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SECTION 3: INCLUSION IN DISASTER RISK REDUCTION: ENGAGING WITH DISASTER AFFECTED GROUPS

1. What is community?

Author: Robert Coates

Community-based approaches are now a fundamental pillar of disaster risk reduction and response. This was made explicit in the Hyogo Framework (2005-15), which directed global policies and initiatives with the by-line: Building the Resilience of Nations and Communities to Disasters. Vulnerability and resilience work is now increasingly measured and perceived according to more or less-cohesive communities and social support networks.

Yet it is not so clear what a 'community' really means. Are communities the close, cohesive units they are imagined to be, and does this even matter for disaster professionals? Rather than to assume that the community in question presents the same characteristics and motivations across its members, the cities section of this handbook advised us to unpack 'the social mechanisms that actually create resilience in a community'. This is a key point in what follows.

- The first half of this chapter briefly looks at the idea of community,
- The second half considers what community aware behaviour can add to disaster risk reduction work. Above all, here we think through what an improved understanding of community does to deliver better risk reduction and response.

Figure 41. What is community?

1.1. Questioning community

Like 'culture' itself, the word community is slippery – it means different things to different people in different places. Communities are indeed often perceived from outside rather than from within: migrant communities in European cities can easily be thought of as individual units, with common languages, identities, or customs. This may contain a grain of truth but it may also be an easy generalisation that papers over numerous cracks. The differences among each groups' members may

in fact be much more pronounced, with ethnic, political, linguistic, religious, socio-economic or gendered differences pulling people in different directions, and making their communication and behaviour in disaster settings harder to predict.

But many of these 'intra-community' differences can of course also apply to any group of city residents. While ethnic, linguistic, religious, or class ties might very often be strong indicators of community in European cities, the extent to which members of these groups agree amongst themselves on the best approach to preparedness, rescue, rebuilding, and future resilience is an open question.

Communities very often differ in their access to power holders in politics or business – and in many cases government actions on risk reduction are not spread evenly according to, for example, risk of flood or earthquake damage in each location. Rather, timely delivery of services and infrastructure can depend as much on a group's ability to lobby for its own interests as it can the actual cost of project implementation.

Authors have often used the term social capital to explain the bonds that community members have in common. Following research in both Italy and the United States, Putnam (2000) viewed the quality of community as lying within social networks. 'Weak ties'—as opposed to the blood ties of family—described the practices of trust and understanding that were built around the social networks of church, work, and neighbourhood activity. The stronger these 'weak' ties were, the more community members relied on each other for support, planning, and organisation in difficult situations such as crises and disaster.

Yet these community ties should not be seen as straightforward, or as things that outside initiatives can build and produce automatically. While community is certainly about shared interests and values, it is also about place – that is, the experience of living together in a proximate area. Looking specifically at marginalised, working class districts, renowned social theorist Pierre Bourdieu called this the 'site effect': people might have origins in very different cultural or ethnic backgrounds but come together as a community by nature of dealing with the same local issues and sharing the same local memories. Be it their employment and housing situations, political or social campaigns, or a trauma, tragedy or disaster, people were brought together. Social and cultural capital could act as constraining forces for community development as much as enabling ones. 'Essentialising' a particular community (say, Roma people, slum dwellers) as 'problematic', needy or wanting therefore causes problems as it fails to deal with the issues that pulled the community together in the first place.

In a more recent essay, Noortje Marres (2005) declared that Issues spark a public into being: communities are not 'pre-given' things but are formed, develop, and then change according to the issues (in this case, disasters) that unite them in a common goal.

1.2. Community and disaster interventions

The above discussion helps us when considering the role of external professionals in disaster situations. We should not be romantic about the pre-existing ties that bind a disaster-affected community together, but maintain an awareness that social cohesion and mutual acceptance of other community members helps people to recover from disaster impacts. With this in mind, we must work to encourage and strengthen community bonds – not only for the mutual help that each member provides, but for the purpose of strengthening the community's collective ability to access political, planning, and economic decision makers in a unified approach into the future.

In a wide-ranging survey of flood victims in the UK, Butler et al. (2016) found that negative impacts on individual well-being were at their most critical point one year after flood events. A large part of the health problems experienced were due to people feeling a sense of isolation from those making decisions about their future needs – whether in terms of social-organisational needs or local

infrastructure. People felt like they were coping alone and that they were powerless to take actions to better their situation.

Critical to this were people's attachments to the places in which they lived. Where adapting to future flood risk required significant change—both to infrastructure design and social organisation—people were more resistant to change and wanted to preserve traditional practices and landscape characteristics. People demonstrated little power in getting across the priorities they felt themselves in order to preserve place attachment. This directs us towards sensing a balance between 'hard' infrastructural resilience work and rebuilding communities' attachments to the places in which they live in order to maximise risk reduction outcomes. Doing the correct survey and conversational work across community members, and thus including their voice in disaster management decision-making was one of the projects' key findings – as was the need to take seriously local peoples' descriptions of the places in which they lived, across both landscape, social and political factors.

Key ideas can therefore be considered for engaging with communities in the disaster risk context:

- Studies on social vulnerability and resilience point to the important place of community workers in giving support, disseminating information, and connecting communities with governance institutions. In emergency situations, and throughout the post-disaster period, use of these workers should be comprehensively evaluated and supported in order to increase wide ranging benefits across communities.
- The writing of flood plans, emergency evacuation procedures, or timelines for disaster recovery should be written together with local communities, both to gain their perspectives and to inspire the communities' own conversations about future planning and community connectivity.
- Social mapping can be undertaken to gain insight into how community members perceive their own situation and their relationships with other key stakeholders. This can produce surprising diversity of bodies to draw on in both disaster preparedness and response, and more critically still, reveal the relative importance local actors give to state, private sector, NGO, political or foreign bodies.
- Assistance can be given to communities in how to influence decision makers and draw attention to their situations. Uses of the media, and social media, may be critical. Gough (2000–2002), writing on New Zealand, reported that government agencies undertook risk perception studies, where residents explored how to create communication channels to increase dialogue between themselves and government bodies responsible for disaster situations.
- There is a tendency for community leaders, often men, to speak for everyone, but less involved parts of communities, including women and young people, quite often bear the greatest brunt of disaster impacts. Activities undertaken with youth in the past have included drama role-plays of disaster evacuation plans, or flood or earthquake preparedness strategies.

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2. Engaging with local culture

Author: Mona Regad

Because cultural aspects are present at multiple levels of an organisation, of a group and of an individual, culture can be elusive and overlapping, which makes it difficult to 'notice'. Misunderstandings can happen between people from a similar culture, so between two groups originating from a different faith, profession, or country, they are likely to have much greater consequences. And yet, recognising it is challenging.

In disaster-affected settings, a disaster manager will approach his/her work with a mindset that differs from his/her target groups. International organisations and NGOs have a culture of their own, which trickle down into their vocabulary and procedures. This can translate for example in vulnerability assessments, in a context where people do not perceive themselves as 'vulnerable' but instead, use a diversity of resources and strategies to cope with adverse situations. Engaging with local communities necessitates to understand and acknowledge how the community responds as a whole and at the individual level.

2.1. Recognising culture

The first step to recognise culture in others is to recognise it in yourself. As a disaster management practitioner, it means being aware of your own culture and of the factors influencing your perception and understanding of events, relationships, speeches... Your experiences and training shape your language, ways of communicating, norms and practices. These bear little resemblance to those of the disaster-affected communities you work with. All the rules, conventions, and behaviours we accept are governed by our culture and express themselves as bias. Accepting these biases is necessary to overcome them and to work effectively with groups originating from another culture.

How to get to the core of the onion – Lessons from fieldwork

In a field research endeavour, a young researcher experienced how to work around biased and socially desirable answers. Fieldwork took place in a distinct cultural setting, namely among Buddhist communities in Ladakh, India. The research aimed at collecting perceptions about weather and climate change in a region which experienced annual occurrences of flood disasters in the last 7 years.

Figure 42. Engaging with local culture. Rig sin gonbo in Igu, Ladakh, India.

Every colour represents a different virtue: power, knowledge and wisdom. In this part of the village, there are four of them on the mountain slopes, where they are built to protect villagers from disastrous events such as flash floods.

Yet, the research design did not show specific cultural awareness. Many questions revolved around the notion of climate change and people's perceptions of it in their village, such as "Why do you think the weather is changing?". The first time respondents were asked this question, their answers often involved the use of Western scientific jargon such as "carbon or CO2 emissions", "global warming" or "climate change". These answers were characterised by a lack of precision, which suggested to the researcher that this speech was not belonging to the respondent but an echo of their education or from what they collected from the media.

Not satisfied with these answers, the researcher decided to ask the question again at another moment in time. This is where answers slightly differed, as the jargon was still present, but people resituated global phenomena at their local scale. This is how "global warming" was explained as the outcome of increased vehicle traffic at a local mountain pass and of the consequent pollution. It was at that moment that was understood that people used sense-making processes to bridge the gap between their own knowledge, their beliefs, and what they heard from external sources or what they thought the researcher expected from them.

By repeating the same question over time to the same respondents, each time getting closer to the core of their values, the researcher adapted her research to the local context, where beliefs gained a prominent role. In the end, people evoked their own relationships with nature, and the interconnectedness of human and natural systems, as the cause for changing weather conditions. It originated from their cultural Buddhist background.

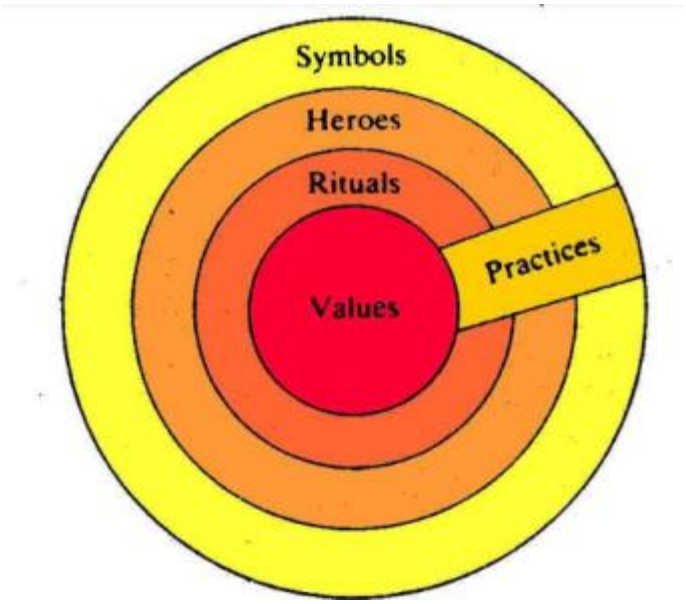

Figure 43. Engaging with local culture

Hofstede's ''onion'' model of culture (Hofstede, Hofstede 2005)

To recall Hofstede's onion model of culture; where culture is compared to an onion, the aim of these questions was to reach the inner values, the meaning people attached to change in their environment. The outside layer of the onion, of a culture, is represented by symbols, which change at a fast-paced rate. Another layer, closer to the core, contains the rituals and cultural habits, which change slowly. Values stand for the core of a culture and do not change much. Although some can seem out-of-fashion, or traditional in a modern world, they still hold a subconscious power to individuals and groups.

Uncovering these beliefs helped the researcher to understand the local context and to place the climate change issue within the local knowledge. It permitted to reflect on the ways local authorities and NGOs communicate about these issues, often in a manner that does not enable people to personally engage with it and thus prevents them from taking action. Networks of support were studied, and religious authorities had a privileged position in the villages both in terms of capacity to reach out to people and in their capital of trust.

"Not everybody goes to school, but everybody goes to the monastery" was one of the key statement given by a respondent, which underlines the need to work with community representatives, including faith leaders or customary chiefs who can sometimes not be documented. Getting these insights from the people had been made possible by accepting not to stick to a single expected answer and to introduce flexibility in the research process. It is one example, among many, of positive outcomes emerging from collaborative intercultural work.

2.2. Understanding vulnerability from the perspective of aid recipients and acknowledging existing capacities

Each perspective on vulnerability implies a different strategy for DRR. By understanding vulnerability as a question of infrastructure or nature of the hazard, technological or scientific solutions will be sought. If vulnerability is understood regarding costs and income, then it involves resolving economic and financial issues. Locating vulnerability within societal structures finally suggests looking at the political domain. These dimensions of vulnerability are often interrelated and targeting them in isolation can actually reinforce the vulnerability pattern.

Integrating culture in disaster management and recognising different perspectives towards vulnerability are modes of action taking part of the wider framework of bottom-up approaches which put communities at the centre. Community-based Disaster Risk Reduction (CBDRR) gained popularity

in the late 1990s and since then characterise interventions aimed at reducing people's vulnerability both in the short and long term. At the core of CBDRR are participatory methods and the acknowledgement of capacities in place and of local knowledge.

Methods that are part of the CBDRR framework are:

- Vulnerability and Capacity Assessment (VCA): as part of disaster preparedness, it aims at measuring people's exposure to and capacity to withstand natural hazards before setting up action plans to prepare and respond to the risks identified
- Risk maps produced by population: besides providing useful inputs for the design of early warnings and evacuation measures, for example, risk mapping can open a space for dialogue between various actors of a community

Because all these methods are participatory, they necessitate to engage with communities and sometimes involving them is challenging, especially in in circumstances where different cultures encounter.

3. Culture and how disaster responders (do not) engage

Author: Peter Tamas

3.1. (Mis)recgonising Culture

We make snap judgments about culture all the time. When people talk about culture, what they are really saying is mostly that some people are different and usually that this difference is bad or confusing. There are three steps here:

1. We draw a circle around a group of people
2. We say they are all the same in some ways
3. We make a judgement about those ways

This is all perfectly normal. Early on in history we needed to decide quickly if what we were seeing/hearing would eat us or if we should eat it. We learned early to look at a member of a group and make quick simplistic judgements about that individual. If we had the time and if it was safe, then we might go carefully sniff the individual to see if they were the same or different than we expected. This same strategy is with us today. In our normal day-to-day lives this quick classification and then efficient decision making works good enough. In fact, most of the time we are not even conscious of making these sorts of decisions.

Today disaster responders have to deal with many different kinds of people. We will take a quick glance and make initial decisions about the characteristics of that group and, on that basis, decide what we can and should do. If we are going to deal with people from that group, we will use our group based classification as a starting point for figuring out who that person really is. While this sort of decision making serves us well most of the time, there are a few ways in which they get us in trouble.

1. The rules we have for classifying people took many generations to evolve. They might fit the world of our grandparents. When we are in new circumstances, as we are in any major European city, and we use old rules to classify new people, they will fail in ways we can't predict and often can't even see.
2. We are invested in our rules. We don't like it when they are wrong and we will persist in using them even when they don't fit quite right.
3. When our rules don't fit quite right, rather than parking the rules and starting from scratch our initial response will often be to get a bit grumpy and try to make them fit.
4. Once we have figured out that they don't fit and we start from the ground up, the group based decisions we make will still be sticky. It will take time and effort for us to adjust
5. When we are under stress, we don't think twice. We will revert to simple rules and stick with the group based decisions they suggest

6. Most of what is happening here isn't conscious. This means that just learning will not fix what we do. Learning happens between our ears. Most of the decisions we make here are more gut-level intuitive calls.

It is possible for us to learn new things. We may, for example, learn how to work with people who are really quite different, people who behave in ways we initially thought were not good. This sort of boundary crossing work has to be done in consort by people on both sides. This is extra work that takes time and effort. In normal circumstances this if fine. We have the time and head space required to reach out, to make links, to figure out what is going on and how to work together. Under stress, however, we will all revert to the familiar and the efficient.

Putting this all together, all of the work that we do figuring out contact people in distinct groups, all the time spent going to meetings, all the time we spend building trust, may very well come to nothing. When the disaster strikes, we will all tend go back to are primal thinking: making quick judgments, clumping people into groups that are easy to think about, sticking to the familiar and doing what makes sense to me and those who think like me. Under stress our natural reaction is to kill off all of the careful thinking, all of the nurtured relationships, all of the individual understandings that let us see people rather than classes. In a disaster, our natural tendency is to crawl back into the culture, the shell, that is most familiar.

The only way to get to the point where under stress we go in the right direction is through conditioning. This is well known to the military whose training revolves around the saying 'train as you fight, fight as you train.' The only way to work effectively with diverse cultures in disaster is to fully integrate that diversity into preparation…so much so that it becomes impossible to think any other way.

3.1.1. Implications

To work effectively across cultures both disaster responders and members from the diverse groups who make up their cities must be conditioned. This means that, at every step of the way, we must not only be sharing or informing, we must be behaving in ways that build and use the relationships and the trust on which lives will depend in a disaster. This will be difficult because conditioning is far more expensive than training.

When the disaster is not pressing, with the exception of one organization, it is very hard to justify the time and money required for conditioning. Armed forces know about conditioning. They regularly second staff to work in other organizations. These other organizations are pleased to host these seconded solders. Very rarely, however, do other organizations second staff to work with Armed Forces. Further, in the military, approximate 1/3 of staff hours are spent in some form of training and this does not count all of the rituals that structure feelings and behaviors in ways that are useful for combat. This ratio is not supportable in almost any civilian organization. In civilian organizations, we are paid for what we are doing today and we are hired because we know how to do it. This means that our time is fully committed to our immediate tasks. Resourcing for current task loads means that we do not have the time required to design and undertake the sort of conditioning that will save lives when it matters.

It is difficult to talk about building conditioning into civilian organizations but it is possible. It can be made part of our jobs, our job descriptions, our performance review, our organizational culture. Our jobs can pay us to engage and our organizational culture can encourage us to find comforts in the diverse communities in our cities. This may be as simple as where we choose to get lunch together, who we work with on the annual litter picking day or where we recommend incoming colleagues look for housing.

It is, however, illogical to talk about building conditioning into the diverse communities that make up our cities. People do what makes sense to them today and our organizations can change what makes sense so that we are nudged towards engaging across difference. This does not work in private lives.

The only way to build conditioning into the cultures of those we wish to serve is by going to them, by working with them on their terms to do what is important to them today…recognizing that what is important to them today may very well not matter all that much to us. If we do this for a long time we will build relationships, we will build trust. Working with each other will become part of who we are It is precisely the relationship and the trust that will matter in a disaster. Police have known this for at least a generation. The whole institution of community policing was and remains a seismic shift in what it means to police. More importantly, it is a fundamental change in what it means to be a police officer.

If we are to work effectively in our increasingly diverse and always changing cities, we can learn from the police and the armed forces. With the armed forces, we must make the time, the resources and the effort required to condition ourselves such that, when stressed, we behave appropriately. With the police, we must change how we are in our cities so that the time we spend those who become our neighbours and friends alters their conditioning such that the, under stress, also behave appropriately.

If we get culture right, then the improbable and the illogical becomes instinctive.

- we will leverage the bonds from which the diverse communities that make up are cities are built.
- we will see ourselves as part of those communities, as supporting them so that our new friends and neighbors, when they respond first they will do so in a way that both preserves lives and integrates with the professional response that will quickly follow.

3.2. Culture: why it is an asset

When we are under stress, as in a disaster, we will revert to known familiar patterns. These patterns tell us where to go for information, who to trust, what we should do and with whom we should do it. They will tell us who we must look after and they also tell us who is obliged to look after us. Most of these patterns will tell us to trust, to share with, to help, and to be helped by the familiar. All of this happens without our thinking. These patterns are conditioned. This means that when there are distinct groups in a city they will have strongly conditioned patterns that link them to other members of their group. These patterns are usually difficult, if not impossible, for outsiders to see. They, however, are far more durable that what people have learned, for example, in training sessions in which people are told about early warning systems for floods. This conditioning will survive a generation or two after a population immigrates. If disaster responders rely on training and information, they will likely fail. This information provided by outsiders is easy to reject. If disaster responders partner with members of the community and if, together, they become part of the tendencies, the conditioning, of that population, then they we will be able to leverage the assets, the strengths, the conditioning of that community so that they both look after themselves better (they will be first responders) and such that their actions are more compatible with those of the professional disaster response community.

3.2.1. Why our comfort zone matters and what to do about it

When we have time and energy and when we are feeling relaxed and competent, we willingly work at the edge of our comfort zones. This is when we are happy to try chicken feet stew for supper and shisha for desert...and find both desirable though perhaps not in the same night. The minute we are stressed, however, we will snap back to where we are comfortable. There is no way to avoid this snapping back and it would be foolish to try. When we are in our comfort zone we can think and act faster. We get in trouble when our comfort zone is not where we need to be to perform well. The only strategy available is to change what we find to be natural, to change what is comfortable, to change what counts as our comfort zone so that it is where we need to be when we are under stress.

The things we do, and the things that we do not, talk about – they matter.

Professionals do particular things in particular ways that are recognized to work. In addition, we are professionals in part because we talk about the right sorts of things in the right sorts of ways. Sometimes having some topics off limits is a good thing. There is no reason in professional conversations to talk about how bloated and constipated you are today…unless you are an adult performer preparing for a scene in which your bowl condition matters. While both may be very important, neither belong in most professional discourses. What counts as professional, like our culture, has taken generations to form and it changes slowly. Some of the things that we talk about do not help and there are some things that we avoid discussing that we should talk about. For example, both police and the military are still figuring out if and how to talk about mental health. Real men, they are learning, do cry and this, it seems, might be good to make part of professional talk. When disaster responders look at other communities there are all sorts of things that we do not think and/or do not say. We might, for example, label a Muslim community in some slightly insulting way and not talk about how in makes us uncomfortable to deal with women wearing head-scarves: it might be OK to label others but not OK to talk about our own discomforts. These patterns matter. Talking about others in simplistic terms draws lines that then become harder and harder to cross and not talking about our own discomforts makes it impossible for us to take the first, and necessary, step.

It is difficult to identify and deal with 'unmentionables' and 'undiscussables'. For those who are in a culture, one way to begin to find undiscussibles is to look for discomfort. For example, mention of the adult entertainment industry in the previous paragraph might have made you uncomfortable. This discomfort is a flag that we have talked about something that is not proper. In most situations our reaction to mention of an undiscussable is analogous to a loud belch at the dinner table: we don't see it, we minimize it, we make a joke of it, and, whatever we do, we quickly move on and pretend it did not happen. These strategies minimize disruption. They help us keep on with business as usual. Too bad for us that our business as usual is not good enough. If we have decided that the way we do things is not good enough, when we trip over an undiscussable the correct strategy is to stop, to flag it with a statement along the lines of 'I just saw/heard a belch. That didn't feel right.' At which point you might learn that the belch you heard was the highest praise possible for a delicious meal and that the minimizing the silence it occasioned was a potential relationship-disrupting insult.

Having undiscussables makes our work efficient. It reduces what we can and need to think about. They work great until we are in a different world. The minute we are in a different world, we need to question what we do and do not talk about. Fundamental to these discussions is something called 'metacognition' (https://en.wikipedia.org/wiki/Metacognition) which is fundamental to something called the relational model of intercultural communication (http://www.sciencedirect.com/science/article/pii/0147176789900138).

3.2.2. Proxy indicators

When we look at people we make intuitive judgements about them. The Dutch, for example, say 'trust me by the blue of my eyes.' In this case blue eyes are a proxy indicator of trustworthiness. We have all sorts of proxy indicators that matter in a particular culture: the firm handshake, the straight gaze, the confident voice, being male, being clean shaven, being well dressed, using appropriate vocabulary, driving the right car. None of these measure what we are actually interested in. They, and many others, might work well enough in some contexts. When we move to new contexts, however, these proxy indicators might not work and we won't know when they fail. This means that when we are working in new environments we can't trust our intuition. Intuition, however is very convenient. It lets us make fast decisions that, when in the right circumstances, work well enough. Intuition will get us in trouble unpredictably when we are not in familiar circumstances. This means that we have to make every decision deliberately. This takes time and effort. In a disaster, when the unthinkable happened nevertheless, we don't have time and we are exhausted. This means that we

will not be able to make deliberate decisions. We must, therefore, train our intuition before a disaster so that the proxy indicators we have are good enough for the full diversity of communities we will work with in a disaster. This will take time and energy up front.

4. Informal coping and adaptive capacity during disaster

Author: Jeroen Warner

''We must remember that the very definition of a disaster, that circumstances have exceeded a community's ability to cope, implies that some form(s) of improvisation will be necessary'' (http://understandingkatrina.ssrc.org/Wachtendorf_Kendra/)

Most people are saved and rehabilitated by non-experts in case of a disaster. It inevitably takes time for the police and fire brigades, to arrive onsite and by the time the international search and rescue teams are around, only some additional people will be saved – which is of course still really important as every life counts. If most people are not saved by professional responders, people rely on their relations (social capital), on their organisational powers, on the environment, on their access to money and material resources, on their political connections, and on the general goodwill a disaster creates.

People tend to display pro-social behaviour in disaster – disaster tends to bring community members together and make people temporarily overcome their differences. Group membership can promote altruistic behaviour. Helping enhances one's self-esteem (being a good citizen) and group esteem.

In 1995 the Dutch Ooij polder, a green area housing 15,000 people, was preventatively evacuated in light of a river flood on the Rhine - which never came, but you don't know that in advance. An 8 hour traffic jam was soon clogging the roads. Several people with local knowledge went by bicycle and boat. Farmers helped each other evacuate livestock and the cooperative Rabo bank, which the majority in the area were clients of, provided easy facilities to tide business and operators over the evacuation period.

People will use their ingenuity to restore essential production and infrastructure often in informal way to save themselves and others, sometimes recklessly. Informal coping can mean the repurposing of infrastructure including formal but also informal, sometimes illegal channels – smugglers and hawkers who know the highways but also the byways. Police officers may well be aware of these channels, but be loath to share that knowledge rather than deal with it themselves as they are trained to report and deal with criminal activity. But sharing this knowledge with other responders may promote a more adequate/effective response.

Disasters tend not to stick to the disaster scenario, and disaster responders tend not to stick to the script to take action. Planners and rescuers find themselves compelled to operate outside their comfort zone. However, not everything is wholly different. When people perform non-routine tasks and new social structures emerge, these are normally quite closely related to existing structures. This makes improvisation to a degree predictable. People rely on their repertoires and networks. Yet there is surprisingly little 'planning for improvisation' after disaster.

Persons in authority may not necessarily be the ones whose judgment is trusted. It is important to know and understand informal local opinion leaders that can be 'ambassadors' in times of crisis. As communities tend to be differentiated, there is unlikely to be only one person everybody trusts. But since they tend to be gregarious people, one opinion leader may well know others from other communities.

In your own organisation there are likely to be people who naturally reach out to others outside the organisation, and can conduct more informal contacts with informal leaders (https://en.wikipedia.org/wiki/Boundary_spanning).

This is helpful for multiple reasons. Wachtendorf and Kendra claim a cultural change towards "Learning organizations" is necessary. To learn, you have to reflect both on your own organisation and note what others are doing – which means going beyond a 'not invented here' mentality, While that sounds easier said than done, fortunately there are people to whom looking across institutional borders comes naturally. So called 'boundary spanners' in organisations look outside what others are doing and look for trends and opportunities. Finding these people and acknowledging what they do and know is likely to pay off.

4.1.Psychological coping

Another aspect of coping is how people deal with disaster psychologically. Despite the current-day tendency to relabel disaster management to risk management, suggesting risk can be dealt with rationally, disaster is traumatic and life-changing to many. A technological or human-attributed disaster makes people lose their faith in technology and in government,

For example, after the fireworks disaster in Enschede in 2000 part of the Turkish migrant community felt abandoned and lost faith in authorities. on civil rights to restore law and order, excessive measures will make people distrustful of the state. Also while much less frequent than generally believed, looting does take place and the fear or rumour of looters makes people distrustful and less likely to cooperate.

After disaster most affected people tend to refuse offers of mental help, professionals most of all; tirst responders are unlikely to accept help them deal with posttraumatic stress – but it is clear many will need it. A museum exhibition in Enschede 10 years after the 2000 fireworks explosion in Enschede however showed that while a neighbourhood may recover and see positive transformation, some individuals who had faced death develop chronical symptoms, such as substance dependencies and depression, and needed medical and psychological help ten years after.

Still, public health research immediately after disaster has proved ineffective, as people are too focused on regaining control of their lives. We have to take the longer view.

5. Vulnerability mapping

The more we open up to others, to nature, to the world, to enter into relationships and exchange, and give up our autonomy and sovereignty, the more we expose our self to vulnerability.

Vulnerability is defined as a predisposition to be (negatively) affected; the degree to which an adverse event can wound or hurt a person, group, structure or network. "Vulnerability defines the characteristics of a person or group and their situation that influence their capacity to anticipate, cope with, resist and recover from the impact of a hazard" (Wisner et al, 2004).

Reducing vulnerability would seem to be our first impulse. But guarding our autonomy also means cutting up our lifelines. To be social is to be vulnerable. Just like we can only reduce risk to absolutely zero by not breathing, we will have to expect a degree of vulnerability in order to leave a fulfilling life.

That said, we can seek to reduce unnecessary vulnerability. If disaster risk is the relation between probability (of an adverse event happening) and vulnerability (exposure to its harmful effects), the latter can often be dramatically reduced.

Indicator-based Social or Socio-economic Vulnerability (SeVI and SoVI) are useful approximations, but they tend not to take culture into account. Many vulnerability and damage assessments reduce losses to material values.

Below we briefly note several ways of accounting for culture in vulnerability – and vice versa.

5.1. Safety culture in organisations and organisational networks

As management guru Peter Drucker has quipped, 'Culture eats strategy for breakfast'. In other words, no matter how good your safety strategy, if the values and perceptions in an organisation are not aligned with that strategy, you're lost.

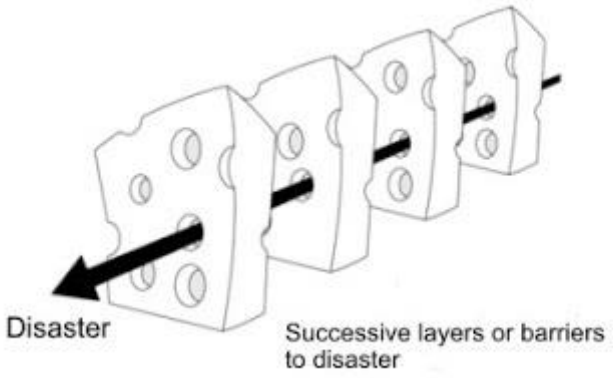

Figure 44.Vulnerability mapping

The culture ladder shows how organisational culture can evolve from pathological (let's not get caught) via reactive and proactive to generative (safety is our business). The assumption is that where safety becomes 'the way we do things around here' there is little incentive to neglect defenses (see: http://publishing.energyinst.org/heartsandminds/culture). These defenses can be represented as a 'Swiss cheese'.

This metaphor sees vulnerability as gaps in an array of protective defences against hazard (economic, organisational, technical, cultural...). Each of these inevitably has 'holes' as nobody's perfect and zero risk does not exist. The challenge is not to make these holes align. But while some holes are due to incidental errors and actions, many are ingrained in the system – production pressure, unhelpful organizational structures.

In complex systems, the defences will inevitably be gaps – nothing is unbreakable; the challenge is to avoid their alignment. This requires the promotion of a safety culture. This is a long-term commitment to constant improvement. This starts with a 'no blame' rule: everybody makes mistakes and some things that go wrong cannot be attributed to any one; the all too human tendency to cover up or deflect errors means nobody learns in a high-stakes environment.

A safety culture, then, cannot be imposed, but certainly management and employees can be encouraged to work with rather than against safety culture by banking on positive cultural aspects and reducing negative ones, so below:

CULTURAL THREATS NEGATIVE DIMENSIONS	**CULTURAL DEFENSES** POSITIVE DIMENSIONS
Production Pressure	Committed Safety Leadership
Complacency	Vigilance
Normalization of Deviance	Empowerment and Accountability
Tolerance of Inadequate Systems and Resources	Resiliency

(source: https://www.neb-one.gc.ca/sftnvrnmnt/sft/sftycltr/sftycltrsttmnt-eng.html)

5.2. Vulnerability, culture and development

Terry Cannon (2015) argues that the neglect of culture has added to people's vulnerability. For social groups, immaterial aspects such as (loss of) social and political trust strongly affect the speed of people's recovery and rehabilitation. Religion plays a role in this. A church, temple, mosque, synagogue is not only a potential shelter, but also can give solace and meaning to people struck by disaster. To the contrary, the loss of trust in institutions or loss of identity can have long-term impact, as it is reflected in turn in their physical an mental health and attitude.

As Kenneth Hewitt has argued, cultural frameworks moreover affect power distribution, access to resources, exposure to disaster. As a consequence, they drive vulnerability. ActionAid lists “class, occupation, caste, ethnicity, gender, disability and health status, age and immigration status and the nature and extent of social networks.” as vulnerability factors. Changing these factors means “altering the way that power operates in society”.

We know that coping capacity is heavily affected by power differentials (Blaikie et al 1994). For the marginalised, the ‘degrees of freedom’ are strongly constrained. DFID’s Sustainable Livelihoods model conceptualises this as access to various 'capitals”: social, financial, natural, physical and social. Shocks such as quick-onset disasters or trends (say, 'creeping catastrophes' such as erosion) impact all of these and affect people's livelihoods (See Figure below).

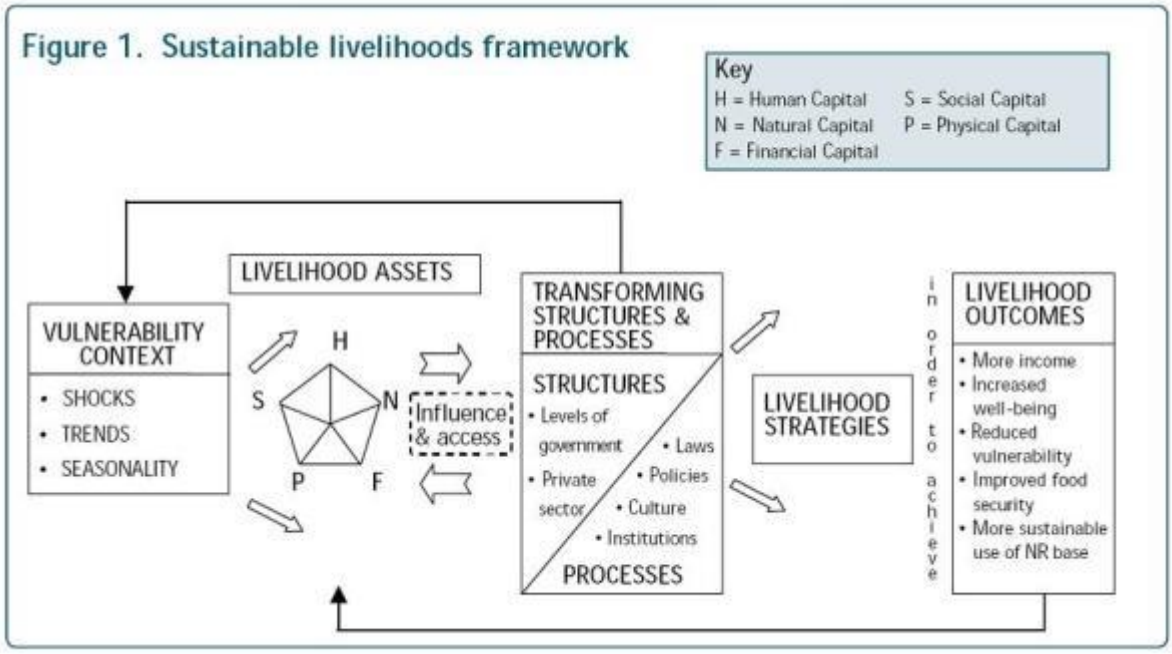

Figure 45.The Sustainable Livelihoods framework (see: http://www.eldis.org/vfile/upload/1/document/0901/section2.pdf.)

A focus on “vulnerable groups” in society (migrants, aged, indigenous, disabled) however risks seeing them as passive victims. 'Vulnerable' or 'marginalised' groups have capacities too (Anderson and Woodrow 1989). Even those labelled ‘vulnerable’ may well have offsetting capacities that make them resilient. These authors identify three categories - social/organisational, physical/material, and motivational/attitudinal - for analysing vulnerability and capacity in their interrelatedness. For example, a poor community group may lack access to loans but have a steely determination

(attitude) and are very well organised or networked to get what they need (see Figure below). This is from Anderson and Woodrow (1989): for their methods chapter see repository.forcedmigration.org/pdf/?pid=fmo:5326).

A comparative perspective can be generated by filling out VCA matrices for different social categories (men vs. women, young vs old, us vs. the neighbours) or for different points in time (dynamic VCA).

	Capacities	Vulnerabilities
PHYSICAL/MATERIAL What productive resources, skills, and hazards exist?		
SOCIAL/ ORGANISATIONAL What are the relations and organisation among people?		
MOTIVATIONAL/ ATTITUDINAL How does the community view its ability to create change?		

Figure 46.: Woodrow and Anderson' s (1989) Vulnerabilities and Capacities matrix

For example, more men than women survive disasters. Women are often culturally tied to the home and family, and David Alexander found that the L'Aquila earthquake was no exception. Yet, those women who survive tend to do better than men in their resourcefulness and stamina in dealing with adverse, unfamiliar conditions. Likewise the poor are likely to be more resilient than the rich. What they lack is access to a range of resources.

Reducing vulnerability will have to go beyond mere coping. Coping is immediate short-term response. The more people are forced to cope, the more they feel compelled to sacrifice their lifelines for the long term – their savings, their livestock, their tools and storage, even their children.

The 'nutcracker' (Pressure and Release) approach to disaster vulnerability analysis sees vulnerable groups squeezed between socio-economic factors and an environmental stress or trigger for complex chains of events. A small change (nudge) can tip their system of survival over the edge, bringing hardship and destitution. The analysis emphasises root causes such as poor governance, environmental degradation, structural inequality, that creates and perpetuates unsafe conditions through 'dynamic pressures' such as mass migration or deforestation.

This literature claims that the development model can be a reason for disaster just as much as it can reduce it.

This line of thinking also points us to the long-term drivers for vulnerability, that may take us back decades, even to the feudal system. The idea is that it also works the other way round: if we can meaningfully change unsafe conditions, this may positively affect root causes of vulnerability.

While analytical tools such as these are often applied in devloping countries, there is no reason why they would not be useful in Europe, as shown in Trude Rauken and Ilan Kelman's (2010) application of the model to flood risk in Norway.

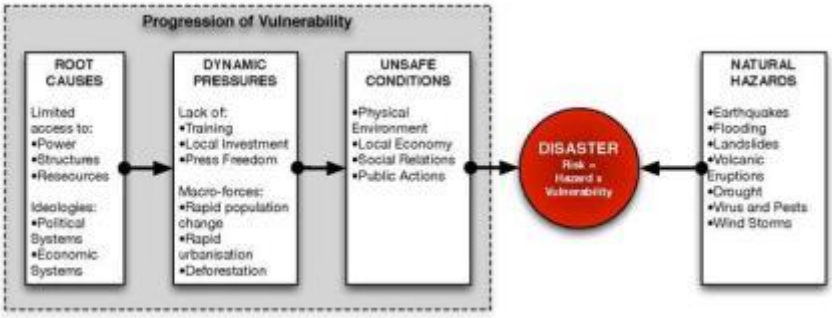

Figure 47.: Pressure and Release (PAR) model after Blaikie et al. (1994) showing the progression of vulnerability. The diagram shows a disaster as the intersection between socio-economic pressures on the left and physical exposures (natural hazards) on the right. Source Wikipedia.

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6. Inclusive Disaster Risk Reduction: attention for gender, disability and special needs

Georg Frerks (Netherlands Defence Academy)

Disaster Risk Reduction (DRR) ultimately aims at saving people and protecting them against harm due to natural or man-made disasters. This is not only done by looking at people's specific vulnerabilities, but also by emphasizing their capacities, assets and resilience. The Sendai Framework for Disaster Risk Reduction 2015 – 2030 calls for an 'all-of-society approach' that is people-centered and inclusive. Governments should, among others, engage with all relevant stakeholders, including women, children and youth, persons with disabilities, poor people, migrants, indigenous peoples, and older persons in the design and implementation of policies, plans and standards.

All-of-Society Guideline of the Sendai Framework

Disaster risk reduction requires an All-of-Society engagement and partnership. It also requires empowerment and inclusive, accessible and non-discriminatory participation, paying special attention to people disproportionately affected by disasters, especially the poorest. A gender, age, disability and culture perspective should be integrated in all policies and practices, and women and youth leadership should be promoted. In this context, special attention should be paid to the improvement of organized voluntary work of citizens (United Nations (2015) Sendai Framework for

Disaster Risk Reduction 2015-2030, p. 19)

These groups may have special needs that deserve attention in order to assure that DRR policies and practices not only include them, but are also sufficiently tuned to their special needs and conditions. In the EDUCEN project gender and disability were highlighted as priority areas in this regard, but also other groups were discussed in the EDUCEN workshops and exercises.

6.1 Gender

Gender refers to "the socially defined or constructed sex roles, attitudes and values which communities and societies ascribe as appropriate for one sex or the other".

6.1.1. The concept of gender

Gender is defined as "the socially defined or constructed sex roles, attitudes and values which communities and societies ascribe as appropriate for one sex or the other. Gender does not describe the biological sexual characteristics by which females and males are identified" (The Sphere Project 2000). Bouta, Frerks and Bannon say that: "Gender roles vary according to socio-economic, political and cultural contexts, and are affected by other factors, including age, class and ethnicity. Gender roles are learned and negotiated, or contested. They are therefore changeable. Besides differences in roles between women and men, roles among women and men differ as well, while both women and men may also combine different roles individually over time or even simultaneously" (2005: 3).

It should, however, be underlined that making gender synonymous with the positions and roles of women and men constitutes an extremely limiting and reductionist gender view. According to Dubravka Zarkov gender is better seen as an organizing principle of social life that affects different levels of social reality, not only individual people. Gender is part of everyday social relations of power that reproduce or challenge gender and gendered relations (Zarkov in Bouta et al 2005).

Over the last two decades, gender issues have increasingly become an explicit part of disaster analysis and management and there is a growing awareness of the different relations between gender and disaster. The call for gender-sensitive disaster management is motivated by the question of how to intervene in disaster situations without losing track of their gender dimensions, not rarely with the explicit aim to prevent that women are overlooked or marginalized in disaster response. This is also needed to ensure that disaster responses are tuned to the gender-specific needs and problems that women and men face.

- The effects and impacts of disasters differ for men and women due to biological, sexual and socio-cultural factors
- Gender dynamics often translate into particular gender-specific patterns of vulnerability as well as resilience and also affect patterns of coping, how disaster experiences are built up, and risks perceived.
- Stereotypical images of women as passive and incapacitated victims overshadow the fact that they possess valuable knowledge, skills and experiences that as a consequence remain unnoticed in many disaster policies and responses.

>"A gender perspective should be integrated into all disaster risk management policies, plans and decision-making processes, including those related to risk assessment, early warning, information management, and education and training" (The General Assembly and the Hyogo Framework for Action quoted in Valdés 2009: 19).

6.1.2.The link between gender and disaster

Gender is of utmost relevance to disasters and disaster management. First of all, the effects and impacts of disasters differ for men and women. This is due to biological, sexual and socio-cultural factors including gender relations in a community. Different reproductive functions, menstruation, pregnancy, child bearing and lactating require culturally adapted support and protection for women and girls. These biological and gender dynamics often translate in particular gender-specific patterns of vulnerability as well as resilience. They also affect patterns of coping, how disaster experiences are built up and risks perceived, how risk awareness is distributed and attitudes forged. In many instances the distribution of knowledge, assets, income, livelihood possibilities, decision-making power, and access to services is also highly gendered.

In addition, women and girls are often seen as physically and emotionally weak, inferior to men and boys, dependent, subordinate and generally as a burden. In disaster these perceptions are extended to identify them as passive and incapacitated victims. In reality, women appear to have valuable knowledge, skills and experiences, but this goes unnoticed in disaster policies and formal disaster mitigation and recovery arrangements ((Ariyabandu 2009).

There is evidence that the mortality rates in recent disasters (esp. the Indian Ocean tsunami) have been higher for women than for men, due to a combination of cultural aspects and gendered patterns of vulnerability. But also disaster recovery is biased with less participation, access and rights for women .

A gender focus should not exclude men. Gender is always a relational topic, and also men and boys have specific needs, capabilities and vulnerabilities. It is also of the essence to deal with masculinities and the way they inform male behaviour and attitudes. Several programmes did focus on women only, sidelining men who also had lost nearly all they had in the disaster and also had their share of grief and sorrow. But apart from that, successful interventions simply will have to include men, in an effort of 'men-streaming', as it was dubbed by Bannon and Correia (2006) as meaningful changes cannot happen without the 'other half of gender', as Bannon and Correia have titled their book on men's issues in development.

There is a lot of helpful material available on how to make disaster management gender-inclusive or gender-specific in the form of guidelines, tools and checklists. Be aware that these may need to be adjusted to your own specific situation or purpose.

button: [read more about gender-specific disaster management instruments](Gender-specific disaster management instruments)

6.1.3.Gender-specific disaster management instruments

There is a burgeoning literature on how to make disaster management gender-aware, gender-inclusive, gender-specific, gender-fair or simply 'gendered'. It is not possible to do justice to all what has been written and we suffice a by only a few references that can further guide researchers and practitioners.

Elaine Enarson is the founder of the Gender and Disaster Network (GDN). She is one of the most influential scholarly writers on the subject. Her several publications are a rich source to review the debate. The chapters 'Representation of Women in Disasters'' and 'How Gender Changes Disaster Studies' in her book are very informative and insightful (Enarson 2011). Enarson designed for the GDN "Six principles for engendered relief and reconstruction'' comprising again over fifty issues warranting attention in disaster planning, analysis and implementation (reproduced in Valdés 2009).

The website of GDN (http://www.gdnonline.org/sourcebook/index.htm) provides access to the Gender and Disaster Sourcebook. In addition, Chakrabarti and Walia offer a comprehensive toolkit for mainstreaming gender in emergency response, comprising again sixteen partial toolkits for the

issues covered varying from preparedeness and early warning, search and rescue, health, livelihood and Water Supply and Sanitation (2009).

Based on its experiences with the tsunami relief aid in Sri Lanka, UNIFEM has gendered the five priority areas of the Hyogo Platform for Action (reproduced in Joshi and Bhatt 2009). In addition Joshi and Bhatt offer six specific recommentations to better engender future disaster recovery (see 2009: 318).

6.2. People with disabilities

People with disabilities often do not recognize signs of danger or receive timely warning messages. Moreover, many among them are unable to respond quickly during an emergency due to lack of mobility or cognitive or sensory impairment. People with disabilities are often excluded from emergency preparedness policies and planning and run the risk of being left behind in an evacuation or forced to evacuate without vital supports.

6.2.1. People with a disability in preparedness, response and recovery

There is limited research on the experiences of people with disabilities during and following a major disaster. In the majority of planning documents there is reference to disabled people, but they are often just mentioned as members of vulnerable or special needs populations, and there is little acknowledgement of disabled people's heterogeneity (Priestly and Hemingway 2007). The literature suggests that disabled people are more likely to be poor, to live in low income neighborhoods, to live alone or to have high health care needs (Paton and Johnston 2000; Spence, Lachlan, Burke, & Seeger 2007), all factors that contribute to an increased likelihood of being impacted by disaster.

Preparedness

People with disabilities are often excluded from emergency preparedness policies and planning. The lack of attention to disability-related needs could result in people with a disability left behind in an evacuation or forced to evacuate without vital supports such as medications, mobility devices, or companion animals (Peek and Stough 2010).

For those disabled people who did respond to the earthquake in Christchurch by thinking about how to prepare themselves for future emergencies, some found that the advice provided by Civil Defence was not appropriate to their situation, because it was too general or made assumptions about people's bodies or lives that did not apply to them (Phibbs et al. 2015).

Response

People with disabilities are often unable to respond quickly during an emergency (Chou et al. 2004). In a sudden-onset disaster such as a tornado or earthquake, people with disabilities may for example experience difficulties in taking recommended protective actions or escaping. People with mobility limitations may be unable to hike up a hillside or run to an evacuation point. People with cognitive impairments may not recognize the signs of danger (Kales and Enders 2007) or may get confused by emergency signals (Scotti et al. 2007). Studies on people with sensory disabilities such as blindness or deafness suggests that these individuals often do not receive timely warning messages (Philips and Morrow 2007). In the case of Christchurch, disruption to electricity supply, resulting in an inability to watch television or charge cell phones were cited as key reasons for not being able to access emergency information. Text messaging was a key source of information for people who were deaf while vision impaired people needed to be able to access up-to-date verbal information (Phibbs et al. 2015).

In addition, they encounter difficulties during evacuation. Van Willigen, Edwards, Edwards, and Hessee (2000) found that evacuation rates of households in North Carolina with a family member with a disability were anywhere from 9 to 25 percent lower. These households were more likely to

report transportation issues and the lack of accessible shelters influenced their decision not to evacuate (Peek and Stough 2010).

Recovery

Most shelters and refugee camps are not accessible to people with disabilities; they are often even turned away from shelters and refugees camps due to a perception that they need 'complex medical' services. Insufficient structures to assist disabled people in the disaster response or recovery phases increased exposure to risk. Common difficulties for people with a disability are inability to access support workers, responding agencies that were not set up to cater for the needs of disabled people, and temporary housing and public information that is not disability accessible (Phibbs et al. 2015).

Disruption to physical, social, economic, and environmental networks and support systems affect persons with disabilities much more than the general population. In addition, people with disabilities are less likely to have access to the social and economic resources necessary for recovery (Klinenberg 2002) and there is a potential for discrimination on the basis of disability when resources are scarce. In conclusion, the needs of persons with disabilities continue to be excluded over the more long-term recovery and reconstruction efforts, thereby missing the opportunity to ensure that cities are accessible and inclusively resilient to future disasters (UN website on disability).

For more information on disaster and disability also see to chapter Diversity and inclusion of people with a disability

Other groups with special needs

There are many other groups with special needs that require special attention in disaster response. They include children, the elderly, socially excluded communities, homeless, (illegal) migrants, chronically ill, (linguistic) minorities, tourists, HIV positive individuals, males who have sex with males (MSMs), occupational minorities. Many of those groups are socially excluded and face special risks or lack empowerment.

6.3. Socially excluded groups

According to the facilitators' guidebook 'Practicing Gender & Social Inclusion In Disaster Risk Reduction', socially excluded groups experience varying degrees of alienation (distancing) in the disaster reduction or emergency response programs. This distancing is also an outcome of the wider social processes within which these groups usually receive inadequate attention and are systematically disadvantaged owing to different reasons. These groups face social exclusion on the following grounds:

- These groups are, in various ways, kept away from full participation in the wider economic, political, cultural, and social life;
- The enduring discrimination and historical social features entrapped these groups in a situation below the minimum threshold of well-being while hindering their full participating in the society.
- They are lacking in power and access to decision-making that could influence policies or create opportunities for improving their standard of living.

'Social exclusion describes a process by which certain groups are systematically disadvantaged because they are discriminated against on the basis of their ethnicity, race, religion, sexual orientation, caste, descent, gender, age, disability, HIV status, migrant status or where they live. Discrimination occurs in public institutions, such as the legal system or education and health services, as well as social institutions like the household, and in the community' (DFID (2005). However, the degree of discrimination varies from one society to another, as do the forms that social exclusion takes. Social exclusion operates on the ground and accelerates the vulnerabilities of these groups through three different processes:

- exclusion in the community and social interaction,
- institutional or organizational exclusion and
- exclusion by the market

(Directorate of Relief and Rehabilitation, Ministry of Food and Disaster Management (2009, p. 16-17)

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7. Diversity and Inclusion of people with a disability

7.1.Disaster policies and frameworks

Author: Caglar Akgungor

Disasters highlight the human diversity in a very dramatic way: A person's or a group's characteristics translate into different levels of vulnerability to disaster risks, which in turn lead to an "unequal distribution" of the disaster impact. While some hazards like the air pollution are said to be more "egalitarian" than others, rapid onset and large scale events such as major earthquakes, floods or hurricanes cause the biggest harm and loss on the "less-privileged" or the "marginalized". The latter's exposition level to risks is also usually higher and their capacity to mitigate those risks is lower due to several factors. A low level of income is often mentioned as the prevalent factor since it may limit seriously people's ability to access to risk information and to take the necessary measures to reduce their exposure. Poverty not only signifies a limited access to disaster-resistant infrastructure and services like education (more access to information) that would increase the protection level, but also a diminished capacity to recover after the disaster. On the other hand, the economical situation is often intertwined with other human conditions or characteristics in shaping vulnerabilities: Combined with socioeconomic conditions, gender, age, disability, health condition, ethnicity and other particularities generate a class of "most vulnerable" which is disproportionately affected by catastrophes' impact.

Dealing with the human (and social) diversity is a daunting task for the public sector, which continues to be the primary actor in the field of disaster risk reduction (DRR) and disaster management. "Most public policies and policy process, disaster policies originate in some bureaucratic agency or professional epistemic community and most depend for stamps of approval (certification) and implementation on one or more bureau of professional communities." (Bobrow 2006) Disaster policies are no exception to this pattern, which generally result in "one size fits all" plans and actions that may exclude the "disadvantaged" ones. Unfortunately, the most disadvantaged groups are also the least equipped for influencing policy-making processes, so the need for the recognition of the human diversity (and the associated cultural variety) may not become a priority for those who make or implement disaster-related policies until a dramatic series of events make the society aware of this particular problem. A positive development at the international level in this respect is the rising trend of "inclusiveness", in part as a consequence of recent major disasters that have made the problem more visible, but also as a result of decades-long efforts by advocacy groups.

The Sendai Framework for Risk Reduction, drafted in March 2015, is the most recent, comprehensive framework that clearly emphasizes the need for inclusion in the disaster risk reduction. Adopted by 187 UN member States, it brings the concept of inclusion as a fundamental element for reducing disaster losses: "Disaster risk reduction requires an all-of-society engagement and partnership. It also requires empowerment and inclusive, accessible and non-discriminatory participation, paying special attention to people disproportionately affected by disasters, especially the poorest. A gender, age, disability and cultural perspective should be integrated in all policies and practices, and women and youth leadership should be promoted." (article 19d) The Sendai Framework also stresses that inclusiveness cannot be reached by a top-down approach, and it requires active presence of the possible disadvantaged groups who would be given the opportunity to express themselves and to mobilize their resources (intellect, knowledge and skills) in order to contribute to the design and implementation of the disaster risk reduction plans and actions. (article 36).

Although the Sendai Declaration's focus is mainly on the reduction and mitigation of the risks and building resilience, its recommendations on inclusiveness can (and should) be extended to any phase

or activity of the disaster cycle. Notably, post-Sendai declarations follow this trend. For instance, the Dhaka Declaration on Disability and Disaster Risk Management that has been drafted in December 2015 has urged governments around the World "to ensure the participation, inclusion and leadership of persons with disabilities within all disaster management programs" (article 1) (Dhaka Declaration on Disability and Disaster Risk Management 2015) The recognition of diversity and the need for inclusiveness has also been considered as a "key finding" by the World Humanitarian Summit in May 2016, which shows that inclusive approaches will become part of the humanitarian policies and actions as well (World Humanitarian Summit Commitments to Action 2016).

The well-known proverb "a chain is only as strong as its weakest link" is very much true with respect to vulnerability to disasters. It is clear that "a community can only be safe when all of its members are able to cope better to avert disasters" (INCRISD 2014). But a superficial acknowledgment of variety will not help much. Inclusion is a rights-based notion that should not be seen as "optional"; it is neither "positive discrimination" nor an attitude of compassion. Inclusion is about equality of rights and opportunities for all those exposed to the same risks. To this end, it is necessary to recognize diversity; to admit that all social groups should benefit from the same rights and services vis-a-vis disasters; to create the mechanisms that will ensure participation to disaster risk reduction effort; to empower the "marginalized" ones both from the point of knowledge and skills so they could participate and contribute. Naturally, the last step is to develop tailored approaches that will encompass all the stakeholders. In other words, it is about replacing "one size fits all" developing approaches to disaster risk reduction and disaster management by "universal" ones.

7.2. Disability

Most people associate the term "disability" with some form of physical impairment and a quasi-permanent state of incapacity, which is likely to explain why the wheelchair icon became the omnipresent symbol of disability. The reality is that this term points out to a wide spectrum of physical or mental conditions that may also coexist and cause very complex situations. On the other hand, medical perspective alone is hardly sufficient for understanding disability. Looking from a societal point of view, disability also comes to signify a particular life style, a different way of thinking, experiences and culture as well. In other words, it is a human condition rather than a pathological state.

Notably, the "social model of disability", which claims that the disability results from the reaction a society gives to difference, is increasingly replacing the medical model, which focuses on the difference itself. According to the social model, individuals become disabled when the society fails to recognize human diversity and to lift the barriers that restrict their options and action margin in life. While the term barrier is often associated with physical obstacles such as the lack of adapted infrastructure or accessibility solutions, adverse socioeconomic conditions and shortcomings in terms of support may also be considered as barriers. The latter, nevertheless, is not limited to what is "tangible" or directly measurable: Prejudices, beliefs, perceptions, negative attitudes, stereotyping or discrimination continues to prevent people with disabilities from enjoying a "full life".

The social reality described above affects the life of a significant part of the World population. Despite being referred as "the largest minority" in the planet (15,6 % of the World's adult population according to the World Health Survey; 2,2 % having significant difficulties in functioning) people with disabilities have difficulties in enjoying their fundamental rights and in benefiting from the same services and opportunities offered to the rest of the population. Like other disadvantaged groups, people with disabilities around the World suffer from "inadequate policies and standards, lack of provision of services, problems with service delivery and lack of consultation and involvement"; among other problems (WHO 2011).

7.3.Disability Inclusive Disaster Risk Management (DiDRM)

People with disabilities are disproportionately affected by disasters and mass-emergencies. Recent and increasingly better documented cases such as the Indian Ocean Tsunami (2004), Hurricane Katrina (2005), the Haiti Earthquake (2010), and the Tohoku Earthquake (2011) helped bringing the attention to the hardships encountered by people with disabilities during and after catastrophes. The dramatic fact is that not only the rates of loss and injury were considerably higher among the disability communities, but persons with disabilities also experienced severe problems with the post-catastrophe services such as response and emergency sheltering, which failed to respond to their specific needs (Kang and Stough 2015). In other words, people with disabilities cannot receive the same level of protection and support compared to the rest of the population. This situation will likely to remain unchanged unless the disaster risk management becomes a truly inclusive process.

Disaster risk management (DRM) involves risk mitigation, preparedness to disasters and disaster management. It is "a way of thinking and acting around risk" which goes beyond infrastructure-based solutions and focuses on society, emphasizing the vitality of improving people's capacity to cope with disasters and building social resilience, in order to minimize the potential effects of disaster risks. These goals, however, cannot be reached through "generic" DRM frameworks designed for the "average citizens" without significant health issues, who are supposed to possess adequate resources and a sufficient literacy level to access information. Inclusiveness, therefore, becomes necessary to bring under the same protection umbrella the ones excluded by the "one size fits all" attitude. In this sense, DiDRM aims to compensate the lack of adapted strategies for individuals with disabilities.

The UN Convention on The Rights of Persons With Disabilities (2006) stresses that:"State Parties shall take, in accordance with their obligations under international law, including international humanitarian law and international human rights law, all necessary measures to ensure the protection and safety of persons with disabilities in situations of risk, including situations of armed conflict, humanitarian emergencies and the occurrence of natural disasters." (Article 11, Situations of risk and humanitarian emergencies)

The Dhaka Declaration on Disability and Disaster Management (2015) urge governments to "Implement the Principles of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), other human rights treaties to ensure the participation, inclusion and leadership of persons with disabilities within all disaster risk management programmes." (Article 1, Ensuring people centric approach)

It is important to retain that DiDRM is a rights-based approach and based on the principle that people with disabilities should enjoy the same level of information, support, service and they should be given the same range of options offered to the rest of the population facing risks and disasters. On the other hand, it is equally important to retain that DiDRM is not only about receiving services, or benefiting from various forms of protection. It also involves active participation to the design and to the implementation of DRM actions by people with disabilities, who know best their needs but also capabilities and strengths.

DiDRM's key principles can be summarized as follows:

- Participation: People with disabilities should participate to planning, implementation and monitoring of the DRM activity. This suggests that the barriers to their participation should be lifted and the opportunity for dialogue be created (they should be empowered first if necessary, for example in terms of knowledge).
- Non-discrimination: The exclusion factors preventing people with disabilities' from being part of the DRM activities and services have to be eliminated.

- Accessibility: Disaster risk information, participatory DRM activities and all DRM-related services should meet the accessibility needs of various disability groups.
- Tailored solutions: People with disabilities should not be considered in broad categories and the complexity of disability phenomenon should be taken into account in the DRM processes. Specific solutions should be developed for the widest range of possible cases.

7.4. In Practice: Lessons Learned on DiDRM in the EDUCEN Case Study of Istanbul, Turkey

Although states are the leading actors of DRM, recognition of diversity and inclusion cannot be achieved through public sector action only. The adoption of an inclusive attitude towards people with disabilities is also a must for all stakeholders, including NGOs and other types of civil initiatives working in the domain of disasters and mass emergencies. The difficulty is that the road to inclusiveness is not without pitfalls, despite the apparent simplicity of the DiDRM principles as summarized above. In this sense, we believe some lessons we have learned during EDUCEN Project Istanbul Case Study may help other organizations in their DiDRM efforts.

Figure 48.Focus group meeting with participants with sight impairments

Figure 49.Focus group meeting with participants with reduced mobility

As explained in detail in the EDUCEN Istanbul Case Study Manual AKUT Search and Rescue Association has aimed at developing a disability inclusive public disaster preparedness program. From AKUT case study team's perspective, the main objective then was to make the disaster preparedness materials accessible for people with sight and/or hearing impairments while incorporating disability-specific information into the content (for 3 selected groups, persons with sight impairments, persons with hearing impairments and those with reduced mobility). Consequently, the action has debuted as a feedback collection and formal adaptation work. A series of extended focus group meetings have been organized in order to review AKUT's existing program and content, in collaboration with disability organizations.

Figure 50.Focus group meeting with participants with hearing impairments

Figure 51.Focus group meeting with participants with hearing impairments 2

It would be convenient to say that a true reflection on the concept of inclusiveness has only started to develop following the focus group meetings, where the Istanbul case study team and the other participants from AKUT's public training unit came into close contact with the disabled participants. Interaction and dialogue with disabled shareholders has altered AKUT volunteers' perceptions of disability, the Istanbul Case Study's focus shifted to inclusiveness, repositioning accessibility as merely one of its pillars. The case study team also made the following observations:

- Conveying information to people with disabilities, even in accessible formats, do not make a training program inclusive per se. Genuine inclusiveness happens when people with disabilities can take part in any section and/or any phase of the program by their own choice and assume any role offered to other volunteers. In other words, the host organization itself has to become inclusive. For an ONG like AKUT, this would require a significant effort at different levels, starting by the improvement of physical accessibility to the association's premises, to the modification of the recruitment and orientation process (use of online learning tools for people with reduced mobility or sign-language translation for people with hearing impairments).
- Inclusion is a goal that requires commitment on behalf of the organization aiming it. Unfulfilled promises and impertinence are causes of frustration for persons with disabilities, who would also be discouraged from participating to other actions in the future because of such negative experiences.
- The tendency to see inclusion as an "empathetic process" is quite common. Nevertheless, inclusion is not about empathy, which can be described as the drive and the effort to understand another. This capacity is certainly relevant in the context of inclusiveness, yet the issue of DiDRM cannot stand on an individual capacity (that people might not have developed enough, also). Inclusion is based on the principle of equality between human beings and the associated human rights. People with disabilities have right to receive whatever services AKUT offers, just as they have the right to participate to any activity of the association they consider appropriate.
- Accessibility has several dimensions and forms depending on the context and the type of disability. There is no single "generic" accessibility solution. Making a printed booklet accessible for people with total hearing impairments and making a training hall accessible for people with reduced mobility require different approaches, techniques and instruments. Persons with disabilities as end-users are the best guides on which tool to use. It is critical to take their suggestions into account. Members of the Istanbul Case Study team, for example,

have realized that most of their ideas about accessibility tools and options were based on false assumptions.

- Regarding the accessibility issue, people with disabilities' attitude is generally realistic, as they limit their expectations depending on the context. They appreciate their "non-disabled" partners' efforts for ensuring accessibility. They also tolerate, even compensate for deficiencies, provided that they consider the partner's efforts as sincere. As for the accessibility of training materials, the most efficient strategy is to seek for "usefulness". For example, a visual element does not have to be orally described for people with sight impairments if it does not have informational value.
- DiDRM also requires commitment from people with disabilities, in the sense that their systematic presence in the DiDRM programs incite the non-disabled individuals to change their perspective on disability. People with disabilities are not necessarily dependent on others during disasters, and many are perfectly capable of assuming various roles in the DRM actions. Yet, their is need for demonstration of this capacity, which requires continuous, active participation by people with disabilities.
- DiDRM is about mutual learning as well. No matter how efficient an organization is in the disaster preparedness and response, it needs the life-knowledge (and support) of people with disabilities to become inclusive. This is only possible through integration and dialogue.

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8. Risk perceptions

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People are bound to see risks differently because they are differently affected by it – their exposure and level of vulnerability to the risk is different. But this is not all.

While analysts work to establish and communicate objective risk, this is not what people act on. They act on subjective risk, that is, the risk they perceive, how they think and feel about it. While experts may claim to have better knowledge of risk based on scientific methods and evidence, Science and Technology Studies show that they themselves may also have a 'subculture of risk' that brings considerable biases, such as faith in technology over faith in people.

Brief, we all have risk perception filters exaggerating some risks and underestimating others – their exposure to risk and their vulnerability in the face of risk. People who depend on others or live in isolated places tend to feel more vulnerable. (Mild) risk can give people a sense of excitement and adventure. For our present purposes, it is key that perception and cognition reflects cultural values.

Next to this we have communication filters - all links in the communication chain filters information, amplifying some and attenuating others. Information carries different (positive or negative) connotations for different cultural groups, because they make different sense out of it. People turn to their peer group to validate their risk perception and information.

Risk perception crucially depends on how much people feel in control with respect to the threat – a car passenger feels more at risk in traffic than the driver. This helps us understand why socially dominant categories (males, whites, adolescents) have a lower risk perception than less powerful categories: females, non-whites, the old) who may be more aware of their individual and collective vulnerabilities to disaster. Parents responsible for young children or people without permanent employment can be expected to feel more at-risk from natural hazard than others.

Local people also have very relevant knowledge. Some of their knowledge may strike the experts as superstitious or misguided, but long exposure to risks in their environment may make local people better at 'seeing the signs' (of the rate of river rise, fish or bird behaviour etc) than outsiders. Dialoguing about risk perceptions and remedies can help supplementing scientific knowledge by local knowledge, bringing mutual validation of assumptions and observation of risks.

Such a dialogue requires building and/or showing trust; a willingness not to be an outsider..

Cultural theory indicates that close-knit cultures that fear of 'outsiders' and of 'a non-specific, invisible and uncontrollable threat' drives perception significantly. For socially marginalised or isolated groups, 'the government' may be seen as outsiders - they are more likely to lack systemic trust, and may harbour theories about the government causing risks to them, e.g. when a house suddenly fissures. The nature of the risk matters: people fear things they cannot see (e.g. radiation, microbes) more than things they can (traffic).

Apart from risk perception, the perception one can protect oneself against risk is key. Protection motivation theory claims this is based on:

- the perceived severity of a threat,
- the perceived probability of the occurrence, or vulnerability,
- the efficacy of the recommended preventive behavior,
- the perceived self-efficacy

The work of Tim Harries' shows that people who feel they have no action perspective will tend to ignore disaster risk. Thus we find people considering themselves safe living in floodplains, in landslide-prone areas at the toe of volcanoes. Blind faith in the state, in God, in fate, or in others may prevent them feeling responsible for self-protection

A contemporary example is evacuation in flood events in a coastal Dutch city. During the EDUCEN project Thomas Jansen carried out perception research in Dordrecht, the Netherlands, a city that regularly experiences mild flooding but has not seen a major flood events in over 60 years. People have been conditioned to rely on the government in times of disaster; 'vertical (self)evacuation' is a new phenomenon :Jansen found that:

- A majority of households indicated to prefer the evacuation option of trying to evacuate within your own home or home environment.
- A little over one third of the households chose the option of trying to evacuate outside of the municipality of Dordrecht.
- Only a very small number of households indicated to prefer towards local emergency shelters