Culture and disaster risk managment - Stakeholder attitudes during Stakeholder Assembly in Rome, Italy.

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1. Introduction

This report provides a summary of the topics discussed and the results of the CARISMAND Second Stakeholder Assembly conducted in Rome, Italy on 27-28 February 2017. In order to promote cross-sectional knowledge transfer, as in the CARISMAND First Stakeholder Assembly held in Romania in the previous year, the audience consisted of a wide range of practitioners that are typically involved in disaster management, e.g., civil protection, the emergency services, paramedics, nurses, environmental protection, Red Cross, fire-fighters, military, the police, and other non-governmental organisations. Further, these practitioners were from several regions in Italy, e.g., Rome and Lazio, Toscana, Emilia-Romagna, and Valle D'Aosta. The participants, who varied between 40 and 60[1], were recruited via invitations sent to various Italian organisations and institutions (at the national, regional and local levels), and via direct contacts of the Protezione Civile Comune di Firenze who are one of the Italian partners in the CARISMAND Consortium.

The event consisted of a mix of presentations, working groups, and panel discussions for these participating practitioners, in order to combine dissemination with information gathering (for the detailed schedule/programme please see Appendix 1). After an initial general assembly where the CARISMAND project and its main goals were presented, the participants of the Stakeholder Assembly were split into small groups[2] in separate breakout rooms, where over the course of the two days they discussed the following topics:

- Working Group 1. "Culture & Risk": Practical Experience of Cultural Aspects Disaster Communication between Practitioners and Citizens;

- Working Group 2. "Media Culture & Disasters": The Use of Social Media and Mobile Phone Applications in Disasters;

- Working Groups 3. "Social Cohesion & Social Corrosion": Cultures, Communities, and Trust.

After each working group session, panel discussions allowed the participants to present the results of their working group to the rest of the audience. After each panel discussion, keynote speakers gave presentations related to the respective working group's topic. This time schedule was designed to ensure that participants are provided with detailed information about recent developments in disaster management, e.g. related to the use of mobile phone apps and social media, but without influencing their attitudes and perceptions expressed in the working groups.

The main focus of the working groups was the relationships between culture and risk/disaster communication, the role of social media and smartphone apps, and trust between citizens and disaster managers and/or authorities. These topics, and the questions discussed within each working group, were chosen:

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[1] The composition of the audience changed over the course of the 2-day event, as some practitioners could, for work reasons, only attend one day, morning/afternoon sessions only. Overall 59 practitioners participated in the event.
[2] The composition of the working groups changed over the course of the Assembly to ensure that each topic was assessed from various sides and new ideas could be brought up.

- following the findings of the CARISMAND First Stakeholder Assembly held in Bucharest, in particular regarding the disconnection between citizens' risk perception and cultural factors in disasters;

- the results of the CARISMAND First and Second Citizen Summits held in Bucharest and Malta respectively, specifically taking up the participants' suggestions regarding vulnerable groups and groups that are seen to be potentially helpful in disaster situations;

- the results of Work Package 3 'Cultural Factors and Technologies', in particular regarding the increasing interest in mobile phone apps compared to social media usage;

- the literature review provided in Work Package 4 'Risk Perception and Risk Cultures', particularly regarding the ambivalent of role of trust in disaster preparedness, response and recovery;

- the preliminary findings of Work Package 7 'Citizens Empowerment', in respect to community cohesion and specific opportunities for citizen empowerment; and

- topics highlighted in Work Package 8 'Risk Communication and the Role of the Media in Risk Communication' regarding disaster communication practices (particularly in connection with social media/apps usage as identified in Work Package 3 'Cultural Factors and Technologies').

These topics were also chosen in order to provide a sound basis for the next round of CARISMAND events (Third and Fourth CARISMAND Citizen Summits held, later, in Rome and Frankfurt in June 2017), i.e. exploring issues of risk perception and culture in the context of disasters at the very point, where practitioners and citizens interact.

The location of the Second Stakeholder Assembly was selected to make use of the extensive local professional network of the Protezione Civile, but also due to Italy being a location where various "types" of hazards are prevalent, and disasters were occurred in the very recent past.

All documents related to the Working Groups, i.e. discussion guidelines and consent forms, were translated into Italian. Accordingly, all presentations as well as the group discussions were held in Italian[3], aiming to avoid any language/education-related access restrictions, and allowing participating practitioners to respond intuitively and discuss freely in their native language. For this purpose, researchers from the Laboratory of Sciences Citizenship in Rome[4], one of the CARISMAND Consortium members, were used as Working Group moderators, alongside simultaneous interpreters and professional local moderators contracted via a local market research agency (RFR International[5]), who also provided the transcripts and translations into English for all Working Group discussions.

It is important to note that the discussions within these working groups reflect the participants' perceptions and may or may not reflect the realities of how communication actually occurs in disaster situations.

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[3] Or in English with simultaneous translation into Italian.
[4] Laboratorio di Scienze della Cittadinanza (LSC)
[5] http://www.rfr-international.net/

2. Methodology

Participants for the Second Stakeholder Assembly were recruited by CARISMAND partners from Italy through personal direct and indirect contacts. Following the welcome and introduction session of the CARISMAND project to participants, the participants were divided into six smaller groups, where they discussed the topics outlined in each Working Group (See Appendices 2-4).

The consistency of each Working Group was designed specifically to ensure that the participants reflected different professional backgrounds, were from different departments and organisations, and that they were (as far as possible) from different regions across Italy. Following the participants' completion of the consent forms, all group discussions were audio-recorded, fully transcribed and translated into English. In this process, all participant names and personal identifiers were removed to ensure the participants' anonymity.

The resulting English transcripts were coded following a preliminary coding framework which allowed an initial structuring of the vast amount of collected data. Then, all transcripts were re-coded theme by theme, summarising specific processes and practices or constructions and interpretations. This process of re-coding also initialised a critical restructuring and rethinking of the codes applied first, and allowed a more focussed data analysis.

The word association exercise was conducted at the beginning of the third Working Group, where participants were read to, one at a time, a series of words ('Responsibility', 'Credibility', 'Trust', and 'Faith') and asked to state the first word that came spontaneously to their mind. The word association exercise was also audio-recorded and focussed on the immediate responses with no data being added or amended later in the Working Group discussion. The resulting associations were transferred into a database and categorised according to each of the respective words. Then, the associations were analysed by frequency of occurrence using the word-count feature of NVivo 11 and converted into a Word Cloud reflecting the frequency of use.

3. Qualitative Data Analysis

3.1. Cultural Differences in Communication Strategies

The aim in this initial discussion topic was to explore how the participants would adapt their communication strategies in response to a specific disaster to different cultural groups, and to further explore how they would adapt their disaster management strategies to different cultural groups. Accordingly, the participants were asked to discuss their communication and disaster management strategies in how they would respond to a fire in three different residential locations within Rome, which are associated with different cultural groups: 1) Tor Bella Monaca (6th town council); 2) Viale Parioli (2nd town council); and 3) Via del Vantaggio (1st town council).[6] Participants were encouraged to speak openly and develop their own ideas according to methods used in explorative qualitative research.

Generally, participants recognised in this context that there is a need to ensure that those disaster and emergency services who communicate with the public have an appropriate level of awareness and training to respond to different cultures and communities: "*Operators need to be well trained though, because if populations are different, approaching them needs to be as well*" (G1; R3[7]), "*We receive calls from anybody, even from foreign people, they might not speak properly, they might have issues understanding, and our operators need to be able to understand every single call. Italian people too, they often tend to be very technical with terms, but we ask them to keep it as clear and simple as possible*" (G1; R6), "*there should be two well differentiated lines of communication strategy, a communication for training that is carried out in what was once called "peacetime", and a communication for emergency that should be very slender and simple*" (G6; R5).

> "*What we care about is to have a good training on what comes next and on long term developments. The multicultural camps are nothing more than a recreation of what was there before. But you scramble neighbourhoods. If I have 10 Romanian families that normally live in different areas of the city, in camps they end up together and group up, and Italians lament their presence in their camp. They were there before, as well, but the arrangement changed. Knowing different cultures, their approach to food, death, gender issues and the fact that, for Muslims, a woman with uncovered arms touching a man's body is an offense... We don't need to adapt, but need to envision a different training for the long terms*" (G1; R?[8]).

A small number of practitioners differentiated between poorer and wealthier neighbourhoods, and their responsiveness to communication strategies in risk and disaster situations. They felt that 'nicer' neighbourhoods were easier to work with in disaster situations or simulations: "*In 24 apartments only one person was still inside, the others were very cooperative. This was a nice neighbourhood; if*

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[6] Tor Bella Monaca is located in one of the more marginalised and highly populated areas of Rome, characterized by a high rate of immigration, lack of schools and safety. The area is also known for its very high crime rates. Viale Parioli is located in one of the richest areas of Rome, with apartments (and few villas too) belonging mostly to people from the upper strata. Via del Vantaggio is located in an old area of Rome, with narrow streets and old houses. The area is partially inhabited by elderly people.

[7] Group (G) 1; respondent (R) 3. These abbreviations will be used throughout this report.

[8] In some cases, the recording was not clear enough to allow recognising the voice of the respective speaker (e.g., due to background noise / other participants speaking at the same time). The same codification (R?) is adopted for all such cases.

you bring the same situation to the suburbs, people usually do not move and you cannot convince anyone" (G1; R5), "*In other areas, you find people who can easily leave their homes and this is easier for us. The problem with the suburbs is that after the event you need to spend energies to relocate people, the wealthier areas need attention in other terms: insurance, safeguard of the cultural heritage*" (G3; R6).

Practitioners also felt that some citizens require direct communication in disaster situations: "*In terms of management, I expect a tight community social net in the first [Tor Bella Monica] and third [Via del Vantaggio] setting, while I don't see it so strong in the high end Rome. The second setting [Viale Parioli] could need a single direct communication to families.*" (G1; R2). Practitioners, then, based on their actual experience, identified other neighbourhoods where they felt that they did not get as an effective response: "*We made some evacuation simulations in Naples, inside the Vesuvius red zone for eventual eruption. Since people there live in abusive houses, they were not leaving, as they know that if they go they cannot go back in. We made the simulation with no people*" (G1; R?), "*As a former municipal police chief in [Italian locality], I speak from my own experience. In popular areas, there is a higher participation, but the most problems are brought out in areas where people are more indifferent [towards disaster communication]*" (G2; R?).

Elderly populations were often perceived by practitioners as having difficulties with some communication channels (e.g., social media) and, instead, were seen to be more likely to receive communication through word-of-mouth or TV, although sometimes small emergencies are not included on local news reports either, presenting additional challenges: "*Elderly people are not used to social media, are not used to receive information from other media than a relative's phone call or the news on TV. They hardly find indication of a small local emergency on the news, though*" (G3; R?), "*We should also consider the elderly population that not always is updated*" (G4; R?). Of further concern to one practitioner was that some elderly populations were not contactable even through print media, or did not have relatives or friends to provide them with information related to disasters; however, a telephone number for communication with these citizens meant that they could be informed about emergencies or disasters:

> "*We did not reach elderly people. They did not read newspapers, as characters are too small, and we could not reach them through social media. In fact – as there was a telephone number well indicated for any request of information – all the telephone calls we received were of elderly people, out of the working environment, who did not have anyone to ask, such as grandchildren*" (G6; R7)[9].

A few practitioners also stated that citizens may be hostile and uncooperative towards them in disaster situations, and that sometimes practitioners need to rely on support from law enforcement when communication strategies fail: "*It depends on areas and situations, but sometimes police needs to intervene and force people out*" (G1; R?). Although one practitioner felt that all areas can have their own problems when trying to communicate in disasters: "*It makes no difference if we are called in one area or the other of the town. Every area has its own problems*" (G1; R5). Some mistrust towards disaster workers by citizens was also perceived by the practitioners, and that effective communications strategies are required to interact with them in disaster situations: "*People are without faith, and they are diffident, when for instance, we go to open doors, they don't want to give*

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[9] This incident referred to ensuring that all residents in Florence were informed about the UCI Road World Championships in 2013, so that they knew what procedures to follow for a large-scale event.

out information, and we had to work on being diplomatic and make them understand that all we need is a name and surname to identify people and be sure about what we do" (G1; R5)[10].

Practitioners specifically identified a number of perceived language barriers in emergency and disaster response, where interpreters may be required to help communicate with different groups; however, these interpreters may also pose problems of their own in communication with different cultures: *"For example in plane crashes – even if in the airports many languages are spoken – all the problems arise when people do not know the local language"* (G6; R8).

> *"What I found difficult was to speak to those people. The Tor Bella Monaca area could be compared to Rocca Tedalda, the one I mentioned before for the warehouse[11]. We don't have many people speaking Italian there… many languages indeed… we had this Chinese interpreter who knew only 50 idioms of Chinese, but not all the others, therefore this was a barrier"* (G2; R3).

Thus, translators may not be able to communicate to citizens in all situations, particularly if communication is required in multiple languages, and translators are not able to do this. Further, translators' abilities may be limited by their knowledge of a language and are asked to translate information where they may not know the correct words or phrasing.

Different cultural groups were also seen to have different relationships with authority figures. In some cases, these relationships are good and in other cases these relationships are not good, which may impede communication in emergency and disaster situations: "*I can think of what happened with the Costa Concordia accident[12]. Most of the victims were German who are more used than we are to respect orders. The problem there was who was giving the orders, as those who followed orders died*" (G2; R?), "*I once rescued from a car crash with a coach full of Japanese people, and they strictly followed my orders to go out and sit on the guardrail... You need to be careful, Chinese people are like that, too. They are helpful, Italians are not so much*" (G2; R?).

> *"In my personal experience, different ethnic groups react differently, in terms of actions. Chinese communities have a different approach from Senegalese groups. You rarely see groups of Chinese running around and fleeing in panic. Young Senegalese groups have this kind of response. Chinese people wait for their instructions, for instance, other groups don't. I believe that some cultural backgrounds are easier to manage during emergencies. Some types of people obey orders, some other don't"* (G2; R4).

Some practitioners' judgements regarding cultural groups' communication interactions with authority figures are stereotyping, and such cultural stereotypes do not necessarily reflect the actual behaviour of people depending on their nationality. In this context, it is interesting to note that a perceived stereotypical behaviour of 'following orders', which may not necessarily reflect a 'good' relationship with authorities, may have both life-saving or life-threatening effects, in which case having a 'bad' relationship with authorities, resulting in more self-reliance and initiative, may, in some cases, be the more desirable behaviour.

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[10] In this case the participant is referring to the difficulties of informing citizens about the potential of fire hazards in the area where they live.

[11] In this case the participant was referring to a fire in a warehouse in a six-storey building.

[12] This refers to the Costa Concordia disaster in 2012 where the cruise-ship capsized and sank after striking rocks near Isola del Giglio.

Furthermore, practitioners noted that some communities are difficult to communicate with, as they may have illicit lifestyles and interactions with authorities: "*The relationship they have with authorities is always very "distant", because they often work in a total illicit way and they cannot ask for assistance saying "I am the one who manages 200 people…". There is a substantial incommunicability between big parts of these micro-societies and authorities*" (G4; R10).

3.2. Perceptions of Citizens' Understandings of Risk

The aim of this section was to explore the attitudes of practitioners towards the influence of culture on citizens' understandings of disaster risk, and how such understandings may affect citizens' preparedness towards hazards. The practitioners were invited to discuss their perceptions based upon their own experiences of working with different cultural groups rather than speculations or hypotheses, and they were encouraged to identify cultural differences beyond ethnicity or religion.

As a result, there was a generally strong awareness amongst these practitioners that citizens' perception of risk is varied, and that a lot of citizens may not have a perception of risk that reflects the reality of their situation. Furthermore, although practitioners had recommended and/or conducted education and information campaigns regarding the risks of disasters and how to respond to disasters, there was also scepticism that such risk awareness campaigns, actually, lead to more appropriate behaviour towards emergencies and disasters.

3.2.1.   Perceptions of Citizens' Lack of Disaster Awareness

The specific focus, here, was on practitioners' perceptions of how citizens perceive hazards and disasters, rather than on what citizens actually feel or how they perceive disasters. Understanding how practitioners perceive citizens' behaviour in response to hazards and disasters may enable a greater understanding of the relationship between authorities and citizens regarding responses to hazards.

Citizens may not be aware of emergency and disaster prevention methods, and practitioners identified an ignorance about these amongst citizens: "*If we are lucky to be able to meet those needs, fine, but if we don't because it's not been planned… If people are not prepared and there has not been the first part of prevention, lacking the risk perception*" (G4; R3). A lack of awareness about correct procedures to follow in emergency and disaster situations by citizens was identified by practitioners, for example, citizens may not know the correct phone number to use in disaster and emergency situations[13]: "*I had an experience here in Rome, in the Corviale Area, a bad area that now is getting better, but when I went for a scooter in flames… they told us that we were late, they insulted us but they don't know that the access by only the number 112 slowed our operations a lot*" (G1; R5).

Beyond citizens ignoring disaster prevention efforts, practitioners also felt that there are institutional barriers:

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[13]Potentially due to, as until recently in Italy there were many emergency numbers: 112 was only for "Carabinieri", 113 for police; 115 for fire-fighters and 118 for health emergencies.

"I managed the national plan on seismic emergencies, starting from Calabria […] For other buildings, we have the landscape restrictions, and we cannot intervene on them because they are protected, but they end up falling with quakes. We have law and institutional barriers that need to be overcome" (G3; R8).

"My answer is that in 1915 a norm was issued saying that in all areas of Calabria and Sicilia regions a list of areas where it was possible to build was listed, divided by type of events such as flood, earthquake etc. It was a sort of micro-zonation that today we don't still have. Today all those areas are completely built, especially all the alluvial area. So it's a matter of the government of the territory that does not work" (G4; R5).

In the immediate response to a disaster, practitioners felt that *"the first reaction during emergency is worry, fear, panic and people feel lost. The second stage is the safeguard of my [a citizen's] private interest: family, home, assets. The sense of the community fades quickly, it always happens"* (G2; R5).

"In case of troubles, people tend to think about themselves, their families, their interests and their problems. I don't have any doubt about this. So clearly the perception of risk depends on our own interests. If I am a farmer and I have animals, I don't care if the earth trembles, but I won't move from here if my cows won't come with me. If I am old I will think to my needs… if I am young and I have a caravan, I try to think if it's better to stay here... etc. They try to see how they can manage themselves and their families" (G4; R3)

Citizens were argued by practitioners to not be aware of the actual risks posed by emergency and disaster situations for a variety of reasons, for example, citizens may be in denial or have a fatalistic approach to disaster risks, or not have any experience of previous disasters from which they form judgements of risk. A number of practitioners also felt that citizens had no awareness of risk in emergency and disaster situations due to a "culture of denial of risk" amongst some social groups: *"Regardless of all the messages that we receive, we need to admit that we like to live in denial. We ignore something and take care of it when it happens"* (G1; R?); *"They highly underestimate every risk. There is a denial attitude, and it comes from the higher grounds of the social and cultural population"* (G2; R5); *"We see this usually even in the world of work… people who do not wear an helmet because they think that nothing can happen, people who don't fasten their seat belt, those who do not put a baby on the baby's chair and so on. Probably this is a very important cultural fact"* (G4; R10), *"We all are convinced that 'something like that cannot happen to me'. We feel safe"* (G2; R?). The perception of practitioners that citizens with a higher social status have a misperception of security reflects other areas of security research, for example, citizens with a higher economic status may feel more insecure and seek to protect themselves and their property[14].

Furthermore, there was a difference in opinions amongst practitioners, with some practitioners perceiving younger citizens as being more risk-aware than older citizens, who were seen as more fatalistic: *"The culture of emergency is missing, not much in young people where we can see more of sensitiveness to this topic, but perhaps we are a bit fatalist by nature"* (G6; R1), whilst others felt that older citizens were actually more aware than younger ones: *"Paradoxically, young people were as uninformed as elderly people"* (G5; R7), *"sharing with others the sense of danger and what it is*

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[14] See e.g. Lee, D. R., & Hilinski-Rosick, C. M. (2012). The role of lifestyle and personal characteristics on fear of victimization among university students. *American Journal of Criminal Justice*, *37*, 647-668. doi: 10.1007/s12103-011-9136-0.

necessary to do. I think that this attitude is more present in the elderly people" (G5; R3). To counter this, practitioners from one focus group felt that to some extent citizens should search for information related to emergency and disasters themselves rather than rely on waiting to be informed by the authorities: "*It is - though - up to us to look for information. We are adult people, we have families, children, we have to offer protection to weaker people, so it should be our act of conscience to look for information without waiting it will fall from heaven*" (G2; R5).

Further to this perceived lack of awareness regarding risk related to disasters, practitioners felt that citizens do not know how to respond appropriately in emergency and disaster situations, "*like the fire that occurred at Aiazzone warehouse, with more than 100 people who did not know what to do*" (G1; R6), "*We also distributed to citizens a questionnaire, in order to understand their level of knowledge of the civil protection system, and what civil protection means. The outcomes were a bit disappointing*" (G5; R7), "*In some countries people evacuate as soon as they hear the alarm, while in Italy no one wants to move from their home or from their centre*" (G5; R2). One practitioner presented in this context an assumption that citizens do not even inform themselves about emergency plans and how to respond in case of disasters: "*The people usually don't know about the civil protection plans. They don't go to the municipal offices and ask for that*" (G3; R4).

As another factor, citizens' perception of risk related to disasters was perceived by practitioners as being linked to their knowledge of the area where they live, with those citizens who were seen as being more familiar with this area perceived as being more aware of the risks of a disaster "*because you know how you live and you know that in certain areas you are at risk*" (G2; R?), "*Hydro-geological disasters are common to mountain people, and they can have an effective and proper preparation, especially those who work with the territory*" (G3; R8), "*Where the link between the territory and the citizens has been severed, with many people living in the big cities, things drastically changed. Clearly this is linked to the culture we carry out in schools, through parents and as administrations*" (G4; R?). On the other hand, practitioners felt that some citizens may just ignore the risk posed by the area in which they reside: "*It depends on expectations. It depends on what you chose to do and what to buy and where to live. But even if you are in a risk area, you don't want to know*" (G2; R?), "*you cannot tell people that everything will always be fine and nothing will happen. I have a home up in the mountains and nobody from the area knows if their home is safe or not. They assume they are*" (G2; R6).

The frequency of emergencies and disasters was also seen by practitioners as effecting how citizens perceived the risk of a disaster happening in the area they live in. If disasters were not seen as frequently occurring, practitioners felt that citizens lacked an accurate perception of risk: "*We did this [providing information regarding risks of earthquakes] close to Latina, where there were about 3 small shakes, as the territory is not seismic, and the first time many people came to listen. But after a year from the shakes, people just walked by. Fear is what gets people closer but then they get away*" (G1; R?), "*I insist they have a short memory. When things happen, we are all moved and involved... as soon as memory fades, we need to find so many motivations to make prevention that it becomes very hard*" (G2; R?), "*in Florence the flood comes every 100 years, and in 100 years people not only forgot the flood, but as culture [of emergency] is missing, what should I tell you to do?*" (G6; R1).

A small number of practitioners reflected that citizens may not be aware of whom to contact or how to actually get help in an emergency or disaster situation: "*People tend to be very frightened and ask for help even from places that are not nearby the interested area; people are alarmed, for instance,*

just by a plume of smoke" (G1; R6), "*There is no information. This indicates a very poor information about how to react, where to ask*" (G4; R?).

Furthermore, the collective and historical memory of past emergency and disaster situations was identified by practitioners as important to citizens' perception of disasters and how they judge risk and respond to disasters. In particular, practitioners felt that younger generations may learn from older generations' personal experience of emergencies and disasters: "*The experience and historical memory needs to be recognized. Younger people do not have that much experience, and the elder people's experience and history need to be shared and valued*" (G3; R?), "*I think that elderly people are very important, because they have experience and sometimes they help us in the emergency, because they remember what happened in the past*" (G6; R7).

> "*It is very important to work on culture, i.e. remembering the events of the past, because often the perception of risk is connected to the occurring of the event. If the event did not happen and did not touch us personally, it is hard to perceive its risk and to adopt behaviours in order to prevent possible damages and consequences. The Department of Civil Protection for years has worked for the emergency planning for the volcanic risk in the Vesuvio and Campi Flegrei[15] area… it came out that citizens who live in the Campi Flegrei area do not have the perception of living on the top of a volcano, but they perceive Vesuvio like a more dangerous volcano. There's a lack of knowledge of the territory, and we would need a "culture" [collective memory] in this sense, because those events happened 400 years ago – the last important eruption at Campi Flegrei occurred in 1600 – and consequently the memory of what happened does not exist*" (G4; R7)

Finally, one practitioner referred to a cultural practice, which they perceived as increasing citizens' risk, whereby citizens were provided with funding to increase the resilience of their property as part of a strategy of disaster preparation but, instead, citizens used the funding to decorate their homes: "*In spite of spending money to secure their buildings, they preferred decorating them. People don't want to hear the word 'danger'*" (G3; R8).

3.2.2.   Identified Cultural Factors in Disasters

Practitioners felt that there were differences between communities related to their socio-economic status in how they responded to disasters. On the one hand, citizens from wealthier neighbourhoods were seen as being more cooperative and more willing to help in disaster situations compared to those from neighbourhoods seen as less privileged: "*I would expect a higher mutual participation in Tor Bella Monaca and Via del Vantaggio compared to Parioli, where I envision indifference and isolation. This could be my prejudice though*" (G2; R5). Practitioners also perceived that in disaster situations wealthier citizens may often have more resources, whether such resources are financial or in other forms (e.g. social networks), which they can rely on in disaster situations: "*these people have the right contacts and they directly call friends and colleagues to obtain whatever*" (G2; R6). On the other hand, some practitioners felt that poorer people had less to lose in disaster situations than wealthier ones with lots of material goods: "*The following reaction depends on how much you have to lose. The social ranking means a lot here. People living in a rented flat have less to lose and tend to save their lives. The Parioli population will have a different reaction as they have a lot to lose*

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[15] Volcanic area to the west of Naples, Italy.

materially speaking" (G2; R?). One practitioner also felt that "*usually wealthy people feel like being invincible*" (G2; R?), which was seen as effecting their risk perception in disaster situations.

In terms of disaster recovery, wealthy citizens were seen as having greater resources for achieving their recovery compared to vulnerable groups (e.g. poorer people and the elderly); at the same time, though, poorer people were seen to be able to work towards their own recovery (e.g. rebuilding their own homes):

> "*This is where the Viale Parioli citizen has it easier, he has someone to go to, and maybe the citizen in Tor Bella Monaca does not. There was this homeless lady there who did not have a backup house and we gave her one spot at the Caritas Hostel, but no one else did ask for us to find a home, they all had their own resources, and that depends on the area*" (G1; R4).

> "*Wealthy people have a greater awareness of what they can lose. I usually take care of disaster refunding and when we had the Lunigiana[16] flood, I was surprised I was surprised by a request for a Porsche refund. This is an extreme request, as it affects the finances of the entire community, but it is about the reestablishment of the damage. There are many solutions, sometimes it even happens that poor people manage to fix their own homes and don't take any money whereas the rich people hire lawyers and manage to be reimbursed*" (G2; R2).

> "*The house was inside an historical building, there was a hotel next door. It belonged to an old woman with a daughter. High culture, architects and professionals. They were able to go sleep somewhere else but they were also old people and very settled in their lives. He did not want to leave his apartment on fire. He was much attached*" (G3; R6).

Further, some practitioners felt that citizens in urban environments did not have as much understanding of the risk of their surrounding environment, and that these citizens delegated the responsibility for their safety to authorities, whilst citizens living in smaller communities were seen as more self-sufficient, and that this trait would be in the community's collective memory: "*There is a difference in the effort we need to make to help people from a rural suburb vs. central high-end areas. The first ones need less help than the others, even in the event of snow or flood… this comes from the population's resilience, as poorer people are used to deal with life, and wealthy people are not*" (G2; R?), "*If we look at old studies, we will see that the mountain men are more hard-working, but this is because if they do not chop wood, in winter they will die, or if they do not repair the roof, they will die. A Neapolitan man will go to the port, someone will pass, we will fix the house*" (G4; R3). The practitioner, here, suggests that citizens in some urban environments may just wait for help to arrive rather than being proactive in responding to a hazard themselves.

> "*The ability of residents to perceive safety depends on the size of the place where you live in. The urban safety of cities is very strange, in the biggest cities people tend to delegate their safety care to institutions, as risks are higher. Smaller communities are self-sufficient, are like islands, and people take care of themselves and for one another and generations pass on this attitude. I am in touch with the Isola del Giglio[17] people, and the local police and they had to manage the great fluxes of people getting on and off the island. The rescues usually focus on boats, not on people off the boat. At Isola del Giglio, they acted spontaneously opening houses, hotels, and*

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[16] Lunigiana is a historical territory of Italy, across the provinces of La Spezia and Massa Carrara.
[17] The participant here is referring to the Costa Concordia disaster, January 2012.

helping the people. Without no protocols. In a big city, this would be much harder to do as operations are on institutions and they get loaded" (G1; R4).

In terms of disaster response, practitioners also felt that "*in small communities, the way to restoration is faster and more successful than in big cities*" (G2; R?).

Furthermore, practitioners were often found to ascribe behaviour to nationality as a cultural group, although the actual reason for the different behaviours displayed by these groups in disaster situations is more likely to be due to their lack of local knowledge, i.e. they do not know how to respond to a hazard with which they are not familiar: "*North African people suffered from a great number of fractures during the last quakes, not because they were under a collapsed building but because they have been throwing themselves out of the window. They were not aware of what a quake was, they just jumped down and broke all bones*" (G2; R?), "*I think about UK, which is a quake free country and Greece… the behaviour is very different, they would act like African people probably. They would not in the event of a flood, as they are more experienced with water emergencies. It depends on the environment background*" (G2; R?).

Differences in gender roles may further affect how citizens respond in a disaster situation, as some cultures may restrict interaction between women and men, and this can create difficulties in providing effective responses to disasters: "*The women's role in emergencies. Some groups don't accept women doctors, or doctors cannot touch women. The gender barrier is very strong in some communities*" (G3; R8).

Some cultural groups may also not rely on authorities in their response to disasters, and may show an apathetic response to the on-going event: "*For example, in case of fires in nomad camps the reaction of people is to remain where they are, and they also seem not to like the intervention of rescue means, despite the event is still ongoing*" (G4; R?). A small number of practitioners reflected on a perceived culture of fatalism, i.e. behaviours related to citizens' specific worldview, regarding earthquakes in Italy, where even after having responded to these disasters adequate prevention efforts were still not being made: "*I am saying that unfortunately this overall situation [with repeated earthquakes] pushes people to stick to fatalism instead of looking for some prevention tools*" (G4; R?).

A few practitioners stated further that an awareness of religious differences is required for disaster response, for example, regarding burial customs, to ensure that citizen' needs were met:

> "*I remember the train accident that occurred in Viareggio[18], where there was a strong Muslim community and in the accident many Muslims died. And the community wanted to do a Muslim funeral, and in that case the person who managed this situation was extremely capable, because they have some specific requirements in funerals, for example they should be directed vs. Makkah. And that person did an excellent work*" (G6; R8)

Generally, practitioners recommended that citizens, including those from immigrant backgrounds, should be included in the planning of how to respond in emergency with the aim of creating a 'culture' of disaster awareness: "*In Parma, the Protezione Civile safety plans were shared with the population during creation, to give people the chance to contribute to them and use the citizen's direct experience through years*" (G3; R8), "*In a district like Tor Bella Monaca, with a high density of immigrants, I would hope that there have been some 'inclusive' information policies, meaning with*

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[18] A train carrying liquid gas derailed and hit some residential buildings before exploding and killing 32 citizens and injuring 26 in June 2009. See, e.g., https://www.theguardian.com/world/2009/jun/30/train-crash-viareggio-lucca.

the participation of citizens" (G4; R5), "*Did the citizens participate to the construction of the protection rules and system in the territory? No, it's been written in a closed room by four heads that probably did not even go in the territory. Let's start to involve people, let's bring this "culture" in the territory*" (G4; R5). Although plans need to be kept simple and uncomplicated, so that citizens can fully understand them: "*A system like this should have a fundamental element, which is the simplification of processes, otherwise taking to a table citizens to discuss something extremely complicated it is not recommended, at least in Italy*" (G4; R?).

A few practitioners also stated that citizens may place themselves in unnecessary risk in disaster situations, for example, through inappropriate use of social media, or through incorrect use of information online: "*The social media matter is very hard to treat, as you always see people who prefer to take selfies with a building in flames rather than have correct information. And that is morally very wrong*" (G2; R?), "*It seems to me that there's a lot of self-learning. I mean, people think they understood how certain things work because they go to check on the internet. And often we have to make them understand that what they read on the internet is not always correct*" (G5; R5).

In the context of worldviews, practitioners also felt that religious beliefs and religious differences caused problems in disaster response, for example, in medical issues and that some emergency and disaster workers are not well trained to deal with the issue: "*Cultural difference… family management… the corpse exposition and transportation. This is the reason for many misunderstandings and critical points. Operators are not well trained and do not understand the differences between Jewish, Muslims, fundamentalist Catholics needs*" (G1; R?), "*The Jehovah witnesses that don't receive blood transfusions, for instance. And the nurses are confused and don't know what to do*" (G3; R?), "*Medical issues differ from religion to religion*" (G3; R?), or how religious beliefs are linked to fatalistic attitudes towards disasters: "*We are all very fatalist, and this fatalism is connected to religion. I think that more than a scarce perception, there is the behaviour of those who say "We'll see, God will protect us"*" (G4; R10).

Awareness of religious differences was perceived as important for practitioners also after a disaster has occurred, as some religions have specific dietary requirements, which may be hard to match in relief camps: "*In Emilia, we had difficulties with immigrants, not much for languages but for cooking and traditions, meat, relationships with women*" (G1; R?), "*Once we had to break a fight because the volunteer woman who was serving meals used the same spoon both for tortellini and penne with tomato sauce. I had not realized that tortellini had meat inside*" (G1; R?). In the disaster recovery phase, one practitioner felt that religious beliefs affected recovery efforts, with some areas placing more emphasis on rebuilding religious centres rather than homes or businesses: "*I see the religious issue in the recovery phase. In Friuli in '76, their priority was to rebuild factories, then homes, then churches. In other areas the church priority is higher than the productive or residential system*" (G3; R?).

Finally, practitioners outlined the importance of belonging in disaster response, which may also cause problems for the citizens who have been evacuated: "*The territorial belonging. If you take someone out of their context, they collapse. Think of taking a citizen from Parioli to Tor Bella Monaca. You kill him*" (G3; R?), and for the areas they have been evacuated from: "*Amatrice's mayor urged people not to leave, or the city died*" (G3; R?). Furthermore, some citizens may not want to be evacuated, and disaster workers may need extra support from law enforcement to move citizens to safe areas: "*Often we are assigned the task of managing people, i.e. those who are evacuated but want to remain in the same area. So we try to manage those people in cooperation with local police*" (G5; R5).

"It comes to my mind that people do not want to live their homes. Wealthy people fear looting, while elderly people… do not want to leave their home, it happened to me both in L'Aquila[19] and Amatrice[20]. In the tent cities, elderly people would not consider the idea of going in a different place. In some cases, it is very difficult to communicate to these people that – for their own good – they should leave the territory" (G4; R7).

3.2.3.   The Need for Education Campaigns

Practitioners strongly felt that "*citizens, as R8 was saying, need activities and training on how to react in terms of behaviours and communication abilities. We need to find ways to spread information to population*" (G1; R3). Practitioners also recommended that education campaigns need to actively engage citizens over a period of time to make them more effective: "*it is something that you should build slowly and then define with training. You can't teach anything in emergency. There are schools of thought that claim "If this happens you have to do so…", no, it's not possible, it doesn't work and it's useless*" (G6; R5). In this context, they particularly identified simulations as the most effective at informing citizens about disaster risks: "*In cooperation with firemen, every year in Castelli Romani we have a training "day" where firemen do prevention in terms of anti-fire, risks and so on, while we teach some prevention [to citizens] in terms of health rescue, such as reanimation, first aid*" (G5; R5), "*The only thing that works are simulations. We need to spread the words and make simulations*" (G3; R?), something which practitioners saw as lacking within the Italian context: "*This is what the Nordic countries do. In Italy, we start from theory and go to practice. It must be the other way around*" (G3; R?).

> *"Why do they get away, because nobody conveys them an active interest. If you combine the questionnaire 'know RISK'[21] with the one called 'La Terra ti parla: impara ad ascoltarla' ['the earth speaks to you: learn to listen it']*[22] *you give people the task to evaluate the signs of the upcoming event. In that case, the citizen follows you and his involvement becomes bidirectional and compelling. Giving only the '' questionnaire, and my colleague knows it, creates a mono-directional involvement*" (G1; R7)

However, practitioners felt that some citizens do not participate in education campaigns due to cultural factors including their livelihood, socio-economic status, and/or social exclusion: "*We made some evacuation simulations in Naples, inside the Vesuvius red zone for eventual eruption. Since people there live in abusive houses[23], they were not leaving, as they know that if they go they cannot go back in. We made the simulation with no people*" (G1; R?).

Generally, practitioners strongly expressed their frustration, feeling that there are difficulties in informing citizens about disaster risks and that some information campaigns do not work: "*the question is: why it's not working in our territory? Why we are not able to permeate the society with this information? Because probably in the communication process there is a block between who provides it and who receives it*"; "*Some meaningful steps in culture of prevention… if we are not able*

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[19] L'Aquila province was hit by a violent earthquake in April 2009
[20] Amatrice was hit by various violent earthquakes in August and October 2016
[21] An Italian questionnaire exploring citizens' attitudes and behaviours towards seismic risks.
[22] An Italian questionnaire exploring citizens' perceptions of natural hazards and disasters.
[23] Houses which are illegally occupied or not safe to live in, or linked to perceived organised crime, e.g. Scampìa, Naples.

carry to them out now that TV is in all the houses and involves types of population who are refractory to this type of information… we should probably put less "stratospheric experts" or boor ones that tell silliness, and we might try to obtain something" (G4; R10). On the other hand, as a suggestion as how to inform citizens about disasters and to improve information campaigns one practitioner stated that: *"We should introduce a system – which is currently carried out in my province – of "peer education", where young people who volunteer train other young people in the civil protection, but it's been particularly hard"* (G5; R5).

Practitioners recommended long-term education campaigns to inform citizens how to respond in disaster situations, as often citizens are not actually aware of how to respond:

> *"Territorial associations or local police might help new residents with leaflets on the area and on what to do in case of emergencies. We have many people living the areas who are not capable of doing anything in case of emergencies, and risk to get in the way of rescue operations. Implementing long-term prevention policies will not solve the emergencies, but prepare people for critical situation"* (G1; R?)

A number of practitioners also felt a need for adopting education campaigns that are specifically targeted at children and adolescents to instil a culture of risk perception and awareness in them for when they are adults: *"What we need is a prevention policy in the medium and long run. We seem to be able to manage emergencies as they happen, but why don't the different cities work on prevention and education in schools in terms of emergencies? This is a way to have capable adults in the future"* (G1; R?), *"We have been doing the driving education to children in school with 'safe school'. The Florence prefecture proposes the schools of Florence province, a number of projects with Protezione Civile, 118 and they train 4th grade children on correct behaviour"* (G1; R?). *"I come from a similar case in Romagna, but it is difficult to offer education and information, because I think that we should start from schools. It is difficult to form and inform adult people, some might come to listen but these things usually get lost. And this is because they don't have a training that starts when they are children"* (G5; R2).

> *"I was visiting my brother [in the US] and suddenly a man collapsed. Some very young people immediately gave him CPR. We have nothing like that in Italy… They told me that everyone could do that in the US. Heart attacks are most common here than there, because they save lives there. If you spend in training of children and young adults, emergencies would be easier to manage"* (G3; R?)

However, a small number of practitioners also spoke about the difficulties of educating children and adolescents about disaster situations, where information campaigns may not work with all children and adolescents, and that such programmes may need further improvement: *"Children have their own little autonomy, but in case of emergency, they will continue to look for their parents' reassurance. Even if we teach the principles of self-protection, or if we try to create the culture of protection, I think that a part of "expectations from the outside" will continue to exist"* (G4; R10).

> *"The attitudes were very different, but there was a common point: when we showed some scenes with gore and crude images and told them that that was not a movie but real accidents, and it could happen to them. We then took a black bag and made an experiment to put a bag on a boy and take him away. We did this to depict the eventuality of being them inside the body*

bag on Saturday night, and then he vanishes. Someone took a selfie, but some others were impressed and decided to change habit" (G1; R?)

"I created some slides with all the brochures available on the matter, and they all speak to able people: go under the table etc. There was a simulation in my daughter's class and they have a disabled schoolmate, [name deleted]. And once they were all under the tables, they realized that she was still sitting there in her wheelchair. There are no instructions for disabled" (G2; R?).

"I directed "Roma Capitale" (Rome Capital, i.e. the municipality of Rome); we had a project with five people working on it – actually they still do it – five people of a civil protection group who work for carrying out prevention activities in the schools. Do you know how many classes we were able to do in one year? 400. Do you know what is for Rome 400 classes? A drop in the sea" (G5; R4).

One practitioner also identified problems with local authorities in Italy and how they went about educating children about disasters, with a perceived lack of interest from some authorities in actually educating children and adolescents about how to respond in disaster situations:

"In cooperation with 'Save The Children Italy', we are doing a project that aims to know what are the plans for civil protection in the different cities, we have contacted all the Italian municipalities and provincial capitals to verify if there are specific measures – in both prevention and emergency phase – for children, thus below 18 years of age. The response of the municipalities has been almost equal to zero, because it would be like self-denouncing" (G5; R8).

Although another practitioner perceived that there was an improvement in how children and adolescents are educated about risks and disasters in schools: "*I have to say that over many years devoted to teach this, since the first days when nobody used to care, we are now at a good level, at least in schools. Training is carried out, they know what are the risks in our country, while before it was considered superfluous and boring*" (G6; R3).

An additional benefit of educating children and adolescents about how risks in disaster situations was argued to be, that they can take this knowledge home with them and provide this information to their parents and families, which is particularly important when their parents may not be fluent in Italian and not understand such procedures: "*Children know Italian, and children are those who explain to their parents – who often only know Chinese – what are the principles of civil protection. Children go to school and they are taught information on protection, on assembly centres, and they refer this back home*" (G4; R10), "*there are activities such as communication of risk, of behavioural norms and so on. In fact children, going back home, asked their parents "Is our house at risk?"*" (G4; R10).

3.3. Cultural Factors in Effective Disaster Communication

Across the different phases of a disaster, there is a need to ensure that effective communication is used regarding risks posed to citizens from different cultural backgrounds, and practitioners

discussed what they considered as effective or problematic forms of communication, and which are the cultural factors that shape these forms.

To ensure that risk communication and information related to disasters reach a wide range of citizens, practitioners suggested that multiple communication channels can be used including traditional approaches and more modern approaches via social media platforms. Traditional communication techniques alongside technological advances were seen by practitioners as being advantageous in disaster situations, as "smart" devices (e.g. smartphones and tablets) can help inform and provide information and updates quickly to citizens in disaster situations. In this context, the potential of such devices was highlighted to specifically reach expatriates, migrants or simply holiday makers, i.e. people who may be exposed to significant risks due to a lack of local knowledge: "*In France, they are experimenting with some new technologies in some areas. If you have a foreigner mobile phone, you automatically receive some messages with emergency directions for the area you are at that moment*" (G1; R?), "*For all scenarios, we might use more than one communication channel. A direct communication and the use of mobile devices*" (G2; R2).

The importance of knowledge of languages to ensure effective disaster communication was also discussed by the practitioners. Here, practitioners identified that cross-cultural symbols are important in effective disaster communication, as they can cut across different languages:

> "*If we shift from language to communication, we can go toward the use of pictures, without hesitation. Everybody can understand regardless of their culture and language. But it is not about language anymore, but about communication, and every emergency will have their own signs, words won't be used anymore. We will all have different channels to convey information, we might send a weather alert by social media in order to reach a wider range of people*" (G2; R?).

Practitioners felt that, ideally, communication in emergency and disaster situations needs to be clear and simple, so that citizens are fully able to understand the situation in which they find themselves, and that those individuals and organizations interacting with citizens need to better understand this: "*My experience tells me that maybe operators overestimate the ability of people to understand fully the details of rescue operations. Citizens usually look for clear and basic and simple information*" (G2; R?), "*we don't have a big experience of direct interaction with people, if not through some channel of direct contacts such as a toll-free number and a contact centre. However, what it is clear for us it is not clear at all to citizens. This is due to the lack of a number of references and background that perhaps we give for granted*" (G4; R7), "*On a side, institutions speak more and more their own complicated language and there is not that translation in clear and simple terms to the citizen*" (G4; R3).

Although a small number of practitioners lamented that they may not always be effective in keeping communication simple when informing citizens about disaster situations: "*We try to make them more understandable. But I am sure that something gets lost from when the information is issued to when it arrives*" (G4; R?), "*by mistake - I used a technical term… They immediately jump up asking what was it and they were upset about this, because it was incomprehensible for them. In other words, the message I was transmitting arrived maimed, substantially*" (G6; R5). Accordingly, the ability of practitioners to critically review the technological language they use in disaster communication is positive and should be further encouraged to ensure an effective disaster communication.

Further, practitioners identified that there are age-related and profession-related differences in use of social media; therefore, effective disaster communication requires that messages are adapted to these: *"Facebook goes from 30 to 65, Instagram goes from 15 to 30. Snapchat is under 15, LinkedIn is for professionals, and they are all a different and specific target. But I always refer to the work that was done upstream. We cannot improvise any piece of communication"* (G2; R?).

Besides using a wide range of different communication channels to reach different groups of the population with different social and cultural backgrounds, communication strategies should be tailored towards specific groups, for example, for marginalised groups by using community leaders, and for elderly populations by using social services.

> *"It is useful to identify stakeholders of the social groups that are interested by the event[24] (religious groups, or criminal groups) and make them understand that we are not against them but with them. The communication needs to be found according to the place where you are. If institutions are welcomed, they can use some social networks to communicate. Parioli, for instance could work that way. They [citizens] tend to be isolated in their homes and prefer to communicate via social media rather than direct human contact; therefore, social media can be useful. In the central area of Via del Vantaggio one could use a mapping of the social services that tells us what are the areas that need a targeted operation for the presence of older or impaired people"* (G3; R8).

One cultural factor identified related to effective disaster communication was attitudes towards authorities, where the development of relationships with community leaders to help effective communication is required, particularly in the case of differences between closed and open communities: *"We must be careful when we enter the closed communities, especially in suburbs, where the relationships are tense. If you have a referent to talk to, we make him understand what is going on. If we cannot do that, we will never convince anyone"* (G3; R8).

By including citizens in the process of drawing up guidelines and strategies for effective disaster communication, practitioners may also be able to utilise citizens' local knowledge and collective memory in the development of a 'culture of inclusive policy-making' in disaster management:

> *"In Parma, the Protezione Civile safety plans were shared with the population during creation, to give people the chance to contribute to them and use the citizen's direct experience through years. Technicians are very capable [in their jobs], but the involvement of citizens who know what happens by memory and is in the meantime is involved in the creation [of guidelines]… makes populations [more] aware of what to do. And if this is not happening, they should publicize the plans once they get them in order to have people know what to do in case of emergencies"* (G3; R8)

In particular in urban environments, following a disaster, practitioners stated that one of the first steps to be taken is to help restore social networks amongst civilians, as this may help with effective communication and disaster response efforts: *"in the cities the social network is missing while it is still present in the smaller realities. That should be the first step to take in the cities… reconstructing the social network"* (G6; R5).

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[24] A disaster in the area of Tor Bella Monaca.

Pre-disaster communication with General Practitioners (physicians) should, or could, be part of effective disaster preparedness efforts. For example, practitioners referred to databases of information related to citizens' needs: "*The experience of programmed events, lead institutions to create databases with contacts and references inside, so that you can have a fast access to their names and contact them when the emergency starts. You need to keep the databases updated*" (G2; R?); furthermore, databases should also be developed for temporarily vulnerable groups (e.g. those with temporary disabilities: "t*hese people are not present in ASL [local health units] database, but we can trace them – and it is something we are about to do – through the general practitioner physicians*" (G5; R5).

> "*Luckily, we sent special troops who could rescue this person with a toboggan, an extemporary sleigh. But this information, this mapping is essential. There might be people who need lifesaver medicines… or, without coming to Rigopiano[25] as the magistracy is working on it, the mapping. If I know that she lives in a house that is at risk… I give priorities to the snowplough. But if I don't know that she is at risk, I will send the snowplough to rescue other people*" (G4; R3)

However, one practitioner expressed concerns that these databases are not updated regularly, but should be: "*in fact the registry of people with health issues is not as updated as it should be*" (G4; R1).

Speed of communication was also deemed as affecting the credibility of communication, where news about events spreads faster over social media rather than through official communication channels: "*Let me tell you we had a reality bite with the lack of our communication skills, as social media had already spread the word before the fire department arrived. News and images were spreading everywhere and the situation is hard to manage when you lose control*" (G2; R3).

Ultimately, a number of practitioners felt that there needs to be a generally greater effort made to communicate information and practices related to disaster prevention: "*That is important about the people prevention training. The Protezione Civile plans are very effective, but never involve population information. They are very valid but we also need to produce information [leaflets] to hand to families in order to have a good management of the emergency*" (G1; R?). In particular, this was seen as more challenging in urban environments compared to smaller communities: "*I would like to add – based on my experience – that it's easier to have communication and knowledge in the small centres rather than in big cities. In the big cities there is such a dispersion… for example I could not say what is the assembly point where the people of my area should go, no one ever told us*" (G5; R3). Overall, the practitioners showed a strong desire to improve communication with citizens already in the preparedness and prevention phase to enhance their communication in emergency situations.

3.4. Practitioners' Perceptions of Vulnerable Groups in Disasters

During the Citizen Summits held in Bucharest and Malta in 2016, the participating citizens identified a number of groups which they deemed to be vulnerable during disaster situations. These groups included: i) Elderly people who overestimate their physical abilities; ii) Professional groups, who, due

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[25] In Ripopiano an avalanche destroyed, in January 2017, a hotel (29 deaths). It was not possible, before the tragedy, to evacuate the hotel as the road was blocked by snow.

to their specific profession, may not receive or hear a warning; iii) Children who are left at home alone; and, iv) foreigners who may not know the area or language, lack social networks or are stigmatised. As these suggestions were made by citizens, it was important to understand how practitioners feel about these vulnerable groups in disasters. Overall, practitioners were, in the majority, in agreement with the citizens that the majority of these groups may be considered vulnerable in disasters.

3.4.1.   Older Citizens as a Vulnerable Group

Practitioners reflected the citizens' views that, from their professional experience, elderly people who overestimate their own abilities are vulnerable during disasters: *"Yes, older people tend to overestimate their abilities. They rarely say they cannot do something. They are limited in all their senses but don't admit it. They want to do things their own, but direct communication is not always possible"* (G1; R?). They were also considered difficult to manage during disaster situations, because practitioners *"have much respect for them but they are hard to manage during emergencies"* (G2; R?). One of the practitioners noted, that it is not just elderly people who may overestimate their physical ability leading to vulnerability in disaster situations, but also citizens in general who overestimate their physical ability leading to vulnerability:

> *"Those who "overestimate" their abilities are not only elderly people. Either because they have a different technical, scientific and cultural education or because they go to the gym 3 times a week, and think they can face everything… this is independent from age. Usually who overestimates his ability in this field is a problem for himself and for others. Certainly elderly people are even worse, because they have a lower resistance"* (G5; R4).

Participants further suggested that older people may also be more vulnerable, because they are more bound to the place where they live: *"Yes, elderly people have more difficulty in leaving their place. If elderly people already live isolated – and there are many in those areas – they will move with a lot of difficulty, they want to stay in their place. While if all the people around are moving, elderly people will follow"* (G5; R4).

However, not all the practitioners felt that older people will be vulnerable in disasters, as they referred to older people living in mountain communities who they perceived as 'hardy': *"In the Amatrice quake, the elderly people were so strong and solid; they are toughened up by hard life"* (G2; R?).

3.4.2.   Citizens Working in Environments which Create Vulnerability

The majority of practitioners' views regarding citizens who are at a greater risk during disasters due to vulnerability in their working environment reflected, again, the findings of the Citizen Summits, and they identified a number of particular vulnerabilities which place this group at risk. For example, citizens may be vulnerable if they work in buildings which are not earthquake proof: *"In Emilia, most of the people who died were in factories. All houses were quake proof, but factories were not. This is out of the specific emergency but it is a great failure for us"* (G1; R?), *"they have a priority in their job and sometimes in quakes, if they go back to work right after an event, they risk dying in another*

event" (G3; R8), or they do not follow the correct rules and regulations: "*Not all workplace observe regulations, we know that*" (G2; R?) and work without proper safety equipment. A few practitioners also felt, in their professional experience, that there is no culture of work safety in Italy and that a safety culture is hard to create: "*We should make them understand that they should care for their own life, and the only way – if they don't – is the immediate removal from their workplace. And in construction sites, if a worker does not respect the safety norms, he should immediately be removed from his workplace*" (G5; R2).

> "*I have experience in this sense, as for years I have been the responsible of installations for a metalworking company. I never succeeded to teach, to inculcate the culture of safety on work, especially to younger people. I saw people walking on scaffoldings with the harness – because they are obliged to wear it – but not hooked. Or people who welded at ground floor with a man on the second floor who was putting bolts without a helmet because it was hot… and this happens especially with young people. I have seen accidents on workplace, even serious ones*" (G5; R5)

Alternatively, a small number of practitioners felt that working environments were now safe enough for employees, and that this group is not particularly vulnerable during disasters: "*According to the work regulations in or country, every workplace needs to have an emergency system that informs all workers. If regulations are observed, the second group should be ruled out*" (G2; R?); "*even if you have loud noises or headphones on, in case of an emergency there are many systems like lights going off, that make you immediately spot the danger*" (G1; R?).

3.4.3.   Children Left Alone at Home

The majority of practitioners felt that the vulnerable group of children left at home identified during the Citizen Summits did not apply to Italy, as, in their opinion, "*Italian families don't leave children home alone*" (G3; R?), "*we have grandparents or social services*" (G3; R?), "*in Italy we usually do not abandon children to themselves*" (G5; R3). However, practitioners did identify that different cultural (e.g. children of drug users) and national groups may hold different beliefs regarding children being left at home alone, and that this may create vulnerability for these children: "*they might be perhaps children of drug users*" (G5; R8).

> "*I know for sure that in Romania – I saw it with my eyes – some kids go around with a key at their neck. This because when kids are back from school and their parents are out to work they can go in their homes and they are completely alone. […] Even Chinese people often leave their kids alone at home*" (G6; R6)

> "*Only some ethnicities, though, because other ethnicities… it comes to my mind another group with which I am in contact, the Senegalese group, where they have some "diffuse kindergartens", meaning that a family put at disposal their home and in any case there are people who take care of the children*" (G6; R5)

A few practitioners also felt that all children should be considered as vulnerable during disaster situations, not just those who have been left at home by their parents or caregivers and that in turn concern for children during disasters can cause further reactions in others: "*I don't understand why children are considered only if home alone. Having children around during an emergency, deeply*

affects the reaction to it" (G1; R?), "*We sometimes have parents calling us in panic because they are locked out with kids inside. And even if the house is safe, they are terrified*" (G1; R5), "*I think of parents, in general. They are very vulnerable as a group, if they have children in school. They risk going crazy*" (G2; R5).

3.4.4.   Foreigners as a Vulnerable Group

The majority of practitioners perceived that foreigners as a vulnerable group, identified by the Citizen Summits, were vulnerable due to language differences and lack of familiarity with an area: "*They are, of course. They have no knowledge of the territory; they know nothing about emergency plans*" (G1; R?), "*The tourists here are amongst the people at risk only because they do not know the territory, they are disorientated, perhaps they do not speak the local language, and so on*" (G4; R3). However, the practitioners also differentiated between different nationalities and their level of vulnerability through stereotypes regarding national identities: "*It depends on how foreigners are used in their own countries. Italians, Spanish go and don't get any information. Nordic people plan their trip in terms of security too*" (G3; R?).

A small number of practitioners felt that not all tourists would be vulnerable during a disaster, as they would still be able to understand warning signs: "*Talking about the tourists, it seems to me that the language exchange – at least in Italy… travelling a lot, I always received information. It seems unlikely to me that people coming from other countries are not able to understand the signs and the indications*" (G5; R3), or in touristic areas there would be people who can communicate with foreigners. However, there was a doubt as to whom this information should be provided, particularly whether this should be provided by authorities more linked to tourism: "*English is more or less spoken around, especially in the structures where tourists go. But only those who work in the touristic structures should give information on where to go in case of earthquakes or floods?*" (G5; R8).

In this context, practitioners referred to mobile-phone based technologies that provide foreigners with multi-lingual messages containing emergency information. Additionally, they felt that in multi-cultural areas like Munich it is important to provide multi-lingual information to the general population: "*in Munich, the German Police after the attack[26], they gave information to all citizens in many different languages using twitter. And this was very effective. Therefore, even people who don't speak German could understand what was going on*" (G1: R?).

> "*In terms of groups at risk, I think that tourists effectively are at risk. Usually [emergency] plans are studied for… for example Americans, they know that if something happens they have to call immediately their consulate and they are immediately informed. In Israel, the hotels managers are those who – in case of emergency – have to act as a liaison and give information to tourists. This is a very simple solution – and inexpensive - because it would be enough to teach some basic notions to the hotel's staff*" (G6; R8).

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[26]July 2016 rampage shooting at the Olympia shopping mall in Munich, Germany.

3.5. Practitioners' Perceptions of Citizen Groups who may be Supportive in Disasters

The Citizen Summits held in Bucharest and Malta also led to the identification of a number of groups who they considered to be supporting across the different phases of a disaster. Here, the participating citizens identified four main groups whom they considered as being able to play a role in disasters: i) elderly people who are in good physical health and participate in volunteering activities; ii) foreigners who may have previous experience of disasters and use this knowledge to support a local community; iii) children and teenagers who may be able to provide support through their volunteering activities; and iv) children who have first aid and/or disaster response skills due to courses and drills at schools, which may help motivate their parents to learn these skills as well. Again, as these suggestions were made by citizens, it is important to explore practitioners' understanding of the viability of these groups and whether they, actually, perceive these groups as useful support groups during disasters.

In this context, a number of practitioners discussed further potential groups who may be supportive in disasters (e.g. local sports groups or other groups already involved in volunteering), and discussed how emergency and disaster volunteers and associations in Italy have become professionalised as part of Civil Protection. On the one hand, a minority of participants felt, that citizens should not volunteer in emergency and disaster situations, unless they were a part of a professional structure: *"Talking of civil protection, in the emergency, only professionalism is needed. I am sorry, but I don't believe much in volunteering. If volunteering is structured – but well structured, almost professional – then fine, otherwise no"* (G4; R3).

> *"In these years, volunteering has been trained, it became specialized, it puts a lot of attention in safety… it is different from then, luckily. First of all for volunteers… in any case there is no civil protection organization that can do without volunteering. It would be self-conceit, because the number of risks in all the Italian territory is too high and we cannot make it alone. The only way is having a very active volunteering, well trained, present on the territory. The project "Io non rischio" [I don't risk] is a project that the department carries out through volunteering"* (G6; R4).

On the other hand, practitioners identified the benefits of citizens' individual volunteering, as in some situations they were perceived as having local knowledge: *"Local people can be of great support for the rescuers, as they can provide precious information on territory and locations"* (G2; R?), and being more flexible and able to adapt to situations rather than having to rely on established procedures: *"This is a capability that often volunteers have because they can act in a more casual and easier way, while we have to move around with a lot of administrative acts… we are more bound"* (G6; R4). Practitioners also identified how volunteers are able to provide further support to emergency and disaster services: *"In Tuscany, the medical emergency system does not have any working ambulance. They are all from medical volunteer associations"* (G1; R?).

3.5.1. Physically Fit Elderly People as Volunteers

Practitioners had divided opinions regarding physically fit elderly people being suitable as volunteers during emergency and disaster situations. Some practitioners identified strengths of this volunteer

group, and suggested that they are useful in providing support: "*Old people know how to move and where to go*" (G3: R?), "*elderly people need some work but are helpful*" (G3; R?). Other practitioners rather identified weaknesses: "*Older people are harder to work with*" (G3; R?). Again others suggested that physically fit older people can provide volunteering in emergency and disasters in specific contexts which reflect their abilities: "*Still through a professional guide, elderly people can be used to support children, the pairing elderly-children is very important*" (G4; R5).

From an alternative perspective, one of the practitioners felt that age does not affect volunteering in Italy, and that citizens of all ages and backgrounds can participate in volunteering activities related to emergency and disaster situations: "*Volunteer associations in our reality are different, they include people with all ages, we have a strong tradition and history, and it is incorrect to define it by age*" (G1; R?).

3.5.2. Foreigners with Emergency and Disaster Experience as Volunteers

Again, practitioners' opinions regarding the utility of foreigners being able to volunteer in emergency and disaster situations, or how they might share their knowledge of emergency or disaster situations with local populations, were varied. Some practitioners held a positive attitude towards the general impact that foreigners could make: "*If they offer their help they are well disposed to give it*" (G3; R?), and they also highlighted the benefits of having non-native volunteers as representatives for communities which they considered hard to reach:

> "*Having Chinese mediators and spokespersons… it was more than spokespersons; there are even Chinese police officers. They are more credible to them and having a foreigner inside an association who can deal with local foreigners and stop the crisis could be very important. In the event of a quake where you need to send out people who don't want to leave and stop working, as they are afraid that they lose everything, having a Chinese explaining everything to them and convince them to leave for their own safety, is very important*" (G1; R?).

However, some doubt was expressed about the actual abilities of foreigners to be effective volunteers in emergency or disaster situations, assuming a lack of knowledge about the established local procedures within a host nation: "*Foreigner people make me doubt as well… only for the preparedness and prevention phase. A foreigner cannot operate during the crisis; he knows nothing about safety procedures of another country*" (G1; R?).

3.5.3. Children and Teenagers as Volunteers

In general, not many practitioners discussed the potential of children and teenagers as volunteers during disaster situations, which had been identified by the participants of the Citizen Summits. However, one participant did identify a use for such volunteers in disaster response, in particular, in providing entertainment for children who have been evacuated from areas affected by disasters: "*We take all the children that are currently located in the hotels on the Adriatic Sea and scouts can entertain them, a support of this type*" (G4; R3). This result is in line with the Citizen Summits' finding,

where it was suggested that children could take care of children, helping disaster managers thus to focus on other tasks.

3.5.4. Children with First Aid & Disaster Preparedness and Response Knowledge as Volunteers

A number of participants discussed the possibility of children and teenagers with first aid and disaster knowledge being able to provide support during emergencies and disasters, with practitioners expressing their opinion that this does not happen often in Italy, but that they should encourage this practice. Furthermore, practitioners identified the potential to use children as 'Trojan horses' (in the positive meaning), and that once they have knowledge, they are able to share this with their families, helping to educate them about what to do in emergency or disaster situations: "*In prevention, meaning that in the schools this is already carried out, as there are activities such as communication of risk, of behavioural norms and so on. In fact children, going back home, asked their parents "Is our house at risk?"*" (G4; R5).

> "*We already have an instrument that enters all homes: children in school. We started to go to schools with dogs and the police dogs. Children are very interested in dogs, and in the meantime, they gather the information given by authorities. Children are very alert; they absorb information and bring them back at home, where they tell what they do. They know what to do in case of a quake or a flood.*" (G3; R?).

> "*Children are much more responsive, while adults are more "rejective", like if certain things were far away. Then they [adults] are the first ones to look for help when the event occurs, but they do not understand that they should be informed to inform their children. Often there are children who – thanks to school – inform their parents*" (G5; R2).

One participant further identified that "*the acute disaster phase is not proper for elderly people and children… no, that is not right. [But] they might operate in the preparatory phase as a mean to convey messages and procedures in schools, churches and communities*" (G1; R?).

In addition to children with first aid or disaster preparedness and response knowledge, which they may be able to share with others, practitioners also identified those children of immigrants who spoke both Italian and their parents' language (e.g. Chinese), who could then inform their parents about emergency and disaster situations: "*In Rome, there are a lot of Chinese warehouses and shops. A woman owner did not speak any Italian, while her 10-year-old daughter did and translated for us. It was amazing*" (G3; R?), "*In Tuscany there is the Chinese community, and I noticed that a way to bring help to this community, which is pretty closed, are children. Many times the only way to talk to adults is through their children*" (G6; R8).

> "*In Tuscany, especially in Florence's and Prato's areas, we have a large presence of Chinese community. We noticed that in that community, the communication flow is going the other way around. Children know Italian, and children are those who explain to their parents – who often only know Chinese – what are the principles of civil protection. Children go to school and they are taught information on protection, on assembly centres, and they refer this back home. At least in our territory, this is a very important reality*" (G4; R10).

However, one practitioner outlined that in some communities (e.g. Chinese immigrants) children might not be listened to by their parents or families due to different forms of authority: "*If we arrive and a child acts as translator, a senior comes and tells him to stop talking*" (G6; R6), demonstrating that the role of children in disaster-related communication is also defined by the cultural factor of family hierarchies.

3.5.5. Further Volunteer Groups

A number of practitioners identified further groups that they felt would be able to volunteer in emergency and disaster situations, and that these groups should be utilised and encouraged to participate in emergency and disaster training. Groups involved in sporting activities were identified by practitioners as being useful as volunteers during disaster situations: "*In L'Aquila[27] there was the rugby team that helped*" (G3; R?), "*they offer a great support, in Rigopiano[28] as well, skiers... People that are passionate with sports and give help*" (G3: R?). Practitioners from Working Group 2 identified further groups whom they considered would be useful as volunteers during disaster situations, including church groups: "*Augustinians are very important for that area; they serve food to poor and the assist social groups. They are very strong in Tor Bella Monaca*" (G2; R5), "*Priests are very important because they can help to check if someone is missing and where are people. During emergency events, it is very important to have people who can help telling who was there*" (G2; R?), and unions and guilds: "*I expect that the unions become an instrument of stabilization. They need to be one of the support groups. If I cannot trust the leaders of the unions or associations of the area I lose some bits of society, as they need to pass information*" (G2; R5), "*The guild networks are very powerful, hunters, alpines, and all people who can group up are very useful, as they act as a social group*" (G2; R5).

3.6. Media Cultures

With the rapid pace of technological advancement and increasing use of social media and mobile phone apps by citizens in their daily life, it is important to establish the ways in which different cultural groups use these communication platforms to ensure that practitioners can effectively use these to communicate with citizens. When discussing this topic, there were rather different preferences amongst the practitioners regarding social media and apps use, some perceiving social media as an existing platform which is already established and has a widespread use amongst many groups of the population, whereas others appreciating and preferring in particular the specific functions of mobile phone apps.

Generally, practitioners identified a variety of communication platforms across different types of social media and smartphone apps, which can be used in emergency and disaster situations and management: "*We have 4 ways to reach recipients through cell phone or landline phone, app or certified SMS*" (G2; R?), "*orange code is distributed with newsletters, apps, Facebook, Twitter, Instagram, Pinterest, Google+, all the social media and is sent to pharmacies, […] medical offices*"

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[27] See above
[28] See above

(G2; R?). Practitioners referred to the promise of instant messaging (IM) communications, which they saw as enabling them to reach large numbers of citizens instantly in case of a disaster situation, for example, through WhatsApp, Telegram or other IM services where practitioners can inform groups of citizens: "*WeChat is a Chinese app which is taking over the country. They have groups that reach 5,000 people*" (G1; R?). Social media and app resources were seen to provide further benefits in emergency and disaster situations as they can be used for effective communication when traditional means of communication fail: "*The use of social media would allow me to receive in the context of ordinary social media, danger alerts, where the operation unit 115 or the local police don't work. I think that in Emilia Romagna you have Apps for the use of criticality alerts, urban propriety and others, in Tuscany no, for example Sesto Fiorentino has it*" (G3; R2).

Practitioners referred in particular to the development of smartphone apps for emergency and disaster situations, where citizens can use them to take photos or to inform emergency services about an emergency or disaster situation. However, some practitioners felt that social media platforms like Facebook may have made such apps redundant, and that greater focus should be placed on social media strategies: "*We should succeed in fidelizing social media users rather than using many apps… improving the presence of "sentinels" over the territory*" (G2; R?).

> "*The Service of Civil Protection in Sesto was the first to launch an app that allowed citizens to send a referenced photo to Civil protection service at any time of the day. This system has been surpassed by Facebook. There're are [Facebook] groups of inhabitants of Sesto, but these groups exist in every municipality, that have tens of thousands of users*" (G2; R?).

Smartphones and tablets were seen to have additional benefits in disaster situations, as citizens are easily able to carry them and use them to receive information in the early stages of disaster relief: "*I live in the area of the earthquake in Emilia, we had the quake at 4 am and we all went out in the street, and we all took our tablets and smartphones with us. The municipal offices after 2 hours were able to give out all information and directions about the emergency on its website*" (G1; R3).

However, social media and speed of communication by citizens were also perceived as posing additional challenges to organizations in disaster situations, as they may have difficulties in effectively managing how information about the disaster is shared with citizens, thus making disaster situations hard to control. In particular, the practitioners had a strong sense of self-criticism in their abilities: "*Let me tell you, we had a reality bite with the lack of our communication skills, as social media had already spread the word before the fire department arrived. News and images were spreading everywhere and the situation is hard to manage when you lose control*" (G2; R3).

Apps may also have limitations in their ability to be utilised across different areas, with a small number of practitioners reflecting on the difficulties that this may cause: "*This is the issue with Apps they overlap. If you have to move across Italy it's a great issue because you need to have the region of Tuscany App and the App for Liguria and so on*" (G6; R2).

Further, it was perceived that different forms of social media can be targeted towards different audiences, to ensure that information related to disasters more effectively reaches different groups of citizens, for example, some practitioners felt that Twitter may be used to communicate at an institutional level, whilst Facebook has a wide-reaching audience and Instagram may be used to reach younger audiences:

"Twitter is an institutional tool that we use to communicate with the regional TV and radio. Facebook is used by individual users, Instagram by young people, mainly for sharing photos. Institutions don't' use it…I can create a hashtag on Instagram…and this tool together with #prociv… #allertameteotos, #allertameteolig is widely used by users" (G2; R?).

Citizens' age was argued by practitioners to reflect their usage of communication technology, with younger citizens using social media: *"WhatsApp does. Telegram is also widely used. Its use depends on users' age and sociability. My son is 14 and he does not use Facebook"* (G1; R?), *"A lot of Instagram's users are very young; therefore, I cannot "bombard" them with weather alerts, they should receive one alert a month, and I need to concentrate the message using key words so that the message is reported to their family. Otherwise they would unsubscribe"* (G2; R5), *"if I want to speak to kids I open Facebook it's wrong because all the kids do not visit Facebook. I should have to catch them on Instagram, or something else"* (G3; R2); and older citizens were seen as more likely to use traditional communication means:

"Its limitation depends on user's capability to access the app. I'll give you an example: my mother is 86, she has a smartphone with all the basic apps. I can explain her 500 times how these apps work, however it is nearly impossible for elderly people to use an app… Considering that our population is ageing rapidly and these communication tools are based on modern technologies which are inaccessible to the elderly. They may be able to read an e-mail or an SMS. In some municipalities, alert messages are sent through SMS" (G1; R8).

In this context, it is important not to rely on stereotypes of citizens and their behaviours including their ability to use technologies. Stereotypes of citizens' attitudes and behaviours are problematic, because there is evidence[29] that older citizens may not use social media as extensively as younger citizens, but they do use mobile phones and they are interested in mobile phone apps. Accordingly, some practitioners questioned such differentiation by age, and they, for example, suggested that even some young people do not use social media, and that computer literacy further effects citizens' use of social media and apps: *"It depends on age, social class and computer literacy. I know young people who are really not involved at all with the social; It depends…it's a personal choice"* (G1; R?).

"Be careful, social networks do not differentiate age. While till some time ago social networks were mainly used by young people, till 20-25 years old, now people of all ages use the PC, from younger ones to adults and elderly people" (G5; R4).

Furthermore, technology use by citizens was argued by practitioners to reflect their national background, with people from different countries using different communication platforms in some cases: *"Chinese people use completely different platform systems"* (G1; R?)[30]. However, the practitioners did not mention to what extent they make use of such nationality-dependent communication platforms in order to adapt and reach these groups. One practitioner further stated that communication via social media in more touristic areas was conducted in both English and Italian to ensure that any warnings reached a greater number of citizens: *"There are some that are issuing communications in Italian and in English, and mostly in touristic areas in the area of Tuscany by the sea"* (G6; R1). However, they did not outline the potential need of more or other languages, adapted to the spread of visiting nationalities in different tourism areas.

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[29] See, e.g., results from Citizen Summits 3 (Italy) and 4 (Germany).
[30] For example, Weibo and WeChat.

Social media and apps can also be used in response to emergency and disaster situations where citizens or law enforcement officers, who may already be trained in first aid, can be quickly notified and provide a rapid response to a situation, and can notify these responders where they might be able to access life-saving equipment:

> *"In Tuscany, in general, there are a number of apps, "Good Samaritan" is the most famous one: This app allows an operation centre to identify all the volunteers entitled to perform cardio-pulmonary reanimation manoeuvres…these are trained people and give their availability to be contacted through the web, wherever they are … Whoever is entitled to do it. The app is able to identify and locate all the public sites provided with defibrillators; It is able to tell you how far is both the nearest volunteer entitled to perform the manoeuvres and the defibrillator, based on patient's clinical conditions"* (G1; R?).

To ensure an effective communication with citizens so that all citizens are aware of emergency and disasters practitioners state that multiple communication channels should be used in case one fails or citizens do not use one of the communication channels used: "*The communication can be sent through but it needs other types of communication that are parallel, maybe someone will receive it twice. I think that it's very complicated to be selective, sending a communication with Twitter or in another way. It's better to proceed with systems that overlap one another*" (G6; R1). However, such overlapping may also be seen as a strength, given that cultural groups and cultural factors overlap as well. Accordingly, it may be preferable to use multi-channel communication to ensure that all cultural groups are reached, despite the risk of sending redundant information, perceiving social media and apps as complementary information tools.

Social media and apps also enable citizens to submit reports and/or of take photos of emergency and disaster situations, which they can then send to the authorities to report the situation, and if authorities identify them as credible, they are able to respond to a situation:

> "*Local police have opened social media because of this reason [to inform about emergencies], depending on the request there are different functions, Facebook is for complex things. They [the police] are not always present 24 hours, the citizen is thanked and he is invited to report it on a dedicated channel*" (G3; R2).

> "*USAKDIDI… it's an App that combines maps and images, and it can be done according to a main theme, like for example the earthquake in the Centre of Italy, create a map where the citizens are, and where they send personally an image of the real situation in that area, this could help the institutions understand what are the real emergencies*" (G4; R4).

Practitioners also observed that citizens may also spontaneously develop their own apps to report damage following disasters or offer other forms of support to citizens who require it:

> "*Floods of 2011-2012, we witnessed the spontaneous creation of many Apps where citizens used to report damages or in other cases they provided, also in the latter emergency websites where citizens would publish availability of flats houses and so on. So far the Civil Protection system has never used such types of resources. These were things created spontaneously*" (G4; R2).

A small number of practitioners identified that, as social media enable the rapid spread of images of disaster situations, a new type of disaster 'victim' may occur, where citizens experience the disaster through social media and are negatively affected by it: "*As the "sixth level" victims, who are those people who are not directly involved in the event, but can experience it through the media*" (G1; R?)

The use of different communication media was identified by the practitioners to reflect their own and others professions. For example, one practitioner stated that: "*There is a greater use of Twitter among fireman if I'm not wrong, you don't have Facebook, Instagram*" (G3; R4), whilst another practitioner reflected upon how volunteer radio operators were particularly useful in the past for checking the credibility of information before they informed others about disaster situations:

> "*The ham [amateur] radio operators in the past used to have a very important function in passing on news, because the ham in general would ask and check the information and then he would check with the other hams before passing it on. […] This is something that no longer happens hams are few now, but they used to cover the immediacy role like the ones of the social networks, like internet, google but the fact that today there is no check[31]*" (G5; R2).

However, one practitioner further outlined the challenges posed in ensuring credibility of information on social media, where some citizens actively assess the credibility of information, and challenge incorrect information:

> "*If someone shares a [piece of] fake news, there are many actors involved who can go against the fake news. It's like Wikipedia, when someone writes something wrong… In smaller scenarios, paradoxically, this is more difficult to achieve. If I have 20 people involved in an accident, and one or two people start saying fake news, the other 18 persons may not be on Facebook to oppose to it: when an earthquake occurs, people working in the Operations Room look at the social networks, because it's faster and nobody says "an earthquake occurs" if it hasn't occurred*" (G2; R?).

Practitioners also referred to the need to share information amongst themselves through different media platforms to ensure efficient responses to emergency and disaster situations, aligning their private and professional social networks: "*I have two groups on WhatsApp, one for the Immigration officers and for the social administrative police and we share everything, we manage to plan an action in a better way rather than using normal protocols. In this way the social network is coherent with the institutional indication*" (G5; R4). At the same time, though, they felt that some institutions involved in disaster management needed further skills and training in how to manage social media platforms and apps: "*The institutions are probably not ready yet, there is lack of knowledge of these technologies by the institutions, at least by the people who use them*" (G1; R?), "*Illiteracy is a gap that hasn't been bridged yet: cellular phone is part of our life, but we still know little about its potentialities, that are enormous. There is a resistance to social media, a sort of demonization of these tools*" (G1; R?). Although some practitioners were actively increasing their skill-set to improve their communication abilities: "*I am taking a master in communication and the municipal administration of region Tuscany is particularly interested in dealing with preventive communication*" (G2; R?). However, the use of social media by citizens, journalists and, also, some disaster practitioners themselves, was perceived as potentially causing problems in disaster situations through either hindering or preventing the work of disaster relief workers and organisations, e.g. by making selfies or sensational videos, physically blocking access to the rescue site by doing so and, through excessive use of network capacity, causing network overload.

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[31] However, social media platforms, e.g. Facebook and Twitter now have or are trialling options where users can report fake news to try and ensure the credibility of information posted.

3.7.   Social Cohesion and Social Corrosion: Cultures, Communities and Trust

Trust and mistrust in disaster situations is linked to when citizens feel that appropriate action is or is not being taken by emergency and disaster services: "*Trust goes hand in hand with action. When my words and my actions are coherent, I get trust from people. When disasters occur, people feel weaker. Thus, betraying their trust is the worst thing we can do. The lack of trust towards the operators makes emergency management harder*" (G5; R3). Based on the findings within the literature review of Work Package 4, trust (and mistrust) was placed at the core of the last Working Group session, aiming to explore and bring together the possible links between cultural factors and trust in disasters.

3.7.1.   Word Association Exercise

To "warm up", but also to examine the perceptions that participants held regarding culture, communities and trust, and how these impact on the area of risk and disaster management, a word association exercise was conducted by the participants[32] at the beginning of this last discussion session. Participants were asked to state the first word that came to mind in response to the following words: 'responsibility', 'credibility', 'trust' and 'faith'. The results of the word association exercise are visualised and described below.

Image 3.7.1: Word Cloud of Overall Associations

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[32] With the exception of Working Group 5 where the word association exercise was not carried out by the moderator, instead the participants discussed their experiences in relation to these words. The results of these discussions are part of the general qualitative analysis.

The participants in the different discussion groups reported a wide-range of different 'top-of-mind' associations for each of the association words, of which the full results by each group are outlined in Table 3.7.1 below. For 'Responsibility', the most frequent associations were 'Ethics', 'Roles' and 'Work'. For 'Credibility', the words most frequently associated were 'Competence', 'Ethics', 'Knowledge', and 'Seriousness'. For 'Trust', the most frequent associations were 'Awareness', 'Coherence', 'Responsibility/Responsible Behaviour', and 'Transparency'. With 'Faith', finally, was most frequent associated 'Hope', 'Reliability', 'Religion', and 'Trust'.

Overall, the associations that participants reported with these words varied widely, highlighting the complexity of these feelings and perceptions. In particular, it is of interest to note that participants held 'top-of-mind' associations, which were repeated across the different association words, suggesting that in the context of their professional roles the concepts of 'Responsibility', 'Credibility', 'Trust' and 'Faith' overlap each other, and are all important in their interactions with citizens across the different disaster phases, but with ethics and reliability at their core.

Table 3.7.1: Results of Association Exercise

	Responsibility	Credibility	Trust	Faith
Group 1	Ethics/Deontology (3)	Ethics (3)	Transparency (2)	Trust (2)
	Work (3)	Knowledge (3)	Alliance (1)	Dialogue (1)
	Court of Auditors (1)	Competence (3)	Coherence (1)	Hope (1)
	Carabinieri (1)	Professionalism (2)	Cooperation (1)	Religion (1)
	Dangerous (1)	Seriousness (2)	Dialogue (1)	Wedding (1)
	Honesty (1)	Courage (1)	Help (1)	
	Task (1)		People (1)	
	Transparency (1)			
Group 2		Adequateness (1)	Familiarity (1)	
		Authoritativeness (1)	Intimacy/Intimate (2)	
		Competence (1)	Knowledge (1)	
		Concreteness (1)		
		Reputation (1)		
		Resolution (1)		
		Seriousness (1)		
Group 3	Assignment (1)	Exercising Responsibility (1)	Awareness (2)	
	Escaping Responsibility (1)	Honesty (1)	Responsibility/Responsible Behaviour (2)	
	Freedom (1)	Reliability (1)	Achieved (1)	
	Professionalism (1)	Transparency (1)	Conquered (1)	
	Reliability (1)		Maintained (1)	
	Scapegoating (1)			
	Trust (1)			
Group 4	Hierarchy (1)	Appropriateness (1)	Coherence (1)	Reliability (2)
	Organisation (1)	Coherence (1)	Developed Relationship (1)	
	Roles (1)	Decisions (1)	Evaluate (1)	
	Towards the Citizenship (1)	Non-Decisions (1)	Relationship (1)	
	Troubles (1)		Reliability (1)	
			Truth (1)	
Group 6	Roles (2)	Institutions (1)	Presence (1)	Hope (1)
	Coordination (1)	Pathway (1)	Professionalism (1)	Religion (1)
	Public Institutions (1)	Responsibility (1)		
		Role (1)		

3.7.2. The Role of Citizens' Trust in Effective Risk and Disaster Communication

In this section, the practitioners were encouraged to elaborate factors for trust and distrust on two levels: (1) depending on who is trusting, and (2) depending on who is to be trusted. The discussions were moderated towards the aim to bring these two levels together, i.e. how different cultural groups trust, or distrust, different types of institutions involved in disaster management and providing emergency services. However, it was also addressed to what extent there are, or may be, differences between trust in authorities and trust into individual practitioners who work for such authorities. As in the preceding sessions, the practitioners were encouraged to talk about their personal experiences – in particular how they handled difficult situations when they were faced with mistrust.

Generally, practitioners felt that citizens' trust in authorities, and their ability to effectively communicate information related to risk and disaster, was connected to citizens' expectations of authorities in performing their job well in providing support and correct information in emergency and disaster situations. Further, they perceived citizens' trust in authorities as being further developed through speed of response, taking up a personal responsibility for actions – even if one is not formally in charge – being flexible and showing situational awareness of citizens' needs: "*You earn the trust by being [responsive] in the emergency or by solving a particular problem in a short time*" (G2; R1), "*it would be better to say that he must wait, rather than saying that we are going to intervene immediately or that that issue does not fall within our competence. We should accompany the citizen towards who is in charge of that issue*" (G3; R1), "*On one hand, we tried to not to be intrusive, on the other we had to listen to their requests. We must be helpful and flexible. In fact, sometimes we are required to do something different from what we were supposed to do*" (G6; R2).

The practitioners described a number of experiences where citizens' trust in authorities was undermined due to misleading information, or a feeling that authorities do not, or are not able to take care of their needs:

> "*First of all there is a political aspect: it is very hard to make promises regarding the timing of interventions. They say 118 (i.e. health emergency) teams get anywhere within 20 minutes, and they do, more or less. A politician would say that they get there within 3 minutes, so when the rescue team actually gets there after 20 minutes, the expectation has not been met... We relate with the citizens regarding reimbursements in the post-event and what the municipality tells them and what the regional authority tells them is what the state wants them to say so it is never very clear and the citizens are basically distrustful from the beginning*" (G2; R5).

> "*The most important thing is listening to people. I had an experience in which people showed distrust towards institutions, when the Sarno mudslide[33] occurred. After the COC (Town Operations Centre) was set up, rescue operations started. Few days later, Carabinieri had to protect the structure, because citizens assaulted us. That was the only distrust experience I have had in 10 years of work. In that case, citizens thought we were not able to take care of their needs*" (G6; R4).

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[33] In May 1998

Generally, meeting citizens' expectations was seen as an important factor: "*Everything depends on the work that was done beforehand. If we spend time for a correct prevention campaign, created groups of aware citizens, always replied, created a working institution, the citizen will trust us when needed and will not go looking for other pieces of information*" (G2; R?). Practitioners, here, suggested that communication needs to be reassuring and simple to be effective in building credibility and communicating with citizens:

> "*Honesty is highly relevant, because you always need to give exact information, or your credibility collapses, even under small details. The voice tone needs not to be reassuring and downgrading, because the person you are rescuing won't believe you, and you lose your authority. We need to be honest in describing all you can do and not do*" (G2; R2).

> "*However, this is very complicated, as we need to guarantee also the accuracy of what we say and this takes a lot of time. We deal with communication, however, to transmit correctly a message we would constantly need the presence of experts that help us to explain it in the more understandable – and at the same time correct – way*" (G4; R7).

The aspect of "listening" was elaborated further by other practitioners who outlined trust issues when there is no common language, and the important role of empathy to overcome such difficulties:

> "*When we do not listen to people. E.g., earthquake in Emilia Romagna[34]. There was a foreign citizen, desperately looking for help, because his house was destroyed and his family was missing. He went to the Police, and he was told to stay in line. The situation went off the rails, the cops wanted to jail him. Finally, a police officer hugged him and asked him what was going on. That means that sometimes, people just ask for listening. In emergencies, as people are more vulnerable, they need to be listened*" (G3; R8).

The effectiveness of communication in disaster situations was also seen to be affected by the credibility of both the communication and the communication source, and the need to build credibility over a period of time so that citizens can trust disaster communications. The importance of credible communication sources was highlighted, as practitioners felt that citizens require individual communicators they can trust: "*Credibility is on individuals and we do not speak for units. If we send to Tor Bella Monaca the communicator who was in jail for a miscommunication in Stromboli[35], for instance, people do know him and know about the charges and the fire becomes a political and media event*" (G1; R?), "*When we had the impeachment issues for L'Aquila, having dirty facts happening took away all the trust of people in institutions*" (G1; R7).

> "*I need to measure every word, I cannot make promises I cannot keep, and if people lose the faith in your communication, they elect outer sources that often feed with people's rage and distrust*" (G2; R?).

> "*In the US, they have so many tornado alerts and then only a few happen. In Italy, if we gave so many alerts, we might be questioned for alarming the population, they have no such problem. In 2011, the Genoa flood made thousands of death. A year later there was the same risk and after they secured the entire area, there was a huge payback, as the flood didn't happen. We are not as free as to trust institutions even within high-risk areas*" (G3; R8).

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[34] In May 2012
[35] Stromboli is a very active vulcanic island in Sicily

Generally, practitioners outlined that trust in emergency services and institutions by citizens should not be assumed, although, in acute emergency situations, citizens are more likely to give their trust: "*Trust is an act of complete surrender that is not so obvious. So why don't they give us their trust? It's normal not to, but it is very frequent to get it in emergency situations*" (G1; R3), "*Trust must be earned, as currently, it must not be taken for granted. We represent the Government institutions, and we take for granted that people trust these institutions. Now, that's wrong. This "pact" must be earned day by day, and our institutions have to deserve it*" (G3; R3). Practitioners felt that trust towards authority figures also needs to be developed over time to ensure that citizens see them as credible: "*The citizen do not trust the institutions; therefore, the institutions should build confidence gradually. E.g., I meet a Carabinieri who shows me he is able to do his job…as a citizen, I trust him. However, if I meet his useless colleague, I do not trust him. Now, the trust must be built, it's not taken for granted*" (G3; R8).

Citizens' trust in emergency and disaster professionals was also seen to be linked to their trust in how these institutions are managed: "*In the last few years there has been a scuttling of the honest and competent people who denounced the ill management of emergencies. And this, of course, has led to a lack of trust in the institutions*" (G1; R5). However, if institutions are well managed and adapt to the situation, for example by using trustworthy individuals who, independent from their role in the respective authority, are acting as spokespeople, then trust is greater: "*There may be someone among the workers who is recognized as a spokesperson and as someone reliable. So when one is uncertain, it is good to identify some reference people, even though the hierarchical role may not necessarily be the best*" (G2; R1).

The credibility, or lack thereof, of institutions working in emergency and disaster situations is further linked to citizens' trust, according to practitioners, especially where there is not perceived conflict of interests: "*where there is credibility of the institutions is when there are no conflicts of interests*" (G1; R5), "*in many other disaster situations, people were aware of our difficulties, and they knew we were working for helping them*" (G6; R4). However, if organisations are transparent with citizens, then they are seen as being more credible and trustworthy. This transparency is related to treating citizens as partners and not hiding behind authoritative means such as laws or politics: "*Based on my own experiences, it is more appreciated to say that we are not able to fulfil one's request, rather than saying that we would do it. Using the laws as a shield may cause distrust*" (G3; R8), "*What we should try to do, even though it's hard, is explaining the things how they really are, because our interventions are driven by politics*" (G3; R1).

> "*As of Amatrice[36], people in charge of taking care of these requests, said, that by that date, they would have given the "little houses"[37] to the citizens, but then it didn't happen. Probably, they were not allowed to do that, by law. To me, they betrayed their trust. They should have better said, "we could deliver the houses at another time"*" (G5; R6).

Finally, one practitioner felt that the stereotype of younger citizens being more critical towards authorities than older people was incorrect and that younger citizens also respect trusted symbols, although their respect and trust must be earned:

> "*I was really surprised because as I grow older, based on the prejudices we have against younger people, I strongly believed that the world worked based on this logic: elderly people trust*

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[36] See above

[37] Emergency wooden houses, also known as 'casette' or 'little houses' arrived in March 2017 in Amatrice to accommodate families whilst their homes were being repaired.

uniforms because for many years, the figure of the person in a uniform has been somehow internalised… and younger people are an aimless group. Actually, though, I very seldom go into a classroom but I organize training projects for schools and I discovered a world that is completely different. Our young people seem adult. I don't know if I am mistaken… they have a clear idea of the importance of uniforms and of the respect towards them. It's just that compared to the elderly, they are more critical and one must earn their trust" (G1; R1).

3.7.3. The Role of Cultural Leaders in Effective Risk and Disaster Communication

The current section focuses on practitioners' experiences of working with cultural leaders in effective risk and disaster communication, and how these cultural leaders can be identified and proactively involved in disaster communication between citizens and authorities. In emergency and disaster situations there are figures who spontaneously emerge from the community and perform leadership roles. These 'spontaneous' leaders play an important role, and practitioners felt that ignoring them may seriously impede any communication with the affected groups: *"They become elements of cohesion"* (G1; R2), *"in Abruzzo there was a lady who had naturally become the camp's spokesperson, so we had to go through her to tell people things and, in the same way, people told her things they wanted us to know"* (G2; R1), *"As of L'Aquila[38], there was not a head in every camp; many spontaneous camps were formed. As we did not manage these camps, some local leaders took care of collecting information"* (G4; R2).

Ideally, such "cultural leaders" should already be identified during the prevention and preparedness phases, so that emergency and disaster workers have established contacts through which they can communicate, as it may not be easy, or done quickly, to identify these influential people in actual emergencies. Additionally, practitioners believed that *"Civil Protection coordinators need to carefully assess those people working as mediators"* (G6; R4).

Generally, there was an awareness that cultural leaders come from an array of backgrounds, many of which are related to formal or informal associations, and they are expected to share their knowledge and actively encourage citizens: *"In Val D'Aosta, the hotel managers, the Mountain Guides Association and the Ski instructors association have made an agreement with the Regional Civil Protection. They convey information and teach self-protection to their citizens"* (G3; R4).

> *"They both[39] have a list of people representing the reference stakeholders of that community. I have worked in the Central Police Station for 30 years, and I know there are religious heads, ethnic representatives and so on. The Presidents of the associations, e.g. Language Mediators Association, Elderly Association, the Italian hunting association….those may be reference stakeholders"* (G5; R1).

Beyond links already established in the preparedness phase, cultural leaders can also be identified by practitioners in emergency situations, building an immediate connection between different forms of hierarchies: *"A leadership coming from the bottom is possible; it can work as a link between citizens and the institutions at the top. You are talking of a leadership coming from the top. However, there*

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[38] See above
[39] Central police station and local police station.

could be some people gathering the population's requests, in order to make these clearer" (G4; R8), "*My husband was sent to Molise[40], and he had to find the reference people he needed*" (G5; R6). Although practitioners mentioned that this may prove difficult in some disaster situations in large cities: "*The problem would be if an earthquake occurred in Rome. In this last case, I would not know who the leaders are, where camps should be built*" (G4; R1).

Local leaders, including doctors or religious figures, were seen as important reference points following disasters in communities, as they could provide reassurance and enhance social cohesion: "*Based on the interviews to survivors of Rigopiano[41] we know that a qualified source is important at such a time. Not any voice saying "stay calm, we're going to save you" in the dark can reassure you*" (G1; R2), "*As head of the camp, I had to talk to the imam and put down some ground rules we agreed upon. I mean, I couldn't even talk to the women*" (G2; R4).

One practitioner noted awareness of how different cultural groups may interpret trusted symbols differently. However, it was also outlined that the use of too many uniforms by practitioners may be perceived as too many symbols and, therefore, may be confusing and unproductive. Generally, it was felt that the use of a uniform as a symbol may further instil trust in some people, but distrust in others, depending on their experience:

> "*In Italy, people often say that they do not understand whom we belong to. During joint interventions, people say that they do not understand our roles, because there are too many uniforms. Sometimes, this is true. When I was sent to Mugello, I went in a school, wearing my uniform. There was a little girl from Ex-Yugoslavia, which started to cry. Probably, she feared we would take her away from school, as the soldiers did with her little friends in her former country*" (G6; R5).

Cultural leaders should also "*encourage trust*" (G3; R3), particularly if they are able to influence large numbers of people, for example, teachers, celebrities or TV personalities who stand up for citizens: "*I'm thinking also of some journalist, e.g. Mentana[42], or some TV shows, e.g. Le Iene, which always stand up for the citizens*" (G3; R2), "*I remember our reference person was a teacher, which was always with us. She trusted us, and consequently, the population showed their trust as well, once they saw our synergy*" (G6; R2). Further, a small number of practitioners reflected that in smaller and more isolated communities some cultural leaders have more respect from citizens as they are more directly involved in with them:

> "*In the Mugello, for example, they have a local procedure of self-help because there are some areas that are very hard to reach so they do not need an earthquake to be isolated and they have their problems in the inside every day, so they have their reference people, i.e. the GP, the district nurse, the pharmacist… they each have some competences*" (G2; R1).

3.7.4.   Collective Efficacy and Empowerment in Disasters

Disasters can have a number of different effects on collective efficacy and community cohesion. On one hand, there can be a strengthened sense of community and an increased willingness to help each

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[40] Earthquake in Molise, Italy in 2002.
[41] See above
[42] Mentana is the Director of TG La 7 (one of the 7 main TV channels in Italy

other on one hand, but, on the other hand, there can also occur an increased level of conflict over the causes of the disaster and what actions should be taken, generating hostility and mistrust. In this context, practitioners identified a need to actively encourage community engagement in disaster preparation, so that citizen are aware of and can contribute collectively towards disaster planning: "*In Chile, the quarter planning is set up; probably, that means that life in neighbourhood still exists. In Rome as well, there are still many quarters, where people meet each other in some places, they talk and so on. We should meet this level again*" (G3; R1).

This dynamic can be further enhanced through the use of social media to enable greater communication between citizens: "*In Emilia Romagna, but in other places as well, the "Neighbourhood Watch" is developing; groups of citizens keep in touch through WhatsApp, but they have a reference person, based in the quarter. Probably, this is going to work in the small cities, rather than in the big ones, more fragmented*" (G3; R8). In addition to neighbourhood meetings, practitioners saw further potential to encourage and be involved in 'apartment block meetings', so that residents are aware of the safety procedures for their building.

Following a disaster, practitioners perceived that communities can become either closer together or drift further apart*, i.e. "whether it becomes more cohesive or disaggregated*" (G1; R?). However, they also perceived different dynamics at different levels within the general public: "*An emergency always unites normal people inside a community, but it also always disaggregates the political parties*" (G2; R?), "*In refugees' camps, small blocks are developed. Consequently, people are willing to stay close to each other. In emergencies, people get attached to each other*" (G4; R4).

But, on the other hand, communities may also break down following the devastation caused by disasters and subsequent economic problems, particularly when citizens relocate to other areas for greater opportunities: "*The most awkward issue is the social breaking up following the post-earthquake economic gloom*" (G4; R3), "*The elderly are going to miss their past and their memories. They lived there for years, that's an emotional attachment. However, youth is more exposed to the effect of the disaster. In fact, they won't have any future there….The elderly would be happy to have their houses back; instead, young people would like their life back*" (G4; R6).

4.Summary

Generally, the three working group sessions held within this Stakeholder Assembly aimed to approach the topic of culture/s and risk in disaster management from several angles, building upon the findings from all other Work Package findings so far. However, as a combined dissemination, research and networking event, the group discussions were moderated in a way to allow practitioners to exchange their ideas and perceptions amongst peers also beyond pre-set definitions, and to explore the topic of culture and cultural factors based on their professional experience. Accordingly, some of the qualitative findings in this report also provide insight into their perceptions related to more general aspects in disaster communication, social media use, and the role of trust.

Regarding cultural factors in disaster communication strategies, all practitioners recognised the need to ensure that those disaster and emergency services who communicate with the public have an appropriate level of cultural awareness and receive specific training. But they also highlighted that response related to different cultural groups and cultural factors has to be constantly re-evaluated, and that such response may have to be adapted due to shifts in citizens' behaviour in case of a disaster situation when cultures "collide", e.g. in multi-cultural camps. Further, they identified language barriers in emergency and disaster response, where interpreters, who are supposed to help communicating with different groups, may know the respective common language, but need to translate information where they may not know the correct words or phrasing. Accordingly, such interpreters should receive specific training to ensure that they have the appropriate linguistic and "technical" background in disaster communication. At the same time, though, the practitioners felt that they themselves should use such instances to critically review their use of technical language. Additionally, cross-cultural symbols were identified as important in effective disaster communication (e.g., the use of icons) as they can cut across different languages, but should best be tested with different cultural groups before implementation to avoid misunderstandings.

Concerning perceptions of citizens' understandings of disaster risk and related behaviours, the practitioners identified a lack of citizens' awareness about the correct procedures to follow in emergency and disaster situations. But although practitioners had recommended and/or conducted education and information campaigns about disaster risks and disaster response, they also expressed their scepticism that such risk awareness campaigns would, actually, lead to a more appropriate behaviour. However, they did feel there was a link between citizens' risk perception and adaptive behaviour, when the perceived risk was seen to be related to worry/concern for significant others (e.g., family members), which is an aspect that should be specifically addressed in risk awareness campaigns. Additionally, practitioners recommended that any educational campaigns would need to actively engage citizens, and they identified simulations, rather than presentations, as the most effective way of risk education, with simulation exercises having also the benefit of being bi-directional.

Furthermore, the collective and historical memory of past disaster situations was outlined by practitioners as important to citizens' risk perception and disaster preparedness. Here, practitioners outlined the success of community workshops, where the participants built, besides being given informative material of specific disaster risks, or re-build the history of their city, village or region through the use of historical artefacts and pictures. Such collective exercises to recover the "lost"

memory of disasters aim to encourage citizens to take up responsibility and action through a shared cultural identify.

As another aspect in the context of risk awareness and disaster response, the practitioners elaborated upon the potential of peer education, a strategy that could also be applied by engaging peers within cultural groups, with the same social status, and/or the same religious or ethnic background. For example, young people were seen to be most successful in training young people, seniors may be easiest to reach through older trainers, and technology or sports enthusiasts will be more likely to follow the advice of people who think likewise.

Regarding specific cultural factors in disaster response, practitioners recognised the ambivalent role of citizens' socio-economic status: A higher socio-economic status was related to a greater willingness to cooperate with the authorities in case of disasters, but it was also seen as the potential cause for greater resistance due to "having a lot to lose". On the other hand, a lower socio-economic status was associated with citizens' greater indifference, but also with a greater flexibility due to "having nothing to lose". A more important role was ascribed to the existence, or lack of, social networks, with social isolation seen to be a major risk factor across all social strata. Additionally, practitioners felt that in urban areas there is a tendency of citizens being less self-sufficient, and citizens "delegating" the care for their safety to the authorities.

Further, they elaborated on differences due to gender roles (e.g., restrictions in the interaction between women and men, family management) as well as religious / worldview-related differences (e.g., dietary requirements, medical issues, burial customs). Due to the vast number of these differences, practitioners recommended that citizens from all cultural (including immigrant) backgrounds should be involved in the planning of emergency and disaster response, i.e. before a disaster occurs, in order to ensure that practitioners learn early about these differences and adapt guidelines and procedures accordingly.

During the Citizen Summits held in Bucharest and Malta in 2016, the participating citizens identified a number of groups which they deemed to be vulnerable during disaster situations. These groups deemed vulnerable by citizens included: i) Elderly people who overestimate their physical abilities; ii) Professional groups, who, due to their specific profession, may not receive or hear a warning; iii) Children who are left at home alone; and, iv) foreigners who may not know the area or language, lack social networks or are stigmatised. As these suggestions were made by citizens, it was important to understand how practitioners feel about these vulnerable groups in disasters, and the stakeholder discussions revealed that a majority was in agreement with the citizens. However, practitioners outlined that different cultural groups (e.g., children of drug users) and national groups may hold different beliefs regarding children being left at home alone. Regarding foreigners as a vulnerable group, they strongly recommended the development and usage of mobile phone-base technologies which, in their opinion, could provide foreigners with multi-lingual messages containing emergency information.

Further, the abovementioned Citizen Summits 1 and 2 also led to the identification of a number of groups, who were considered to be supporting across the different phases of a disaster. Here, citizens identified four main groups whom they considered as being able to play a role in disasters: i) elderly people who are in good physical health and participate in volunteering activities; ii) foreigners who may have previous experience of disasters and use this knowledge to support a local community; iii) children and teenagers who may be able to provide support through their volunteering activities; and

iv) children who have first aid and/or disaster response skills due to courses and drills at schools, which may help motivate their parents to learn these skills as well. Again, as these suggestions were made by citizens, they were presented to and discussed with the practitioners to explore their understanding of the viability of such groups. Regarding active elderly people, a large number of practitioners felt that involving physically active senior citizens in disaster preparedness training would offer such senior citizens the opportunity to take up social responsibility and play (again) an important role in their community. Encouraging them, e.g. through senior citizens organisations, to get training and become volunteers, was considered as an important contribution to socially inclusive procedures. Further, the practitioners strongly agreed that children can play an important role, because not only may they speak the local language better than parents with a migration background, but they can also help providing information to households which, otherwise, are suspicious towards authorities.

As an additional group, they outlined those who share a passion (e.g., sport, hobby), feeling that people who are passionate about a shared activity would also be passionate about giving help, as they are already used to having a common goal. Here, the practitioners recommended to "piggyback" on such team cohesion, i.e. to identify such local groups, build upon their dynamic, and encourage their team leaders to incorporate disaster preparedness in the group's set of already existing common goals.

Regarding the role of social media and mobile phone apps in disaster management, the discussions revealed rather disparate preferences amongst the practitioners. Some preferred social media as being a well-established platform, which was seen to have a widespread use amongst many groups of the population, whereas others appreciated and preferred in particular the specific functions of mobile phone apps. Regarding social media usage, they identified age-related and profession-related preferences, outlining the usage differences between Facebook, Instagram, Snapchat and LinkedIn users, and that an effective disaster communication needs to take these differences into account.

On the other hand, practitioners outlined specifically the potential of "smart" devices (e.g., smartphones, tablets) in particular to reach foreigners, e.g. expatriates, migrants or holiday makers, i.e. people who may be exposed to significant risks due to their lack of local knowledge. Furthermore, they also referred to the promise of instant messaging (IM) communications, which they saw as enabling disaster managers to reach large numbers of citizens instantly, e.g. through WhatsApp, including the possibility to target specific large groups. With such a multitude of social media channels and mobile phone apps, some perceived the risk of providing redundant information. However, the majority of practitioners agreed that overlapping information streams may also be seen as a strength, given that cultural groups and cultural factors overlap as well.

Finally, regarding the role of trust, practitioners perceived different levels of trust in different authorities (e.g., related to professional roles, symbols, personal experience) in the disaster response phase, and they reported several issues particularly in the disaster recovery phase. However, there was little information about the role of trust in the disaster preparedness phase, which will require further investigation. Additionally, many practitioners showed a rather self-critical attitude, elaborating that not only citizens mistrust institutions, but institutions also mistrust citizens, e.g., that citizens may use social media to spread false information rather than understanding citizens' social media usage in disaster situations as their willingness to take part and take up responsibility in public life.

The individual topics raised in this report will, together with the relevant findings of Work Packages 3, 4, 6, 7 and 8 (as outlined in the introduction chapter), shape the next round of Citizen Summits in 2017. Additionally, all results will

- be included in the Work Package 9 Cultural Map; and
- shape a comprehensive set of recommendations to professional stakeholders, policy makers and interested citizens, which will be included in the recommendations module of the Work Package 9 Toolkit.

Appendix 1. Schedule/Agenda

CARISMAND Second Stakeholder Assembly "Disasters, Cultures & Trust"
27-28 February, 2017, Rome, Italy

Day 1: Monday, 27th February 2017

10:00 – 10:30	Participant Registration / Welcome Coffee
10:30 – 11:00	Welcome & Project Introduction
11:00 – 13:30*	Working Group Session I. "Culture & Risk":
	Practical Experience of Cultural Aspects in Disaster Communication between Practitioners and Citizens
13:30 – 14:30	Lunch Break
14:30 – 15:30	Panel Discussion: "Culture & Risk – Practical Experiences"
15:30 – 16:00	Noellie Brockdorff / Sandra Appleby-Arnold (University of Malta):
	Results from the CARISMAND Citizen Summits 2016 in Romania and Malta
16:00 – 17:30*	Working Group Session 2. "Media Cultures & Disasters":
	The Use of Social Media and Mobile Phone Applications in Disasters

Day 2: Tuesday, 28th February 2017

09:00 – 09:30	Participant Registration
09:30 – 10:00	Welcome / Summary of the Previous Day
10:00 – 10:30	Remy Bossu (European-Mediterranean Seismological Centre):
	Smartphones, Apps and Emergency Management: Lessons Learnt from Earthquakes
10:30 – 11:30	Panel Discussion: "Media Cultures and Disasters"
11:30 – 13:30*	Working Group Session 3. "Social Cohesion & Social Corrosion":
	Cultures, Communities and Trust
13:30 – 14:30	Lunch Break
14:30 – 15:30	Panel Discussion: "Cultures, Communities and Trust"
15:30 – 16:00	Gabriele Quinti (Laboratorio di Scienze della Cittadinanza):
	Cultures, Social Actors, and Empowerment in Local Communities
16:00 – 16:30	Conclusion

All working group sessions included coffee breaks.

Notes:
All working groups have been held in Italian language.
All presentations in English were translated simultaneously into Italian. Panel discussions were held in Italian with simultaneous translation into English.

Appendix 2. Working Group Session 1 "Culture & Risk"

Practical Experience of Cultural Aspects in Disaster Communication between Practitioners and Citizens

Objectives	Discussion Guideline Briefing
Welcome and introduction *[about 15 min]* • **Welcome participants** • **Distribute name cards** • **Obtain signed consent forms** • **Start recording the meeting** • **Thanking participants** • **Introduction of the moderator** • **Duration** • **Confidentiality** • **Ground rules for the discussion** • **Brief introduction of the participants**	*Welcome the participants, assign them a seat, and provide them with name cards.* *Distribute the consent forms and ask the participants to read and sign the consent forms before the start of the working group. This is mandatory, in order to obtain their informed consent and to ensure that they understand what they have agreed to do. Explain to them that the audio recording of the discussion is necessary so as not to miss any of the comments given during the discussions. Start recording the meeting and inform the participants that the recording has begun.* "Welcome and thank you for agreeing to participate in this important working group. My name is _____ and I will be moderating this group discussion. Our session will take about 2 hours, plus another half hour to summarise our results. Since we will be audio recording the discussion, I would kindly ask you to speak in a clear voice; your opinions, experiences and suggestions are very important to this project, and we do not want to miss any of your comments." *At this stage, do not to provide any additional details on the content of the working group in order to avoid influencing and biasing the discussion! However, in case a participant asks, you can give them the general explanation that "these discussions serve to understand the everyday experiences of people working in disaster management".* "As stated on the signed consent form, everything that will be recorded during this session will be used only for the purposes of this study and will be kept confidential, i.e. the recorded comments might be used in scientific publications and reports relating to this study, but only as anonymous quotes. Some of the project partners who have organised this conference may follow the working group discussion with the help of an interpreter translating simultaneously into English, but this will not affect the confidential character of any statement.

I want you to make sure that you are comfortable enough to share your opinions with all the participants in the group. In order to facilitate this, I would like to ask everyone present to follow these ground rules:

- We are interested in the opinion of each individual and we would therefore like to hear from all the people in the group.

- There are no wrong or right answers. There are only different opinions. Consequently, we request that you mutually respect each other's opinions.

- It is important for us that only one person speaks at a time. Each opinion is important and I would kindly request that you don't speak when others are speaking, otherwise it will be difficult for us to capture all of your opinions.

- I would also kindly request that you silence your mobile phones and thus provide for an uninterrupted discussion.

Do you have any comments or other suggestions for these ground rules?

[…]

Do you have any other important general questions before we start?"

[…]

"So, let us start with each member of the group briefly introducing themselves. Let us go around the table. Tell us, please, your name or, if you prefer, your first name or a nickname, and a few basic things about yourself, such as your occupation, what type of organisation you come from, etc. Let me start by introducing myself…"

Running total: 15 min

1. Warm-up: *Scenario discussion* *"Cultural factors"* *[about 20 min]* *Question aims:* - *Explore how participants would adapt their*	To start, I would like to discuss with you the following scenarios: Imagine that a large fire has started in a house in Rome and is spreading rapidly to the nearby houses. Now imagine 3 different situations. The house is located on: (a) Tor Bella Monaca (6th town council) (b) Viale Parioli (2nd town council) (c) Via del Vantaggio (1st town council). How would your communication strategies, and disaster management, potentially differ?

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communication strategies in case of a disaster to specific cultural groups

- *Explore how they would adapt their disaster management practices to specific cultural groups*

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[…]

What different reactions would you expect?

[…]

Note:

Tor Bella Monaca is located in one of the more marginalised and highly populated areas of Rome, characterized by a high rate of immigration, lack of schools and safety. The area is also known for its very high crime rates.

Viale Parioli is located in one of the richest areas of Rome, with apartments (and few villas too) belonging mostly to people from the upper strata.

Via del Vantaggio is located in a old area of Rome, with narrow streets and old houses. The area is partially inhabited by elderly people.

In all three cases, the buildings are mostly houses, and all three are residential areas.

Running total: 35 min

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2. Perceptions of core concepts

[about 15 min]

Question aims:

- *Explore the attitudes of practitioners towards influence of cultural aspects on citizens' understandings of disaster risk, and how it affects their preparedness*

- *Approach the topic of "culture" carefully, keeping an open mind for*

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"Let's continue our discussion by returning to a very basic question: All of you, as practitioners in emergency services and disaster management, have quite some experience and understanding of what a disaster, actually, "is". But how about citizens' understandings of disaster risk, and their preparedness? What differences have you experienced in your professional practice with different groups of people, for example regarding different perceptions of acceptable or unacceptable risks?"

[…]

*The aim of these questions is to **encourage participants to talk about their actual professional experiences, elaborating on perceived differences, rather than speculating or hypothesising**. Most likely they will, at this point, already bring up examples that show the influence of cultural aspects. Therefore, it is important NOT to use the word "culture" immediately, as this may trigger stereotyping or reducing the definition of culture to ethnicity or religious groups.*

To probe further, some of the following examples could be given:

- *Different livelihoods*

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cultural aspects that go beyond ethnicity or religion.	- *Different educational backgrounds*
	- *Different levels of local knowledge (and local risks), e.g. due to migration*
	- *Local histories*
	- *Different levels of health literacy*
	- *Norms and traditions (e.g. family ties)*
	- *Religions or worldviews*
	- *Gender roles (e.g. women having less access to education)*
	Running total: 50 min
3. Effective communication with different cultural groups [about 30 min] *Question aims:* • *Elaborate positive, and negative, experiences during all the three main disaster phases (preparation, management, recovery)* • *Explore the role of language and use of language in this context*	"From the discussion we just had, you have identified a number of cultural aspects that affect citizens' perceptions of disaster risk. Now, drawing again on your professional experience, what cultural factors have you ever encountered which produced barriers and difficulties: - in case of a disaster risk, i.e. when you would like them to take precautions and prepare themselves; - during the "acute" disaster phase; and - during the recovery phase? […] And what cultural factors have you experienced that helped overcoming such difficulties? […] *Here, the participants should be encouraged to share both their positive and their negative experiences. However, particularly relating to their negative experiences they should also be encouraged to elaborate how the communication should have been.* "What roles does language play for successful communication with different cultural groups? This, of course, will concern the communication with ethnic minorities. But I'd like you to think as well about how different people use the same language differently, for example depending on their age, or their social background." […] *Running total: 80 min*

4. Discussion of vulnerable groups suggested by citizens (participants of Citizen Summits) **[about 20 min]** *Question aims:* - *Explore what participants think of these suggestions* - *Explore how participants feel about citizens contributing to disaster management by making such suggestions*	"As our final topic, I would like to show you some pictures. These pictures represent some of the feedback we received from citizens who participated in the two CARISMAND Citizen Summits that were held in Romania and Malta last year. In these Summits, more than 200 citizens were asked what specific groups of the population – other than elderly people and children in general – they think would be particularly vulnerable in case of a disaster. These are the results:" *Hand out CARD 1 to participants, and read out loud the descriptions below.* Picture 1: Elderly people who overestimate their physical abilities. Picture 2: Professional groups who, due to their specific profession, may not hear or receive warning; for example because of an isolated or noisy workplace.

Picture 3:

"Latchkey children", i.e. children who are alone at home because their parents work full-time.

Picture 4:

Foreigners (for example tourists, expatriates and/or migrants), who

- may lack local knowledge (e.g. assembly points) or experience in disaster typical for that area

- do not speak the local languages

- lack local social networks (family, friends)

- are stigmatised.

"What do you think of these suggestions?"

[…]

Encourage participants to freely discuss both their positive and their negative opinions about these suggestions. Please probe <u>why</u> they are

5. Discussion of groups that may play an important role in disaster situations, suggested by citizens (participants of Citizen Summits)

[about 20 min]

Question aims:

- *Explore what participants think of these suggestions*

- *Explore how participants feel about citizens contributing to disaster management by making such suggestions*

"The 200+ citizens in the CARISMAND Citizen Summits were also asked what specific groups of the population may potentially play an important role in disasters. And these were their responses:

Hand out CARD 2 to participants, and read out loud the descriptions below.

Picture 5:

Elderly people who are of good physical health and, because of being pensioners, have time to join volunteer groups and learn how to become skilful active helpers.

Picture 6:

Foreigners who may contribute and enrich local communities by sharing their disaster-related knowledge and experience they have gained elsewhere.

Picture 7:

Children and teenagers who are members of scouts groups and may be trained to help other children in disaster situations, or to engage other children so emergency services can take care of other core tasks.

Picture 8:

Children who may have more up-to-date First Aid and disaster response skills due to courses and drills at school; these may help motivating their parents to bring their skills up to date and take preparatory measures.

"What do you think of these suggestions?"

[…]

Encourage participants to freely discuss both their positive and their negative opinions about these suggestions. Please probe why they are

	holding these opinions, and specifically ask for participants' professional experiences with these groups in disaster situations. *Running total: 120 min*
6. Concluding summary and preparing presentation for discussion panel **[about 30 min]**	"We are coming to an end of this working group which, I think, has revealed some very interesting aspects, and I thank you very much for the fruitful discussion. Our last task is to prepare together a short summary of the results for the panel discussion that will take place later today. I would perhaps recommend to structure it along the main topics we have covered, which were: - How different groups of the population may perceive disaster risk differently, - How different groups may prepare themselves differently for disasters, - What cultural factors may cause barriers and difficulties in the different disaster phases (preparation, response, recovery), - The role of language and use of language when communicating with different cultural groups in disaster situations. - As a conclusion, we should perhaps give the audience a brief outline of the different groups you have identified – either in your professional practice or in the course of this discussion. Let's start […]" *For this summary, the moderator will represent the group on the discussion panel. The presentation should not exceed 5-10 minutes. The group should be guided to prepare a clearly structured summary that, if the results allow for, follows the main topics mentioned above.* *Running total: 150 min*

Appendix 3. Working Group Session 2 "Media Cultures & Disasters"

The Use of Social Media and Mobile Phone Apps

Objectives	Discussion Guideline Briefing
Welcome and introduction **[about 10 min]** • **Welcome participants** • **Distribute name cards** • **Obtain signed consent forms (if required)** • **Start recording the meeting** • **Thanking participants** • **Introduction of the moderator** • **Duration** • **Confidentiality** • **Ground rules for the discussion** • **Brief introduction of the participants**	*Welcome the participants, assign them a seat, and provide them with name cards.* *At this point all, or at least most, of the participants will have signed the consent forms (in the beginning of their participation in working groups 1 and 2). However, please check and collect signed consent forms if required. Explain to them that, as in the previous working groups, the audio recording of the discussion is necessary so as not to miss any of the comments given during the discussions. Start recording the meeting and inform the participants that the recording has begun.* "Welcome and thank you for agreeing to participate in this important working group. My name is _____ and I will be moderating this group discussion. Our session will take about 90 minutes, plus another 20-30 minutes to summarise our results. Since we will be audio recording the discussion, I would kindly ask you to speak in a clear voice; your opinions, experiences and suggestions are very important to this project, and we do not want to miss any of your comments. " *At this stage, do not to provide any additional details on the content of the working group in order to avoid influencing and biasing the discussion!* **Note: The following is only required in case there is any participant who has not participated in working group 1!** "As previously explained and stated on the signed consent form, everything that will be recorded during this session will be kept confidential, i.e. the recorded comments might be used in scientific publications and reports, but only as anonymous quotes. I want you to make sure that you are comfortable enough to share your opinions with all the participants in the group. In order to facilitate this, I would like to ask everyone present to follow these ground rules: • We are interested in the opinion of each individual and we would therefore like to hear from all the people in the group. • There are no wrong or right answers. There are only different opinions. Consequently, we request that you mutually respect each other's opinions.

- It is important for us that only one person speaks at a time. Each opinion is important and I would kindly request that you don't speak when others are speaking, otherwise it will be difficult for us to capture all of your opinions.

- I would also kindly request that you silence your mobile phones and thus provide for an uninterrupted discussion.

Do you have any comments or other suggestions for these ground rules?

Do you have any other important general questions before we start?"

[…]

So, let us start with each member of the group briefly introducing themselves. Let us go around the table. Tell us, please, your name, or nickname if you prefer, and a few basic things about yourself, such as your approximate age, occupation, where you come from, etc. Let me start by introducing myself…"

Running total: 10 min

1. Picture association exercise I *[about 20 min]* *Question aims:* - *"Warm-up"* - *Explore immediate reactions to the topic (role of the media in disaster situations)* - *Start off the group discussion*	 "I would like to begin our discussion with a quick look at this picture. It was taken near the site where, in 2015, the Germanwings A320 airbus crashed into a French mountain, killing 150 people (*source: The Guardian (28/03/2015): Should the media rethink how they cover disasters?*)." "Can you tell me what you think, your immediate thoughts and feelings, when you see this picture?" […] *These associations are meant to serve as a warm-up; participants should be encouraged to freely express their thoughts, and each of them should be given the opportunity to speak without being interrupted by others. If possible, notes should be taken of aspects mentioned by participants that relate to "culture", for example*

- *media cultures (the way certain types of media report about disasters)*

- *communication cultures (the way how disaster managers/practitioners and journalists communicate with each other), or*

- *how certain cultural groups may be specifically affected by "sensationalist" media reporting (e.g. increasing vulnerabilities of victims or relatives of victims).*

Running total: 30 min.

2. Picture association exercise II

[about 30 min]

Question aims:

- *Explore immediate reactions to the topic (role of social media in disaster communication)*

- *Stimulate the discussion*

"I would like to continue our discussion by shifting to the topic of social media, having a quick look at this picture. It is the banner on the Google Crisis Response website which provides for example crisis maps, person finder functions, and it can create public alerts. The picture was taken in Port-au-Prince, Haiti, where in January 2010 an earthquake killed more than 160,000 people."

"Can you tell me what you think, your immediate thoughts and feelings, when you see this picture?" […]

"What role, do you think, do social media, or mobile phone apps specifically designed for disaster situations, play for citizens at risk, or for victims of a disaster?"

[…]

"And how, do you think, can disaster managers and emergency services make use of social media or mobile phone apps?" […]

"What role do social media or mobile phone apps play in your professional practice?" […]

"Can you tell us of any experiences from your professional practice when people used social media or specific mobile phone apps in disaster situations?" […]

These questions shall predominantly explore and establish the participants' knowledge about the various uses of social media and mobile phone apps in disaster management. The participants should be

	particularly encouraged to talk about their personal experiences in disaster situations where social media or mobile phone apps were used, and what effect this usage had on public preparedness, response, and/or recovery.
	Running total: 60 min
3. The role of social media and mobile phone apps for different cultural groups in disasters *[about 30 min]* ***Question aims:*** • ***Explore which cultural groups use and respond to different types of social media and/or mobile phone apps*** • ***Explore the reasons for these differences*** • ***Elaborate the potential for improving the effectiveness of these tools***	"Now, let me continue with the following question: In the previous working group sessions, you identified various cultural groups and cultural factors that play a role in disaster preparedness, response and recovery. So who, in your opinion, are the people who use social media, or mobile phone apps, in the case of a disaster risk, or in a disaster situation?" […] "How effective do you think are social media, or mobile phone apps, in raising risk awareness, promoting disaster preparedness, response and recovery with these different cultural groups? Can you give me examples from your personal experience?" […] "How do you think this effectiveness could be improved?" […] "What effects, do you think, may the use of social media or mobile phone apps in disaster situations have on trust between citizens and authorities?" […] *In all the questions above, the <u>focus should be on social media and mobile phone app usage by specific cultural groups</u> – **not** social media usage in general. The aim is to explore how these tools can be used to facilitate:* *(1) the bi-directional communication between citizens and authorities, and* *(2) the communication between citizens.* *Running total: 90 min*
4. Concluding summary and preparing presentation for discussion panel *[about 20 min]*	"We are coming to an end of this working group which, I think, has revealed some very interesting aspects, and I thank you very much for the fruitful discussion. Our last task is to prepare together a short summary of the results for the panel discussion that will take place later today. I would perhaps recommend to structure it along the main topics we have covered, which were:

	- Which are the cultural groups that make use of social media/mobile phone apps;
	- Why do different groups of the population use and respond differently to different types of media;
	o How effective are social media/mobile phone apps in providing information related to (1) disaster preparedness, (2) disaster response, and (3) disaster recovery;
	- As a conclusion, we should perhaps give the audience a brief outline how identifying cultural groups and their specific media preferences could be integrated in a disaster communication framework for improved effectiveness.
	Let's start […]"
	For this summary, the moderator will represent the group on the discussion panel. The presentation should not exceed 5-10 minutes. The group should be guided to prepare a clearly structured summary that, if the results allow for, follows the main topics mentioned above.
	Running total: 110 min

Appendix 4. Working Group Session 3 "Social Cohesion & Social Corrosion"

Cultures, Communities and Trust

Objectives	Discussion Guideline Briefing
Welcome and introduction *[about 10 min]* - ***Welcome participants*** - ***Distribute name cards***	*Welcome the participants, assign them a seat, and provide them with name cards.* *At this point all, or at least most, of the participants will have signed the consent forms (in the beginning of their participation in working group 1 or 2). However, please check and collect signed consent forms if required. Explain to them that, as in the previous working groups, the audio recording of the discussion is necessary so as not to miss any of the comments given during the discussions. Start recording the meeting and inform the participants that the recording has begun.* "Welcome and thank you for agreeing to participate in this important working group. My name is _____ and I will be moderating this group discussion. Our session will take about two hours, including

• *Obtain signed consent forms (if required)* • *Start recording the meeting* • *Thanking participants* • *Introduction of the moderator* • *Duration* • *Confidentiality* • *Ground rules for the discussion* • *Brief introduction of the participants*	a coffee break, plus another 20-30 minutes to summarise our results. Since we will be audio recording the discussion, I would kindly ask you to speak in a clear voice; your opinions, experiences and suggestions are very important to this project, and we do not want to miss any of your comments. " *At this stage, do not to provide any additional details on the content of the working group in order to avoid influencing and biasing the discussion!* **Note: The following is only required in case there is any participant who has not participated in any of the working groups 1 or 2!** "As previously explained and stated on the signed consent form, everything that will be recorded during this session will be kept confidential, i.e. the recorded comments might be used in scientific publications and reports, but only as anonymous quotes. I want you to make sure that you are comfortable enough to share your opinions with all the participants in the group. In order to facilitate this, I would like to ask everyone present to follow these ground rules: • We are interested in the opinion of each individual and we would therefore like to hear from all the people in the group. • There are no wrong or right answers. There are only different opinions. Consequently, we request that you mutually respect each other's opinions. • It is important for us that only one person speaks at a time. Each opinion is important and I would kindly request that you don't speak when others are speaking, otherwise it will be difficult for us to capture all of your opinions. • I would also kindly request that you silence your mobile phones and thus provide for an uninterrupted discussion. Do you have any comments or other suggestions for these ground rules? Do you have any other important general questions before we start?" […] "So, let us start with each member of the group briefly introducing themselves. Let us go around the table. Tell us, please, your name, or nickname if you prefer, and a few basic things about yourself, such as your approximate age, occupation, where you come from, etc. Let me start by introducing myself…"

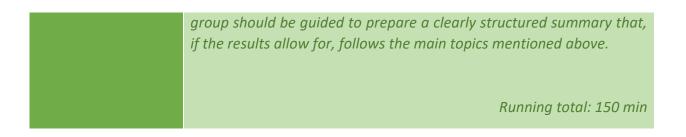|	
	Running total: 10 min
1. Word association exercise **[about 10 min.]** **Question aims:** • *"Warm-up"* • *Establish top-of-mind associations with key aspects of this working group* • *Start off the group discussion*	"I would like to begin our discussion with a short "warm-up": I will read out a word and I would like you to say the first couple of things that spring to your mind when you hear the word. Let's try an example first: What is the first thing that comes to mind if I say the word "fire"? Preferably, try to think about single words or short phrases, and try to avoid lengthy descriptions. Read Out (one at a time): - Responsibility - Credibility - Trust - Faith" *Running total: 20 min*
2. The role of citizens' trust in effective risk and disaster communication **[about 30 min]** **Question aims:** • *Elaborate positive, and negative, experiences related to the role of trust* • *Explore the relationship between who is trusting, and who is to be trusted, with specific emphasis on the identification of differences*	"Let's now talk a bit about your experiences. Can you give me examples from your own experience where citizens showed trust, or distrust, towards authorities in a disaster situation? [...] What do you think were the reasons for such trust? [...] And what do you think were the reasons for citizens' distrust? [...] These reasons you just described, how do they affect different groups of the population? [...] And how about different levels of trust, or distrust, in different types of institutions? How do you think may these relate to cultural differences? [...] *In this set of questions, the participants should be encouraged to elaborate factors for trust and distrust (ideally participants should give examples of both) on two levels:* *(1) Depending on who is trusting, and (2) depending on who is to be trusted. The discussion should be moderated toward the aim to bring*

between cultural groups	*these two levels together, i.e. how different cultural groups trust, or distrust, different types of institutions involved in disaster management and providing emergency services. However, it should also be addressed to what extent there are, or may be, differences between trust in authorities and trust into individual practitioners who work for such authorities. Here, the participants should be encouraged to talk about their personal experiences – in particular how they handled difficult situations when they were faced with mistrust.* *Running total: 50 min*
3. The role of cultural leaders in effective risk and disaster communication **[about 30 min]** *Question aims:* • **Elaborate experiences of working with cultural leaders** • **Explore the possibility to proactively identify cultural leaders and how to involve them in disaster communication**	"Now, let's continue with a very basic question: Who, do you think, are the cultural leaders that play, or have in your opinion the potential to play, an important role in the different disaster phases, i.e. - Risk communication aiming at public preparedness - Communication between citizens and authorities during a disaster, and - Communication between citizens and authorities that is aiming at a fast and effective recovery?" *Here, participants may identify e.g. individuals such as peer group leaders, teachers, religious leaders, leaders of community groups (e.g. Boy/Girl Scouts), sports group leaders, company managers, caregivers, trade union representatives, celebrities / idols (e.g. athletes, musicians, actors). However, these examples should only be given if participants have difficulties to understand what a "cultural leader" may be.* "Can you describe any experiences you have had with cultural leaders and their role in a disaster or disaster risk situation?" […] How do you think could such cultural leaders be identified and proactively involved in disaster communication between citizens and authorities?" […] *Running total: 80 min*
4. Collective efficacy and empowerment in disasters **[about 30 min]**	"Now, after identifying potential cultural leaders, I would like to discuss with you also the reactions in local communities themselves. What effect, in your professional experience, could a disaster have on the social cohesion of local communities?

	[...]

Question aims:
 	
• **Elaborate the various effects different types of disasters can have on local communities**
	What effect could a disaster have on the attitudes in local communities towards
	
	    (a) authorities, and
	
	    (b) practitioners involved in disaster management and emergency services?
	
	[...]
	
	What difference do you think does it make whether the causes for such disaster are natural or man-made?
	
	[...]
	
	Disasters can have a number of different effects on collective efficacy and community cohesion. On one hand, there can be a strengthened sense of community and an increased willingness to help each other on one hand, but, on the other hand, there can also occur an increased level of conflict over the causes of the disaster and what actions should be taken, generating hostility and mistrust. Participants should be encouraged to talk about their professional experiences with local communities, elaborating both potential cohesive and corrosive effects.
	
	Running total: 110 min

5. Scenario discussion "Culture & Trust"
[about 20 min]
 	
Question aims:
 	
• **Explore how participants would adapt risk communication strategies to issues of trust related to**
 	
    ○ **who is trusting; and**
 	
    ○ **who is to be trusted.**
	"As our final topic, I would like you discuss the following issue:
	
	Remember the strong earthquake in the Rieti province on last August 24th and the following ones on October 26th and October 30th that, as you know, have caused serious damages. Now imagine that a similar earthquake may affect another seismic area in Lazio (Castelli Romani in the Roma Province). Therefore, let's imagine 3 different situations: The damages are in
	
	    (d) Amatrice
	
	    (e) Accumuli
	
	    (f) Frascati.
	
	Which would be the authorities that local communities or different cultural groups in that area would trust most? And why?"
	
	[...]
	
	"How would, or could, you involve local communities or different cultural groups in disaster response or recovery activities?
	
	[...]

Running total: 130 min

4. Concluding summary and preparing presentation for discussion panel

[about 20 min]

We are coming to an end of this working group which, I think, has revealed some very interesting aspects. As in the previous working group, our last task is to prepare together a short summary of the results for the panel discussion that will take place later today. I would perhaps recommend to structure it along the main topics we have covered, which were:

- The factors that affect citizens' trust in disaster and disaster risk communication, depending on

    o Who is trusting, i.e. related to different cultural groups; and

    o Who is to be trusted, i.e. the differences which cultural groups trust which authorities responsible for disaster management and emergency services.

- As a conclusion, we should perhaps give the audience a brief outline of how to identify the links between culture and trust in disaster situations, and how these links could be used in successful communication between citizens and different authorities.

Let's start…

[…]

For this summary, the moderator will represent the group on the discussion panel. The presentation should not exceed 5-10 minutes. The

group should be guided to prepare a clearly structured summary that, if the results allow for, follows the main topics mentioned above.

Running total: 150 min

Appendix 5. Consent Form

CARISMAND Stakeholder Conference
"Disastri, Communicazione e Cultura"
Roma, Febbraio 27 – 28 2017
Modulo di Consenso

Nome: _____

Carta d'identita' numero: _____

Do il mio consenso perché le discussioni alle quali partecipero' durante questi Gruppi di Lavoro siano registrati. M'impegno a tenere confidenziali tutte le informazioni che sono condivise durante queste discussioni.

Sono stato/a informato/a che questi Gruppi di Lavoro fanno parte del progetto CARISMAND (Culture and Risk Management in Man-made and Natural Disasters) – un progetto collaborativo che é co-finanziato dall'Unione Europea come parte del programma Horizon2020.

Concordo che le mie opinioni ed idee che esprimerò durante il corso di questi Gruppi di Lavoiro siano usati solo per gli scopi del progetto CARISMAND e che saranno utilizzate in forma anonima dai membri del progetto CARISMAND e da altri ricercatori. Tutte le mie risposte saranno tenute in modo sicuro e rispettando le leggi sulla privacy.

La mia partecipazione é volontaria e sono libero/a di lasciare il Gruppo di Lavoro in qualunque momento senza fornire motivazione.

Dichiaro che comprendo le condizioni imposte per la partecipazione e accetto di partecipare a questi Gruppi di Lavoro.

Data ……………………………………………………….

Firma ……………………………………………………….