

Disaster Risk Reduction new dimensions: COVID-19 Preparedness at local level





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Foreword

In the past years, COVID-19 has grown into one of the greatest humanitarian issues in recorded history. Its impact is immense, not to mention the hundreds of thousands who have died. Its effects have been exacerbated by climate change, as we are facing far more climate risk and losses due to increasing severity and frequency of climate shocks and stresses, as well as deepening vulnerability and inequality. Currently, half of humanity is living in a climate-impact danger zone as global emissions are not being reduced to safe levels (IPCC Working Group II Report, 2022). The climate emergency, COVID-19 pandemic, illustrate how disaster cascades across geographies and sectors today, and are exacerbated by armed conflict and inequalities.

Over the past years, the United Nations Office for Disaster Risk Reduction has supported national and local governments in developing holistic and integrated disaster risk reduction strategies, and more recently, how to incorporate pandemics into resilience planning. Taking this approach is crucial at a national level, but also particularly at the local level, as cities and provinces are at the front line of disaster prevention, preparedness and relief. The impacts of climate extreme events across our region in the past months, combined with the dramatic health and socio-economic consequences of the pandemic crises, remind us that managing disaster risk is a complex issue and is everyone's business.

Making Cities Resilient 2030 was launched in October 2020 as an alliance to assist local governments in preparing for this challenge. Through advocacy, sharing knowledge and experiences, establishing city-to-city learning networks, injecting technical expertise, connecting multiple layers of government, and building partnerships, MCR2030 seeks to improve local and regional resilience.

The initiative builds on the experience of many institutions working with cities on resilience issues, including WHO, UN-Habitat and different international organisations such as ICLEI, Resilient Cities Network and the World Bank, which have come together to offer their services to support cities in building resilience. By joining MCR2030, cities can benefit from a vast range of resources available from global partners, including tools for resilience assessment, training on resilience strategy development, and assistance with project preparation.

In Europe and Central Asia, the initiative is implemented by the Regional Coordinating Committee, a steering group committed to joining forces in offering support to cities. The committee works on different priorities, gathering resources and best practices that can assist and inspire member cities.

As part of a semester-long project focused on Covid-19 Recovery, this policy brief provides clear recommendations on how to become more resilient in a world that is constantly changing. The University of Huddersfield is the leading partner of UNDRR in this effort, which also includes contributions from several RCC partners, such as UNDP, WHO, Amadora, Greater Manchester, Milan and the Province of Potenza and is the result of numerous activities, events, and city consultations.

It is our hope that this guide can serve as an inspiration for all MCR2030 cities seeking to integrate pandemics into their resilience planning, and that they can continue sharing their best practices. UNDRR and MCR2030 partners will continue to collaborate to share resources at MCR2030, creating a space for learning and exchanging.

Mr. Octavian Bivol
Regional Chief for UNDRR in Europe and Central Asia

Key takeaways

/ Executive summary

a

Encourage cross-sectoral collaboration between the health, disaster management and other sectors.

An accurate and comprehensive assessment of pandemic risk should be supported by the understanding that 'risks' cannot be measured based on mere exposure to a hazard. Risk is a combination of both exposure and vulnerability. Hence, various dimensions of vulnerability, including social and economic vulnerability of households, should be considered when assessing risks. Risk, hazard and vulnerability assessments for pandemics and other biological hazards (particularly at the district, divisional and local levels) have predominantly focused on tracing exposure to such hazards and largely overlooked the dimensions of social and economic vulnerability regardless of their importance in assessing pandemic risk. Further, efforts to assess pandemic risks should account for the complexity of risks, i.e. the potential for hazards to interact, cascade into and co-occur with another hazard. The extent to which risk assessments for pandemics at the sub-national level has captured complex risk scenarios is minimal. Thus, there is an urgent need to develop composite risk matrices to identify communities that are at risk of pandemics as well as other hazards (e.g. floods, landslides) that may concur with a pandemic. Such broad conceptions of risks can only be developed, supported and put into action through cross-sectoral collaboration among health, disaster management and other sectors as relevant, such as Local Authorities, the private sector and NGOs.

b

To develop the governance system through a responsive learning approach to avoid future mistakes.

A balanced decision-making approach is vital to secure governance. Equal representation of public health experts, epidemiologists, virologists, and politicians are recommended for governance bodies. Such expert committees should also be supported through scientific data towards evidence-based policymaking. Governance can be further assured by making policymakers accountable for policy outcomes instead of shifting their responsibilities to experts, as occurred in the early stage of the pandemic in UK.

c

Introduction of clear, timely, accurate, and uniform guidance and communication to health and social care workers and the public for strengthening pandemic preparedness.

Clear communication prevents information overload and confusion during an emergency. Accordingly, clear communication between policymakers and the public is essential for the long-term application of crisis management practices. This is because early warnings are critical in preparedness for future pandemics until a vaccine is found to greatly reduce the threat posed by a biological hazard.

d

Introducing community-based measures to avoid any harmful consequences of the pandemic, especially on the minority and underrepresented groups in society.

These measures may include opening libraries and community centres as soon as possible to heal the damages left by the pandemic. Besides this, a greater understanding is necessary to understand the impact of the pandemic on different communities and groups. Accordingly, it is important to introduce new ways of identifying and evaluating individuals at risk of abuse and self-harm to help and to allocate additional support to people at risk. Additionally, responses required of certain communities (e.g. religious minority groups) during a pandemic may discord with cultural norms accepted and followed by those communities. Conflicts and response failures that stem from such situations can be minimized through encouraging community participation in local level pandemic preparedness activities as well as sensitizing these activities to the local culture.

e

Introduction of long-term economic support to reduce the impact created by the pandemic

As the initial support schemes made available to the affected communities are limited and temporary in nature, introducing long term support is key. Such support should also be extended to industries, like the hospitality and travel sectors to facilitate quick recovery. A global emergency fund could be established to provide immediate compensation to heavily affected sectors in the economy.



1. Context

The ongoing COVID-19 outbreak is an unprecedented event in modern human history. Its underlying factors, vulnerabilities and impacts extend far beyond the health sector, affecting the world's most vulnerable including women, children and youth, older persons, migrant workers, displaced people and refugees, and persons living with disabilities, among others. It is an example of systemic risk: when a hazard leads not only to negative effects in parts of the system but also threatens the failure of the entire system.

Globally, cities are dealing with the Covid-19 pandemic against a backdrop of shocks, pressures, and growing vulnerabilities, all while attempting to prioritize justice, economy, and climate action as part of their recovery efforts. Amidst the worst global economic crisis in nearly a century, it is imperative that progress on sustainable development be re-energized. Now is the time for national and municipal governments to re-establish themselves as stronger, fairer, and more environmentally friendly than before.

This position paper aims to showcase how cities and partners are working together to create solutions (and potentially share these practices with peer cities). It provides insights on several critical problems that need to be better understood in order to improve epidemic and pandemic preparedness at the city/local level. Pandemic preparedness has to be holistic and contribute to build national to local resilience that integrates public health and disaster risk management. This is core to pandemic planning and preparedness, together with adequate risk communication, risk perception and risk-informed behaviour of communities at risk



2. Approach

The brief utilised a mixed approach in gathering and analysing data relevant to the COVID 19 preparedness at the local level, as part of the UKRI funded “Improving COVID-19 and pandemic preparedness and response through a multi-hazard early warning system” research project. Project partners used both secondary and primary data and utilised the following data collection methods:

- A comprehensive desk review to examine the extent to which pandemics have been integrated within national and local disaster risk reduction (DRR) strategies.
- Key informant interviews carried out with purposively selected national and sub-national level officials representing the health and disaster management sectors of the country.
- Focus group discussions carried out with village/local level public health officials
- Use of case studies provided by the cities in response to an open call were used to substantiate the points that have been established.

3. Mainstreaming pandemics into local DRR Strategies: Current Status



The extent to which COVID-19 preparedness planning is currently embedded at local level DRR planning as a biological hazard, so that there will be a detailed understanding on the state of the art of COVID -19 preparedness planning.



Lessons from Greater Manchester, UK

Each year, informed by a national risk assessment, institutions in Greater Manchester (GM) that may be involved in responding to emergencies undertake an all-hazards assessment of risks and compile a Community Risk Register. For over a decade, GM has recognised potential infectious diseases as one of the highest risks within this Community Risk Register, albeit focused on an influenza pandemic. In addition, GM's Resilience Strategy identifies the importance of emerging biological threats to urban resilience, illustrating this through reference to the growing issue of anti-microbial resistance.

Prior to the COVID-19 pandemic, ***this acknowledgement of infectious disease as a significant potential hazard had led GM's institutions to work together to develop a suite of infectious disease outbreak control plans and a protocol for High Consequence Infectious Diseases tested in the Ebola epidemic.*** Building on the experiences of responding to the COVID-19 emergency, these plans have been updated and extended to date. They remain part of the core contribution from GM's public health experts to system-wide disaster preparedness and, ***in addition to the ongoing response to COVID-19, recent outbreaks of other infectious diseases such as monkeypox have utilised these emergency response plans,*** demonstrating their effectiveness and reinforcing the need to embed preparation for biological hazards into a comprehensive approach in DRR planning.

To share lessons learnt from the pandemic at the local level from cities emphasising abundant evidence that a robust, integrated and cascaded multi hazard, preparedness programme that is in place using early warnings and an array of measures will reduce loss of life in cities.



Lessons from Amadora Municipality, Portugal

The first cases of COVID-19 emerged in Portugal in March 2020, in the Municipality of Amadora (171.179 inhabitants). Initially, there was uncertainty regarding who or which agency should take the lead to curb the threat posed by COVID-19. This uncertainty led to an inconsistency in measures adopted by authorities and the community. Another challenge was the lack of resources or lack of access to resources.

In this context, the Mayor of the Amadora municipality decided to activate the **Municipal Civil Protection Emergency Plan (MCPEP)**, in order to guarantee the allocation of all means and resources of the municipality to respond to the growing number of cases.

Under the MCPEP an Integrated Municipal Operational Center (IMOC) was set up including the local Health Authority and the Amadora Public Hospital; the Social Department; the Red Cross; the Social National Institute; the Local Police; the National Police, the Municipal Civil Protection; Red Cross and the fire department. The IMOC became instrumental in addressing the challenges posed by COVID-19.



To comply with global level developments to ensure that health aspects of DRR including risk reduction activities targeting biological hazards are clearly articulated and adequately accommodated in national and local level DRR policing and planning documents.



Western Europe heatwave of 2020

The long-term increase in climate risk, mainly caused by the impact of COVID-19 on livelihoods and poverty can be considered as one of the key implications of the past year.

Climate risks are partly determined by extreme weather and climate events, which are on the rise in a warming climate. **The recent IPCC report** clearly outlines an overall increase in the frequency and intensity of extreme conditions in a changing climate, but also a rising risk of unprecedented conditions and surprises which would complicate preparedness and risk reduction measures (as demonstrated, for instance by the unprecedented US/Canada heatwave).

However, climate impacts are also determined by vulnerability. This is where poorer people generally suffer the biggest blows. Livelihoods have been hit by COVID-19 and the measures to contain it, and sometimes by the additional impact of climate-related disasters in the very same period. Due to the above the recovery period would last longer and more people will be more vulnerable to future shocks of any kind, including the rising risk posed by climate-related extremes.

Learnings from UK policy makers

The **Civil Contingency Act (CCA) of 2004** governs the UK's overall disaster management system. One of the Act's strengths is that it **identifies biological hazards as an emergency under Section 19 and 22**. For example, provisions on coordinating the Regional Civil Contingency Committees and the Central Government during a pandemic are covered in the Act. The **CCA also identifies the NHS, police and local authorities as front-line emergency responders** working in partnerships for effective emergency response.

Moreover, the Government introduced the latest **Coronavirus Act (CA) 2020 on the 25th of March 2020**. Initially, the Act is valid for two years and will be renewed if necessary, depending on medical advice. The Act **delegates additional powers to the Government to slow down the spread of the virus, reduce the resourcing and administrative burden on public bodies, and limit the impact of potential staffing shortages on public services delivery**. The CA grants the Government emergency powers to restrict or suspend public gatherings, detain individuals suspected of being infected, and intervene or relax regulations in various sectors.



Risk identification activities have not addressed the possibility of complex and compound disaster scenarios such as natural hazard-pandemic hybrid scenarios. With the increasing incidence of such scenarios in the context of COVID-19 and the 'new-normal', it is crucial that multiple - risk scenarios are visualised and composite risk matrices are developed emulating a comprehensive and all hazard risk assessment approach.

Lessons from Europe – The compound risks associated with extreme heat and the COVID-19 pandemic

In the 2020 and 2021 northern summers, the prospect of responding to COVID-19 and extreme heat was a particularly complex mix for authorities across Europe. People most vulnerable to extreme heat included older individuals; those with pre-existing medical conditions, such as heart, respiratory and kidney illnesses; people who are socially isolated; the homeless; people living with disabilities and children. **There was a substantial overlap in terms of the highest-risk groups who were at a greater risk of contracting Covid-19, especially during the early stages of the pandemic.**

When considering the protective measures against extreme heat, such measures were the opposite of the protective measures for Covid-19.

For example, physical isolation is one of the clearest ways for older and/or medically high-risk individuals to protect themselves from COVID-19. In contrast, physical isolation with a lack of indoor cooling and heightened risk factors, such as age and pre-existing medical conditions, substantially increases the risk that a person will be affected by extreme heat and will not receive emergency medical attention. Confusion and disorientation are one of the early signs that a person is in need of emergency medical attention, but the same symptoms reduce the chance that an individual will recognize and act on that need on their own.

Similarly, in an early pandemic effort to control the spread of COVID-19, many municipalities closed public drinking fountains – an action that can have an acute, negative impact on people who are homeless during an extreme heat event. Some illustrative examples include: Windsor, Tampa, Lansing, Chicago, and **London**. Other cities instituted large-scale disinfection protocols.

Innovative adaptations to manage the combined risk of COVID-19 and extreme heat also emerged. New York City scaled up its social protection system and installed 40,000 air conditioners in the homes of at-risk elderly people. **In Rome, health authorities repurposed COVID-19 telemonitoring systems to remotely check people at high risk of heat-related illnesses.**

The compound risks associated with extreme heat and the COVID-19 pandemic further underlines the urgent need to strengthen public awareness and individual perception of the risks from extreme heat events.



Minimal attention has been paid to pandemic risk in sub-national level disaster preparedness and response plans. Rather, these plans have focused predominantly on hydro meteorological hazards.



Lessons from the UK:
Non-inclusion of Pandemics
in the Hazard map utilized to
track and provide short-term
forecasts of simultaneous and
successive hazards across the
globe

The U.K. Met Office Global Hazard Map tracks and provides short-term (one week) forecasts of simultaneous and successive hazards across the globe and contextualize these events in relation to antecedent conditions and non-meteorological information. **The tool is underpinned by ensemble forecast data to predict high-impact weather events, including forecasts of tropical cyclones, heavy rain and heatwaves.** At longer lead times, sub-seasonal to seasonal outlooks like those provided by the WMO Global Seasonal Climate Update, associated Regional Climate Centers, Regional Climate Outlook Forums, and National Meteorological and Hydrological Services, and institutions like the International Research Institute and the Copernicus Climate Change Service provide probabilistic forecasts that can be indicators of some types of hydrometeorological hazards. **Such forecasts contain significant uncertainty, and collaborative planning and capacity building are required to make use of the information for hazard-relevant decision-making.** Although, these forecasts predominantly focus on hydro Meteorological hazards and pay minimum attention to pandemic risks.



Case study from Milan, Italy

The impact of the pandemic produced visible changes in Milan's social and economic fabric, including population decline, increase in the unemployment rate and the doubling of families receiving food aid. This forced the city to face the reality, to redefine priorities and to show a new perspective. As with every disruptive event, the COVID-19 outbreak brought to the surface existing vulnerabilities, such as social and territorial inequalities and the quality and accessibility of public spaces and services. All these aspects are directly related to unsustainable urban and territorial development and reveal a lack of resilience. In this context, the pandemic represented an opportunity to the city to rethink its urban context and accelerate political interventions to make the city more liveable, resilient and adaptive to the changes that are redefining Milan. In triggering this change, the Municipality adopted the "Milan 2020 Adaptation Strategy", which contains 33 actions divided into 10 areas of intervention to guide the city in reorganising the urban activities, ensuring social distancing and other precautions related to the health emergency. It contains strategies, actions and projects framed within a broader vision that allowed the city to contain environmental and social repercussions. Indeed, Milan addressed the emergency by strengthening existing activities, initiatives, and temporary projects supporting the Municipality's long-term plans, strategies and actions with particular attention to the city's master plan and the Air and Climate Plan. By doing so, Milan was able to embed the fundamentals of environmental transition into the health emergency management measures. Piazze Aperte ("Open Squares") and Strade Aperte ("Open Streets") are examples of how existing projects fit the "new" need for safe open spaces. Thanks to tactical urbanism, the city succeeded in involving citizens in urban regeneration and fast prototyping new urban frameworks by using short-term, low-cost and scalable interventions. During the Covid-19 pandemic, Piazze Aperte and Strade Aperte assured safe meeting points in the neighbourhoods where people could meet and move while respecting social distancing, avoiding enclosed spaces and crowded public transport. This Adaptation Strategy represents a tangible example of how a city can shape existing measures and policies to adapt to new unforeseen hazards. A moment of 'discontinuity', such as the pandemic, always offers opportunities to learn from past mistakes and strengthen the city's resilience.





Insight of COVID-19 risk governance in the Country, including aspects as powers/national platforms/accountability?



Case study from the United Kingdom

To ensure accountability, the UK Government set up a daily briefing on Covid-19. During the daily briefing, all significant details including infected statistics and number of deaths were presented to the general public. This briefing was chaired by the event Prime Minister during initial stage and thereafter, either the Home secretary or another minister appointed by the Government took over. During these sessions, the chief medical advisor and another representative from the NHS presented the status of the virus in the UK. Further, at the end of these daily briefings, journalists were allowed to raise questions to the panel. This demonstrated some form of transparency as well as accountability. One of the ways to measure the level of accountability is through compare targets with results. Accordingly, the government promised to increase daily testing to 100,000 since March 2020, and to introduce NHS Test and Trace Scheme. Use of scientific advice on policy decisions was cited as a key indicator to assure transparency and accountability of government. UK science and scientists played a vital role in combating the virus. Among these scientific committees, the UK's special group entitled: Scientific Advisory Group for Emergencies (SAGE) provided scientific and technical advice to the Government during emergencies. The group comprised of the Government Chief Scientific Adviser, co-chaired by the Chief Medical Officer and includes experts from within government and leading specialists from the fields of healthcare and academia. Specifically, during Covid-19, the SAGE was further consulted by New and Emerging Respiratory Virus Threats Advisory Group (NERVTAG) and Scientific Pandemic Influenza Group on Modelling (SPI-M) and Independent Scientific Pandemic Influenza Group on Behaviours (SPI-B). The use of science and promotion with sustained interactivity and policy adaptability further ensured COVID-19 risk governance in the Country.





4. Policy Recommendations

1. Consolidate and update existing DRR plans and policies so that 'pandemics' and epidemics' are separately identified in plans and policies.

- There is a need to formulate new Disaster Risk Management [DRM] plans that address preparedness, mitigation, response and recovery from pandemics and associated compound scenarios.
- Steps should be taken to develop preparedness and response plans for public health emergencies including pandemics.
- Scenario planning should be encouraged to identify potential compound, interacting or cascading hazard scenarios, mainly those which feature disparate hazards such as natural and biological hazards.

2. Pandemics and associated compound hazard scenarios are identified in hazard, risk and vulnerability assessments

- Encourage cross-sectoral collaboration between the health, disaster management and other sectors
- Promote data sharing across sectors and administrative levels by the establishment and maintenance of a central database
- Identify geographical and socio-demographic risk factors for the most prominent communicable diseases
- Encourage the use of technological advancements in developing risk knowledge for compound risks [impacts, vulnerabilities, capacities]

3. Improved detection and monitoring of pandemics and associated compound hazard scenarios

- Integrate technology used in EW systems into detection and monitoring of pandemics and associated compound hazard scenarios
- Invest in improving the resilience of critical infrastructure, particularly healthcare facilities to improve testing and detection and vice versa
- Train and deploy volunteer teams to carry out detection and monitoring activities at the ground level
- Empower the community to streamline channels of receiving ground risk information
- Undertake staff contingency planning for required activities during pandemics

4. Early warning messages issued during a pandemic and an associated compound hazard scenario are effective in influencing anticipated behaviour changes and have a higher reach

- Establish national level collaboration between health sector and non-health sector stakeholders to design influential and appropriate EW messages
- Use the existing EW mechanism to disseminate early warning messages pertaining to epidemics and pandemics
- Establish a rumour monitoring and management mechanism at the local level
- Use technological platforms such as social media for EW dissemination and risk communication

5 Improved preparedness and response for pandemics and associated compound hazards.

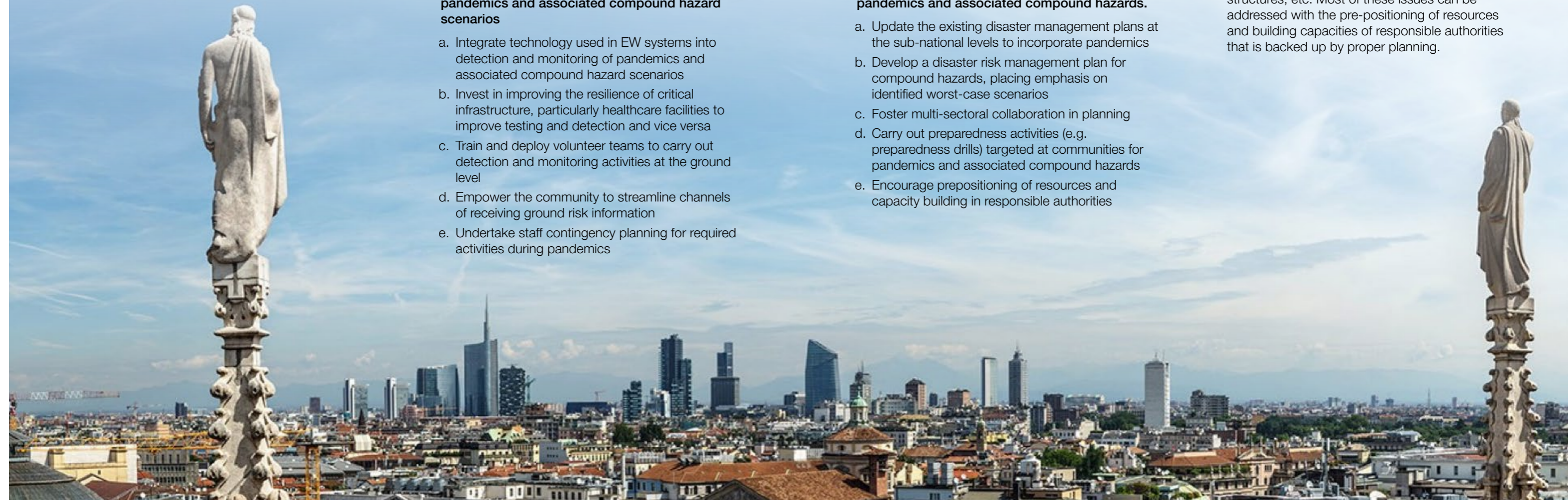
- Update the existing disaster management plans at the sub-national levels to incorporate pandemics
- Develop a disaster risk management plan for compound hazards, placing emphasis on identified worst-case scenarios
- Foster multi-sectoral collaboration in planning
- Carry out preparedness activities (e.g. preparedness drills) targeted at communities for pandemics and associated compound hazards
- Encourage prepositioning of resources and capacity building in responsible authorities

6. Promote cross-sectoral data sharing to ensure that comprehensive risk assessments are carried out for pandemics.

- Data sharing across sectors should be promoted and facilitated to identify vulnerable households in a pandemic context both accurately and in a holistic manner.

7. Encourage the development of policies to enable the repositioning of resources and capacity building in responsible authorities enhancing the capacities to mitigate the impacts of a pandemic and associated compound hazard events.

- During the COVID-19 outbreak, response mechanisms were hindered by travel restrictions, lack of resources, infected officials, supply chain disruptions, the establishment of ad-hoc structures, etc. Most of these issues can be addressed with the pre-positioning of resources and building capacities of responsible authorities that is backed up by proper planning.





5. Further reading

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Web links:

COVID19 information platform in Amadora: <https://www.cm-amadora.pt/covid-19.html>

Embedding COVID-19 preparedness into local disaster risk reduction: <http://covid19liaise.info/project-01-introduction/>

Improving COVID-19 and pandemic preparedness and response through the downstream of multi hazard early warning systems: <http://pandemic-mhew.org/>

Integrating pandemic preparedness and disaster risk reduction to protect economic assets and people in the 'new normal' for the Greater Bandung Metropolitan area of Indonesia: <http://covid19liaise.info/>

