



Culture and disaster risk management - Citizens' reactions and opinions during Citizen Summit in Frankfurt, Germany.

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1. Introduction

The analyses and results in this document are based on the data collected during the fourth Citizen Summit held in Frankfurt/Germany on June 14th 2017. As the previous three Citizen Summits held in Romania, Malta and Italy, this Citizen Summit was designed as a one-day event combining public information with feedback gathering through different methods of data collection. In the morning session, 42¹ questions with pre-defined answer options were posed to the audience and collected via an audience response system. In the afternoon session, small moderated group discussions of approximately 1.5 hours duration were held, which followed a detailed set of questions and discussion guidelines, including a short association exercise. All questions and discussions aimed to explore cultural factors in citizens' attitudes, feelings, and perceptions towards disaster risks, as well as their identification in relation to disaster preparation, response and recovery. In coordination with the Work Package 11 briefs, the definition and design of the questions was based on:

- Results from Citizen Summits 1 and 2, complementing in particular the data related to risk perception with the aim to build up a comprehensive base for cultural comparison across all six summits;
- Results from Stakeholder Assemblies 1 and 2, in particular regarding the identification of non-professional ("cultural") leaders in disaster situations, motivators for improving disaster preparedness, and the role of trust/distrust;
- Results from Work Package 3, aiming to complement and increase knowledge about citizens' uptake of mobile phone apps and interest in usage of different features, also in contrast to social media use;
- Results from Work Package 4, in particular regarding recent research findings in the relationships between perceived disaster preparedness and actual disaster preparedness, and in the ambivalent relationships between trust in authorities and citizens' personal preparedness;
- Results from Work Package 7, aiming to complement the research regarding citizen empowerment by exploring trust as a bi-directional relationship between citizens and disaster managers; and
- Results from Work Package 8, taking into account the role of media in all phases of disaster management.

For a detailed overview of all questions asked and topics discussed please see Appendix A.

Overall, 105 citizens participated in this Germany event. The total sample shows a relatively even gender and age distribution, which is unsurprising given the target quotas² that were requested from

¹ 40 questions; plus 2 initial test questions to ensure that the ppvote radio signal between the participants' keypads and the central software unit are working.

² Target gender split: 50% female / 50% male; target age split: 20% 18-24 years, 40% 25-44 years, 40% 45+ years; total target of 100-110 participants per Summit.

the recruiting local market research agency. The comparatively low number of senior citizens aged 65 and above was expected and reflects mobility issues.

Table 1
Distribution by age and gender

Total	Gender			Age Groups						
	Female	Male	No answer ³	18-24	25-34	35-44	45-54	55-64	65+	No answer
105	56	48	1	18	23	22	24	15	3	-

Participants were asked about three key aspects of experience of disasters and disaster risk perception that could potentially have an impact on how other questions were answered⁴. Two out of three respondents indicated that they themselves, or a close friend or family member, have experienced a disaster, more than half (54%) felt that they were living in an area that is specifically prone to disasters, and 62% answered that they know other people in the area where they live who they think are particularly vulnerable or exposed to disasters. Slight gender differences (as well as age-related differences) were found to be not statistically significant ($p \geq .05$).

Table 2
Disaster risk perception I

Questions		Answer=YES		
		Total	Female	Male
Q5	Experience of disasters	66.7%	64.3%	68.8%
Q6	Feel that living in a disaster area	54.4%	50.9%	57.4%
Q7	Know of vulnerable groups particularly exposed to disasters	61.5%	57.1%	66.0%

Q5: Have you, or a close friend or family member, ever experienced a disaster?

Q6: Do you feel you are living in an area that is specifically prone to disasters?

Q7: Do you know of any other people in your area where you live who you think are particularly vulnerable or exposed to disaster?

This report is structured in five main sections: After this introduction, the second section will provide an overview of the different methods applied. The third section, based on the quantitative data collected via the audience response system, presents the results from questions on general disaster risk perceptions, disaster preparedness, behaviours in disaster situations with a particular focus on the use of mobile phone apps and social media, and trust between citizens and different authorities including trust in different social media sources. In the fourth section, based on the qualitative data collected in the ten discussion groups, the analyses will take up the topics introduced in the previous section, focussing first on the role of citizens' trust in different entities, in particular towards different authorities, "non-professional" leaders, and the media. Furthermore, this section will report on the participating citizens' attitudes towards improving their disaster preparedness through different measures. In all topics, the analyses seek to identify different cultural aspects which may play a role in an improved disaster preparedness and response. The final section compares and contrasts the

³ In each question, the participating citizens were given the answer option "choose not to say".

⁴ These questions formed part of the recruitment criteria to ensure a good mix of levels of experience for the discussions about disasters.

results from Sections 3 and 4, draws some tentative conclusions, and identifies topics and issues that should feed into the last round of events in 2018, i.e. the 3rd Stakeholder Assembly, as well as the 5th and 6th Citizen Summits.

2. Methodology

Participants for the Citizen Summit were recruited via a German market research agency⁵, following a recruitment questionnaire (see Appendix B), which aimed at achieving an even gender and age distribution, as well as a minimum proportion of participants fulfilling certain criteria such as having experience of disasters and using social media. All documents, i.e. recruitment questionnaire, consent form, PowerPoint presentations and focus group discussion guidelines were translated into German. Accordingly, the Citizen Summit presentations, as well as the group discussions were held in German⁶, aiming to avoid any language/education-related access restrictions for participation and allowing citizens to respond intuitively and discuss freely in their native tongue. For this purpose, professional local moderators were contracted.

Overall, 42 quantitative questions were posed during the presentations to the general audience, 40 before the group discussions, and 2 after. The participants' immediate responses were captured via an audience response system⁷ which allowed immediate feedback of the results to the participants via PowerPoint. After the event, all data were exported into a database for further analyses. All data in this database are fully anonymous. Although keypad ID's were assigned to participants during the registration process to enable retrieval of the devices at the end of the event, WP5 team members were not involved in this process and had no access to the registration documents. Additionally, after data export, random new ID's were assigned to all data sets. All analyses were conducted with SPSS Version 24.0 and significance tests were run for all results.

After the presentations and questions, the audience was split up into smaller groups of 9-11 participants with an even gender split and similar ages. This division into age groups aimed to allow participants to discuss amongst peers with similar life-experience. 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.

⁵ Schmiedl Marktforschung GmbH, a Schlesinger Associates Company.

⁶ Some presentations were held in English but with simultaneous translation into German.

⁷ Klik-a-pad system with ppvote software; for further information see <http://www.clikapad.com>.

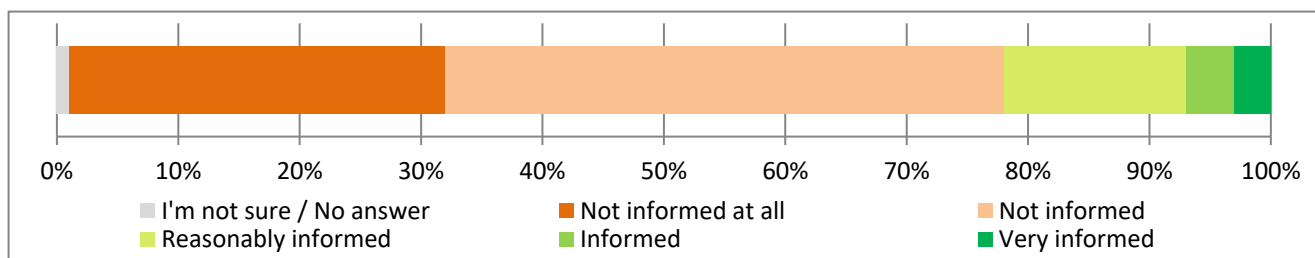
3. Quantitative Data Analysis

3.1. Disaster Preparedness

The questions in this section build directly upon the design and results from the first two Citizen Summits held in 2016, as well as results from the Work Package 4 literature review which points particularly at recent research findings regarding the ambivalent relationships between perceived disaster preparedness and actual preparedness⁸. In detail, Q10 introduces the topic of disaster preparedness through asking for awareness of disaster-related behaviours; Q11, Q14 and Q15 measure citizens' perceived preparedness levels and preparedness intentions, with Q12 and Q13 operationalising the results from Q11 for guidance to disaster managers. Regarding the latter, a need of specific training activities for citizens rather than the mere provision of information was specifically pointed out by the practitioners who participated in the 2nd Stakeholder Assembly.

Generally, participants of the German Citizen Summit expressed a strong lack of knowledge about what to do in case of a disaster, with 77% of respondents feeling not informed or not informed at all.

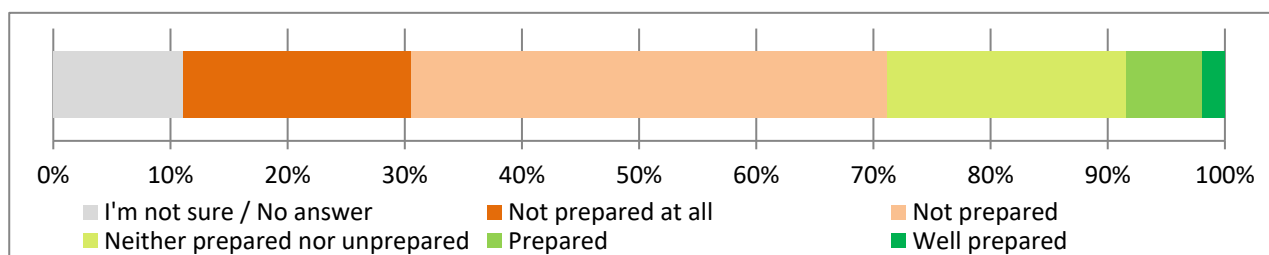
Figure 1
Feeling informed about what to do in case of a disaster



Q10 - How informed do you feel by the authorities (for example Civil Protection, local police, emergency services) of what you have to do in case of a disaster?

Accordingly, two out of three participants expressed their feelings of not being prepared or not being prepared at all, whereas less than one out of eight (13%) feel prepared or well prepared and, not surprisingly, there is a medium correlation ($R=.478$) between feeling informed and feeling prepared.

Figure 2
Feeling personally prepared for disasters



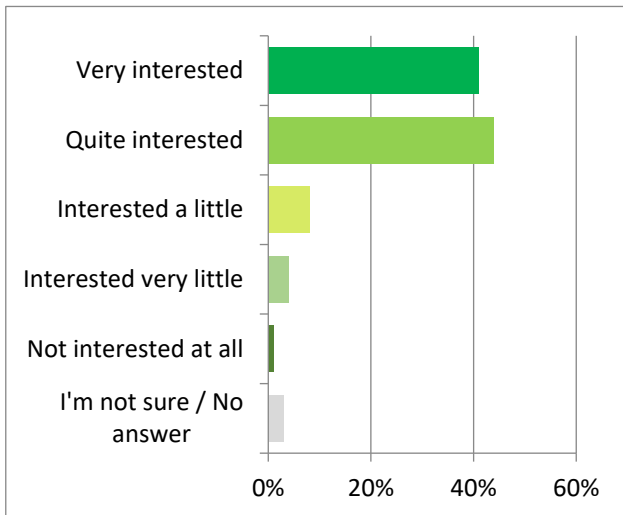
⁸ Joffe, H., Perez-Fuentes, G., Potts, H.W.W. & Rossetto, T. (2016) How to increase earthquake and home fire preparedness: the fix-it intervention. In: *Natural Hazards*, 84: 1943. doi:10.1007/s11069-016-2528-1.

At the same time though, participants expressed considerable interest in having information about disaster preparedness, with 85% of participants indicating they were quite or strongly interested in information about disaster preparedness. However, only one out of 5 participants (19%) indicated strong intentions to prepare for disasters (prepare quite a lot or a lot) and, accordingly, there is no statistically significant correlation between the respondents interest in information and their intentions to prepare themselves.

Q11 – How prepared do you personally feel for a disaster in your area?

Figure 3

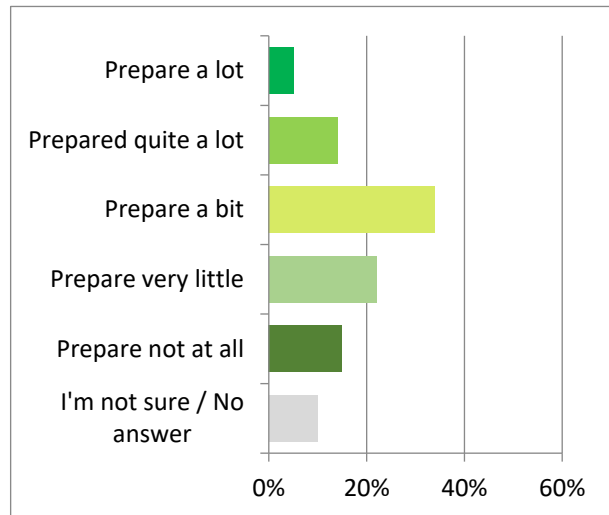
Interest in information about disaster preparedness



Q11 – How much are you interested in information about disaster preparedness?

Figure 4

Intentions to prepare for disasters



Q15 – To what extent do you intend to prepare for disasters?

However, these somewhat abstract questions about the participants' interest and intentions were put more into context with further questioning which explicitly asked for their expectations and participation in preparedness activities within specific time frames. Here, the answers provide a rather different picture (see Tables 3 and 4 below), which show that a considerable number of participants are far from unwilling to prepare themselves: Not only would 76% of them like to **receive at least once per year information** about how to prepare themselves and their family/friends for a disaster, but almost two third (63%) would also like to **participate at least every 1-2 years in training activities** (e.g., emergency drills or workshops) that would help improve their and their family's/friends' safety in case of a disaster.

Table 3

Frequency of receiving information about disaster preparedness

Q12 How often would you like to receive information about how to prepare yourself and your family/friends for a disaster?	% of respondents
Never	1%
Only when there is an increased disaster risk	20%
Once per year	36%
Once every 6 months	27%
At least once every 3 months	13%
Not sure / no answer	4%

Table 4
Frequency of participating in training activities

Q13 How often would you like to participate in training activities, e.g. emergency drills or workshops that will help improving your and your family's /friends' safety in case of a disaster?	% of respondents
Never	2%
Only when there is an increased disaster risk	13%
Every 3-5 years	20%
Every 1-2 years	34%
At least once per year	29%
Not sure / no answer	3%

There are no statistically significant differences between age groups in the results of Q12 and Q13. Regarding gender related differences, female respondents are more interested than males in participating in training activities at least once per year, and less interested in participating every 3-5 years ($p < .001$). Otherwise, there were no statistically significant differences between female and male responses to all questions related to disaster preparedness, as well as between responses by different age groups.

3.2. Citizens' Feelings and Perceptions of Disaster Risk

As one of the overarching topics of the CARISMAND project, and progressively complementing the data collected during the previous three Citizen Summits for a cultural comparison in the final synthesised report of this Work Package, participants were asked about their feelings and perceptions of disaster risk at different points during the event⁹. The results show that almost half of these German citizens perceive a high or very high risk of a disaster in their area (48%), whereas only 20% believe this risk to be low or very low. Additionally, they indicated similarly elevated levels of worry/concern about potential disasters in their area (see Table 5 below). Again, slight differences between male and female results were found to be not statistically significant ($p \geq .05$), and there are also no statistically significant differences between age groups.

⁹ In order to achieve adequate internal consistency but without using exactly the same wording, these questions are based on the 5-item measure developed by Kellens et al (2011) with a Cronbach's Alpha of 0.80 for the perception of flood risk, adapted to disasters in general (see Kellens, W., Zaalberg, R., Neutens, T., Vanneuville, W., & De Maeyer, P. (2011). An analysis of the public perception of flood risk on the Belgian coast. *Risk analysis*, 31 (7), 1055-1068).

Table 5
Disaster risk perception II

Questions		Total		Female		Male	
		Mean	STD	Mean	STD	Mean	STD
Q8	Perceived disaster risk in my area (high/low)	3.38	1.028	3.33	1.019	3.44	1.056
Q9	Worried about disasters in my area	3.40	1.215	3.48	1.193	3.35	1.211
Q16	Concerned about disasters in my area	3.49	1.128	3.58	1.197	3.40	1.035

Q8: How high or low do you think is the risk that a disaster occurs in the area where you live? (5-point Likert scale with 1=very low, 5=very high).

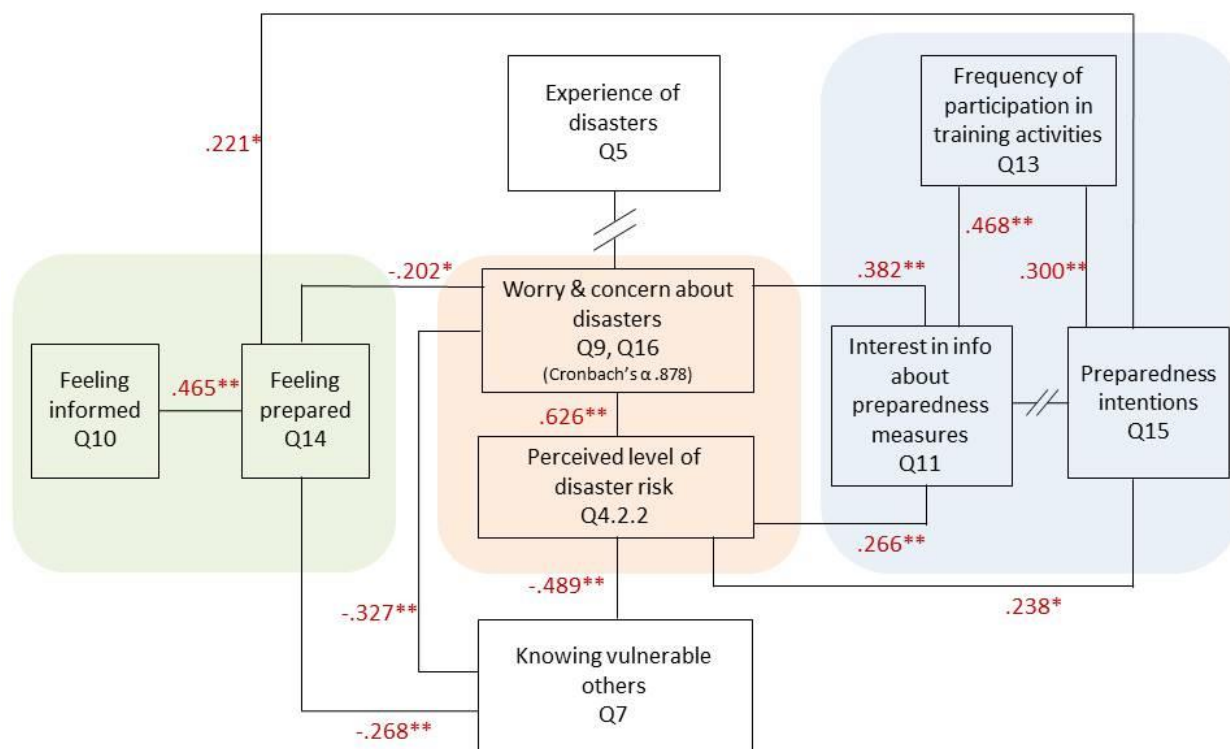
Q9: How much do agree, or disagree, with the following statement “I am worried about disasters in the area where I live.” (5-point Likert scale with 1=totally disagree, 5=totally agree).

Q16: How much do agree, or disagree, with the following statement: “When I think of disasters in my area, I feel concerned.” (5-point Likert scale with 1=totally disagree, 5=totally agree).

However, this perception of an increased level of disaster risk appears not to be connected with any previous experience of disasters – a result which coincides with the findings in the second Citizen Summit (held in Malta) and the third Citizen Summit (held in Italy) – and was only weakly related to any increased interest in receiving information about disaster preparedness measures, or intentions to prepare for disasters. Feelings of worry and concern do show a medium correlation with interest in disaster preparedness-related information. This interest, in turn, shows a medium to strong relationship with the participants’ desired frequency of participation in disaster training activities.

At the same time, knowing vulnerable others appears to have a stronger relationship with risk perception and a still weak to medium relationship with worries and concerns. Appealing to the responsibility for vulnerable others, be it family or community members, may therefore be a viable strategy to promote citizens’ participation in disaster preparedness activities, in particular when taking into consideration the aforementioned missing link between feelings of preparedness, experience of disasters and disaster risk perception (including worries/concerns).

Figure 5
Spearman's Correlations



* Significance $p < .05$

** Significance $p < .001$

3.3. Usage of Social Media and Mobile Phone Apps

This set of questions was built particularly upon the results from the first two Citizen Summits in 2016, the 2nd Stakeholder Assembly, as well as the Work Package 3 Deliverables which show the uptake of social media by citizens in disaster situations to gather information, but also the increasing usage of specifically designed “disaster apps”. Q19 to Q21 and Q24 to Q26 intentionally differentiate between social media and mobile phone apps, because there is yet little research which explores the different possible functions expected, or desired, by citizens.

The results show that a large proportion of participants are likely or very likely to use both mobile phone apps and social media in disaster situations, with the likeliness of app usage being slightly higher than the likeliness of social media use. Generally, the likeliness of usage of mobile phone apps for receiving alerts, warnings or emergency messages from authorities is highest (74% likely or very likely), followed by using them to warn or inform other app users (64% likely or very likely). The likeliness of apps usage to submit information about disasters or disaster risks to authorities is lowest, but with still 51% more than half of the participants indicate they would be likely or very likely to do so. A similar picture, though at a somewhat lower level, is revealed for the likeliness of social media usage.

Figure 6
Likelihood of mobile phone app usage
in disaster situations

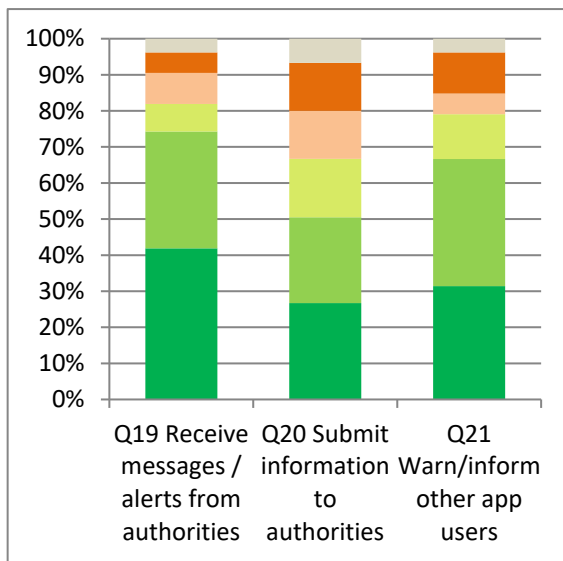
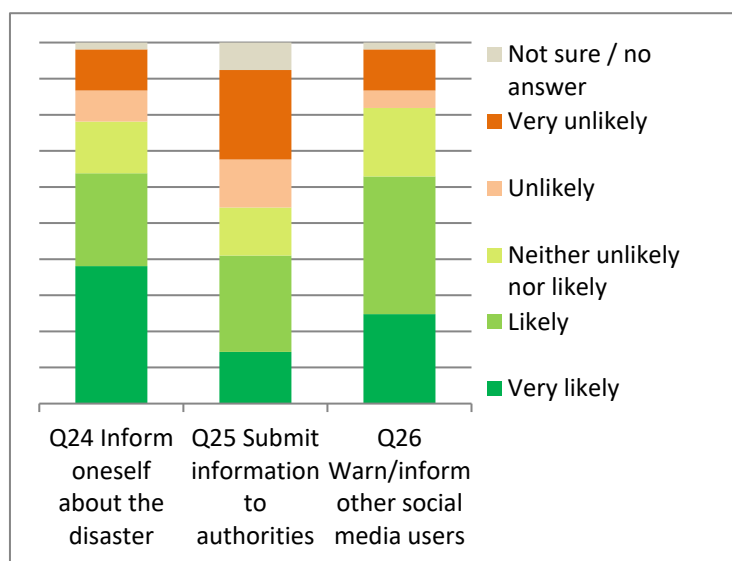


Figure 7
Likelihood of social media usage
in disaster situations



In the case of a disaster, how likely are you to use a mobile phone app that is specifically made for disaster situations to...

Q19: receive alerts, warnings or emergency-related information from local authorities / emergency services.

Q20: submit information about disaster risks or disasters to local authorities / emergency services.

Q21: warn/inform other app users.

In the case of a disaster, how likely are you to use social media to...

Q24: inform yourself about the disaster.

Q25: submit information about disaster risks or disasters to local authorities / emergency services.

Q26: warn/inform other social media users.

(Answers for all questions provided on a 5-point Likert scale with 1=very unlikely and 5=very likely)

Note: There are no statistically significant differences between female and male responses, or between age groups.

Additionally, there are a number of interesting relationships between the different types of usage (see Table 6 below): First, and not very surprisingly, participants who indicated that they are likely to use one function of such mobile phone apps (e.g. to receive alerts) were also likely to use any of the other functions (submit information to authorities, warn other app users). Likewise, participants who responded that they are likely to use one function of a social media site (e.g. for informing themselves) were also likely to use any other function of such social media site (submit information to authorities, warn other social media users).

However, there is only a weak to very weak correlation between “passive” usage of mobile phone apps (i.e. usage for receiving information) and any of the three types of social media usage, whereas for “active networkers” (i.e. those who would warn other users) a medium correlation between mobile phone apps usage and social media usage is revealed. Given the abovementioned finding of a high overall likeliness of mobile phone app usage in disaster situations, the reverse conclusion may be drawn that citizens of all ages who are not active or frequent social media users may still be very interested in using mobile phone apps designed for disaster preparedness and disaster response.

Table 6
Correlations: mobile phone apps and social media usage in disasters

	Q19 Mobile phone apps: receive information	Q20 Mobile phone apps: submit information	Q21 Mobile phone apps: warn other app users	Q24 Social media: receive information	Q25 Social media: submit information
Q20 Mobile phone apps: submit information	0.574				
Q21 Mobile phone apps: warn other app users	0.522	0.668			
Q24 Social media: receive information	0.181	0.288	0.349		
Q25 Social media: submit information	0.319	0.636	0.486	0.511	
Q26 Social media: warn other users	0.066	0.345	0.491	0.651	0.562

Note: Significance $p < .001$ for all correlations except for those marked in green.

Furthermore, there is a strong relationship ($R=.636$) between mobile phone app usage to submit information to authorities in disaster situations and social media usage for the same purpose, which is a correlation that cannot be found across apps usage and social media usage for the other two functions and, accordingly, may be interpreted as a specific usage that is strongly motivated by these citizens' general interest in cooperating with authorities rather than being bound to a specific type of technology.

3.4. Trust and Distrust between Citizens and Authorities

The questions in this section are, again, based on the findings in the literature review of Work Package 4, as well as the results from the 2nd Stakeholder Assembly, outlining the important but often contradictory role of trust between citizens and disaster managers. Q27 to Q38 specifically seek to explore different levels of expectations towards, and trust in, different authorities/institutions; Q39 and Q40 are based on this topic (trust in different social media sources) having been raised by practitioners during the 2nd Stakeholder Assembly (Discussion Group Session II). Q41 and Q42 which concluded the morning session of this Citizen Summit target another topic brought up during the 2nd Stakeholder Assembly (Discussion Group Session III), further exploring trust and understanding it as a bi-directional relationship between citizens and disaster managers. As such, it is complementing the research regarding citizen empowerment in Work Package 7.

The results show that the strongest perceived effectiveness was assigned to the fire brigade, medical emergency services and civil protection, whereas less than half of the participants perceived the media and the local police to be effective or very effective in providing help in case of a disaster. The same picture is revealed for these authorities' respective trustworthiness in case of a disaster. However, there were slightly more participants who trusted the local police (42% trust or trust a lot), and the media were trusted least (only 33% trust or trust a lot).

Table 7**Perceive effectiveness and trustworthiness of different authorities in disaster situations**

	Trust or trust a lot	Effective or very effective
Q27/28: Civil Protection	74%	67%
Q29/30: Local Police	42%	34%
Q31/32: Medical Emergency Services	74%	69%
Q33/34: Fire Brigade	80%	87%
Q35/36: Voluntary Aid Institutions	52%	56%
Q37/38: The Media	33%	45%

Q27/29/31/33/35/27: When you think of [respective authority], how effective in providing help do you think they are in case of a disaster? (1=not effective at all, 2=not effective, 3=neither ineffective nor effective, 4=effective, 5=very effective, 6=I'm not sure).

Q28/30/32/34/36/38: When you think of [respective authority], how trustworthy do you think they are? (1=not trustworthy at all, 2= not trustworthy, 3=neither untrustworthy nor trustworthy, 4=trustworthy, 5=very trustworthy, 6=I'm not sure).

There are, generally, strong relationships¹⁰ between the perceived effectiveness and the felt trustworthiness of a specific authority, i.e. if participating citizens perceived, e.g., the effectiveness of the fire brigade to be high they would also indicate a high level of trust in the fire brigade. Likewise, a lower level of perceived effectiveness of the local police is strongly related to a lower level of trust in the local police. Regarding potential links between different authorities, the strongest correlations could be found to the medical emergency services, in particular regarding trust¹¹. Under the assumption that this is the authority/public service most participants may have had personal experiences with, it may be concluded that its reputation in responding to smaller-scale incidents influences citizens' perceptions and feelings towards other authorities in disaster management. At the same time, the comparatively lower perceived effectiveness of and trust in local police forces which is also likely to be shaped by the participants' everyday experiences appears *not* to affect their perceptions and feelings towards other authorities, as there were mostly no statistically significant correlations found.

¹⁰ Between $R=.617$ for the Media and $R=.763$ for Voluntary Aid Institutions; only for Civil Protection it is slightly lower but still $R=.533$.

¹¹ Between $R=.548$ and $R=.648$.

Figure 8
Perceived trustworthiness in disasters

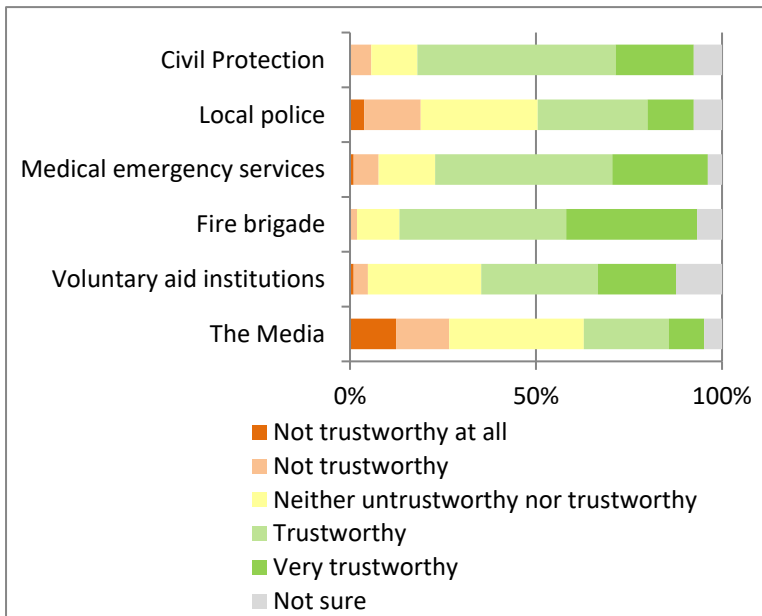
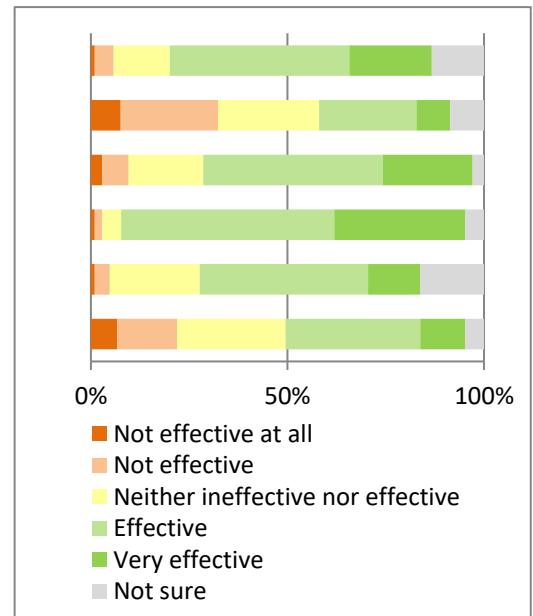


Figure 9
Perceived effectiveness in disasters



Note: There are no statistically significant differences between female and male responses, or between age groups.

Interestingly, the generally low trust in the media in disaster situations as shown above (see Table 7) cannot simply be transferred to trust in social media messages. Here, the data reveal a considerable difference between the respective information source: Whereas 58% of the participants indicated that they trust (or trust a lot) messages from local authorities (and only 13% distrust or distrust a lot), only 18% answered that they trust (or trust a lot) messages from other private social media users, without any statistically significant difference in the responses between gender and age groups.

Table 8
Trust and distrust in different social media sources

	Distrust a lot	Distrust	Neither distrust nor trust	Trust	Trust a lot	Not sure	Mean	STD
Q39: Local authorities	3%	10%	25%	46%	12%	5%	3.58	0.945
Q40: Private users of social media	7%	19%	51%	16%	2%	6%	2.87	0.853

Q39: Imagine there is a high risk that a disaster will occur in the area where you live. If you use social media, how much would you trust, or mistrust, messages from local authorities?

Q40: Imagine there is a high risk that a disaster will occur in the area where you live. If you use social media, how much would you trust, or mistrust, messages from private users of social media?

Finally, and as outlined by disaster management practitioners during the second Stakeholder Assembly, citizens' trust in authorities may also be influenced by their belief to what extent local authorities and/or emergency services trust citizens in disaster preparedness and disaster response. The results in Table 9 below show that only just over one out of four participants believe that local authorities trust citizens or trust citizens a lot that they are appropriately prepared in case of a

disaster, and even less (16%) believe that citizens are trusted to be able to respond appropriately, whereas almost half of the participants (49%) believed that citizens are distrusted, or distrusted a lot, to be able to respond appropriately in a disaster situation.

Table 9
Citizens' beliefs of authorities trusting / distrusting citizens

Beliefs that local authorities / emergency services trust citizens that they are....	Distrust citizens a lot	Distrust citizens	Neither distrust nor trust citizens	Trust citizens	Trust citizens a lot	Not sure	Mean	STD
Q41: appropriately prepared in case of a disaster	6%	31%	24%	14%	13%	12%	2.99	1.181
Q42: able to respond appropriately in a disaster situation	10%	39%	23%	9%	7%	13%	2.58	1.065

Q41: How much do you believe that the local authorities/emergency services trust YOU, as a citizen that you are appropriately prepared for a disaster?

Q42: How much do you believe that the local authorities/emergency services trust YOU, as a citizen that you are able to respond appropriately in a disaster situation?

However, no significant correlations could be found between these results and the participants' responses regarding *their* trust in the different authorities, contradicting any hypotheses that citizens may distrust, or trust, authorities because they feel that they themselves are distrusted or trusted. There is, though, a weak correlation to the participants' likeliness of using mobile phone apps to submit information to authorities in case of a disaster ($R=.252$), and a weak to moderate correlation to the participants' likeliness of using social media for this purpose ($R=.305$). But there was no correlation found between citizens' trust/distrust in different authorities and such behavioural intentions. Accordingly, changing or motivating citizens' behaviours in this respect may require a strengthened belief that trust in preparing for and responding to disasters is mutual.

4. Qualitative Data Analysis

Topics for the focus group discussions held in the afternoon of this forth Citizen Summit were chosen based on the results from the Stakeholder Assembly 2 held in Rome in February 2017¹², as well as from other work package deliverables produced since the first two Citizen Summits held in 2016. At the same time, the discussion guidelines were aiming to complement the quantitative data collected via the audience response system during the morning session. Accordingly, after a “warm-up” up phase where the participants were asked to talk about both their individual disaster experiences and collective memories of disasters, the discussions focused on two main themes: trust in different entities (authorities/institutions, non-professional leaders, social media), and disaster preparedness measures in practice.

4.1. Trust

4.1.1. Trust in Authorities

The aim, here, was not only to find out which different authorities or institutions citizens trust, or distrust, in disaster situations, but also what the reasons for these feelings are, and what cultural factors may play a role in the development, sustainability, lack, or loss of trust. Participants were encouraged to talk about actual personal experiences rather than hypothetical situations and, in line with the concept of exploratory qualitative research, they were given the space to develop their own ideas rather than discussing about pre-defined examples.

The overwhelming majority of participants in all groups explained how they draw their trust from experiences in smaller-scale or personal emergencies, e.g. mass accidents on motorways, house fires, or life-threatening health incidents. In all these cases, the participants outlined in particular the speed of professional response (or lack thereof), be it the police, the fire brigade, or the medical emergency services. However, they also described their feelings of trust related to a strong multi-sensual experience of being helped: *“They all come with sirens and an entire team, and you see that help ‘comes running’. And I believe that builds a lot of trust”* (G4-P9¹³). Other participants highlighted their feelings triggered by experiencing the emergency services’ strong dedication and persistence: *“When our house was flooded and we got home we arrived to find the fire fighters working on in already. They were working very hard and doing as much as they could. They did not give in. It was a beautiful sight”* (G9-P3). Others again reflected upon their feelings as a somewhat “natural” reaction: *“These emergency services, the fire fighters, the Red Cross: When they come, they are always there to help you. This brings along a positive atmosphere. One of help”* (G9-P7). Still, despite such rationalising in several of the discussion groups, the link persisted – *“Rescue forces, emergency doctors and so on, they react so fast in case of heart attacks and strokes. Yes, they reacted. I trust them”* (G10-P4) –

¹² Which, in turn, was based on the results from the first round of public CARISMAND events (i.e. Stakeholder Assembly 1 as well as Citizen Summits 1 and 2).

¹³ Group no. 4 – participant no. 9; this form of abbreviation will be used in the following for all original quotes.

drawing upon experienced speed of response in personal emergencies, and transferring this trust to “rescue forces” at a larger scale.

Amongst the various authorities active in disaster response, voluntary aid institutions were outlined by the participants as particularly trustworthy, because they were believed to be *“acting by their heart. They do it because their job makes them happy, because they want to help people and animals, and that makes the difference”* (G10-P5). Again, amongst voluntary aid institutions, three were specifically highlighted in this Citizen Summit, drawing a connecting line between dedication, qualification and trust:

“As far as the Fire Brigade¹⁴, the Red Cross and the Agency for Technical Relief (Technisches Hilfswerk)¹⁵ are concerned, I can only agree. I respect these people tremendously [...] They do that because they believe in what they do. They are very well trained. I can trust these three organisations one hundred percent” (G9-P7).

Furthermore, trust was not only drawn from personal experiences of a disaster or emergency situation, but also from feelings of security in situations which were perceived as hazardous. Here, in particular those younger participants who had not experienced disasters or serious personal emergencies referred to perceived man-made hazards, e.g. in mass gatherings:

“I have a lot of trust in the police, fire brigade and so on. I attended a protest march organised by the Social Democratic Party of Germany in Frankfurt some time ago. There was a large counter-demonstration by neo-Nazis as well. Hundreds of police were present and they made you feel quite safe” (G2-P1).

“I was in Frankfurt once and there was an unaccompanied suitcase sitting on a metro platform. The area was immediately fenced off and they showed up with sniffer dogs for explosives. Of course you trust them, they take those things very seriously. They go about it very precisely, closing areas off and searching everything. At the Christmas market they were very visible everywhere as well. Even the Christmas market in Hanau¹⁶ was full of security forces patrolling around” (G2-P2).

These links between feelings of security and trust were explained by some participants through the role of symbols, elaborating that *“the uniform does provide a certain sense of security, because you know that the right people are taking care of the situation at hand”* (G4-P1), and that trust in such symbols may be stronger than individual experiences: *“I see more the uniform than the person that is in it. I pay less attention to the faces, but I see the entire organisation that is behind the uniform. And, I don’t know, I feel more protected”* (G4-P9). However, one participant in the same group pointed out that symbols, as cultural artefacts, may as well be subject to different interpretations: *“Some people may come here [to Germany] from countries where they had different experiences, because rescue teams cannot be trusted there, and then they come here into our country and they see somebody who is wearing a uniform, and then there might be a completely different reaction”* (G4-P10). A similar experience was outlined by a participant of the 2nd Stakeholder Assembly in Rome,

¹⁴ The vast majority of fire fighters in Germany are organised and working for the voluntary fire brigade, as only larger towns are obliged (and able) to finance a professional fire brigade.

¹⁵ Technisches Hilfswerk (THW) = Agency for Technical Relief. As a German Federal agency, the THW belongs to the department of the Federal Ministry of the Interior. However, only one percent of the staff works full-time for the authority. 99 percent of THW-members (more than 80,000) work on a voluntary basis.

¹⁶ Medium-sized town (95,000 inhabitants) 25km east of Frankfurt/Main.

who described how a migrant child showed strong fear rather than trust towards her rescuer wearing a uniform. Similarly, this could apply to practitioners who are deployed in a disaster-struck area, where people with a recent migration background are affected, may be wary of such unintended effects.

At the same time, though, several participants with a migration background from South-Eastern Europe and Russia compared the situation in Germany with the one in their native countries and concluded that *“here in Germany we can trust the emergency services. Their staff is getting paid well, they have nice working hours. Here you don’t have as much corruption [...] I do feel in good hands here”* (G2-P5). Other participants who grew up in Israel or lived there for an extended period of time described a yet different trust relationship between citizens and authorities:

“In Israel, there is a much stronger feeling of closeness to the police force, they are a part of the population. Here, in Germany, there is a clear dividing line between citizens and the police. It was a very different feeling in Israel [...] you grow up with security guards from a very early age. They don’t cause fear, they are there for you. In Germany it’s very different” (G8-P4).

These quotes suggest that it cannot be assumed that groups of the population with a non-native background (migrants, expatriates, etc.) will, in any case, distrust authorities in a disaster situation. On the one hand, this may be the case for those recent migrants who still have very “fresh” experiences of rejection, corruption and/or are coming from war-torn countries. On the other hand, migrants or expatriates who have settled and strongly identify themselves with their new home and the new environment may, through their increased level of trust in authorities, be of particular help as informal liaison persons who can mediate between affected citizens and disaster managers.

Whereas positive experiences in personal emergency situations were widely reported as shaping the participants’ trust in different authorities, negative experiences were described much less often, and only in one case a direct link to distrust was drawn: *“Due to my experiences at the love parade¹⁷, I have lost my trust in authorities because, in the end, it was the authorities that failed [...] and, for financial gain or prestige, human lives were put at risk”* (G4-P11). Otherwise, feelings of distrust were mostly related to perceptions of the police forces being overstrained, understaffed and, in particular, powerless: *“Recently in Cologne¹⁸: The police just watched, they didn’t do anything [...] How can you trust them?”* (G10-P7); *“They don’t have any power and that is terrifying”* (G10-P10).

Generally, it seemed that there was more trust in the effectiveness of authorities in disasters caused by natural hazards than by man-made hazards, in particular major terrorist attacks, due to their perceived uniqueness and unpredictability. At the same time, participants outlined the positive media coverage of professional response in case of natural hazards-caused disasters as particularly trust-building. Here, again, they referred specifically to emergency services and voluntary aid institutions: *“The things I saw on TV. The THW with the landslide in Tibet where they flew right in [...] they needed 12 to 14 hours to get there by plane, but I think they were the only ones who hit the road*

¹⁷ During a stampede at the Love Parade music festival in Duisburg/Germany in July 2010, 21 people were killed and more than 500 injured. The crush happened when thousands of people tried to squeeze through a narrow tunnel that served as the only access to the grounds. Several staff members of the music festival organiser and of the city administration are prosecuted, being accused of negligent homicide and mayhem.

¹⁸ In the city centre square in front of Cologne’s central train station, on New Year’s Eve 2015 more than 1,000 women were sexually assaulted.

right away, who are dedicated. They have their dogs and they do something, so there are always success stories” (G10-P6). At the same time, the mere absence of negative media coverage appeared to create feelings of trust as well:

“You do not hear any negative news in case of a large-scale accident. Otherwise the media would certainly make an issue of it like ‘something bad has happened and the rescue services were completely disorganised.’ They would certainly report about it [...] It creates trust that you never hear anything negative about the rescue services. I have to admit this” (G5-P9).

Such success stories “when the rescuers fly with their dogs to the most remote corners and always find at least one survivor” (G10-P10) sell well in the media and can, in particular when the rescue forces are deployed abroad, be a source of trust through (national) pride, whereas incidents with police forces or other authorities deployed locally may be more often subject to local criticism due to being so close to “home”, and may result in distrust.

4.1.2. Trust in Non-professional Leaders

Beyond citizens’ trust, or distrust, in different authorities and institutions that are active in disaster prevention, preparedness, response and recovery, another aim during this Citizen Summit was to find out who are the non-professional (“cultural”) leaders citizens trust in a disaster situation, and what makes them trust such persons. Again, this discussion topic was set up to allow participants to elaborate their own ideas, e.g., based on pre-existing trust relationships, previous experiences in everyday situations, assumed organisational skills, or assumed “natural” or professional authority in other areas. It is expanding upon the results of the second Stakeholder Assembly which, in turn, were developed upon the participants’ ideas revealed during the first two Citizen Summits and, as such, contributes further to the cyclical character of the CARISMAND events.

During these discussions in the fourth Citizen Summit, some groups were predominantly elaborating on personal qualities perceived to be important to become an informal leader in disaster situations, such as social competence, general helpfulness, selflessness, or being a self-starter. Generally, participants shared the opinion that people who bear or take on responsibility for others in their normal lives would do the same in a disaster or emergency situation. However, whether these people will be trusted would, then, depend on the authenticity of their behaviour. Additionally, some participants (who had experienced disaster situations) described a somewhat spontaneous divide between “leaders” and “followers”:

“Based on my war experience, I know that when push comes to shove, when survival is at stake, then there are two kinds of people: those who act and those who let themselves be led by others. That’s the way it naturally is somehow. And it’s not wrong when someone isn’t able to do something, but then you have to allow yourself to be led. And that happens within a fraction of a second: You know exactly who leads and who follows” (G7-P6).

“If you are in a terrible situation things cannot get any worse. And you cannot get out of it on your own. You will trust anyone who comes by to help you” (G9-P11).

These statements coincide with the practitioners’ experiences who explained during the 2nd Stakeholder Assembly that, during the first (i.e. immediate) disaster response, having the victims’

trust is usually not an issue. The groups of people identified by this Summit's participants as trustworthy can, though, be seen as helpful not only in the immediate response but also during the recovery phase. Here, interestingly, TV hosts, journalists and media people were pointed at. Despite a prevailing distrust in the media as reporting reliable news, they were perceived by a number of participants as holding personal qualities such as self-confidence and skills like stress management which were seen as important – and creating trust *“because of their strength to bring something across [...], to think straight in stressful situations. These people you could trust, they know how to handle stress well”* (G2-P7).

Groups identified otherwise were, e.g., teachers because *“they look after large groups and need to watch everything; they know how to control crowds”* (G2-P4), property managers, because they know the structure of buildings and the surrounding infrastructure, and sports team players, because they were seen as people who can transfer their attitude and skills also to situations outside the playing field: *“They do a lot of organising, football players know you need to help each other: not just the 11 or 20 members of your team, but you need to help each other wherever you are. I assume they would be capable of handling such situations”* (G2-P3). Additionally, one participant outlined that, despite a generally decreasing trust in people holding occupations that are typically associated with authority, such as teachers or priests, *“for me it still exists: There are still those ‘standard’ trustworthy contact persons”* (G4-P11).

Finally, the different statements in different groups related to trust in neighbourhood help show that cultural stereotypes cannot be taken for granted or applied to multi-cultural areas as the Frankfurt region. On the one hand, a number of native (West-)German participants elaborated their belief that *“solidarity with neighbours is more pronounced in other countries because the authorities work much less efficiently than they do here in Germany [...] Because the government is failing, people stick together more, they feel they need to help each other”* (G9-P4). Additionally, they referred to the role of “family and honour” in neighbourhood help which was seen as a *“completely different attitude than here”* (G4-P1). But, on the other hand, a number of participants coming originally from East Germany or South-Eastern European countries described their experience that *“if there is a flood neighbours help each other”* (G2-P1), and that *“here in Germany, neighbours will help you, even if they can do only very little”* (G9-P11).

4.1.3. Trust in Social Media

This discussion topic built upon the quantitative set of questions asked in the morning session, i.e. why social media messages originated by one entity may be trusted, or distrusted, more those originated by others, with a specific emphasis on potential differences between messages from public authorities and messages from other private social media users.

Here, a considerable number of participants expressed initially their general distrust in social media: *“There are no reliable sources in the social media”* (G5-P4). However, as the discussions progressed, it was revealed that many of them inadvertently equated ‘social media’ with Facebook and, exclusively, with social media messages from private individuals, as they were unaware of public authorities’ social media sites: *“I think I would trust the authorities first and then maybe the radio. But I don’t think I would trust Facebook”* (G7-P3). Of those participants who were aware, the majority explained that they would trust social media sites and messages from public institutions rather than

those of private media channels – *“Public-service media aren’t always to be taken completely seriously either, but compared to private media they are still the more serious alternative”* (G9-P4) – often drawing upon their perception of traditional media, i.e. their preference of public TV rather than private TV channels.

Amongst public news providers, participants in most groups outlined additionally their preference of local media, in particular the regional public-service broadcaster *“Hessischer Rundfunk”*, based on beliefs that *“they collect all the information and sort through it before they publish their news”* (G2-P8); *“they are funded by the GEZ [German public broadcasting fees], we are paying for them not to lie to us”* (G2-P10).

As the discussions progressed further, the focus shifted increasingly from media providers to social media websites and social media messages originated by authorities involved in disaster management. Here, all participants who had known of or used such sites before, stated their trust: *“I definitely trust [messages from] official bodies, everything provided by the civil protection department, the police or the fire brigade, because they are the right source of information”* (G2-P8). Interestingly, contrary to participants’ previously described general feelings of distrust towards the police in effective disaster response, social media sites and messages particularly from the police appeared to be highly appreciated and trusted:

“Police departments that are using Twitter or something similar – they are doing a great job now” (G4-P5).

“If the police publish something like this I will trust it because they will have investigated it” (G5-P6).

“I would say the police are very trustworthy when they offer information on social media” (G8-P1).

“The police, I believe, would never let hundreds of thousands of people walk on the Zeil¹⁹ if they were in doubt that it was safe [...] Yes, of course, they are also learning, but I think we really should start to believe them and trust them” (G4-P11).

Here, the participants’ trust is not related to their perceptions of police forces’ actual physical disaster response, but to the police’s perceived capability to provide truthful *and* timely information: *“All these police pages, they post very much about up to date events on Facebook”* (G1-P9). These statements point at the potential of social media use to regain citizens’ trust by taking up the role of a trustworthy information provider at times where both private and public media channels are increasingly distrusted: *“Because the government is making it hard for me to believe, and it has also become hard for me to believe in big private media providers [...] I’d rather believe the smaller outlets, like the local community news or the local police who is posting something for their neighbourhood”* (G1-P7).

However, not all participants dismissed social media messages from private individual users as untrustworthy. Rather, they pointed at the importance of making sensible use of *all* information available in a disaster situation:

¹⁹Main shopping street in the city centre of Frankfurt.

“Having some life experience is part of being able to differentiate between things, of course [...] I would first check the sites of the authorities and try to get information there. Then I would compare those to live reports from private individuals [...] or information from people who are in the situation and experiencing something. Then I would see what coincides [...] I would, of course, try to get as close as possible to the truth but, initially, I would trust that the majority of people spreading information aren’t idiots who just want attention” (G7-P4).

This somewhat balanced view that, despite sensationalism and inevitable exaggerations when personal opinions are spread, messages and information from both public authorities and private individuals would be helpful, was particularly prevalent amongst the 40-50 years old participants who described their practice of comparison and “common sense” in social media usage.

4.2. Disaster Preparedness in Practice

This second main discussion theme was chosen to elaborate upon the related quantitative questions asked in the morning, i.e. how much the participants feel informed about preparedness measures, how much they are interested in preparing themselves and, in particular, what different activities they would be willing to participate in to improve their disaster preparedness.

4.2.1. Feeling Informed or Trained

Regarding their feelings of being informed and/or trained, most participants initially associated such preparedness skills with building evacuation in case of a fire, and emergency first aid. Here, only the youngest and the oldest participants indicated some level of preparedness: The participants in G1 and G2, i.e. those aged 25 and younger, referred to evacuation drills at school or the obligatory emergency first aid course they had to take when preparing for their driving license. However, all of them also pointed out that they felt not sufficiently prepared due to a lack of routine in the required skills. In G9 (ages 45+) some participants explained that, at their workplace, regularly scheduled emergency drills were held: *“Small exercises that teach us what to do in case of a fire or similar smaller-scale incidents. But we have never dealt with actual disasters in this regard” (G9-P11).* Participants in all other groups expressed their feeling of being generally uninformed and unskilled, and they expressed a strong desire for access to information sources: *“I would like to receive information, it doesn’t matter which medium would give me this information – all would be fine” (G8-P2);* and whilst some indicated a vague awareness that such information may be available, but they did not know where to find it, they felt that citizens’ disaster preparedness should be a shared responsibility: *“Of course, it is up to you to gather information. However, you should be able to expect your government to inform the citizens about what to do or at least to sensitise them in this matter” (G6-P4).* Another participant described in this context how she, unsuccessfully, attempted to gather such information and skills:

“Once I visited the city administration because I was interested in a training or workshop dealing with disasters. So, I went there and asked if something like that was available. But the women there looked at me as if I was mad. I explained to her what I meant and

she sent me to the fire brigade. But what should I do there? Should I go there and say 'Hello, here I am'? Anyway, I went there but they also looked at me as if I was mad. They said it was a cool idea but also that it was not available. They only invited me to their summer festival" (G5-P7).

Regarding the different ways information may be provided/received, a number of participants referred to the, in their opinion most "simple", form of awareness improvement measure - paper brochures: *"You receive so much unnecessary advertising material at home. It would make much more sense to receive such important information instead" (G2-P4).* Others suggested reinforcing knowledge through the omnipresence of information: *"There should be a permanent poster on the wall in every classroom to look at from time to time" (G2-P9)* – a suggestion which could also be taken up for workplaces. Again other suggestions included a somewhat mandatory exposure to information: *"In planes, there are always safety instructions before take-off. There are both leaflets and brief audio-visual presentations. And you are not even asked whether you want to hear it, you have to listen to it" (G9-P3),* which could be implemented in public or semi-public spaces such as busses, waiting halls, entrance areas of sports stadiums, shopping centres, or concert halls, but also in private spaces such as cinemas or hotel lobbies.

Finally, a considerable number of particularly middle-aged and older participants expressed how they would appreciate television as a regular information source – either via *"a TV commercial that doesn't have to be too serious and scare people" (G8-P6),* or as some form of a TV series, e.g. a documentary or talk show:

"I would wish for some kind of disaster preparedness measures to be talked about on TV. All day long there is so much content on TV that no one really needs. However, something useful like this is nowhere to be found. Disaster preparedness measures, what to do in case of a disasters, useful telephone numbers. If something like this ran once every three months a lot of people would want to watch this" (G9-P11).

4.2.2. Willingness to Improve

As the last topic in the afternoon session of this Citizen Summit, participants were shown visual cues – pictures of different disaster preparedness activities – and asked to discuss why, why not, and under which specific conditions they would be interested in participating. The three activities presented were:

- (a) a free emergency preparedness and response course which runs over several weeks at hours when the participant has time, for example 2 hours per week over a period of 6 weeks;
- (b) a large-scale disaster scenario set up in the participant's area over a day on a weekend, for example an explosion in a metro station; and
- (c) a mobile phone app that is specifically designed to provide information about disasters or threats in the area where the participant lives; the participant would be asked to test this app for a period of 3 months and fill out an anonymous feedback questionnaire after that period.

Participation in Courses

With the exception of the youngest and the oldest participants (G1, G2 and G10), at least a third of participants in all groups expressed their interest in attending such a course. Interestingly, in particular those participants who could have been expected to have the least spare time available due to full-time work and family duties, showed the greatest willingness to learn and improve their skills. Accordingly, only one outlined this as a reason for non-participation – *“I am too busy with my children, work and household”* (G6-P1) – whereas the others declared that *“I have four children and they have lots of social activities, but you have to set priorities, so I would like to learn more about this”* (G6-P5), *“you just need to find a way to make time for that next to children and work”* (G6-P8), and even indicating the fact of having children as one of the main motivators for participation: *“If you have children, you should know what to do in an emergency”* (G6-P4).

Only two participants, despite their explicit interest in the topic, gave *“difficult work hours”* (G4-P3) as a reason for not attending. All others expressed more general time constraints, and in particular some of the youngest participants explained that they would not want to invest their leisure time, unless they are paid for; two older participants felt that they would not be able to attend due to their physical limitations.

As reasons for their interest in attending, beyond general interest, increased knowledge and a “why-not” attitude, a considerable number of participants expressed their expectation that it would provide them with an increased sense of security in their everyday lives. Additionally, as one participant explained, the activity as a group itself would play an important role: *“I would feel more comfortable when I am together with other people, because I would not have the feeling that I will be left alone in case of a problem, that there is nobody who start filming everything with their mobile phone, but I can rely on others who have also taken part in this training”* (G5-P6). Here, participation is seen to, potentially, increase social cohesion and trust in fellow citizens – also by providing an opportunity *“to exchange experiences with other people who may have encountered such situations, to discuss emotions after such events”* (G2-P6). Finally, some participants outlined that the “attractiveness” of such disaster preparedness courses would, to them, depend on the local and situational relevance (e.g. fires in high-rise buildings for people working in the Frankfurt city centre) and that, accordingly, they could *“choose what topic to learn more about”* (G9-P11).

Participation in Simulation Exercises

When presented the possibility of participating in a one-day disaster scenario exercise, at least half of the participants in all groups expressed their interest, or at least a certain “why-not” attitude: *“No one would be worse off by having to invest some hours of their free time into this”* (G8-P2).

Generally, when discussing this type of activity, different dynamics could be observed, each group developing their own concepts of and reasoning for participation. One concept discussed largely was the one of such simulation exercise being useful for an increased mutual understanding between practitioners and citizens – *“it might help you trust the emergency services more”* (G6-P11); that *“it helps the public”* (G8-P2) and is a learning experience for both: *“I don’t ride the metro very often, still it might help me and emergency responders to have such scenarios [...] I would be willing to sacrifice one of my own weekends to help the emergency services learn more about how to handle disasters. You should think about more than just your own time”* (G6-P5). Additionally, as one participant

outlined, it can provide a feeling of security and trust in the authorities involved: *"I participated in a [disaster] scenario at the airport before. It gave me a sense of security. The authorities did an incredible job. I got the impression that everyone knew exactly what they had to do. There were thousands of people on the airfield at the airport. It was incredible"* (G8-P7).

A similar idea was developed in G4, where the participants outlined particularly the role of understanding the processes in dealing with a disaster situation – *"to understand how they work"* (G4-P10). Rather than being told what to do, such scenario was seen as a better option than merely participating in a "course", because

"It will also give a person a better understanding of the structure and maybe participants learn where to step in but also how the emergency response units think. What they possibly expect from the people standing around at the scene. What are their expectations of the general population, how are we expected to act, where we are in the way and where assistance is really helpful and important. And where do they [emergency services] need it but do not get it?" (G4-P9)

In G7 the participants concentrated specifically on the mental experience and *"perhaps being able to know yourself better"* (G7-P9), *"because you don't really know how you'll react in extreme situations"* (G7-P3); *"it helps you grow personally and to recognise and think about hazards. I think that's great"* (G7-P8). Generally, it was believed that a real-life simulation would have a better learning effect, because *"you also simulate the feeling of shock that you would suffer during a real disaster. You will probably be able to react better and more quickly once you have participated in such a scenario"* (G9-P7), and that it may even have a longer-lasting motivational effect towards personal disaster preparedness: *"[It is] an opportunity to reflect upon your own abilities and how to respond. What do I do afterwards? Perhaps once you've been exposed to it, you'll want to do even more. I think that's a good thing for all those involved"* (G7-P7).

Of those participants who rejected the possibility to participate in a disaster simulation exercise, only one claimed to have no time during weekends. The reason for not-participating given most often was that it was feared that citizens would only be able to be passive by-standers and reduced to background actors: *"I don't want to participate if I have to play a dead person"* (G5-P3); *"even if I was a rather fit victim they would certainly tell me to sit down somewhere and drink something; I would not be interested in that"* (G5-P2); *"no, I don't want them to paint a wound on my head. I would like to learn how I could help other civilians or how I could get out of the danger zone myself"* (G5-P3).

Finally, some participants expressed their concern that *"many people would like to take part in such a scenario particularly because of the action character. Many people who want to experience thrilling adventures would sign up to it, less due to an interest in disaster [management], but rather to get an adventure"* (G5-P10). This aspect was somewhat more discussed amongst the younger participants. Interestingly though, whilst the "fun factor" was perceived in these groups as the first motivator, there was also seen the possibility that participation may still have a lasting effect by creating sustainable interest in disaster preparedness with those people who, initially, were mostly interested in immediate reward: *"I can imagine that the way this is designed is very appealing, especially for people at my age. I can really picture myself saying 'Come on guys, let's do this'. Even as a fun thing to do. So that one can develop an interest in it naturally by oneself"* (G1-P7).

Testing/using Apps

Again, at least half of the participants in most groups explicitly expressed their interest in testing, and using, an app that is designed for providing information about disasters or threats in the area where they live. Whereas two of the middle-aged participants gave as a primary reason their specific interest in technologies, most others either expressed their “why-not” attitude – *“I wouldn’t have any reason not to install this. It wouldn’t take much”* (G6-P4) – or they described an app as *“useful and convenient”* (G2-P4). Some participants also outlined that downloading and testing such an app may also give a feeling of social cohesion: *“The app would be something that you have with you all the time. It does not cost you any time [...] you just have it. And people still have the feeling that they are participating, that they are part of it, and interested. But you can integrate it in your everyday life”* (G4-P4). Others expressed their interest to go beyond mere information gathering, stating that *“I would also like to help the emergency services”* (G6-P6) and that, by using the app, *“you can actively be of some help”* (G6-P8).

Of those participants who explicitly rejected the possibility to test and use such an app, one was questioning whether it could be subject to personal data abuse, one found it too much effort, and two felt that *“where I live there are hardly any disasters. This app wouldn’t make any sense here”* (G6-P1). Another participant suggested that *“it’s just an app for teenagers. We still feel young, but how about older people?”* (G3-P10). This argument which is stereotyping older people could, however, not be confirmed during the group discussions. In contrary, particularly in the two discussion groups with the oldest participants (groups 9 and 10) the suggestion of using and testing the app was met with the most positive response:

“My son was in Dortmund when that football team’s bus was under attack there²⁰. My son tried to call me but did not reach me for some reason. He was able to contact me via WhatsApp though. I was glad he did. I would have suffered a panic attack had he not done so. He was in the football stadium. The mobile phone network was under such a heavy strain that he could not call me. But WhatsApp was still working. When I grew up there weren’t even mobile phones around. We survived without them but we may as well use as much as technology as we can now” (G9-P2).

²⁰ On 11 April 2017, the tour bus of German football team Borussia Dortmund was attacked with roadside bombs in Dortmund, Germany. Three bombs exploded as the bus ferried the team to the stadium. One of the team’s players and a policeman were wounded, but the strengthened windows of the bus prevented further casualties.

5. Summary & Conclusions

As in all previous Citizen Summits, the quantitative data revealed that most participants of the Germany Summit feel they have a strong lack of knowledge about what to do in case of a disaster. This result reflects the lack of knowledge expressed by most participants in the discussion groups who described themselves as uninformed and unskilled, indicating a vague awareness that information how to prepare themselves appropriately may be available but they did not know where to find it, and they expressed their expectation that citizens' disaster preparedness should be a shared responsibility between citizens and authorities. Their strong desire for access to information sources is consistent with the results from the quantitative study which found that participants indicated a considerable interest in information about disaster preparedness, but only a minority of participants expressed strong intentions to prepare for disasters despite almost half of them perceiving a high or very high risk of a disaster in their area (and similarly elevated levels of worry/concern about potential disasters).

These somewhat contradictory data could be interpreted as German citizens' trust in the authorities' perceived effectiveness to deal with disaster situations reducing the perceived need to prepare themselves. However, when explicitly asked for their expectations and participation in preparedness activities within specific time frames, a rather different picture was revealed: Almost two thirds of the participants would like to participate at least every 1-2 years in training activities that would help improve their and their family's or friends' safety in case of a disaster. This result demonstrates that assigning models of "risk cultures" based merely on qualitative data²¹, or quantitative data which do not take into consideration that definitions of "preparing very little" or "preparing a lot" are also culturally defined, may not do justice to citizens' actual willingness to prepare themselves for disasters.

In addition to the participation in training activities every 1-2 years, three out of four participants also expressed their strong interest in receiving at least once per year information about how to prepare themselves and their family/friends for a disaster. During the group discussions, suggestions ranged from receiving "simple" paper brochures, a desirable omnipresence of information (e.g. via posters in schools and workplaces) and dedicated regular TV series (e.g. documentaries or talk shows) to mandatory exposure to information, similar to the safety briefings in airplanes, that should be implemented in public or semi-public spaces such as busses, waiting halls, entrance areas of sports stadiums, shopping centres or concert halls, but also in private spaces such as cinemas or hotel lobbies.

Generally, between one third and half of the participants expressed during the group discussions their willingness to participate in free emergency preparedness and response courses, in disaster simulation courses, and to test and use mobile phone apps specifically designed to provide information about disasters or threats in the area where they live. Here, beyond a certain "why-not" attitude and a perceived general usefulness, in particular those participants with children indicated the fact of having children as one of the main motivators for participation, despite limited spare time

²¹ See, e.g., the assignment of Germany to a "state-oriented risk culture" model where countries are seen to be marked by a strong trust in authorities, citizens' belief that disaster consequences can be minimised and that the public authorities should take care of risk prevention activities (Cornia, A., Dressel, K. & Pfeil, P. (2016) Risk cultures and dominant approaches towards disasters in seven European countries. In: *Journal of Risk Research*, 19:3, 288-304).

due to work and family duties, i.e. to ensure their family's safety. These qualitative results confirm the quantitative data which point at knowing vulnerable others as an important factor. Additionally, the participation in courses, simulation exercises and mobile app usage was seen to increase social cohesion and trust in fellow citizens, and specifically the participation in simulation exercises was perceived as holding the potential for an increased mutual understanding and trust between practitioners and citizens, in particular through a better understanding of the general processes involved. The risk that people may predominantly want to participate in simulated disaster scenarios due to the "fun factor" was seen, but it was also argued that the inclusion of such cultural groups ("adventure seekers") may still have a long-term effect by creating sustainable interest in disaster preparedness.

Regarding trust, or distrust, in different authorities, the quantitative data revealed generally strong relationships between the perceived effectiveness and the felt trustworthiness of the respective authority, with citizens perceiving the effectiveness and trustworthiness of the fire brigade, the medical emergency services and civil protection as highest, and the effectiveness and trustworthiness of the local police and the media as lowest. Additionally, the data suggest that participants' strong trust in the German medical emergency services, derived from personal experiences in smaller-scale incidents, affects their perceptions and feelings towards other authorities in disaster management – a finding which was explicitly confirmed during the group discussions. The strong distrust in the local police's effectiveness was explained during the discussion groups as related to the German police forces seen as being overstrained, understaffed and, in certain situations, powerless. However, the participants also outlined positive media coverage of professional disaster response, in addition to the mere absence of negative media coverage, as particularly trust-building. Accordingly, a current media culture of reporting "success stories" about rescue forces deployed abroad can be the source of (national) pride, whereas incidents with police forces or other authorities deployed locally are more often subject to local criticism and, therefore, may result in distrust.

Furthermore, citizens' trust in authorities appeared also to be strongly affected by their national or regional background: Several participants with a migration background from South-Eastern Europe and Russia explained their strong trust in German authorities with their distrust towards the authorities in their country of origin. Other participants who grew up or lived in Israel for an extended period of time described their experience of a stronger "closeness" between citizens and police forces as shaping their trust. Accordingly, it cannot be assumed that groups of the population with a non-native background will, in any case, distrust authorities in a disaster situation. On the one hand, this may be likely for recent migrants with still very "fresh" experiences of rejection, corruption and/or coming from war-torn countries. On the other hand, migrants or expatriates who have settled and strongly identify themselves with their new home and the new environment may, through their increased level of trust in authorities, be of particular help as informal liaison persons who can mediate between affected citizens and disaster managers. An additionally contributing factor in this context may also be the identified cultural practice of assigning positive values (e.g. neighbourhood help) from their country of origin to their new host country.

As other informal ("cultural") leaders, participants pointed in particular at TV hosts, journalists and media people. Here, despite the previously expressed distrust in the media, such individuals were perceived as holding personal qualities, e.g. self-confidence, and skills like stress management which were seen as important to manage disaster situations and, therefore, creating trust. Other groups identified were teachers (due to their ability to manage large groups of people), property managers

(because of their knowledge of the structure of buildings and the surrounding infrastructure), and sport team players because of their presumed ability to transfer their “team attitude” and “team skills” also to situations outside the playing field.²²

In relation to behavioural intentions in a disaster situation, the quantitative data showed that a large proportion of participants are likely or very likely to use both mobile phone apps and social media, with the likeliness of apps usage being slightly higher than the likeliness of social media use. The results also point at groups of citizens who are not active or frequent social media users but may still be interested in using mobile phone apps. This was confirmed by the qualitative data which revealed that in particular the older participants showed the most positive response towards using and testing a “disaster app”, contradicting thus the cultural stereotype of older people being generally more technology-averse. The qualitative data revealed additionally that social media are, often, equalled with Facebook and, exclusively, with social media messages from private individuals. Many participants were unaware of public authorities’ social media sites/profiles which, by all those participants who had known or used such sites before, were trusted considerably more than social media messages from private media channels or other individual social media users. Here, contrary to the participants’ general feelings of distrust towards the German police in effective disaster response as indicated by the quantitative data, social media sites from the police are highly appreciated and trusted. This may be interpreted as the participants’ trust being based not on their perceptions of the police forces’ physical disaster response, but on the police’s perceived ability to provide truthful and timely information. It also points at the potential of social media usage to rebuild citizens’ trust in the police by specifically taking up this role of a trustworthy information provider at times where both private and public media channels are increasingly distrusted.

Finally, the quantitative results contradicted any hypotheses that citizens may distrust, or trust, authorities because they feel that they themselves are distrusted or trusted. However, in the context of mobile phone apps and social media it appears that feelings of trust (or distrust) may not affect citizens’ behaviours of sourcing information from public authorities, but it does affect their willingness to contribute by submitting information to authorities in a disaster situation.

The individual topics raised in this report will be compared and synthesised with the results from the third Citizen Summit which was held in Italy, and also complement the synthesised results from the first Citizen Summit in Romania and the second Citizen Summit held in Malta. These synthesised results will shape the final round of Stakeholder Assembly and Citizen Summits in 2018. Additionally, all results will

- be included in the Work Package 9 Cultural Map²³; 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.

²² The inclusion of members of sports teams or associations was also explicitly pointed at by practitioners participating in the 2nd Stakeholder Assembly.

²³ For inclusion of these results in the WP9 Cultural Map, this document will be fully coded following the matrix as described in Deliverable D9.1, using QDA Miner Lite software.

Appendix A

Time	Detailed Schedule & Content	Total running
[60 min.]	0. Participant registration a. Collecting consent forms b. Handing out voting keypads	
15 min.	1. Welcome; introduction / presentation CARISMAND project	15 min.
10 min.	2. Presentation: Organisation & logistics 2.1 Time schedule; breaks; refreshments 2.2 Breakout rooms/locations 2.3 Instructions how to use the voting keypads 2.4 Test questions ²⁴ <i>These questions serve the purpose of live testing whether the ppvote system (central unit) is communicating properly with the distributed keypads (strength of radio signal), and to ensure that the participants know how to use their keypads. However, the questions' content also refers to the 2nd Stakeholder Assembly where several practitioners suggested that the perceived "value" of disaster management-related professions, such as police or firefighter, would be represented in a change of children's dream jobs.</i> 2.4.1 What was your dream job when you were a child? <i>(1=actor/musician/dancer, 2=astronaut/pilot, 3=doctor/nurse, 4=engineer, 5=firefighter, 6=lawyer, 7=police officer, 8=professional athlete, 9=scientist, 10=teacher, 0=Other/I don't remember)</i> 2.4.2 Think of a 7 or 8 year old child you know well, which may be your own or, for example, the child of a friend or family member. What does that child want to be when they grow up? <i>(1=actor/musician/dancer, 2=astronaut/pilot, 3=doctor/nurse, 4=engineer, 5=firefighter, 6=lawyer, 7=police officer, 8=professional athlete, 9=scientist, 10=teacher, 0=Other/I don't know)</i>	25 min.
15 min. ²⁵	3. Question Set I: Demographics & disaster experience <i>The first 5 questions in this set (Q3.1 – Q3.5) are taken directly from the recruitment questionnaire and provide some demographic and other basic participant information. Q3.6 asks for citizens' for citizens' disaster risk perception, whereas Q3.7 asks for citizens' emotions (worry/concern)²⁶.</i> 3.1 Gender (1=female, 2=male, 3=choose not to say) 3.2 Age (numeric) 3.3 Have you, or a close friend or family member, ever experienced a disaster?	

²⁴ Please note that the question numbers in this schedule are not identical with those in section 3 (Quantitative Analysis) of this document, because in the schedule the numbering serves the structuring of the overall event.

²⁵ The time for this (as well as for each following) set of questions is generously planned, allowing for app. 2 min. per question. The presenter will read each question and all answer options out loud to the audience whilst they are shown on the presentation screen.

²⁶ This type of question is going to be posed to the audience a second time, i.e. at the end of question set II (Information & disaster preparedness). In order to achieve adequate internal consistency but without using exactly the same wording, these questions are based on the 5-item measure developed by Kellens et al (2011) with a Cronbach's Alpha of 0.80 for the perception of flood risk, adapted to disasters in general (see Kellens, W., Zaalberg, R., Neutens, T., Vanneuville, W., & De Maeyer, P. (2011). An analysis of the public perception of flood risk on the Belgian coast. Risk analysis, 31 (7), 1055-1068).

	<p>(1=yes, 2= no, 6=I'm not sure)</p> <p>3.4 Do you feel you are living in an area that is specifically prone to disasters? (1=yes, 2=no, 6=I'm not sure)</p> <p>3.5 Do you know of any other people in your area where you live who you think are particularly vulnerable or exposed to disasters? (1=yes, 2=no, 6=I'm not sure)</p> <p>3.6 How high, or low, do you think is the risk that a disaster occurs in the area where you live? (1=very low, 2=low, 3=neither low nor high, 4=high, 5=very high, 6=I'm not sure)</p> <p>3.7 How much do you agree, or disagree, with the following statement: "I am worried about disasters in the area where I live." (1=I totally disagree, 2=I disagree, 3=I neither disagree nor agree, 4=I agree, 5=I totally agree, 6=I'm not sure)</p>	40 min.
15 min.	<p>4. Question Set II: Information and disaster preparedness</p> <p><i>This set of questions builds upon the design and results from the first two Citizen Summits in 2016, as well as results from the Work Package 4 literature review which points particularly at recent research findings regarding the correlations between perceived disaster preparedness and actual preparedness²⁷. In detail, Q4.1 introduces the topic of disaster preparedness through asking for awareness of disaster-related behaviours; Q4.2, Q4.5 and Q4.6 measure citizens' disaster preparedness intentions²⁸, with Q4.3 and Q4.4 operationalising the results from Q4.2 for guidance to disaster managers (the need of training activities rather than the mere provision of information was specifically pointed out by participants in the 2nd Stakeholder Assembly). Q4.7 is the second measure of citizens' feelings as outlined in question set I.</i></p> <p>4.1 How informed do you feel by the authorities (for example Civil Protection, local police, emergency services) of what you have to do in case of a disaster? (1=not informed at all, 2=not informed, 3=reasonably informed, 4=informed, 5=very informed, 6=I'm not sure)</p> <p>4.2 How much are you interested in information about disaster preparedness? (1=not interested at all, 2=interested very little, 3=interested a little, 4=quite interested, 5=very interested, 6=I'm not sure)</p> <p>4.3 How often would you like to receive information about how to prepare yourself and your family/friends for a disaster? (1=never, 2=only when there is an increased disaster risk, 3=once per year, 4=once every 6 months, 5=at least once every 3 months, 6=I'm not sure)</p> <p>4.4 How often would you like to participate in training activities, for example emergency drills or workshops, that will help improving your and your family's/friends' safety in case of a disaster? (1=never, 2=only when there is an increased disaster risk, 3=every 3-5 years, 4=every 1-2 years, 5=at least once per year, 6=I'm not sure)</p>	

²⁷ Joffe, H., Perez-Fuentes, G., Potts, H.W.W. & Rossetto, T. (2016) How to increase earthquake and home fire preparedness: the fix-it intervention. In: Natural Hazards, 84: 1943. doi:10.1007/s11069-016-2528-1.

²⁸ Questions are based on the 3-item measure (Cronbach's Alpha 0.86) developed by Terpstra (2011) for flood preparedness intentions. (see Terpstra, T. (2011). Emotions, trust, and perceived risk: Affective and cognitive routes to flood preparedness behavior. Risk Analysis, 31 (10), 1658-1675).

	<p>4.5 How prepared do you personally feel for a disaster in your area? (1=not prepared at all, 2=not prepared, 3=neither prepared nor unprepared, 4=prepared, 5=well prepared, 6=I'm not sure)</p> <p>4.6 To what extent do you intend to prepare for disasters? (1=Not prepare at all, 2=Prepare very little, 3=Prepare a bit, 4=Prepare quite a lot, 5=Prepare a lot, 6=I'm not sure)</p> <p>4.7 How much do you agree, or disagree, with the following statement: "When I think of disasters in my area, I feel concerned." (1=I totally disagree, 2=I disagree, 3=I neither disagree nor agree, 4=I agree, 5=I totally agree, 6=I'm not sure)</p>	55min.
15 min.	5. Presentation about personal preparedness measures for citizens in case of a disaster provided by disaster practitioner or moderator	1h 10min.
15 min.	<p>6. Question Set III: Social media use in disasters</p> <p><i>This set of questions builds upon the results from the first two Citizen Summits in 2016, the 2nd Stakeholder Assembly as well as the Work Package 3 Deliverables which show the uptake of social media by citizens in disaster situations to gather information, but also the increasing usage of specifically designed "disaster apps". Q6.3 and Q6.4 intentionally differentiate between social media and mobile phone apps, because there is yet little research which explores the different possible functions expected, or desired, by citizens.</i></p> <p>6.1 Do you use a mobile phone? (1=yes, 2=no)</p> <p>6.2 Do you use mobile phone apps? (1=yes, 2=no, 3=I don't know)</p> <p>6.3 In the case of a disaster, how likely are you to use a mobile phone app that is specifically made for disaster situations to:</p> <p>6.3.1 receive alerts, warnings or emergency-related information from local authorities / emergency services.</p> <p>6.3.2 submit information about disaster risks or disasters to local authorities / emergency services.</p> <p>6.3.3 warn/inform other app users.</p> <p>(1=very unlikely, 2=unlikely, 3=neither unlikely nor likely, 4=likely, 5=very likely, 0=I'm not sure)</p> <p>6.4 Do you use the internet? (1=yes, 2=no)</p> <p>6.5 Do you use social media? (1=yes, 2=no, 0=I'm not sure)</p> <p>6.6 In the case of a disaster, how likely are you to use social media to:</p> <p>6.6.1 inform yourself about the disaster.</p> <p>6.6.2 submit information about disaster risks or disasters to local authorities / emergency services.</p> <p>6.6.3 warn/inform other social media users</p> <p>(1=very unlikely, 2=unlikely, 3=neither unlikely nor likely, 4=likely, 5=very likely, 0=I'm not sure)</p>	1h 25min.
15 min.	7. Presentation about the use of social media and mobile phone apps in disaster management presented by app designer or moderator	1h 40min.
20 min.	<p>8. Question Set IV: Trust / Distrust</p> <p><i>These questions, generally, are based on the findings in the literature review of Work Package 4, and the results from the 2nd Stakeholder Assembly, outlining the important but often contradictory role of trust between citizens and disaster managers. Q8.1 to Q8.6 specifically seek to explore different levels of expectations towards, and trust in, different authorities/institutions²⁹; Q8.7 is based on this topic having been raised</i></p>	

²⁹ See Armaş, I., Crety, R. Z. & Ionescu, R. (2017) Self-efficacy, stress, and locus of control: the psychology of earthquake risk perception in Bucharest, Romania. In: International Journal of Disaster Risk Reduction (accepted manuscript, in press). The results of this study specifically point at different components of trust.

by practitioners during the 2nd Stakeholder Assembly (Discussion group session II). Q8.8 is another topic brought up during the 2nd Stakeholder Assembly (Discussion group session III) explores trust further, understanding it as a bi-directional relationship between citizens and disaster managers and intending to complement the research regarding citizen empowerment in Work Package 7.

8.1 When you think of the **Civil Protection**...

8.1.1 How effective in providing help do you think they are in case of a disaster? (1=not effective at all, 2=not effective, 3=neither ineffective nor effective, 4=effective, 5=very effective, 6=I'm not sure)

8.1.2 How trustworthy do you think they are? (1=not trustworthy at all, 2=not trustworthy, 3=neither untrustworthy nor trustworthy, 4=trustworthy, 5=very trustworthy, 6=I'm not sure)

8.2 When you think of your **local Police**...

8.2.1 How effective in providing help do you think they are in case of a disaster? (1=not effective at all, 2=not effective, 3=neither ineffective nor effective, 4=effective, 5=very effective, 6=I'm not sure)

8.2.2 How trustworthy do you think they are? (1=not trustworthy at all, 2=not trustworthy, 3=neither untrustworthy nor trustworthy, 4=trustworthy, 5=very trustworthy, 6=I'm not sure)

8.3 When you think of the **Medical Emergency Service**...

8.3.1 How effective in providing help do you think they are in case of a disaster? (1=not effective at all, 2=not effective, 3=neither ineffective nor effective, 4=effective, 5=very effective, 6=I'm not sure)

8.3.2 How trustworthy do you think they are? (1=not trustworthy at all, 2=not trustworthy, 3=neither untrustworthy nor trustworthy, 4=trustworthy, 5=very trustworthy, 6=I'm not sure)

8.4 When you think of the **Fire Brigade**...

8.4.1 How effective in providing help do you think they are in case of a disaster? (1=not effective at all, 2=not effective, 3=neither ineffective nor effective, 4=effective, 5=very effective, 6=I'm not sure)

8.4.2 How trustworthy do you think they are? (1=not trustworthy at all, 2=not trustworthy, 3=neither untrustworthy nor trustworthy, 4=trustworthy, 5=very trustworthy, 6=I'm not sure)

8.5 When you think of **Voluntary Aid Institutions**...

8.5.1 How effective in providing help do you think they are in case of a disaster? (1=not effective at all, 2=not effective, 3=neither ineffective nor effective, 4=effective, 5=very effective, 6=I'm not sure)

8.5.2 How trustworthy do you think they are? (1=not trustworthy at all, 2=not trustworthy, 3=neither untrustworthy nor trustworthy, 4=trustworthy, 5=very trustworthy, 6=I'm not sure)

8.6 When you think of the **Media**...

8.6.1 How effective in providing help do you think they are in case of a disaster? (1=not effective at all, 2=not effective, 3=neither ineffective nor effective, 4=effective, 5=very effective, 6=I'm not sure)

8.6.2 How trustworthy do you think they are? (1=not trustworthy at all, 2=not trustworthy, 3=neither untrustworthy nor trustworthy, 4=trustworthy, 5=very trustworthy, 6=I'm not sure)

8.7 Imagine there is a high risk that a disaster will occur in the area where you live. If you use social media, how much would you trust, or mistrust, messages from:

8.7.1 Local authorities

8.7.2 Private users of social media

	<p>(1=distrust a lot, 2=distrust, 3=neither distrust nor trust, 4=trust, 5=trust a lot, 6=I'm not sure, 7=I don't use social media)</p> <p>8.8 How much do you believe that the local authorities/emergency services trust YOU, as a citizen, that...</p> <p>8.8.1 you are appropriately prepared for a disaster? (1=they distrust citizens a lot, 2=they distrust citizens, 3=they neither distrust nor trust citizens, 4=they trust citizens, 5=they trust citizens a lot, 6=I'm not sure)</p> <p>8.8.2 you are able to respond appropriately in case of a disaster? (1=they distrust citizens a lot, 2=they distrust citizens, 3=they neither distrust nor trust citizens, 4=they trust citizens, 5=they trust citizens a lot, 6=I'm not sure)</p>	2h
60 min.	Lunch break	3h
10 min.	9. Introduction of moderators and discussion group logistics (and guiding participants to the different breakout rooms)	3h 10min.
10 min.	<p>10. Discussion group briefing</p> <p><i>Welcome the participants and assign them a seat. 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.</i></p> <p>“Welcome and thank you for agreeing to participate in this discussion group. Your contribution is highly valued. My name is _____ and I will be chairing this group discussion. Our session will take about 90-120 minutes. Since we will be audio recording the discussion, I would kindly ask you to speak in a clear voice and one at a time; your opinions, experiences and suggestions are very important to this project, and we do not want to miss any of your comments.”</p> <p><i>At this stage, do not to provide any additional details on the content of the discussion 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 how citizens feel and what they think about disasters”.</i></p> <p>“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.</p> <p>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:</p> <ul style="list-style-type: none"> • 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’d like you to 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. 	

	<ul style="list-style-type: none"> • I would also kindly request that you silence your mobile phones and thus provide for an uninterrupted discussion. <p>Do you have any comments or other suggestions for these ground rules? Do you have any other important general questions before we start?" [...]</p> <p>"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, for example your age, your occupation etc. Let me start by introducing myself..."</p>	3h 20min.
10 min.	<p>11. Discussion topic: "Warm-up"</p> <p>"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. "</p> <p><i>Read out (one at a time, and encourage each of the participants to give one or two words only they associate spontaneously with the respective term):</i></p> <ul style="list-style-type: none"> - "Responsibility" - "Credibility" - "Trust" - "Faith" 	3h 30min.
10 min.	<p>12. Discussion topic: Experience of disasters</p> <p>"What disasters that have occurred in the past in the area where you live can you spontaneously think of?" [...]</p> <p><i>This question does not only serve as an additional warm-up, but it should also probe what actual disaster experience (or memories thereof) the different participants have. Here, it is ok if participants also talk about e.g. their parents' or grandparents' memories they may have been told when they were children, as we are also interested in what collective memories of disasters are prevalent in the respective region.</i></p>	3h 40min.
25 min.	<p>13. Discussion topic: Trust in authorities</p> <p>"We have asked you a couple of questions this morning regarding your trust in different authorities and institutions, for example Civil Protection, local police, fire brigade, medical emergency services, voluntary aid institutions etc. Now I would like to discuss this with you a bit more: Can you tell me about your personal experiences of a disaster or an emergency situation where you felt trust, or distrust, in the different authorities that were on site?" [...]</p> <p>"What did they do to earn your trust, or distrust?" [...]</p> <p><i>Please try to make the participants talk about their actual experiences rather than speculating about hypothetical situations. Those who claim that they have no such experience at all should be encouraged to talk about other, smaller-scale emergency situations, e.g. a car accident or a workplace</i></p>	

	<p><i>accident. The aim of this question is not only to find out which different authorities or institutions citizens trust (or distrust) in disaster situations, but also what are the reasons for these feelings. Such reasons may be, e.g., previous experience with the respective authority, specific symbols (e.g. uniform, red cross), or specific behaviour that raises trust or distrust. Please let the participants speak freely and develop their own ideas; only use the abovementioned examples for probing in case they can't think themselves of any reasons why they felt trust or distrust.</i></p> <p><i>“Do you think other people in your area felt the same in that situation you just described? Why / why not? What different behaviours did you observe in different people, or different groups if people?” [...]</i></p> <p><i>The intention of this question is to find out whether different cultural groups trust, or distrust, differently in disaster situations. Whilst a certain level of speculation is in this case unavoidable, please probe the participants’ opinions by asking what observed behaviours in others make them think so.</i></p>	<p>4h 5 min.</p>
<p>25 min.</p>	<p>14. Discussion topic: Trust in non-professional leaders</p> <p><i>“What other persons did you encounter in a disaster or emergency situation who were NOT professional disaster managers or emergency services but took up responsibility spontaneously. For example, people who helped in organising evacuation, rescuing victims, or assisting in the communication between authorities and citizens or between different groups?” [...]</i></p> <p><i>“How did you feel about these persons? And why?” [...]</i></p> <p><i>Here, we are trying to find out who are the non-professional (“natural”) leaders citizens trust in a disaster situation, and what makes them trust such persons. Please let the participants elaborate their own ideas and experiences (e.g. pre-existing relationships, previous experiences in everyday situations, assumed organisational skills, assumed “natural” or professional authority in other areas). Only if participants have difficulties to think of any such person, you may give them examples, such as local council representatives, the parish priest, the imam, a local doctor, the pharmacist, a teacher, a local business owner, volunteers of local sports clubs or other associations etc.</i></p> <p><i>“Do you think other people felt the same in that situation you just described? Why / why not? What different behaviours did you observe in different people, or different groups of people?” [...]</i></p> <p><i>As in the previous set of questions, the intention, here, is to find out whether different cultural groups trust, or distrust, differently in disaster situations. In this question we are trying to identify who are the individual “cultural leaders” people are trusting. Again, whilst a certain level of speculation is in this case unavoidable, please probe the participants’ opinions by asking what observed behaviours in others make them think so.</i></p>	<p>4h 30min.</p>
<p>15 min.</p>	<p>15. Discussion topic: Trust in social media</p> <p><i>“This morning you were also asked about your trust in social media messages from different sources, in particular information provided via social media from authorities, journalists, volunteer associations or other,</i></p>	

	<p>private social media users. Can you tell me a bit more about this? Why do you trust, or distrust, some more than others?" [...]</p> <p><i>This discussion topic is building upon the quantitative question asked in the morning. Please encourage the participants to find specific reasons why they trust, or distrust, one entity more than another, and ask them to describe specific situations where they trusted (or distrusted) social media messages.</i></p>	<p>4h 45min.</p>
15 min.	<p>16. Discussion topic: Disaster preparedness measures in practice</p> <p>"What information do you have available, or have you ever received, about disaster preparedness measures and about what to do in case of a disaster? Can you tell me a bit what type of information this is, or was, and how useful you found it?" [...]</p> <p><i>This discussion topic is also building upon a quantitative question asked in the morning. Possible types of information could be, e.g., brochures, specific websites, posters/awareness campaigns by local authorities. Please probe not only for general perceived usefulness, but also for specific aspects, e.g. how easy the information was to understand (language use / technical terms etc.), and how appropriate they felt it was for different cultural groups.</i></p> <p>"Earlier today you have also heard a bit about different possible measures to prepare yourself, and your family or your friends, for the case of a disaster. Imagine you have the opportunity to</p> <ol style="list-style-type: none"> Participate in a free emergency preparedness and response course which runs over several weeks at hours when you have time, for example 2 hours per week over a period of 6 weeks. Participate in a large-scale disaster scenario set up in your area over a day on a weekend, for example an explosion in a metro station. Download a mobile phone app that is specifically designed to provide information about disasters or threats in the area where you live; you will be asked to test this app for a period of 3 months and fill out an anonymous feedback questionnaire after that period. <p>Would you take up such an opportunity, and why, or why not?" [...]</p> <p><i>For each of these three options you will have cue cards. Show these cue cards – ONE AT A TIME – and let the participants discuss freely. Please probe for the specific conditions under which they would be most interested to participate in any activity.</i></p>	<p>5h</p>
20 min.	<p>Coffee break (and guiding participants back to the main meeting room)</p>	<p>5h 20min.</p>
30 min.	<p>17. Final presentation: Overview of real-time results from participants' responses via the audience response system</p> <p><i>During the breaks and the group discussions, the participants' responses will undergo a quick analysis and be collated in a presentation which visualises the results via graphs and in short descriptive statements. Additionally, the final presentation will provide some information about the results from the first two Citizen Summits.</i></p>	<p>5h 50min.</p>
10 min.	<p>18. Conclusion</p>	<p>6h</p>

Appendix B

CARISMAND Citizens Summits Recruitment Questionnaire

Participant name: _____

1. Gender: Female Male

2. Age: _____ years

3. Have you, or a close friend or family member, ever experienced a disaster?
 Yes No I'm not sure.

4. Do you feel you are living in an area that is specifically prone to disasters?
 Yes No I'm not sure.

5. Do you know of any other people in your area where you live who you think are particularly vulnerable or exposed to disasters?
 Yes No I'm not sure.

6. Do you work as a volunteer in a community or self-help group?
 Yes No I'm not sure.

7. Do you use social media?
 Yes No I'm not sure.

8. I am working in a profession that is related to disaster management (e.g. Emergency Services).
 Yes No I'm not sure.

Participant signature: _____

Date: _____

Appendix C

CARISMAND Citizens Summits Consent Form for Participation in Discussion Groups

Name of participant: _____

ID-card number: _____

I hereby give consent to the audio-recording of the discussions within the working groups and I commit to keep secret and confidential any information that I may gain access to during these discussions.

I have been informed that these Working groups are part of the CARISMAND project (Culture and Risk Management in Man-made and Natural Disasters) – a collaborative project co-funded by the European Union under the Horizon2020 programme.

I agree that my opinions and ideas expressed during these Working groups will only be used for the purposes of the CARISMAND project in an anonymised form by CARISMAND project members and other researchers. All my answers will be kept in a secure way.

My participation is voluntary and I understand that I am free to withdraw at any time, without giving any reason.

I hereby declare that I understand the participation conditions and that I agree to take part in these Working Groups.

I consent that a copy of this consent form is passed on to the CARISMAND team for due diligence purposes.

Date

Signature