

USE CASE

Challenges in the use of digital technologies in the preparedness, readiness, and response to disasters



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CHALLENGES IN THE USE OF DIGITAL TECHNOLOGIES IN THE PREPAREDENESS READINESS AND RESPONSE TO DISASTERS



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(c)

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CRIMEDIM



WHAT IS A DISASTER?

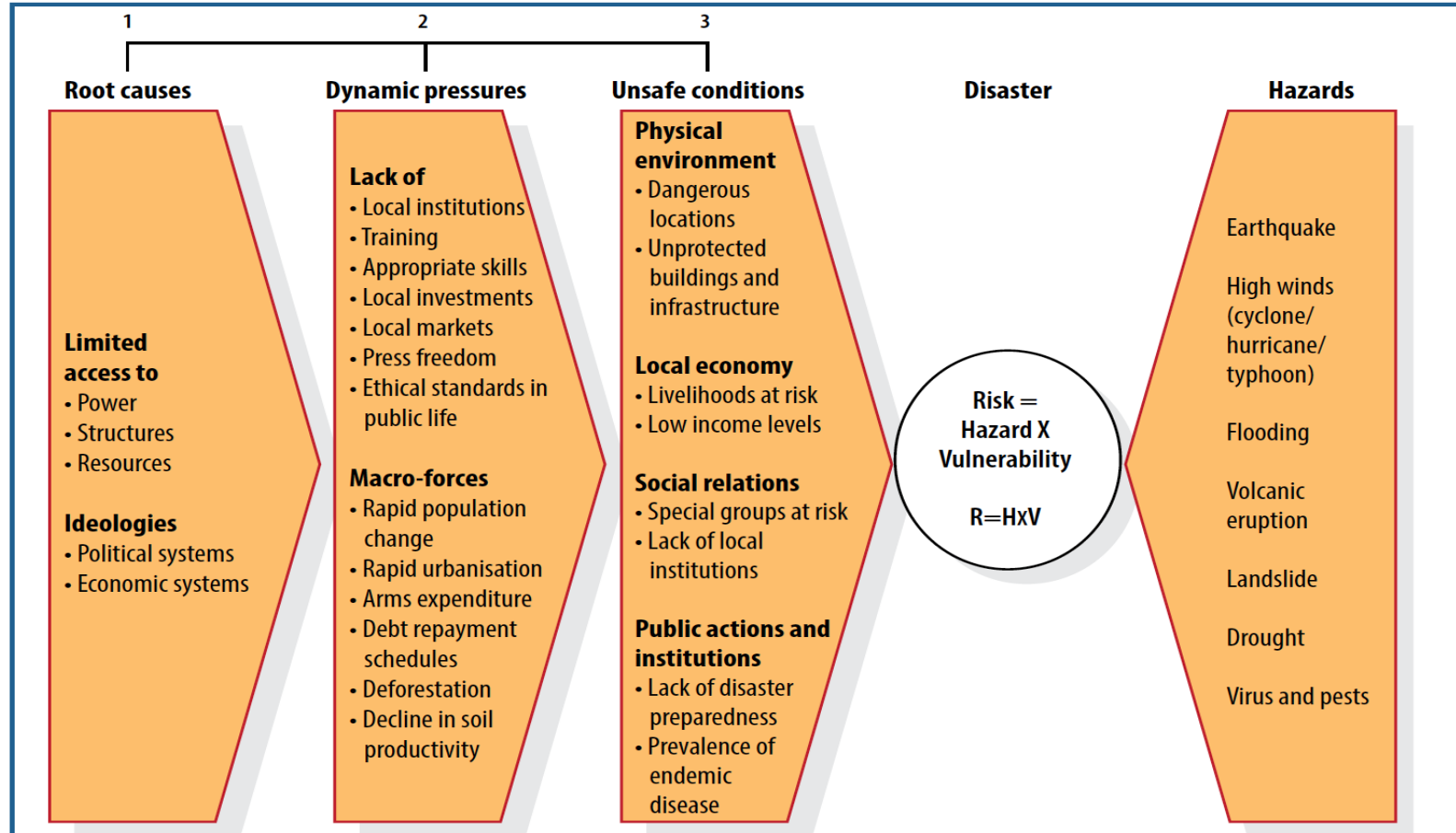


UNDRR United Nations Office for
Disaster Risk Reduction

”A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts.”

Disasters can be natural, man-made or hybrid

Figure 1.1 The Progression of Vulnerability

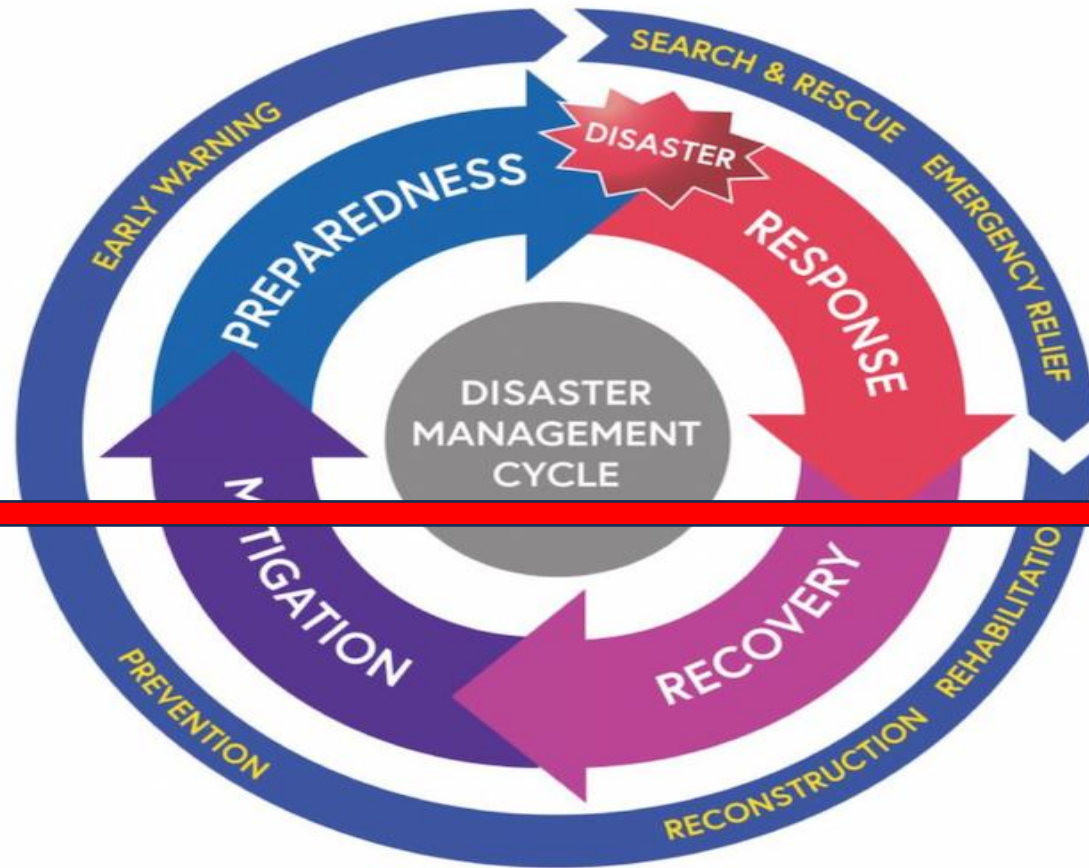


Humanitarian Practice Network, ODI, 2004. Online at: <https://bit.ly/2HUU60l> (page 20).

(Wisner 1994) introduced a model framework to explain how disasters happen, calling it the Pressure And Release (PAR) Model

The Release Model





How Digital technologies can be used in the Disaster Cycle?



Preparedness, Readiness and Response



Real data (primary data) collection and analysis



Sharing information through digital platforms



Early Warning through epidemiological surveillance



Support Surge Capacity efforts



Risk communication and Community engagement (Social Media)



Tailored Response based on context needs



Map Filters Use the filters to adjust the data

Country view Point view

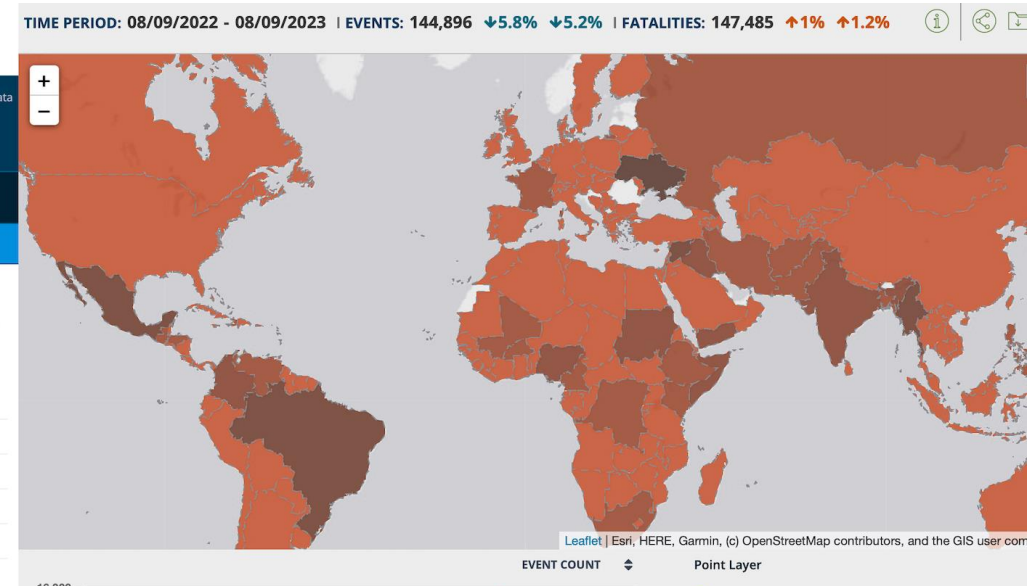
FILTERS LIST

EVENT TYPE

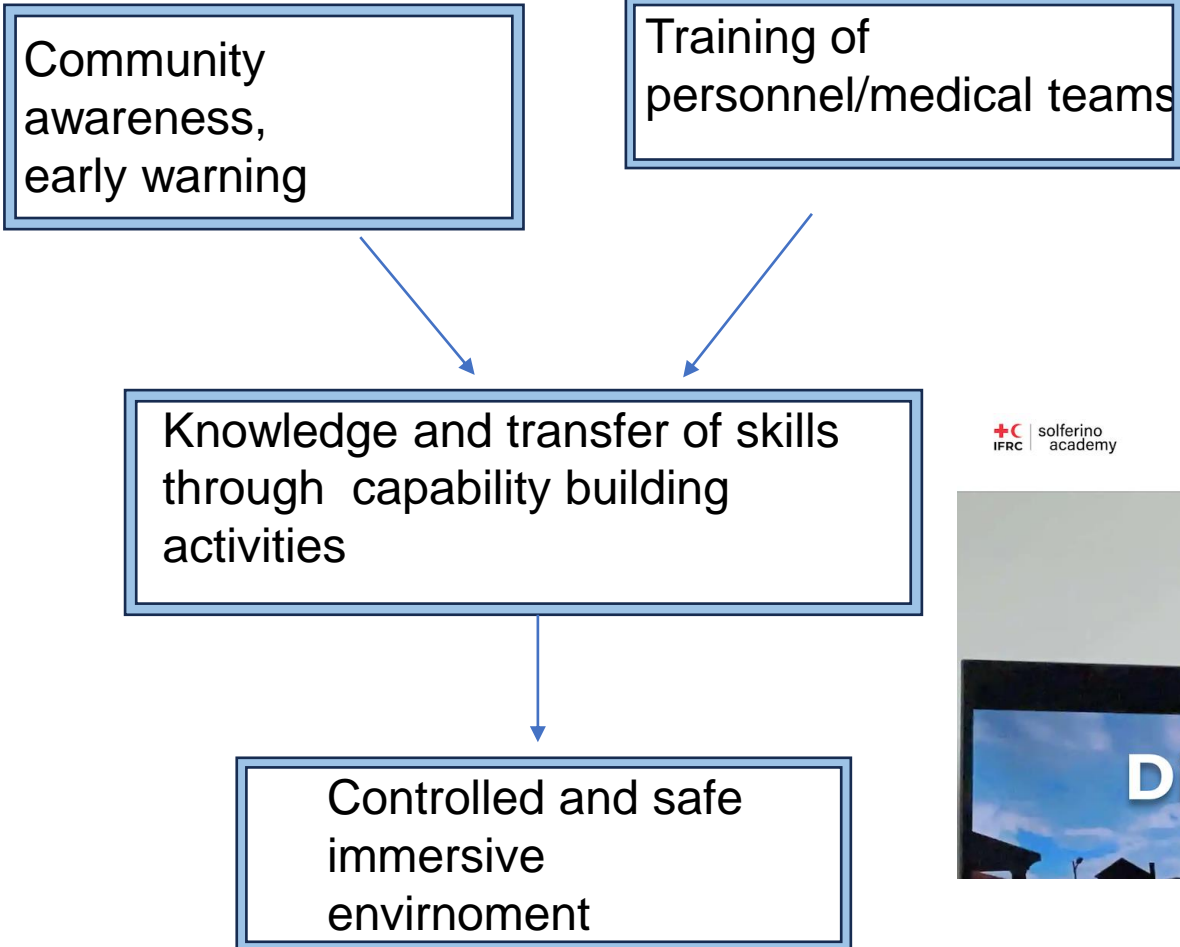
Search

SELECT ALL | SELECT NONE

- Battles (3/3)
- Violence against civilians (3/3)
- Explosions/Remote violence (6/6)
- Riots (2/2)
- Protests (0/3)
- Strategic developments (0/8)



Virtual Reality for Disaster Preparedness , Readiness and Response



ADDRESSING URGENT NEEDS

- Webinars
- Podcasts
- Online Clinical case discussions
- Just-in time-Training
- Telemedicine (MSF experience in Low-resource /fragile settings)



SARS-COV2 infection management in low-intensity settings

Ambra Barco, MD DTM&H



Challenges

- Widening **existing health inequalities** (lack of access by many parts of the population to digital technologies)
- **Ethical dilemmas** due to social injustice for potential unequal access to care and health outcomes/**ownership** of data
- **Incapacity to engage health professionals** due to lack of literacy / lack or limited access to such technologies
- **Insufficient** technical expertise, infrastructure / devices
- **Lack of funding** particularly in LMICs/for disaster response
- **DHT context specific**
- **Role (+/-) of social media** during disaster responses



Challenges

- **Lack or limited regulations** that can guarantee data protection and privacy at all times
- **Absence of formal frameworks and standards** that supports the **use, implementation and monitoring** of Digital health technologies
- **Lack of evidence** to determine the effects of DHT in supporting delivery of quality care during Disaster responses
- **Limited capacity and capability building (legacy)** activities focus on DHT during readiness and response time
- **Cyber Operations in Armed Conflicts** with detrimental consequences for the health and protection of civilians, protection of health personnel and health infrastructure





- **Multi-disciplinary collaboration** between IT companies, Academia and Emergency/Disaster Medical Teams /First responders/Humanitarian and Development stakeholders
- **Operational research** activities , for example to determine the effectiveness of DHT in Disaster responses (all hazards)
- **Monitoring and evaluating** the implementation of digital technologies
- **Definition of standards or frameworks** for the use of DT in Disaster preparedness , readiness and response
- **Improvement** of technologies based on lessons learnt/**tailoring technologies** based on context needs
- **Increase** accessibility , literacy and affordability
- **Explore Public –Private engagement**

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Thanks!!

Any questions?

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