



## **Roadmap ‘Public empowerment policies for crisis management’**



Authors: M. Vos, A. van het Erve, N. de Gouw, L. Hokkanen, C. Johansson, A. Laajalahti, M. Linnell, N. Meriläinen, A. Olofsson, S. Öhman, H. Rantanen, M. Stal, F. Vergeer, E. Wall.

10.12.2014

## Public Empowerment Policies

The project Public Empowerment Policies for Crisis Management (PEP, 2012–2014) identifies best practices in a community approach to crisis resilience, and gives directions for future research and implementation, including the use of social media and mobile services, to further community resilience as a co-production of response organizations and citizens.

The project Public Empowerment Policies for Crisis Management (PEP) is a cooperation of several teams of researchers from January 2012 to December 2014. This EU-funded project is coordinated by the University of Jyväskylä and based on extensive ground work by research teams from:

- The Mid Sweden University, Sweden
- Global Risk Forum, Switzerland
- Inconnect, the Netherlands
- The Emergency Services College, Finland
- The University of Jyväskylä, Finland  
(consortium coordinator prof.dr. Marita Vos).

Public Empowerment Policies enhance crisis management as a coproduction of response organizations and citizens. The project will identify best practices in the community approach to crisis resilience and give directions for future research and implementation, including the use of social media and mobile services, to further citizen response. The input of the experts in the field of crisis management and communication is a key element in pursuing the goals of this project.

The materials can freely be used by crisis response organisations, with citation. Feedback by users and researchers is highly appreciated.

The research project Public Empowerment Policies for Crisis Management leading to these results has been funded as part of the European Community's Seventh Framework Program (FP7/2012–2015) under grant agreement n° 284927.

[www.projectPEP.eu](http://www.projectPEP.eu)

[crisiscommunication@jyu.fi](mailto:crisiscommunication@jyu.fi)



## CONTENT

<b>1. Introduction .....</b>	<b>4</b>
1.1 Trends in risk and crisis management .....	4
1.2 The PEP project .....	4
1.3 The roadmap – approaches and core concepts .....	5
<b>2. The process leading to the roadmap.....</b>	<b>8</b>
2.1 Gathering input for the roadmap .....	8
2.2 The matrix ‘Public empowerment policies for crisis management’ .....	9
<b>3. Practice .....</b>	<b>12</b>
3.1 Developments in practice – engaging citizen groups .....	12
3.1.1 Cooperation with citizens .....	12
3.1.2 Public preparedness and response .....	14
3.1.3 Technology enhancing citizen response .....	15
3.2 Motivation and main aim .....	18
3.3 Strategy and proposed directions .....	18
<b>4. Policymaking .....</b>	<b>20</b>
4.1 Developments in policymaking – enhancing community resilience .....	20
4.1.1 Attention for public preparedness and resilience .....	20
4.1.2 Community resilience at various policy levels .....	20
4.1.3 Diversity and policy making .....	22
4.2 Motivation and main aim .....	23
4.3 Strategy and proposed directions .....	24
<b>5. Research .....</b>	<b>25</b>
5.1 Developments in research – creating a better understanding .....	25
5.1.1 A focus on resilience and citizen perspective .....	25
5.1.2 Coproduction competence .....	27
5.1.3 Integral approach of crisis communication .....	28
5.2 Motivation and main aim .....	29
5.3 Strategy and proposed directions .....	30
<b>6. Conclusions .....</b>	<b>31</b>
<b>Appendix 1. List of abbreviations.....</b>	<b>35</b>

# 1. Introduction

The roadmap 'Public empowerment policies for crisis management' aims at charting directions for further research and implementation supporting human resilience. It reports core problems and gaps identified based on research conducted by the teams that composed the international consortium of the project Public Empowerment Policies for Crisis Management (PEP). Currently, the level of development of public empowerment policies differs widely across Europe. What explains this and why are public empowerment policies not being developed in many places? Is this, in part, a lack of knowledge that can be amended by providing best practices and guidelines? Or are there also other barriers that need attention in policymaking and future research? These are core questions addressed in the roadmap.

The sections that follow briefly introduce trends in risk and crisis management, provide background on the project, clarify the aims and approach of this roadmap, and explain the key concepts used.

## 1.1 Trends in risk and crisis management

Nowadays crises are seen as long processes, rather than events focusing solely on warning and early response. Moreover, more actors are involved in co-creating resilience, and risk and crisis management call for attention on the local, national and international levels. An integrated approach is needed that includes natural as well as man-made disasters and engages various sectors in society, thereby enabling multiple aspects, such as health concerns and financial matters, to be taken into account.<sup>1</sup>

Coordination between different societal sectors, authorities on the national and local level, as well as response organisations and citizens, remains a challenge. Moreover, it needs to be taken into account that policymaking does not necessarily translate into real change on the ground, and that, similarly, public awareness campaigns do not always lead to the desired behavioural change<sup>2</sup>. In crisis management, such matters cannot be taken for granted, as improvement of resilience requires engagement on the part of all of the actors that this process relies on. This in turn underlines the importance of public empowerment policies.

## 1.2 The PEP project

The project Public Empowerment Policies for Crisis Management (PEP) serves the purposes of a Coordination and Support Action. It brings together knowledge about how the crisis response abilities of the public can be enhanced, identifying directions for further research and implementation. By investigating best practices in educating citizens and working with communities, taking their point of view, potential key enablers for public empowerment are identified and analysed to highlight promising areas. This also includes the use of social network tools and mobile devices in a human technology approach.

---

<sup>1</sup> Margareta Walström UN ISDR, 24.8.2014, in her address to the IDRC conference in Davos, Switzerland.

<sup>2</sup> UNISDR (2014), Post-2015 Framework for Disaster Risk Reduction: a proposal for monitoring progress. Draft 5.6.2014. Accessed at <http://www.wcdrr.org/preparatory/prepcom1>

Empowering the public to be better prepared for crises seems a logical way to strengthen crisis management, although in the past resources have been focused mainly on the activities of response organisations. Nowadays, research shows and authorities have realized that the problems created by crises cannot be solved by response organisations alone, and that the behaviour of citizens can contribute to, or otherwise influence, crisis prevention, preparedness, response and recovery. Informed and well prepared citizens know how to react and respond to crisis and are able to support neighbours or responders, thereby helping to reduce primary and subsequent harm and damage. In this way, the project addresses important societal needs and challenges.

The cooperation of citizens is needed at all the phases of crisis management. For example, not all people impacted by a crisis can be reached immediately by responders, so that the behaviour of 'ordinary citizens' and those impacted is crucial at that stage, rendering them civilian first responders. Equipping citizens with appropriate skills and tools will do much to enhance their abilities in this role. Thus, the role of communities in crisis response can be enhanced, while technology for training and instructions can facilitate wiser and more concerted response behaviour.

Some authorities may refrain from including citizens on the assumption that citizens are likely to panic in crisis situations. Research, however, has shown that this so called 'panic myth' is not true, although collaboration with publics can at some times be difficult, since citizens follow their own perceptions, rationalities and interests<sup>3</sup>. In fact, most lives are saved by the actions of ordinary citizens. As well-intended actions may also put volunteers in danger, this calls for protecting them through preparedness education. This leads to the obvious conclusion that complex evolving crises can only be solved through collaboration.

### 1.3 The roadmap – approaches and core concepts

Our scientific work was characterised by an integrative perspective and grounded in the following approaches:

- a stakeholder perspective acknowledging that crisis management is a coproduction<sup>4</sup>, a dynamic process involving response organisations and communities, which entails attention to the viewpoints of citizens;
- a best practices approach that utilizes exchange of current insights to stimulate authorities and other organisations to further develop a culture of preparedness in communities at risk<sup>5</sup>;
- a communication process model that fits integrative crisis management and considers all phases of a crisis<sup>6 7</sup>;

---

<sup>3</sup> Sheppard, B., Rubin, G.J., Wardman, J.K. and Wessely, S. (2006), Viewpoint: Terrorism and dispelling the myth of a panic prone public, *Journal of Public Health Policy*, 27(3), 219–245.

<sup>4</sup> Palttala, M. and Vos, M. (2011), Testing a methodology to improve organizational learning about crisis communication. *Journal of Communication Management*, 15(4), 314 - 331.

<sup>5</sup> Seeger, M. (2006) Best practices in crisis communication: An expert panel process. *Journal of Applied Communication Research*, 34(3), 232–244.

<sup>6</sup> Reynolds, B. and Seeger, M. (2005), Crisis and emergency risk communication as an integrative model. *Journal of health communication*, 10, 43–55. And

<sup>7</sup> Veil, B., Reynolds, B., Sellnow, T. and Seeger, M. (2008), CERC as a theoretical Framework for Research and Practice. *Health Promotion Practice*, 9(4), 26S–34S.

- a human technology view that sees mobile devices and information services as part of communication policies and includes a human-centred approach to ensure social acceptance.

To further empower people in crisis situations, it is crucial to understand the supporting role of communities and how these may be facilitated. This requires a human-centred approach, based on what people need in order to be better prepared for crises. Current insights emphasize the importance of understanding perceptions and building trust to maintain partnership-like relations with the public<sup>8</sup>. This perspective also recognizes the diversity of citizens, and their communities, taking into account gender and other demographics, and giving attention to vulnerable populations, including those with disabilities, children, the aging population and those who may be linguistically or culturally separated from the communities in which they reside<sup>9</sup>.

In this way, preparedness is part of an integrative approach to all the phases of a crisis, aiming at building self-efficacy among the public as well as trust in cooperation. Communication policies help to manage uncertainty, respond to the crisis, resolve it, and learn from it<sup>10</sup>. Social networking tools and mobile devices can be strong facilitators of the crisis response abilities of the public, if they fit well into the communication policies chosen. This means that perceptions and social acceptance of the technology or services employed<sup>11</sup> are also taken into account, along with the dynamics in how people use them<sup>12</sup>.

In this roadmap, the key concepts are 'resilience', 'empowerment', 'public empowerment policies' and 'community approach'. Below we explain these concepts further.

**Resilience** is the ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions. Resilience means the ability to 'resile from' or 'spring back from' a shock.<sup>13</sup> A community is resilient when it can mobilise resources and self-organize in response to a crisis<sup>14</sup>, and thus is able to adapt when faced with disruption<sup>15</sup>.

---

<sup>8</sup> Boin, A., & McConnell, A. (2007). Preparing for critical infrastructure breakdowns: The limits of crisis management and the need for resilience. *Journal of Contingencies and Crisis Management*, 15(1), 50-59.

<sup>9</sup> See also GRF Davos (2014): 5th International Disaster and Risk Conference. Outcomes Report. Available at: [http://idrc.info/fileadmin/user\\_upload/idrc/documents/IDRC14\\_OutcomesReport\\_web.pdf](http://idrc.info/fileadmin/user_upload/idrc/documents/IDRC14_OutcomesReport_web.pdf), last updated 27.11.2014.

<sup>10</sup> Ulmer R., Seeger, M. & Sellnow, T. (2006) Post-crisis communication and renewal: expanding the parameters of post-crisis discourse. *Public relations review*, 33, 130–134.

<sup>11</sup> Davis, F. D. (1989), Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340.

<sup>12</sup> Mathieson, K. (1991), Predicting user intentions: comparing the technology acceptance models with the theory of planned behaviour. *Information Systems Research* 2(3), 173-191.

<sup>13</sup> UNISDR Terminology. Available at: <http://www.unisdr.org/we/inform/terminology#letter-r>, last updated 26.11.2014.

<sup>14</sup> Heath R.L., Palenchar, M. and O'Hair, H.D. (2009). Community building through risk communication infrastructures. In R.L. Heath & H.D. O'Hair (Eds.) *Handbook of risk and crisis communication* (pp. 471–487). New York. Routledge.

<sup>15</sup> Norris, F. H., Stevens, S. P., Pfefferbaum, B., Wyche, K. F. and Pfefferbaum, R. L. (2008). Community resilience as a metaphor, theory, set of capacities, and strategy for disaster readiness. *American Journal of Community Psychology*, 41(1), 127-150.

**Empowerment** relates to a process of developing skills, abilities and increased control over outcomes important to one's life, and can be noted on the individual as well as the community level<sup>16</sup>. In the context of risks and crises, empowerment refers to helping citizens to “develop emergency responses that can mitigate the severe outcomes in the event of a risk event”<sup>17</sup>.

**Public empowerment policies** aim at enhancing resilience on the individual and community or societal level. This includes structurally facilitating awareness of risks and preparedness by public groups, by utilizing a community approach to connect with citizen networks and initiatives, and supporting citizen response by communication activities throughout all the phases of a crisis.

Here we follow the philosophy of the **community approach**, also known as ‘whole community approach’<sup>18</sup>, which refers to making use of all the available resources and social capital. This acknowledges the importance of all the actors that form the network, rather than only counting on formal specialized teams for fixed scenarios. This calls for an ongoing process of co-producing resilience, supported by technology.

---

<sup>16</sup> Sadan, E. (2004), *Empowerment and community planning: Theory and Practice*. Tel Aviv: Hakibutz Hameuchad. Accessed online 11.8.2014 at <http://www.mpow.org/>

<sup>17</sup> Palenchar, M.J. and Heath, R.L. (2007), Strategic risk communication: Adding value to society. *Public Relations Review*, 33, 120–129.

<sup>18</sup> FEMA (2011). A whole community approach to emergency management: Principles, themes, and pathways for action. Washington: Federal Emergency Management Agency. Retrieved from <http://www.fema.gov/library/viewRecord.do?id=4941>

## 2. The process leading to the roadmap

In this chapter we describe how the input was gathered for this roadmap and explain the matrix that forms the basis of the roadmap.

### 2.1 Gathering input for the roadmap

The roadmap is based on the outcomes of desk studies and empirical research conducted in Work Packages 1, 2 and 3 of the PEP project<sup>19</sup>. The desk studies were aimed at identifying best practices and trends in the literature on community resilience and crisis communication. The empirical research included interviews with citizen volunteers and experts, an online expert questionnaire, and focus group interviews with citizens<sup>20</sup>.

In the next step, interviews were conducted with the members of the International Expert Panel. These interviews helped clarify the challenges of and directions for public empowerment policies.

The recommendations deriving from the research outcomes were brought together in the project's Guide. The '**PEP Guide**' consists of three parts:

- best practices in public empowerment
- community approaches
- technology supporting resilience.

The main parts of the Guide are available as a download publication on the project website [www.projectPEP.eu](http://www.projectPEP.eu). The results were also opened up in the more comprehensive form of the '**Crisis communication WIKI for professionals**'. This wiki<sup>21</sup> provides recommendations and links to available web materials.

The challenges were further analysed for the roadmap, including interaction in the well-known **International Disaster and Risk Conferences** in Davos, in particular IDRC Davos 2012 and IDRC Davos 2014.

In addition, the '**PEP online discussion FORUM**' was developed to invite comments. The WIKI and the FORUM were extensively marketed through these two international conferences, the project e-letter to 170 subscribers, email to 4 500 experts, several Tweets and posts on six LinkedIn pages of large groups related to crisis communication and crisis management. The discussion on the FORUM pages was monitored. More people visited the website than actively contributed, but those comments that were posted have been integrated into this roadmap.

Researchers were invited to contribute to a **Special Issue** on community resilience of the peer-reviewed journal 'Human Technology' in November 2014. Next to the four articles and the related guest editorial, several articles were processed in later issues of the journal.

---

<sup>19</sup> Public Empowerment Policies for Crisis Management, Project 284927, Annex I: Description of Work.

<sup>20</sup> Haataja, M., Hyvärinen, J. & Laajalahti, A. (2014). Citizens' communication habits and use of ICTs during crises and emergencies. *Human Technology: An Interdisciplinary Journal on Humans in ICT Environments* 10(2), 138–152. <http://www.humantechnology.jyu.fi/archives/>

<sup>21</sup> A wiki is a website or database developed collaboratively by a community of users, allowing users to consult the content, and add and edit content. For this WIKI see [www.projectPEP.eu](http://www.projectPEP.eu)



During the IDRC participants were invited to provide suggestion for the future policy agenda concerning Disaster Risk Reduction (DRR)<sup>22</sup>. The input was further analysed and, where relevant, also included in this roadmap. The results of relevant earlier EU research projects were also analysed for this purpose<sup>23</sup>.

Additional sources were gathered from policy sources, in particular from documents published by the United Nations, European Commission and European Parliament.

## 2.2 The matrix ‘Public empowerment policies for crisis management’

To create a basis for the recommendations, a matrix was constructed showing three areas: practice, policymaking and research (see Figure 3). In the area of practice, directions are given for practices that enhance community resilience and public preparedness; in the policymaking area the focus is on policies that create favourable conditions for public empowerment; and in the research area the development of future research is addressed.



Figure 2.1 The three areas of practice, policymaking and research.

Table 2.1 gives an overview of suggestions for enhancing resilience. The table clarifies how public empowerment policies can be supported in the three areas of practice, policymaking and research. For each area, first, the challenges are addressed by explaining motivation and aims, after which strategy components and proposed directions are noted. The matrix in Figure 2.1 constitutes an executive summary of the roadmap.

In Table 2.1, the three areas are shown in vertical order. In each area, first, the motivation is given, that is, how the problem is seen, together with the main aim, emphasizing what in particular needs to be achieved. Next, the envisaged strategy, that is, the way to reach improvements, is explained together with the directions, or proposed line, for future action in this area.

<sup>22</sup> More precisely, this concerned the successor of the Hyogo Framework for Action, the post 2014 Framework for Disaster Risk Reduction.

<sup>23</sup> See e.g. Wetzstein, I., Grubmüller, V., Götsch, K. and Rainer, K. (2014). Crises and social media: A meta-study on pertinent research and practice. *Human Technology, an Interdisciplinary Journal on Humans in ICT Environments*, 10(2), 95–124. <http://www.humantechnology.jyu.fi/archives/>

Matrix for the roadmap	Public empowerment policies for crisis management		
	Practice	Motivation	Main aim
		Very diverse and often low level of development in countries	Include resources under-used thus far
		Strategy components	
		<ul style="list-style-type: none"> <li>Exchange of best practices in including citizens</li> <li>Utilizing available insights on how to arrange cooperation processes</li> <li>Showing possibilities for engaging civil society actors and companies</li> </ul>	
		Proposed directions	
		<ul style="list-style-type: none"> <li>Collaboration of response organisations with civil groups to be strengthened, together with public-private partnerships, in building societal resilience.</li> <li>Public education campaigns need to be rooted in strong community involvement, and utilize an all-hazard approach with a focus on local high likelihood risks.</li> <li>Strategies are needed on how social media platforms and smart phone applications can foster public engagement in all the phases of a crisis.</li> </ul>	
	Policymaking	Motivation	Main aim
		So far, the community approach is only visible in a fragmented and not structured way	Strongly stimulate public empowerment and remove barriers
		Strategy components	
		<ul style="list-style-type: none"> <li>Strengthening Disaster Risk Reduction efforts by emphasising community resilience and giving citizens a more decisive role</li> <li>Involving various sectors such as health and infrastructure in a human-centred approach that utilises social capital</li> <li>Sensitivity to cultural-specific requirements and diversity in society</li> </ul>	
		Proposed directions	
		<ul style="list-style-type: none"> <li>Community approaches need continued attention in policymaking, next to public-private partnerships and sector-wise activities.</li> <li>Resilience calls for activities on all policy levels, but clarification needed on how each level contributes and connects with the others.</li> <li>Efficient exchange of insights in working with civil groups can be arranged between regions with similar risk profiles.</li> </ul>	
	Research	Motivation	Main aim
		Community approaches and citizen perspectives have received little attention in security research	Clarify how communities self-organise and reveal barriers to cooperation of citizens and authorities
		Strategy components	
		<ul style="list-style-type: none"> <li>Investigating the interplay between civil actors, authorities, and private organisations in real-life cases</li> <li>Scrutinising different forms of collaboration with an eye to detail</li> <li>Counteracting myths (such as the panic myth)</li> </ul>	
		Proposed directions	
		<ul style="list-style-type: none"> <li>Empirical research into collaboration of authorities with citizen groups needs more attention in allocation of research budgets.</li> <li>Research can clarify competences for collaboration from a communication point of view.</li> <li>An integral approach should be stimulated in security research, looking beyond technical means and utilizing multidisciplinary research.</li> </ul>	

Table 2.1 The matrix 'Public Empowerment Policies for crisis management'

The matrix provides an overview of the elements of the roadmap and clarifies the line of thinking. In chapters 3-5 the further arguments for the proposed approach will be given. Each of these chapters will explain part of the matrix. Finally, chapter 6 will conclude by reflecting on how the various policy areas influence public empowerment.

### 3. Practice

In this chapter, the first area of the roadmap, practice, is presented. Here, we address related developments, motivation, main aim and strategies, and propose directions for future activities.



Figure 3.1 The practice area in the roadmap

#### 3.1 Developments in practice – engaging citizen groups

In practice, empowerment strategies can be built on various elements that have been reported as effective in the literature and found in our empirical research. A robust approach is needed on many levels, as will be explained further in the following sections on cooperation with citizens, public preparedness and response, and technology enhancing citizen response.

##### 3.1.1 Cooperation with citizens

**After years of specialization, the quality of the rescue services in many European countries is very good and citizens rely on them. However, major crises call for a strong citizen response as well, and the administrative mindset does not yet seem to be ready for that. The scope and depth of collaboration with public groups differ greatly across authorities. Collaboration with well-known organisations of volunteers is already embedded, but many other citizen groups and non-governmental organisations (NGOs) exist that could increasingly be included in resilience efforts.**

Citizen participation should be valued in crisis situations. Citizens can play a vital part in crisis situations. The UN regards disaster-affected communities as the real first responders, arguing that while humanitarian professionals simply cannot be everywhere at the same time, the ‘crowd’ is always there<sup>24</sup>. The value of communities should be more established in official settings. The UN sees empowerment and resilience as something that can be created in disaster-affected areas by “developing the capacity of community members to be the responders and organizers of their own relief”<sup>25</sup>.

<sup>24</sup> International Federation of Red Cross and Red Crescent Societies, World Disasters Report, 2013: 73.

<sup>25</sup> International Federation of Red Cross and Red Crescent Societies, World Disasters Report, 2013: 67.

Along the same lines, the European Parliament (EP) sees it as relevant to integrate civil society actors such as NGOs in the work of resilience. The EP “stresses the important role that local authorities and local and national civil society organisations can play in building resilience”<sup>26</sup>. Local knowledge should be integrated in preparedness and response work. In the same vein, the UN has stated that “local knowledge is essential to forecasting, mitigating and coping with disaster”<sup>27</sup>.

It can be noted that in the last decades there has been a shift from civil defence to societal security, welcoming bottom-up oriented approaches involving the public<sup>28</sup>. Accordingly, local authorities in particular are expected to take more initiative in connecting with civil sector groups that can contribute to crisis response or preparedness, such as volunteers, who can be organized to a greater or lesser extent. In municipal crisis plans, traditional NGOs may be involved, such as volunteer fire brigades or the local Red Cross. However, a wider approach may be utilized to include available resources in various forms, including social capital.

Such resources can be identified and further developed in integrated intervention maps, following a whole community approach involving public organisations, citizen groups, NGOs and private companies in the area. A broad look at the available resources is recommended, especially in rural areas where, for example, farmers and local companies may be asked to help clear roads after storms or strengthen dams. Similarly, on a regional or national level public-private collaboration<sup>29</sup> needs to be further developed, for example, in collaboration with vital infrastructure companies. This calls for joint mapping of resources before a crisis happens, and preparedness in how to reach contacts in crisis situations.

After consideration of how the results of mapping can be used in crisis management, the social capital identified may include the competences and communication connections of parties on the local, regional or national level. Local authorities can utilize their connectedness with health care and education where these may serve as bridges to the public. Doctors and schools, along with religious communities, have high trust relations with citizens that can facilitate preparedness of the latter. Regional and national authorities often have strong links with associations and special interest groups. The last-mentioned can help take the special needs of public groups into account, including, for example, pregnant women, the elderly, people with disabilities and minority groups.

Building societal resilience in an interactive and inclusive way involves more actors than the rescue services, which primarily supply specialised emergency capabilities. Although, among citizens, the trust basis of rescue services may be high, the collaborative work needs additional competences and the involvement of other administrative bodies. In a time of economic constraints, it is hard to prioritise budgets for empowerment-related tasks. However, insights into how collaboration can be strengthened have increased and there is a growing number of best practices that can inspire crisis management authorities.

---

<sup>26</sup> European Parliament resolution 2013/2110(INI).

<sup>27</sup> International Federation of Red Cross and Red Crescent Societies, World Disasters Report, 2013: 154, <http://worlddisastersreport.org/en/>

<sup>28</sup> Linnell, M. (2014), Citizen response in crisis: Individual and collective efforts to enhance community resilience. *Human Technology, an Interdisciplinary Journal on Humans in ICT Environments*, 10(2), 68–94. <http://www.humantechnology.jyu.fi/archives/>

<sup>29</sup> The importance of public-private collaboration in crisis management was also emphasised in an SME contribution on the PEP online discussion FORUM at [www.projectPEP.eu](http://www.projectPEP.eu).

### 3.1.2 Public preparedness and response

**Public preparedness can be enhanced by preparedness education. Top-down campaigns are less effective than initiatives with citizen involvement. Citizens can be involved in crisis planning and exercises, and schools further included in preparedness activities. The communication policy should include multiple communication channels. During crises, monitoring of social media facilitates answering information needs and rumours, and follow-up, if the instructions provided have proven effective.**

UN-OCHA emphasises two-way communication with citizens and sees access to information as a form of assistance as important as water, food, and shelter, because without it citizens cannot find help, make informed decisions or be leaders in their own recovery process<sup>30</sup>.

The EP calls for improved education on disaster prevention<sup>31</sup> and, more specifically, the need “to strengthen and develop education in the context of disasters and emergencies and to improve the dissemination, compilation and communication of information and knowledge that will help build community resilience and promote behavioural changes and a culture of disaster preparedness”<sup>32</sup>.

Current crises are often complex and can develop in unexpected ways. Therefore, preparedness is not helped so much by learning fixed responses for various detailed scenarios, but rather by enhancing understanding of risks and strengthening competences and skills that are helpful in a range of emerging crises. An all-hazard approach is recommended facilitating resilience to various hazards, and especially those that have a high likelihood in the region involved.

Because media use habits differ widely across the population, a multi-channel approach is recommended<sup>33</sup>, utilizing many traditional as well as virtual media. As a community approach goes beyond one-way communication, a broad strategy relates to working with intermediary groups and stakeholders, including interest or minority groups, NGOs and private companies, on the local, regional and national levels. In this way, safety is co-created in a broader network than the traditional response network. On the local level collaboration can begin by exchanging activities and insights by various groups to see what activities are already in train and clarify local risks, for example, by making local risk excursions.<sup>34</sup>

Preparedness campaigns organised by authorities in a top-down approach without active public involvement are usually not effective. Authorities can better connect with ongoing citizen initiatives and create strong community involvement through public education campaigns<sup>35</sup>. Moreover, public interest in preparedness information is often low, rising when a potential crisis unfolds. This leaves a limited timeframe for preparedness action. Other strategies for preparedness education are based on involvement of intermediaries, such as local health institutions and schools. Preparedness education should also be part of school curricula.

---

<sup>30</sup> OCHA on message: Communications with communities, November 2013.

<sup>31</sup> European Parliament, resolution 2011/2023(INI).

<sup>32</sup> European Parliament, resolution 2013/2110(INI).

<sup>33</sup> Vihalemm, T., Kiisel, M., & Harro-Loit, H. (2012). Citizens' Response Patterns to Warning Messages. *Journal of Contingencies and Crisis Management*, 20(1), 13-15.

<sup>34</sup> Anna Olofsson, 27.8.2014, during IDRC 2014. See also Linnell, M. Johansson, C., Olofsson, A., Wall, E. and Öhman, S., Enhancing Public Resilience: A community approach. In *Proceedings IDRC Davos 2014*, 544-548.

<sup>35</sup> See the best practices in the 'Crisis communication WIKI for professionals' at [www.projectPEP.eu](http://www.projectPEP.eu)

Recently, the use of social media in crisis communication has received much attention. However, it should also be noted that the role of the news media is strong in disasters and emergencies. News reports are followed more actively in times of crisis and a large proportion of retweets in fact concern news media messages. Therefore, collaboration with journalists and providing services for news media reporting need continued attention. Furthermore, the importance of face-to-face meetings and direct contacts between responders, other authority representatives and citizens should be underlined<sup>36</sup>.

Many people may not be aware of how important their knowledge and skills could be in coping with emergencies, as they tend to rely on being able to retrieve information on such occasions from sources such as internet websites or apps. However, in power outages, only preparedness helps. This makes it important to have dedicated preparedness websites that are easy to access for those moments when people, because of a crisis in another country or at an early stage of a crisis, are still able and also motivated to learn how they might be able to cope with an evolving crisis situation.

When assessing the results of crisis exercises, emphasis should be put on evaluating the collaboration with citizens<sup>37</sup>. During crisis situations, it is important to involve those sources, people and organisations that are trusted by different groups in the population. Similarly, it is recommended to avoid medical or statistical jargon, as language abilities in stressful situations become critical. It should be noted that trained responders and citizens alike may revert to their first language and start to talk in this language. Even people who are fluent in a second language in normal situations can show first-language reversion in crises<sup>38</sup>. To arrange and canalise public help, information and communication technologies (ICT) may be used, for example, as a tool for the recruitment, development and maintenance of the voluntary public.

### 3.1.3 Technology enhancing citizen response

**Technology creates opportunities for citizens to communicate with authorities and vice versa, as it can facilitate fast exchange of information in crisis situations. In the future, open and closed crisis mapping systems will co-exist. In open systems, filtering is needed for quality control, while privacy protection and misuse of systems must be taken into account. Crisis management apps should be integrated into citizens' daily life, but should not increase feelings of insecurity.**

Technology can play an important role in the empowerment and crisis work that integrates citizens and authorities on all levels. However the UN also points to the drawbacks of technology use, as the introduction of online two-way communication means “may also raise expectations and frustration if bottom-up communication is left unanswered”<sup>39</sup>, while, for example, “increased dependency on technology may also create new vulnerabilities as post-disaster environments are highly prone to failure of technological infrastructures” (World Disasters Report 2013: 35).

---

<sup>36</sup> This was emphasised on the online PEP discussion FORUM for this project by a representative of a national emergency support unit.

<sup>37</sup> [www.crisiscommunication.fi/criscomscore](http://www.crisiscommunication.fi/criscomscore)

<sup>38</sup> Robert Chandler, 27.8.2014, during IDRC 2014

<sup>39</sup> A Korean study showed an increase in public trust in authorities after social media services were experienced. See Kim, S.K., Park, M.J. and Rho, J.J. (2013), Effect of the Government's Use of Social Media on the Reliability of the Government. Public Management Review, <http://dx.doi.org/10.1080/14719037.2013.822530>.

The levels of supporting technology of authorities in different countries are diverse, and in many cases the new technologies are still used for one-way sending of messages. Information relayed by citizens can be seen merely as an add-on to already well-developed internal authority crisis-mapping systems, but also as an opportunity to co-create a fuller picture of the situation in a system that is also open to citizens. In the future, diverse closed and open crisis mapping systems will probably co-exist. Open systems, for example those that show citizen messages on a map, need filtering for privacy protection and prevention of misuse. Naturally, citizens will expect a follow-up on the messages they post.

Current attempts in developing social media platforms for crisis mitigation are fragmented and strategies are needed on how these social media platforms can foster public engagement in all the phases of a crisis. The absence of formal national systems for sharing risk information may explain the growing impact of social media<sup>40</sup>.

Crowd mapping can deliver heat maps of activity and provide live info maps that show citizens safe places and, for example, where to go for food or fuel<sup>41</sup>. This is very useful, especially in major crisis events. Crisis mapping in open systems is also being developed to include high numbers of smaller urban incidents. However, this could increase feelings of insecurity as it confronts people with many, often irrelevant, notifications. Instead, apps for localized warnings and integration of crisis-related messages in wider apps, such as weather apps and road planners, should be considered.

All interactive use of technology requires preparations before a crisis situation occurs, as citizens need to become acquainted with the tools and, for example, take out subscriptions for apps and become a follower in Twitter or friend in Facebook. It also requires cooperation, for example, asking citizens and organisations to use the same hashtag<sup>42</sup> when tweeting information about a particular crisis.

Initiatives are increasingly being taken by groups of trained digital volunteers such as, for example, Humanity Road<sup>43</sup> and the Emergency 2.0 WIKI<sup>44</sup> that educates citizens and organisations in the use of social media. Developments in the use of technology for crisis management are exchanged in conferences, online communities and blogs<sup>45</sup>. As technology is in constant flux, authorities need to focus on its functionality<sup>46</sup>. So far, authorities have not been active in setting standards for information exchange with citizens, although some development of tools is currently supported by the UN and EU<sup>47</sup>.

---

<sup>40</sup> International Disaster and Risk Conference Davos 2014, Extended abstracts: oral presentations, special panels, sessions and workshops. Available at:

[http://idrc.info/fileadmin/user\\_upload/idrc/documents/IDRC14\\_ExtendedAbstracts.pdf](http://idrc.info/fileadmin/user_upload/idrc/documents/IDRC14_ExtendedAbstracts.pdf), p. 526

<sup>41</sup> Tracy Morgan, 27.8.2014, during IDRC 2014

<sup>42</sup> Hashtag standards were proposed by UN OCHA in a Policy Brief of 4.11.14, see <http://www.unocha.org/node/117960>

<sup>43</sup> <http://humanityroad.org>

<sup>44</sup> <http://emergency20wiki.org>

<sup>45</sup> <http://irevolution.net>

<sup>46</sup> The COSMIC project provided guidelines for social media use in crises, while FOODRISC showed how online tools can be utilized to examine how consumers react to issues of food safety.

<sup>47</sup> For example, the open software platform RapidPro by Unicef <http://unicefstories.org/2014/10/01/rapidpro-answering-your-questions/> and EMM, NewsExplorer and Medisys by EU, see <http://emm.newsbrief.eu/overview.html>



To promote interactive use of online platforms for collaboration between authorities and citizens, it is important to understand that communication via social media and mobile services is initiated by response organisations and citizens for different purposes. For cooperation to be successful, a win-win situation should be created, where the motivations of publics and authorities converge or both gain benefits from the functionalities of the platform. For example, response organisations may aim to educate, give instructions or ask citizens for assistance, while citizens may want to know what's happening, report to others on what is happening in their own vicinity or exchange emotions. The development of interactive technology for public empowerment requires an integral approach, entailing understanding of why and how different users may want to employ it, and making the solution accessible and inclusive, and possibly part of the user's everyday life<sup>48</sup>.

The continuous evolution of technology will bring new opportunities as well as challenges in the field of crisis management and communication. As consumer electronics become more and more ubiquitous, the possibility exists that the gap between the technologies available to the public and the capabilities and resources of the authorities to exploit the latest means will widen. Next, we present some issues that are likely to characterize the field over the next few years.

The younger generations, who are more information technology literate, may take over related responsibilities within authorities as well as citizen groups. This could help promote shared understanding of technological solutions and awareness of how empowerment can be integrated into the development processes.

The mobile phone has transformed into an immediate smart interface with local or remote data and information. Intelligent sensors are increasingly being embedded into these devices, enabling an increase in citizens' participatory sensing. This means that in the years to come any (urban) environment will be monitored by thousands of smart devices also during crisis situations. How this massive information load can be rapidly collected, analysed and presented to decision makers will become an important issue.

In social media, a trend towards more security and privacy concerning ways of working among the general public can already be observed, e.g. people moving from Twitter to various closed applications such as WhatsApp, an instant messaging tool. If the public continue to use more closed and more diverse forms of group communications, this will have the effect of scattering the information available and make it harder for authorities to access citizen information during a crisis situation.

Another cause of global concern entails issues of cyber-security that may hinder the development of communication between public and private actors. In developing preparedness for possible cyber emergencies, the empowerment of the public is important. If and when the overall communication infrastructure is compromised, there still remain the innovative solutions of citizens' groups, which should be strengthened by supporting empowerment.

---

<sup>48</sup> Studies on technology acceptance and inclusiveness can be downloaded here <http://www.crisiscommunication.fi/pep/research/articles>

### 3.2 Motivation and main aim

The motivation to create public empowerment policies in the area of practice is based on the fact that the level of development of initiatives for community resilience and citizen response is very diverse across the EU and in many places low. The main aim for doing this is to include the thus far under-used resources of civil society groups and private organisations that may enable coping with crises. Table 3.2 summarizes the motivation and main aim in the area of practice.

Practice	Motivation	Main aim
	Very diverse and often low level of development in countries	Include resources under-used thus far
	Strategy components	
	<ul style="list-style-type: none"><li>• Exchange of best practices in including citizens</li><li>• Utilizing available insights on how to arrange cooperation processes</li><li>• Showing possibilities for engaging civil society actors and companies</li></ul>	
	Proposed directions	
	<ul style="list-style-type: none"><li>• Collaboration of response organisation with civil groups to be strengthened, together with public-private partnerships in societal resilience.</li><li>• Public education campaigns need to be rooted in strong community involvement, and utilize an all-hazard approach with a focus on local high likelihood risks.</li><li>• Strategies are needed on how social media platforms and smart phone applications can foster public engagement in all the phases of a crisis.</li></ul>	

*Table 3.2 Motivation for and main aim of public empowerment policies, strategy components and directions, in the area of practice.*

### 3.3 Strategy and proposed directions

Table 3.2 also mentions strategy and directions. In light both of the diverse levels already achieved and the interest observed among authorities in further developing this work in practice, we propose a strategy for facilitating the exchange of best practices that includes citizens in preparedness and response. This should help to counter misperceptions such as the panic myth and clarify how cooperation processes can be arranged.

In addition, we propose the following future directions for the area of practice. When stimulating public empowerment activities, one should ensure that activities on one government level accord with those on another level and that they do not contradict each other. As explained before, it is important to connect with local or other citizen initiatives, and to have an inclusive multi-stakeholder approach.

## 4. Policymaking

In this chapter, the second area of the roadmap, policymaking, is presented. Here, we address related developments, motivation, main aim and strategies, and propose directions for future activities.



Figure 4.1 The policymaking area in the roadmap

### 4.1 Developments in policymaking – enhancing community resilience

As resilience to crises is crucial in today's society, the level of involvement of public groups needs to increase fast. However, there are several problems to overcome, for which attention in practice is not enough and that need policymaking to create more impact.

In the sections below, we address the issues of public preparedness and resilience, community resilience at various policy levels, and diversity and policymaking.

#### 4.1.1 Attention to public preparedness and resilience

**The status of public empowerment initiatives in crisis management is very diverse across Europe. Public preparedness has received insufficient attention in many places, although good practices also exist that build on local citizen initiatives and, for example, link with the UNISDR campaign 'Making cities resilient'.**

The European Commission accords importance to disaster risk reduction (DRR) and says that "it saves lives and strengthens the resilience of communities enabling them to anticipate, absorb, and bounce back from shocks"<sup>49</sup>. Public awareness should not be forgotten despite the current economic situation in Europe. Therefore, the Commission emphasises that DRR activities are cost effective, and that every euro spent on DRR saves between four and seven euros in the costs of response to the impact of disasters<sup>50</sup>.

<sup>49</sup> UN-ECHO Factsheet, Disaster Risk Reduction, 2014.

<sup>50</sup> UN-ECHO Factsheet, Disaster Risk Reduction, 2014.

One of the main challenges is to create and maintain a high position on the political and authority agendas for public preparedness and resilience. For this, attention paid to the international policy level of the UN and EU has proven helpful. For example, the global UNISDR campaign 'Making Cities Resilient: My City is Getting Ready'<sup>51</sup> drew much attention to the theme on the local policy level, although within the EU not that many, and mainly municipalities in Southern Europe, actually participated in the campaign. We would recommend (continuation of) similar initiatives in the EU and UN, while at the same time ensuring a clear community focus in these initiatives. Only if bottom-up activities are more strongly emphasised can such campaigns be successful in more than just setting agendas in policymaking, directly benefitting practice.

In addition, to include resilience from a public empowerment perspective, a sector-wise approach can be undertaken, for example, in the health sector, on various policy levels. Different government sectors can look into the consequences for their ways of working of adopting an empowerment approach in collaborating with citizens and engaging with other stakeholders to increase societal resilience. This may also lead to training and education materials for specific sectors. All public and private stakeholders need to be strongly encouraged to develop societal resilience in ways that relate to them, and required to report on progress made<sup>52</sup>. Individual and company investment in preparedness can also be stimulated by incentives, for example tax reduction<sup>53</sup>.

Civil participation needs to be ensured in all phases of a crisis. Concerning the implementation of preparedness activities and of response activities, a good start has been made in various places. But it also needs to be ensured that civil society actors and citizen groups are included in decision making on the prioritization of the risks to be prepared for, and reconstruction activities in the aftermath of a crisis, e.g. by participative decision making.

#### **4.1.2 Community resilience at various policy levels**

**Next to attention to the individual level of preparedness, collaboration with civil society actors and community groups needs to be strengthened. A sustainable, approach systematically acknowledges social networks and social fabrics. Civil society actors should also be included in the policymaking for societal resilience, for example, in disaster risk reduction (DRR) protocols.**

If citizens do not feel that they are included, this may create blockages to social reliance efforts on their part and so widen the gap between authorities and citizens. Also, people with special needs should be taken into account in social resilience activities. It should be stressed that "local knowledge is essential to forecasting, mitigating and coping with disaster"<sup>54</sup>.

---

<sup>51</sup> <http://www.unisdr.org/campaign/resilientcities/>

<sup>52</sup> International Disaster and Risk Conference Davos 2014, Outcomes Report. Online available at: [http://idrc.info/fileadmin/user\\_upload/idrc/documents/IDRC14\\_OutcomesReport\\_web.pdf](http://idrc.info/fileadmin/user_upload/idrc/documents/IDRC14_OutcomesReport_web.pdf), last updated 27.11.2014.

<sup>53</sup> International Disaster and Risk Conference Davos 2014. Extended abstract, oral presentations, special panels, sessions and workshops. Available at: [http://idrc.info/fileadmin/user\\_upload/idrc/documents/IDRC14\\_ExtendedAbstracts.pdf](http://idrc.info/fileadmin/user_upload/idrc/documents/IDRC14_ExtendedAbstracts.pdf), Stolz, N. et al., p. 688.

<sup>54</sup> World Disasters Report, 2013: 154.

However, as the Commission says: “Disasters have no boundaries. Emergency situations – such as earthquakes, toxic industrial accidents, or forest fires – often affect several regions, even several countries. National and regional authorities need to cooperate when using today’s technologies and devices to alert people – in the languages they understand best – and advise them what to do. People with special needs – including those with disabilities and the elderly – must also be taken into account”<sup>55</sup>.

The EP also noted that “DRR is a key component in achieving resilience” and that it “involves analysing and managing hazards in order to reduce vulnerability to disasters, and covers activities which support preparedness, prevention and mitigation at all levels from local to international”<sup>56</sup>. According to the Commission, when developing disaster management capacities, their impact has to be evaluated and processed. Whether countries have relatively developed disaster management capacities or not, “national response to disaster events may leave gaps of uncovered needs, related to social inequality, isolation, under-reporting of events and/or inadequate capacity at local level”<sup>57</sup>.

It is often unclear where on the different government levels responsibilities for public empowerment lie and, in particular, how national level policy genuinely supports local-level decision making<sup>58</sup>. The concern here is how the local, region and national levels contribute to societal resilience. Defining roles and responsibilities needs to be emphasised, in collaboration with citizen groups but also among the different authority levels<sup>59</sup>.

It is clear that the leadership of local authorities is needed to increase community resilience and public response. However, inclusive approaches are not only expected on the local or municipality level. For example, on the national level collaboration with civil society groups and associations can be initiated so that the needs of special groups are taken into account, for example, ensuring accessibility norms for security applications. On the (inter)national level norms for the use of crowdsourcing could also receive attention, for example, ownership of data gathered (rescue services or software companies involved), and codes of conduct<sup>60</sup>.

The EU knowledge centre on humanitarian aid could host a catalogue of free solutions and best practice materials that enable community resilience and citizen response. This would also make related free services developed by EU projects easier to find (for example, the PEP ‘Crisis communication WIKI for professionals’).

Currently, expectations on the role of the municipalities are high, which relates to more policy themes than security. For municipalities their links with the local health and education institutes offer chances, but there are also challenges in developing resilience. One of the major challenges for collaboration between municipalities and NGOs is the lack of common meeting platforms and, in consequence, low degrees of interaction between voluntary groups and municipal representatives.

---

55 European Commission, An emergency alert system for Europe, 2014.

56 European Parliament, resolution 2013/2110(INI)

57 EC, Humanitarian Implementation Plan: Small Scale Humanitarian Response to Disasters, 2014.

58 UNISDR (2014), Post-2015 Framework for Disaster Risk Reduction: a proposal for monitoring progress.

Draft 5.6.2014. Accessed at

[http://wcdrr.org/documents/wcdrr/prepcom1/Indicator%20system%20for%20Post%202015%20Framework%20June%202015\\_v3.pdf](http://wcdrr.org/documents/wcdrr/prepcom1/Indicator%20system%20for%20Post%202015%20Framework%20June%202015_v3.pdf)

59 This was stated on the online PEP discussion FORUM for this project by an expert from an international organisation.

60 A code of conduct for crowdsourcing was proposed by iRevolution <http://irevolution.net/2014/10/21/code-of-conduct-cyber-crowdsourcing-for-good/>

An additional challenge facing future collaborative efforts is the fact that at present most of the collaboration between the voluntary public and municipal representatives takes place between traditional organizations. Policies are needed to create common platforms, e.g. through joint exercises with established NGOs and new network-like forms of organizations supported by ICT.

At the municipal level, inclusion of NGOs now often depends on personal contacts, and hence policies are needed to ensure their continuation and make such initiatives not coincidental but structural. It should be clear in what way enhancing resilience, taking the role of social networks and social fabrics into account, is seen primarily as a task of rescue services, the broader municipality and/or others.

Members of NGOs may be willing to take responsibility for handling specific tasks, but the challenge is how to satisfy the needs of the municipal representatives and at the same time address the diverse interests and ambitions of the NGOs. New possibilities are being created to reach out to, and gather, people as well as disseminate information, not only by authorities, but also by NGOs and individuals themselves. Also, local NGOs may not have the resources to build and use digital tools. Municipalities need to develop policies on how to use digital media, both to communicate with NGOs and the general public, and in other areas of crisis management, e.g. education and training.

One of the challenges experienced at the local level is related to the transfer of contacts and knowledge between people and generations. Traditional NGOs are often dependent on older age groups, while young people and minority groups are often underrepresented. An inclusive policy is needed to ensure that younger generations, as well as a diverse public, are engaged in different volunteer activities to ensure long term engagement and knowledge transfer, e.g. by engaging people from various age groups and with different skills and experiences. Differences in the resources and habits of citizens in a diverse society characterized by multi-ethnicity, social and educational gaps and ability to use new communication technology must be considered by municipalities.

Yet another challenge is posed by new forms of voluntary commitment, such as loosely connected networks of individual non-organized volunteers and the structural difficulties these bring in their train. This includes insurance and financial compensation during voluntary commitment, as well as how to secure the competence and skills of the volunteers, and how to recruit volunteers. Therefore, policies are needed that solve such needs, and especially the need for insurance.

#### **4.1.3 Diversity and policy making**

**Diversity in the population calls for a differentiated approach in implementing cooperation with citizens. Collaboration may focus on different matters, and different communication means and approaches may be utilized that take risk perceptions and, for example, trust in authorities into account. Although cultural aspects and differences call for specific approaches, ways can be found to make efficient use of expertise gained in different countries. In particular, regions with a similar risk profile could exchange experiences and deploy similar ways of engaging citizens in crisis preparedness.**

Local and cultural aspects, social economic conditions and traditions shape the impact of disasters. Risk perceptions can be very different among different population groups<sup>61</sup>. Perceptions differ, for example, in levels of risk awareness and tolerance<sup>62</sup>, in trust<sup>63</sup>, for example trust in authorities, in experience of disasters, and in attitude, such as anticipation vs. passive acceptance<sup>64</sup>. Often, local vulnerable groups have unequal exposure to risk and access to resources or networks<sup>65</sup>.

Attention also needs to be paid to inclusive approaches in cross-border crisis management, and when assistance is offered across borders it should connect with what local communities need and, to be an ethical response, take diversity into account.

Similarly, media use habits, trust in media and being acquainted with various technologies also need to be taken into account. The UN noted that differences in actors' beliefs, cultures, different capacities, institutional and personal interests, values and other attributes may also "shape and contribute to difficulties encountered in successfully adopting these technologies"<sup>66</sup>.

Although diversity clearly needs to be taken into account, this does not mean that sharing experiences or utilizing approaches used elsewhere is impossible. Some regions may have more in common with others abroad than with neighbouring regions in the same country. In particular, exchange of policies can be useful among regions with a similar risk profile. These regions could consider utilizing similar ways of engaging citizens in crisis preparedness, for example cities near a river vulnerable to flooding, mountain regions with similar erosion risks, or industrial areas with intensive farming and animal-disease or chemical risks. This includes how citizens can be asked to participate in gathering data on interactive platforms, and in reconstruction of the area after a crisis situation has occurred.

## 4.2 Motivation and main aim

The motivation for directing attention to this topic in the policymaking area is that a community approach to crisis management is, thus far, only visible in a fragmented and not structured way. It often depends on single individuals whether such an approach has been taken up or not. Therefore, the main aim is to strongly stimulate the attention of policymakers and remove the barriers to a cultural change in crisis management practice that allows room for bottom-up collaboration in emerging crises<sup>67</sup>. The following table summarizes motivation and main aim for policymaking.

---

<sup>61</sup> Olofsson, A. and Ohman, S. (2014), Vulnerability, values and heterogeneity: one step further to understand risk perception and behaviour. *Journal of Risk Research*, 1-19.

<sup>62</sup> Burningham, K, Fielding, J., and Thrush, D. (2008), 'It'll never happen to me': understanding public awareness of local flood risk. *Disasters*, 32, 216-238.

<sup>63</sup> Falkheimer, J. and Heide, M. (2006), Multicultural crisis communication: towards a social constructionist perspective, *Journal of Contingencies and Crisis Management*, 14(4), 180-189.

<sup>64</sup> Eiser, R.J., Bostrom, A., Burton, I., Johnston, D.M., McClure, J., Paton, D., White, M.P. (2012), Risk interpretation and action: A conceptual framework for responses to natural hazards. *International Journal of Disaster Risk Reduction*, 1(0), 5-16.

<sup>65</sup> Morrow, B.H. (1999), Identifying and mapping community vulnerability. *Disasters*, 12(1), 1-18.

<sup>66</sup> International Federation of Red Cross and Red Crescent Societies, *World Disasters Report 2013 Focus on technology and the future of humanitarian action*, p. 212.

<sup>67</sup> Pandey, B. and Okazaki, K., *Community Based Disaster Management: Empowering Communities to Cope with Disaster Risks*. United Nations Centre for Regional Development, Japan.  
<http://unpan1.un.org/intradoc/groups/public/documents/un/unpan020698.pdf>

<b>Policymaking</b>	<b>Motivation</b>	<b>Main aim</b>
	So far, the community approach is only visible in a fragmented and not structured way	Strongly stimulate attention for public empowerment and remove barriers
	<b>Strategy components</b>	
	<ul style="list-style-type: none"> <li>• Strengthening Disaster Risk Reduction efforts by emphasising community resilience and giving citizens a more decisive role</li> <li>• Involving various sectors such as health and infrastructure in a human-centred approach that utilises social capital</li> <li>• Sensitivity to cultural-specific requirements and diversity in society</li> </ul>	
	<b>Proposed directions</b>	
	<ul style="list-style-type: none"> <li>• Community approaches need continued attention in policymaking, next to public-private partnerships and sector-wise activities.</li> <li>• Resilience calls for activities on all policy levels, but clarification needed on how each level contributes and connects with the others.</li> <li>• Efficient exchange of insights in working with civil groups can be arranged between regions with similar risk profiles.</li> </ul>	

*Table 4.2 Motivation for and main aim of public empowerment policies, strategy components and directions, in the area of policymaking.*

### 4.3 Strategy and proposed directions

Table 4.2 also mentions strategy and proposed directions. Components of the recommended strategy include strengthening Disaster Risk Reduction initiatives by a clear emphasis on community resilience, involving various sectors in a human-centred approach, in a way that is sensitive to cultural-specific requirements and diversity in society.

The proposed directions for policymaking concern the following. Continued attention to community approaches in risk and crisis management can be provided in multiple ways, also including public-private collaboration and implementation of community principles in various sectors. The contribution and inter-relatedness of the different governmental levels involved, need to be clear. Cross-border exchange of insights adds value among regions with similar risk profiles, such as mountain regions with erosion problems, densely populated city areas and riverbanks prone to flooding.



## 5. Research

In this chapter the third area of the roadmap, research, is presented. Here, we address related developments, motivation, main aim and strategies, and propose directions for future activities.



Figure 5.1 The research area in the roadmap

### 5.1 Developments in research – creating a better understanding

The research needs mentioned in this section relate to knowledge gaps found in the literature and challenges experienced in practice or policymaking that call for research.

The sections below concern resilience and the citizen perspective, competence in coproduction, and the theoretical basis of crisis communication.

#### 5.1.1 A focus on resilience and citizen perspective

**There is a need for studies focusing on community resilience and citizen response. The main interest of earlier studies in the security field has been, for example, in response organizations' strategies and tactics, rather than in the needs and actions of citizen groups in crisis situations. To enhance community resilience and citizen response, further research should be done to understand crises in greater depth from the viewpoint of citizen groups and clarify the role of the latter in crisis response, for example by investigating modes of collaboration in detail and scrutinizing barriers to collaboration that have occurred in recent crises.**

In the report 'Meeting the challenge - the European Security agenda'<sup>68</sup>, mission-oriented research is argued for in order to improve "the preparedness of governments, first responders and societies prior to an incident", in relation to terrorism, natural disasters and major industrial accidents. Here, societies are also mentioned.

<sup>68</sup> European Security Research Advisory Board (2006), *Meeting the challenge, The European Security Research Agenda*. [http://ec.europa.eu/enterprise/security/doc/esrab\\_report\\_en.pdf](http://ec.europa.eu/enterprise/security/doc/esrab_report_en.pdf)

The need for research on enhancing the capability needs of security ‘users’ was also mentioned in the report ‘Research for a Secure Europe’<sup>69</sup>. Moreover, community resilience is emphasised as an umbrella concept that calls for a holistic approach to increase social capital<sup>70</sup>.

Previous security projects have primarily related to citizens by addressing one-way information, for example contributing to improved warnings, or communication among response organisations, while improving crisis communication in two-way interaction with the public, with the aim of enhancing community resilience, has received attention in just a few projects, and thus remains in need of further research efforts<sup>71</sup>. Some models on the role of community in disaster response have been investigated, clarifying opportunities but also warning of possible negative effects of community cohesion<sup>72</sup>. Further research needs to “investigate a variety of community engagement methods, including design of social media, taking into account the variations in hazard experience, community make-up and social capital”<sup>73</sup>.

Crisis communication is often viewed from the perspective of authorities, rather than citizens. Similarly, papers linking crisis communication and social media have rarely focussed on qualitative approaches and on how individuals deal with crises in social media contexts<sup>74</sup>. Future research should clarify the self-organization activities and capabilities of citizens, so that response organizations can better connect with this. In addition, modes of collaboration between citizen groups and response organisations could be investigated in recent crises, with a view to critically pointing out barriers to collaboration, legal and policy concerns, and points of cooperation and tension<sup>75</sup>.

In practice, older ways of segmenting target groups by demographic characteristics have been left behind and replaced by an approach focusing on “rings” of involved people. In a crisis situation, those directly affected were considered part of the inner ring, while other rings consisted of those who were indirectly involved, for example through mass media. Now that social media contacts facilitate fast communication from those directly involved to others, the segmentation of target groups seems to have become more difficult. This indicates a need for further research.

Similarly, it has been shown that top-down campaigns are less effective than activities that originate from a bottom-up approach. However, it remains unclear what aspects of inclusion of citizen initiatives explain this difference, and how elements of both approaches can be combined.

---

<sup>69</sup> Group of Personalities in the field of Security Research (2004), *Research for a Secure Europe* [http://ec.europa.eu/enterprise/security/doc/gop\\_en.pdf](http://ec.europa.eu/enterprise/security/doc/gop_en.pdf)

<sup>70</sup> European Commission (2014), *Adaptation Strategies for European Cities*, Ref: ED57248 - Issue Number 1.

<sup>71</sup> Of the 22 security projects in FP7 identified that concerned communication, participative approaches with citizens were primarily found in the projects COSMIC and CrisComScore, with the projects FOODRISC, SARSCONTROL and TELL ME focusing on specific types of threat.

<sup>72</sup> Patterson, O., Weil, F. and Patel, K. (2013), The Role of Community in Disaster Response: Conceptual Models. *Population Research and Policy Review*, 29:127–141.

<sup>73</sup> Burnside-Lawry J., Akama, Y. (2013), Communication research needs for building societal disaster resilience. *Australian Journal of Emergency Management*, 28(4): 29-35.

<sup>74</sup> Wetzstein, I., Grubmüller, V., Götsch, K. and Rainer, K. (2014). Crises and social media: A meta-study on pertinent research and practice. *Human Technology, an Interdisciplinary Journal on Humans in ICT Environments*, 10(2), 95–124. <http://www.humantechnology.jyu.fi/archives/>

<sup>75</sup> National Research Council (2011), Public response to alerts and warnings using social media; a report of a workshop on current knowledge and research gaps. The National Academy Press, Washington, D.C.. [www.nap.edu/catalog.php?record\\_id=1585](http://www.nap.edu/catalog.php?record_id=1585)

Many publications refer to the need for bilateral collaboration between authority organisations and citizen groups, while failing to build a more complete picture of the interplay in a multi-actor network of governmental, non-governmental and private organisations, with various more or less loosely connected individuals.

Furthermore, there is a need for empirical data on the use of social media tools for collaborative data gathering. This can obviously include quantitative approaches, but qualitative approaches from the perspective of multiple users with different objectives for their participation are also needed.

### 5.1.2 Coproduction competence

**The crisis communication competence of both experts and citizens needs to be further studied. Coproducing safety necessitates the spanning of boundaries. This requires competence in interpersonal communication and social interaction from the experts working in response organizations. Also, the citizens involved in crises need multifaceted crisis communication competence. There is a need to better understand what kind of crisis communication competence is required from experts and citizens alike, and how this can be developed, including through informal learning. In addition, cultural differences in crisis communication competence and learning should more profoundly be taken into account.**

In the community approach to crisis management, citizen groups are not seen merely as target groups, but instead as active co-actors in response to emergencies. The importance of collaboration<sup>76</sup> between response organisations and citizens has been underlined in crisis communication. However, only few studies have been done on the related competence needed in crisis management, in order to coordinate and facilitate cooperation between experts and citizens, relationship and trust building, manage tensions and roles, use supporting ICT, and develop ethical principles in the communication with citizens<sup>77</sup>.

Similarly, research could further clarify the specific competence needed by citizens to enable them to work together flexibly and creatively solve problems<sup>78</sup>. This includes social competence, problem solving, autonomy, self-efficacy, and sense of future and purpose<sup>79</sup>. Studying crisis communication competence would be helpful for community resilience in the future, especially if seen as networked competence rather than an individual characteristic.

---

76 Helsloot, I. and Ruitenberg, A. (2004), Citizen response to disasters: A survey of literature and some practical implications. *Journal of Contingencies and Crisis Management* 12(3): 98–111.

77 Laajalahti, A. and Vos, M. (2014), Roadmap for crisis communication competence research. Conference ECREA, 14.11.2014, Lisbon.

78 Norris, F.H., Stevens, S.P., Pfefferbaum, B., Wyche, K.F. and Pfefferbaum, R.L. (2008), Community resilience as a metaphor, theory, set of capacities, and strategy for disaster readiness. *American Journal of Community Psychology* 41 (1): 127–150.

79 Boon, H.J., Cottrell, A., King, D., Stevenson, R.B. and Millar, J. (2012), Bronfenbrenner's Bioecological Theory for Modelling Community Resilience to Natural Disasters. *Natural Hazards* 60(2): 381–408.

### 5.1.3 Integral approach to crisis communication

**Research on crisis communication in emergencies and disasters has focused excessively on case studies of specific crisis events. Similarly, the focus has often been on the use of a single social media application in a particular crisis. Consequently, there is a need for an integral approach. This also relates to research into the development of security-related tools for interaction with citizens, where the budget has primarily been focused on the production of the requisite tools, while content and multiple users with different motives have been under-investigated.**

An integral approach is needed in research to acknowledge that crisis communication is co-created in a network comprising response organisations, other public and private organisations, citizen groups and individual citizens. The perspective of multi-actor networks adds value to the traditional focus on response organisations alone, or studying response organisations collaborating with citizens. It connects with the ‘whole community approach’ mentioned earlier and underlines the diversity of the groups and individuals involved.

A literature search of refereed articles showed a trend towards focusing on particular crisis events. One reason for this may be support from research funding sources inviting research after an event, such as the September 11 attacks, or the 2004 Indian Ocean tsunami. This is visible as a peak in related studies some years after a crisis event, as call and review procedures take time. Leaving the case situation to be investigated more open in the call stage could result in quicker delivery of studies on current crisis events. Although EU funding, more than many other sources, avoids approaches confined to single case studies, researchers often opt for such an approach.

While case studies have value, we recommend meta-analyses of studies to allow generalization beyond a particular case. Furthermore, a broader view on crises is called for, instead of exclusively investigating one (type of) crisis event. Such research efforts could also provide a basis for the all-hazard approach that has been recommended for crisis preparedness in practice-related guidelines.

Similarly, more attention could be given to how the different media are connected and reinforce each other. For example, tweets often link to crisis management websites, news media and other internet sources. This may clarify changes in the roles of the various media over time. A focus on a single social medium (e.g. Facebook or Twitter), often seen in studies, brings partial insights but does not provide a comprehensive view on citizens’ perspectives of crisis events. An integral approach may show how citizens use multiple media and how this affects resilience.

In EU-funded research, multidisciplinary efforts are emphasised. However, research consortia may be more or less adept at delivering a mature balance. Often, the development of the content and research on multiple user perspectives receive little attention and quick assumptions in these areas are made, whereas most of the time and budget is invested in the development of technologies. Consequently, there is little attention for inclusiveness and different ways to relate to diverse publics. Assessment of project proposals should not just take into account if there is any attention for users, but also to what extent a mature balance is visible in the budget.

In multi-disciplinary research the role of the social scientist is often one of counteracting myths about human behaviour. For example, although the panic myth has been falsified in many studies, and we know that contrary to it, most lives are actually saved by ordinary citizens<sup>80</sup>, the myth of the panicking crowd continues to be misused as an excuse not to involve citizens in crisis management and as an excuse not to furnish citizens with information. Therefore, scrutinising such myths will continue to need attention.

## 5.2 Motivation and main aim

The motivation to call for research with a bottom-up perspective on crisis management is that community approaches and citizen perspectives have, so far, received little attention in security research. The main aim in recommending such research is to clarify self-organisation by citizens and reveal barriers to the cooperation of citizens and authorities. The following table summarizes motivation and main aim for policymaking.

Research	Motivation	Main aim
	Community approaches and citizen perspectives receive little attention in security research	Clarify how communities self-organise and reveal barriers for cooperation of citizens and authorities
	Strategy components	
	<ul style="list-style-type: none"> <li>Investigating the interplay between civil actors, authorities, and private organisations in real-life cases,</li> <li>Scrutinising different forms of collaboration with an eye for detail, and utilising meta-studies to clarify the broader picture</li> <li>Counteracting myths on human behaviour (such as the panic myth)</li> </ul>	
	Proposed directions	
	<ul style="list-style-type: none"> <li>Empirical research into the collaboration of authorities with citizen groups needs more attention in the allocation of research budgets.</li> <li>Research can clarify competences for collaboration from a communication point of view.</li> <li>An integral approach should be stimulated in security research, looking beyond technical means and utilizing multidisciplinary research.</li> </ul>	

Table 5.2 Motivation for and main aim of public empowerment policies, strategy components and directions, in the area of research.

<sup>80</sup> Andersen, P.A. and Spitzberg, B.H. (2009), Myths and maxims of risk and crisis communication. In Heath, R. L. & O'Hair, H. D. (eds.), *Handbook of Risk and Crisis Communication*, New York, NY, Routledge, 2009, 205–226.

Perry, R.W. and Lindell, M.K. (2003), Understanding citizen response to disasters with implications for terrorism. *Journal of Contingencies and Crisis Management* 11(2): 49–60.

### **5.3 Strategy and proposed directions**

Table 5.2 also mentions strategy components. We recommend a focus on the interaction of the various actors involved in analysing real-life cases. Different collaborative approaches need to be looked at in detail, while meta-studies can provide a broader overview of insights gained. It remains necessary to counteract myths that hinder collaboration.

This leads to the following directions for future research. We propose more attention be paid to empirical research on collaboration with citizens in allocating research budgets. Collaboration competence needs to be further examined from a communication point of view. Moreover, an integral approach beyond technical means is needed in security research.

## 6. Conclusions and recommendations

Below we provide conclusions and reflect on how the three areas contribute to public empowerment policies.

A robust approach is needed in public empowerment policies for crisis management. All three areas of practice, policymaking and research have an important role in bolstering community resilience and public response. How can these areas contribute? The following figure visualizes an initial answer to that question. It can be read upwards from bottom to top, and is explained below.

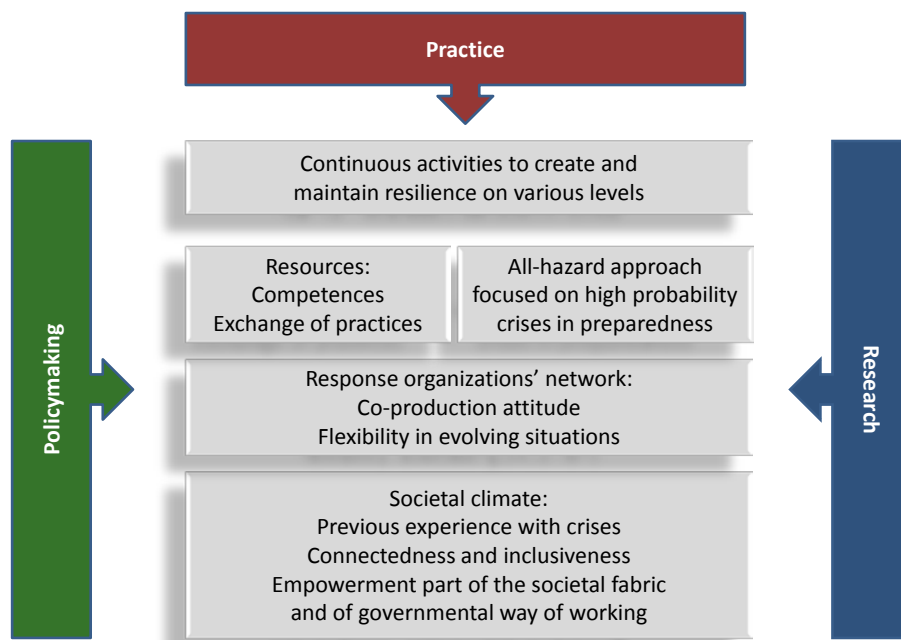


Figure 6.1 Fostering community resilience and public response

The societal climate forms the basis for the empowerment of publics. If previous experience of crises exists in a certain region, this facilitates risk awareness, but it also depends on the culture whether this leads to a passive acceptance of the risk or the feeling by people that they can do something about it. The collective memory may also provide directions for preparedness, and hence storytelling may be one communication strategy that can help reinforce a tendency to act to enhance preparedness. Well connected societies have created bonds that may be helpful in responding to crises, and in an inclusive society more groups will be included in the process.

Community resilience initiatives may seek to strengthen such ties and so increase risk knowledge and skills. Empowerment can be part of the fabric of a society, where people are invited to develop themselves, and the way in which the government is working can also in part be directed to such goals, for example by facilitating participative policymaking on risk prioritization and recovery. Where such an approach is common in various policy areas, it is also more likely to be chosen in the field of risk and crisis management.

In the network of multiple response organisations and other actors involved, a co-production attitude can prevail to a greater or lesser extent. If collaboration with publics is part of the mindset, this is an important building block for resilience. Such collaboration also needs flexibility, a willingness to look at possible changes in the divisions of tasks and patterns of collaboration in emerging situations. Co-production with different publics is particularly needed in a major crisis.

In the case of high probability crises, intensive collaboration is more feasible. Preparation of publics makes more sense when the emphasis is on re-occurring crises, while delegation to authorities and inter-authority cooperation is called for in the case of lower probability crises. In an all-hazard approach to preparedness, all kinds of crises can be included, with the emphasis on high probability risks.

The extent to which resources are available makes a difference, but this is a matter of prioritisation. Community resilience-enhancing activities need the involvement of many policy levels, organisations and groups. It will not necessarily follow naturally from just one organisation's interaction with publics, as the way in which resources are allocated may hinder what could be more beneficial at an aggregate level. Such involvement needs broader scope. To enable crisis management to function as a co-production of various professional and volunteer actors, various competences are required, including communication capabilities. Cross-border exchange of practices can facilitate finding suitable ways to integrate this approach into the (inter)national and local ways of working. Good practices can inspire others, while pitfalls should also be addressed in this learning process.

In this roadmap, we recommended directions for public empowerment policies for crisis management. The focus was on three areas, practice, policymaking and research, was along with cogent reasons for the need of public empowerment policies, and how we envisage their main aim and the components of such a strategy.



*Figure 6.2 The three areas of public empowerment policies for crisis management*

All three areas are of importance and the areas strengthen each other. For the practice area, we stress that public empowerment can be enhanced by exchange of best practices, that preparedness activities need to be re-invented in new ways to sustain an adequate level of attention to related issues and maintain resilience, and that technology needs to be used in a goal-oriented way to support community resilience.



Some challenges experienced in practice can only be overcome by making progress in the policymaking area. Here, public empowerment needs attention and at various levels. It should be clear how the national level contributes to the local and how diversity in the population is taken into account.

Issues experienced in the practice and policymaking area call for research efforts. These should to a greater extent be geared towards bottom-up approaches involving citizens that clarify how safety is co-created in multi-actor activities and identify barriers to collaboration processes. Co-production competence needs to be further explained, and the importance of an integral approach to research is stressed.

In the matrix 'Public empowerment strategies for crisis management', shown in Table 2.1, a complete summary overview was provided. In the table below, we repeat the proposed directions for all three areas.

Public Empowerment Policies for crisis management	
Practice	Proposed directions
	<ul style="list-style-type: none"> <li>• Collaboration with civil groups to be strengthened, together with public-private partnerships, in building societal resilience.</li> <li>• Public education campaigns need to be rooted in strong community involvement, and utilize an all-hazard approach with a focus on local high likelihood risks.</li> <li>• Strategies are needed on how social media platforms and smart phone applications can foster public engagement in all the phases of a crisis.</li> </ul>
Policymaking	Proposed directions
	<ul style="list-style-type: none"> <li>• Community approaches need continued attention in policymaking, next to public-private partnerships and sector-wise activities.</li> <li>• Resilience calls for activities on all policy levels, but clarification needed on how each level contributes and connects with the others.</li> <li>• Efficient exchange of insights in working with civil groups can be arranged between regions with similar risk profiles.</li> </ul>
Research	Proposed directions
	<ul style="list-style-type: none"> <li>• Empirical research into collaboration of authorities with citizen groups needs more attention in the allocation of research budgets.</li> <li>• Research can clarify the competence required for collaboration from a communication point of view.</li> <li>• An integral approach should be stimulated in security research, looking beyond technical means and utilizing multidisciplinary research.</li> </ul>

Table 6.1 Summary overview of proposed directions for the practice, policymaking and research areas.

Together, the three areas of public empowerment policies and their proposed directions provide a solid basis for developing community resilience and citizen response. A comprehensive approach is needed because the current approaches are fragmented and public empowerment initiatives are currently at very different levels in the EU member states.

## **Appendix 1. List of abbreviations**

DRR	-	disaster risk reduction
ICT	-	information and communication technologies
IDRC	-	International Disaster and Risk Conference
EC	-	European Commission
EP	-	European Parliament
EU	-	European Union
FEMA	-	Federal Emergency Management Agency, USA
NGO	-	non-governmental organisation
PEP	-	Public empowerment policies for crisis management
UN	-	United Nations
UNISDR	-	United Nations Office for Disaster Risk Reduction
UN-OCHA	-	United Nations, Office for the Coordination of Humanitarian Affairs