need presents. They differ from the extension of volunteer organizations (type III), which are organizations that assume similar tasks in disaster situations as they do normally, but on a larger scale. Emergent volunteering organisations also differ from extending organizations (type II) that typically have pre-existing structures and functions, but which might adapt or change during disasters.

The different types of volunteers differ greatly with respect to recruitment, their *modus operandi*, and

Figure 1: Three dimensions of volunteerism (own depiction).



capabilities, but also concerning their needs, interests, and self-conception.

Influenced by their historical roots, volunteer organizations have distinct organizational characteristics. In the following, we focus on three key dimensions of volunteerism:

- the level of formality of volunteer organizations;
- the intensity of cooperation between volunteers and official emergency and disaster management systems, and the integration of the former into the latter;
- the locality or virtuality of volunteerism.

In combination, these dimensions create diverse and dynamic forms of volunteerism. The consequence (as discussed in detail in sections 4–5) is that there exists no one-size-fits-all approach to work with and support volunteers in the context of civil protection. Figure 1 provides a visual template illustrating how the authors categorise the cases explored in this report with respect to the dimensions of volunteerism described here. In particular, an understanding of the dimensions of volunteerism in disasters helps to inform a discussion about the difficulties associated with integrating ‘new’ (especially emergent or spontaneous) volunteers into existing organisational structures and functions.

### a) Formality

Volunteerism can be organized through long-standing institutions, but it can also function effectively in the absence of any guiding agency or other formal arrangements (Giroux and Roth 2012). For example, volunteer fire brigades, national Red Cross societies, or similar well-estab-

lished volunteer organisations have clear hierarchical structures, often similar to the command-and-control structures to be found in military or civil protection organizations. These organizations are characterized by long-term, often life-long membership, clear hierarchies and regular in-person meetings and exercises. At the other end of the spectrum are the so-called “unsolicited”, “informal”, “unorganized” or “spontaneous” volunteers, which are not organised through pre-existing structures (Whittaker et al. 2015).

While the role and value of hierarchical volunteer organisations for civil protection is uncontested, the issue of spontaneous volunteering is the subject of heated debate among professional disaster managers, disaster scholars, and volunteers themselves. These discussions are often hamstrung because of the difficulty in defining what spontaneous volunteering actually means.

Following ISO/DIS standard 22319:2017, a spontaneous volunteer can be defined as “[an] individual who is not affiliated with an existing incident response organization or voluntary organization but, without extensive preplanning, offers support to the response to, and recovery from, an incident” (ISO 2017). Similarly, the Australian Red Cross regards spontaneous volunteers as “those who seek to contribute on impulse — people who offer assistance following a disaster and who are not previously affiliated with recognised volunteer agencies and may or may not have relevant training, skills or experience” (Australian Red Cross 2010). In other words, theoretically every citizen who is not yet active in a disaster-related organisation anyway, can become a spontaneous volunteer when disaster strikes.

In practice, during most disasters of recent years, spontaneous volunteers have outnumbered all other volunteer groups. Nonetheless, there is only little integration of spontaneous volunteers into official disaster management. “Notably, until recently, government authorities have tended to overlook spontaneous volunteering when planning, and to regard them as an unpredictable and uncontrollable nuisance and risk rather than as a legitimate part of response and recovery” (McLennan et al. 2016, 24) Importantly, spontaneous volunteers are nothing new in any sense. Human convergence to places of disaster is a basic social phenomenon that has been observed and studied for many years (Fritz and Mathewson 1957). What is rather new is the way in which spontaneous volunteers can be activated and coordinated through new communication services (see section 6).

## **b) Integration and cooperation**

The formality of volunteer organisations is closely connected to the strength of their relationship with the state. While some volunteers seek close links with, even incorporation in official disaster management structures,

others operate independently from these structures, even regarding themselves as counterweights to, or opponents of the government (Harris et al. 2017). As an example, established aid agencies like the Red Cross societies or volunteer fire brigades are examples of the well-integrated organizations, operating with clear and formal roles in specific disaster management systems. An extreme version of this example occurs when volunteer organizations and authorities form so-called “hybrid organizations”, in which elements of public and civic organizations are merged and governance mechanisms mixed (Seibel 2015; Roth et al. 2018). An example of hybrid organizations in the context of disaster management could be a refugee accommodation with which state authorities and civil society groups collaborate so closely that typical behavioural logics are being mixed and traditional categorizations no longer apply (Roth, Neuberger, et al. 2018).

Typically, volunteers in organizations that are well integrated in the official disaster system receive regular trainings and participate in official disaster exercises, contributing to their skill base. However, volunteers outside these organisations (e.g. spontaneous volunteers) can also be highly qualified and organized. However, due to a lack of official recognition their involvement in state structures is typically less extensive, or non-existent. “Individuals and groups who work outside of [the formal] system have tended to be viewed as a nuisance or liability, and their efforts are often undervalued” (Whittaker et al. 2015, 359). Establishing a functioning partnership with volunteers that want to help without being “instructed what to do” or being “under control by authorities” remains a tricky task.

## **c) Virtuality**

The third dimension of volunteerism relates to the geographic locality or virtuality of the resources put to use. Traditionally, most volunteer work has a strong local component. One reason for this is that many volunteers are engaged exactly because they want to make a positive contribution to their local communities. Also, disasters are mostly geographically localised in their impact (except pandemics, for instance). As such, in times of disaster and hardship, personal social ties are particularly important (Rotolo and Berg 2011). Also, because of the disruptive nature of disasters convergence of human resources and goods is often difficult due to logistical issues and coordination problems (Fritz and Mathewson 1957). For instance, until recently, if a major flood devastates large regions of a European country, ordinary people in neighbouring countries could hardly do more to mitigate the situation than donating goods (e.g. winter clothing) or money as well as moral support through symbolic solidarity.



Cyber technologies and the fast-developing ICT domain are altering the geographic localisation of disaster response and recovery. How ICT can be employed in supporting distributed disaster communication and responses has been debated at least since the early 2000s (Palen et al. 2007). During this time, grassroots groups have actually demonstrated the practical value of virtual collaborations, with a prominent case being the devastating 2010 earthquake in Haiti. The value of this work lay largely in the virtual execution of local communities' needs assessments and developing 'crisis maps' illustrating real-time, on-the-ground necessities (Meier 2010; Heinzelman and Waters 2010; Ziemke 2012). These grassroots groups were principally organized on the basis of university networks, mainly in the United States, and other civil society groups, such as diaspora communities. As a result of this informal basis, and despite their motivation to support established disaster management authorities, these groups of engaged volunteers received a limited buy-in from professional disaster management organizations. Since the "breakthrough" of virtual volunteerism around 2009/2010, virtual teams have worked on numerous disasters around the world, fulfilling diverse tasks, including data-gathering, crowd-sourcing, mapping, fact-checking, countering rumours, coordinating goods, shelter and other volunteers on the ground, providing moral support, etc.

These deployments have repeatedly proven that volunteers do not necessarily have to be present physically in the disaster zone to make a valuable contribution. With fast advancing digitalization in many fields, in future, virtual volunteerism will most likely become even more important.

## 3 Methodology

To provide a broad overview of the topic of volunteerism in civil protection in different national contexts, the research team drew on a broad empirical basis, including a desktop analysis of publicly available documents and studies, interviews with experts in disaster management and volunteer organizations, and workshops with practitioners from governmental and civil society organizations.

### 3.1 Desktop analysis

The first element of the empirical analysis consisted of an in-depth study of pre-existing documents related to the study's topic. The focus was placed on countries that are broadly considered to be pioneering moves toward modernising the role of volunteers in disaster management and civil protection. The volunteer-specific policies and practices of countries including Australia, Germany, Netherlands, New Zealand, United Kingdom, and United States were examined first. Specifically, the research team considered official legal texts, strategy documents, and guidelines for disaster management practitioners. Further, we examined the results of several research projects that have followed different approaches to improve the involvement of volunteers in disaster management.

### 3.2 Expert interviews

The second source of information was a set of telephone-based and written surveys conducted with disaster management personnel on the national and subnational levels across four continents. The survey specially targeted practitioners who work at the intersection of volunteerism and professional disaster management through their engagement in Virtual Operation Support Teams (VOST's, see section 5). The survey encompassed 16 open questions, covering the personal backgrounds of the respondents, the history of the organizations each respondent was associated with, including possible trigger events, deployments and exercises. Further, the survey questioned the internal operational processes (activation, personnel development, etc.), and how the organization was connected to other virtual support teams, local and international disaster management authorities and academia. Finally, interview partners were asked to provide some indication of how the future development of volunteering was planned. All answers were provided under the condition of anonymity.

### 3.3 Workshops

The final source of input for the present study came from a series of international expert workshops, which were organized or co-organized by the authors and which addressed different aspects of the complex relationship between disaster management and civil protection professionals on the one side and volunteers in this field on the other.

The first workshop was held on April 20, 2018 in Konstanz, in cooperation with University of Konstanz, the Ludwig-Maximilian University München and the German Red Cross under the umbrella of the international “HybOrg” research project.<sup>1</sup> The event was focused on the challenges and experiences gained in the German response to issues of migration and asylum. The workshop aimed to support the exchange of experiences gained over the last years (especially during the so-called ‘refugee crisis’ of 2015/16) and to discuss potential strategies to improve civil society participation in crisis management processes. Specifically, the workshop encouraged dialogue between academics and practitioners (Roth, Neuberger, et al. 2018).

The second event was a three day expert workshop from August 22-24, 2018, in Zürich. Supported by the Swiss National Science Fund (SNF), it brought together scholars and practitioners from Australia, Germany, Switzerland, the United Kingdom, and the United States for in-depth discussions on the issue of social vulnerability in the context of disasters. A main focus of the workshop was the question how collaboration between different actors and stakeholders could be improved in order to support vulnerable social groups and foster community resilience (see Prior and Roth, forthcoming).

A third workshop was held on October 23, 2018 in Berlin. It took place as part of the “Fachtagung Katastrophenvorsorge”, hosted by the German Red Cross and the German Foreign Ministry. The workshop was co-organized with the German Red Cross and Ruhr University Bochum. It examined in how far new forms of cooperation and networks between different organizational bodies (specifically aid organizations, authorities and social actors) could contribute to improving local crisis management, prevention and preparedness (see Biegert, Borgmann, and Roth 2018).

## 4 Opportunities of volunteerism

Volunteerism is a well-known resource in emergency and disaster management. In many countries, formal volunteer organisations have long played a role in emergency preparedness and response – volunteer fire-fighting organisations are a particularly widespread form of institutionalised volunteerism.

However, in recent times the level of non-institutionalised volunteerism has increased dramatically. Following recent disasters, emergency management and disaster response authorities from around the world are typically inundated by unsolicited support from the public. Managing this support in the context of the opportunities such volunteerism presents is of particular importance.

This section explores the opportunities volunteers can bring for emergency and disaster management authorities. It explores how volunteers can be used as a resource that can unburden authorities, and examines in which ways this might be accomplished; details how volunteer participation increases social capital in the community – among the public, and between the public and emergency and disaster management authorities; the way ‘new’ volunteers can increase the speed of emergency response; and lastly, it explores the way new technologies might be employed in facilitating volunteer participation.

### 4.1 Organizing fast and flexible local help

When disaster strikes, professional disaster managers are rarely the first on the scene. In most cases, local residents are already there and eager to help, for example by providing first aid, starting search and rescue actions in destroyed buildings, or by clearing debris (Helsloot and Ruitenberg 2004). In this sense, local volunteerism can be considered a prime example of community resilience (Harris et al. 2017). The strength of civil society organizations to mobilize volunteerism and social capital in the form of community life and social networks, especially utilising personal telecommunications, has never been greater.

The United Kingdom’s focus on the Local Resilience Forum (LRF) as a mainstay of its Civil Contingencies Act is a direct recognition of the legitimacy of local people as the first line of response to an incident (see case study 2). Indeed, in developing guidance for the inclusion of spontaneous volunteers in emergency response, the Secretariat highlights that volunteers can have a role in all stages of the emergency management cycle – including first response. Given that this potential involvement is recognised, planning for spontaneous volunteers at all stages of an emergency response process is correspondingly necessary. While the LRFs were originally strongly dominated by membership from the blue light organisations, more recently their mandate has expanded to meet the needs of, and include, spontaneous volunteers. This is a clear recognition that involvement by local volunteers is important and legitimate.

<sup>1</sup> <https://www.hyborg-projekt.de/en>

This adaptability in the UK is perhaps an indication of organisational “looseness”, which reflects the ability of an entity to respond dynamically to changes that influence the circumstance of its existence. Loose organizational structures allow for flexibility and change. Typically social movements, like volunteering, create loose organizational structures, within which people can participate and get information without being bound to a specific course of action. Traditionally this characteristic of volunteers has been considered a disadvantage from the top-down perspective, because these groups are perceived to be less organised and more difficult to control.

Organizational “looseness” is in fact a strength of emergent groups like volunteers (Stallings and Quarantelli 1985a), allowing them to react in an adaptive manner to new problems. Emergence can also allow authorities, like the UK Civil Contingencies Secretariat, to devolve responsibilities to well-organised volunteer groups, a benefit in crises and emergencies where circumstances are often very changeable, as was the case in Germany’s haphazard, hybrid-organisational response to the influx of refugees into the country in 2015/16.

Therefore, the ability to rely on a well-organised volunteer group relieves the authority of the necessity to plan the minutiae of an emergency response. In the UK, increased agency for the community, through the LRF, is a realisation of the limits of centralised actions, and as long as volunteers from the community can be integrated into a well-planned emergency management cycle, the perception exists that well-managed volunteers can strongly support the authority’s more formalised actions.

## 4.2 Unburdening authorities

A common opportunity identified across a number of the case studies is the recognition that well-organised volunteers are a valuable resource in emergency management. Organisers of volunteers highlight that, when well-managed, volunteers can help to unburden authorities’ activities in emergency and disaster responses.

‘Well-managed’ volunteerism is influenced by several factors: volunteer skills placement, avoiding additional risk, and volunteer management planning pre-event. In order to realise the value of volunteers in emergency or disaster management, perhaps the most important factor is the recognition that, in the current social and cultural climate, volunteers will present, and without an established plan that can be used to organise this resource prior to an actual event, the opportunity to benefit from volunteers will be lost.

Several of the cases highlight the necessity to direct volunteers to fulfilling roles which reflect their particular skills. The UK (Case Study 2) establishes volunteer ‘skills triage’ facilities for events. These facilities seek to organise volunteers into support roles that match the volunteer’s capacity and the authority’s need. Likewise, in the Netherlands (Case Study 4), volunteers are only engaged if their skills match necessity gaps of the authorities. Virtual Operation Support Teams (Case Study 1) are perhaps the most specific form of specialised volunteer support, fulfilling the specific role of information management and analysis for authorities.

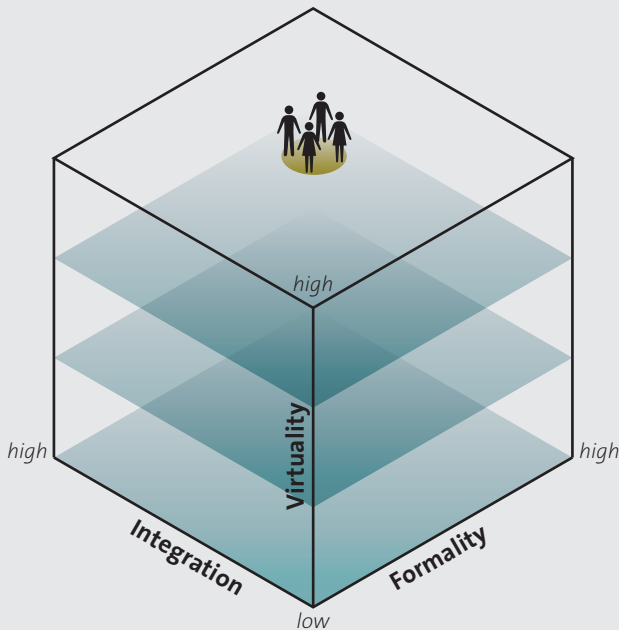
Not all tasks involved in disaster response require extensive training. Volunteers can take over those tasks that either require few specific skills or tasks that match volunteers’ skills. In this way, professional disaster staff can focus effort on the most demanding tasks (Zettl 2017, see figure 2). Some of the activities that spontaneous volunteers tend to fulfil include (Whittaker et al. 2015):

- a) search and rescue,
- b) first aid,
- c) assessment of community needs

One important aspect of task allocation that all authorities are sensitive to, with respect to utilising volunteers, is the avoidance of additional risk. Where volunteer activities increase risk, by undertaking tasks for which they have no training, or simply by being in places that are unsafe, the burden-lifting capacity of the volunteer is negated. In the UK, this means engaging volunteers (especially those from outside of the affected communities) in support roles away from the hazard-affected areas. In Wertheim, Germany (Case Study 3), a volunteer organisation holds responsibility for informing residents about flood risk prior to an event, and supporting vulnerable members of the community during events.

These issues suggest that actually organising volunteers is a burden in itself. However, in reality, overlooking the pre-organisation of volunteer involvement can place a bigger burden on authorities – especially during events, when their resources are most restricted. Volunteers will present in support of emergency management efforts, a feature of modern disasters that continues to be widely reported and recognised (Harris et al. 2017; Lindner et al. 2018). As such, dealing with this issue in the normal integrated disaster management planning process makes a great deal of sense. The UK Civil Contingencies Secretariat goes as far as acknowledging that problems arising from volunteer engagement in a disaster response, for instance, are simply the manifestation of poor resilience planning before an event transpires.

## Case study 1: Virtual Operation Support Teams



Monitoring a highly dynamic, polycentric information environment is becoming increasingly resource-intensive. During or soon after a disaster, the number of eyewitness reports, videos or opinions uploaded and shared on social media quickly overwhelms the classical information resources of authorities, which might overlook important signals within the noise (Paris and Wan 2011). Many traditional disaster risk managers have faced difficulties when managing information in social media channels during large-scale incidents (Hurricane Sandy, for example), when extensive resources were diverted to dealing with misinformation during the incidents (Hughes et al. 2014).

To support authorities in handling the new information environment during and after disaster, so-called Virtual Operation Support Teams (VOSTs) have become established in many countries in recent years. These teams are known for their activities in social media monitoring, situational awareness support, countering rumors, and the amplification of official crisis communication (S. Reuter 2012). As such, during incidents and events in particular, the collaborative and capability-enhancing potential of VOSTs becomes most obvious.

The idea of a Virtual Operational Support Team (VOST), to unburden disaster management authorities during events in this new information age, was conceived in 2011. The concept was introduced by Jeff Phillips (an emergency management coordinator

from Los Ranchos de Albuquerque, New Mexico) at the Annual Conference of National Emergency Management Association (NEMA), 2011. Phillips envisioned the VOSTs as a resource-efficient means of monitoring social media, collecting, aggregating and verifying crisis-related information, similar to existing forms of local citizen engagement in the offline world, like the Community Emergency Response Teams (CERTs).

VOSTs were designed to stand on the shoulders of “trusted agents” (Reuter 2012) – people with a background in emergency or disaster management who could coordinate the support actions undertaken by the virtual teams. In contrast to other forms of digital volunteerism, which have mostly emerged as bottom-up activities, VOSTs are connected to disaster management agencies, and are only activated operationally by a disaster management authority PIO when required. In recent years, the VOST concept has spread quickly, first within the US, but also to other regions, including South America, Europe, and Oceania (Virtual Operations Support Group (VOSG) 2018).

In the European context, Spain and France were forerunners in adopting the VOST concept and adapting it to their specific needs. Both countries are prone to regular wildfires and therefore, most of the deployments have dealt with fire incidences. Already in 2012, a first national VOST was established in Spain. Since then, 18 regional teams have been founded. Some of them are well integrated in the official disaster management structures, take part in civil protection courses and support authorities, for example by countering hoaxes related to hazards and disaster. Others, however, only have loose connection with official disaster management agencies. In France, a national team “VISOV” supports mainly the Civil Defense Department (COGIC). Further, in 2015 a regional VOST was created in Nice, in response to several landslide events in the area. Since then, it had several live deployments, most prominently after the terrorist attack on July 14, 2016. Over a period of two weeks, it shared information and provided other support services. In Germany, a national VOST was founded in 2017 as part of the Technische Hilfswerk (THW), a federal agency which members are mainly volunteers. The German VOST had its first deployments at a large sport event and in the context of the G20 summit in Hamburg, where it provided situational awareness for the authorities. In September 2018, the first regional German VOST was established in Baden-Württemberg. Its first deployment was during the federal disaster exercises (LÜKEX) in November 2018.

On top of these benefits, the UK Civil Contingencies Secretariat, especially, highlight the value of volunteers in the context of reduced emergency management budgets during periods of austerity. Countries like the UK, USA and Australia also highlight how important public activities in preparedness can reduce the state’s emergency response and recovery burdens (Prior et al. 2016).

Figure 2: Categories of task during disasters, source: Zettl 2017 (authors’ translation)

Category	Description
Green tasks	No instruction or training necessary
Yellow tasks	Tasks that spontaneous volunteers can assume after brief training
Orange tasks	Tasks to be fulfilled by volunteers with specific qualifications, verification of proper qualification necessary
Red tasks	Tasks to be fulfilled only by trained and skilled emergency personnel

### 4.3 Building social capital

Among the greatest positive effects of disaster events is pro-social behaviour of affected and non-affected people, which form “altruistic” or “therapeutic” communities (Kaniasty and Norris 1995). From this perspective, visible participation by parts of the society in the crisis management response should improve the acceptance among all parts of the society regarding the burdens generated by the consequences of crises and associated political decisions (Roth et al. 2018). Participation of volunteers can build social capital between the community and authorities, and within the community in several ways:

- participation increases public acceptance and transparency of authorities’ disaster management activities;
- it gives the public agency in decision making that might affect them;
- it creates a sense of community that supports disaster affected community’s disaster resilience.

Perhaps the most important aspect of public volunteer participation is the generation of mutual trust. The benefits of participation for social capital listed here are ultimately a function of trust. In turn, as research on spontaneous volunteering warns, “managers deterring people from spontaneous helping (even if justified as concern about hazards) can ultimately have a negative effect, diminishing community resilience” (Harris et al. 2017, 7 (see

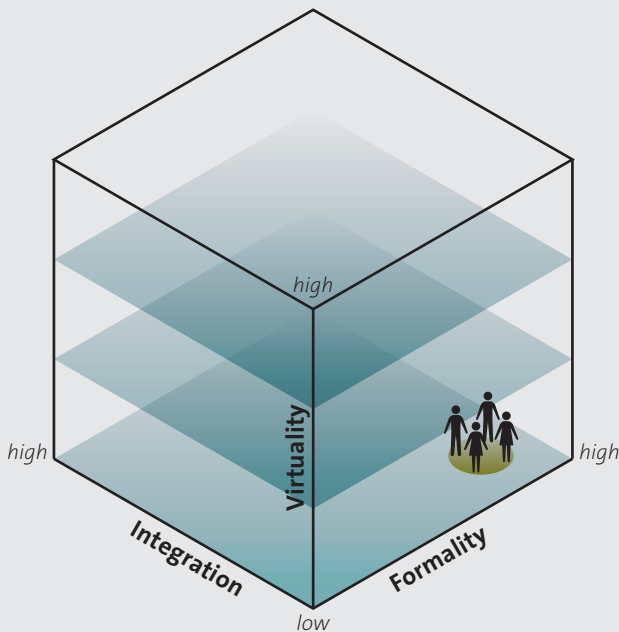
also Nichols et al. 2014). In the United Kingdom, for example, the Civil Contingencies Act (CCA) seeks local participation directly within the auspices of Local Resilience Fora (LRF), which focus on emergency response at the community level. Since the CCA was established, the LRF has become an important vehicle in supporting participatory emergency response, and in building social capital.

Increased access to new technologies that connect people and service providers is increasing people’s expectations of services. As a result, people are seeking to be involved in determining service provision, and particularly in decision making that has an impact on those populations, also in emergency management. The UK’s Civil Contingencies Secretariat recognises these new-found expectations of the public (Case Study 2) – also ignoring these expectations can cause more harm than good with respect to public-authority social capital. Managed participation of volunteers in specific, and appropriate roles, is a way that the UK authorities can increase the public’s agency in emergency management.

In the UK, LRFs act as a focal point around which the community collaborates. Social cohesion and sense of community are important characteristics that support community resilience (Prior and Eriksen 2013), so by supporting cohesiveness of the community, LRFs can play a significant role in building social capital. This is especially the case in the context of emergencies, where communities of interest (in this case in the context of emergency management) tend to be especially important for supporting community emergency preparedness and response.

Participation can also contribute to the legitimacy of authorities’ actions, creating the basis for the development of social capital with the public. In Germany, the civil society group “Second Planet” coordinated engagement of various aid groups and individuals in Frankfurt during the refugee crisis 2015 (Case Study 3). The volunteer organisation’s exchanges with the local crisis management board, which shared important information with the group and supplied them with special uniforms (high-visibility vests), gave the group official legitimacy, in turn creating a strong form of civil society-authority social capital.

## Case study 2: UK Local Resilience Fora



Over the last 15 years, the British civil security system has been decentralized, now following a subsidiary approach, where the local first responders usually manage emergencies and crises, assisted by the community. This strategic shift is anchored in the 2004 Civil Contingencies Act (CCA), which replaced the previous Civil Defence Act UK Cabinet (Office Civil Contingencies Secretariat 2008). As a central element of the new strategy, Local Resilience Fora (LRF) were established by a mandate from the national government to bring together first responders as the basic resource in incident preparedness, planning, and response (Shaw 2012). Fourteen years after the introduction of LRF under the auspices of the Civil Contingencies Act, UK authorities are beginning to observe the benefits of a more active community-based volunteer population, supporting community-based emergency response.

The interviews conducted for this study indicate that, during the existence of the CCA, managers have recognized the Act has slowly become out of date with respect to warning and informing the population. This has been accompanied by fundamental changes in organization and social culture:

- Tightened resources – financial austerity.
- Recognition that well-organised volunteers can unburden authorities.
- Demographic change – aging population, recognition of climate change, increased connectivity between individuals.
- Public desire for increased involvement in service delivery, and relevant decision making.

As a result of these changes (among others), effort has been made to increase the level and quality of the population's involvement in emergency management. For the most part, authorities have sought to organize volunteers in a structured fashion, particularly the LRF, thereby managing disorganized or uncontrolled upswell in volunteering support.

According to the experts interviewed, key considerations of the CCA's current approach to the participation of the public in UK emergency management include:

1. A consideration that volunteers should be involved in an organized way, and that disorganized participation of volunteers should be avoided.
2. Acknowledging that the appearance of spontaneous volunteers is simply a manifestation of people's interest in being involved in service delivery. It is also indicative of poorly planned resilience management before an event, where potential volunteers, and modes to support their participation, were not identified before the incident.
3. Finding ways to incorporate volunteers from the affected community, while limiting the participation of those spontaneous volunteers that come from outside of the affected community to help.
4. Volunteer participation is driven by volunteer origin (local people?) and skills triage (identifying volunteers with emergency response related skills). Based on these characteristics, volunteer activities would be coordinated by authority-lead volunteer management centres.

UK government recognizes that volunteers are inevitable in the modern society, but in order to add value to an emergency response process the volunteers themselves should be prepared. As a result, the CCA considers volunteers as a resource that must be planned into the complete emergency response.

## 4.4 Making the best use of new technologies

Modern technologies, particularly information and communication technologies, are increasing the convenience of many aspects of daily life. The public tend to adapt to, and use, new technologies, as they require them, more quickly than organisations. The ability of organisations to piggy-back on the public's use of new communication technologies can yield consequential benefits in emergency and disaster management. Crisis mapping and Virtual Operational Support Teams are two examples where technology-supported voluntary contributions of the public to emergency management are indicative of the need for authority adaptation to the potential of technology (see case study 1).

Crisis mapping is the real-time collection, mapping, and analysis of hazard data during and after an event. Typically crisis mapping has been initiated by active members of the public who have recognised the potential of local actors to provide emergency-related information for their peers in real time. Once established, the wider public can also contribute information to the platforms. The opportunities and problems for authorities that have been associated with crisis mapping have been well detailed, also in previous work conducted by the CSS for the Federal Office for Civil Protection (Giroux and Roth 2012; Roth et al. 2013). In reality, the activity of crisis mapping, and the technology that supports such spontaneous behaviour of the public, will not disappear, so authorities must find ways to incorporate this capability into their emergency planning processes.

A potential means of formalising or institutionalising the practice and technology associated with crisis mapping is in the establishment of Virtual Operational Support Teams (VOSTs). VOSTs are known for their activities in social media monitoring, situational awareness support, countering rumours, and the amplification of official crisis communication (Reuter and Kaufhold 2018). Additionally, because of the historical development of VOSTs typically as side projects of members of dedicated members of formal emergency management authorities, they tend to have greater potential to be integrated into formal operations as an additional disaster management capability.

## 5 Challenges of volunteerism

As discussed in the previous section, disaster volunteers offer great capacities for coping with disaster risks, and even can make valuable contributions to society beyond disaster contexts, for example by building up social capital within communities. However, making these capacities work is often harder than it might sound. In this section, we describe three important cluster of challenges that complicate many efforts to get volunteers involved in disaster management: operational challenges, legal difficulties, as well as political and cultural challenges.

### 5.1 Operational challenges

Emergent and decentralized engagement is rarely integrated in established bureaucratic planning processes. As Scanlon *et al.*, observe, "(...) emergency plans rarely take into account the way ordinary citizens attempt to help themselves and others, so the actions of ordinary people are still rarely associated with any part of emergency management response systems" (Scanlon et al. 2014, 45).

Convergence (of volunteers, donations, etc.) can be overwhelming, if not channelled properly (McLennan et al. 2016). For example, after an earthquake hit Turkey in 1999, spontaneous volunteers created a massive traffic jam that hampered the professional disaster response (Helsloot and Ruitenbergh 2004). Further, volunteers require proper equipment, food, and for longer deployments, also accommodation. Since spontaneous volunteers particularly often lack this kind of logistical autonomy, they risk being more a hindrance than a help (Alexander 2010).

Many tasks require in-depth training. The skills and knowledge of volunteers outside of traditional organizations is often unclear and hard to verify if disaster management resources are already engaged in a disaster response situation. In the worst case, untrained volunteers hurt themselves or others. In an extreme case, in the aftermath of a large earthquake in Mexico in 1985, untrained volunteers saved around 800 people, but also 100 of the volunteers died during the rescue efforts (Helsloot and Ruitenbergh 2004). Even more common is psychological stress experienced by volunteers during or after their engagement in a disaster response (Alexander 2010). Untrained volunteers are particularly at risk of negative psychological effects, like burn-out phenomena, for instance (Dyregrov et al. 1996).

During the early phase of a disaster response there is often an abundance of people willing to help. But

maintaining a sustainable basis of volunteers on the long-term is much more difficult. Many people are able to take off a couple of hours or even days, generally drawing on broad support from their employers and families. After a while, however, they have to re-focus on their everyday priorities. This raises problems of reliability on the one hand, and the need for authorities to be constantly vetting volunteer involvement throughout a response on the other – not just in the preparation phase of the disaster management cycle, or the very beginning of a response.

## 5.2 Legal challenges

Contrary to the proverb that necessity has no law, in fact, legal regulations generally also apply in the context of disaster. This is also true for the involvement of volunteers. Especially if volunteers cause harm to others or are harmed themselves during or as a consequence of a disaster, legal questions rise. A study on volunteer organization conducted in the United States found that 16% of the surveyed organizations had been sued because of actions by spontaneous volunteers and 5% were sued by a spontaneous volunteer (Sauer et al. 2014). In Switzerland, this issue is partly addressed by the legal insurance coverage of individuals who assist in formal civil protection activities.<sup>2</sup>

The rights and duties of volunteers in established auxiliary organizations are typically well defined. It is clear how the volunteers are activated, who leads their deployment, which tasks they are allowed to perform, and which tasks are reserved for professionals like policemen, for example. In contrast, there appears to be a high level of uncertainty regarding spontaneous volunteers, even though in fact, general legal frameworks for volunteerism apply (Erkens 2016). In Germany, for example, authorities can entitle spontaneous volunteers legally to the status of “Verwaltungshelfer” (administrative assistance providers). In this way, they can act on behalf of a state agency without actually being part of the authorizing agency itself. Further, they are protected from potential liability claims, for example if a volunteer unintentionally causes damage. The entitlement is a formless administrative act, that can be easily resolved, for example if a volunteer does not follow instructions (Erkens 2016).

## 5.3 Political and cultural challenges

The emergent nature of volunteerism, coupled with changing societal characteristics, combine to challenge political and cultural processes and notions about the role of volunteerism in emergency and disaster management.

Modern communication applications, like Twitter for example, give the public a false closeness to political decision makers. The activities of these leaders or public figures are often reported on in detail, and followers can essentially comment their support for, changes to, or disagreement with these ideas, policies or activities. To the followers it can be interpreted as an expression of their democracy (Loader and Mercea 2011; Sunstein 2017), even if their thoughts or wishes are rarely heeded. This is problematic from a volunteerism perspective, where the perceived public value lies in the agency and empowerment associated with volunteerism. This issue highlights two key challenges for authorities: curtailing institutional scepticism of volunteers, and properly integrating volunteers into established processes.

### 5.3.1 Scepticism towards ‘new’ volunteerism.

There is nothing new about volunteerism in emergency management. In places like Switzerland, community level fire brigades, civil defence activities, and many aspects of civil protection are made possible through institutionalised volunteer programs. However, the value of ‘new’ technology-supported or emergent spontaneous volunteerism is often questioned by established emergency management authorities.

The long history of institutionalised volunteerism in emergency and disaster management naturally sets the scene for scepticism toward new types of volunteerism. It is perceived to create more work for authorities, and indeed, disorganised spontaneous volunteers create work, divert otherwise dedicated resources, and may even create additional risk in an uncertain emergency environment. However, ‘new’ volunteerism tends to reflect socio-cultural changes in society, which are often influenced by the use of new technologies. While opportunity can clearly be associated with the adoption of new technologies (Baezner et al. 2018), section 4.4 highlights how technology use can change the public’s perceptions and expectations of service provision.

Scepticism is typically associated with unfamiliarity. It’s true that emergent or spontaneous volunteer groups lack the same properties – organisation, administration, clear-cut chains of command, or divisions of la-

<sup>2</sup> Kapitel 2, Art 29, S 2, Bundesgesetz über den Bevölkerungsschutz und den Zivilschutz: “Wer beim Einsatz des Zivilschutzes Hilfe leistet, ist nach dem MVG versichert.“ MVG – Bundesgesetz über die Militärversicherung.



bour – as “normal” emergency management organisations (Stallings and Quarantelli 1985a). Yet, there are numerous examples where traditional models of organisation have failed during crises, including within formal emergency management authorities. The emergence of ‘hybrid’ organisations to support Germany’s response to the influx of refugees into the country in 2015 and 2016 represents a perfect example where formal authorities responded in an emergent manner to address the problem.

Formal authorities may also perceive spontaneous volunteer groups as competitors or opposition. These perceptions are also connected to a lack of familiarity with the goals and activities of newly emerging volunteer groups. Typically, emergent groups form in response to the perceived need to address a problem that authorities have missed, and therefore tend to assume that their existence complements, rather than competes with, the activities of authorities.

The political legitimacy or visibility of volunteers, and volunteer-based organisations, like VOSTs for example, limit systematic integration into formal disaster management practices. The problem of official ‘buy-in’ was raised several times, and reflects the officials’ lack of faith that VOSTs, for example, could deliver additional, and important, capabilities to the traditional emergency or incident response process. Respondents acknowledged that first having the chance to demonstrate the way in which their organizations could act as mediators between volunteers and official emergency management information providers would help to raise awareness within established emergency management agencies of the utility of social media channels during crises and crisis response. Respondents highlighted that demonstrating how social media could be treated as a resource was fundamental in securing ‘buy-in’ from official information providers. This ability was closely connected to the potential of VOSTs to distil situational awareness knowledge from a vast quantity of social media, synthesising information and providing analytics that complement the type and style of information that authorities are already using and disseminating to the public. One interview partner explained the basic ratio of his organization: “The [VOST] is not meant to replace or substitute any social media response or plan. The [VOST] is a resource that can be activated to supplement or enhance a community’s existing social media for emergency management (SMEM) plan.” Additionally, volunteers engaged in VOSTs highlighted the way their organisations could support two-way information passage between the public and official emergency management agencies.

### 5.3.2 Failure to integrate volunteers

Volunteerism is a form of participation, which itself is a mechanism by which people gain agency and empowerment. The inability of the public to participate, or denial by authorities, may result in negative consequences when active participation by the public is sought or expected.

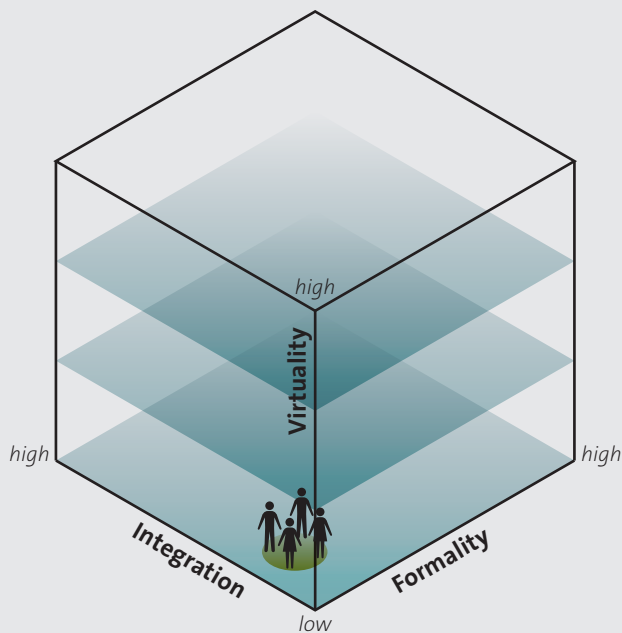
The attitude of the UK Civil Contingencies Secretariat provides a good example of the challenges associated with *not* integrating volunteers. After recognising the importance of providing managed mechanisms by which volunteers can become involved in emergency responses, the Secretariat has actually begun to frame participation very differently. Rather than seeing volunteers as a hindrance, they rather frame participation from volunteers, throughout the emergency management cycle, as an ingredient in a resilient emergency response. The organisation acknowledges that, in the current social climate, volunteers will come whether invited to help or not, so managing their integration properly empowers people, and increases their own operational legitimacy.

The international VOST movement (Case Study 1) is a perfect example of the difficulty of coordinating and integrating non-formal participation in emergency response activities. Surveys conducted with VOST teams from around the world highlighted that coordination with, and integration in, formal disaster management remains a key challenge. At first glance, this appears surprising, given that VOSTs have been established mostly by people actively employed by, or with backgrounds in, disaster management or emergency management organizations.

Integration is largely *ad-hoc*. For example, few teams have been included in official exercises. Most respondents identified that continued involvement in exercises were at once a route towards formal integration, and a means by which VOSTs could improve their own processes and practices – developments that could influence their formal attractiveness to traditional disaster managers. “As one respondent noted, “volunteers that are outside of official purview are still looked on with suspicion and we are building policies for verification and background checks. Building trust is critical.”

Especially in the UK, where the Civil Contingencies Act (2004) mobilises Local Resilience Fora, the VOST concept, as a democratised and interactive means of communication, seems particularly suitable. “While the PIO staff was on board with the initiative, there was not complete buy in from the Incident Commander. Once analytics were delivered midway through the first incident in 2012, this was resolved.” VOSTs are an excellent example of the difficulties of integration, even though for the most part, they are instigated by ‘trusted agents’ from within authorities.

### Case study 3: Intermediate organizations during the refugee crisis in Germany



Civil society actors played a central role in mitigating the “migration crisis” in Germany 2015/16 and fostering a steady return to normalcy. In other words, without the engagement of social associations, aid agencies, newly founded refugee initiatives, faith-based charities, sport clubs, informal help networks, contributions from individual citizens, and many other forms of public engagement, the crisis would have been much worse. Beck (2016), for example, sees the migration crisis as a “renaissance of civil society” and the beginning of a new division of responsibilities between the state, economic and private actors. On the other side, however, research also points to significant differences in the adaptive capabilities of local authorities to develop and implement appropriate solutions together with these civil society groups. While in some places, effective mitigation was hampered by maintaining rigid pre-existing structures and work divisions, in other contexts it was possible to develop flexible and effective local solutions (Bogumil, Hafner, and Kuhlmann 2016; Hahlen and Kühn 2016). So far, however, it remains largely unclear which factors have influenced the emergence of such adaptive and innovative strategies.

The existing literature has tended to focus on anecdotal evidence on either success stories of civic engagement and capable local administrators, or experiences of administrative shortcomings that were partially absorbed by volunteers. In one of the few systematic analyses on the topic, Speth and Becker (2016) identify five groups of actors involved throughout Germany: the federal state, municipalities, estab-

lished civil society organisations, spontaneous supporters, and finally, the concerned migrants themselves. Studying a diverse set of cases (Berlin, Mannheim, and Starnberg), they concluded that between 2015 and 2016, the relationship between these actors has generally shifted in the direction of more deeply anchored civil involvement, which was highly valued by local authorities. Although the challenges encountered in this critical period appeared to be similar to a large extent, they find that the observable coping strategies have differed widely.

An interesting example is the newly established civil society group “Second Planet” coordinated engagement of various aid groups and individuals in Frankfurt, Germany, during the refugee crisis 2015.<sup>3</sup> They had close exchange with in the local crisis management board, which shared important information with the group and supplied them with special uniforms (high-viz vests) to give them official legitimacy.

Due to its geographical exposition, the city of Wertheim regularly experiences significant flood events. The “Bürgergemeinschaft Wertheim” (civic community Wertheim) is a non-profit agency that organizes a broad range of forms of public engagement during floods, including supply for elderly people, coordination of aid offers, etc. It is fully integrated in the city’s crisis management plans (Zettl 2017). The city actively supports the civic community, for example by providing information about it to newly arrived citizens.

<sup>3</sup> <https://www.thesecondplanet.com>

## 6 Instruments for improving volunteer involvement

Any form of volunteerism, whether organized or spontaneous, is ultimately carried by the willingness of people to contribute their time and skills without payment in return. Without the willingness of the volunteers, any effort to involve citizens in disaster management is doomed to fail (Alexander 2010).

Volunteer engagement cannot be taken as a given, but in reality varies quite strongly between contexts. By definition, nobody can be forced to be volunteer. However, this does not mean that volunteerism is random and beyond the reach of public policy. To the contrary, volunteerism can be successfully guided, supported and fostered through various measures, from the strategic level down to operational questions.

### 6.1 Policies of encouragement

There is a broad range of measures to encourage volunteerism in the context of disaster management and civil protection that policy-makers have at hand. Particularly important appears a stronger consideration of volunteers in strategic planning processes and structures.

#### 6.1.1 Opening up the system

Civil protection in its modern form has its origins in civil defence as a supportive element in military strategy (Prior et al. 2015; Roth 2018). Not at least due to these historical roots, civil protection systems in most countries are highly state-centric, putting strong emphasis on efficiency, professionalism, and clear command structures. However, as Russell Dynes argued, as early as three decades ago, any model that “viewed emergencies as conditions of social chaos which could be rectified by command and control (...) is inadequate based on a knowledge of behavior in emergencies and the model is dysfunctional for planning. A more adequate model is (...) based on conditions of continuity, coordination and cooperation” (Dynes 1990, i). To encourage initiatives by different actors, Dynes postulated that civil protection and disaster management practices needed to be developed into an “open system (...) in which the premium is placed on flexibility and initiative among the various social units, ...and

those efforts are coordinated” (Dynes 1990, 13). For civil protection agencies, “opening up” represents no less than a paradigmatic change that incites wariness among many managers. This may especially be attributed to relinquishing at least part of their role as the masters of disaster management. As a result, authorities are likely to assume a more organizational role, with a strong coordination function within an increasingly open civil protection system that has to find the right balance between structure and flexibility (Eckhard et al., 2019).

#### 6.1.2 Setting out principles

The uncertainties involved in reaching out to volunteers cannot be overlooked. Even so, in recent years, several countries have recognized the too often dormant potential of volunteers, drafting strategies and white papers that aim to foster civic engagement in disaster management, and that seek to better integrate volunteers into official structures and procedures. For example, in the UK, the Civil Contingencies Act 2004, introduced the requirement for all Category 1 responders (Police, Ambulance, Fire Service) “to have regard to the activities of voluntary organisations in the course of carrying out their emergency and business continuity planning duties.” To coordinate the contributions by volunteers, Local Resilience Fora (LRF) and Strategic Co-ordination Groups were established (The UK Cabinet Office 2013). Another good example of such an effort is the Australia-New Zealand Emergency Management Committee’s Spontaneous Volunteer Strategy that particularly addresses the involvement of volunteers outside of established organizations (Australia-New Zealand Emergency Management Committee (ANZEMC) 2015). The strategy recognizes “the inevitability of spontaneous volunteerism in contemporary disaster management” and consequently aims to “harness its value and contribution to disaster resilience” (ANZEMC 2015, 3). While appreciating the value of volunteers for disaster resilience, the document also develops basic principles to ensure that volunteer help is actually useful and not a hindrance. Further, it suggests a number of measures in line with the strategy’s objectives and principles (see Figure 3). Similarly, in the Netherlands, the Amsterdam Amstelland Safety Region has defined basic criteria for the involvement of volunteers at different stages of the disaster cycle (see case study 4).

Figure 3: Objectives, principles and suggested actions of the Australia-New Zealand Emergency Management Committee’s Spontaneous Volunteer Strategy.

**Goal: Coordination of volunteer effort in the immediate post disaster stage**

Objectives	Principles	Summary of Suggested Actions
Empowered individuals and communities	<ol style="list-style-type: none"> <li>1. People affected are the first priority</li> <li>2. Spontaneous volunteering aids recovery and resilience</li> <li>3. Jurisdictions will take considered policy positions about engaging spontaneous volunteers</li> </ol>	<ul style="list-style-type: none"> <li>• Consider the management of spontaneous volunteers in recovery plans and budgets</li> <li>• Identify suitable post-disaster activities in advance</li> <li>• Involve existing community groups in pre-event recovery planning and exercising</li> <li>• Review existing legislation that addresses risk and liability for spontaneous volunteers</li> </ul>
Efficient and effective coordination of spontaneous volunteers	<ol style="list-style-type: none"> <li>4. Processes will need to engage volunteers and support agencies</li> <li>5. Standard volunteer management processes apply in emergencies</li> <li>6. Spontaneous volunteering is included in existing recovery arrangements</li> </ol>	<ul style="list-style-type: none"> <li>• Develop scalable processes that reflect the motivations of spontaneous volunteers</li> <li>• Provide information about how the needs of people affected by the disaster are being met</li> <li>• Register spontaneous volunteers and monitor their safety and wellbeing</li> <li>• Integrate arrangements for spontaneous volunteers into existing emergency management plans</li> </ul>
Satisfied volunteers who may continue to volunteer in the emergency management sector	<ol style="list-style-type: none"> <li>7. Everyone has a right to help and be valued</li> <li>8. The time when help is offered may not coincide with the need for volunteers</li> <li>9. Effective, timely and consistent communication is essential</li> </ol>	<ul style="list-style-type: none"> <li>• Recognise the inevitable nature of spontaneous volunteering</li> <li>• Provide training and guidelines for individuals and emergent groups who may spontaneously volunteer</li> <li>• Promote future volunteering opportunities and ensure effective follow-up and referral</li> <li>• Develop communication plans and key messages including the use of social media in recovery</li> </ul>

### 6.1.3 Creating incentives, removing obstacles

In general, volunteers possess high levels of intrinsic motivation. Previous research shows that volunteers’ investment of time and effort is driven both by individual motives, e.g. coping with disaster by becoming active and helping others, and group-oriented values, such as a strong commitment to their local community (Rotolo and Berg 2011).

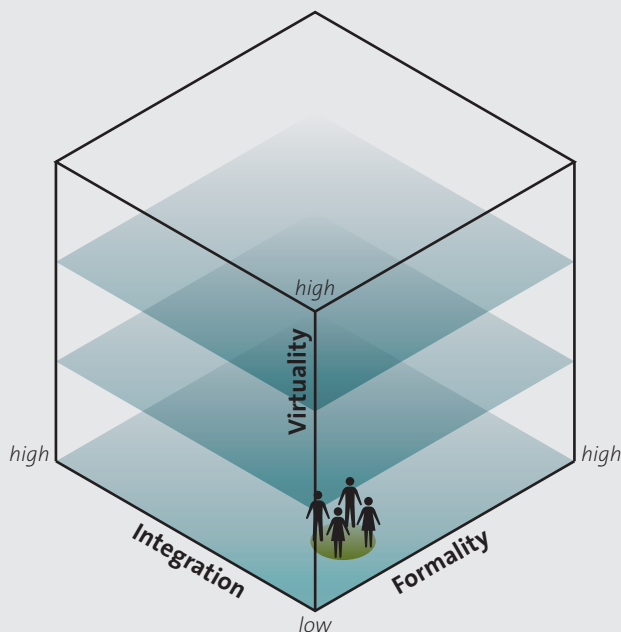
However, the reality is that in citizens’ everyday lives, volunteer engagement often competes with other obligations in their jobs, families, etc. Specifically, few people (mainly pensioners and students) can commit to long-term deployments without major negative effects on their personal lives. One option to incentivise civic engagement is to pay a monetary compensation for volunteer work. Such a compensation is far from a salary, which would contradict the basic idea of volunteerism, but more a symbolic recognition for the contributions that people make to their community, which may also help to offset some of the substantial costs that volunteers may have (food and clothing for their deployments, travel costs, child care, etc.). Further, legal uncertainties around volunteer work (e.g. relating to liability and insurance questions) need to be resolved, so that these issues do not discourage motivated citizens (see section 6.1).

Another approach is to improve the compatibility of volunteer work and people’s regular jobs, which often poses a major obstacle hindering motivated people from assuming functions as volunteers. Especially for smaller businesses, it can be a significant burden, if one or several employees are on leave for a longer period to do volunteer work. A feasible way to help employers is to create tax incentives for companies to support volunteer work of their employees (Balas and Glas 2015)

## 6.2 Standards and routines

As mentioned before, contributions of volunteers to disaster management are generally most effective when aligned (or at least not in conflict) with official plans, procedures, and practices. Especially when volunteers are supposed to assume complex, demanding, or even risky tasks, it is essential that volunteers are properly qualified, and that these qualifications are easily assessable and verifiable. By establishing clear and usable standards and routines, authorities and volunteer organizations both can ensure that the valuable resource of volunteer work is allocated when and where it is needed most.

### Case study 4: Policies and procedures to integrate citizens in the Amsterdam Amstelland Safety Region



The Amsterdam Amstelland Safety Region has established a model to guide integration of ordinary citizens into the region's safety plans. It is based on a set of four basic criteria

1. "co-operation must be voluntary—no individual group or organization can be forced to participate in the emergency response.
2. the tasks assigned should have minimal safety risks.
3. the tasks should add value to the overall emergency response.
4. ordinary citizens can only be asked to fulfil a task when they have the skills and knowledge to complete the task successfully." (Scanlon et al. 2014: 57).

Based on these criteria, professional disaster managers are encouraged to work together with volunteers, particularly with existing groups rooted in local communities. The involvement of volunteers is organized in five phases:

1. "Phase 1 assumes that victims and bystanders will start with providing help and mitigating the crisis.
2. In phase 2 first few professional responders will arrive, professional responders accept assistance and do not push ordinary people aside.
3. In Phase 3, when commanders in charge of the fire brigade, police, and emergency medical service arrive, citizen response will be discussed in the first structured meeting. At that time, a decision should be made about the effectiveness of the assistance of ordinary people. If appropriate, arrangements will be made for registration of volunteers.
4. Fourth, the operation continues under the control of the professional emergency response agencies. In this phase, no new helping citizens will be allowed to access the incident scene unless requested by the incident commander.
5. Fifth and last, citizens who made a contribution to the emergency response will be thanked by the official authorities and offered mental health support as well as the possibility to get compensation for any damage to their personal belongings." (Scanlon et al. 2014: 57–58)

The Amsterdam Amstelland model includes a comprehensive training conducted by the Fire Department for professional emergency responders aimed at integrating volunteers successfully. To get this also into operational routines, the Fire Department has started to include ordinary citizens into emergency exercises.

## 6.2.1 Recruitment, deployment, communication

Functioning standard procedures are broadly considered a key factor for the successful employment of volunteers (Sauer et al. 2014). Standing operating procedures have to be specifically developed for the recruitment of volunteers, the assignment of volunteers to specific tasks and communication between volunteers and authorities:

*Recruitment:* As discussed above, having motivated volunteers on hand during an emergency or disaster is one thing, knowing who these volunteers actually are, what skills they possess and which tasks they can be

assigned to, is another. Especially if volunteers are supposed to work in sensitive areas, such as public order and security or working with children, it is essential to have established security clearance routines, coordinated with law enforcement agencies. These security check-ups should be accomplished during the preparedness phase when time and resources can be directed efficiently toward this task.

*Deployment:* During the "hot phase" of disasters, it is central to organize volunteer work according to the situational needs, priorities, and resources. To this end, the leading disaster management organization should assign a coordination person or coordination team. Depending on the type of volunteers at hand, this

person or team can guide, support or instruct the helpers. In this context, a simple, but effective way to organize different groups of volunteers is through a unified system of identifying clothing (Harris et al. 2017). The coordinator also should aim to avoid overburdening volunteers, a typical issue especially during prolonged disaster situations. Preventing exhaustion or volunteers burn-out can be achieved, for example, by defining clear working periods and breaks. Finally, the coordinator should assess whether volunteers require psychological support, especially after emotionally stressful deployments. Possible measures to be taken are debriefings and counselling sessions after emergencies (Alexander 2010).

*Communication:* Clear and transparent communication between professional and volunteer actors is a central precondition for effective collaboration between the two. As soon as a disaster event is immanent, and the convergence of volunteers must be expected (or is even requested), professional disaster managers should communicate proactively and transparently where, when, and how volunteer work is useful, but also make clear under which circumstances it is not. In this way, expectations on both sides can be managed. During the response phase, authorities should offer timely information to volunteers, for example through daily briefings. Further, dedicated online information platforms or social media sites can be used to keep volunteers updated and also facilitate coordination among the volunteers (Harris et al. 2017).

## 6.2.2 Resource management systems

Decision-support systems are an innovative and promising instrument for authorities to coordinate and allocate volunteer capabilities (Raucher and Schryen 2018). Early adoption of these systems has already occurred, for example the EV CREW in Australia (see case study 5). Another system in the development or pilot phase is the ‘Automatisiertes Helferangebot bei Großschadensereignissen’ (AHA) project, led by the Hochschule Ruhr West, Germany (Bumiller and Hoffmann 2016). The AHA system follows a four-step process:

- a) Interested citizens can register as volunteers through a website or app, entering not only name and contact details, but also their specific qualifications and skills (e.g. medical training, driving licences for larger trucks, language proficiency, etc.), and the types of tasks they would be ready to assume in case of an event.
- b) The information provided by the citizens is then checked by a designated verification office.

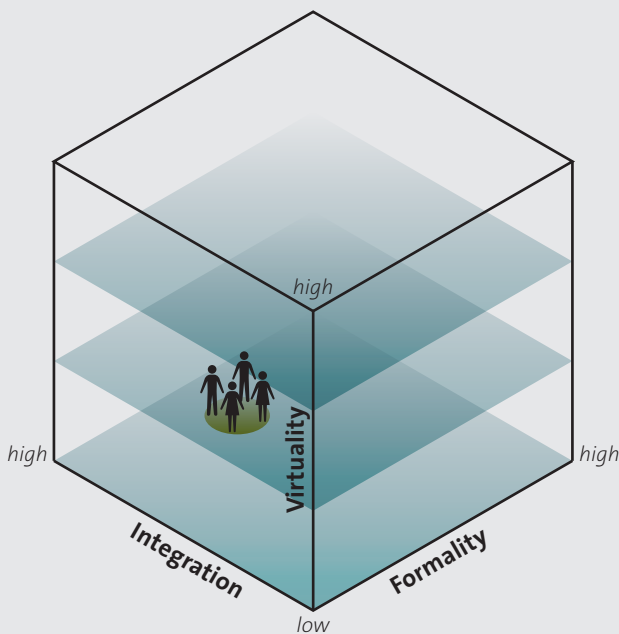
- c) After successful confirmation by the verification office, the volunteer data enters a central volunteer database. Besides the personal characteristics and qualifications of the volunteers, the database also contains real-time information on the geographical location of volunteers, which is collected through the volunteer smartphone app.
- d) Disaster management authorities can then access the database, search for available volunteers, filter by location and skill set, and request support from individual volunteers or groups of volunteers. In order to avoid “overbooking” volunteers, all requests for support are recorded in the database, blocking further requests.

Another approach draws on the increasing power of computer algorithms to manage volunteer resources more effectively. For example, the research project ‘Koordination ungebundener vor-Ort-Helfer zur Abwendung von Schadenslagen’ (KUBAS), led by Universität Halle-Wittenberg, aims to automate at least parts of the volunteer management process. To this end, it integrates different data sources (e.g. geo-data on hazards, information from social media) into a prognosis tool to support disaster managers in the response phase. Further, the tool is intended to be used to enrich civil protection exercises by realistic simulations of volunteer behaviour, using agent-based modelling (Lindner et al. 2018).

## 6.2.3 Training

Volunteers are not always easy to handle, posing challenges for disaster management professionals. As discussed above, depending on the level of organization and the willingness to be integrated in official structures, collaboration can be rather difficult for authorities. To master this challenge, training can help managers. Training can help disaster managers to learn about the motivations, capabilities and needs of different types of volunteers and how to work with them most effectively. Optimally, such training efforts should not only address volunteer coordinators, an increasingly common role in many disaster management structures (see section 6.2.1), but all professional staff. One way to train the management of volunteers is through simulations of their behaviour, using agent-based modelling which is becoming increasingly sophisticated and realistic (see section 6.2.2). Another alternative is to involve real volunteers in disaster exercises. Opening up exercises to volunteers allows both parties to practice coordination and cooperation between the different actor types under realistic conditions. Further, experiences of personal interaction between professionals and volunteers can support the creation of

### Case study 5: EV CREW, Australia



The acronym EV CREW stands for “Emergency Volunteering – Community Response to Extreme Weather”. It is a model to register offers to volunteer from the public and live-match registered people to specific requests for volunteers from organisations that support communities during and after disaster. It was established in 2007 by Volunteering Queensland, a not-for-profit organisation from Queensland, Australia, that had organized traditional form of volunteering for many years. After a large cyclone that hit different regions of Queensland 2006, the organization observed a decline of social capital, because many people had offered their help during the event, but were turned away by established emergency management organizations. EV CREW was Volunteering Queensland’s attempt to make

the best use of help offers, attracting a broad spectrum of diverse people for volunteer engagement (McLennan et al. 2016, 25).

Citizens can sign up to EV CREW during or outside disaster times. “Volunteering Queensland provides important capacity-building support (...) It approves and registers organisations to receive volunteers, provides support during their volunteering campaigns, and actively seeks out, recruits and refers volunteers to them (McLennan et al., 2016, p26). Registered organizations have to fulfil pre-defined standards, e.g. in terms of induction and insurance.

At the point of writing, EV CREW had more than 80’000 registrations. Its volunteers have been deployed to over a dozen disaster events, mostly flooding and tropical cyclones. A main benefit of the programme is its strong local component that aims to strengthen social ties within communities: “Community resilience is strengthened as matching volunteers is undertaken so volunteers are as local as possible to foster local social connectivity and cohesion. Stakeholders reported that the EV CREW model can assist the psychosocial recovery of both volunteers and those who receive their assistance by offering an important avenue for people to express their willingness to help and support each other” (McLennan et al. 2016, 28). Despite these benefits, during these deployments, EV Crew has also faced different challenges. Among others, coordination with the existing emergency management system was insufficient in the beginning and the team had to deal with unrealistic expectations of recipient organisations as well as volunteers. Through constant improvement many of these hurdles have been overcome and, overall, EV CREW has proven successful and has been adapted in Victoria, the Australian Capital Territory and Tasmania.

a better understanding about how “the other side is ticking” and ultimately help to build trust.

Obviously, not only professionals benefit from training. In fact, there are many elements that volunteers can learn rather quickly, but make things much easier in the case of an event. Following Sauer et al. 2014, these include:

- a) Codes of conduct
- b) incident command
- c) psychological first aid
- d) scene safety and basic injury prevention.

Teaching volunteers the relevant know-how on these issues does not necessarily require extensive on-site training. Various disaster-related online training courses for volunteers have been developed over the last years through e-learning platforms. One of the broadest services are FEMA’s First Responder Training courses, which are available for different topics and qualification levels.<sup>4</sup> Another example, focused on a specific hazard, is the “Online Bystander Training Course”, developed by the New York City Department of Health and Mental Hygiene.<sup>5</sup> The course offers basic lessons on how to respond

<sup>4</sup> FEMA National Preparedness Course Catalog <https://www.firstrespondertraining.gov/frt/npccatalog/EMI>

<sup>5</sup> <http://www1.nyc.gov/assets/doh/media/em/player.html>

in the event of a terrorist attack and is free to all interested citizens.

Whether online or offline, training is critical to advance the skills and knowledge of volunteers, to minimize potentially harmful or counterproductive behaviour by volunteers, and to increase general preparedness. Alexander argues that “training is the key to improving the profile of volunteers, enhancing their job satisfaction and increasing the efficiency of the emergency services that they provide” (Alexander 2010, 151). However, it is important to note that any kind of training should take place during the preparedness phase. Although brief on-site instructions for volunteers (e.g. relating safety issues) can certainly be useful, they cannot replace in-depth trainings, for which there is typically no time once a disaster event occurs.

## 6.3 Intermediate organizations

During emergencies and disasters, it is often very difficult to interact directly with emergent groups or individual volunteers. Intermediate organizations function as a link between authorities and spontaneous volunteers. Today, a broad range of intermediate organizations exist that function in different ways, but which aim to leverage the potential of the citizenry to cope with crisis and disaster.

Some intermediate organizations are officially recognised by the responsible civil protection authority for their role in structuring and coordinating pre-existing unbound social engagement during or already before a disaster (Zettl 2017). Examples of intermediate organizations actively seeking official recognition are the Virtual Operation Support Teams (VOSTs, see Roth et al. 2018). Intermediate organizations can build on existing organizations or just be created for a specific purpose. Some have been founded by local actors, e.g. the Farmy Army in Australia, which was established by wildfire-affected farmers. An interesting example of an intermediate organization initiated by a media outlet is “Team Österreich”, which has assumed volunteer management functions during several incidences in Austria. The model has also been adapted in Bavaria, Germany. Finally, intermediate organizations can be directly guided by authorities, closely integrated in official structures. An example of such a hybrid, semi-professional organization are the Community Emergency Response Teams (CERT) in the United States, which are actively supported by FEMA and other disaster management authorities.<sup>6</sup>

Regardless of the specific origins and structures of intermediate organizations, it is central that they have clear processes to ensure high quality and reliable work. A survey by the Institute of Volunteering Research identified eleven points that characterize many good volunteer organizations:

1. recruitment policies, including strategies for increasing diversity
2. a coordinator or manager of personnel and its various units
3. a handbook or document that explains policies, practices and procedures
4. systems for supporting, supervising and disciplining personnel
5. procedures for evaluating the work of volunteers, managing their relationships with supervisors and moving them on to new tasks
6. procedures for counselling volunteers
7. training on the job and in the classroom
8. procedures for accreditation and certification
9. reimbursement of expenses incurred by volunteers during the course of their duties
10. strategies to improve sponsorship
11. procedures designed to cost the value of volunteers’ work in time and money equivalents. (cited after Alexander 2010, 154)

Authorities should encourage and support intermediate organizations to establish procedures and structures that meet these criteria.

<sup>6</sup> [www.ready.gov/community-emergency-response-team](http://www.ready.gov/community-emergency-response-team)



# 7 Conclusions and Implications

Although national emergency and disaster management services have developed in specialisation and efficiency in the last 25 years, citizens are typically the first at the scene of major emergencies. Whether this is because they are geographically close, or arrive quickly because they are networked to people who are directly affected and wish to help, citizens play a significant role in response and recovery. While volunteering has always been an important element of disaster management in many countries, new forms of volunteerism are appearing, which present both challenges and opportunities for formal emergency service providers (see Table 1).

Research conducted in this report has identified three major issues that ‘new’ volunteerism will raise for the future of emergency management. First, for a variety of reasons, authorities can no longer refuse the support of citizens volunteers, but must rather explore how volunteers can be best integrated into disaster management actions. Second, that integration of volunteers should be considered as an investment in improved emergency management. Last, that volunteerism is about partnership, and that in the modern age, formal disaster management authorities no longer possess a monopoly on the process. These issues are presented and discussed in greater detail in this section.

## 7.1 Why “no” is not an option

Refusing offers for volunteer help is becoming increasingly impossible. In fact, the emergence of volunteers or groups of volunteers during a disaster situation is “inevitable, natural, neither dysfunctional nor conflictive, and cannot be eliminated by planning” (Stallings and Quarantelli 1985a, 98). Refusal to allow the engagement of citizens in emergency management may also bring several risks (Harris et al. 2017).

### 7.1.1 Uncontrollable ‘freelancing’ volunteers

Disasters and emergencies require fast, efficient and effective responses and solutions. As such, disaster management agencies seek to establish processes and practices that reflect this need. Convergent volunteerism (also often termed ‘freelancing’), is known to cause serious op-

erational challenges (Larkin 2010). When multiple groups come together, lacking operational familiarity, mismatches of resources, services, and expertise are likely.

As Stallings and Quarantelli (1985) note, emergent groups tend to fill perceived gaps in formal management, so identifying potential demands, and engaging interested citizens or NGO groups before an emergency could be one way to limit the potential for ‘freelancers’ to complicate an emergency response. This ‘gap perception’ is far more likely in places like Haiti where emergency management structures and processes may be over-burdened, dysfunctional, or completely non-existent.

Authorities must recognize, now more than ever, that the convergence of volunteers will be inevitable, and that planning for this emergence can ease the challenges associated with ‘freelancers’ in an emergency situation. One potential means of addressing this problem is for authorities to seek active interaction with potential ‘freelancers’ during non-emergency times. By encouraging informal interactions and providing some support in building ‘freelancer’ familiarity with formal processes, potential roles and responsibilities is essential in order to establish effective and efficient teamwork. (Larkin 2010, 499).

### 7.1.2 Frustration among citizens

The example of emergent volunteer ‘freelancers’ presented in 7.1.1 is indicative of people’s wishes to help during emergency and disaster situations. When these wishes or actions are spurned, citizens become frustrated, disempowered, and disillusioned – usually the consequences failed participation efforts will have impacts on the refusing authority (Roth 2018).

Citizens often just want to help. But participation must be suitable for both parties – authorities and concerned member of the public (Arnstein 1969). The increased accessibility of the public to politicians and government authorities that social media affords influences the public’s perception of, and expectations for, involvement in decision-making that affects them. Given that many nations are seeking to ‘responsibilise’ the public by encouraging shared approaches to hazard preparedness (Roth and Prior 2016), spurning expectations of participation may be counter-productive in the long-term.

### 7.1.3 Negative effects on community resilience

The UK Civil Contingencies Secretariat specifically highlights that if potential volunteers are not properly engaged in the emergency response process, their emergency planning is considered to be inadequate and actually non-resilient. This acknowledges that well-managed participation of volunteers in an emergency are a fundamental factor in resilience.

Research illustrates that “citizens tend to become more cohesive and engage in pro-social behaviour in disaster situations” (Whittaker, McLennan, and Handmer 2015, 364), reflecting the importance of local participation, even in disaster management. How important is this pro-social behaviour in the community’s resilience, then? Certainly, based on the Civil Contingencies establishment of Local Resilience Forums, populated by locals willing to help their community following emergencies, resilience is heightened through local participation throughout the emergency management cycle. Therefore, if local people are not engaged meaningfully in a disaster response that directly affects them, the respective community’s recovery may be hindered.

Table 1: Opportunities & challenges of volunteerism

Opportunities	Challenges
Organizing fast and flexible local help	Operational challenges
Unburdening authorities	Legal challenges
Building social capital	Political and cultural challenges
Making best use of new technologies	

## 7.2 Investing in volunteers

Volunteers can make a significant contribution to how societies prepare for and respond to disasters. In the best case, they can unburden professional disaster managers and help to safeguard sufficient protection levels in times of changing hazards and tight budgets (see section 4). However, it should be clear that this contribution is not cost-free, especially if volunteers are expected to be engaged in an organized, goal-oriented, and safe fashion.

### 7.2.1 Resource investments

As discussed in section 6.2.3, to provide effective help without posing risks to themselves and others, volunteers require deep instruction and training. Otherwise, they may pose more of a hinderance than help – regardless of their good intentions and motivations. Transferring disaster-related know-how and building capacities of volunteers requires a certain investment from professional disaster managers.

A minimal budget for activities with volunteers should be accounted for, including non-financial investments. As one workshop participant noted, “cooperation is good, but we just have to be able to afford it in the first place”. Budgeting should be sufficient to cover training expenses (e.g. clothing, protective gear, food and accommodation or instructors as well as participants), public dialogue (e.g. online-platforms, handbooks, town hall meetings), and after-care (e.g. counselling, professional psychological support). Optimally, volunteers should also receive at least partial compensation for travel, unpaid leave from work, and minor personal expenses rated to their volunteer work.

Arguably more important than financial investments is the time disaster managers are ready to spend engaging with volunteers. Getting to know volunteers, understanding their motivations, capabilities, and requirements is a long-term process that consumes time and energy. This investment is nonetheless essential for building a strong partnerships.

### 7.2.2 Long-term pay-off

Especially in countries that have experienced only a few major disasters in recent history (often meaning that professional disaster management structures have rarely been tested to their limits), policy-makers and disaster managers may be tempted to regard processes for volunteer integration as a “nice to have”, a feature that is generally desirable, but not necessarily essential for an effective protection of the population. As various case studies in this report have shown, at least for large-scale disasters, this assumption does not hold. In fact, during all the events discussed in the report, volunteers of all types – established, extending, expanding and emergent – played a central role. The degree to which these volunteers were aligned with state response made a significant difference for the overall coping processes.

Unsurprisingly, efforts to improve volunteer relations have been the strongest where disasters have repeatedly exposed the inability of authorities to guarantee safety, for example in Australia, France, and the UK. These countries have begun to recognize that spending human and financial resources on volunteer integration tends to

pays off on the long run, not at least because of the high opportunity cost of not involving volunteers (Harris et al. 2017). Increasingly, they regard these efforts as a long-term investment in the resilience of the overall societal system.

In the view of the authors, other countries, which by comparison have been spared by major disasters, would be well-advised to learn from these experiences. There is little reason to believe that the collaboration between authorities and volunteers would go more smoothly than anywhere, should disaster strike. Not at least the projected increase of natural hazard-related extreme events in many countries in future necessitates learning from countries that regularly face such events today (Biegert, Borgmann, and Roth 2018). Even during quiet periods with no events, communities can benefit from volunteer activities, as they help to strengthen local ties and build social capital.

## 7.3 Towards a culture of partnership

Although volunteers are an important resource in disaster management, they should not be treated like a commodity, but as partners with specific interests, motivations and identities. However, this also means that volunteers have to understand the preconditions under which authorities operate. The ideal of disaster volunteers and professionals working hand in hand effectively is only achievable if there is mutual respect on both sides. In this constellation, government authorities should increasingly assume an enabling role, trying to get volunteers on board in the processes of prevention and preparedness, not just for disaster responses (Biegert, Borgmann, and Roth 2018).

### 7.3.1 Hierarchies work, but not command and control

When reaching out to volunteer organizations, professional disaster managers often tend to be annoyed by the difficulty identifying clear contact points and the vertical organizational structures of their counterparts (Biegert, Borgmann, and Roth 2018). Instead of lamenting the ‘chaotic nature’ of volunteer organizations, governmental agencies should rather accept protracted processes of participatory decision-making and grass roots democracy when cooperating with civil society organizations. “Attempts to ‘integrate’ informal volunteers into formal systems may prove counter-productive because they quash

the adaptability, innovativeness and responsiveness that informal volunteers bring to emergency and disaster management.” (Whittaker, McLennan, and Handmer 2015, 366). Rather than trying to exert command and control over volunteers, disaster managers should aim to make use of the advantages of the organizational “looseness” of many volunteer organizations (Stallings and Quarantelli 1985b). To this end, disaster managers need to be trained to develop a high level of adaptability and improvisation under all circumstances, and develop flexible and creative solutions for different partners (Twigg and Mosel 2017).

Conversely, civil society organizations must accept the logic of rule-of-law based hierarchy and financial accountability when cooperating with government agencies. Obviously, any attempt to impose one’s own logic on a partner in a partnership will render the latter unsustainable. “Recognizing both the potentially contrasting, but mutually complementary, strengths and identities to strike a balance between concessions and adaptation on the one hand, and maintenance of identity and relative strength on the other hand, is what accomplished leaders seek to ensure” (Roth et al. 2018, 6). True partnership is feasible only when both sides accept the particularities of their partner.

### 7.3.2 Authorities as enablers

Volunteerism is not random, but can be established and supported by enabling policies and practices. Some volunteers prefer to stay at a certain distance to the authorities due to their specific organizational identity, but most volunteers actually appreciate a constructive partnership with disaster management officials, as long as they are not being co-opted or degraded to mere auxiliaries of state actors. As discussed in chapter 6, policy-makers and disaster managers have a broad range of instruments at their disposal to support volunteerism and optimize the collaboration between paid and unpaid actors. Importantly, these measures must all be accomplished before a disaster event unfolds. Measures include strategic decisions to partner up with volunteer organizations, the provision of training programs, or the removal of legal obstacles that may hinder motivated citizens from engaging in disaster preparedness and response. Ultimately, professional disaster managers should aim to act less as administrators or commanders of resources, and more as enablers of the broad capacities that rest within society.

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