ACCESSIBILITY

MAKING INFORMATION ACCESSIBLE IN CASE OF DISASTERS

MATERIAL/PHYSICAL AND SENSORY ACCESSIBILITY

The physical, social, and economic factors that can affect accessibility

HOW TO ENSURE ACCESSIBLE INFORMATION IN CASE OF DISASTERS?

The use of social media and crowdsourcing in case of disasters has increased in recent years. It represents a challenge as well as an opportunity for disaster management.

Social media could be **one** important communication tools to disseminate information in hazardous contexts. However, these platforms might also propagate disinformation and affect negatively the process of disaster response by worsening situations of social exclusion. Below are some actions to be taken.

CULTURAL ACCESSIBILITY

Digital and educational disabilities

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IDENTIFY YOUR TARGET GROUPS

Go to Action 1

2

IDENTIFY ACCESSIBILITY PROBLEMS

Go to Action 2

3

SET UP YOUR COMMUNICATION CHANNELS

Go to Action 3 & 4

RELIEF ACCESSIBILITY

Who is 'unknown' in case of disasters

MATERIAL ACCESSIBILITY

To access material resources that can satisfy basic needs in hazardous contexts.

Accessibility is strictly connected to the vulnerability of people and places. It can be defined as the ability to use the resources that ensure livability, which depends on the socioeconomic relations established in a society. Accordingly, accessibility strictly depends on the level of development as well as on the power relations on both local and global scale.

"Accessibility is the precondition to guarantee integration without barriers"

In particular, social and spatial disparities are strongly affected by limited access to new technologies, sources of information and means of representation. Thus, accessibility is a necessary precondition to the well-being of others.

In relation to social media and crowdsourcing, material accessibility refers to the access to communication and information systems as well as to technological devices in general. Moreover, it deals with the role that social media and crowdsourcing could have in easing the access to relief systems. Vulnerability can be exacerbated by the lack of access to the virtual space: a person can be deprived of the possibility to receive information and to be duly represented in the process of rescue request and response.
According to recent studies, although ethnic or health disparities can limit the access to Internet, these same factors do not affect the use of social media in a significant way.

FOCUS ON MATERIAL ACCESSIBILITY

Accessibility relies on the availability of new technologies and other services without material limitations. Notwithstanding the efforts to develop design innovation in order to increase the global access to internet, there are still significant limitations that prevent vulnerable and marginalized people from accessing digital tools. As a matter of fact, the access to digital resources during disasters can be limited by pre-existing barriers:

- Language (i.e., people who cannot use common language)
- Socio-economic status
- Geographical impediment (i.e., people who live in areas with no access Internet
- Lack of familiarity with the basic functions of social media

PHYSICAL AND SENSORY ACCESSIBILITY

Physical and/or sensory (in)ability to use specific platforms or communication systems

Accessibility is strictly connected to physical limitations. People with disabilities represent one of the most vulnerable groups in the regard. The lack of access to social media and technologies can be a serious risk factor: people with disabilities could become invisible and be excluded from the disaster response process.

"Disability can be defined as people's inability to access communication"

Governments, organizations, and agencies often fail to adopt more inclusive solutions during emergencies and other forms of crisis. People with different forms of difficulties could be left behind. For instance, most of the social media platforms are inaccessible to people with visual impairment. As a consequence, they exclude them from either collecting or giving useful information.
We urgently need solutions to expand the concepts of "disability" and "accessibility" applied to the online environment.

"Digital disability could overlap with physical disability, and increase the situation of discrimination and exclusion"

DATA ABOUT PHYSICAL ACCESSIBILITY

Around 20% of the world's population is affected by one or more types of disabilities. It is important to specify that some people have multiple disabilities. Around 6% of people (466 million) have deafness and hearing impairment, around 3,2% (253 million people) have a visual impairment, 2,6% (200 million people) have intellectual disabilities and 1% of the population (75 million) is on the wheelchair. Out of 20%, 80% are people between 18 and 64 years old, and according to UNICEF data, 240 million of children are affected by disabilities (around 1 child up 10).

Nowadays, 5 billion people around the world, that is the 63% of the total population, have access to Internet. Around the 20% are people with disabilities.

CULTURAL ACCESSIBILITY

It deals with the individual's capacity to gather reliable sources of information and determine the quality of the information itself.

Digital disparities especially in the use of mobile technology, are exacerbate by pre-existing socio-structural conditions as well as by information constraints. Demographic, linguistic and knowledge differences play a central role in this regard: age, gender, education, geographical location (especially meant as marginalization), and income represent important differentials in access to digital tools as well as information.

"Cultural accessibility is affected by social and knowledge differences"

The knowledge gap between advantaged and disadvantaged groups is reflected in significant variations in disaster information and in preparedness behavior. The lack of familiarity with the common language, for instance, could affect the use of the official sources of information and exacerbates informational vulnerabilities, with consequences on people capacity to properly react in case of emergency. Furthermore, people with limited capacity to understand the official information are also more exposed to risks of disinformation, misinformation and fake news. As a consequence of the inability to provide official accessible information, some social groups could experience further level of marginalization (perceived or real), reducing or losing their trust in the official response system.

"Vulnerability and inequality negatively affect people's susceptibility to risks"

DATA ON CULTURAL ACCESSIBILITY

According to the data elaborated by UNICEF about the school-age digital connectivity (December 2020), 2.2 billion, that is two-thirds of children's and young people aged 25 years old or less, do not have internet access at home. A recent survey by the same institutions (May 2021) highlighted significant differences due to factors such as country of provenance, income group, and the residence location (urban or rural). Compared to the 33% global average, only 5% of school age people in West and Central Africa have internet access, and only 6% of children in low-income countries have Internet access, compared to the 87% in high-income countries.

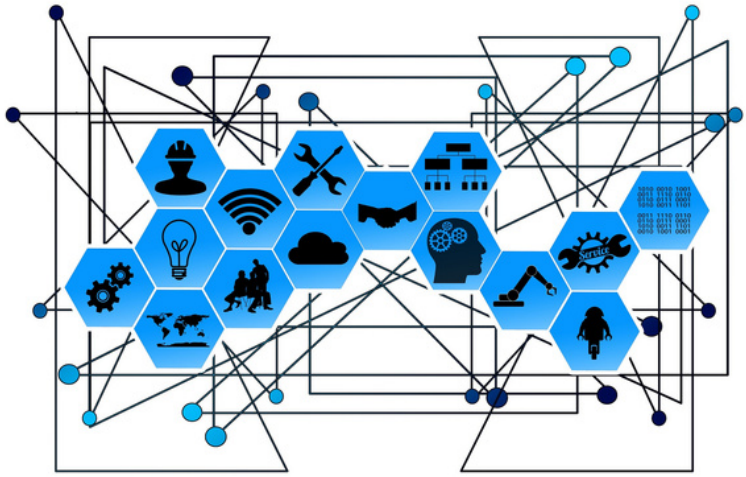
RELIEF ACCESSIBILITY

To access relief systems and to receive support mean to be represented and to be acknowledged as part of a political, economic and social system.

Vulnerable people without access to reliable sources of information are dramatically disadvantaged when they request assistance. People may have difficulties in receiving warning or guidance, or serious issues in asking for assistance, especially if the access to social media platforms is limited.

"When people receive news from people they are familiar with, they respond in a faster and better way "

Social media can play a crucial role during hazardous events, because they offer a platform to share basic data with the rescuers and with other people that are in the same state of emergency.



In several cases, specific "hashtags" have become viral and helped to collect useful information.
Finally, social media can help to organize task forces and to gather volunteers together, in order to support the process of search and rescue.

"People need to have multiple ways to receive information during disasters"

FOCUS ON RELIEF ACCESSIBILITY

During calamities and disasters, social media have grown to be a significant alternative information source to traditional media. Social media have been recently used as a tool by first responders – i.e., those who provide immediate aid – for disaster relief and crisis management due to their popularity and wide range of topics involved. For instance, Facebook supports a number of groups that deal with emergencies, such as The Humanitarian Free and Open Source Software (FOSS) Project and Information Systems for Crisis Response and Management (ISCRAM).
Furthermore, social media are used by a wide range of emergency and disaster-related groups, including colleges, businesses, nonprofits, and state and local governments, to share information, connect, and coordinate actions such as emergency preparation and drills.

ACTION 1: HOW TO IDENTIFY YOUR TARGET GROUP

This section's aim is to provide you with some guiding questions to ask to people in need in order to understand which kind of communication can be more appropriate.

STEP 1: STUDY THE CONTEXT	STEP 2: IDENTIFY THE HAZARD	STEP 3: SEEK FOR THE UNKNOWN	STEP 4: CHOOSE THE BEST COMMUNICATION LEVEL / CHANNLES
Area: Are you indoor or outdoor? Do you know where you are? **Time:** Do you know what time of the day is? Can you define the weather? Does it represent a risk or not? **Community:** Is there someone with you? Can you count the number of people around you? **Emotions:** How do you feel? Are you afraid? Are you angry? Which is your emotional state?	Are you able to target the physical obstacles around you? (i.e., walls collapsing, water leakages, fires and so on) Are you able to find an escape path? Is someone injured? How many people are injured?	Are there people with physical impairments? Are there people with sensorial impairments? Are there people unable to act due to psychological impairments? Are they injured? Are there children or elderly people? Are there people who do not know the language? Which language can understand the people around you? From which country did they come from?	After identifying the damaged people and evaluating their level of vulnerability, provide them with a specific and focused communication: • Provide a clear communication on closed streets, collapsed buildings, inaccessible areas etc. • Guarantee a real time communication • Share the evacuation plan and the right behaviors to follow • Use more than one social media to be sure that everyone can get the information • Guarantee a communication flow during and after the disaster • Give people the possibility to share their needs and problems

ACTION 2: HOW TO ENSURE THE ACCESSIBILITY OF YOUR COMMUNICATION

The aim of this section is to provide you with some recommendations on how to guarantee the accessibility of the information you want to share before, during and after a disaster.

ELDERLY PEOPLE

- Screen layout, navigation, and terminology should be easy to access
- Language should be simple and clear, with short sentences and examples
- Make sure to enhance the color contrast between the foreground and the background
- Provide the same information using different styles (images, videos, sounds, icons, speech, and so on)
- More information HERE

PEOPLE WITH HEARING IMPAIRMENT

- Video feature is needed for sign language access
- Make sure that the bandwidth is high as possible to ensure that signing looks smooth in the video
- Test audio quality to make sure that people can hear properly
- Even though there are auto-captioning system available, it is better to rely in professionals who can produce captions that are more clear and accurate than auto-generating ones
- More information HERE

PEOPLE WITH VISUAL IMPAIRMENT

- Make photos accessible for screen reader by including alternative texts in the posts
- Hashtags are important, hence they should be written in capital letters
- Add alternative means of contact such as phone numbers
- If you are linking to a PDF document, make sure it follows the Web Content Accessibility Guidelines (WCAG) standards and is accessible to the reader
- More information HERE

YOUNG PEOPLE

- Provide a safe and inclusive space for children to express their views
- Provide appropriate information and facilitate the expression of children's views
- Ensure that children's views are communicated to someone with the responsibility to listen
- Ensure that children's views are taken seriously and acted upon
- More information HERE

LINGUISTIC MINORITIES

- Guarantee the subtitles in different languages in the videos
- Provide the communication and the text of the social media post in different languages
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- Collaborate with associations that are experts in different cultures and languages
- Ensure the use of one social media specific for local linguistic minorities such as WeChat or Telegram
- Choose and easy and not too technical language
- More information HERE

ACTION 3: HOW TO SET UP YOUR COMMUNICATION CHANNEL

In order to help you to set up your communication channel, we provide you with a checklist to follow to create an accessible social media post:

✓ DO:

MATERIAL/PHYSICAL/ SENSORY ACCESSIBILITY	• Creating both mobile and website design • Giving possibility of access for people with old smartphones • Use the right colors for texts and backgrounds • Include alternative text to all images
CULTURAL ACCESSIBILITY	• Providing translation support in all languages, including LIS • Adding subtitles and audio description to videos • Using system to identify fake news • Using user-friendly language • Ease the keyboard navigation
RELIEF ACCESSIBILITY	• Promoting the official channels to collect verified information • Create direct link with institutional channels • Give visibility to vulnerable groups • Providing specific communication for vulnerable groups

✗ DON'T:

MATERIAL/PHYSICAL/ SENSORY ACCESSIBILITY	• Writing large section of text in 'all-caps' • Putting valuable information in headers and footers as screen readers will ignore them • Underlying large blocks of text as it reduces readability • Adding temporary elements • Adding too much information
CULTURAL ACCESSIBILITY	• Using acronyms and technical language • Adding emoticons • Using images, symbols and icons
RELIEF ACCESSIBILITY	• Creating more than one official pages • Using institutional pages to promote not strictly necessary information • Using just one social media (each social media has its accessibility rules)

ACTION 4: CONNECTING PROBLEMS TO ACTIONS

The aim of this tool is to support you in identifying the best actions to take in case you deal with accessibility problems.

PROBLEMS	SOLUTIONS
How to involve low income and homeless people?	Make sure that they have internet connection by guiding them to urban areas with free WI-Fi Try to keep in touch with associations and NGOs that could help them directly Suggest the use of emergency apps that do not require too frequent updates as they can be downloaded on older smartphones. More information here.
How to communicate in a child-friendly way?	Guidelines on how to provide child-friendly communication here
How to guarantee accessibility to people with visual impairment?	Guarantee TAB focus and keyboard navigation. Information here or at this link
How to create accessible presentations and websites?	Pocket guidelines to follow are available here
How to offer support to people with hearing impairment?	Suggest the use of apps such as Telegram, that can be used in situations of urgent need
How to include local minorities?	Consider to be active on specific social media used by local minorities, such as WeChat for the Chinese community Try to be in touch with associations or NGOs that could inform them directly
How to reduce gender disparities?	Some examples are available in the table at this link
How to engage vulnerable groups in research activities?	Pocket guidelines are available here

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