



Culture and disaster risk management – Citizens’ reactions and opinions during Citizen Summit in Malta.

Appleby-Arnold, Sandra & Brockdorff, Noellie

Department of Cognitive Science, University of Malta, Msida, Malta

September 2016



CARISMAND

Culture And RiSk management in Man-made And Natural Disasters (G.A. 653748).

The project was co-funded by the European Commission within the Horizon2020 Programme (2014 – 2020).

<https://www.carismand.eu/>

The views expressed in this report are the sole responsibility of the authors
and do not necessarily reflect the views of the European Union.

Correspondence about this report should be addressed to:

Noellie Brockdorff, Department of Cognitive Science, University of Malta, Msida, MSD2080, Malta.

noellie.brockdorff@um.edu.mt

1. Introduction

The analyses and results in this document are based on data collected during the second CARISMAND Citizen Summit held in Malta on July 16th 2016. The Citizen Summit was designed as a 1-day event combining public information with feedback gathering through different methods of data collection: (1) 30 questions with pre-defined answer options posed to the audience and collected via an audience response system; and (2) small moderated group discussions of approximately 1.5 hours duration which followed a detailed set of questions and discussion guidelines, including (3) a short association exercise. All questions and discussions aimed to explore citizens' attitudes, feelings and perceptions towards disaster risks as well as the identification of cultural factors in disaster preparation, response and recovery. The definition and design of the questions was based on a literature review, preliminary research results from other work packages, and taking up specific topics identified in the 1st CARISMAND Stakeholder Assembly. For a detailed overview of all questions asked and topics discussed please see Appendix A.

Overall, 108 citizens participated in the Malta event. The total sample shows a relatively even gender and age distribution, which is unsurprising given the target quotas¹ which were requested from 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 ²	18-24	25-34	35-44	45-54	55-64	65+	No answer
108	50	53	5	19	29	15	22	17	2	4

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 answered³. Half of respondents indicated that they, or a close friend or family member, have experienced a disaster, 38% felt that they are living in an area that is specifically prone to disasters, and 48% 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 were found to be not statistically significant ($p \geq .05$).

Table 2
Disaster risk perception I

		Answer=YES		
		Total	Female	Male
Q1.3	Experience of disasters	50.0%	48.0%	56.6%
Q1.4	Feel that living in a disaster area	38.0%	44.0%	32.1%
Q1.5	Know of vulnerable groups particularly exposed to disasters	48.1%	46.0%	49.1%

Q1.3: Have you, or a close friend or family member, ever experienced a disaster?

Q1.4: Do you feel you are living in an area that is specifically prone to disasters?

Q1.5: Do you know of any other people in your area where you live who you think are particularly vulnerable or exposed to disaster?

¹ 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.

² In each question, the participating citizens were given the answer option "choose not to say".

³ These questions formed part of the recruitment criteria to ensure a good mix of levels of experience for the discussions about disasters.

This report presents the results of the second CARISMAND Citizen Summit and is structured in six 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, and behaviours in disaster situations, the latter with a particular focus on the use of social media. The fourth section, based on the qualitative data collected in the discussion groups, will analyse the participants' risk perceptions and behaviours related to (a) different "features" of disasters, in particular related to slow/fast onset, short/long-term effects and the "visibility" of disasters, and (b) different disaster phases. Furthermore, this section will report on the different cultural aspects and cultural groups identified by the participants, the specific needs of such groups, and perceived community strengths and weaknesses in case of a disaster. Additionally, it will provide insight into participants' views on measures that may help to improve disaster preparedness and response. The fifth section focuses on risk perception in relation to causes of disasters, in particular the blurred distinction between natural and man-made disasters. The final section compares and contrasts the results from sections 2, 3 and 4, draws some tentative conclusions, and identifies topics and issues that should feed into the next round of events in 2017, i.e. the 2nd Stakeholder Assembly as well as the 3rd and 4th Citizen Summits.

2. Methodology

Participants for the Citizen Summit were recruited via a Maltese market research agency⁴, 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 Maltese. Accordingly, the Citizen Summit presentations as well as the group discussions were held in Maltese, 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, 30 quantitative questions were posed during the presentations to the general audience, 24 before the group discussions, and 6 after. The participants' immediate responses were captured via an audience response system⁵ 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. Two groups consisted of participants aged 18-24, four groups of participants aged 24-44, and four groups of participants aged 45+. 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

⁴ Bloom Research Ltd (<http://www.bloomresearch.com>).

⁵ Clik-a-pad system with ppvote software; for further information see <http://www.clikapad.com>.

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

The association exercise was conducted in the beginning of the group discussions, asking participants to write down anonymously on a sheet of paper the first three disasters (outside their own country⁶) that come spontaneously to their minds. These papers were immediately collected by the group moderators to ensure that only immediate associations were recorded and no data added or amended later during the group discussions. The resulting associations were transferred into a database and categorised by age group and type of disasters. Additionally, different weights were assigned to each associated type of disaster depending on its ranking⁷, and the descriptive results were triangulated with the other quantitative and qualitative data related to disaster types and risk perception.

⁶ The decision to ask for disasters outside the respective participants' home country aimed to explore what type of disasters are associated first, rather than those that are "closest".

⁷ The type of disaster associated first was given a weight of "3", the one associated second a weight of "2", and the one associated third a weight of "1". If a participant associated four or more disasters, only the first three were transferred into the database.

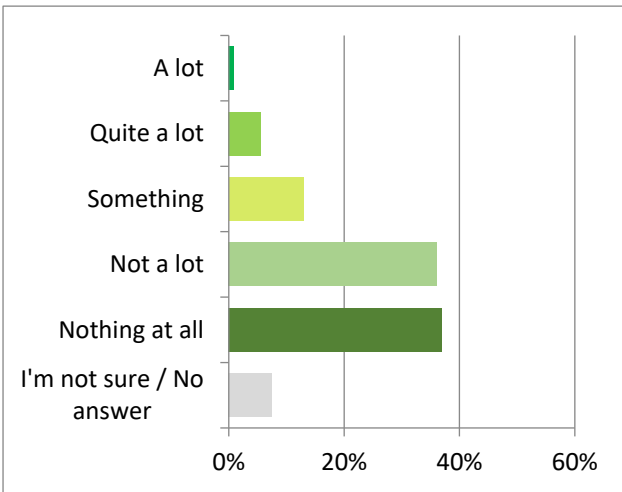
3. Quantitative Data Analysis

3.1 Disaster preparedness

Generally, participants of the Malta Citizen Summit expressed a strong lack of knowledge about the guidelines and procedures their local disaster management authorities are following, with 73% of respondents indicating that they know not a lot or nothing at all. In addition, they also indicated that they feel even less informed about what to do themselves in case of a disaster, with 91% of respondents feeling not informed or not informed at all about what to do in a disaster.

Figure 1

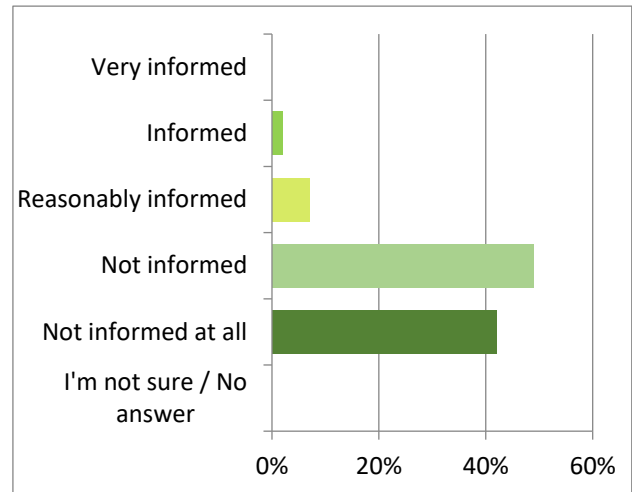
Knowledge of disaster guidelines & procedures



Q1.8 – How much do you know about the guidelines and procedures your local disaster management are following in case of a disaster?

Figure 2

Feeling informed about what to do in a disaster

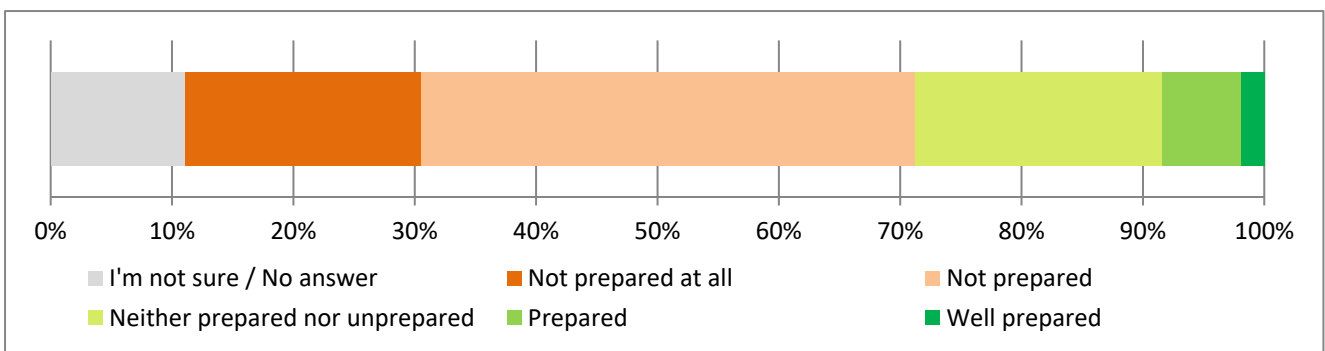


Q2.3 – How informed do you feel by the authorities of what you have to do in case of a disaster?

Whilst the results of these two questions show only a moderate correlation, there is a stronger relationship between respondents feeling informed, or not informed, by the authorities on what to do, and feeling personally prepared for a disaster in their area. Almost three out of five participants expressed their feelings of not being prepared or not being prepared at all, whereas less than one out of ten (8.4%) feel prepared or well prepared.

Figure 3

Feeling personally prepared for disasters

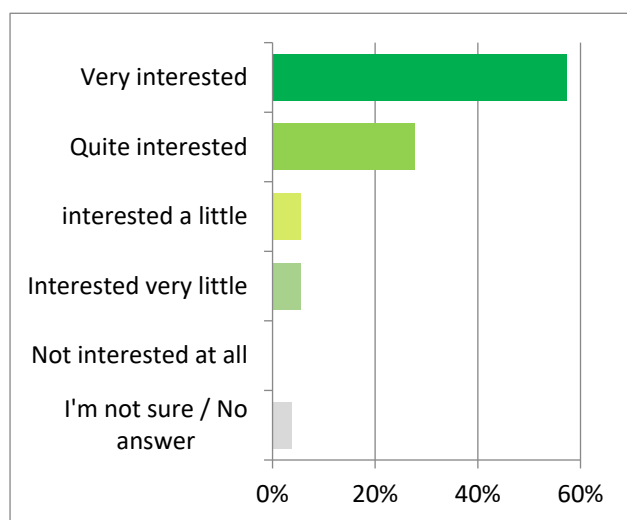


Q1.10 – How well do you personally feel prepared for a disaster in your area?

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. Additionally, almost three out of four participants (71%) indicated strong intentions to prepare for disasters (prepare quite a lot or a lot).

Figure 4

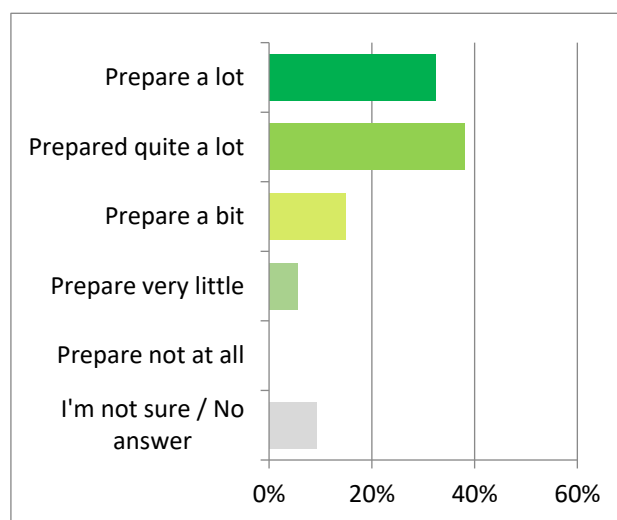
Interest in information about disaster preparedness



Q1.9 – How interested are you in information about disaster preparedness?

Figure 5

Intentions to prepare for disasters



Q1.11 – To what extent do you intend to prepare for disasters?

There were no statistically significant differences between female and male responses to all questions related to disaster preparedness, or to previous experience with disasters (responses to Q1.3 and Q1.4), as well as between responses by different age groups.

3.2 Disaster risk perceptions

Participants were asked about their perception of the risk of disasters at different points during the Citizen Summit in order to measure the potential effects of information and/or visual cues⁸, in particular the video of a disaster simulation exercise.⁹ The results indeed revealed such effects: Before showing the video, only female participants were more worried than unworried about disasters in the area where they live (see responses to Q1.7 in Table 5 below), whereas after viewing the video both female and male participants agreed more than disagreed that they are concerned about disasters in their area (see responses to Q2.2 in Table 3 below). However, this increased concern coincided with 87% of participants finding disaster simulations as shown in the event important or very important, which suggests that being aware of simulation exercises may increase disaster risk awareness but, at the same time, this is appreciated.

⁸ 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).

⁹ In August/September 2015 the Civil Protection Department Malta, in cooperation with the CPD Sicily and the Universities of Catania, Palermo and Malta, conducted a complex disaster exercise as part of the EU co-financed project SIMIT--Integrated System for Transboundary Italo-Maltese Civil Protection. The scenario setting was in Gozo, the second largest of the inhabited islands of the Maltese Archipelago, simulating a major earthquake (7.6 on the Richter scale, 120 km southwest of Malta, lasting 20 seconds), and it involved around 300 participants (members of the Civil Protection Department, Police, soldiers, medical staff etc.) as well as the general public. Based on the video material provided by the CPD Malta, a short film with several sequences was purpose-cut for the CARISMAND Citizen Summit.

Table 3
Disaster risk perception II

		Total		Female		Male	
		Mean	STD	Mean	STD	Mean	STD
Q1.7	Worried about disasters in my area	2.93	1.115	3.17	1.141	2.71*	1.071
Q2.2	Concerned about disasters in my area	3.45	1.019	3.59	1.041	3.28	1.026
Q4.2.1	High risk of natural disasters in my area in next 3 years	2.62	0.883	2.67	0.715	2.53	0.952
Q4.2.2	High risk of man-made disasters in my area in next 3 years	3.28	0.986	3.25	0.943	3.25	0.997

How much do agree, or disagree, with the following statement (5-point Likert scale with 1=totally disagree, 5=totally agree):

Q1.7: I am worried about disasters in the area where I live.

Q2.2: When I think of disasters in my area, I feel concerned.

Q4.2.1: I think there is a high risk of a natural disaster happening in my area in the next 3 years.

Q4.2.2: I think there is a high risk of a man-made disaster happening in my area in the next 3 years.

Note: Results in this table marked with an asterisk (*) signify that the results between males and females are statistically significantly different ($p < .05$). Other differences between males and females are not statistically significant. There are also no statistically significant differences between age groups.

At the very end of the Citizen Summit, i.e. after the group discussions, participants were asked again for their risk perception, this time with a specific focus on the near to medium future (the next three years), and differentiating between the risks of natural and man-made disasters.

The results show that participants perceive a significant difference between the risk of natural disasters and the risk of man-made disasters (see replies to Q4.2.1 and Q4.2.2 in Table 5 above), although the distinction among these two categories is quite blurred. Whereas more participants agree than disagree that there is a high risk of man-made disasters, for natural disasters more participants disagree than agree that there would be a high risk in their area in the next 3 years. Additionally, responses of male and female participants have shifted even closer together (compared to responses to Q1.7 and Q2.2) and are, in particular for man-made disasters, practically identical. This result suggests that providing more information and encouraging discussion may reduce the difference in risk perception between men and women.

3.3 Behaviour in disaster situations

54% of all participants in the Malta Citizen Summit indicated that in case there was a high risk of a disaster happening soon and they would feel this disaster may cause serious harm, the first thing they would do is call their family and friends; 32% would first call the emergency services. Being asked for the second thing they would do, 42% would call the emergency services, 30% would call their family and friends, and 10% would turn on the television or radio, with no statistically significant differences between female and male responses or between age groups.

Although 92% of the participants stated that they do use social media¹⁰, in an emergency situation it appears that use of social media usage is not the preferred immediate response. 8% responded they would use social media to inform family/friends, submit information to authorities or gather more information for themselves as their first priority. It is the second priority of 11%.

¹⁰ Compared to 93% who stated that they use a mobile phone.

Table 4
First and second reaction in case of a disaster

Q2.4 Imagine that a situation in which there is a high risk of a disaster happening soon, and you feel this disaster may cause serious harm to your family or friends. What is the first / second thing you would do?	First	Second
Call the emergency services	32%	42%
Call family / friends	54%	30%
Go to your neighbours	0%	0%
Use social media to inform family / friends	4%	5%
Submit information via social media to authorities	2%	3%
Get more information via the internet	3%	3%
Get more information from social networks	2%	3%
Turn on the television / radio	0%	10%
Other / not sure / no answer	4%	5%

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

However, this picture changes in the case of an ongoing disaster, where social media usage was indicated as rather likely. More than four out of five participants indicated they would be likely or very likely to use social media to inform themselves and warn or inform other social media users, and about three quarters would warn or inform family and friends, stay in contact with others or provide help through social media. The likelihood of submitting information to local authorities through social media was considerably lower. Nevertheless, 47% of respondents indicated it as likely or very likely that they would use social media to submit information about disasters to the authorities, whilst 35% responded that this is unlikely or very unlikely.

Table 5
Social media use in disasters

In the case of an ongoing disaster, how likely are you to use social media to...	Total	
	Mean	STD
Q3.3.1 Inform oneself about the disaster	4.30	0.954
Q3.3.2 Submit information about disaster risks/disasters to local authorities	3.19	1.324
Q3.3.3 Warn or inform other social media users	4.11	1.070
Q3.3.4 Warn or inform family and friends	3.86	1.195
Q3.3.5 Stay in contact with others	3.97	1.049
Q3.3.6 Provide help to others	3.73	1.139

Answers measured on a 5-point Likert scale with 1=very unlikely, 5=very likely)

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

4. Qualitative Data Analysis

4.1 Disaster preparedness

In the very beginning of the group discussions, most participants across all age groups agreed that disasters with a perceived fast onset allow little, if any, time to prepare. They also understood preparedness mostly as measures for protection which were seen to be immediate and situational once the disaster is already underway: *"I think there are more possibilities than, say, in an earthquake, because flooding is slow in the sense that you do realise that once rain is coming down [and] you see a lot of rain and think that we might*

have a problem of flooding, so that you can prepare a little more than for an earthquake” (G1/P8¹¹; 18-24 yrs); or, in case of a heatwave, “I would turn on the air conditioner, I wouldn’t go to work for sure, and stay indoors” (G4/P9; 25-44).

Another initial reaction common in all groups was, to perceive disaster preparedness predominantly as the responsibility of governments rather than reflecting upon personal preparation measures “[...] if it’s a well prepared country” (G1/P2; 18-24 yrs) to provide an appropriate infrastructure, expert warning systems, and organise disaster response training for the general public: *“I think it is the government who should be taking care of these things” (G3/P4; 25-44 yrs); “You need to prepare society, do some drills” (G1/P3; 18-24 yrs).* In this regard, it was also felt that more could be done: *“I don’t feel that the authorities prepare us for these kind of things” (G2/P1; 18-24 yrs).*

However, as the discussion progressed, the emphasis in all groups shifted noticeably from a perceived duty of public authorities and institutions to a more personal responsibility, awareness and “common sense” (G7/P1; 45+ yrs). The link between state responsibility and citizen responsibility was established via the dynamic between provision, and need of, information about possible preparedness measures:

“I don’t feel informed enough. I’d like the authorities, maybe through the media, to help us understand what we should do in that case. I work in a school so drills are carried out regularly, we do them every term. But still, if I’m at home, I don’t know [what to do]. Probably I would run away if it’s an earthquake. But I’d like to know how to tackle the situation.” (G4/P6; 25-44 yrs)

A number of participants outlined in this context that active information-gathering would be an integral part of preparedness measures: *“First thing, I would talk to the people involved in my locality. You can’t fix something without knowing what the procedures are. These people can guide you to do things correctly” (G5/P3; 25-44 yrs).* Others went a step further and suggested several activities such as improving preparedness through discussions with their families (e.g. about meeting points and means of communication in case of a disaster¹²), planning to share resources between neighbours (e.g. sharing pumps in case of flooded basements), organising community meetings to discuss preparative measures, learning or refreshing First Aid skills, and preparing ready-packed “emergency bags”.

Finally, some participants linked preparedness, or lack thereof, specifically to local attitudes: *“Malta is an island [...] and we are surrounded by so many beautiful things that we don’t think of certain things [disasters]” (G9/P8; 45+ yrs); “we are so distracted in Malta (G9/P2; 45+ yrs); “as a nation [...] we never think of negative things” (G7/P5; 45+ yrs); or “Malta is so small that the probability of an earthquake or these things hitting us is very remote. This is why we’re a nation that doesn’t worry” (G9/P3; 45+ yrs).* Others explained a lack of preparedness via perceived cultural traits – *“we do not prepared ourselves well, but Malta and the Maltese are very resourceful and we get through disasters like in the wars¹³ in the past” (G9/P?; 45+ yrs)* – or the loss of awareness through history:

“From a tour guide point of view, I look at the history. Besides the earthquakes which have happened in Sicily which affected Malta because of the stone and Mdina which is built on clay, the prehistoric temples that go back 7,000 years at least [...] are some of the first free-standing

¹¹ Group 1 / Participant number 1; this form of abbreviation will be used for all quotations.

¹² Some of these points were presented during the morning session, but participants also brought up own examples.

¹³ During the discussion, several groups brought up the vast destruction in the areas around the Grand Harbour which suffered intensive bombing during the Second World War and has become part of Maltese collective memory.

structures in the world which were earthquake-proof. It is very interesting that, in those days, they were preparing for it.” (G5/P2; 25-44 yrs).

A few participants expressed a certain “fatalism” – “it’s in God’s hands” (G10/P3; 45+ yrs), but most participants related preparedness activities to actual experience, as two participants (who live in an area of Malta that floods frequently when it rains heavily) explained:

“My gardener’s boots are at home and if we need to cross [the road] we do but with a plan [...] When we hear the storm water alarm we don’t go out.” (G5/P7; 25-44 yrs)

“These are factors which you need to take into consideration, like a lifestyle.” (G5/P2; 25-44 yrs)

4.2 Disaster risk perceptions

In the context of disaster risk perception, two main themes emerged during the group discussions. The relationship between risk perception¹⁴ and different types or characteristics of disasters, and the close link to experience and knowledge: *“I also think it depends on your knowledge of what to do in the situation [...] If you feel that the authorities have informed you of what to do in such cases, then you know exactly what to do, so your comfort level I think, to an extent, rises” (G1/P1; 18-24 yrs).* Beyond linking risk perception to the level of information provided by the authorities, participants particularly outlined the importance of specific local experience – *“everyone is used to it [heatwaves]; it’s as through you’re saying a snow storm in Finland” (G4/P2; 25-44 yrs)* – or lack thereof: *“If we had the rain that England has, Malta would drown” (G6/P2; 25-44 yrs).* One participant explained how, in their opinion, knowledge and experience do not eliminate but considerably reduce insecurity:

“It is how much people know, how much they’re aware of how you need to act if you’re struck by circumstances like these [heatwave]. Us Maltese, given that our climate is what it is, and that heat in summer is not a rare thing, I’m not going to say that I feel safe in these temperatures we have, but I feel much better than compared to say flooding as I know that if it’s heat I must not eat hot things and I should keep myself hydrated [...] obviously you need to be knowledgeable to adapt.” (G1/P4; 18-24 yrs)

The discussions in all groups related to both preparedness for and protection during heatwaves were particularly lively and demonstrated how these adaptive behaviours have become internalised: *“It becomes part of you” (G3/P9; 25-44 yrs).* However, it was also outlined that experience can have different effects on different people. In one group, the moderator probed these effects by reminding participants of their experience of the 1972 earthquake in Malta¹⁵. In response, a number of participants elaborated that the fact nothing serious happened then – and nothing more serious has happened since then to date – makes them feel more secure: *“I’m less afraid, in the sense that it was the worst one we had ever heard about and nothing happened [...] At the time I was terrified [but] because we’ve been through one, maybe the worst one in a number of years [...] and nothing happened, so I’m less afraid in Malta” (G8/P9; 45+ yrs).* Other referred to it as a distant memory – *“time passed and I was still young” (G8/P5; 45+ yrs)* – or their experience as a child: *“It was an adventure” (G8/P8; 45+ yrs); “I didn’t take it seriously. I saw so many funny things, the way people were acting” (G8/P6; 45+ yrs).*

¹⁴ In many cases, the participants spoke more about the emotional components (e.g. feeling of safety) than about the cognitive components (perceived risk) of security and insecurity in relation to disasters. However, in everyday language this distinction is often not being made and the mixed use of terms is acceptable in a qualitative setting.

¹⁵ Earthquake measuring 4.5 on the Richter scale.

Others again linked their feelings of safety to perceived architectural characteristic – *“in Malta the buildings are strong, unlike abroad [...] so I kind of feel safe”* (G8/P7; 45+ yrs) – though these same facts were seen by others as increasing rather than decreasing risk: *“The way they’re building these days [in Malta] scares me.”* (G8/P8; 45+ yrs). At the same time, there were also participants who described a negative long-term effect of previous experience: *“I get scared now. When I feel tremors I’m scared”* (G8/P11; 45+ yrs), and *“I think you remain afraid after that”* (G4/P5; 25-44 yrs). These statements point at the fact that, ultimately, the effect of experience on disaster risk perception can be rather different depending on the lapse of time, actual or perceived seriousness, personal life situation and personal traits. The same applies to the effect of experienced disaster frequency, where some participants outlined they would worry more, and others that they would not worry more but prepare more.

Regarding the relationships between risk perception and types or characteristics of disasters, only one participant in all discussion groups mentioned the aspect of slow or fast onset, claiming that she/he would worry less because *“you have more time [to prepare]”* (G3/P1; 25-44 yrs). In contrast, a slow onset, in combination with *“invisibility”* such as in the case of heatwaves, was perceived as more risky: *“I think it’s gradual and slow, and I don’t think we will be so aware of what’s going to happen.”* (G9/P1; 45+ yrs).

The type of hazard appeared to influence risk perception with some participants expressing their somewhat fatalistic outlook: *“What happens naturally, nobody can stop it”* (G5/P9; 25-44 yrs); *“when an earthquake happens and the buildings are falling, what can you do – stop it with your hands?”* (G4/P9; 25-44 yrs). However, most often an increased disaster risk was connected with man-made rather than natural disaster causes, in particular human error and technical faults. Here, some participants felt that unknown and unintended side-effects of new technologies in combination with an increasing population density pose the highest risks: *“Things will be different in the future [...] we have to change our mentality for future disasters, because now with complex technology and even the population growth, disasters can be bigger than before”* (G9; 45+ yrs). The strongest emotional reactions to man-made disaster causes occurred, though, when the topic of terrorism was brought up; there, participants felt to have the least control: *“What scares me the most is terrorist attacks especially. I’m terrified and I don’t know what to do. I can’t think of any prevention you can do”* (G2/P3; 18-24 yrs).

Finally, feelings of insecurity were also related to a fear for others, in particular family members, and the responsible behaviour of others: *“Your worry would increase or decrease depending on whether you see those around you taking certain actions [...] if you see that all the precautions are being taken, even if you know it [a disaster] could occur, you feel rather safe”* (G3/P10; 25-44 yrs).

4.3 Behaviour in disaster situations

When asked for their immediate behaviour in disaster situations, some participants’ first reaction was to *“keep calm”* but, more often, to *“keep others calm”* and ensure the safety of their families. The response given most often was that they would offer voluntary help to the Civil Protection Department, NGO’s and/or neighbours in need: *“Help and ask”* (G4/P4; 25-44 yrs).

Here, the participants’ general attitude was that in such a situation everyone could help by using their personal and/or professional skills, and not only those who are trained in medical aid: *“I think everyone could use their skill set”* (G3/P10; 25-44 yrs), *“a person who is like a builder”* (G3/P3; 25-44 yrs), *“perhaps an electrician”* (G3/P5; 25-44 yrs), *“if someone is able to drive they can pick up a group of people and take them to hospital”* (G3/P10; 25-44 yrs), or *“even simply leadership – in all that chaos you could be the person who does not panic and use that skill to help your family and those around you. That skill helps”* (G3/P1; 25-44 yrs).

This willingness of Maltese participants to provide aid by using everyday capabilities and skills even blurred the boundary between public and private spheres: *“Helpful actions, for example give someone a lift to work if something happened to their car; if the kitchen is flooded and they can’t use their kitchen, maybe they can come and cook at your house [...] being helpful”* (G4/P2; 25-44 yrs). At the same time, this behaviour was perceived as a specific cultural trait, in particular by participants aged 25 and above:

“I think deep down, the Maltese in times of need, everyone would [help]. It would be because we were brought up like this.” (G3/P7; 25-44 yrs)

“I think in Malta there is a culture to help – we are ready to help. We give even when we don’t have. There is solidarity.” (G5/P10; 25-44 yrs)

“I think, here in Malta, thankfully our culture is to take care of each other.” (G7/P7; 45+ yrs)

“That’s one of the virtues of the Maltese people: No matter how much they argue – they help.” (G10/P3; 45+ yrs)

Particularly in the recovery phase, participants also highlighted the potential for an increase in community cohesion: *“After something has happened you see communities uniting [...] If there is a carpenter he could help someone else by making furniture, an electrician can help someone else by working on their electricity, a plumber working on water. Many times, communities after a disaster like this unite.”* (G3/P10; 25-44 yrs).

Generally, there appeared to be a considerable difference between participants’ own intended behaviour and what they imagined other people outside Malta may do in case of a serious disaster. Whereas many hypothesised that disasters could cause long-term trauma and make people move away, for themselves they expressed a more hands-on approach and learning from mistakes:

“You check out the damage and if something was wrong you draw attention to it so it’s not repeated.” (G4/P5; 25-44 yrs)

“You try and raise awareness, but you don’t just leave.” (G5/P11; 25-44 yrs)

“If you’re leaving you’re also removing your identity.” (G1/P10; 18-24 yrs)

4.4 Cultural groups, cultural aspects and the role of community

All participants identified four main groups as particularly vulnerable during disasters: the elderly, children, people with physical or mental disabilities, and people who are ill or have had recent injuries. But within these groups the participants also distinguished further: Elderly people were perceived as particularly vulnerable if they are living alone, with poor health and/or mobility issues, and children who are very young and lack the mental ability to respond maturely in the case of a disaster. Furthermore, participants named other groups that may be vulnerable during disaster, such as people with a low socio-economic status (low education, low income), homeless people, prisoners and people who live in locations that are prone to specific types of disaster (e.g. industrial zones or densely populated areas).

Although age, social, economic or physical characteristics may contribute to our understanding of cultural groups they do not define them. Rather, the CARISMAND project conceptualises culture as a set of attitudes, practices, values and/or beliefs that are shared amongst a group people. Therefore, the moderators were instructed to probe beyond age, social, economic or physical characteristics during the in-depth discussions which produced more distinct characteristics as described below.

Firstly, the participants pointed at elderly people who overestimate their physical abilities: *“I know two people who fainted because of the heat. Not because they didn’t know – because they did – but because they were*

hard-headed. One of them was elderly but thought he was still 18. He fainted, remained poorly and died after a month" (G9/P10; 45+ yrs). This finding is consistent with research in Germany where "active pensioners" put their lives at risk during the 2003 heatwave.¹⁶ However, a number of the more mature participants also pointed out that *"those who are retired but still strong"* (G8/P7; 45+ yrs) may join volunteer groups, learn more about disaster response and become active helpers. Furthermore, elderly people were identified who either do not use or do not have access to certain information technologies: *"The elderly because they [...] may be not connected to the media"* (G9; 45+ yrs). Some participants extended this vulnerability to groups of people who, generally, do not use computers, social media and/or mobile phones.

Secondly, participants outlined the vulnerability of professional groups, i.e. people who, due to their profession, may not receive, or not hear, alerts, e.g. because of an isolated or noisy workplace, or because of shift work and related sleeping patterns:

"Maybe they don't hear the alerts, if they are working with a jack hammer on a construction site. They may see the stones falling if it's an earthquake, but if it's something else they may not notice – if you're high up you won't hear. Or maybe a hair dresser would have three blowers on and won't hear what is going on outside." (G4/P9; 25-44 yrs)

A third group identified as potentially more vulnerable during disasters were foreigners and tourists. In particular, they felt that foreigners may lack the required local knowledge and experience: *"If it's raining we will know it's going to rain and half an hour later it will stop, the sun will come out [but] we notice when it's not going to stop and will keep raining. They [foreigners] won't notice until they get used to the weather, the climate"* (G8/P7; 45+ yrs). Additionally, participants pointed at possible difficulties for foreigners and tourists because of not speaking the local language – *"they could have a problem communicating"* (G8/P7; 45+ yrs) – and the potential lack of social networks in case of a disaster: *"They don't have family, they don't have immediate neighbours who are friends"* (G8/P7; 45+ yrs). However, it was also felt that social integration is a mutual process and requires efforts from both sides: *"Africans, they feel [Maltese] people are not friendly with them so it's not that easy [for them] to go and knock on their neighbour's door"* (G8/P7; 45+ yrs). Some participants speculated in this context that, generally, certain groups who are stigmatised may lack neighbourhood help in case of a disaster.

Finally, a specific group of children was perceived to be particularly vulnerable – those with parents working full-time and who may, therefore, be alone at home and without support and guidance in case of a disaster. At the same time, though, children were seen as not only generally vulnerable but also as having skills their parents may not have; these may be more up-to-date First Aid skills due to courses and drills at school – *"children are being taught First Aid, even the young ones, so they know what they have to do"* (G5/P6; 25-44 yrs) – but also language skills: *"Children have to go to clinics or employment or tax agencies with their parents because they can speak English or Maltese and their parents cannot"* (G9; 45+ yrs). In such cases, children could become key communicators in disaster situations.

Another group of young people the participants identified as being potential helpers rather than being vulnerable were scouts and their leaders:

¹⁶ Bittner, Martin-Immanuel / Stoessel, Ulrich (2012) Perceptions of heatwave risks to health: results of a qualitative interview study with older people and their carers in Freiburg, Germany. In: GMS Psycho-Social-Medicine 2012, Vol. 9: Doc05.

“Perhaps this activity [Citizen Summit] will serve as a stimulus because, for example, I run a football nursery. I’m talking about the football ground in [Maltese town] and I’m thinking about what I can do. I’m in the local scouts, and if I gather the scouts and organise a course and carry out simulation exercises in the [football] ground, because it’s an open space and God forbid there will ever be a disaster, they would lead people to an open space, so at least I will be offering a service, I’m doing something.” (G7/P5; 45+ yrs)

Regarding the role of local communities all participants in all age groups strongly felt that *“you need a sense of community”* (G2/P7; 18-24 yrs). Attitudes oscillated between a perceived weakness due to low social cohesion in areas with a high fluctuation of people, including but not limited to a high flow of tourists and expatriates, and a perceived strength of tightly knit neighbourhoods with strong social cohesion. Whereas, initially, many participants argued with general stereotypes, i.e. urban anonymity in multi-storey apartment blocks vs strong community sense in rural villages, the discussions also revealed more pointed aspects, in particular related to the strengths and weaknesses of multicultural neighbourhoods:

“Maybe it’s a weakness: I can mention St Julian’s: Obviously there are Maltese but there are also a lot of foreigners. Maybe it’s not a weakness, because it can work both ways, as they bring their perception from where they live so they can help out, maybe they are prone to these situations more than us. But then again obviously you know the way it is: Maltese people stick to themselves, and the foreigners also, so that that might be a weakness in that respect. So there’ll be a lack of community as a result and a lack of communication.” (G2/P7; 18-24 yrs)

This participant, whilst ultimately defaulting to national stereotypes, reflects upon the possibility that people with different (national) backgrounds may also contribute to a wider range of experiences available which could be helpful in disaster preparedness and response. However, he also highlights communication as a prerequisite for community – a need felt by others as well: *“Organising a small meeting with people who live in your road, so everyone can give an opinion and see what preparations are best to be done”* (G3/P9; 25-44 yrs). One of the main problems identified in this context was a perceived “fear” to talk about disaster-related issues:

“I think the community should be prepared before and after. First of all we shouldn’t be afraid to talk about the possibility of these events happening. I think many times the lack of education and information that exists among the people is coming from fear that if one talks he will raise [...] panic, fear of nothing, alarming people, being alarmist, sort of. I think we should eliminate this and explain it.” (G7/P3; 45+ yrs)

Additionally, the question was raised who about who would initiate community activities. Here, a considerable number of participants pointed at the parish priest playing a core role in the distribution of information: *“If I go to mass and hear the parish priest say that the council is going to set up a voluntary group I can pass on the information”* (G8/P8; 45+ yrs).

Despite the fact that there is a perceived loss of community cohesion in some areas, the large majority of participants related to community cohesion as a “tradition” – *“in Malta, traditionally we are very close to one another, as we are very small, too”* (G3/P10; 25-44 yrs) – and as a cultural aspect which has persisted over time: *“I think the Maltese community is divided in many things that, at the end of the day, become irrelevant. Be it politics, football, whatever, the village feast, but time and time again, even when financial help is needed, deep down the Maltese community is ready to help those around it”* (G7/P3; 45+ yrs).

4.5 “What can be done?” – Citizens’ suggestions

In all discussions groups the participants were asked to put forward suggestions on how to improve disaster preparedness, response and recovery. The suggestion brought up most often, and where the strongest group dynamic could be observed, was starting to teach emergency procedures to children from a young age, in combination with embedding altruistic behaviour in children’s education: *“We should raise children to help others”* (G2/P9; 18-24 yrs). At the same time, participants distinguished between teaching children merely how to call for help, and training them in actual behaviour in disaster situations: *“They have no education. The school tells them to call the police or emergency. I agree with that, but if they are in an emergency situation what will they do? These days you leave a 12-year-old boy home alone”* (G4/P4; 25-44 yrs).

Several participants pointed in this context to “scout skills” which were perceived as beneficial not only for their own and, potentially, their family’s safety, but also as a framework where children could learn how to help other children: *“I was a scout [...] kids at this age can be of help to other children and one needs to keep them entertained during an evacuation [...] Let’s face it, kids can distract the work of experienced firemen, civil protection professionals, whatever. So if they are entertained you can work better as it should be”* (G5/P8; 25-44 yrs).

The second theme pointed at by most participants was a strong desire to improve their own capabilities in disaster preparedness and response. Here, the suggestions brought up most often were more disaster scenario exercises for the general public – *“simulations at community level”* (G5/P1; 25-44 yrs); more assembly points, and more disaster preparedness courses at council level: *“Just as the local council organises computer courses for free, they could organise certain courses”* (G10/P10; 45+ yrs). In this context, the youngest participants outlined an additional desirability of disaster-related training specifically designed for vulnerable groups: *“Nowadays we can train them, train those who are intellectually disabled, or those who are elderly can be trained on other aspects. [...] Why not train them on safety aspects related to disasters? Is there a way we can train someone who is dependent, who can at least in some form be independent in that situation?”* (G1/P10; 18-24 yrs); and *“what we can do is that as much as possible we help these persons live a more independent life”* (G1/P8; 18-24 yrs). Further suggestions mentioned in particular the need of raising awareness for basic safety items such as fire extinguishers or fire blankets, and 112 awareness campaigns.

Another suggestion favoured by many participants was setting up “community teams”, based on the local community members’ individual skills. Some participants favoured in this context the organisation of such teams by the local council – *“In case of a disaster they [councils] would have a list, you see who is safe and who isn’t. If nothing happened to you, they check who can help: a doctor, a nurse, a carpenter, maybe someone who has a factory, and see if you can build a team”* (G2/P8; 18-24 yrs) – whilst other participants preferred mere lists of volunteers that would be available to local community members: *“This already exists in companies, so why isn’t this also used in local communities? There could be directory given out to people, so you’d know if you need a doctor, a nurse, who to go to for help”* (G10/P11; 45+ yrs).

Finally, the participants pointed at Malta’s specific situation as a tourist destination, where they perceived the need for more safety instructions in different foreign languages: *“Mainly they are in English but not everyone understands them”* (G4/P5; 25-44 yrs). By referring to the procedures on cruise ships – *“in case of a cruise liner, the first thing they do is greet you and inform you where the rescue things are, the procedures you need to follow, the boats etc. They do not do this for nothing”* (G6/P1; 25-44 yrs) – some participants suggested that information about emergency procedures should also be actively provided to visitors of mass-gathering locations, e.g. as part of the check-in procedures at hotel receptions or when entering touristic attractions.

5. “Top-of-mind” types of disaster and disaster causes

Research into disaster risk perception has demonstrated that there may be a relationship between perceived risk and type of disaster, in particular by distinguishing between “natural” and “man-made” causes. However, it has also been argued that due to environmental changes, population density, technological developments and political situations this distinction is becoming increasingly blurred¹⁷ which, in turn, may effect both professionals’ and citizens’ perception of disaster risks. Accordingly, this topic was taken up in the first two CARISMAND Citizen summits and approached from various angles. In the beginning of the focus group discussions, all participants were asked to write down anonymously on a sheet of paper the first three disasters (outside their home country) they can think of spontaneously. The decision to ask for disasters outside the respective participants’ home country was not only aiming to make the data comparable between different Citizen Summits, but also to explore what types of disasters are top of their minds, rather than those that are “closest”.

Table 6
Disaster types – results of association exercise

Groups	Non-weighted results (count)				Weighted results (count ¹⁸)			
	Total	18-24 yrs	25-44 yrs	45+ yrs	Total	18-24 yrs	25-44 yrs	45+ yrs
Earthquake	71	16	27	28	164	34	64	66
Terrorist attack	59	13	28	18	120	26	54	40
Tsunami	52	6	25	21	130	15	64	51
Flooding	42	5	18	19	74	9	27	38

As a result of this association exercise, the type of disaster which was mentioned most often (non-weighted results) and also ranked highest (weighted results) were earthquakes; only participants aged 25-44 years mentioned terrorist attacks slightly more often than earthquakes¹⁹. Terrorist attacks and tsunamis show the second- and third- highest results in both frequency and ranking. Flooding was also mentioned frequently, but at a lower level, and it mostly ranked in the third place. Other types of disasters, e.g. transport accidents (7) or explosions (2) due to technical causes, were mentioned considerably less often; heatwaves were mentioned only by one participant.

Within the category of earthquakes, participants mentioned incidents across a variety of countries, but with no event/location standing out. Among terrorist attacks, 9/11 was mentioned more often than the recent attacks in Paris, Brussels and Nice combined. Within the tsunami category, most participants specifically pointed at the Indian Ocean 2004 disaster; for flooding, India was mentioned more than any other location. Overall, the single disasters mentioned most often were the Indian Ocean 2004 tsunami (27 times), followed by 9/11 (26 times), and the recent terrorist attacks in France (22 times²⁰). Other large-scale disasters such as Hurricane Katrina (7 times) or the 2010 Haiti earthquake (3 times) were barely mentioned, which cannot merely be explained by different levels of media coverage but rather suggests a combination of scale and time line/frequency of events.

¹⁷ This finding was confirmed in the discussion groups held during the first CARISMAND Stakeholder Assembly held in Bucharest in April 2016.

¹⁸ The type of disaster associated first was given a weight of “3”, the one associated second a weight of “2”, and the one associated third a weight of “1”. If a participant associated four or more disasters, only the first three were transferred into the database.

¹⁹ But less often in a top ranking as shown in the weighted results.

²⁰ Most participants did not specify whether they meant the Charlie Hebdo attack or the suicide bombing/shooting on November 13-14, 2015 in Paris. The attack on Bastille Day 2016 in Nice was noted down by 6 participants.

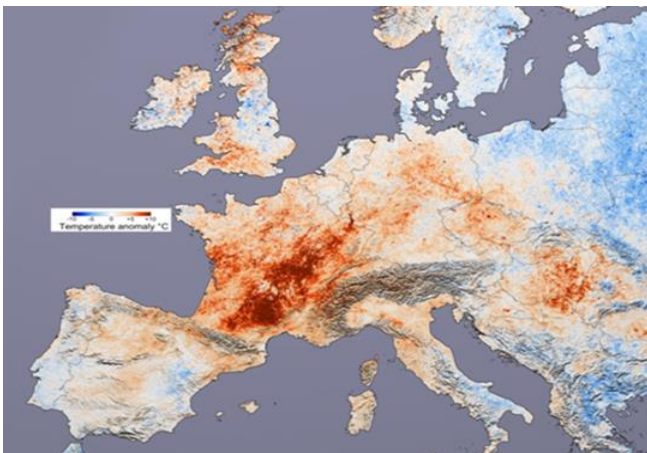
Immediately after the association exercise, the participants discussed several questions related to risk perceptions in the context of different types of disasters²¹ whilst being given visual cues (see pictures below). Again, to make the resulting data comparable, four disasters were chosen that all occurred outside the countries where the Citizen Summits took place²²: (1) the earthquake in Ecuador on April 16th 2016; (2) the heavy flooding in Southwest Germany in May and June 2016; (3) the 2003 heatwave in Europe; and (4) the Fukushima disaster in 2011.



Ecuador earthquake 2016



Germany flooding 2016



European heatwave 2003



Fukushima disaster 2011

After discussing issues of disaster preparedness, response and recovery in relation to perceived risks for each of these four situations, the participants were asked to elaborate their thoughts about the causes for each respective disaster. The results below show that causes related to human activity were indicated almost twice as often as natural causes. Opinions that outlined a combination of natural and human activity related causes were expressed slightly more often than natural causes. Only for the Ecuador earthquake natural causes exceeded slightly the number of human activity related causes. For the Fukushima disaster, participants appeared uncertain and somewhat reluctant to give their opinion due to the complexity of causes and a perceived lack of understanding of the technology-related chain of events.

Table 7

²¹ See in particular the qualitative results in chapter 4.2 Disaster Risk Perception.

²² With the exception of the 2003 heatwave in Europe which affected Romania (the location of the first Citizen Summit) more than Malta. However, in the group discussions this phenomenon was presented as a Europe-wide rather than a country-specific disaster and with an emphasis on France, Germany and the UK as particularly affected locations.

Causes of disasters mentioned during discussions

Causes	Nature		Human activity		Both	
	Count	Percentage	Count	Percentage	Count	Percentage
Earthquake Ecuador	12	41%	8	28%	9	31%
Flooding Germany	8	23%	19	54%	8	23%
Heatwave Europe	7	18%	19	50%	12	32%
Fukushima disaster	2	12%	7	44%	7	44%
Total²³	29	25%	53	45%	36	30%

Question: What do you think are the causes for this disaster?²⁴

At the very end of the Citizen Summit, i.e. after presenting the results of the morning session, the participating citizens were again shown the same pictures and asked the same question. But this time, instead of discussing perceived causes of the four different disasters, they were given the opportunity to provide their anonymous response via their keypad.

Table 8
Causes of disasters measured using audience response keys

Causes	Nature		Human activity		Both	
	Count	Percentage	Count	Percentage	Count	Percentage
Q4.1.1 Earthquake Ecuador	57	56%	3	3%	42	41%
Q4.1.2 Flooding Germany	51	50%	11	11%	39	39%
Q4.1.3 Heatwave Europe	37	36%	26	26%	38	38%
Q4.1.4 Fukushima disaster	16	16%	37	36%	48	48%
Total	161	40%	77	19%	167	41%

What do you think is the main cause for this disaster?

Q4.1.1: Showing picture of earthquake Ecuador; Q4.1.2: Showing picture of flooding Germany; Q4.1.3: Showing picture of heat map Europe; Q4.1.4: Showing picture of Fukushima power plant.

41% participants perceived both nature and human activity as main causes for the disasters shown. Still almost as often (40%) participants perceived nature alone as the main cause and, for the earthquake and the flooding example, nature was indicated by the majority of participants as the main single cause. On the other hand, human activity was not seen as the single main cause by a majority but, with the exception of earthquakes, it was perceived as being at least one of the main causes by 3 out of 5 participating citizens.

The quantitative data revealed a weak to moderate relationship between the perceived disaster causes²⁵ (see Table 8 above) and the perceived risk of a natural disaster in the participants' area (see Figure 6 below, left

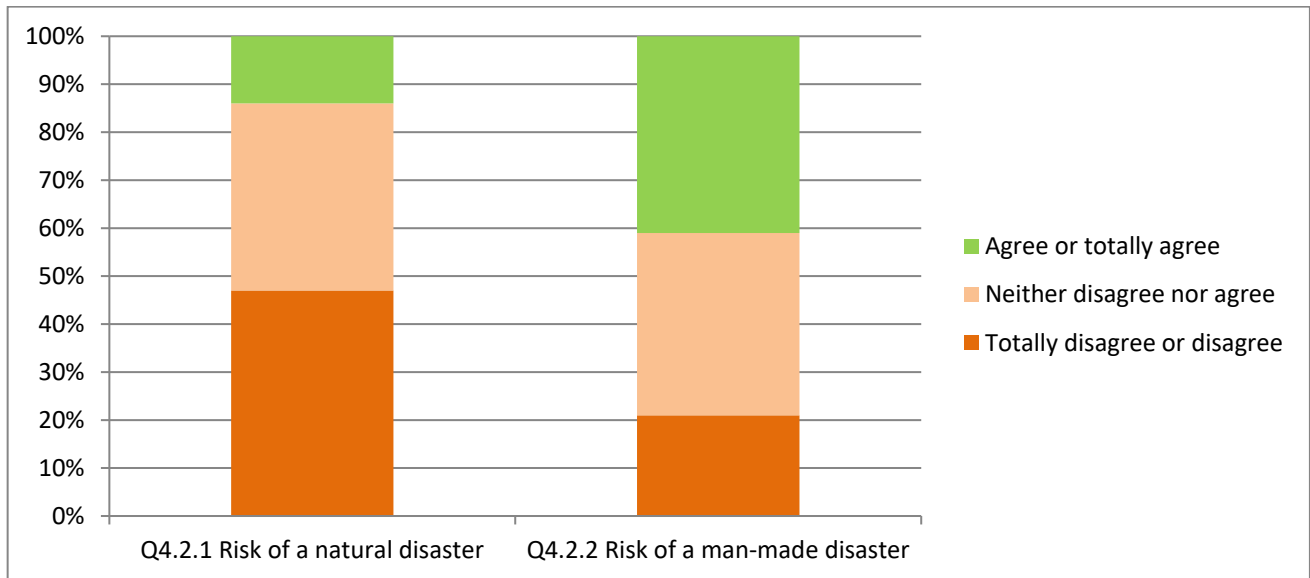
²³ Regarding the comparison of total counts in this table, it needs to be taken into consideration that there were only 2 discussion groups with participants aged 18-24 years, but 4 discussion groups with participants aged 25-44 years and 3 groups with participants aged 45 years and older (one of the 45+ groups did not discuss this specific set of questions due to time constraints in the end of the session).

²⁴ All responses of each participant were counted; accordingly, it was possible for one participant to indicate several causes per event. However, if a participant repeated the same argument (cause) for one event several times, it was counted only once. The "quantification" of qualitative data in this table is not for statistical purposes but only serves the purpose of facilitating a comparison with Table 8.

²⁵ Except for heatwaves where only a very weak relationship was found between Q4.1.3 and Q4.2.1 or Q4.2.2.

column), but only very weak to no relationships between perceived disaster causes and the perceived risk of man-made disasters (see Figure 6 below, right column). This result suggests that there are factors other than knowledge and experience which shape these citizens' risk perception of disasters, in particular for those with perceived non-natural causes.

Figure 6
Perceived risk of natural or man-made disasters in the next 3 years



How much do agree, or disagree, with the following statement (5-point Likert scale with 1=totally disagree, 5=totally agree):

Q4.2.1: I think there is a high risk of a natural disaster happening in my area in the next 3 years.

Q4.2.2: I think there is a high risk of a man-made disaster happening in my area in the next 3 years.

6. Summary & Conclusions

The quantitative data revealed that most participants of the Malta Citizen Summit feel they have a strong lack of knowledge about what to do in case of a disaster. This result reflects, partially, the lack of knowledge expressed by some (predominantly younger) participants in the discussion groups who ascribed responsibility for disaster preparedness to the authorities and saw themselves as passive receivers of preparedness measures. However, during the discussions the majority of participants viewed preparedness as a shared responsibility between authorities and citizens, linked via active information-sharing from both sides. This is consistent with the results from the quantitative study which found that participants expressed a very strong interest in learning how to prepare for and act during disasters. This is also supported by participants' high appreciation of disaster simulation exercises.

Additionally, in the context of disaster preparedness participants outlined a number of perceived cultural traits, i.e. a behavioural inertia they characterised as "Maltese light-heartedness" due to living in pleasant surroundings, and resourcefulness in times of need. Whilst both of these are actually personal rather than cultural traits, they can also be seen as cultural values. Such shared cultural values could play an important role in building preparedness, i.e. by addressing them in the design of disaster-related information sources and messages to the public.

Regarding the participants' disaster risk perception, the qualitative data revealed that prior experience of disasters may influence risk perception. Such connection, however, was not confirmed by the quantitative data, where no significant correlation between experience of disasters and risk perception could be found. This link was also challenged during the group discussions, with participants elaborating a number of factors (lapse of time, actual or perceived seriousness of the disaster, personal life situation, personal traits) which appear to have a stronger effect on disaster risk perception than disaster experience or disaster frequency. Evidence from both qualitative and quantitative data is consistent with participants perceiving a higher risk of man-made disasters than of natural disasters. The participants pointed in particular at unknown and unintended side effects of new technologies in combination with an increasing population density as being likely causes of man-made disasters. In this context, they expressed their strongest concern regarding terrorist attacks, where they perceived a complete lack of control.

In relation to behavioural intentions, the quantitative data showed that the participants' immediate reaction to a disaster situation would be to ensure their family's and friends' safety by calling them directly rather than contacting the emergency services (the latter, however, was indicated by many as the second step being taken). Social media was more indicated as being used in case of an ongoing disaster, in particular for gathering information and warning other social media users. The findings from the discussion groups are consistent with these results. But, in the group discussions, the participants also emphasised that after this first response they would see themselves as actively assisting and offering voluntary help to disaster professionals, and they strongly expressed the opinion that in such situations everyone could be useful by using their individual skills.

Generally, the participants revealed a strong sense of solidarity with others and an explicit hands-on approach, construing both these traits as a specific Maltese "culture to help". These aspects could be embedded as shared values in behavioural guidelines for disaster situations.

As particularly vulnerable groups, beyond age, social, economic and/or physical characteristics, the participants identified:

- Elderly people who
 - overestimate their physical abilities,

- do not use computers, social media and/or mobile phones;
- Professional groups who, due to their specific profession, may not hear or receive warnings, e.g. because of
 - an isolated or noisy workplace,
 - shift work and related sleeping patterns;
- Children who are alone at home because their parents work full-time and, therefore, may lack support and guidance in case of a disaster;
- Foreigners (i.e. tourists, expatriates and/or migrants) who
 - may lack the required local knowledge (e.g. of assembly points) and local experience (e.g. behaviour in case of heavy rain),
 - do not speak the local languages (i.e. no Maltese and poor English),
 - lack a local social network of family and friends,
 - are stigmatised and, therefore, may hesitate to ask for help in their neighbourhood.

On the other hand, as groups who may be capable of playing an important role in the case of a disaster, the participants identified:

- Elderly people who are of good physical health and, because of being retired, have the time to join volunteer groups and become skilful active helpers;
- Children who
 - have more up-to-date First Aid skills than adults due to courses and drills at school, and may help motivating their parents to bring their skills up to date,
 - speak the local language better than their expatriate parents and may become key communicators / mediators in a disaster situation,
 - are members of scout groups and may be trained to, e.g., help other children in disaster situations;
- Foreigners who may contribute and enrich local communities by sharing their disaster-related knowledge and experience they have gained elsewhere.

It may be useful to define measures for each of these groups that (1) help identifying the individuals/groups, and (2) provide information and opportunity to reduce vulnerabilities and enhance capabilities. In this context, the participants also developed a number of suggestions which, in particular, pointed at education and training activities that start at a young age, more awareness campaigns that address the most basic safety items and behaviour, courses that are offered at local council level, and the setting up of voluntary “community teams” as well as local “emergency directories” which would provide direct contact to local volunteers and indicate their different specific skills. Regarding the specific issue of Malta as a tourist destination, participants suggested not only more safety instructions that are available in languages beyond English and Maltese, but also providing safety information and emergency procedures to visitors of any mass-gathering location, e.g. at the entrance of any major touristic attraction or event.

To summarise, the results of this CARISMAND Citizen Summit point at two separate approaches: Identifying and addressing the strengths and weaknesses of specific groups as outlined above, and using shared cultural values at large to improve the preparedness of Maltese citizens and non-Maltese residents and visitors. The individual topics raised in this report will be compared and synthesised with the results from the first Citizen Summit which was held in Romania. These synthesised results will shape the next round of Stakeholder Assembly and Citizen Summits in 2017.

Appendix A

Time	Detailed Schedule & Content	Total running
[30 min.]	0. Participant registration & collecting consent forms	
15 min.	1. Welcome; introduction / presentation CARISMAND project	15 min.
15 min.	2. Presentation: Organisation & logistics 2.1 Time schedule; breaks; refreshments 2.2 Breakout rooms/locations; emergency procedures 2.3 Incentives 2.4 Distribution of voting keypads and technical instructions <i>[including test question]</i>	30 min.
20 min. ²⁶	3. Question Set I: <i>The first 6 questions in this set (Q3.1 – Q3.6) are taken directly from the recruitment questionnaire and provide some demographic and other basic participant information.</i> <i>Q3.7 is the first in a series of questions which ask for citizens' risk perception. This type of question is going to be posed to the audience several times, each time after providing additional information (e.g. via presentations, or after giving visual cues).²⁷ Furthermore, it is embedded between or preceding so-called transitional questions (here Q3.8) which lead towards the next presentation or exercise.</i> <i>Q3.9, Q3.10 and Q3.11 measure citizens' disaster preparedness intentions.²⁸</i> 3.1 Gender (1=female, 2=male, 3=choose not to say) 3.2 Age (numeric) 3.3 Do you, or a close friend or family member, have ever experienced a disaster? (1=yes, 2= no, 0=I'm not sure) 3.4 Do you feel you are living in an area that is specifically prone to disasters? (1=yes, 2=no, 0=I'm not sure) 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, 0=I'm not sure) 3.6 Do you work as a volunteer in a community or self-help group? (1=yes, 2=no) 3.7 How much do you agree, or disagree, with the following statement: "I am worried about disasters in the area where I live."	

²⁶ The time for this (as well as for each following) set of questions is generously planned, allowing for app. 2 min. per question. It is envisaged that the presenter reads each question and all answer options out loud to the audience whilst they are shown on the presentation screen.

²⁷ In order to achieve adequate internal consistency but without using exactly the same wording several times, 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., Vanneville, W., & De Maeyer, P. (2011). An analysis of the public perception of flood risk on the Belgian coast. Risk analysis, 31 (7), 1055-1068).

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>(1=I totally disagree, 2=I disagree, 3=I neither disagree nor agree, 4=I agree, 5=I totally agree, 0=I'm not sure)</p> <p>3.8 How much do you know about the guidelines and procedures your local disaster management authorities are following in case of a disaster? (1=nothing at all, 2= not a lot, 3=something, 4=quite a lot, 5=a lot, 0=I'm not sure)</p> <p>3.9 To what extent 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, 0=I'm not sure)</p> <p>3.10 How well do you personally feel prepared for a disaster in your area? (1=not prepared at all, 2=not prepared, 3=neither prepared nor unprepared, 4=prepared, 5=well prepared, 0=I'm not sure)</p> <p>3.11 To what extent do you intend to prepare against disasters? (1=Prepare not at all, 2=Prepare very little, 3=Prepare a bit, 4=Prepare quite a lot, 5=Prepare a lot, 0=I'm not sure)</p>	50 min.
15 min.	<p>4. Factual presentation about a local disaster simulation exercise (including short video if available) presented by moderator</p>	1h 5min.
10 min.	<p>5. Question Set II:</p> <p><i>Q5.1, Relates directly to the preceding presentation, asks citizens for their evaluation of simulation exercises. This question is directly based on the findings in the first Stakeholder Assembly where disaster practitioners described simulation exercises as improving cooperation, communication and trust.</i></p> <p><i>Q5.2 measures risk perception after being provided with "real life" information about actual disaster management practices.</i></p> <p><i>Q5.3 is a transition question introducing the next presentation topic (communication between authorities and citizens).</i></p> <p><i>Q5.4 and Q5.5 are transition questions as well, bringing in the additional aspect of media usage.</i></p> <p>5.1 What do you think about disaster simulation exercises like this? (1=they are not important at all, 2=they are not important, 3=they are neither important nor unimportant, 4=they are important, 5=they are very important, 0=I'm not sure)</p> <p>5.2 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, 0=I'm not sure)</p> <p>5.3 How informed do you feel by the authorities 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, 0=I'm not sure)</p> <p>5.4 Imagine that a situation in which there is a high risk of a disaster happening soon, and you feel this disaster may cause serious harm to your family or friends. What is the <u>first</u> thing you would do? (1=Call the emergency services, 2=call family / friends, 3=Go to my neighbours, 4=Use social media to inform family / friends, 5=submit information via social media to local authorities/emergency services, 6=Get more information via the Internet, 7=Get more information from social</p>	

	<p>networks, 8=Turn on the TV, 9=Turn on the radio, 10= Other, 11=I'm not sure)</p> <p>5.5 What is the <u>next</u> thing you would do? (1=Call the emergency services, 2=call family / friends, 3=Go to my neighbours, 4=Use social media to inform family / friends, 5=submit information via social media to local authorities/emergency services, 6=Get more information via the Internet, 7=Get more information from social networks, 8=Turn on the TV, 9=Turn on the radio, 10= Other, 11=I'm not sure)</p>	<p>1h 15min.</p>
15 min.	<p>6. Presentation about the communication procedures between authorities and citizens in case of a disaster</p>	<p>1h 30min.</p>
15 min.	<p>7. Question Set III: <i>This set of questions builds upon the results from the 1st Stakeholder Assembly where practitioners expressed their perceived usefulness of social media, but only in the recovery phase. There, social media were ascribed an important role in re-establishing feelings of security through social cohesion and solidarity. However, for preparation, prevention and management of disasters, most practitioners appeared to prefer the use of traditional media which they believed to have a stronger impact and be more "trustworthy for the population".</i> <i>Q7.3 (and further elaboration of this topic in the focus group discussions in the afternoon) explores the potential of social media as a sustainable element in <u>all</u> disaster phases (for preparedness, see also Q5.4 and Q5.5).</i></p> <p>7.1 Do you use social media? (1=yes, 2=no, 0=I'm not sure) 7.2 Do you use a mobile phone? (1=yes, 2=no) 7.3 In the case of an ongoing disaster, how likely are you to use social media to:</p> <ul style="list-style-type: none"> 7.3.1 inform yourself about the disaster 7.3.2 submit information about disaster risks or disasters to local authorities/emergency services 7.3.3 warn/inform other social media users 7.3.4 warn/inform family and friends 7.3.5 stay in contact with others during a disasters 7.3.6 provide help to others during a disaster 7.3.7 provide help to others? <p>(1=very unlikely, 2=unlikely, 3=neither unlikely nor likely, 4=likely, 5=very likely, 0=I'm not sure)</p>	<p>1h 45min.</p>
15 min.	<p>8. Presentation about the use of social media in disaster management provided by moderator</p>	<p>2h</p>
15 min.	<p>Coffee break</p>	<p>2h 15min.</p>
15 min.	<p>9. Introduction of moderators and discussion group logistics (and guiding participants to the different breakout rooms)</p>	<p>2h 30min.</p>
10 min.	<p>10. Discussion group briefing <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</i></p>	

	<p><i>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 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</i> “these discussions serve to understand how citizens feel and what they think about disasters”.</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. • 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>	<p>2h 40min.</p>
<p>40 min.</p>	<p>11. Group discussion topic 1: Perceptions and effects of natural and man-made disasters²⁹</p>	

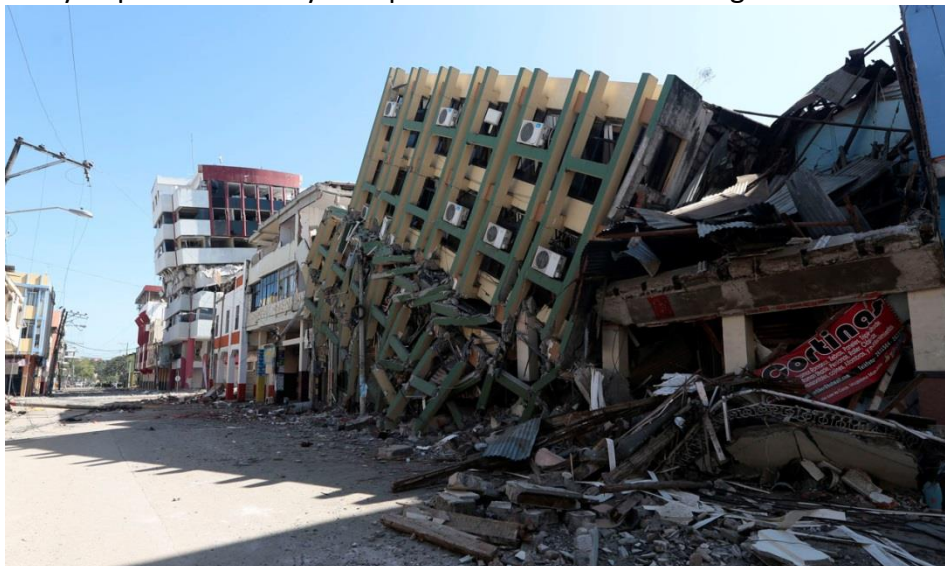
²⁹ It is widely by expert recognised today that disasters related to natural hazards, such as landslides, floods, earthquakes etc., are mainly man-made and only in small part linked to a natural event (e.g. the earthquake in L’Aquila, in 2009 destroyed the town with more than 300 deaths; the one in Ecuador, mentioned below, killed more than 660 people; but other earthquakes in Japan, of greater magnitude, were almost without consequences; the “difference” was in the quality of buildings, in the preparedness of people, etc. i.e. in man-made factors).

This topic was brought up in the 1st Stakeholder Assembly: the blurring distinction between natural and man-made disasters.³⁰ However, instead of presenting this distinction (which is still widely used in the literature) and ask participants to “choose”, the intention of this set of questions is to explore whether citizens, actually, do think in the same categories as practitioners.

- 11.1 As a start, could you please write down on a sheet of paper three disasters you can spontaneously think of and that happened outside your country?

All participants should have a blank sheet of paper and a pen available to write these 3 disasters down. They can use the name of the location, but if they are not sure about the precise location they may also use terms such as “large fire in Australia”, “earthquake in South America”, “building collapse in Russia”, “heatwave 2003 in Europe” etc. Please collect these sheets of papers and hand them in to the event organisers afterwards.

- 11.2 This picture shows some of the destruction after the earthquake in Ecuador on April 16th this year (2016), with a magnitude of 7.8, killing more than 660 people and leaving almost 28,000 injured. Can you please tell me your opinions about the following:



- 11.2.1 Once people realise that something like this is happening, or going to happen, how much time do you think they would have to take action to keep themselves and their families safe? And what possibilities would they have had to be prepared?

Possibilities to prepare for a disaster could be, for example, listening to warnings issues by the authorities or informing oneself about emergency procedures, but also long-term strategies such as avoiding to work/live in or travel to certain areas that are prone to disasters.

If you were living in this area, how worried would you be about disasters like this?

³⁰ For the increasing complexity of disasters with multiple components see also e.g. Wachinger, G., Renn, O., Begg, C., & Kuhlicke, C. (2013). The risk perception paradox—Implications for governance and communication of natural hazards. *Risk analysis*, 33 (6), 1049-1065.

This question is aiming to explore whether the fast or slow onset of a disaster plays a role in the way people perceive disaster risks.

- 11.2.2 How long do you think it will take the people who live there to get back to a “normal” way of life after this disaster? How will it affect their lives? What, if anything, is going to change?

This question is aiming to explore how people feel about the short or long-term effects of a disaster, and how the experience of such disaster may, or may not, change their risk perception and/or behaviour. It should also explore potential positive effects (such as learning process, community resilience increase, people empowering, widening of volunteer actions, etc.).

- 11.2.3 What do you think are the causes for this disaster?

This question is aiming to explore whether people, actually, think in distinct categories such as natural and man-made disasters, and to what extent such categorisation affects their risk perception.

- 11.3 This picture is a bit “closer” to our European homes: It shows the very recent aftermath of heavy rainfall and flooding in Southwest Germany in the night from May 29th to May 30th 2016, where 4 people died, amongst them a 13-year-old girl and a volunteer firefighter whilst trying to rescue a man trapped in a flooded railway station.

Can you please tell me your opinion about the following:

Note: These are the same questions as for the previous picture.



- 11.3.1 Once people realise that something like this is happening, or going to happen, how much time do you think they would have to take action to keep themselves and their families safe? And what possibilities would they have had to be prepared?

Possibilities to prepare for a disaster could be, for example, listening to warnings issues by the authorities or informing oneself about emergency procedures, but also long-term strategies such as avoiding to work/live in or travel to certain areas that are prone to disasters.

If you were living in this area, how worried would you be about disasters like this?

This question is aiming to explore whether the fast or slow onset of a disaster plays a role in the way people perceive disaster risks.

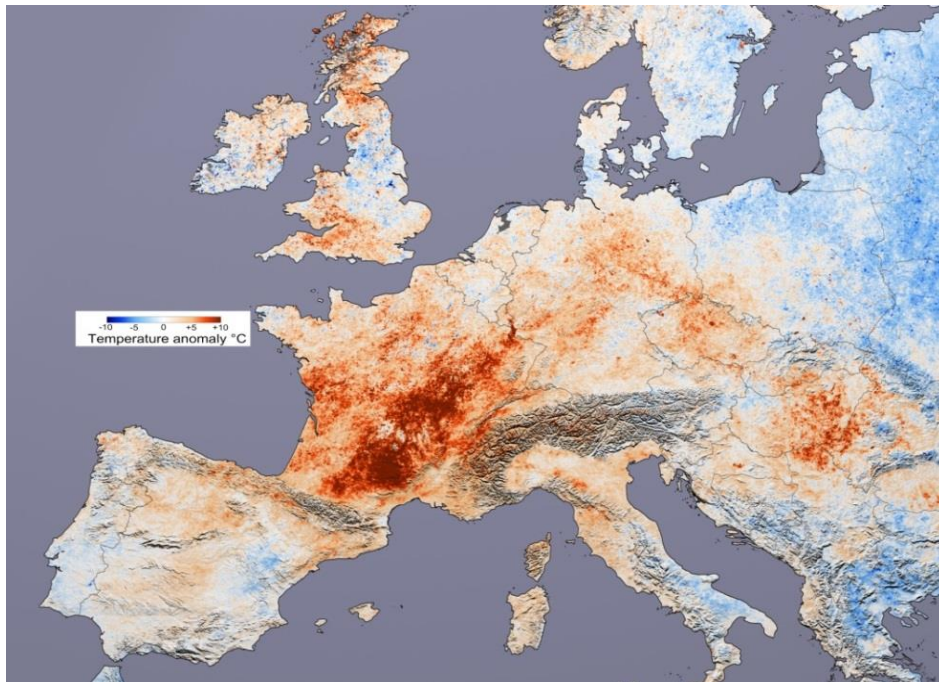
11.3.2 How long do you think it will take the people who live there to get back to a “normal” way of life after this disaster? How will it affect their lives? What, if anything, is going to change?

This question is aiming to explore how people feel about the short or long-term effects of a disaster, and how the experience of such disaster may, or may not, change their risk perception and/or behaviour. It should also explore potential positive effects (such as learning process, community resilience increase, people empowering, widening of volunteer actions, etc.).

11.3.3 What do you think are the causes for this disaster?

This question is aiming to explore whether people, actually, think in distinct categories such as natural and man-made disasters, and to what extent such categorisation affects their risk perception.

11.4 This picture goes a little bit further back in time, showing a map of the heatwave in Europe in 2003, with temperatures up to 10 degrees higher than average for the period between July 20th and August 20th. Overall this heatwave cost more than 70,000 lives, with France being hit hardest and almost 15,000 deaths.



Can you please tell me your opinions about the following questions:

11.4.1 Once people realise that something like this is happening, or going to happen, how much time do you think they would have to take action to keep themselves and their families safe? And what possibilities would they have had to be prepared?

Possibilities to prepare for a disaster could be, for example, listening to warnings issues by the authorities or informing oneself about emergency procedures, but also long-term strategies such as avoiding to work/live in or travel to certain areas that are prone to disasters.

If you were living in this area, how worried would you be about disasters like this?

This question is aiming to explore whether the fast or slow onset of a disaster plays a role in the way people perceive disaster risks.

Additionally, it should be explored to what extent the “visibility” or “invisibility” of a disaster shapes people’s risk perceptions.

11.4.2 How long do you think it will take the people who live there to get back to a “normal” way of life after this disaster? How will it affect their lives? What, if anything, is going to change?

This question is aiming to explore how people feel about the short or long-term effects of a disaster, and how the experience of such disaster may, or may not, change their risk perception and/or behaviour. It should also explore potential positive effects (such as learning process, community resilience increase, people empowering, widening of volunteer actions, etc.).

11.4.3 What do you think are the causes for this disaster?

This question is aiming to explore whether people, actually, think in distinct categories such as natural and man-made disasters, and to what extent such categorisation affects their risk perception.

11.5 And now one final picture: It shows the aftermath of the disaster at the Fukushima Nuclear Power Plant in March 2011. Following an earthquake, a tsunami caused equipment failures which, in turn, caused a loss-of-coolant accident, resulting in nuclear meltdowns and the release of radioactive material.

Can you please tell me what you think in this case:

Note: These are the same questions as for the pictures in 11.2 and 11.3.



11.5.1 Once people realise that something like this is happening, or going to happen, how much time do you think they would have to take action to keep themselves and their families safe? And what possibilities would they have had to be prepared?

Possibilities to prepare for a disaster could be, for example, listening to warnings issues by the authorities or informing oneself about emergency procedures, but also long-term strategies such as avoiding to work/live in or travel to certain areas that are prone to disasters.

If you were living in this area, how worried would you be about disasters like this?

	<p><i>This question is aiming to explore whether the <u>fast or slow onset of a disaster</u> plays a role in the way people perceive disaster risks.</i></p> <p>11.5.2 How long do you think it will take the people who live there to get back to a “normal” way of life after this disaster? How will it affect their lives? What, if anything, is going to change?</p> <p><i>This question is aiming to explore how people feel about the <u>short or long-term effects of a disaster</u>, and how the experience of such disaster may, or may not, change their risk perception and/or behaviour.</i></p> <p>11.5.3 What do you think are the causes for this disaster?</p> <p><i>This question is aiming to explore whether people, actually, think in distinct categories such as natural and man-made disasters, and to what extent such categorisation affects their risk perception.</i></p>	<p>3h 20min.</p>
<p>60 min.</p>	<p>Lunch break</p>	<p>4h 20min.</p>
<p>20 min.</p>	<p>12. Group discussion topic 2: The role of citizens in different disaster phases</p> <p>12.1 Welcome back! Let us now move to a couple of questions that affect you <u>personally</u>: If you think there is a risk that a disaster may happen in <u>your area</u>, what do you think <u>you</u> can do to prepare</p> <ul style="list-style-type: none"> - Yourself and your family, - for people who live in your neighbourhood? <p>12.2 If a disaster does happen in your area, what do you think <u>you</u> can do?</p> <p>12.3 After a disaster has happened and, slowly, things are getting back to normal, what do you think <u>you</u> can do during this period?</p> <p><i>The intention of this set of questions is to explore how citizens see their own role and their own possibilities to become active <u>before, during and after</u> disasters. If they have difficulties to imagine any situations, they may be given as examples different types of disasters, e.g. “Imagine there is serious flooding/an earthquake/a gas explosion in your area”. However, it should first be explored with which examples participants may come up by themselves, which will give some indication about what types of disasters are, actually, on top of their mind.</i></p>	<p>4h 40min.</p>
<p>25 min.</p>	<p>13. Group discussion topic 3: The role of cultural groups and cultural factors in disaster preparedness, relief and recovery</p> <p>13.1 Who do you think are the people, or groups of people, who are most affected by disasters? Why do you think they are more affected than others?</p> <p><i>Whilst this question is aiming to explore the influence of cultural aspects, it is important NOT to use the word “culture” immediately, as this may trigger stereotyping (e.g. age, gender) or reducing the definition of culture to ethnicity or religious groups.</i></p> <p><i>PLEASE STEER THE DISCUSSION AWAY FROM THE OBVIOUS “CHILDREN, OLD PEOPLE, DISABLED” GROUPS that are likely to be mentioned. In such case – for example if age is given as a stereotypical “cultural</i></p>	

	<p>factor” – you could ask: “Do you mean <u>all</u> elderly people? Or what differences are there?”</p> <p><i>To probe further, also some of the following examples could be given:</i></p> <ul style="list-style-type: none"> - Different livelihoods - Different educational backgrounds - Different levels of local knowledge (and local risks), for example due to migration - Different levels of health literacy (e.g. behaviour during heatwaves) - Gender roles (for example women having less access to education) - Age-related aspects (for example elderly people living alone under precarious conditions). <p>13.2 What do you think are the specific needs of these people, or groups,</p> <ul style="list-style-type: none"> - in preparing for a possible disaster - during a disaster - after a disaster getting back to “normal” life? <p>13.3 And who do you think are the people, or groups of people, who can give most help before, during and after disasters? Why?</p> <p>13.4 If you think of the area where you live, what do you believe are the strengths of your community in case a disaster strikes? And what do you believe are the weaknesses?</p> <p>13.5 When you think of the strengths of your community you just described, how do you think these strengths could be made use of in cooperation with the authorities (local authorities, emergency services, etc.)</p> <ul style="list-style-type: none"> - during the preparation for a disaster - during a disaster - when recovering from a disaster? <p>“With this last topic our group discussion has come to an end. Thank you very much for participating and for sharing your opinions and thoughts. We will now have a coffee break and then return to the main room, where there will be a final presentation which is summarising the results from today.”</p>	<p>5h 5min.</p>
<p>15 min.</p>	<p>Coffee break (and guiding participants back to the main meeting room)</p>	<p>5h 20min.</p>
<p>10 min.</p>	<p>14. Question set IV:</p> <p>“Welcome back from what we think were some very interesting discussions. To summarise the opinions you expressed – particularly regarding the different types of disasters you identified – I would like to quickly show you again these pictures and ask:</p> <p><i>Show the same pictures as in Group discussion topic 1, and ask question 14.1 separately for each picture / assembly of pictures:</i></p> <p>14.1 What do you think is the main cause for this disaster? (1=Nature, 2=Human activity, 3=both, 4=I’m not sure)</p> <p>14.2 How much do you agree, or disagree, with the following statements:</p> <p>14.2.1 “I think that there is a high risk of a natural disaster happening in my area in the next 3 years.” (1=I completely disagree, 2=I disagree, 3=I neither disagree nor agree, 4=I agree, 5=I completely agree, 0=I’m not sure)</p> <p>14.2.2 “I think that there is a high risk of a man-made disaster happening in my area in the next 3 years.” (1=I completely</p>	<p>5h 30min.</p>

	<i>disagree, 2=I disagree, 3=I neither disagree nor agree, 4=I agree, 5=I completely agree, 0=I'm not sure)</i>	
20 min.	15. Final presentation: Overview of real-time results from participants' responses via the audience response system <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.</i>	5h 50min.
10 min.	16. Conclusion	6h

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).

8.1. Yes No I'm not sure.

Participant signature: _____

Date: _____