Search & Rescue

Emerging technologies for the Early location of Entrapped victims under Collapsed Structures & Advanced Wearables for risk assessment and First Responders Safety in SAR operations

D2.3 Report on the Role of Civil Society Involvement in Crisis Management

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Executive Summary

T2.3 – the Role of Civil Society Involvement in Crisis Management – is a task focused on exploring the increasingly recognized role of civil society in crisis management. In T2.3, civil society includes volunteers, non-governmental organizations (NGOs), and local communities. In order to identify the main challenges and best practices relating to the role of civil society in crisis management, a set of qualitative research methods were employed including semi-structured interviews, focus groups, and case studies with SnR organizations and volunteers, as well as local communities.

This extensive research involving 45 semi-structured interviews, 3 focus groups, and 32 case studies allowed for the emergence of patterns and themes pinpointing the advantages, challenges, best practices, and limitations of civil society involvement in crisis management.

The data collection and analysis in T2.3 culminated in D2.3 – Report on the Role of Civil Society Involvement in Crisis Management. D2.3 includes a detailed description of the research findings that are categorized according to the emergent themes. It also includes a SWOT analysis based on the themes. Moreover, the report and SWOT analysis are contextualized with the broader crisis management literature for further relevance. D2.3 concludes with a set of recommendations for future research, as well as the crisis management field more broadly.

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1   Introduction

1.1 Overview

This deliverable is a product of research conducted within task T2.3 "The role of civil society involvement in crisis management." The methodology for this task was qualitative, consisting of 45 semi-structured open-ended interviews and 3 focus groups. The data collection in this task was to an extent informed by the literature review and case study collection conducted in task T1.3 "Gap analysis of community resilience" and reported on in D1.2. The current document, D2.3 presents the findings of the research conducted within T2.3 and a SWOT analysis of the field of civil society involvement in crisis management.

1.2 Aims and objectives

The aim of D2.3 is to gain a better understanding of the role of civil society in crisis management. Members of civil society are often the earliest respondents during disasters, they possess valuable local knowledge and are connected with each other in networks containing high levels of social capital (Putnam, 1995), yet, apart from traditional NGOs, their role is rarely acknowledged (Meyer and Simsa, 2018). In order to analyse the field, various types of civil society actors were identified together with their roles and interdependencies. SWOT analysis was conducted to gain clarification on the strengths, weaknesses, opportunities and challenges in the field.

1.3 Relation to other tasks and documents

T2.3 "The role of civil society involvement in crisis management" is related most closely to T1.3. "Gap analysis of community resilience" and D1.2 deliverable. Both tasks consider civil society actors, however, their focus and scope are different which is discussed in the following section. As the current document also refers to the pilots conducted within the Search & Rescue project, it is also connected to deliverable D8.11 "Pilot Implementation and Evaluation".

1.4 Scope

Tasks T1.3 and T2.3, although interconnected, differ in scope. Gap analysis conducted in T1.3 included civil society organisations (CSOs) with a scope to analyse professionals and volunteers as a community in terms of factors that are clearly linked to the S&R technologies and objectives. Exploring the distinctions among various CSOs as actors in crisis management together with their roles and interdependencies was the focus of research conducted for T2.3 and this deliverable reports on its results.

2   Context

2.1 Role of civil society organisations (CSOs) in crisis management

According to Coppola (2015), the primary goal of CSOs in crisis management is to reduce victims' suffering and pain. Regardless of the actions taken, their overarching goals can be grouped into four general goals:

1. Reduce the crude mortality rate observed among disaster victims.

2. Reduce or minimise the incidence of disease and disability while stabilising public health conditions.

3. Assist in the reconstruction and repair of infrastructure that has been damaged or destroyed.

4. Protect displaced populations, and provide for their safe return once the emergency has passed.

CSOs disaster management work, like all other disaster management work, falls under the four functions of the emergency management spectrum: preparedness, mitigation, response, and recovery. Developmental organisations have long-term presence and are therefore mostly involved in mitigation. On the other hand, other CSOs focus specifically on response (rapid deployment-rapid return) and long-term recovery (working on enhancing the community's overall capacity to provide these services for themselves). CSOs can also act as first responders as an equivalent to or in support of activities performed by local fire, police, emergency medical, and emergency management agencies. They can also provide food, water, clothing, and shelter (Hanatani et al., 2019).

2.2 Civil society organisations as community

One way of approaching the role of civil society in crisis management is to view various actors in this sector as a community. Community is a broad term and as such can be defined in multiple ways (for the in-depth review on the literature on the topic, please refer to D1.2, Chapter 3). In the context of emergency management, there are three main theorisations as discussed by Räsänen et al. (2020). The first one is the community of practice and interest. It includes professional and non-professional stakeholders who are usually the first respondents and who come together mainly in the preparedness and response stages of the four-phase crisis management model (Coppola, 2015). It focuses on individual's shared sense of belonging that can reach outside geographical and institutional boundaries. The second one is the interaction-based community that comprises different networks and social groups, more active in the response and recovery phases. It focuses on social institutions, including formal and informal interactions, practices, norms and values (Putnam, 1995). Last but not least, there is a place-based community that is mainly defined by individuals and social structures within a geographical location where an emergency happens. It tends to consider everyone living in a specific location as sharing certain characteristics which is true to a limited extent as there could be many different groups sharing a geographical location. It does not consider types of relationships among people, it also downplays the role of communication, infrastructure and transport that make people more connected than before.

Paveglio et al. (2017) created a fourth category of a community as an interactional field which considers people in a certain locale that happens within a geographical area, consists of shared norms, practices

and values and is defined by social networks. Interactional fields do not automatically make a community. For a community field to emerge its inhabitants need to choose to act collectively and mobilise their resources to address a common issue. This conceptualisation emphasises that disruptive events ultimately have a local dimension and there has to be a clear view of who and what is at risk. Providing demographic data on certain communities assumes that the population shares certain characteristics. In such an approach a community is assigned by researchers and policy makers and does not sufficiently consider its local creation by residents. Recognition of unique community characteristics should be among the first empirical questions in risk and hazard studies. One of the first considerations should be the potential that a given community has to mobilise for collective action. This should be informed by site visits and key informants. The second issue is to recognise the scale of the potential mobilisation. This could be done by documenting existing collective actions. The range of collective action could only be understood through systematic documentation of a unique social context. Resources, planning strategies and incentives have to be tailored to the local context or else will not be observed. This could mean e.g. considering the types of partnerships that would be most effective in addressing risks.

Task T1.3 used the definition of a community of practice and interest that consisted of professionals and volunteers in crisis management as a theoretical frame. This facilitated the analysis of community resilience in terms of factors that are clearly linked to the S&R technologies and objectives. In task T2.3, we utilised elements of all four conceptualisations introduced above to identify civil society actors and explore various dimensions of CSOs in crisis management. Table 1 lists actors identified based on a specific community conceptualisation. The scope for analysis is wide as the empirical research on the topic is still scarce and concentrates on team responses of more traditional CSOs as theorised by the practice-based community literature (Meyer and Simsa, 2018). Exploring the roles and activities of other civil society actors in crisis management such as grassroots associations or self-organised spontaneous volunteers (Simsa, 2017; Simsa et al., 2019) could contribute to actively engaging and connecting to these groups, recognising their diversity and understanding their potential for mobilisation.

Table 2-1: Civil Society Actors Conceptualisation

Civil Society Actors Conceptualisation	
Community conceptualisations	**Examples of CSO organisations**
Place-based interactional field	• Local groups • Grassroots groups • Schools • Existing local networks
Interaction-based	• Networks of traditional CSOs • Informal volunteers • Spontaneous volunteers

	· Self-organised groups of spontaneous volunteers
Practice and interest	· Traditional CSOs - formal NGOs and formal volunteers including: ⁻ emergency organisations ⁻ grassroots organisations ⁻ social service organisations

3 Methodology

3.1 Overview

T2.3 employed several qualitative research methods to achieve its objectives. These included semi-structured interviews, focus groups, case studies, and desk research in the form of a literature review. The data collection process took place in the years 2020-2022. Combined, these research methods allowed for gaining an in-depth analysis of the role of civil society in crisis management, from the perspective of both SnR organizations and other civil society actors. The data collection process relates to semi-structured interviews involved the contributors to T2.3, including NTUA, PSCE, SAN, SYNYO, UCSC, UGL, and VUB. The focus groups were held by PSCE, SAN, and SYNYO.

The case studies were a component of T1.3 "Gap analysis for community resilience", and SAN was responsible this component in terms of coordination and collection among T1.3 contributors. T1.3 contributors that participated included ESDP, PROECO, SAN, SUMMA, and UGL. There were also non-T1.3 partners that contributed to the case studies including HRT, JOAFG, JUH, and PUI.

In total, 45 semi-structured interviews were conducted with various civil society actors including SnR organizations, professionals, volunteers, and local communities. Of those, 42 interviews were in the EU, 2 were in the Middle East, and 1 was in Australia. The three focus groups with SnR professionals and volunteers were held with participants from EU countries. There was a total of 32 case studies on natural and manmade disasters in European and international locations. The case studies, and the intersection of T1.3 with T2.3 formed the basis for the interview schedules employed in the semi-structured interviews and focus groups as part of T2.3.

For data collection that involved human subjects, such as the interviews and focus groups, verbal or written consent was obtained from the participants to comply with research ethical requirements. The names of the participants have been anonymized to protect the research subjects. However, the names of the organizations have been kept as they are, except in the few cases were respondents wished that their organization remains anonymous. The respondents were given the option to remain anonymous if that was their preference. The data has been transcribed by each responsible partner, and all the interviews have been coded using NVivo software for qualitative analysis by SAN. Using NVivo enhanced the process of identifying emergent themes and patterns relating to the role of civil society involvement in crisis management. The themes listed in this report are mainly a result of this data analysis process.

In the next sections, an overview is provided of how we arrived at the case study template, interview schedule, and focus group guide.

3.2 Case Studies

The starting point for the case study questions was a literature review conducted in T1.3. The case studies aimed to analyze community resilience from the perspective of nine end-users in the SnR project. However, the questions and areas covered in the two case study templates (below) also tackled the role of civil society actors such as volunteers and non-governmental relations. To further validate the responses from the case studies, a focus group was organized and held by SAN with the SnR consortium partners. The responses received from the case studies and focus group, in turn, formed

the basis for formulating the questions for the semi-structured interviews and the focus groups of T2.3. While T2.3 built on T1.3, it also broadened the scope of T1.3 by delving deeper into civil society actors' distinctions, roles and interdependencies. Additionally, T2.3 delved deeper into different categorizations of volunteers and identified a distinction between formal, informal, and spontaneous volunteers as well as self-organised spontaneous volunteers.

The case studies were collected from the nine end-users in the SnR project including EPAYPS, ESDP, HRT, JOAFG, JUH, PROECO, PUI, SUMMA, and UGL. Two case study templates were distributed, one covering general overviews and one on specific cases. In total, 8 general overviews and 24 specific cases were collected. The two templates used are presented in the table 2 and table 3 below.

Table 3-1: General Overview

Case study collection template	
Questions	**Answers**
1. What type of disasters have you responded to and what type of organizations and professionals did you cooperate with in these responses?	
2. What are the major challenges and advantages of working with other SAR organizations and professionals during the response phase?	
3. What are the major challenges and advantages of working with volunteers during the response phase?	
4. Have there been mistakes made during the response phase either by your organization or in cooperation with others? How can this be avoided in the future?	
5. Do you experience unfulfilled needs in terms of technological resources, technical skill, logistics, communication, or reporting during response either as an organization or in cooperation with other organizations? Could you please briefly elaborate on the most prominent?	
6. Are there legislation, hierarchal organizational structures, or complex decision-making procedures hindering your response?	

7. In terms of pre-disaster preparedness, do you cooperate with volunteers, other organizations, professionals, NGOs, or individuals from the wider community? If so, could you please briefly elaborate and list these?	
8. Are there any major lessons learnt by your organization in how you respond to disasters: a) in order to improve its and/or the community's resilience? b) in relation to the SAR proposed technologies and/or Use Cases? Did your organization change or adapt to address challenges over the years, and if so, how?	

Table 3-2: Specific Cases

Case study collection template	
Questions	**Answers**
1. Can you briefly describe a specific disaster event and your organization's role in it? What other organizations and professionals did you cooperate with in this response?	
2. If the case study / disaster is documented, please provide a relevant reference/link.	
3. What were the major challenges and advantages of working with other SAR organizations and professionals during the response phase of this specific disaster?	
4. What are the major challenges and advantages of working with volunteers during the response phase of this specific disaster?	
5. Have there been mistakes made during the response phase of the above disaster event, either by your organization or in cooperation with others? How can this be avoided in the future?	

6. During your response to the disaster, did you experience unfulfilled needs in terms of technological resources, technical skills, logistics, communication, or reporting either as an organization or in cooperation with other organizations? Could you please briefly elaborate on the most prominent?	
7. Were there legislation, hierarchal organizational structures, or complex decision-making procedures that may have hindered your response to the disaster?	
8. In terms of pre-disaster preparedness for the event you have described, did you cooperate with volunteers, other organizations, professionals, NGOs, or individuals from the wider community? If so, could you please briefly elaborate and list these?	
9. Were there any major lessons learned by your organization in how you responded to the disaster: a) in order to improve its and/or the community's resilience? b) in relation to the SAR proposed technologies and/or Use Cases? Did your organization change or adapt to address challenges over the years, and if so, how?	

3.3 Focus Group Guide – End Users

As noted, the focus group aimed to validate the findings of the case studies in the process of T1.3's objective of conducting a gap analysis for community resilience. Yet, the focus group guide designed by SAN also included two questions specifically on the role of civil society, which in turn, fed into the interview schedule of focus group guide of T2.3. Table 4 below presents the questions of the T1.3 focus group.

Table 3-3: Focus Group - End Users Questions

	Focus Group Questions
1	In what ways can relations be strengthened between end-users on one hand and civil society organizations and local communities on the other?

2	In what ways can relations be strengthened between end-users and vulnerable populations?
3	What training and skills do you think are lacking?
4	How can the physical and mental health of first responders or victims be protected?
5	What is the best way to allocate resources?
6	What are your main needs in relation to information sharing and storage?
7	What are the challenges you face with victim localization, situation awareness, and risk assessment?
8	How can the understanding of rescue processes be improved?
9	What are the limitations of detection, monitoring, and reporting devices?
10	In what ways can technologies, social media, and community networks reduce the aftermath of the disaster in terms of a size of the affected area and number of victims?
11	How do smart devices, real-time information sharing systems, and other equipment impact the maneuverability of you team?
12	How does your organizations internal processes impact maneuverability?

3.4 Semi-structured Interviews

In total, 45 semi-structured interviews were conducted with SnR organizations, professionals, volunteers as well as local communities. The interviews were conducted by the T2.3 contributors including NTUA, PSCE, SAN, SYNYO, UCSC, UGL, and VUB. A list of the interview respondents, and the countries they belonged to, are presented in Table 5.

The interview data collection was based on two interview schedules presented in Tables 5 and 6. One was specific to SnR end-users and NGOs, and a second was pertinent to local communities.

Table 3-4: Organizations and Individuals Interviewed

	Organization or Individual	Country
1	Disaster Competence Network	Austria
2	Red Cross	Austria
3	Helicopter Rescue	Australia
4	Fire Fighters	Bulgaria

5	Fire Safety Service	Bulgaria
6	Cyprus 1	Cyprus
7	NGO and Volunteer Organization	Finland
8	SIDS Pompiers	France
9	Bavarian Red Cross	France
10	Bavarian Red Cross	Germany
11	Johanniter	Germany
12	Crisis Management Team Hellas	Greece
13	Hellenic Volunteer Rescue Crisis Team	Greece
14	EPAYPS	Greece
15	Elite Team Special Missions of Greece EPOMEA	Greece
16	Greek Fire Brigade	Greece
17	Institute of Management of Manmade and Natural disasters (Panhellenic Network of Civil Protection & Crisis Management)	Greece
18	Rescue Team Delta	Greece
19	Hellenic Rescue Team (1)	Greece
20	Hellenic Rescue Team (2)	Greece
21	The National Network of Voluntary Support Groups on Breastfeeding and Maternity in Greece	Greece
22	Volunteer European Medical Organization	Greece
23	Civil Protection in Central Buda	Hungary
24	Red Cross	Israel
25	SOS Milano	Italy

26	Civil Citizen Milano (1)	Italy
27	Civil Citizen Milano (2)	Italy
28	SOS Centre	Italy
29	Italian Navy	Italy
30	Croce D'Oro	Italy
31	Civil Protection and Golden Cross	Italy
32	Croce Amica	Italy
33	Misericordia	Italy
34	Croce Rossa Italiana	Italy
35	Croce Bianca	Italy
36	ANPAS Novara	Italy
37	Edelweiss	Italy
38	KCCE Centre for Civil Security	Netherlands
39	Volunteer Medical Organization	Poland
40	Michalowo Commune Council	Poland
41	Vlaanderen Action Villages	Romania
42	ESDP	Spain
43	SUMMA 112	Spain
44	NGO	Turkey
45	Serve On	United Kingdom

3.4.1 Objective of Interview Schedules

The objective of the semi-structured interviews was to identify the current role of civil society in crisis management. Civil society in this case, and the respondents, include formal, informal, and spontaneous volunteers, NGOs, and local communities (Table 1). This objective complements T1.3 by providing qualitative data on the interaction between professionals and volunteers, but also broadens the scope of T1.3 by delving deeper into civil society actors' distinctions, roles and interdependencies. It also offers an additional layer to T1.3 by breaking down volunteers to the four categories of formal, informal, spontaneous, as well as self-organised spontaneous volunteers instead of one broad volunteer category.

The semi-structured interviews also had the objective of identifying the key actors and networks, needs, challenges, and best practices in civil society, as well as gaining an indication of the future potential of civil society in crisis management. Tables 6 and 7 present the two interview schedules.

Table 3-5: Interview schedule for End-Users and NGOs

	Research Questions
1	What is your organisation s relation to formal and informal volunteers? What are some of the challenges or benefits of working with volunteers?
2	In what ways does your organisation act as an intermediary between local communities and professionals/formal volunteers?
3	How do professionals/formal volunteers and local communities interact or cooperate using various technologies?
4	In what ways does your organisation source, document, verify and share important information with NGOs, professional/formal volunteers and local communities?
5	Is knowledge accumulated in local warning systems included in the official warning system and how does the knowledge flow from local communities to professionals/formal volunteers?
6	How do you involve local communities in disaster preparedness?
7	How could the creation of local emergency plans be supported by NGOs and professionals/formal volunteers?
8	Have you witnessed cases of self-organization among local civil society organisations such as NGOs, schools, religious associations, community groups, etc.? What are the main characteristics of such systems?

9	In what ways can your organisation empower local communities to best respond to disasters?
10	How do you reach out to and involve vulnerable communities in both preparedness and response? These could include persons with disabilities, migrants and refugees, LGBTQ individuals, the elderly, and so on.
11	Do you practice an oversight role over government or business operations in disaster prone areas and how?

Table 3-6: Interview schedule for Community Groups

	Research Questions
1	Does your community group have or work with volunteers? What are some of the challenges or benefits of working with volunteers?
2	What relations does your community group have with crisis management professionals and NGOs?
3	How do professionals and local communities interact or cooperate using various technologies?
4	Do you supply crisis management professionals and NGOs with information? If yes, how?
5	Is knowledge accumulated in local warning systems included in the official warning system and how does the knowledge flow from local communities to professionals?
6	As a community group, how do you involve local communities in disaster preparedness
7	Do NGOs and professionals support you in the creation of local emergency plans, and how?
8	Have you witnessed cases of self-organization in the area of crisis management by local community groups? What are the main characteristics of such systems?
9	In what ways can crisis management organisations empower your community to best respond to disasters?

10	How do you reach out to and involve vulnerable communities in both preparedness and response? These could include persons with disabilities, migrants and refugees, LGBTQ individuals, the elderly, and so on.
11	Do you practice an oversight role over government or business operations in disaster prone areas and how?

3.5 Focus Groups

The objective of the focus groups was similar to the semi-structured interviews in terms of identifying the various aspects of the role of civil society in crisis management. Moreover, the focus groups complemented the semi-structured interviews by providing an additional layer of analysis. This analysis, and the data emerging from the focus group, was a result of a group discussion between the participants which allowed for reflection, comparison, and contrast during the session.

Each one of the three focus groups tackled a particular type of SnR actor. The focus group organized and facilitated by PSCE engaged with SnR end-users, whereas the focus group held by SYNYO engaged with medical emergency organisations, and the third focus group by SAN engaged with self-organized spontaneous volunteers. Combined, these different actors provided a more holistic picture of how various actors engaged with SnR on their own, and also in cooperation with other SnR actors.

The focus group guide used in the three focus groups in presented in Table 8, while a list of organizations that participated in the focus groups in presented in Table 9 below.

Table 3-7: Focus Group Guide

	Focus Group Questions
1	In what ways does your organisation act as an intermediary between local communities and professionals/formal volunteers?
2	How do professionals/formal volunteers and local communities interact or cooperate using various technologies?
3	In what ways does your organisation source, document, verify and share important information with NGOs, professional/formal volunteers and local communities?
4	How do you involve and empower local communities (including vulnerable populations) in disaster preparedness and response?
5	How could the creation of local emergency plans be supported by NGOs and professionals/formal volunteers?
6	Have you witnessed cases of self-organization among local civil society organisations such as NGOs, schools, religious associations, community groups, etc.? What are the main characteristics of such systems?

Table 3-8: Focus Group Themes and Participants

End-Users Focus Group Organized and Facilitated by PSCE		
1	Johanniter (JOAFG)	Germany
2	Hellenic Rescue Team (HRT)	Greece
3	Johanniter (JUH)	Austria
4	Croix-Rouge Française	France
5	Pompiers de l'Urgence Internationale (PUI)	France
6	SDIS13	France
1	National Emergency Assistance Centre	Greece
2	Siena University Hospital – Emergency Department	Italy
3	University of Trieste – Emergency department	Italy
4	Paediatric Hospital of Madrid	Spain
1	Refugee Solidarity Group (1)	Greece
2	Refugee Solidarity Group (2)	Greece
3	Border Group	Poland
4	Civil Society Activist	Poland

4   Findings

This section reports on the findings of research conducted for T2.3 as discussed in the previous section. The data is organised into themes that explore different angles of civil society involvement in crisis management.

4.1   Volunteers: Formal, Informal, Spontaneous and Self-Organised Spontaneous

A clear and unified understanding or definition of the terms of formal, informal, spontaneous and self-organised spontaneous volunteers was not present among all the respondents and the precise role and responsibilities of volunteers varied from one country to another. Therefore, during the data analysis, a stronger and more general distinction between the three terms emerged as follows:

- Formal volunteers: have the same level of training as professional first responders but do not have a steady salary for the work they provide.

- Informal volunteers: are members of the public who are connected to the SnR organizations, but their role is focused on relief in terms of distributing food, clothes, and medicine, securing shelter, and so on.

- Spontaneous volunteers: are members of the public, who may be individuals or pre-existing groups, that appear at the site of the disaster without a prior connection to the SnR organizations.

- Self-organised spontaneous volunteers: members of the public who appear at the site of the disaster, or become involved remotely, without a prior connection to the SnR organisations who, however, demonstrate high capacity for self-organisation in terms of their group management and coordination.

4.1.1   Advantages of Formal and Informal Volunteer Involvement in Crisis Management

The importance of volunteers concerning the role of civil society consists in that they tend to be closest to local communities, and they may act as a bridge between professional organizations and local communities. However, the involvement of volunteers has both advantages and challenges. The next sections highlight several of the main advantages of formal and informal volunteers identified during the research. The advantages of spontaneous volunteers are highlighted in section 4.1.2, and the challenges in relation to volunteers are highlighted in section 4.1.3.

4.1.1.1   *4.1.1.1. Commitment, Enthusiasm, Motivation, Time, Energy*

The vast majority of respondents said that formal and informal volunteers possess commitment, enthusiasm, and motivation. They also have time and energy. Formal and informal volunteers are viewed by SnR organizations and professionals as very dedicated people who are bringing their heart and soul into the work. They are also considered to have a deep ideological sense of why they should be involved in SnR. Due to these qualities and attributes, SnR professionals expressed that one can expect more and better results from the involvement of volunteers.

4.1.1.2 4.1.1.2. Expertise

Formal and informal volunteers also have the advantage of bringing in expertise to the SnR field. For example, and in their private lives, volunteers can be nurses, engineers, IT specialists, or doctors, among others. While such professions are important in the preparedness or responses phases, other professions and skills are useful in the recovery phase, such as being a carpenter or electrician, among others.

4.1.1.3 4.1.1.3. Financial

Considering that the SnR field faces financial and budgetary constraints, one of the major advantages of volunteers is that they reduce the financial cost of SnR operations and enable a wider reach of SnR organizations. Apart from costs related to uniforms and minor sustenance expenses during a crisis, volunteers are not salaried.

4.1.1.4 4.1.1.4. Availability

Formal and informal volunteers guarantee that SnR organizations are more likely to have enough first responders and relief workers to respond in an emergency, disaster, or crisis. If a volunteer is needed in a specific moment, SnR organizations will most probably locate one. This offers a particular advantage when juxtaposed to SnR professionals who are more likely to only work their allocated shifts. In this sense, volunteers are more flexible and available. However, the research respondents were divided on the issue of availability as will be delineated in section 4.1.2 below.

4.1.2 Challenges of Formal and Informal Volunteer Involvement in Crisis Management

The research respondents emphasized the indispensability of formal and informal volunteers to SnR and crisis management more broadly. However, this invaluable involvement does not come without challenges, especially in terms of the relationship between professionals and volunteers. Moreover, there is a major challenge in keeping the volunteers on board due to the physical and psychological stress inherent in the crisis management field. The next sections highlight these challenges.

4.1.2.1 4.1.2.1. Protocols and Procedures

Having a shared understanding of protocols and procedures between professionals and volunteers is one of the main challenges in the crisis management field. In disasters, response time is of essence, therefore non-conformity around protocols and procedures can cause delays that negatively impact the rescue efforts in relation to human life, nature, and the built environment. Due to non-uniformity, at time volunteers may not follow the line of command or not follow the plan of professionals possessing greater know-how or a more thorough situation analysis.

It is also important to note that this challenge is not particular to the relation of professionals to volunteers as some volunteers have the same level of training as professionals (while some may not). Moreover, protocols and procedures may not be uniform between professionals from different countries, regions, or organizations.

4.1.2.2 4.1.2.2. Turnover and Availability

A common challenge among many SnR organizations is the issue of volunteer turnover. While volunteers reduce financial costs and are generally committed, some might also quit the organization because they are not salaried. Besides salaries, turnover is sometimes the result of difficulties in keeping volunteers motivated. With the unpredictability of disasters, volunteers may lose motivation in the time

between one disaster and the next. Additionally, for volunteers that are busier in their private professions, time is also an issue. At times, volunteers simply do not show up while providing very little or no notice, and even when a contract exists, it is not very likely that it would be enforced with a volunteer.

The challenge of turnover in terms of motivation and time also links to availability. Some SnR organizations considered volunteers as more available than professionals. This may vary from organization to organization, and from country to country. For example, it emerged in the research that in the former communist countries volunteering is associated with free labour and there is less of a motivation to be involved in it. Yet, availability and turnover are a challenge across countries in the EU to varying degrees.

4.1.3 Spontaneous Volunteers

The majority of respondents pointed out that spontaneous volunteers add to chaos and can increase risk during the response phase of a disaster. Only two respondents considered that spontaneous volunteers can be an advantage, and a third respondent provided of how spontaneous volunteers can become beneficial on the long-run as shown in the next sections.

4.1.3.1 4.1.3.1. Spontaneous Volunteers Challenges

What characterizes the behavior of spontaneous volunteers is enthusiasm and humanity. In emergencies, many spontaneous volunteers may try to help and sometimes this is found useful. However, almost all respondents revealed that in most cases spontaneous volunteers constitute an additional risk, specifically because they are not trained. The situation turns from one where spontaneous volunteers are trying to help into one where they need assistance from professionals, formal volunteers, and informal volunteers. In addition to those distressed by the disaster, SnR organizations end with additional tasks of organizing and guiding spontaneous volunteers on the field unless spontaneous volunteers are able to self-organise. SnR organizations do not have the luxury to offer guidance on the spot and in the moment of a disaster to spontaneous volunteers who lack coordination, training, and experience. Therefore, if not self-organised, spontaneous volunteers generally add to the chaos of the situation and exacerbate risk.

4.1.3.2 4.1.3.2. Spontaneous Volunteers Advantages

In a small minority of cases, spontaneous volunteers were considered as an advantage to SnR organizations during response to a disaster. In these cases, both in the Middle East, spontaneous volunteers are perceived as additional hands that can free members of SnR organizations for other more crucial tasks and activities. For example, instead of having four first responders carrying a stretcher, there can be three spontaneous volunteers and one first responder guiding them. In another exceptional case, spontaneous volunteers transported injured individuals to hospital on motorbikes to bypass the heavy traffic. The fact that both cases were in the Middle East may indicate that utilizing spontaneous volunteers in this manner may be impeded by regulations and laws in the EU, as no such examples were given by any of the respondents in the EU.

Yet, spontaneous volunteers will mobilize regardless or laws and regulations even in the EU. In a year of heavy and unusual snowfall in Madrid, the city was brought to a state of paralysis. However, people who owned 4X4 vehicles created a WhatsApp group where people who were stranded and needed to

attend hospital can contact them for transport. This kind of volunteers would, however, fall under a self-organised category as discussed below.

Within the EU, Austria stands out as country with a best practice in terms of how to organize spontaneous volunteers. Yet, the organization occurs on the long run rather than in the moment of a disaster. In 2020, the "Team Österreich" program was launched, whereby spontaneous volunteers are identified and then included in the chain of command for future disasters. That is, they are provided with basic training and entered into a database whereby they could be called on in time of disaster to relieve some of the pressure from SnR professionals and volunteers. Until present, the research did not identify any best practice within the EU on how to organize spontaneous volunteers in the moment of the disaster and when they appear on the scene without notice or prior training.

4.1.4   Self-organised spontaneous volunteers

This topic is addressed in the section 4.2.

4.2 Self-organisation

4.2.1   Self-organised spontaneous volunteers

Many of the instances of self-organisation that the respondents referred to happened in the need of the hour. Respondents discussed for example how citizens organised non-technical activities, such as collecting blankets, food and other basic necessities for the victims during earthquakes in L'Aquila and Bari. This was later aided by professional organisations who set up and coordinated collection centres, but it was the citizens that started the initiative. Another organisation gave an example of a village in Italy that self-organised for mutual help during the pandemic lockdown. Residents printed and distributed flyers to support people in need with everyday chores that became a challenge during the lockdown, e.g. grocery shopping. Similarly, they were later aided by the professional crisis management organisation, in this case, one that was to some extent militarised and therefore particularly structured.

There are also examples of self-organised groups and networks of spontaneous volunteers that continued with minimal or no institutional support. In Poland, a large network of mutual aid was self-organised to provide support during the pandemic. It started as a Facebook group for friends and developed into a national network of over 130,000 members called Visible Hand, organised based on a system of hashtags that indicated whether a person offered help or needed it, what kind of help and in what location. The activities ranged from doing grocery or pharmacy shopping, through organising catering to walking each other's dogs. The group was active through the entire period of the COVID-19 pandemic, and after a less busy period, it morphed into a platform for providing help to the refugees from Ukraine, when the war started in 2022. No institutional support was provided to the group, although one could argue, that if there was, the network could have had an even wider reach. For example, the online group could have received support for content moderation, which was the most time-consuming activity.

Another example of self-organised group of spontaneous volunteers was discussed by a member of such a group that sprung from the need to help refugees arriving in Poland through a Belarusian border in 2021. The residents of the commune of Michalowo in the North-East of Poland organised a help point for the refugees. What started as a room in a fire station with a kettle, fridge and microwave with a

few mattresses and blankets, became a large help point in several locations that accommodated many refugees and provided a variety of supplies for the newly arrived. The donations arrived from all over Poland and the need for specific supplies was communicated mainly through social media. There was also a person who was known locally who became a natural leader and who communicated with people wanting to donate as well as with the media over the phone. No support was provided in terms of coordination but the local government and the local fire service helped by making premises available or facilitating communication with various stakeholders.

4.2.2 "Latent" network

Many of the self-organised groups or networks of spontaneous volunteers, like the ones discussed in the previous section, dissolve once an emergency is over. However, one could argue that a "latent" or "sleeping" network can remain to become activated for another purpose. This was illustrated by the Visible Hand group which became almost inactive once the pandemic was over to activate again once the war in Ukraine started in 2022 and refugees began arriving in Poland in unprecedented numbers.

Another example was discussed by one of the respondents of a self-organised group formed in Indonesia after the earthquake in 2004. The group set up tents outside the Padang airport to distribute aid and coordinate with international rescuers. The network deactivated after the emergency but its members stayed connected and it included international rescuers. Our respondent was able to seek support from one of the network members in obtaining an official authorisation for a rescue mission during another emergency. The members contacted each other using social media such as Facebook Messenger.

Medics on the Border group in Poland that formed to provide medical assistance during the refugee crisis on the Polish-Belarusian border in 2021, was able to mobilise fast thanks to an existing network of like-minded people who worked together in the past. The strength of such close-knit groups is discussed by a respondent from the Serve on UK organisation in terms of their knowledge of the local context and the ability to quickly "awaken" the network. The respondent, however, also pointed to the weaknesses of this kind of arrangement that might not be inclusive enough.

4.2.3 Importance of preparedness

Most of the respondents who discussed instances of self-organisation pointed to the fact that the activities were mainly taking place in the response phase of a crisis. They stressed how important it is to try to stimulate preparedness as well to decrease risks and vulnerability. One of the respondents discussed an emergency exercise in a school where teachers tried to self-organise on the spot without any preparation. They evacuated the students but led them to the wrong meeting points. If this took place during a disaster, it would increase the risk of injury rather than decrease it.

4.2.4 Long-term self-organisation

Some of the respondents made an observation that their organisations which are now well established with some of them operating for decades were also created in a process of self-organisation. They sprung from the combination of the need of the hour, wanting to offer help and be useful. For example, ESDP, a dog-rescue organisation in Spain discussed how they started as a group of people who owned dogs and wanted to get involved in rescue missions. They describe how step-by-step their activities got institutionalised and how they connected to other groups in a horizontal way, eventually forming a formal organisation.

4.2.5   Lack of recognition

When asked about instances of self-organisation witnessed during emergencies, many responders who were members of established CSOs answered at first that they never observed it. After a moment of reflection, however, several of them remembered some examples or viewed their own organisations as being a result of citizens self-organising. On the other hand, respondents who were members of self-organised groups were able to give a detailed account of their involvement in emergencies or crises. This points to the lack of recognition of the role of the self-organised spontaneous volunteers in emergency missions or even their presence at the scene.

4.2.6   Coordination issues

One of the problems associated with self-organisation in the emergency context can be a lack of coordination. If groups of citizens are dispersed and communication among them is limited, it can lead to confusion and duplication of efforts. One of the interviewees discussed a situation where citizens mobilised during forest fires to provide supplies for rescuers and victims. They described trucks arriving at the scene with clothing and food. This was driven by spontaneity, enthusiasm and compassion, and was highly valuable. However, as the efforts were not coordinated, at some point there were 5000 sandwiches available for just 500 rescuers.

Participants of a focus group for self-organised spontaneous volunteers dedicated to helping refugees discussed how a simple solution to this problem is often the use of social media and other media channels where the needs of the moment could be communicated. One of the focus group participants discussed a situation in the Greek port of Piraeus where refugees were first arriving and how local residents immediately reacted by bringing food to the port that they gave to refugees directly. The situation was chaotic for a few days but it was quickly addressed by self-organised groups of spontaneous volunteers who created a system of food distribution. First, they got access to a warehouse in the port where donated food could be stored. The next step was to create a Facebook group where announcements were made about the collection points and supplies that were needed day by day.

This was also observed during another refugee crisis where various volunteers, including some public figures, made announcements on their public social media profiles of what was needed at different points of the day. The information was also available in mutual-help Facebook groups. The messages were quick and simple, for example: "Juices and yoghurts needed. No more sandwiches today. No more clothing today." Such a system allowed to avoid chaos, duplication of efforts and oversupply.

4.2.7   Role of technology in self-organisation

As demonstrated in the previous sections, coordination of self-organised response to a crisis is to a large extent facilitated by ICTs. This was discussed in detail in one of the focus groups. The participants discussed WhatsApp and Signal as the main communication channels, the use of Facebook groups for announcements and staying in touch with a wider community, the use of Google Drive for sharing handbooks, procedures and other documents that they developed and a shared calendar, e.g. Notion for scheduling shifts and indicating availability.

4.2.8   Importance of institutional support

An important factor in the success of self-organised efforts in crisis management is the availability of institutional support. Self-organisation is driven by the will of citizens to help, their enthusiasm and

compassion but if it is to be sustainable, it needs support from established organisations such as traditional NGOs or various public authorities. This can take different forms, from facilitation of communication and online content moderation, through making premises available, to training. One of the respondents explained how establishing local self-contained civil protection offices could play this role. Such offices could collect and distribute information from various sources to different actors, including citizens. They could also provide different forms of institutional support.

The support could also be less formalised and tailored to a specific situation. One of the interviewees who was a member of an established emergency NGO discussed a situation where a lack of confidence was the main barrier to the action of a self-organised group. The remedy was to be available for consultations and to assure the group that they could trust their own professional expertise. The respondent stressed that the advice needs to be given in a respectful way.

Some of the more established organisations provide "help the helper" schemes as was discussed during one of the focus groups. Aware of the self-organised efforts to accommodate refugees at the border, this international NGO launched a grant scheme, created platforms for communication and run training.

4.3 Preparedness and Empowerment

In the research design, the interview schedule included a separate question on preparedness and on the empowerment of local communities. While the respondents acknowledged the distinction, their responses treated the two concepts in an interchangeable manner, possibly due to the nature of the search and rescue field. The vast majority of interviewees stated that they are involved in preparedness with and empowerment of local communities. In relation to local communities, preparedness is of utmost importance as it influences how these communities react, make decisions, and behave during a disaster, as well as how they assess risk.

4.3.1 Raising awareness and educating on risks

The respondents discussed the importance of educating communities on risks that are specific to areas where they reside. Such awareness would facilitate first activities after a disaster manifests itself before professional services arrive at the site. This could facilitate a better response to an emergency.

Many of the interviewees are actively involved in raising awareness and informing local communities about a variety of risks of different frequencies. Meetings are organised with communities, their representatives, municipal councils, etc. The areas are mapped for communities considered particularly vulnerable such as nursing homes or care centres for elderly or disabled people or those in more remote locations.

Emergency education and training could be applicable in different contexts. An example discussed by one of the interviewees was a large-scale traffic accident where the public could be trained in response to a victim trapped in a car or first aid to be provided to children specifically.

4.3.2 First Aid

One of the ways of community preparedness and empowerment is the provision of first aid courses, both paediatric and for adults. The respondents' experience shows that the courses do not have to be extensive, some of them only last for a few hours but they are still highly valuable. Interviewees who

offer such courses discussed their merit and how popular they were, equipping their participants with basic first aid skills.

4.3.3 Schools

One of the ways to reach out to various community groups and increase levels of preparedness is through local institutions such as schools. Examples that the first responders discussed included organising courses and emergency simulations, such as periodic fire drills and mock school evacuations. These exercises were organised in collaboration with teachers allowing for connecting to their local knowledge of an area and the children involved. There are also discussions organised in schools where children are actively involved. It is a way to raise awareness not only among children but also their families.

4.3.4 Grassroots

Some organisations discussed disaster preparedness programmes that they run at a community level where they support communities and households in creating their own emergency plans. There is an assumption of a trickle-down effect where capacity is built to develop more detailed plans individually.

Another way of involving the community is to try to engage them as regular or spontaneous volunteers. Databases can be created to facilitate reaching out to them. In some instances, volunteers receive training with materials that they can distribute among their families or members of a larger community.

The respondents stressed that community empowerment calls for inclusion. Involving various segments of society and identifying bias is necessary. Education and training programmes cannot be limited to more affluent areas or areas where risks are already well-identified. This can pose a challenge, although the issue has to be addressed if the response to a disaster is to be successful and risks are to be mitigated.

4.3.5 Training

Many respondents discussed the training that they provide to communities. This can have a form of an information session or exercise run in specific neighbourhoods or, as discussed above, schools. Training sessions can be general or tailored specifically to an area in question, with a focus on specific risks. Simple equipment and protective clothing are donated by some organisations.

4.4 Communication with Local Communities

All stages of crisis management require communication with local communities, whether in mitigation, preparedness, response, or recovery. All respondents stated that they maintain communication with local communities using online and offline media, as well as through in-person events, workshops, seminars, festivals, and so on. This communication tends to be unidirectional with S&R organizations targeting local communities, and less commonly that communication is a two-way process with local communities feeding back into S&R organizations.

4.4.1 Social and traditional media

Responders utilise information and communication technologies in various forms. Most of them have websites and some organisations also have dedicated Facebook and Instagram profiles where they

present and advertise their work and share information with citizens and local authorities. Newsletters, emails, sms, as well as WhatsApp and TikTok are other modes of communication. Some activities are covered by traditional media, i.e. radio and television.

4.4.2 Apps

Some organisations make use of mobile applications. Examples discussed by the respondents included an app where a signal of a health issue such as a heart attack is sent out to the trained people within 100 meters or ones that are used for collecting data from members of a community and referring them to the health services.

4.4.3 Blended (online and offline) communication

Many organisations use a blended mode of communication. For example, The National Network of Voluntary Support Groups on Breastfeeding and Maternity in Greece set up Facebook groups for their multiple locations. Their Thessaloniki group has 40,000 members and most communication happens online. However, a few times a year there are also events where the organisation members and the community meet face-to-face during festivals, celebrations and other activities.

4.4.4 Bi-/unilateral communication and connecting to local knowledge

Even though most of the respondents acknowledge the value of local knowledge, so far the process remains to a large extent unilateral. There are a few exceptions, although the scope of the activities is limited. Some of the respondents use social media reports sourced from local communities. Their organisations post on social media during emergencies to source photographs from affected locations and to receive information and updates in the comments. This approach opens a conversation with the social media users who are members of affected communities.

Another approach that was discussed was to train first respondents to map the communities during a rescue mission by building, what they called, a human terrain picture. Such a map would include information on what groups the community consists of, who the formal and informal leaders are, how to connect them, etc.

One of the interviewees brought up the importance of trust. An organisation is better received in a community if community representatives are actively involved. This applies to less formal self-organised groups too as was discussed in one of the focus groups. One of the participants described how the provision of services for refugees was both more effective and better received when it was initiated by refugees themselves.

4.5 Intermediary Role of S&R Organizations, NGOs, or Volunteers

S&R organizations, NGOs, or volunteers are less likely to occupy an intermediary role with local communities than they are to be involved in preparedness or communication. Yet, a minority of these actors acknowledge and act on this role in terms of being a link between professionals, volunteers, and local communities.

4.5.1   Civil society organizations

One of the ways in which SnR organisations, NGOs or volunteers act as an intermediary with local communities is through supporting grassroots networks and associations who want to formalise their activity. In Germany, as one of our respondents discussed, it is often the case that local groups come together to form a forum or a network, although they lack recognition and institutional tools to apply for local grants and subsidies. Johanniter supports such groups by helping them to establish a formal CSO so that they can fit in their local civil society organisation system, and connect them to the relevant authorities (agricultural, law, etc.). On the other hand, for our respondent, these groups can serve as gatekeepers to various groups in the community, such as farmers' groups, women's groups, or youth groups which facilitates bilateral communication.

In Austria, the Red Cross's regional branches are localised which allows for offering specific services to specific groups. The organisation reaches out to local communities to inquire about their needs and challenges to tailor the services on offer. The outreach also allows the members of the community to get involved in the organisation's activities and programmes.

4.5.2   Training

The intermediary role of the SnR organisation can also manifest through training. ESDP, a dog rescue NGO in Spain, spoke about organising workshops and training sessions for local communities but also for other organisations, both locally and internationally. This is a way of establishing connections to various community groups.

4.5.3   Local government

Some of the respondents made an effort to establish cooperation with local governments. Being connected to not just the communities, but also local governments allows for opening a channel for transferring knowledge and skills between citizens and authorities, with an SnR organisation acting as an intermediary.

4.6 Emergency Plans

Emergency plans concern local communities in a direct and crucial way, since local communities will also need to act on these plans in the case of disaster. In this regard, most organizations expressed that they are required to follow the plans set out by governmental authorities, with civil society only having a secondary, but important, contribution towards these plans.

4.6.1   Local Authorities

Emergency plans are mainly the responsibility of the state and state bodies, such as local government, municipalities, and/or districts. As such, it is a top-down approach with impetus coming from the top rather than the bottom. Yet, civil society is included in the design of the emergency plans and/or as actors that implement the emergency plans. Moreover, civil society or SnR organizations can provide input by informing local authorities what they can offer, for example, the number of available volunteers and levels of expertise. In this sense, various SnR organizations are integrated into emergency plans. This was the case in many countries including France, Greece, Italy, and Spain, among others.

In relation to the aforementioned top-down approach, HRT in Greece, drew attention to the shortcomings of not sufficiently involving civil society organizations. HRT, as a volunteer organization, are not always invited to contribute to local emergency plans despite their vast knowledge of the local area and disasters that are common in the area they operate in. All factors ought to be taken into account in an emergency plan, such as local conditions, particularities, and available resources or equipment.

4.6.2 Civil Society Participation

Civil society in the form of non-governmental organizations and volunteers have a central role to play in the formulation of emergency plans, even when the process is predominantly state-centered. Civil society are the closest to local communities and many initially emerge from local communities and the grassroots level. Therefore, by the nature of this proximity, civil society organizations and actors are especially aware of risks and assets in local communities. Civil society as an actor in a long-term involvement with local communities can bring in experiences and lessons learnt from previous crises and missions, for example, how they were dealt with most effectively as well as the identified shortcomings. Additionally, civil society organizations in the SnR field generally have exposure to the know-how of SnR experts by which they can also contribute to emergency plans with from their particular vantage point. The more established and experienced the civil society organization, for example the Red Cross, the more the likeliness they will be solicited to contribute to emergency plans.

4.7 Vulnerable Communities

During a disaster or crisis, vulnerable communities include the elderly, persons with disabilities, and migrants and refugees. SnR organizations have specific measures in place to reach and rescue vulnerable communities. SnR organizations in this study had different approaches regarding vulnerable communities ranging from considering them beneficiaries in need of assistance, or as active agents, to equals. Yet, regardless of the approach, all SnR organizations had specific procedures and practices in place.

4.7.1 Mapping Vulnerable Communities

When disaster strikes, time is of essence in SnR operations, and this becomes more crucial in the case of vulnerable communities that are generally more difficult to evacuate or rescue. For this reason, some SnR organizations work towards mapping the location and condition of vulnerable communities in the preparedness stage.

In Germany, Johanniter holds focus groups with vulnerable communities in the preparedness phase to ensure they are able to access the organizations programmes and to remove barriers towards access. The focus groups also serve the purpose of identifying the types of vulnerabilities present in the community.

Several respondents expressed that it would be useful if the mapping on vulnerable communities could be integrated into a database that can be accessed by first responders during a crisis. For example, SUMMA 112 in Spain emphasized that there is not enough coordination between SUMMA and the civil protection in order to be able to develop such a database. Such a database would provide a map of all

elderly people, or people with disabilities who cannot leave home. While the usefulness of this is self-evident, the impediment towards the realization of such a database are both bureaucratic and legal.

In exception in this regard, albeit one that is not in the EU, is Israel. In Israel, every citizen is associated with a primary health care provider that also holds a database on vulnerable persons. This database, in turn, is shared with first responders during a crisis. Yet, in the EU this may more difficult to actualize due to data and personal privacy laws.

4.7.2   Intermediaries and Active Actors

As it is not yet, or even in the future, possible to have a database of vulnerable persons in the EU, some SnR organizations strive to have intermediaries that can support their work with vulnerable communities. PUI in France practices this approach, for example by training a hearing-impaired person to act as an intermediary or relay between the organization and other hearing-impaired persons as not all first responders have a command of sign language. In this role, the intermediary with a disability is also an active participant in crisis management and not only a beneficiary.

Similarly, Croce Amica in Italy ensures that vulnerable communities do not only take on a passive role. For example, vulnerable communities are also provided with first aid training that is tailored to their abilities. In some cases, the elderly are also asked to volunteer. In one case involving a child with a severe disability who needed a driver and carer to attend school, the elderly were asked to cover this task.

4.7.3   Persons of All Abilities

Several SnR organizations stressed that they apply a policy of equal treatment, whereby vulnerable communities are not singled out. For example, this was the case with the Hellenic Rescue Team in Greece, the Civil Protection in Central Buda in Hungary, or the Austrian Red Cross. The objective is to avoid treating vulnerable communities as a separate group in society. When there is a campaign, programme, or event the entire population is involved according to their abilities. While equality and non-discrimination is at the core of this approach, specific procedures and practices may still be applied with vulnerable communities of the various crisis management phases.

4.7.4   Language Barriers

The issue of language barriers in crisis management was recurrent among respondents, especially with the recent "refugee crisis" in Europe. Here again, while some migrants and refugees are considered beneficiaries, others have a more active intermediary role as interpreters or translators between the SnR organizations and the refugee or migrant community. Similarly, elderly persons who may fall in the vulnerable category can also take on a more active role by providing language lessons to migrants and refugees, as has actually happened in several EU countries such as Germany or Cyprus, among others.

4.8 Protocols and Certification

Protocols and policies allow SnR missions to run safely and also provide guidance on how to deal with local communities. They also allow professionals and volunteers to operate in diverse setting when coordinated well. The main challenge is that it is not possible to have a protocol for every scenario.

4.8.1   Protocols and Certification Challenges

Protocols make intra and inter-organizational cooperation possible and secure an advanced level of coherence in crisis management. It was noted in section 4.1.2.1. (Protocols and Procedures) that the lack of uniform understanding and applications of protocols and procedures is one of the main challenges in the SnR field. One can add that even if uniformity existed the challenged would not be fully eliminated. Crises are unpredictable and unfolding of events can take many forms, therefore it is impossible to have a protocol for every scenario. Yet, one method to deal with this by following the hierarchical line of command to manage responsibility, and equally important, to conduct regular training and simulations of different scenarios. The primary concern here is safety as it relates to the first responders, the overall team, and the victims of the crisis. However, the more diverse the SnR teams, the more difficult it becomes to manage responsibility, therefore increased standardization of protocols ought to be given more attention and allocated more time and resources.

The issue of standardization is not only important for protocols, but also for SnR training-related certification. The effectiveness of responding to a crisis or disaster may be compromised even when SnR professionals and volunteers are highly trained. The fact that training certificates are not awarded based on universal and standardized standards leads to inconsistency when a first responder moves from a region or a country to another, or even to another organization. This is a fundamental challenge considering the high levels of mobility in today's globalized world.

4.9 Inter-Organizational Cooperation

Inter-organizational cooperation is an area of vast significance considering that disaster management usually involves multiple organizations. Such cooperation can include mutual benefits in terms of the exchange of know-how, experiences, and resources. Yet, few organizations stated that they meet post-disaster to have such an exchange.

4.9.1   Inter-Organizational Cooperation Advantages

4.9.1.1   Training

Cooperation can take place in various areas, for example, training. Respondents discussed the exchange of training among organisations of various expertise. For example, training in mountain rescue can be received from a specialised organisation or in setting up tents and shelters from civil defence services. Training provided in return depends on the expertise of an organisation and in the case of our interviewee, it was first aid.

Cooperation can also take the form of consultations where connections among various NGOs are established. This allows for the exchange of experience, expertise and approaches. It also facilitates mapping resources and activities which is crucial in rescue operations. For example, a respondent from a helicopter rescue discussed how important it is to be aware of each other's capabilities, skill sets, needs and challenges when retrieving a patient from the ground while ensuring that everybody involved is safe. This kind of knowledge is built through conducting regular drills but also informal conversations where various scenarios are considered.

4.9.1.2   Common Practice

A factor that facilitates cooperation is establishing common practices and procedures across different organisations. For example, Elite Team Special Missions of Greece explained how multiple teams train based on similar procedures and aim at developing a common mode of operating. This already works at a national level and could be extended internationally. If procedures and practices are shared, the barrier of not speaking the same language is decreased to a significant degree.

4.9.1.3   Equipment

Networks can be created that pool various equipment that could then be shared. This reduces cost, allows to avoid duplications and facilitates cooperation.

4.9.2   Inter-Organizational Cooperation Challenges

4.9.2.1   Lack of platforms

Respondents widely acknowledged the value of discussions and sharing experiences. However, a number of them pointed to a lack of platforms that could facilitate such exchange. For example, SOS Milano Volunteer in Italy discussed an absence of any formal meetings among organisations, with exchanges being limited to informal conversations only. Where more formal connections exist, they are often limited to management only. In some cases, the barrier is understaffing. Not enough personnel can mean that rescuers are overworked and find it difficult to find time for a meeting as discussed by a doctor from a refugee rescue organisation in Poland.

4.9.2.2   Competing Interests

Another challenge to cooperation can be competing interests, in more than one sense. For example, one of the respondents discussed differences in helicopter rescue missions between aircrew who prioritise the safety of an aircraft and its passengers versus doctors who prioritise reaching and tending to a patient. Competing interests can also play out at a political level. One of the respondents discussed the difficulties in navigating a system of providing international aid to refugees that comprises international rescue organisations such as Medicine San Frontier and UNICEF and local authorities who attempt to retain control.

5 SWOT Analysis

5.1 Volunteers

The SWOT analysis of volunteers identified strengths that SnR organizations and civil society organizations can be build on such as the existing enthusiasm and commitment among volunteers, the expertise volunteers bring in, the cost reductions made possible by the work of volunteers. However, some of these strengths such as enthusiasm and commitment can turn into a threat to SnR operations when confronted with the reality of high turnover among volunteers due to physical or psychological stress.

Yet, the threat of high turnover can be transformed into an opportunity if the high levels of enthusiasm and energy can be translated into long-term commitment that enables filling shortages in personnel in a systematic and consistent manner. This commitment can be secured by providing additional training and creating a stronger community of professionals and volunteers that maintains or grows volunteer motivation levels.

As for the risk often inherent in spontaneous volunteers suddenly appearing on the site of a disaster, it may be turned into an opportunity if a database of these volunteers is created for future disasters, especially in disaster and crisis-prone areas. The database, would also need to be supplemented by providing at least basic training to spontaneous volunteers whereby they resemble informal volunteers that can be counted on more systematically.

In terms of relations between SnR professionals and volunteers, the incomplete shared understanding around protocols and procedures represents a weakness, which however, could be transformed into a strength with increased joint training, meetings, joint briefing and debriefing, among other practices.

Table 5-1: SWOT Analysis: Volunteers

Volunteers	
Strengths	**Weaknesses**
• Enthusiasm, energy, and commitment • Expertise – brought in from many different professions in their private lives • Reduction of financial costs – not salaried, costs are limited to uniforms and substance during operations	• Protocols and procedures – a lack of shared understanding with professionals that impacts the effectiveness of the response
Opportunities	**Threats**

• Availability: Can fill shortages when professionals are not available • Database of spontaneous volunteers – that can be trained and organized for the future	• Availability – cannot always be relied on to show up • Turnover – quitting the service due to physical and psychological stress, or lack of motivation • Weaker communities in post-modernity – causing difficulty to recruit volunteers • Chaos of spontaneous volunteers adding to risk – due to lack of training and coordination

5.2 Self-organisation

The SWOT analysis of the area of self-organisation in crisis management revealed that there are already many instances of successful self-organisation in response to crises and emergencies. Self-organised groups consisting mainly of spontaneous volunteers demonstrated a high capacity to self-coordinate, mainly utilising information and communication technologies. Such groups tend to dissolve once an emergency is over, however, the research suggests that a latent network often remains that could activate if another disaster materialises. Self-organised efforts in the response phase of disaster management only are one of the weaknesses. Another one is that self-organised efforts go largely unrecognised. As such, they receive limited institutional support from more established organisations. An opportunity that arises in relation to this issue is to identify ways to support self-organised groups institutionally. Another one is to be conscious of latent networks and maintain a connection to them. Recognising and including self-organised groups would allow to include them in the crisis management system. The threat in this area is that self-organised groups continue to go unrecognised. As a consequence, the potential of active community engagement is not fulfilled which hinders preparedness, mitigation and response to disasters. Another threat is connected with a weakness of self-organised groups often comprising like-minded people who might end up not being inclusive enough.

Table 5-2: SWOT Analysis: Self-organisation

Self-Organisation	
Strengths	**Weaknesses**

• Examples of successful self-organisation in response to crises and emergencies • Utilising ICTs for coordination purposes • "Latent" networks remaining after crises that could be activated if another disaster materialises	• Self-organisation in crises and emergencies is to a large extent not recognised • Institutional support for self-organised groups is limited • Self-organisation is limited mainly to response phase • Self-organised groups often comprise of like-minded people and as such might not be inclusive
Opportunities	**Threats**
• Identifying ways to support self-organised groups institutionally • Identifying and maintaining contact with "latent" networks • Recognising and including self-organised groups in the crisis management system	• Self-organised groups continue to go unrecognised - the potential of active community engagement is not fulfilled which hinders preparedness, mitigation and response • Lack of inclusivity in self-organised groups

5.3 Empowerment, Communication and Local Knowledge

The SWOT analysis of the relationship between traditional CSOs, including first respondents and other emergency organisations, and place-based communities revealed that communication takes place, although it is mainly one-way. Many first responders reach out to local communities with crisis management education and training programmes. They are able to identify gatekeepers of various groups within a community through local institutions and reach out to them. They also provide institutional support to groups that are newly forming which can improve communities' capacity. The main weakness in this area is the fact the communication is largely unilateral and there are practically no methodologies for local community engagement. As a consequence, local communities are not perceived as active partners and the local knowledge is largely overlooked. The important opportunity is to acknowledge this limitation and make an effort to develop bi or multilateral communication so that local knowledge is tapped into to improve the effectiveness of disaster mitigation, preparedness and response. This can be facilitated by developing skills for mapping local communities by identifying various local institutions to reach out to and involve diverse community groups, e.g. youth, seniors, persons with disabilities, etc. The methodologies for community involvement can be developed by further research in the field of crisis management and borrowing from other fields where they already exist. Developing, testing and implementing such methodologies should be incorporated into future projects exploring crisis management. The main threat in this area is that local knowledge continues to

be ignored. As a consequence, the potential of active local community engagement is not fulfilled which hinders disaster preparedness, mitigation and response.

Table 5-3: SWOT Analysis: Empowerment, Communication and Local Knowledge

Empowerment, Communication, and Local Knowledge	
Strengths	**Weaknesses**
• FRs communicating and involving local communities to some extent - educating, training, exercises, raising awareness • FRs identifying gatekeepers by connecting to local institutions, e.g. schools • FRs providing institutional support to grassroots groups and organisations	• FRs' communication with communities - mostly unilateral - limited tapping into local knowledge • Lack of methodologies for community engagement in crisis management
Opportunities	**Threats**
• Developing bi or multilateral communication between FRs and communities to include local knowledge to improve effectiveness of rescue missions • FRs developing skills for mapping local communities by identifying various local institutions to reach out to and involve diverse community groups, e.g. youth, seniors, persons with disabilities, etc. • Methodologies for community involvement could be developed by further research in the field of crisis management and borrowing from other fields where they already exist • Developing, testing and implementing methodologies for community involvement should be incorporated into future projects exploring crisis management	• Local knowledge continues to be ignored - the potential of active community engagement is not fulfilled which hinders preparedness, mitigation and response

5.4 Vulnerable Communities

The SWOT analysis of vulnerable communities identified already existing strengths in terms of in-place programmes among most SnR organizations, for example, tailored to the elderly or disabled persons. Another existing strength consists in some SnR organizations cooperating with vulnerable communities are active actors rather than only beneficiaries. Yet this active role, even though a strength, is still somewhat limited, and therefore can be turned into an opportunity with more SnR and civil society organizations adopting this approach as it would ensure that vulnerable communities are better able to react to crises and disasters.

Moreover, with an active role, trained members of vulnerable communities can act as intermediaries between their wider respective vulnerable community and SnR organizations. Interrelatedly, the inclusion of vulnerable persons of all abilities in the crisis management cycle would be a major opportunity whereby the potential and resources in society as a whole are utilized.

A structural weakness identified consisted in the difficulty in mapping the location and conditions of vulnerable communities that would allow for a more effective and faster response. This difficulty is mainly due to laws and regulations in the EU and on a national level, for example around data privacy, but also heavy bureaucracy at times. Being able to partially or fully map vulnerable communities would turn this weakness into a major opportunity and strength.

Table 5-4: SWOT Analysis: Vulnerable Communities

Vulnerable Communities	
Strengths	**Weaknesses**
• Specifically integrated programmes – for the elderly and disabled persons, among others. • Active intermediary role – where vulnerable persons are active actors and not only beneficiaries	• Insufficient mapping – of locations and conditions
Opportunities	**Threats**
• Mapping of location and conditions • Inclusion of all abilities – in the crisis management cycle	• Language barriers – with migrants and refugees • Lack of intermediaries – between SnR organizations and vulnerable communities

5.5 Emergency Plans

The SWOT analysis of emergency plans identified local knowledge as a strength, however, one that is not fully capitalized on. Rather, the vast majority of emergency plans tend to follow a top-down

approach centred on the governmental and local authorities. While this top-down approach offers coherence within the chain of command, it also represents a weakness in terms of missing out on local knowledge, or local risks and assets, which civil society organizations can bring into light. Capitalizing on local knowledge embedded in local communities or the experience of civil society organizations would be a major opportunity for improved crisis management. Ignoring local knowledge, on the other hand, is a threat that can impede effective and holistic preparedness and response to crises, as well as recovery.

Table 5-5: SWOT Analysis: Emergency Plans

Emergency Plans	
Strengths	**Weaknesses**
• Local knowledge from civil society – such as volunteer organizations or local communities	• Top-down approach – non-state actors not sufficiently invited to contribute
Opportunities	**Threats**
• Bottom-up – taking advantage of an increasing awareness of the importance of local knowledge	• Insufficient awareness of local risks and assets

5.6 Inter-Organisational Cooperation

The SWOT analysis of inter-organisational cooperation in the field of crisis management revealed that the importance of such cooperation is widely acknowledged. CSOs are highly aware that pooling resources in terms of know-how, technology, equipment and organisational capacity is necessary for the successful management of crises and disasters, which is a strength. This is reflected in active efforts to build cooperation, oftentimes through informal networks and communication, that already takes place. The weaknesses concern the scope of cooperation which is often only limited to the management, but not other organisation members. Few formal platforms exist that would facilitate cooperation building and post-mission common debriefing is limited. The major opportunity that exists in this area is to develop more cooperation platforms, both physical and online, that would be accessible to various stakeholders. The main threat is that inter-organisational cooperation is weak as that would increase risk and vulnerability as well as the cost of missions.

Table 5-6: SWOT Analysis: Inter-Organisational Cooperation

Inter-Organisational Cooperation	
Strengths	**Weaknesses**

• The importance of cooperation is recognised • Building cooperation through informal networks and communication	• Cooperation is limited to management • Few cooperation platforms exist • Limited inter-organisational debriefing
Opportunities	**Threats**
• Development of accessible platforms (physical and online) for various stakeholders, including less formal actors	• Cooperation is weak - higher risk and vulnerability, duplication of efforts, higher cost

6 Civil Society Issues in the Context of SnR Pilots

6.1 Inter-organisational cooperation

The focus of the seven pilots conducted in the Search & Rescue project was mainly on testing technologies. From the civil society involvement in crisis management point of view the relevant aspect was inter-organisational cooperation and what facilitates it.

6.1.1 Platforms

The pilots provided platforms for face-to-face meetings of various CSOs and other actors that many respondents pointed to as missing for sharing know-how, experiences and approaches. Members of various organisations had an opportunity to meet and discuss which increased awareness and understanding of each others' competencies, expertise and organisational cultures. UCs also demonstrated the need for multi-stakeholders' consultations.

6.1.2 Shared knowledge

Lessons learned were collected during the pilots and such practice could also be implemented after SnR missions. Such knowledge resources can be transferrable and should be disseminated to organisations involved in the missions.

6.1.3 Briefings and debriefings

Many of the research respondents pointed to the need of more structured inter-organisational briefings and debriefings. During the pilots many configurations of such meetings were tested. D8.11 points to the demonstrated need for different briefings for different target groups such as participant briefings, safety and security briefing or first responder-briefing. Debriefings also came highly recommended as sources of valuable data. Such meetings should take place directly after an event when the experiences are still fresh in participants' minds and should be facilitated. The recommendations of D8.11 referred to pilot tests, they are, however, relevant for SnR missions as our respondents discussed.

7 Conclusion and recommendations

Extensive research was conducted as part T2.3, offering a rich set of findings in relation to civil society involvement in crisis management. For the purpose of this task, civil society in crisis management was framed as a community. Various conceptualisations of the community were employed to identify the main actors, their roles and interdependencies. The main categories included various types of volunteers, established CSOs such as non-governmental organizations as well as local communities. Several pertinent patterns emerged that enabled identifying themes that represent an evidence-based indication of where civil society involvement stands, challenges in or to civil society involvement, as well as strengths, opportunities, and areas for improvement.

Within the data analysis process, it quickly emerged that a common definition or consensus on who or what is considered a volunteer did not exist among the respondents. Additionally, there is a lack of a definite consensus in the literature on the definition of volunteers. Therefore, in this regard, T2.3 identified four main categories of volunteers including formal, informal, self-organized spontaneous, and spontaneous volunteers. This, in turn, allowed for a more rigorous analysis of the research data and findings.

The themes that emerged included volunteers advantages and challenges, self-organisation, preparedness and empowerment, communication with local communities, intermediary role of CSOs and their involvement in emergency plans, SnR organizations' practices and approaches with vulnerable communities, protocols and procedures (between professionals and volunteers) as well as inter-organisational cooperation.. A detailed description of each theme, and its content, can be found in Chapter 4 above.

The finding presented in the themes was analyzed by a SWOT analysis. The finding of the SWOT analysis can be found in Chapter 5 above.

Based on the findings, themes, and SWOT analysis, several main recommendations for future research emerged, including:

1. The need to identify practices that keep volunteers motivated in order to confront the threat of volunteer turnover present in many SnR organizations across the EU. In this regard, T2.3 had already identified increased joint training and a stronger community of professionals and volunteers as one means to increase motivation. However, this needs further research specifically on this issue.

2. The need to identify the best means of further involving civil society organizations and local communities in local emergency plans, and specifically in terms of capitalizing on local knowledge around local risks, assets, and past experiences.

3. The need to develop methodologies for local community involvement in order to stimulate bi-/multilateral communication with community actors and be able to tap into local knowledge. Developing, testing and implementing such methodologies should be incorporated into future projects exploring crisis management.

4. The need to identify the means of mapping the location and conditions of vulnerable communities and individuals, that translates into a database that can be used by SnR

organizations and civil society organizations during a crisis. The potential or possibility of such a database ought to be researched within the framework of existing EU and national laws and regulations.

5. The need to recognise and institutionally support self-organised groups of spontaneous volunteers in crisis management. Self-organising spontaneous volunteers often need minimal support in terms of coordination, advice, small grants or getting connected to wider crisis management networks. More established emergency organisations could build these elements into their response plans to increase the capacity of self-organised groups.

6. The need to develop more cooperation platforms, both physical and online, that would be accessible to diverse stakeholders, including less formal actors. Such platforms would facilitate meetings, including post-event debriefing, discussion and collection of lessons learnt.

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