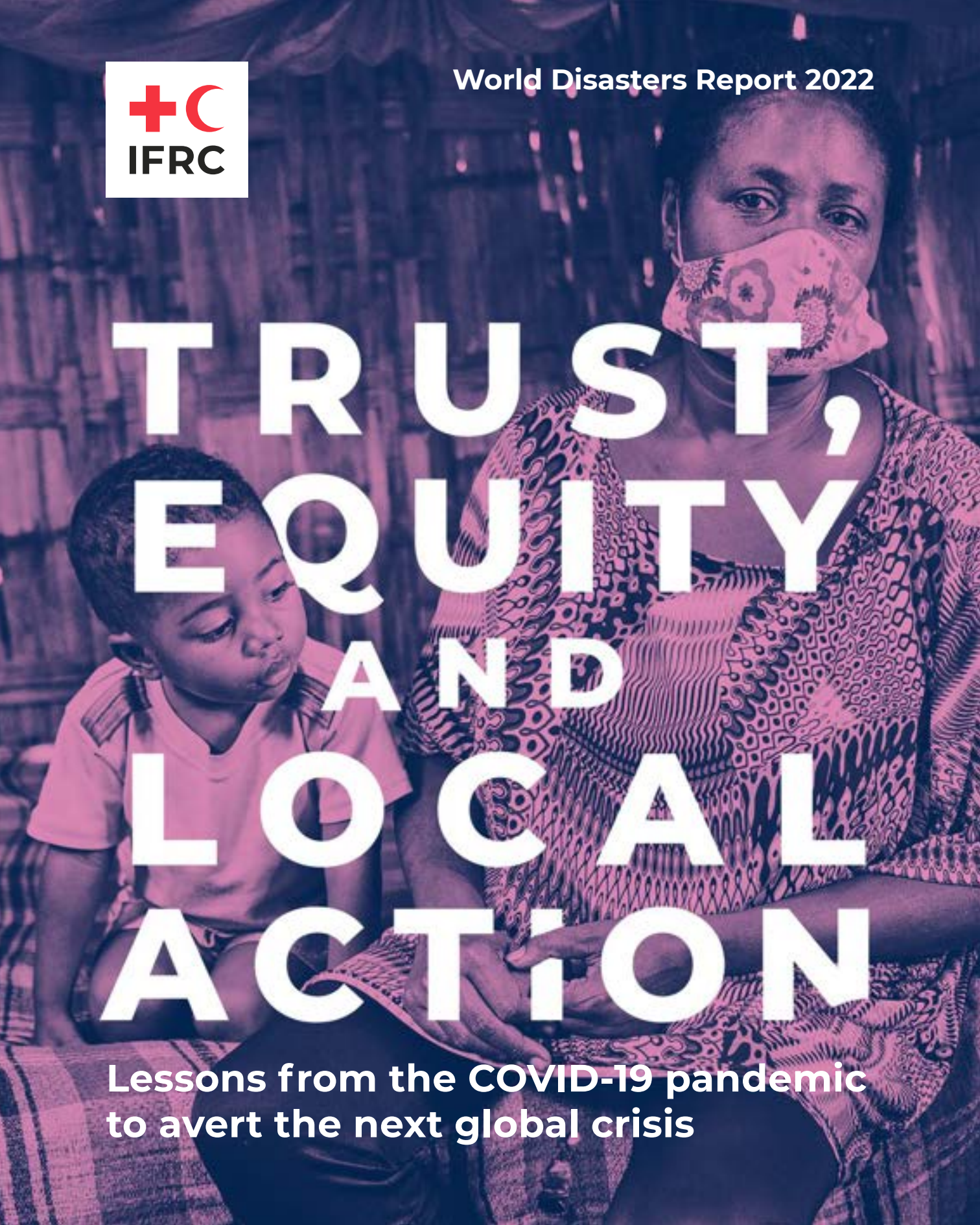

IFRC

World Disasters Report 2022

TRUST, EQUITY AND LOCAL ACTION

Lessons from the COVID-19 pandemic to avert the next global crisis


IFRC

WORLD DISASTERS REPORT 2022

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Cover photo: Madagascar, 2020. Rasoanirina Edouard, a beneficiary of the financial assistance given by the Malagasy Red Cross, returns home after recovering her money. © iAko Randrianarivelo / IFRC

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Address: Chemin des Crêts 17, Petit-Saconnex, 1209 Geneva, Switzerland
Postal address: P.O. Box 303, 1211 Geneva 19, Switzerland
T +41 (0)22 730 42 22 | **F** +41 (0)22 730 42 00 | **E** secretariat@ifrc.org | **W** ifrc.org

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Project managers: Kirsten Hagon (lead), David Fisher and Danielle Larrabee (all IFRC)

Lead author: Michael Marshall

Contributing author: Rachel Amy Macleod (IFRC) – Chapter 6: Law and public health emergencies

Lead editor: Danielle Larrabee (IFRC)

Project assistant: Begümhan Şimşir (IFRC)

Design and layout: Hadley Kincade, Philippe Boisson and Carole Maroun

Copy editor: Rebecca Hills

Data analysts: Julien Chatellier, Dan Walton

Media and communications: Léa Salwan, Melis Figanmeşe and Shani Bannister (all IFRC)

Translations: Consuelo Nunez, Florence Marot, Adel El Tawabti and Rachel Foex (all IFRC)

Management team: Nelson Castano, Xavier Castellanos, David Fisher, Caroline Holt, Petra Khoury, Frank Mohrhauer (all IFRC).

External advisory group

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Acronyms

ACT-A	The Access to COVID-19 Tools Accelerator
CAP	Common Alerting Protocol
CBHFA	Community Based Health and First Aid (team at the Syrian Arab Red Crescent)
CBS	Community-based surveillance
CEPI	Coalition for Epidemic Preparedness Innovations
CHWs	Community health workers
COVAX	COVID-19 Vaccines Global Access
COVID-19	Coronavirus disease
CP3	Community Epidemic and Pandemic Preparedness Programme
CRAF'd	UN Complex Risk Analysis Fund
DEEP	Data Entry and Exploration Platform
DG ECHO	Directorate-General for European Civil Protection and Humanitarian Aid Operations
DREF	Disaster Response Emergency Fund
EAPs	Early Action Protocols
EC DRMKC	European Commission Disaster Risk Management Knowledge Centre
ECPHAO	European Civil Protection and Humanitarian Aid Operations
EM-DAT	Emergency Events Database
ESSN	Emergency Social Safety Net
EVCA	Enhanced Vulnerability and Capacity Assessment
FAO	Food and Agriculture Organization of the United Nations
FbA	Forecast-based Action
FDRS	Federation-wide Databank and Reporting System
FIND	Foundation for Innovative Diagnostics
GAVI	Global Alliance for Vaccines and Immunization
GDP	Gross Domestic Product
GDPC	Global Disaster Preparedness Center
GPMB	Global Preparedness Monitoring Board
IASC	Inter-Agency Standing Committee
IAVG	Independent Allocation of Vaccines Group
ICRC	International Committee of the Red Cross
IDS	Institute of Development Studies
IFRC	International Federation of Red Cross and Red Crescent Societies
IHR	International Health Regulations
IP	Intellectual property

IPBES	Intergovernmental Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
IPPPR	The Independent Panel for Pandemic Preparedness and Response
IRC	International Rescue Committee
ITPC	International Treatment Preparedness Coalition
MERS	Middle East respiratory syndrome
MHPSS	Mental health and psychosocial support
MSF	Médecins Sans Frontières
OECD	Organization for Economic Cooperation and Development
OHHLEP	One Health High-Level Expert Panel
PER	Preparedness for Effective Response
PHEs	Public health emergencies
PPE	Personal protective equipment
PPP	Pilot Programmatic Partnership
RCCE	Risk Communication and Community Engagement
RCIC	The Red Cross Independent College
RCSC	Red Cross Society of China
REAP	Risk-informed Early Action Partnership
SARS	Severe acute respiratory syndrome
SARS-COV-2	SARS Coronavirus 2
SDGs	Sustainable Development Goals
TRIPS	(Agreement on) Trade-Related Aspects of Intellectual Property Rights
UK	United Kingdom
UN DESA	United Nations Department of Economic and Social Affairs
UN OCHA	United Nations Office for the Coordination of Humanitarian Affairs
UN OCHA FTS	United Nations Office for the Coordination of Humanitarian Affairs Financial Tracking Service
UN OHCHR	United Nations Human Rights Office
UN OHRLLS	UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
US EPA	United States Environmental Protection Agency
USAID	United States Agency for International Development
WASH	Water, sanitation and hygiene
WHO	World Health Organization
WHO SAGEI	WHO Strategic Advisory Group of Experts on Immunization
WTO	World Trade Organization

FOREWORD

At the time of writing this *World Disasters Report 2022*, the COVID-19 pandemic has taken a staggering toll on lives, health, and social and economic wellbeing in every nation in the world.

This crisis – including the disease itself, its knock-on effects and the measures taken to combat it – has caused increased unemployment and poverty; increased food insecurity; a higher vulnerability to violence; a loss of education and reduced opportunities for children; and added stress to public services. It has also exacerbated mental health issues and cost the global economy trillions of US dollars.

We can now say with confidence that much of this could have been avoided. While COVID-19 was a new virus that presented new challenges, there are countless common measures and approaches that could have mitigated the pandemic's impacts. Notably, governments could have made far greater investment in emergency preparedness at the community level.

We know this from over a century of helping governments and communities prevent, prepare for, respond to, and recover from disasters and disease outbreaks, including HIV/AIDS, Zika, Ebola, SARS, measles and cholera.

Alongside the Global Preparedness Monitoring Board and other renowned health experts, we warned as early as 2018 that the likelihood of a major pandemic was high and that we were not prepared for it. It took the COVID-19 pandemic, however, to make the world understand the consequences of past mistakes, and to see that solidarity, not competition, was a far sounder public health response.

Since the beginning of the pandemic, the IFRC with its 192 member National Societies and 15 million volunteers have been helping people around the world to survive and cope during and beyond this pandemic, while continuing to respond to many other concurrent disasters and crises.

To date we have reached over 1.2 billion people with health services, information, food and cash to prevent transmission and curb the pandemic while ensuring that our volunteers and staff have been provided with the tools and support they needed to assist their communities while maintaining their safety and physical and mental health.

To ensure that we do not repeat the same mistakes, the critical lessons from this pandemic must be embedded into national laws, policies, budgets and actions.

The *World Disasters Report 2022* is a contribution to this effort and calls for greater investment in domestic and local preparedness: preparedness to prevent, detect early and respond quickly to future outbreaks and other shocks and stresses.

The report underscores the importance of preparedness based on the principles of trust, equity, and local action.

Trust, because pandemic countermeasures, including vaccines, public health information and isolation measures, will not be accepted unless there is trust.

Equity, because pandemics thrive on and aggravate inequity and cannot be controlled until access to services and critical products, including vaccines, is guaranteed in law and available in practice.

Local action, because pandemics begin and end in communities, and because governments need to leverage and support local action to build resilience, trust and agile health systems.

Most importantly, the report recommends several practical approaches and programmes that show how these principles can be addressed through community prevention and preparedness, stronger community health systems, protection and support of frontline responders, legal preparedness, and better use of local data.

We have a historic opportunity to strengthen disease outbreak preparedness in the coming years by putting local communities at the centre. All of us – governments, the international community, and partners – have a critical role to ensure that opportunities are not squandered. The IFRC network commits, in line with our mandate, to stand by governments and communities to support this process in law and in action.

Jagan Chapagain
IFRC Secretary General

Bangladesh 2021 *Noriko Tomabechi is the former country representative and project manager for the Japanese Red Cross Society in Bangladesh. "The COVID-19 pandemic has been another crisis for us all, and it has made life in the camp even more difficult. Four years have passed, and they are still living in harsh conditions in the camps and there are many challenges ahead. Despite multiple crises, people show their resilience every day."*
© Ibrahim Mollik / IFRC

Contents

Madagascar 2020 *The Malagasy Red Cross provided support to the Ministry of Health with sensitization activities including home visits – including to Zanamijay Jeanne pictured – as well as focus groups and sessions with local leaders. © iAko Randrianarivelo / IFRC*

EXECUTIVE SUMMARY
LEARNING FROM COVID-19 TO BETTER HANDLE FUTURE DISASTERS

COVID-19 is a disaster without recent parallels

The coronavirus pandemic has been the biggest disaster in living memory, by almost any measure. Over 6.5 million people are confirmed to have died in less than 3 years – or about 1 in 1,000 people by the most conservative estimates (WHO, no date) – an order of magnitude larger than that of any recorded earthquake, drought or hurricane. Industries and entire economies have been devastated: the International Monetary Fund has estimated that the pandemic will cost the global economy US$13.8 trillion by the end of 2024 (Gopinath, 2022). The socioeconomic impacts of the pandemic, meanwhile, are also enormous.

Furthermore, the pandemic's indirect impacts have touched the lives of virtually every community on the planet. No disaster in recent decades has had such sweeping impacts. This means that everyone now has some exposure to disaster management, or mismanagement, because we have all endured the pandemic and its consequences.

Figure E.1: The death toll from COVID-19 (2020–present) compared to the most severe disasters of the 21st century to date

Source: EM-DAT, no date; WHO, no date; ReliefWeb, no date; Dawood et al, 2012.

On the other hand, not everyone has suffered equally. In many cases, the pandemic aggravated existing inequities and mistrust, both between and within countries. Sadly, in some cases, the health countermeasures taken to respond to it sometimes had a similar effect, particularly when they ignored or impeded local and community action, rather than leveraging it for greater preparedness.

We weren't prepared, and we need to be

This report focuses on preparedness: both the ways preparedness ahead of COVID-19 was inadequate, and how to prepare more effectively for future public health emergencies. We must now prepare our societies for the next public health emergency. Being truly prepared therefore means being ready to prevent, respond and recover, and to learn lessons for next time. In other words, preparedness is an ongoing, continuous process.

Many countries were unprepared for COVID-19. Some did not have a plan for a disease outbreak of this magnitude. Others had allowed key elements of their preparedness to lapse – for example, cutting spare bed capacity in hospitals in the name of efficiency, leaving healthcare systems unable to handle the surge in COVID-19 patients. Crucially, many countries had not invested enough in preparedness at the local level and were not able to leverage the local preparedness that did exist. Those countries most successful in combating the spread of COVID-19 had built resilient healthcare systems and social safety nets, and they had learned the lessons of previous coronavirus outbreaks like severe acute respiratory syndrome (SARS) in 2003. These countries still had to adapt and still found aspects of the pandemic difficult, but they had a cushion that others did not.

As of the time of writing, all countries remain dangerously unprepared for future outbreaks. Despite the COVID-19 pandemic showing the world the importance of being prepared, countries are not ready for another public health emergency. For example, the 2021 *Global Health Security Index* – while an imperfect preparedness analysis tool – analysed 195 countries on six categories of preparedness for health emergencies, including detection, response and societal norms. It concluded that none are ready for future epidemics and pandemics (Bell and Nuzzo, 2021). Rated out of 100 on their preparedness, not one country scored above 80. Worse, the global average was just 38.9, almost exactly the same as the last assessment in 2019, indicating there has been no real improvement in health emergency preparedness.

Furthermore, true preparedness means being ready for multiple hazards, not just one. One of the biggest surprises of the COVID-19 pandemic was that many countries that were seemingly well prepared for a disease outbreak struggled to cope with the coronavirus. It also goes beyond pathogens: societies that prepare well for disease outbreaks but neglect to prepare for extreme weather events will still find themselves vulnerable if a hurricane strikes. Societies can only become resilient by developing disaster frameworks that can handle multiple types of hazard, which can occur simultaneously.

We need to start preparing now, because our world is becoming increasingly hazardous. In 2021, 378 disasters were recorded – not including disease outbreaks – which is higher than the 20-year average of 337 disasters per year. Many countries had to respond to hazards like hurricanes and floods while also dealing with COVID-19. Much of the increase in hazards is driven by a rise in climate- and weather-related disasters. Alongside this, the 21st century has seen a wave of disease outbreaks, of which COVID-19 is just one, albeit the largest. This increasingly hazard-prone world demands a global effort to help communities develop preparedness, to reduce the burden of suffering and mortality.

Italy 2020 *During a shift on the Italian Red Cross ambulance in Florence.© Michele Squillantini*

Trust, equity and local action are key to preparedness

Preparedness is only effective if founded on trust, equity and local action. In the wake of COVID-19, many reports and analyses have highlighted the importance of preparedness for future disease outbreaks, and for disasters generally (see Introduction). However, after reviewing these global evaluations (for example Sachs et al, 2022; IPPPR, 2021) and IFRC's internal learnings (for example Johnston, 2022; IFRC, 2021), we identified three key elements of preparedness that are largely being neglected in the recommendations of other reports, despite being essential for success. These elements are **trust**, **equity** and **local action**. The IFRC highlights the importance of trust, equity and local action throughout this report. They are the common threads running through our recommendations. The COVID-19 pandemic, as well as long experience with other crises, has taught us that neglecting these factors has enormous social, economic, physical and mental costs.

TRUST ***Preparedness means building trust***. **Indeed, trust is one of the best predictors of a successful response to any emergency.** At every stage of the disaster management process – most crucially prior to an emergency – it is essential to build trust throughout communities and societies, something the COVID-19 pandemic made abundantly clear. When people trusted public health messages, they were willing to comply with public health measures that sometimes separated them from their families for months at a time in order to slow the spread of the disease and save lives (see Chapter 2). Similarly, it was only possible to vaccinate millions of people in record time when most of them trusted that the vaccines were safe and effective, or at least better than the alternative. But the reverse is also true: when trust is fragile or lacking, public health becomes political and individualized. In the past years we have learned that the pandemic both fed on and fueled political, economic and personal tensions, impairing our ability to respond.

EQUITY ***Preparedness must include provisions for greater equity,*** **because public health emergencies both thrive on and aggravate existing inequities.** Major hazards like disease outbreaks and extreme weather events have extremely inequitable impacts, causing the most harm to those who are already poor, dispossessed or otherwise vulnerable. This is often compounded by inequitable preparedness frameworks, which fail to assist those who need help the most. In a pandemic, this approach is self-defeating: so long as the disease is spreading in one sector of the population, it can still return in a more contagious or dangerous form. But it is also corrosive to society if some groups are left to suffer the long-term impacts of a disaster. If a society isn't helping everyone, it isn't truly prepared. It is therefore essential to bolster social protection programmes, foster inclusion, and achieve universal health coverage.

LOCAL ACTION ***Preparedness must be local,*** **because action at the community level is an essential component of any effective hazard response.** From disease surveillance to earthquake shelters, local actors are on the front line, meaning they are well placed to achieve real change (see Chapter 2). Local actors like our National Society volunteers form a bridge between authorities and communities, and they are well placed to observe decision making at all levels. Local action harnesses the collective knowledge and actions of a community; for example, people often know their neighbours and are conscious of the most vulnerable. Working closely with communities also allows responders to identify their true wants and needs, and to understand why they are reluctant to adopt health measures such as vaccination. In contrast, top-down government action, imposed without engagement with communities, may fail to reach marginalized groups or to serve the specific needs of each community. This is fatal because diseases spread

at the weakest links in the chain, so a lack of community surveillance allows them to infect ever more people. Instead, local action makes use of the bonds of trust that exist between local businesses, organizations and communities. The IFRC's experience with community health systems, including preparedness and community engagement, illustrates the vital importance of working at the local level and how effective community-based interventions were often the most effective during the COVID-19 pandemic.

Embracing trust, equity and local action will enable society to better handle future disease outbreaks and other hazards. In the following chapters we address six key activities – all of which contribute to building preparedness. They are:

1. **Strengthening prevention and preparedness at the local level.** Our experience indicates that countries that prepared more for disease outbreaks handled COVID-19 – and sometimes multiple overlapping emergencies – better.

2. **Leveraging the roles and capacities of communities and local actors through integrated community health systems.** In many countries the capacities of local actors like community health workers were not used to their full potential, hampering the COVID-19 response. This happened because these local actors were not supported or coordinated with the wider health system. Similarly, communities were not sufficiently involved in the design of programmes, so responses did not necessarily meet their needs.

3. **Building global solidarity mechanisms** to ensure that pandemic response products reach all communities. Many communities have not had sufficient access to pandemic response products like vaccines. This was partly a failure of international distribution and partly lack of capacity in domestic programmes like community engagement and logistics. The situation was exacerbated by an ongoing failure to give more humanitarian funding directly to local actors.

4. **Protecting communities against the socioeconomic impacts of public health emergencies.** Many governments rapidly strengthened their social protection systems to cover more people and offer more effective and rapid assistance, often in the form of cash transfers. However, a number are now treating this as a temporary measure and scaling back their efforts, leaving people again unprotected. Furthermore, there are many barriers preventing communities from accessing essential services.

5. **Collecting local data and harnessing it to take action.** The pandemic has been both a triumph and failure of data collection, analysis and use. 'Traditional' epidemiological data like virus genotyping has been gathered and shared with remarkable speed. However, the pandemic has also seen a continued failure to collect more and better social and economic data in order to better understand people's beliefs, needs, vulnerabilities and capacities.

6. **Strengthening legal preparedness for public health emergencies.** Legal frameworks create an enabling environment for all the other actions. However, many countries' public health emergency laws were outdated, ill-adapted, or did not align with other emergency frameworks. There are also gaps at the international level. This contributed to chaotic responses in many countries. Our public health emergency laws need to be updated and reviewed so that future disease outbreaks can be handled more effectively.

Based on these findings, we have developed a set of overall recommendations.

Bangladesh 2021 *A Bangladesh Red Crescent Society volunteer helps Subbir Hossain, a patient suspected to have COVID-19 suffering from shortage of breath in Satkhira Medical College Hospital. © Mir Hossen Roney*

The consequences of poor decisions and recommendations to address them

The findings and recommendations made throughout this report have addressed what we see as gaps in the COVID-19 response to date. Moreover, as we head into negotiations on the International Health Regulations and on a new pandemic agreement at the World Health Assembly, and as we observe the direction that some domestic authorities are taking at home, we see areas of serious concern. If left unaddressed, these issues could lead us to either repeat the mistakes of the past, or aggravate existing inequities and tensions.

In the next three sections, we address our key concerns about trust, equity and local action – and how to resolve them. Finally, we present three measurable targets for the next three years.

Trust

Top-down social control measures like lockdowns and vaccine passports, when implemented without trust and transparency, **often lead to polarization and create resistance to public health measures**.

Moreover, **a narrow focus on increasing communication campaigns and countering mis-information will not build trust. It may even backfire** in situations of political and social unrest, or discrimination.

Trust can only be built through:

- **Proximity:** People trust people they know, such as local actors.
- **Education:** People trust what they understand, via health literacy programmes.
- **Listening:** People trust those who listen to them and act on their concerns, such as trained community engagement specialists who gather feedback and analyse it.
- **Access to services:** People trust those who address their needs, including their basic health and social protection needs.
- **Ownership:** People trust measures they feel ownership of and are consulted on.

Just as importantly, **building trust is a process that cannot wait until a crisis occurs**.

We urge governments to promote:

Community ownership of emergency preparedness plans: Design, implement and monitor whole-of-society and whole-of-government preparedness plans that leverage the capacities and knowledge of local actors and communities to prevent, detect and respond early to disease outbreaks and public health emergencies.

Active listening and community engagement: Create or scale up meaningful, two-way community feedback mechanisms that record community concerns, needs and suggestions, and collect and analyse them to adapt public health measures when possible and as needed.

Access to services and education through stronger community health systems: Invest in or strengthen **community health systems**. These include all the actors, infrastructures and services that promote community health, ranging from information and services to emergency preparedness and programmes addressing the determinants of health. They include water and sanitation systems and strong mental health and psychosocial support.

Equity

Developing the supply side of pandemic response products, without addressing the demand side, undermines access and uptake of these products by countries and communities, especially the most vulnerable and hard to reach.

The international community and domestic authorities should promote:

Domestic capacities to distribute pandemic response products, including through local actors: Invest in domestic capacity to store, transport and distribute these products through better funding, training, advance notice and the necessary laws/policies to facilitate the movement and distribution of the goods. The contributions of local actors to this process are critical given their access to isolated and marginalized areas, and to disaster- and conflict-affected areas.

More flexible, predictable humanitarian funding: Where government capacities need to be complemented by international humanitarian organizations or recognized local actors, reform humanitarian funding to make it more equitable, predictable, flexible and accessible to local actors.

Community confidence and interest in pandemic response products: Invest in meaningful community engagement programmes to promote community uptake of these products. Such programmes should be complemented by transparent information on the timing, method and location of the distribution, as well as on the choice of product.

Equitable and fair distribution of indemnification and liability risk, including for humanitarian organizations, and limitations on how long manufacturers can be exempted from purchasing indemnification and liability insurance for new products.

Development and production of pandemic response products that are less expensive, easier to store and administer and just as effective: Such products are essential for countries that do not have the capacity to purchase, store or administer more expensive and complex products.

Limiting discussions of equity to the question of equitable access to pandemic response products is short-sighted. There are many other concrete and critical measures that can help address inequities in pandemic preparedness, by addressing the drivers of disease outbreaks and their differentiated impacts.

The international community and domestic authorities should promote:

Equitable access to information: This includes domestic obligations to create early warning/ early action systems for their populations.

Equitable access to domestic health and social protection services: This must include: guaranteeing rights to basic health countermeasures and social safety nets, regardless of legal status; strengthening social protection systems before a crisis occurs, including through joint vulnerability assessments; and increasing local access to health services through community health systems.

Equitable and needs-based access to humanitarian assistance: This should include reducing the use of earmarked humanitarian funding to allow for more flexible, needs-based assistance across countries and time. Such flexibility is essential because of the considerable variations in how disease outbreaks evolve.

Greater emphasis on multi-hazard prevention (primary, secondary and tertiary) and preparedness: This will help to mitigate or avoid the impacts that epidemics and pandemics have on the most vulnerable. It will also address the possibility of compounded shocks and stresses, such as economic or social shocks, earthquakes, weather- and climate-related events, and conflicts.

Local action

While domestic authorities will always have the primary responsibility to manage public health emergencies, **overly centralized and medicalized approaches to pandemic prevention, preparedness and response cannot address the local complexities of emergency management.** These complexities include: a variety of risk factors and drivers of disease; the unpredictable social, economic and physical/mental effects of a disease; and people's attitudes to public health measures and risk.

Moreover, **a failure to include other actors, and to leverage and support local knowledge and capacities, can rapidly lead to overwhelmed government services and systems.**

Domestic authorities can address this by:

Recognizing and integrating recognized and trained local actors into domestic emergency and health systems: This includes the design, implementation and monitoring of **multi-hazard national emergency preparedness plans and legal frameworks** and recognizing their **contributions to health systems strengthening, especially community health systems** (in this case, we refer to approaches such as task shifting – the transfer of non-medical but health-related tasks to trained local actors).

Providing trained and recognized local actors with the legal protections and facilities they will need to carry out their tasks: This includes priority access to personal protective equipment and pandemic response products; exemptions from movement of goods and personnel as public health warrants; and the financial support, training and oversight that they need to meet quality, living and safety standards.

Working with communities to design, implement and monitor **domestic emergency preparedness plans** for prevention, early action and response.

Measurable objectives for the next three years

The next pandemic could be just around the corner: if the experience of COVID-19 won't quicken our steps toward preparedness, what will? Governments can take concrete action immediately by following this three-point plan.

1 By the end of 2023, every country should have **updated pandemic preparedness plans** and should have reviewed the relevant legislation to see if it too needs updating.

- Plans should include **concrete measures** to strengthen equity, trust, and local action.

- Legislative reviews should bear in mind, among other things, the **need for a holistic approach** to crisis response, clarity of roles and responsibilities, and the needs of recognized local actors for personal protective equipment and appropriate exemptions from movement restrictions.

2 By 2024, **adopt a new treaty and revised International Health Regulations,** which include concrete and measurable obligations to:

- **Strengthen** equity and trust.

- **Promote** better domestic and international legal governance of pandemics.

- **Invest in and support** the range of services and inputs that can be provided by recognized local actors and/or communities.

3 By 2025, **increase domestic health finance by 1% of GDP** and **global health finance by at least US$15 billion per year** (G20, 2021; WHO, 2019).

- A much greater proportion of global financing for both public health and humanitarian action must also flow to **the local and community level**.

- Global financing should be **more predictable and flexible** to allow for more effective and needs-based action.

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India, 2021 *People maintain social distance norms as they wait in a serpentine queue along a hilly trail in Mahabaleshwar to receive their COVID-19 vaccine shots at a rural hospital. In coordination with the district administration, the Red Cross has prepared two institutional quarantine facilities in the state. © Pankaj Nangia*

INTRODUCTION
THE WORST DISASTER FOR OVER 70 YEARS

Humanity has been living with COVID-19 since December 2019, when the novel coronavirus SARS-CoV-2 was first detected. The impact on lives, long-term health and economies has been shattering.

As of October 2022, there have been over 618 million cases of the disease reported and 6.5 million confirmed dead (WHO, no date). The real numbers are probably higher, but it is uncertain quite how much higher. The official death toll for 2020 was just over 1.8 million, but some estimates factoring in likely unreported cases placed it at 3 million (WHO, 2022). Given the current global population of 8 billion (UN DESA, 2022a), it is clear that **about one person in every 1,000 has died**. A study published in October 2022 explored the pandemic's impact on life expectancy in 20 countries, and it concluded that COVID-19 has been "the most severe global mortality shock since World War II" (Schöley et al, 2022).

A further impact of the COVID-19 pandemic is that industries and entire economies have been devastated and socioeconomic inequities worsened. The World Bank has reported that, in 2020, "economic activity contracted in 90 percent of countries, the world economy shrank by about 3 percent, and global poverty increased for the first time in a generation" (World Bank, 2022). By January 2021, almost every country's economy was in recession (Jones et al, 2021). The International Monetary Fund has estimated that the pandemic will cost the global economy US$13.8 trillion by the end of 2024 (Gopinath, 2022). The economic impacts were most severe in emerging economies and among disadvantaged populations. As a result, inequality increased both within and between countries (World Bank, 2022).

Furthermore, the pandemic impacted many other aspects of society. Education has been disrupted, with schools often closed for many months. Violence against women and children has increased. Many people's mental health has suffered, and social isolation has been widespread. These spillover effects include delays in achieving Sustainable Development Goals (SDGs) (UN DESA, 2022b).

The impacts from COVID aggravated – or were aggravated by – a host of other hazards. Hurricanes, droughts, other health threats, and conflicts have continued unabated since the emergence of COVID-19. These hazards were often overshadowed by the pandemic. 2020's Storm Alex caused extreme flooding in the Mediterranean region (BBC News, 2020), while an ongoing locust infestation devastated crops in east Africa, the Arabian Peninsula and Indian subcontinent (FAO, no date). Hurricane Grace struck Mexico in August 2021 (Reinhart et al, 2022) and was followed a few weeks later by Hurricane Ida, which made landfall in Louisiana, causing damage second only to 2005's Hurricane Katrina (Beven et al, 2022). On 15 January 2022, the Hunga Tonga–Hunga Ha'apai volcano erupted explosively in the Kingdom of Tonga, causing widespread damage and triggering tsunamis across the Pacific (BBC News, 2022).

As a result, communities frequently found themselves trying to respond to an emergency while also dealing with the ongoing threat of the coronavirus. Multiple, overlapping crises cause greater harm. For example, they place increased pressure on public services, including health systems. During the pandemic, first responders have often been unable to reach certain areas due to movement restrictions. People often spend their savings to recover from the first shock, leaving them with no buffer when another shock arrives. Disasters like floods create unsanitary conditions, which favour the spread of pathogens. COVID-19 was an exceptional disaster – but it was also one of many.

What went wrong: A review of prior reports

The COVID-19 outbreak happened in the 21st century, in a globalised society with access to resources that were almost inconceivable a century ago when the 1918 influenza pandemic took place. For all our knowledge, technology and wealth, humanity was not ready to respond rapidly or efficiently enough to such a public health emergency. Nor were we prepared to deal with the multiple overlapping crises that have compounded the pandemic's impacts.

Multiple reports have examined our response to COVID-19 and how it was impacted by our preparations (or lack of them) for disease outbreaks. These studies offer a wealth of information about the ways governments and the international community prepared themselves for health emergencies, both where those preparations were effective and where they were incomplete or poorly targeted. There are also reams of data on how our health systems, and other public services, performed during the pandemic. In this section we review some of the key reports and their findings. In the following section, we explain how this *World Disasters Report 2022* stands out.

An invaluable overview of lessons learned from the pandemic is provided by the *Lancet* COVID-19 Commission in their report published in September 2022 (Sachs et al, 2022). The commission describes the death toll as "a massive global failure" and identifies 10 examples of where international cooperation faltered. These included several failures to implement the International Health Regulations (IHR) (2005). Many of the gaps in the response occurred early in the pandemic and were defined by slow or delayed action.

The Independent Panel for Pandemic Preparedness and Response (IPPPR) makes similar points in its major report (IPPPR, 2021). The IPPPR also focuses on the early phases of the pandemic. They argue that the initial outbreak could have been contained rapidly were it not for a series of mistakes. First and foremost, multiple warnings that the world would face a pandemic were not taken seriously. Preparedness was underfunded and countries did not do enough stress testing. Second, when the initial COVID-19 outbreak was identified and declared a Public Health Emergency of International Concern, too many countries took a 'wait and see' approach, instead of moving swiftly to contain the virus and forestall a pandemic. Third, international tensions were allowed to undermine global leadership. Fourth, response funding was too slow, so many countries suffered shortages of essential equipment like diagnostic testing kits. Finally, a failure to take a whole-of-society approach meant the pandemic widened inequalities: disproportionate impacts have been felt by women, vulnerable and marginalized populations like migrants and refugees, and by children whose education has been disrupted or terminated.

The theme of under-preparedness has been explored in more detail by successive reports of the Global Preparedness Monitoring Board (GPMB). Its 2019 report was released just months before the COVID-19 outbreak was detected and warned of the "acute risk of a devastating global epidemic or pandemic" (GPMB, 2019). The following year, the GPMB concluded that the COVID-19 pandemic had "revealed a collective failure to take pandemic prevention, preparedness, and response seriously". A central finding was that we had failed to understand preparedness fully. This was demonstrated by the inability of widely used preparedness indices like the Global Health Security Index to predict a country's eventual ability to control the spread of the virus, indicating that those indices were insufficiently well designed (GPMB, 2020).

Finally, the GPMB's most recent report identified the broken international system as a major contributor to the severity of the pandemic (GPMB, 2021). However, it has less to say about local and community-level action.

A central pillar of preparedness is legal preparedness. Laws and policies underpin every single aspect of emergency prevention, preparedness, response and recovery, for example by allocating responsibilities to key actors. These laws and policies need to be regularly reviewed and updated. Two reports from 2021 illustrated the limited legal preparedness for COVID-19.

A World Health Organization committee reviewed compliance with the IHR (2005), which set out countries' responsibilities during health emergencies (WHO, 2021). The committee found that many nations did not fully comply with their IHR responsibilities and that this contributed to the COVID-19 outbreak becoming a pandemic. It argued that responsibility for implementing the IHR needed to be assigned to the highest levels of government and that there was a need for "a robust accountability mechanism". In addition, the report identified specific failings in alert systems and early responses and called for more predictable and sustainable financing.

Meanwhile, the IFRC approached the issue from a different perspective by reviewing over 130 separate emergency laws across the world (IFRC, 2021). IFRC's Disaster Law specialists found that many countries had severely outdated laws and policies governing health emergencies. Some had not been altered since the late 1800s or early 1900s, covered only specific diseases, or lacked provisions for modern technologies and societies. Others weren't comprehensive enough to address a complex pandemic like COVID-19 or contradicted other emergency frameworks. As a result, many countries had to pass new legislation in haste, leading to errors and critical omissions.

Because of our general lack of preparedness, the impacts of the COVID-19 pandemic have been especially severe and widespread. The impacts are not confined to health but also extend into the socioeconomic sphere. In particular, the pandemic has widened inequities and had its most severe impacts on those who are excluded or marginalized.

This is highlighted by a UN report on the pandemic's impact on gender equality (Azcona et al, 2020). The report documents increases in extreme poverty, loss of employment, harms to health, greater burdens of unpaid care, and an increased risk of violence. The *World Disasters Report 2022* builds on this by drawing together evidence of multiple socioeconomic impacts on multiple groups.

Likewise, the International Labour Office's *World Social Protection Report 2020–22* described multiple gaps and inequities in the provision of social protection. As recently as 2020 it found that only 46.9% of the global population was effectively covered by at least one social protection benefit (International Labour Organization, 2021).

Humanitarian organizations tried to mitigate the pandemic's impacts but faced significant challenges. A report co-authored by the International Rescue Committee and Development Initiatives found there was insufficient funding and reporting (IRC and Development Initiatives, 2021). Similarly, Development Initiatives reported that the sum total of global humanitarian aid funding had largely stalled since 2018, despite needs increasing sharply since 2020 due to COVID-19 (Development Initiatives, 2022).

The lessons from COVID-19 replicate and build on the lessons of recent epidemics like Zika and Ebola. In the case of Zika, successful responses demanded intense and complex mental health and psychosocial support; very careful risk communication around sexual and reproductive health risks; and an intense local approach to care and support, especially for pregnant women. For instance, Cuba harnessed active community participation to help control the outbreak (Castro et al, 2017). Meanwhile, the Ebola epidemic highlighted the importance of contact tracing, risk communication, and safe and dignified burials done by local actors. It also illustrated the risk of military, top-down approaches to epidemic control in an area previously affected by conflict, which led to backlashes and violence. A 2020 review of Ebola outbreaks in Africa highlighted the importance of addressing socioeconomic and cultural factors if progress is to be made (Rugarabamu et al, 2020).

In the COVID-19 pandemic, these elements were amplified and made more complex by the global scale of the emergency and by the many movement restrictions. Nevertheless, the lessons were similar and actors like the IFRC network progressed in their understanding of these core lessons. The issue has been a global lack of institutional and systemic memory: the lessons were not sufficiently widely transmitted, or acted upon. The crisis of the pandemic is also an opportunity to learn and develop; the question is whether we will do so.

Finally, other reports have considered COVID-19 in the wider context of disaster risk reduction and sustainable development (World Bank, 2021). The Intergovernmental Platform on Biodiversity and Ecosystems Services argued that the pandemic has highlighted "the fundamental interconnections among human health, biodiversity and climate change" (IPBES, 2020). In line with this, the United Nations has released an assessment report on disaster risk reduction, highlighting the systemic nature of the risks (UNDRR, 2022). The ever-increasing threats posed by climate change were highlighted by the previous World Disasters Report (IFRC, 2020) and more recently by the sixth report of the Intergovernmental Panel on Climate Change (IPCC, 2022). Finally, efforts to prepare for future health emergencies must be integrated into our efforts to improve sustainability, as expressed by the SDGs (UN DESA, 2022b).

What is missing from the discussion

IFRC's analyses of the pandemic, and our preparedness for it, largely concurs with these reports. The COVID-19 response has indeed been hampered by:

- A lack of capacity to prepare for public health emergencies.
- Failures in health systems.
- Failure to prepare for the socioeconomic impacts of a public health emergency.
- Failures of multilateral cooperation, particularly when it comes to the development, production and distribution of pandemic response products.

However, there are some key aspects of preparedness that have not received sufficient attention and which we therefore emphasise in the *World Disasters Report 2022*, notably the need for effective and inclusive **local preparedness systems** to prevent, detect and respond to health emergencies.

While much has been said about lack of preparedness at the national level, few have systematically addressed the local and community dimension of preparedness: the importance of leveraging local-level skills, knowledge and concerns when building domestic and global preparedness systems. As a humanitarian organization born out of the 1918 influenza pandemic, with both global presence and local reach across 192 countries, the IFRC felt that there was a strong need to address this dimension.

Effective preparedness and its key elements

Like other crises before it, COVID-19 demonstrated that effective preparedness, including community preparedness, depends on **trust**, **equity** and **local action**. First, trust underpins successful responses at all levels of society, from individuals' compliance with public health measures to international financing systems. The good news is that it can be strengthened by effective and inclusive preparedness systems. Furthermore, truly effective preparedness can help to address inequities by strengthening protections, coordination mechanisms, and access to services for those who are most often left behind. Local action ensures that communities have accessible, quality health services that they understand and trust, and that they are fully engaged in preparedness and response. The latter includes the ability to co-design health countermeasures and provide feedback that is acted upon.

These concepts are not exactly being ignored in policy discussions, but key aspects are being missed. There is insufficient focus on what is required to build trust: not just more communication from health systems and governments but true two-way communication with communities. Discussions of equity are too narrowly focused on access to vaccines and other pandemic response products, neglecting access to other services such as social protection. Finally, there is insufficient understanding of the key roles local actors can play in health emergencies and the forms of support they require in order to do so.

While some countries have started to re-examine their legal and policy frameworks for pandemic prevention, preparedness and response, many more should be doing so to ensure that the COVID-19 experience – and other disasters – never happens again. This report shares the IFRC's recommendations for these processes, building on the voices and experience of over 15 million National Red Cross and Red Crescent Society volunteers and those of the communities they work with and live in.

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Bangladesh 2019 *This is Sadyra. He is a natural woodworker and handyman, great with tools. When we met in front of his shelter, he explained that he wants to build a bigger house for his family. He made this chair he is sitting on. © Elodie Berthe/ IFRC*

PREVENT AND PREPARE

In a multi-hazard world, we must prevent what we can and prepare for everything else

Contents

INTRODUCTION

The COVID-19 pandemic is the biggest single disaster to strike humanity for many decades – in terms of both the number of lives it has claimed to date and the fact that it has affected virtually every living person on Earth in some significant way. It is tempting to believe we will not see anything like it again in our lifetimes, but actually the pandemic is part of a broader pattern of increasing hazards. Biological and climate risks have been growing for many years, with ever-increasing impacts. Urbanization and population density, which present other risks to health, as well as ever-increasing volumes of international commerce and travel, compound these risks. Furthermore, countries are more frequently experiencing multiple disasters or shocks, either simultaneously or in rapid succession. This taxes public systems and community resilience in new ways.

This multi-hazard world requires a far greater focus on prevention and preparedness. It also demands an integrated and flexible approach that allows us to respond to a wide variety of hazards. Where health risks, in particular, are concerned, prevention requires a suite of measures focusing on the drivers of risk. These include better sanitation and nutrition, plus improved vector control through a 'One Health' approach that treats human health as a component of the overall socio-ecological system. Alongside this, we urgently need health systems strengthening, with particular attention to primary healthcare and community health systems. It is necessary to reinforce social protection systems (see Chapter 4) and community preparedness and action teams (see Chapter 2). We also need to embrace a culture of epidemic and pandemic preparedness that aligns with preparedness for other types of emergencies to ensure resilient societies and communities.

Definitions

Community-based interventions are designed to promote public health in communities and include – but are not limited to – programmes such as community surveillance, community engagement, nutritional support, health counseling and advocacy, community preparedness, home-based care and health services.

Community health systems: The structures, mechanisms, processes and actors needed to support community-led health programming and outbreak management. Core components can include good enabling environments and advocacy for community health; community networks and partnerships; resources and capacity building; community service delivery and organizational and leadership strengthening. They underpin community-led and community-based interventions (The Global Fund, 2022)

Disease outbreak: The occurrence of cases of disease in *excess of what would normally be expected* in a defined community, geographical area or season. If a disease is rare, or has serious public health implications, a single case of a disease may be considered an outbreak.

Guatemala 2022 *Tropical cyclone Julia strengthened to a category 1 hurricane, causing intense rains that left various damages in Central America and made continental landfall on the east coast of Nicaragua. Effects were also reported in Guatemala. The Red Cross teams implemented early action responses, continued to monitor damages and needs and to provide assistance after intense floods and landslides. © Guatemalan Red Cross*

1.1 THE PROBLEM
COVID-19 IS PART OF A WAVE OF INCREASING HAZARDS

1.1.1 The chaotic response to COVID-19

The response to COVID-19 was beset by chaos and mistakes, both within individual countries and internationally. The gaps are delineated in the report of the *Lancet* Commission on lessons for the future from the COVID-19 pandemic (Sachs et al, 2022).

Internationally, the World Health Organization (WHO) struggled to organize coordinated action. The *Lancet* Commission found that the WHO was too slow to recognize asymptomatic human-to-human transmission, too slow to recommend balanced controls on international travel, such as the use of diagnostic testing, too slow to recommend the use of face masks by the public, and far too slow to acknowledge the airborne transmission of SARS-CoV-2 (Sachs et al, 2022). Many governments were also very slow in issuing their own findings and imposing clear preventative measures. It should be acknowledged that many of these decisions were not easy. For instance, there was a shortage of masks, which needed to be reserved for emergency health personnel as a priority. Nevertheless, the fact remains that rapid detection, alert and containment mechanisms failed.

Many countries struggled to deploy the essential tools of public health. In some cases, batches of diagnostic testing kits proved to be faulty (Lee et al, 2021). Even afterwards, testing kits were difficult to access for many months in some countries. Many countries experienced severe shortages of personal protective equipment (PPE) (Burki, 2020). In some nations, at least 30% of care workers, doctors and nurses reported having insufficient PPE. To make up the shortfall (Oliver, 2021), governments hastily awarded multiple contracts without tender, only to waste money on poor-quality PPE that was often unusable (Dyer, 2021). Other shortages were caused in part by a dysfunctional funding system: hospitals were incentivized to minimize costs rather than maintain adequate inventories (Cohen and van der Meulen Rodgers, 2020). There has also been a global shortage of oxygen, which is essential for treating COVID-19. At times, multiple countries' health systems came close to running out (Davies and Furneaux, 2021). In low- and middle-income countries, the shortage has persisted into 2022 (Mahase, 2022).

Government ministries often needed to be faster to coordinate with one another (Jacobzone et al, 2020). The World Bank has identified several traits of an effective coordination system. Coordination requires strong backing from leadership; focuses on a small number of well-defined targets; uses simple dashboards for reporting data and results; and enables constant communication between different ministries, departments and agencies (Kunicova, 2020). IFRC adds that they must incorporate the whole of government and society. However, many governments failed to implement one or more of these aspects, particularly in the first few months of the pandemic (Kapucu and Hu, 2022).

Alongside this, there were widespread failures of communication (Palma-Oliveira, 2021). Governments and health authorities often did not convey the full extent of the threat of COVID-19 to their populations or were slow to do so (Zhang, 2020). With a few exceptions, such as Australia, which emphasized effective and coordinated communication (Hyland-Wood, 2021), many issued confusing and contradictory messages (Finset et al, 2020). This was exacerbated by widespread disinformation (Mheidly and Fares, 2020), which spread particularly rapidly on social media (Malecki et al, 2021). In some cases, political actors sought to politicize the situation (Biehl et al, 2021), reducing trust in the public health response (Hatcher, 2020). On top of that, many communities lacked trust in the authorities and were reluctant to engage in the COVID-19 response. One factor in this lack of trust was that many communities had had little or no contact with health systems or national authorities prior to the crisis.

In many countries the result, especially in the first months of 2020, was chaos in emergency rooms and health systems more broadly. In a 2021 study, 51 healthcare workers from Sweden recounted their experiences. They reported constant, confusing changes to rules governing infection prevention and control. This occurred because there was no pre-agreed plan for such a large-scale health emergency, leading to frantic and repeated changes in response to new information. Furthermore, the staff were asked to operate new and unfamiliar medical technologies, such as high-flow nasal oxygen equipment, without proper training. Combined with multiple other stresses, including fear of contracting COVID-19, this led to stress and burnout (Rücker et al, 2021).

Finally, while COVID-19 has dominated international attention, other hazards have not stopped. South Asia was hit by Cyclone Amphan, a category 5 tropical cyclone, in May 2020 (Ellis-Petersen and Ratcliffe, 2020). The following year, in May, Cyclone Yaas struck nearby (BBC News, 2021). Tonga experienced one of the most violent volcanic eruptions of recent decades on 15 January 2022, when Hunga Tonga-Hunga Ha'apai erupted explosively, causing widespread disruption (BBC News, 2022).

Sometimes these overlapping hazards accelerated the spread of the coronavirus, and sometimes the pandemic made it harder to respond to other hazards. For example, Bolivia was hit by major floods in January and February of 2021 and again in December. The country had kept COVID-19 case numbers low throughout 2020, partly by closing its international borders. But, in the wake of both floods, it experienced spikes in infections – especially after the second flood in December (see Chapter 8). Similarly, in Honduras, Hurricanes Eta and Iota struck in 2020 at the height of the pandemic. This required a surge response from the IFRC network (IFRC GO, no date b). One of the key challenges was the availability of shelter. Many people were displaced by the hurricanes and needed shelter (IFRC, 2021d), but temporary shelters for displaced people had reduced capacity because of the need to maintain social distancing to limit the spread of COVID-19 (IFRC, 2020a).

1.2 WHAT WE LEARNED
THE WORLD WAS NOT READY FOR COVID-19

One thing that went wrong, which we will address in this chapter, is that prior to the pandemic, most countries had inadequately invested in epidemic prevention and preparedness. As a result, in the first few months of the COVID-19 outbreak, governments and health systems struggled to cope, and many became overwhelmed. The response required coordination between multiple actors, but coordination mechanisms were often unclear or non-existent. Many countries had prepared for specific hazards, but their systems were too inflexible to cope with the novel coronavirus. Some health systems were often already overburdened before the pandemic even started. They had no mechanisms or capacity to shift tasks around (IPPPR, 2021).

1.2.1 The world failed to prevent and prepare

The COVID-19 pandemic was allowed to happen because of failures of **prevention**. There was a failure to prevent the initial outbreak from spreading to encompass the entire globe. There was also an earlier failure to prevent the outbreak itself. In section 1.3.1, we will discuss what can be done to avoid future outbreaks, which requires some radically new policy choices. But even within the existing policy frameworks, there was a great deal that could have been done to control the outbreak and slow its spread – but it was not done or was done too late.

Notably, as discussed in 1.1.1, the *Lancet* Commission highlighted the widespread reluctance to implement controls on international travel. The WHO did not recommend travel restrictions when it issued 'Temporary Recommendations' under the International Health Regulations (2005) (von Tigerstrom and Wilson, 2020) (see Chapter 6). It is true that unjustifiably blanket travel bans have been a problem in past pandemics: they created perverse incentives on transparency when new outbreaks occur. However, there are many options in this policy space, including diagnostic testing for people entering and leaving a country and mandatory isolation upon arrival. With a few exceptions, such as New Zealand, most countries refrained from any such measures and therefore allowed SARS-CoV-2 to enter their territories. Even when control measures were imposed, they were often inadequate. For example, visitors travelling directly from certain countries were banned, while those travelling indirectly from the same origin point were allowed in (Sachs et al, 2022).

Similarly, many countries repeatedly allowed case numbers to rise dangerously high. In support of this, governments argued that the disease was under control in their jurisdiction so long as there were spaces available in intensive care units. According to a 2020 analysis, this failure to prevent additional cases was a critical mistake because "it makes a big difference whether there are many victims today or spread over a long period" (Saracci, 2020).

More broadly, it is clear that most countries were not **prepared** for the COVID-19 pandemic. The 2020 report of the Global Preparedness Monitoring Board concluded that the majority of countries were unprepared for COVID-19 because "our understanding of pandemic preparedness has been inadequate" (GPMB, 2020). In some cases, preparedness was understood too narrowly. For example, some countries laid in stocks of PPE but failed to complement this with a robust testing system to identify infected people. They also did not build community-level systems for handling outbreaks. A follow-up noted that this failure happened despite "hundreds of expert recommendations… over the last two decades" and called for "a holistic health emergency system" (GPMB, 2021).

Other mistakes included (but are not limited to) (Sachs et al, 2022; IPPPR, 2021):

- A lack of investment in clear communication protocols, including early warning and early action systems, which led to widespread confusion about the gravity of the threat and which measures were most effective to protect against it.
- Unclear whole-of-government and whole-of-society coordination structures, leading to chaotic and uncoordinated responses.
- A lack of understanding about the importance of community buy-in and trust.
- Insufficient consideration of methods that would have helped relieve overburdened health systems.

In contrast, countries and organizations that had prepared appropriately did do better (IFRC, 2022c). For instance, several east Asian countries/regions, including Taiwan, Province of China, Japan and Singapore, had strong memories of recent outbreaks of avian influenza and severe acute respiratory syndrome (SARS) (Chen et al, 2021). Several had engaged in capacity building after the H5N1 avian influenza outbreak (Corwin et al, 2021). Japan succeeded in preventing a severe initial wave of cases without resorting to

Mongolia 2021 *Mongolian Red Cross staff and volunteers visit the 85-year-old's yurt each month as part of their home care project. The volunteers helped him get his three COVID-19 vaccine doses. © IFRC*

lockdowns. The government prioritized contact tracing, with a focus on working backwards from cases to identify superspreaders and associated clusters of cases. Alongside this, the government adopted a '3-Cs' strategy, encouraging people to avoid "crowded places", "close-contact settings", and "confined and enclosed spaces" (Imai et al, 2022).

In December 2019, just weeks before COVID-19 became known, the International Red Cross and Red Crescent Movement adopted a resolution on "Tackling epidemics and pandemics together" (Faller, 2020). Subsequent research suggests that National Red Cross and Red Crescent Societies that improved their preparedness capacities before the pandemic – both for disease outbreaks and in general – showed higher performance levels in their COVID-19 responses (Johnston, 2022). For example, the Mongolian Red Cross Society developed an influenza preparedness plan ahead of the winter of 2019–2020, which it leveraged to help contain COVID-19 (Natoli et al, 2020). IFRC has identified two lines of evidence indicating that National Societies with more preparedness and prior experience responded better to COVID-19. This evidence is summarized in the *2022 Everyone Counts COVID-19 Edition* report (IFRC, 2022b):

- National Societies that achieved more in 2019 also achieved more during the pandemic. For instance, in 2019, some National Societies reached more people than others with their health, disaster risk reduction and water, sanitation and hygiene (WASH) programming. These National Societies were more likely to score highly on COVID-19 tracking priorities like infection prevention and control. This is measured using data from the IFRC's Federation-wide Databank and Reporting System, which records key performance indicators for each National Society. The analysis is purely correlation-based, so it does not explain why prior achievement predicts success during the pandemic.
- National Societies with prior experience of epidemic emergencies also had higher achievements on two additional indexes: community-based surveillance (CBS) and management of the dead. To give one example, the Somali Red Crescent Society has conducted CBS for diseases since 2018. A Somali Red Crescent Society volunteer identified one of the country's first reported cases of COVID-19 in late March 2020.

The central lesson of COVID-19 is that we must be prepared for a broad but credible range of disease outbreaks. This must include pathogens that a country has not previously experienced but which could plausibly enter. But even this is not enough. Other hazards have continued to occur since the emergence of COVID-19, either before or during the pandemic, creating intersecting and compounding risks that are even harder to deal with if unprepared (see Box 1.1). Furthermore, the next global emergency might be another type of pandemic, another category of disaster like a drought or a multi-hazard event. Whatever form it takes, we will only have limited warning. That means we need to get ready for all potential hazards now. We must embrace multi-hazard preparedness.

Equally, countries must prepare for as many common impacts of hazards as possible. In particular, they should focus on the most vulnerable and hard-to-reach. This is not only to prevent impacts on everyone but also to prevent the aggravation of **inequities**, as impacts are felt much more strongly by the most vulnerable and marginalized. It is tempting to prepare only for the most immediate needs, but all disasters have multiple, ramifying impacts across the whole of society. For instance, many people lost their jobs when businesses collapsed during pandemic restrictions.

BOX 1.1 / CASE STUDY
CONTENDING WITH A COMPLEX EMERGENCY IN AFGHANISTAN

Afghanistan is experiencing a complex humanitarian crisis. It faces multiple hazards, combined with a breakdown of authority due to internal conflict. The hazards include drought, earthquakes, the COVID-19 pandemic, and numerous other infectious diseases – all in the context of a decades-long armed conflict.

The country has struggled to contain COVID-19. By the end of 2021, less than 15% of the population was fully vaccinated (Reuters, no date). Only a limited number of hospitals are still offering COVID-19 treatments (Gannon, 2022). Throughout the pandemic, Afghan hospitals have been in dire need of medical items like swabs, sample collection kits, liquid oxygen and personal protective equipment (PPE) (Ibrahimi and Safi, 2020). Over 30 hospitals were forced to close due to heat and a lack of medical experts.

Case and death numbers stayed low in the official figures, but these are probably underestimated, and anecdotal evidence paints a different picture. For example, gravediggers in Kabul reported death rates almost three times the usual (Blanc et al, 2020). The pandemic also had a negative impact on people's income, access to food and access to clean water and sanitation. As of January 2022, 65% of households in Afghanistan have been impacted by COVID-19 (UN OCHA, 2022a).

Afghanistan 2022 *IFRC supported Afghan Red Crescent to distribute cash-based assistance for shelter to 941 households that were affected by earthquakes in Khost province. © Meer Abdullah Rasikh / Afghan Red Crescent Society /IFRC*

All this was compounded by drought. In the last two years, Afghanistan has experienced its worst drought in the last 27 years. Of the country's 34 provinces, 25 have been affected (IFSPC, 2021). Over two-thirds of the population is affected. Food insecurity has increased, while access to clean water and sanitation has been impaired (Amoli and Jones, 2022). This has led to further disease outbreaks. For example, groundwater levels fell, impacting the quantity and quality of water: this triggered the first reported cholera cases since 2016. The inability to access safe and clean water is also increasing rates of acute watery diarrhoea, measles and dengue fever.

All these crises are contributing to growing food insecurity. Harvest levels in 2021 were 20% less than 2020 levels and 15% less than the five-year average. Consequently, people's food consumption has fallen dramatically. The proportion of households in the 'poor' category of the Food Consumption Score nearly tripled from 2020 (14%) to 2021 (almost 40%). In drought-affected households, people are increasingly relying on extreme coping strategies.

Alongside the COVID-19 response, Afghanistan has suffered multiple shocks (IFRC, 2022a). Over 28,000 people were affected by floods and other disasters in the first eight months of 2021. Then an earthquake on 22 June 2022 killed over 1,000 people, severely damaged or destroyed 13,000 homes, and caused minor or moderate damage to 48,000 homes (Center for Disaster Philanthropy, 2022). It also damaged health facilities, education facilities, water services and grain stores (UN OCHA 2022b). This was followed by off-season rains in July and August that caused widespread flooding, washing away people's livelihoods.

The outlook for 2013 is worrying. Several assessments conducted by humanitarian partners show that drought and economic hardships will continue being major drivers of humanitarian needs in 2023. Monthly household income has decreased due to economic hardships, to some degree exacerbated by implications of sanctions, while household expenditure has skyrocketed as prices of essential items hit the roof. People are left with only two options: to employ coping mechanisms or depend on humanitarian assistance. The food security outlook is grim. It is projected that between November 2022 and March 2023, some 20 million Afghans will be in crisis and acute food insecurity (IFRC, 2022e). If the current drought persists in 2023, millions of Afghans will remain dependent on food assistance.

Resolving the complex humanitarian crisis in Afghanistan will require a massive, sustained international effort. It exemplifies the need for multi-hazard preparedness.

1.2.2 Increasing, overlapping and compounding hazards

Worryingly, our experience of the COVID-19 pandemic is a sign of things to come. We are living in an increasingly hazardous world. Many risks are increasing, with hazards – and the disasters they trigger – becoming either more frequent or more intense, or both.

The number of disasters triggered by natural hazards occurring every year continues to increase. IFRC's latest analysis of data from EM-DAT, the international disasters database, found 332 disasters in 2020 and 378 in 2021 (see Chapter 8) (EM-DAT, no date).

In particular, climate change is driving increases in extreme weather events. In the *World Disasters Report 2020*, IFRC documented a dramatic rise in the proportion of annual disasters attributable to climate and extreme weather, from 76% in the 2000s to 83% in the 2010s (IFRC, 2020c). That trend continued in 2020 and 2021, with 91% of the disasters recorded in the EM-DAT database of disasters attributable to climate and extreme weather (see Chapter 8).

In line with this, the latest report of Working Group II of the Intergovernmental Panel on Climate Change concluded that hazards are increasing due to climate change. The report identified increases in the frequency and intensity of weather extremes, including heatwaves, heavy rainfall events and droughts. This has led to increases in heat-related deaths, areas burned by wildfires, and adverse impacts from tropical cyclones – all attributed to anthropogenic climate change (IPCC, 2022).

This is paralleled by an increased risk of disease outbreaks, of which COVID-19 is the most dramatic example. A 2014 study compiled 33 years of disease data from 1980 to 2013. This encompassed 12,102 outbreaks of 215 human infectious diseases. The researchers controlled for confounders such as improvements in disease surveillance. They found significant increases in the total number of outbreaks and in the diversity of diseases. **In the early 1980s, there were fewer than 1,000 disease outbreaks per year, but by the late 2000s this had tripled to over 3,000.** Bacteria and viruses caused 88% of the outbreaks. Similarly, zoonoses – diseases entering the human population from animals – were responsible for 56% of outbreaks (Smith et al, 2014).

More recently, a review identified "a wave of severe infectious disease outbreaks" in the 21st century (Baker et al, 2021). These included the 2003 SARS coronavirus outbreak, the 2009 swine flu pandemic, the 2012 outbreak of Middle East respiratory syndrome (MERS) coronavirus, the 2013–2016 Ebola epidemic in West Africa and the 2015 Zika epidemic. Similarly, a 2018 analysis by the WHO said: "Epidemics of infectious diseases are occurring more often, and spreading faster and further than ever, in many different regions of the world". The analysis found 1,307 epidemic events between 2011 and 2017. They were caused by a range of diseases, including yellow fever, cholera and shigellosis. That equates to an average of 187 epidemic events per year (WHO, 2018).

Experts cite various reasons for these epidemic trends. Baker et al, 2021 links them to dramatic changes in where people live and how much they travel. As of 2007, population density continues to increase generally, while more people live in urban areas than rural, creating conditions for rapid spread. Meanwhile, airline flights have doubled since 2000, enabling diseases to spread internationally rapidly. Other factors include climate change, which affects the emergence and distribution of new or modified pathogens and the re-emergence of older ones, and how vulnerable people are to them (Romanello et al, 2022). Changes in land use and habitat destruction result in greater contact between humans and wildlife, and thus greater potential for spillover. Food production methods, which sometimes favour large concentrations of animals in unsanitary conditions, are another culprit. Finally, other types of disasters affect people's vulnerability to pathogens via poor sanitation, nutrition, and access to health services.

These rising hazards mean a growing tendency toward overlapping and compounding hazards. Communities and nations are increasingly experiencing two or more hazards at once, or multiple hazards in rapid succession. IFRC analyses indicate that, since 1990, every year there has been an average of 199 instances of overlapping disasters in the same country. Similarly, on average 44 countries every year experienced overlapping disasters at least once, with a peak of 64 countries in 2000 (see Chapter 8). Of course, countries experiencing conflict and other types of fragility are also struck by multiple types of natural and biological hazards.

When disasters overlap or occur in close succession, the impacts can be magnified. If two disasters occur together, the impacts of each can be far greater. For instance, IFRC's analysis of EM-DAT data suggests that a spell of extreme temperature that occurs at the same time and location as another hazard can affect more people and lead to additional deaths. Similar patterns can be seen for other hazards such as floods, storms and wildfires (see Chapter 8).

It is easy to understand why: two hazards are more likely to overpower a community's resilience than just one, responders are expected to be overstretched, and the first hazard may undermine a coping strategy that would have created resilience to the second. Furthermore, disasters do not have to overlap in time to affect one another. A disaster will have more significant impacts if it occurs relatively soon after another, compared to the same disaster striking after a long period of quiet. In general, the greater the time interval between disasters, the weaker the impacts of the later disaster. This may be because communities have had time to recover, restoring some of their resilience (see Chapter 8).

Many of the same unsustainable trends drive both pandemics of COVID-19 and climate change. One analysis links both to "modern consumptive industrialization, including burning of fossil fuels, increasing human population density, and replacement of natural with human dominated ecosystems". Meanwhile, the factors that make people more vulnerable to the hazards are also often the same: notably poverty, substandard housing and outdated infrastructure (Pelling et al, 2021).

1.3 WHAT WE NEED TO DO
INVEST IN PREVENTION AND PREPAREDNESS FOR A MULTI-HAZARD WORLD

We live at a time when hazards of all types, including communicable diseases, are growing more frequent and/or dangerous. The most prudent, economically sound way to mitigate the risk we face can be summed up in eight words: prevent what we can, prepare for everything else.

In this section, we explore the actions required to prevent another health calamity like the COVID-19 pandemic – both how to prevent disease outbreaks from occurring at all, and then how to prevent them from spiralling out of control into major emergencies. Then we tackle the challenge of preparing societies to prevent, detect and respond early and efficiently. Finally, we explore how to expand these preparedness lessons beyond disease outbreaks to a multi-hazard world of increasing, compounding and overlapping risks.

1.3.1 Prevent as many health hazards as possible

The most effective way to handle disasters is to prevent them from happening in the first place. Prevention is the ideal response because it avoids or at least reduces the impacts of disease outbreaks, plus all the costs of responding. There is no need to interrupt regular health programming to focus only on one health threat, no need to close down businesses or borders for extensive periods of time, or to manage the long-term socioeconomic impacts of a global pandemic. Avoiding these harms and costs carries enormous benefits. Life can go on as normal, uninterrupted by devastation or trauma. The advantages of prevention are widely known: in occupational health, hazards are managed using a five-tier 'hierarchy of controls', the first and most effective being to simply eliminate the hazard (NIOSH, no date). But this has not always translated into action. In disease risk management – including public health emergencies – it is possible to prevent significantly more risks than we do at present.

In public health, the term 'prevention' covers a wide range of activities. **Primary prevention** aims to prevent hazards like diseases from occurring in the first place. **Secondary prevention** focuses on preventing such hazards from snowballing into emergencies. **Tertiary prevention** is about reducing the impacts of an illness or injury. Our discussion focuses on primary and secondary prevention.

The international community did not stop the COVID-19 outbreak from escalating into a pandemic. The global cost of this failure has been enormous. Estimates of the cumulative cost of the pandemic are variable, but they are on the scale of trillions of dollars. One study estimated a cost of US$16 trillion for the US alone (Cutler and Summers, 2020). The International Monetary Fund has estimated that the pandemic will cost the global economy US$13.8 trillion by the end of 2024 (Gopinath, 2022). Controlling the coronavirus in

early 2020 would have required a substantial investment, but this would have paid off by many orders of magnitude. One study examined the cost of three primary pandemic prevention actions, which might have reduced the risk of COVID-19 becoming a pandemic: better surveillance of pathogen spill-over, coupled with the development of global databases of virus biology; better management of the wildlife trade; and reducing deforestation. The researchers found that these three strategies cost "less than 1/20th the value of lives lost each year to emerging viral zoonoses and have substantial cobenefits" (Bernstein et al, 2022). Similarly, the World Bank estimates improved preparedness for health emergencies would cost less than US$1 per person per year, at least in countries with reasonably comprehensive health systems (World Bank, 2017).

Of course, some disease risks and outbreaks cannot be stopped. It is not currently possible to prevent most pathogens from emerging (unless they are produced in a laboratory). For instance, there is no approved vaccine against the Zika virus, so small outbreaks are inevitable. However, this does not mean that prevention is not achievable. For instance, it is still possible to prevent zoonotic pathogens from spilling over into the human population, or to reduce the risk of contracting a disease through better nutrition and sanitation (primary prevention). Furthermore, there is a wide variety of basic measures we can take to prevent initial outbreaks from spiralling into epidemics or pandemics (secondary prevention).

The story of COVID-19 would have been very different if the international community had embraced primary and secondary prevention. The benefits to humanity of stopping such a virus from entering the human population, and of rapidly controlling such outbreaks when they do occur, would be huge. In the coming age of pandemics, early action and response will not be enough (Smolinski, 2021).

What actions would have been necessary to prevent the COVID-19 pandemic? There are two interdependent approaches: preventing the initial disease outbreak, and preventing the outbreak from growing into an epidemic, which ultimately became a pandemic.

Preventing disease outbreaks requires us to tackle the factors that make us vulnerable to them. Increasing numbers of novel diseases are emerging, and this is being driven by the same human activities that are causing biodiversity losses. The expansion of agriculture, changes in land use, and the trade and consumption of wildlife are all contributing factors. They bring humans, livestock and wild animals into close proximity – increasing the chances of 'zoonotic spillovers' where diseases of wildlife spread to humans (IPBES, 2020). A study published in 2020 looked at 6,801 ecosystems from around the world. It found that in the human-dominated ecosystems, there were far more animals that hosted pathogens and parasites that could infect humans (Gibb et al, 2020). This means we are creating the conditions for more frequent disease outbreaks, some of which may become pandemics. A 2021 analysis estimated that a person alive today has about a 39% chance of experiencing a pandemic on the scale of COVID-19 in their lifetime – and that this probability may double in the coming decades (Marani et al, 2021).

We can reduce these human-induced hazards, sometimes with simple interventions. Others are more complex, which can be enormously effective. For instance, Mexico saw its first known case of cholera in 1991 and moved fast to control the disease. It improved access to safe drinking water and sanitation and boosted disease surveillance. The last reported case of cholera happened just 10 years later, and the disease never became endemic (Sepúlveda et al, 2006) (see Box 1.2). In the case of airborne infectious diseases like COVID-19, there is growing evidence that improved ventilation and air filtration can reduce people's exposure and thus limit spread (Berry et al, 2022).

Guatemala 2021 *Community engagement and accountability session in the community in the framework of the creation of participatory videos. © Hermanos Corallo*

To reduce the risk of new infectious diseases emerging, we need to adopt a 'One Health' approach (OHHLEP, 2022). In this framework, human health is considered part of the global ecological system (Gibbs, 2014). This is crucial to reducing the risk of zoonotic spillovers that can lead to outbreaks, epidemics and pandemics. For example, livestock should be managed, wherever possible, in ways that prevent undue clustering, as animals in close quarters quickly spread diseases. Similarly, it is best to retain a degree of separation between humans and animals that are known to be a major disease risk. Alongside this, integrated surveillance of human and animal health is our best hope of spotting zoonotic spillovers quickly (see Chapter 5) (Osman et al, 2021).

When outbreaks do occur, it is best to control them while they are still small. Fortunately, we have many ways to prevent small disease outbreaks from exploding into epidemics or pandemics (see Box 1.3). Preventing pandemics means being able to detect disease outbreaks rapidly, reducing general vulnerability, or even forecasting them (as sometimes is the case for cholera (Pasetto et al, 2017)) (see Box 1.4). Depending on the specific disease, this requires some combination of the following:

- Enhanced disease surveillance, including CBS and mechanisms to identify and inform those who are at risk.
- Rapid investigation, contact tracing and active case finding.
- Testing to identify cases.
- Treatment and/or isolation for those who fall ill, when available.
- Measures to reduce risks to healthcare providers and those seeking healthcare.
- Measures to inform those at risk and help them to change behaviours to reduce exposure and vulnerability, such as better sanitation, nutrition and isolation (if required).

The report *Epidemics That Didn't Happen* describes multiple instances of outbreaks being stopped by swift action (Resolve to Save Lives, 2022). In one case, a cruise ship was sailing near Rio de Janeiro in Brazil on 14 December 2021. Several crew members began experiencing influenza-like symptoms. More than 3,500 people were aboard and potentially at risk. Three days later, the National Health Surveillance Agency of Brazil was notified that three crew members had tested positive for influenza, and 13 others had been in close contact with at least one of them. Local health authorities formed an emergency operations center. On 18 December, field epidemiologists boarded the ship to collect samples, conduct laboratory testing, and investigate further cases. Those who tested positive for influenza left the ship and were isolated in a hotel, where they were monitored daily. Aboard the ship, the teams encouraged additional measures, including mandatory mask use, social distancing and health guidelines. A flu vaccination drive took place on 18 December. Only 10 days later, the outbreak was declared over. No new cases were confirmed, there were no hospitalizations, and no passengers were infected. Nor did influenza spread beyond the ship.

Many of these pillars of epidemic prevention can be adapted and undertaken by **local actors** in at-risk communities. For example, in early February 2022, Red Cross volunteers in Makuma village in Sierra Leone reported 32 alerts of fever with red skin rash. These were quickly reported to the community health centre and district surveillance office. Testing revealed measles, sparking a targeted vaccination campaign in Makuma and surrounding villages – rapidly bringing the disease under control (IFRC, 2022d) (see Chapter 2).

BOX 1.2: PREVENTING OUTBREAKS BY PROVIDING CLEAN AND SAFE WATER

The IFRC is working to prevent outbreaks of diseases spread by dirty and unsafe water. Improved water, sanitation and hygiene (WASH) can reduce the spread of diseases like cholera, so the IFRC has been running the One WASH programme. The aim is to provide safe drinking water and sanitation to communities currently vulnerable to cholera, thus protecting them against the disease. Alongside this, the programme also offers vaccinations and boosts community-based surveillance (CBS) so that outbreaks can be detected swiftly (IFRC, 2021e).

Prompted by the COVID-19 pandemic, the IFRC is now expanding One WASH with the aim of controlling multiple water-borne diseases. As well as cholera, WASH programmes can reduce the spread of typhoid, Shigella and rotavirus, to name just three. If funding and support can be secured, the IFRC plans to roll out One WASH in up to 100 countries. Similar WASH projects, and analogous programmes to control other types of pathogens, should be widely deployed.

Mozambique 2019 *Hundreds of families fled their homes following Cyclone Idai to seek safety in accommodation centres like this one. Sanitary conditions are poor, puting communities at risk of water-borne diseases such as cholera. Red Cross volunteers are working in these centres to ensure communities have access to safe water to prevent future outbreaks from occuring. © Corrie Butler / IFRC*

BOX 1.3 / CASE STUDY
AN ANTHRAX EPIDEMIC THAT DIDN'T HAPPEN

On 15 August 2019, a volunteer with the Kenya Red Cross Society received some worrying news. In Narok, a town near the Maasai Mara National Reserve, a local herder and two students had become ill after eating beef. All three had been diagnosed with anthrax.

The volunteer had been trained on the Kenya Red Cross Society's community-based surveillance (CBS) system (IFRC, 2021b) and swiftly sent an SMS to the system, alerting their supervisor. This message was passed on to local health and veterinary authorities, and the national surveillance system.

The volunteer also had some local knowledge due to their engagement with the community. They reported that the Maasai herders were familiar with anthrax, but many were sceptical about the dangers.

Thanks to the volunteer's quick action and the CBS system, the supervisor and Government County Veterinary Officer investigated the health of livestock in the area. Within days, the county vaccinated 10,600 cattle and 14,000 sheep.

The government and Kenya Red Cross Society knew they needed the trust and participation of local farmers, so they convened a traditional community dialogue session. School teachers were shown how to screen children for infection and how to report illnesses to public health officers or area volunteers. Meanwhile, the Kenya Red Cross Society's Community Epidemic and Pandemic Preparedness Program (CP3) conducted awareness-raising activities, including radio broadcasts, household visits and community group education sessions. These activities improved the community's knowledge of health, particularly how to safely dispose of animal carcasses and report unusual animal illnesses. The outreach work was so successful that the community recognized the risk of anthrax, of which many were previously sceptical. They prioritized mitigation efforts and took over financing their own animal vaccinations.

Just over a month after the initial incident, the situation was deemed under control. There were four human cases and one death. Furthermore, the community was better prepared than before (Resolve to Save Lives, 2021).

Kenya 2019 *Josphat is a Red Cross volunteer from a Maasai community in Narok County, Kenya. He helps to engage his community in preventing diseases including anthrax and cholera and refers families to a hospital to get the adequate care they need. © Corrie Butler / IFRC*

BOX 1.4: FORECASTING AND ANTICIPATORY ACTION

With more and better data comes the potential for forecasting and acting in advance. Anticipatory actions based on forecasts are key to humanitarian action in the 21st century.

Many disasters can now be predicted ahead of time, with varying degrees of precision and time lag. Droughts and locust outbreaks can be forecast months in advance, while a hurricane making landfall gives a few days' warning at most. Such forecasting enables governments and humanitarians to take action before the hazard occurs, saving more lives and reducing harm in a cost-effective way. For example, if a hurricane is on its way, communities can be evacuated to shelters ahead of time – provided the shelters have been built and the community has a high degree of trust in the people making the forecast (IFRC, no date a).

The simplest way to translate a forecast into action is to create early warnings. National-level warning systems regularly save lives and should be bolstered, but they often only reach some communities. Community-based multi-hazard early warning systems are essential, and many National Societies have helped local people to create them. **Local action** is best: community early warning systems should leverage local knowledge, skills and experience, plus new forms of data, and harness networks of volunteers to ensure everyone is contacted when warnings are issued (see Chapter 2). To support this, the IFRC joined governmental and agency partners to create the Risk-informed Early Action Partnership (REAP). This aims to make one billion people safer from disasters by 2025 by increasing funding for early action, improving early warning systems, and helping local actors to take early action (REAP, no date).

Forecasts are more valuable if they lead to a range of coordinated actions. This is enabled by impact-based forecasts, which go beyond simply predicting when a hazard will occur and estimate the likely impacts on people (Red Cross Red Crescent Climate Centre, 2020). IFRC's GO platform visualizes forecast hazards alongside information about the number of people and critical assets in their paths. To help with longer term planning, it also has information about anticipatory actions communities might take to mitigate risks associated with specific hazards (IFRC GO, no date a).

Through Forecast-based Action by the Disaster Response Emergency Fund (FbA by the DREF), the IFRC offers dedicated funding to help National Societies swing into action before a disaster strikes (IFRC, no date b). The mechanism is an example of forecast-based financing (Forecast-Based Financing, no date). It uses weather forecasts and other risk analyses to determine whether a hazard is imminent and automatically releases funding if it is. Meanwhile, the National Societies have predetermined Early Action Protocols (EAPs), which are activated in response to specific triggers, releasing funds from the FbA by the DREF.

Regrettably, the forecasting of diseases is still in its infancy. Some diseases display regularity: many countries experience a winter wave of influenza. However, forecasting outbreaks remains a challenge. To date, only a handful of diseases including cholera (Pasetto et al, 2018) and dengue (Hii et al, 2012) have been correctly forecast. Nevertheless, anticipatory action is possible: many EAPs include early actions to prevent disease outbreaks that can result from events like floods and heat waves.

1.3.2 Prepare at all levels for all major impacts of every health hazard

Sadly, prevention has its limits. Despite our best efforts, it is inevitable that some disease outbreaks will occur, and some will grow into larger health emergencies such as epidemics.

It is, therefore, necessary to boost preparedness. We must engage in preparedness at every level, from the very top of government to the smallest local community (see Chapter 2). A chain is only as strong as its weakest link: if a country ensures its government ministries are prepared for disease outbreaks but neglects **local communities**, it will struggle to cope when outbreaks occur. It is therefore necessary to ensure community preparedness gets as much support as preparedness at other levels of society (IFRC, 2021c):

- **Communities:** It is crucial that communities possess the knowledge and skills to take preventive action, whether that be alerting medical professionals about a disease outbreak or organizing an evacuation ahead of a hurricane. To achieve this, it is necessary to strengthen community health literacy about epidemic-prone diseases and how to prevent and prepare for outbreaks. This entails coordinating with local stakeholders. We must also mobilize communities to attend health activities such as government vaccination drives.
- **Authorized frontline responders:** Local actors and humanitarian aid organizations, such as National Red Cross Red Crescent Societies, have a huge role to play in helping communities to cope with disease outbreaks. In some places, they are the primary providers of healthcare, running anything from blood banks to mental health and psychosocial support. It is essential that their capabilities be regularly assessed. They must also be given a secure footing through stable funding mechanisms that enable them to retain staff and stockpile resources.
- **Other key stakeholders:** Disease outbreaks and other hazards don't just threaten lives: they can upend many aspects of society, from food production to education (see Chapter 4). To minimize these harmful ramifications, it is crucial for preparedness workers to identify the correct stakeholders early on. Some of these will be technical experts, but they will also include community leaders, owners of private businesses, and more. The private sector has a key role to play in preparedness: it can supply funding, technical expertise, useful technologies and data, and be a source of solidarity. Likewise, the media is crucial for disseminating public health messages.

The overall aim must be health systems strengthening: that is, to improve countries' healthcare systems. The WHO says health systems strengthening aims to create "a well-functioning health system working in harmony… built on having trained and motivated health workers, a well-maintained infrastructure, and a reliable supply of medicines and technologies, backed by adequate funding, strong health plans and evidence-based policies". A key element of health systems strengthening is universal health coverage ensuring everyone in a country has access to the health system (see Chapter 2).

For emergencies like disease outbreaks, regular practice exercises are key. Frequent training and simulations enable response teams to discover the faults in their plans ahead of time and thus fix them.

It is also essential to build communities' trust in the health system before an outbreak occurs. Many people distrust the authorities in their country, have had negative experiences with healthcare, or have strong cultural beliefs that reduce their willingness to seek assistance. Overcoming these barriers to trust takes time and should be undertaken during 'normal' conditions, instead of being neglected until an emergency occurs (see Chapter 2).

Finally, we must remember that a health emergency has impacts that go beyond immediate health consequences – and plan accordingly for **all** the major consequences. The COVID-19 pandemic is a health crisis at its root, but its impacts are not limited to the health impacts of the coronavirus. The pandemic has harmed people's livelihoods, mental health and children's educations. Countries that responded successfully did so in part by supplying medicines and vaccines, but they also supplied financial aid and other forms of assistance. In most countries, the socioeconomic harms of the pandemic have deepened societal inequities. If we are to prevent such unjust outcomes when future hazards arise, we must devise responses that address all of the people's needs. It is, therefore, essential to prepare for the socioeconomic impacts of hazards, for example for in-home care during periods of isolation for people who require regular assistance. It is also essential to develop digital forms of assistance, which can be rolled out at scale (see Box 1.5). More broadly, strengthening social protections is key because such systems can help people through multiple forms of disaster (see Chapter 4).

Philippines 2021 *To ensure that no one is left behind, Philippine Red Cross volunteers travelled to remote areas to conduct mobile COVID-19 vaccinations. Volunteers are patiently addressing people's concerns and fears about the vaccine. © France Noguera*

BOX 1.5: THE MANY USES OF DIGITAL TECHNOLOGIES

COVID-19 created unprecedented challenges for responders, which they often solved using digital approaches. Digital forms of assistance were already growing in popularity for years before COVID-19 emerged, but the pandemic supercharged their use. Restrictions on travel meant it was difficult or impossible to reach the most vulnerable people. The same restrictions also exacerbated vulnerabilities, by cutting people off from their livelihoods, friends and families – making it more urgent than ever to get help to them.

Many forms of health assistance have been delivered digitally during the pandemic. In many countries, health services shifted to online booking systems to reduce the number of people visiting delivery centres. Red Cross and Red Crescent volunteers who would previously have visited vulnerable people in their homes had to telephone or text instead. Training was done online. This shift to digital solutions was an example of adaptability and clearly mitigated some of the pandemics' worst harms, including psychological and socioeconomic impacts. Such approaches are a key element in future humanitarian responses. The IFRC network now offers several smartphone apps, offering advice on first aid, helping people prepare for emergencies like hurricanes (American Red Cross, no date), and even providing an epidemic control toolkit (IFRC, no date c).

However, digital aid is only sometimes the best or even a possible substitute for in-person assistance. One such area is mental health and psychosocial support (MHPSS). When people's movement was restricted during the COVID-19 pandemic, IFRC staff provided psychological services over the phone and via video chat (IFRC Psychosocial Centre, 2020). However, a 2020 IFRC report concluded that "remote support cannot replace face-to-face services". The evidence for the effectiveness of remote MHPSS remains limited, and the physical presence of another person is a benefit in and of itself (IFRC, 2020b).

A major disadvantage of digital assistance is that it excludes those without online access or those who are uncomfortable with it (IFRC, 2018). This is a significant failure of **equity**, because it is often the poorest and most vulnerable who are cut off from the digital world. Notably, a 2021 report by the Red Cross Red Crescent Global Migration Lab found that migrants were often subject to digital exclusion during the COVID-19 pandemic (Red Cross Red Crescent Global Migration Lab, 2021). In Egypt, the processes for issuing and renewing residency permits were online, and not universally accessible. Although the government decided not to charge fines for expired residency permits, and to extend the period of renewal, migrants with no access to online processes were unable to pay bills or receive assistance. Others were uncomfortable using it: digital psychological safety is an important factor, linked to digital literacy, **trust** and protection.

To combat digital exclusion, governments must boost both mobile/internet access and digital skills or assistance, especially for remote communities and vulnerable people. This is essential to ensure they are not left behind by the digital revolution.

> **The international community did not stop the COVID-19 outbreak from escalating into a pandemic. The global cost of this failure has been enormous.**

1.3.3 Multi-hazard prevention and preparedness

Finally, what do societies need to do to prepare for a multi-hazard world? How does multi-hazard preparedness differ from health emergency preparedness or earthquake preparedness?

The short answer is that we need integrated systems to enable multi-hazard preparedness. Teams of responders that are only trained to respond to a coronavirus outbreak or a tsunami will not be able to cope. Instead, teams must have a broad mix of skills. Specialists and experts are still essential, but they must learn to work in integrated teams. Building such teams requires **trust** and **equity**: members must respect each other's skillsets. Such integration needs to occur at the national, local and organisational levels.

It is crucial to break down the barriers separating disaster risk management and public health. These two areas have often been siloed, which limits their effectiveness. In reality, the two fields are strongly connected. For example, floods do not just increase the risk of drowning, and damage and losses; they also carry water-borne diseases. Again, a One Health approach, which views human health as part of a broader social-ecological system, must be embedded (see Box 1.6).

To create such integrated teams, it is necessary to increase staffing and resources in disaster and health teams – in particular at the community level. Primary healthcare, in particular, needs significant improvement. It is a mistake to run hospitals and other healthcare centres at maximum capacity during normal conditions, because there is no spare capacity to cope with crises. The drive towards efficiency, often in the name of cutting costs, has reduced the resilience of the system. Furthermore, such understaffing means team members do not have the opportunity to learn new skills or improve their processes (see Chapter 5). The same logic applies to community health centres and other **local actors**. The best approach is to build up such teams and their resources during good times. That way, they have a good chance of being prepared when the bad times come.

Training exercises must focus on multi-hazard preparedness. A country may be at high risk of earthquakes because of its location, in which case responders should train for such events. However, those responders should also practise for 'generic' threats like influenza, which may be less salient but are entirely plausible (see Box 1.7).

BOX 1.6: MULTI-HAZARD PREPAREDNESS IN ACTION

IFRC's Preparedness for Effective Response (PER) scheme helps National Societies improve their preparedness. It is effective, in part, because it emphasizes multi-hazard preparedness. PER helps National Societies to assess how prepared they are for different hazards, to identify areas of improvement and to devise and carry out a plan to become better prepared. At all stages, the process emphasizes coordination with the National Societies' partners, from the community-level responders to the private sector and the authorities (IFRC, 2019).

Panama 2021 *Heavy rains in July inundated several provinces of Panama, causing severe floods and landslides, destroying homes and displacing thousands of people. The Red Cross Society of Panama mobilized volunteers to assist more than 800 families (4,000 people) in the hardest hit townships of Bocas del Toro. © Bienvenido Velasco*

BOX 1.7 / CASE STUDY
HOW PANAMA HANDLED A HURRICANE DURING THE WORST OF THE PANDEMIC

In early November 2020, Hurricane Eta tore through parts of Central America after making landfall as a category 4 hurricane. It was the second-strongest storm of the 2020 Atlantic hurricane season and caused havoc in multiple countries (IFRC, 2021a).

In Panama, Eta brought landslides, flooding and strong winds. Thousands of people were forced to leave their homes.

This was potentially a dire situation, because the hurricane had struck during the height of the COVID-19 pandemic. It was an example of how hazards increasingly overlap and compound each other. Panama was already struggling to deal with a dangerous infectious disease for which no vaccine was yet available; now it had a hurricane to handle as well.

One potential impact was the increased spread of COVID-19. Prevention measures like social distancing became harder in evacuation shelters and other places (IFRC, 2020a).

The Panamanian Red Cross implemented the Preparedness Approach for Effective Response for the first time. This entailed a detailed review of their processes, enabling it to identify weaknesses in previous responses and improve them. These areas of improvement included logistics, communication, and coordination with other actors. By working closely with government figures like mayors, and other actors, the Panamanian Red Cross obtained crucial facilities like storage spaces that it did not previously have.

These improvements meant the Panamanian Red Cross was able to deliver essentials like access to hygiene and drinking water. This is likely to have reduced the risk of infections, whether COVID-19 or other diseases like cholera (Acosta, 2021).

The Panamanian Red Cross's experience shows that it is possible to respond effectively even when multiple overlapping disasters occur. Doing so requires meticulous preparation and coordination.

KEY RECOMMENDATIONS

Prevent disease outbreaks as much as possible. Notably, the rate at which new diseases enter the human population from animals can be reduced through the One Health approach: for example, integrated surveillance of animal and human health. Meanwhile, public health measures like improved sanitation, nutrition, air quality (for instance through ventilation) and vaccination (when available) can help keep outbreaks contained. Communities must be engaged in the design and implementation of these programmes.

Strengthen health systems before outbreaks occur, to prevent a crisis from spiralling into epidemics and pandemics. Health systems strengthening is essential to enable rapid and effective responses. Early warning/early action is critical. It is most effective through permanent presence and surveillance at the community level. Strategies like contact tracing, testing and preventive treatments can slow the spread of a disease and improve people's health outcomes. These must be complemented by other public health countermeasures, such as (well-supported) isolation measures, hand washing and mask wearing.

National and local authorities should create nationally coordinated preparedness plans. Preparedness plans must embrace the whole of society, from communities and local actors to health systems and government ministries. It is essential that there are coordination mechanisms in place, and well-defined roles and responsibilities, so these actors can work together smoothly and effectively. This requires regular training. It also demands capacity building for local actors, who have not hitherto received enough support (see Chapter 2).

Enable multi-hazard preparedness by building integrated teams. The risk of disease outbreaks is rising, as is the risk of other hazards like hurricanes and droughts. For societies to become resilient, they must invest in multi-hazard preparedness. This requires integrated response teams, particularly at the community level, with the knowledge and resources to respond to multiple and even overlapping hazards. Increasing digital access and literacy will enable more people to receive aid digitally.

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Yemen 2020 *Rana Yonis is one of seven volunteers at COVID-19 Care Center in Aden, Yemen, where she has been volunteering since August 2020. She has been volunteering in different organizations since 2011. "I got into volunteering because I saw my neighborhood suffer. I thought I have to do something to help. So I joined the Red Crescent." © Anette Selmer-Andresen / NorCross*

2 ENGAGE COMMUNITIES AND LOCAL ACTORS

By integrating local actors and communities into systems, societies can boost their preparedness

Contents

INTRODUCTION

The experience of the COVID-19 pandemic reinforced that local actors and communities need to be at the centre of epidemic and pandemic prevention, preparedness and response. While governments have the primary responsibility for responding to needs and coordinating the response, local actors and communities have essential roles to play.

Communities have many roles, including but not limited to: voicing needs and concerns, contributing local knowledge, problem analysis and co-construction of solutions. Community voices are key because health services and disaster management systems must be relevant, contextually appropriate and co-owned by communities. Many of this report's messages and recommendations are ultimately based on lessons learned from communities.

Meanwhile, recognized and trained local actors, by virtue of their proximity and pre-existing access to communities, can perform frontline tasks such as preparedness, community-based surveillance, strengthening health literacy, and supporting the extension of basic health services to the most vulnerable. Local actors have a very significant role in building trust, strengthening equal access to health and community health systems, and enabling early and effective action – all essential elements of disease control.

Definitions

Disease prevention: Actions designed to avoid the emergence of a disease in the first place (primary prevention); to detect and respond early once the disease manifests (secondary prevention); or to reduce the further spread of the disease at further stages (tertiary prevention) (WHO, no date).

Disease outbreak preparedness: The capability of the public health and health care systems, communities and individuals, to prevent, respond to, and recover from health emergencies. Preparedness is not a steady state; it requires continuous improvement. It also includes the practice of improving the health and resiliency of communities (Nelson, 2007).

Community-based surveillance: The systematic detection and reporting of events of public health significance within a community by community members (IFRC, no date a).

Bangladesh 2021 *Bangladesh Red Crescent volunteers helping an elderly woman named Majeda Khatun who has been recently released from Satkhira Sadar Hospital after getting admitted with COVID-19 symptoms. © Mir Hossen Roney*

2.1 WHAT WE SAW
COMMUNITIES THAT NEEDED HELP OFTEN DID NOT GET IT

Again and again during the COVID-19 pandemic people did not receive the help they needed. In a number of other cases, they have rejected public health advice when offered. In this chapter, we explore some of these problems and how they could have been averted had we paid more attention to local actors and communities, and the role they play in community health systems. In the final section we draw on some positive examples of good practice during the pandemic, which point the way to better preparedness at the community level.

One of the most obvious barriers was restrictions on movement for both domestic and international relief personnel. At the domestic level, these were imposed by many governments to slow the spread of the coronavirus. As noted in Chapter 1, such measures can be important public health tools if used in a balanced way. However, they were often applied with incomplete deliberation as to who might be needed to respond and therefore to be included in the risk calculus for (necessarily) narrow exemptions. This made it harder for some types of frontline responders, including trained and supervised volunteers from our National Societies, to visit those who needed their help. In the strictest regimes, face-to-face contact with anyone outside of one's immediate household became almost impossible. For many people, especially those living in poverty, these restrictions on movement made it hard to put food on the table; a problem many National Red Cross and Red Crescent Societies stepped in to address (see Box 2.1) (for more on socioeconomic impacts, see Chapter 4). The global shortage of personal protective equipment (PPE) like face masks in the first half of 2020 aggravated this problem. Without PPE, health workers could not safely attend to vulnerable and infected people (Burki, 2020). Many had to do without, thus risking their own health and ability to contribute to the COVID-19 response (WHO, 2020).

At the international level, many countries failed to nuance entry requirements to find particular solutions for international relief personnel. Of course they, like anyone, could have been carriers of disease but systems were not ready with bespoke protective solutions to fast-track this group. As a result, those countries received little or no international assistance – and had to rely solely on their own systems (UN OHRLLS, no date).

In some cases, this meant local actors were able to take a lead role. For example, in April 2020 Tropical Cyclone Harold struck Vanuatu and Fiji. In both countries, National Red Cross and Red Crescent Societies were well established and able to take the lead. Their decentralized networks performed assessments, distribution, coordination and community liaison. There was a shift in the power dynamics between national and international IFRC network actors during this response. More emphasis was placed on local leadership and national government partnerships. This shift was enabled by long-standing capacity development programmes that invested in key staff, disaster preparedness programmes, and assets such as pre-positioned relief supplies (Australian Red Cross, 2020).

However, in many countries the local response was less effective, due in part to a lack of investment in local capacity both before and during the crisis. Community health systems – and the local actors and communities that run them – were bypassed or not supported to do their jobs as they should. This left national health systems to respond to every need, everywhere.

Some of this has been discussed in Chapter 1. There was an overall lack of investment in community preparedness and prevention, so communities and local actors did not have the resources and expertise they needed to respond to outbreaks. A key failure of preparedness was the limited capacity for community-based surveillance, which is known to be an effective way of detecting new disease outbreaks quickly, but which had been under-resourced. There was also a lack of clear mechanisms for local actors to coordinate with local authorities and national health systems.

On top of this, three linked problems hampered community responses to COVID-19.

First, there was a lack of access to local health services. In many communities, particularly those that did not have an on-site health centre, people who became ill from COVID-19 or other diseases had no one to turn to. In other communities, the local health services became overwhelmed by the huge demand for COVID-19 assistance. As a result, they had to temporarily abandon other needs such as elective surgery, maternal and newborn infant care, routine vaccination, and management of chronic illnesses (Núñez et al, 2021).

Second, many communities have extremely limited access to health education and information (Royston et al, 2020). Many people did not know how to protect themselves and others from the coronavirus. Information provided by social media or state news was not necessarily trusted. People often did not understand the rationale behind public health measures. Some still do not. In many countries, governments gave contradictory advice. Meanwhile, oversimplified beliefs often took hold: for instance, that COVID-19 is only dangerous to the elderly and clinically vulnerable (King's College London, 2020) or, in Zimbabwe, that "COVID-19 does not kill black people" (Erlach et al, 2021). This was compounded by the mass spread of misinformation and disinformation.

Finally, and very much tied to the two previous issues, there was often a lack of trust in health services and other authorities. Multiple studies suggest that **trust** was one of the best predictors of a country's success or failure in handling the COVID-19 pandemic. A 2022 study compared rates of infection and death in 177 countries. Some of the variation in infections and deaths could be explained by obvious factors like the countries' age profiles, COVID-19 being more dangerous to older people. However, one of the strongest correlations was with measures of trust in the government, and of interpersonal trust. Higher levels of trust were associated with lower infection rates and with higher uptake of COVID-19 vaccines where these were available. The study is observational and does not prove causation. However, if increased trust did contribute to the lower infection rates, potentially due to higher compliance with recommended behavioural changes, it implies that trust is truly powerful. Based on this hypothesis, the researchers estimated that if all countries had the same level of trust in government as Denmark, global infections would have been 12.9% lower. Similarly, if all nations had Danish levels of interpersonal trust, infections would have been 40.3% lower (COVID-19 National Preparedness Collaborators, 2022).

Determinants of trust are very complex, and this report cannot hope to address them all. One factor is that governments are seen as having largely failed to tackle crises like COVID-19 and climate change, so some now view them as discredited (Edelman, 2022). This pervasive mistrust is compounded by the fact that vulnerable and marginalized communities are often the least trusting of governments and authorities, which they often view as sources of demands rather than providers of needed services (Bavel et al, 2020). It is these vulnerable and marginalized people who are most at risk from major hazards like COVID-19, yet their social position and experience of historical mistreatment also makes them prone to distrust authorities and organizations that might help them.

These many problems can all be tied back to one central failing: a lack of local capacities. People tend to trust individuals with whom they are familiar, as evidenced by the trust often shown to general practitioners or 'family doctors' who people know for many years (Salisbury, 2021). Unfortunately, many communities did not have the support, funding and prior training they needed to handle COVID-19. They did not have personnel with the necessary training and expertise, and they did not know with whom to coordinate. They also had little exposure to health systems or access to the equipment and other resources they needed.

Guyana 2021 *Melissa Lewis talks about staying safe and healthy during COVID-19, while the Guyana Red Cross team delivers hygiene kits to rivering communities. These communities are impacted by COVID-19, and it is difficult to access cleaning and hygiene items because of distances and lockdown measures. © Angela Hill / IFRC*

BOX 2.1 / CASE STUDY
FOOD AND HYGIENE FOR THE VULNERABLE

From the beginning of the COVID-19 pandemic, the Turkish Red Crescent delivered food and hygiene kits to vulnerable people. By April 2020, it had delivered over 30,600 food boxes and 35,800 hygiene boxes (Paksoy, 2020). Almost 10,000 staff and volunteers were involved.

The volunteers focused especially on those who were not able to leave their homes due to the protective measures and health concerns. These included the elderly and financially vulnerable. The Turkish Red Crescent also delivered meals three times a day to people who were quarantined and thus unable to leave their houses (TRC, 2020).

Türkiye 2020 *Providing support during Ramadan. Red Crescent volunteers across the country helped to provide three meals a day to vulnerable people, totalling more than 3.4 million individual meals. More than 53,000 Turkish Red Crescent volunteers and staff provided critical support to communities during the COVID-19 pandemic. © Turkish Red Crescent*

2.2 WHAT WE LEARNED
COMMUNITIES AND LOCAL ACTORS WERE NEGLECTED

Many of the failures of the COVID-19 response can be attributed to a lack of engagement with local actors and communities, in all phases of the public health emergency management cycle. Many of the problems that have arisen during the COVID-19 pandemic are the result of top-down interventions and over-centralized command and control measures by governments that lacked community engagement and presence or the coordinated assistance of local response actors (Loewenson et al, 2021). Another factor, tied to this one, was a frequent failure to include people who are not part of the formal health sector in decision making. This, de facto, excludes communities and many local actors. Conversely, successful responses to COVID-19 relied on local actors and communities.

In this report, we use the Grand Bargain's definition of **local actors**: "organizations engaged in relief at the local/community level that are headquartered and operating in their own aid recipient country and which are not affiliated to an international NGO" (IASC, 2018). Local actors may be part of a federation, network confederation or alliance, provided they maintain independent fundraising and governance (IFRC, no date b). They have some formal training and are organized into a structure for supervision. In contrast, we define a **community** as simply all the people living in a specified region.

This distinction means the two groups have different roles. For example, in a health emergency, local actors may provide services like basic health assistance, logistics and building health literacy (Garcini et al, 2022), while communities provide input (including co-designing programmes) and feedback.

In practice, local actors and communities are not entirely distinct. Local actors often belong to communities or are close to them, and their value derives in part from that proximity: they can act as gatekeepers to communities. Similarly, communities and community groups often take a highly active role and should not be considered as passive recipients of aid (see Box 2.2).

In the following two sections, we explore in turn how local actors and communities have been neglected and under-used during the COVID-19 pandemic.

BOX 2.2 / CASE STUDY
INDIGENOUS RESILIENCE TO COVID-19 IN CANADA

When the COVID-19 pandemic hit, indigenous leaders in Canada drew on lessons they had learned from the 2009 H1N1 influenza pandemic to develop strategies to protect their communities.

Key indigenous health actors proposed and implemented strategies to mitigate the risks of COVID-19 and document its impact. Culturally appropriate mitigation and treatment strategies were developed and implemented. Indigenous healthcare providers developed and disseminated public health messaging through webinars and videos. Where possible, indigenous case counts, mortality and vaccination rates for on-reserve indigenous populations were tracked.

At the community level, many innovative responses were in evidence. Leaders, acting as sovereign authorities, closed their borders. In some cases, they did so ahead of regional, provincial or territorial orders – and left them closed after those external restrictions had been lifted. Rural and remote communities transformed public buildings into isolation centres for those with COVID-19, or in some cases as alternative housing for elders to protect them and ensure their needs were met.

Existing emergency plans were adapted to respond to the needs presented by the pandemic. Continuation of cultural practices through social media enabled people to connect despite social distancing and lockdowns. Leaders exchanged knowledge with each other related to successful confinement and mitigation practices. They also sought to put in place strategies to ensure their communities experienced as little interruption in accessing health programmes and services as possible.

Many indigenous communities continued to endure structural inequalities stemming from historical colonisation. These include insufficient housing options leading to overcrowding, lack of access to clean water, and mistrust of a healthcare system where they have experienced discrimination and racism. These inequalities resulted in disproportionate numbers of H1N1 cases. Until they are addressed and resolved, indigenous communities will be impeded in their efforts to fully implement pandemic public health measures. Nevertheless, the indigenous response to COVID-19 was boosted by strong leadership, cohesive communities, historical memory of lessons learned, sharing of knowledge, and continued resilience.

2.2.1 Local actors were not integrated into policy frameworks

In many countries, local actors were neglected by the leaders of the COVID-19 response (IPPPR, 2021a). They found themselves acting in semi-isolation from health systems and other responders. Legal and policy frameworks used to prepare for and respond to the coronavirus did not integrate local actors. This made it difficult for them to work in tandem with health systems and other responders. National Red Cross and Red Crescent Societies have reported that, when coordination with authorities was close, this was a significant enabler to their response. They were able to scale up the most relevant services, which were complementary to those provided by public authorities and other agencies (Johnston, 2022). However, many other local actors do not have such established relationships with governments and public authorities, and were therefore unable to coordinate with them.

This lack of policy integration fed down into practical difficulties. Prior to the emergence of COVID-19, many countries had not conducted joint exercises between public authorities and local actors. When the pandemic began, local actors attempted to step in, but despite their best efforts the result was often confusion (IPPPR, 2021b). In many cases, local actors did not have access to PPE such as face masks. As mentioned in section 2.1, they often did not have authorization to move around to carry out their tasks, and they found that authorization was unclear, with ill-defined rules. They were not trained to perform their tasks, nor was financial support available.

A key role of local actors is to complement overburdened health systems. When waves of COVID-19 patients began flooding hospitals, local actors like community health workers and volunteers could in theory have taken on additional responsibilities, thus freeing up medical professionals to deal with the most urgent and critical cases. However, where countries did not have policies or systems in place to enable this, the capacities of local actors could not be used to their full potential (Sachs et al, 2022).

These problems are not new. Local actors like community health workers have long been undervalued and underfunded. Many local actors face difficulties accessing international support, which is an issue exemplified by the failure to fund local women's rights organizations during the pandemic, despite the increase in violence against women (IRC, 2021). As a result, the pandemic took a heavy toll (Lotta et al, 2022). Even in New Zealand, where the coronavirus was well controlled for many months, community health workers reported major impacts on their wellbeing. A survey published in 2022 found they faced "significant risks to personal and professional relationships", "considerable stress and anxiety" and "personal isolation and loneliness as a result of lockdown restrictions". The researchers recommended that community health workers' "crucial role" should be acknowledged and that they be supplied with PPE, improved remuneration including time off, and regular counselling and support (Holroyd et al, 2022).

2.2.2 A lack of engagement with communities

Health systems and other actors have repeatedly failed to engage with communities during the COVID-19 pandemic. Community engagement is known to be essential to effective health and disaster responses (Corbin et al, 2021). This is partially why the Risk Communication and Community Engagement (RCCE) Collective Service was established by the IFRC, United Nations Children's Fund (UNICEF) and World Health Organization (WHO) (RCCE, no date), and why the humanitarian community pledged to a major transformation of practice, a 'participation revolution', in the 2016 Grand Bargain (Grand Bargain, no date). However, historically it has often been done either partially or not at all (IFRC, 2019). This pattern has been repeated in the COVID-19 response.

When it comes to the 'risk communication' aspect of community engagement, responders have often failed to establish genuine two-way dialogues with communities. Centrally designed and rather anonymous messages have been pumped out about everything from wearing face masks and social distancing to vaccination. Such public information – while valuable – is only one-way and impersonal, and it can therefore easily miss core fears or misperceptions among communities. Furthermore, when feedback has been elicited from communities it has often been dismissed or ignored (McKay et al, 2022).

There has been similar neglect of the 'programme design' element of community engagement. The idea that communities should play an active role in designing the health services they receive goes back at least to the Alma-Ata Declaration of 1978, which includes a proviso that "The people have a right and duty to participate individually and collectively in the planning and implementation of their health care" (WHO, no date). But this has not been carried through in the subsequent four decades. As recently as 2020, an Organization for Economic Cooperation and Development (OECD) report identified multiple gaps in primary healthcare, one of which was a need for "broader roles for patients". The OECD called for genuine engagement of patients and community members (OECD, 2020). Similar arguments have been put forward by the WHO's Independent Panel for Pandemic Preparedness and Response (IPPPR, 2021a).

Instead, governments responding to the COVID-19 pandemic often resorted to coercion. Public health orders were backed up with the full force of criminal law, and law enforcement and security forces were deployed to enforce them. The predictable result was social and political resistance and the exacerbation of communities' distrust of government and health systems (and vice versa) (Loewenson et al, 2021).

2.3 WHAT WE NEED TO DO ENGAGE WITH COMMUNITIES AND LOCAL ACTORS AT ALL STAGES

Health systems strengthening, in particular community health systems strengthening, is fundamental to preparing societies for future disease outbreaks. Communities and local actors both have key roles to play in this. This is true in low- to middle-income countries, where national health services are often less comprehensive. But it is also true in far richer countries (WHO, 2022c). There, a shortage of health personnel has contributed to a delegation of certain tasks to qualified nurses or carers. There has also been a shift towards a more people-centered approach to health (as embodied by the public health approach) and a strengthening of primary healthcare.

2.3.1 Invest in local actors to help manage outbreaks and other hazards

Local actors can play multiple roles in disease outbreaks and other emergencies. Their activities can reduce the risk of major outbreaks and improve outcomes when such outbreaks do occur. A key challenge is to bolster community health systems. Such systems provide a vital link between health systems and the communities they serve, especially remote and marginalized ones.

One crucial group of local actors is community health workers (CHWs) – often including trained and supervised volunteers – who provided essential support during the COVID-19 pandemic. This ranged from contact tracing and screening to preparedness and prevention training, health education, at-home non-medical care, basic primary care and referrals. They have also done so in previous disease outbreaks (Bhaumik et al, 2020). Contact tracing, for instance, is a pillar of infectious disease control: it entails identifying and notifying people who have been in contact with an infected person so that they can take precautions to protect themselves and others (IFRC, 2020a). Contact tracing is often best done by local actors who are embedded in their communities (IFRC, 2021a). They have local knowledge that enables them to swiftly and correctly identify likely contacts, and they can be better placed to address fears about what tracing will entail. For this reason, public health experts called for significant investment in CHWs early in the pandemic (Ballard et al, 2020). It is time for those calls to be heeded.

Community-based surveillance is one way in which local actors can support the detection of health risks and early action within their communities where outbreaks start. Many countries' health systems run early warning systems to alert them to disease outbreaks, but these systems often struggle to reach everyone – for instance, if people are unable to access health facilities. Community-based surveillance is a way to bridge this gap. Local volunteers are trained to spot signs and symptoms of diseases with epidemic potential. Because they work in the communities they are from, they are more likely to be **trusted** than outsiders. If they become aware that someone is ill, they can support the community to take immediate

protective action and alert a supervisor, who can in turn trigger a response from the health system (see Box 2.3). Community-based surveillance thus helps protect vulnerable people and communities who might otherwise fall through the gaps. It also helps to protect society as a whole by enabling early detection and rapid responses to outbreaks. All public health emergencies start small, with a mere handful of cases – but left unchecked they can balloon into a global crisis, as COVID-19 did.

Community-based surveillance is one of the pillars of IFRC's successful **Community Epidemic and Pandemic Preparedness Programme** (CP3) (IFRC, no date c). This has been running since 2017. It uses funding from the US Agency for International Development (USAID) to help communities to prevent, detect and respond rapidly to disease threats. It is currently active in seven countries. CP3 takes a 'One Health' approach, helping communities to detect disease outbreaks in both humans and animals to reduce the threat of zoonotic spill-over. Community-based surveillance is one of the pillars of CP3, alongside more traditional epidemic and preparedness activities (see Chapter 1).

Later in the pandemic, as vaccines became more widely available, local volunteers became crucial to vaccination programmes (WHO and UNICEF, 2021). Vaccine confidence and acceptance issues have been a significant challenge in many countries. The distribution of vaccines requires government expertise and coordination, but localized effort and community engagement are essential to understand access and acceptance barriers and ensure maximum uptake. Even once approved COVID-19 vaccines were proven to be highly safe and effective and made available to the people in need, people still felt hesitant to take them. This was due to distrust of the service providers or social norms like popular distrust of vaccines, which hinder their capacity to use the service (WHO SAGEI, 2022). Rumours and concerns have taken root in some communities, especially vulnerable groups who often have **limited trust** in the authorities. In some cases, this has led to violent attacks on COVID-19-related infrastructure and personnel (IFRC, 2021b).

Centralized awareness campaigns can only do so much about these highly specific forms of vaccine hesitancy. Moreover, people are more likely to **trust people** they know than organizations that may be perceived as faceless: for instance, family-owned businesses are trusted more than any other kind (Edelman, 2022). Instead, community engagement by local actors is necessary. Some local actors have had success in tackling vaccine hesitancy by engaging closely with communities, using community feedback mechanisms and perceptions surveys to find out what they believe and fear. When collected and processed at a regional or central level, this can help public health authorities to develop tailored engagement strategies and thus change people's perceptions. For example, the Georgia Red Cross collected information on people's perceptions of the COVID-19 vaccines in order to systematically identify their reasons for hesitancy. Likewise, the Ukrainian Red Cross conducted one-to-one meetings and small group conversations to convey information about vaccines. Volunteers underlined that vaccination was voluntary and advised people to consult their doctors if they had health concerns (IFRC on Medium, 2021).

Community-level programmes have the additional benefit of creating **networks of trust**. These can be harnessed for more effective disaster responses, and for other humanitarian and development work. Such trust-building exercises are essential for the Global Health Security Agenda. One commentary noted that "the time to start engaging with communities is not in the middle of a health emergency", because such times are chaotic and outside actors are often regarded as suspect (Natoli et al, 2020). Instead, it is crucial to start engaging with communities during 'normal' times. This allows time to build trust and relationships, ready for when a crisis hits (see Box 2.4).

BOX 2.3 / CASE STUDY
COMMUNITY PREPAREDNESS IN INDONESIA HELPS TO STOP DENGUE OUTBREAK

As well as being vulnerable to diseases like influenza that affect most countries, Indonesia also has a number of endemic diseases like dengue fever. To prevent disease outbreaks from spreading, the government established an early warning system in primary health centres to help detect and treat potential outbreaks in communities.

For this to work, community members must report their health status to these clinics. However, many people do not – sometimes because they cannot, sometimes because they are unwilling, and sometimes because their symptoms seem too mild to be worth reporting. Community-based surveillance reduces this problem by detecting possible cases quickly and, through trusted intermediaries, bringing them to the attention of health systems. It extends the reach of the national surveillance system, enabling faster reporting and response and potentially fewer cases and fewer deaths.

In one case, volunteers in Sobokerto village heard reports of a child experiencing fever, joint pain and red spots. These are classic dengue symptoms. The volunteers investigated and alerted their supervisor the same day through WhatsApp. From there, they coordinated with the local village head. The suspected case was ultimately confirmed as dengue and the child received the needed medical support and recovered. The volunteers conducted household visits to look for signs and symptoms of dengue, but no further cases were found.

The volunteers also discovered that residents did not know about all potential mosquito breeding sites. In response, they provided health promotion information and mobilized a community to clean such sites (Resolve to Save Lives, 2022). As a result, the community became more resilient to dengue and other mosquito-borne diseases (IFRC, 2021d).

Local actors also have key roles to play in **health literacy**. People with high levels of health literacy can be thought of as possessing a 'social vaccine', which enables them to adopt good practices and to encourage others to do the same (Okan et al, 2022). Health literacy is not simply about knowledge – though that is essential – but is also about having the skills and motivation to both learn and apply that knowledge (Sørensen et al, 2012). Again, local actors' strong connections to the communities they serve make them ideal promoters of health literacy. People are more likely to trust information and advice when it comes from a known and trusted source, particularly if they feel alienated from their governments (see Box 2.5). For the same reason, local actors are often ideally placed to manage **community engagement** (see section 2.3.2).

During crises, some local actors can aid health services by **task shifting**. CHWs can be trained in certain routine healthcare tasks, such as screening of signs and symptoms for diseases like COVID-19 or administering routine childhood vaccinations. The CHWs can then step in to perform tasks that would normally be conducted by more extensively trained professionals (IFRC, 2020b). There are, of course, risks whenever medical interventions are carried out by people without formal medical credentials. However, the balance of risks is particularly attractive for task shifting when healthcare systems become overwhelmed and 'regular' healthcare staff cannot perform routine tasks, or they are simply unavailable in particular locations. This is because foregoing any care if it cannot be provided by the most highly qualified people brings its own risks: for example, conditions that were under control may flare up if left unattended, necessitating emergency treatment.

With CHWs, the only healthcare available in many communities, task shifting was essential during the pandemic. For their part, the local branches of many National Red Cross and Red Crescent Societies assisted with identifying suspected cases of COVID-19 in communities, including in some cases performing diagnostic testing (IFRC, 2021c). Positive cases could then be directed to the professional healthcare system. This simultaneously relieved the healthcare system by removing the need to conduct screening, and it ensured as many people as possible received healthcare when they got COVID-19. Similarly, many National Red Cross and Red Crescent Societies set up telephone hotlines to provide mental health and psychosocial support during the pandemic. In 2020 alone, the Ecuadorian Red Cross provided mental health and psychosocial support services to 8,677 people (IFRC Psychosocial Centre, 2020).

Task shifting needs to be urgently expanded in the future. This is due to the ongoing global shortage of healthcare workers. The WHO estimates that the global health workforce in 2022 is 15 million smaller than it needs to be. This is an improvement on 2016, when the shortfall was 18 million, but it is still a significant deficit (WHO, 2022b). Furthermore, health professionals often prefer to live in urban areas, so rural and remote areas are typically underserved. Task shifting ameliorates this by using non-professional and semi-professional CHWs. The CHWs can both carry out essential healthcare activities and act as a bridge between local people and the national healthcare system.

Furthermore, local actors can play similar roles in all other kinds of disaster, not just health emergencies. Indeed, the services required are often similar. Whether a community is experiencing an influenza outbreak or an earthquake, basic health services are still essential, as is the provision of accurate information about what to do.

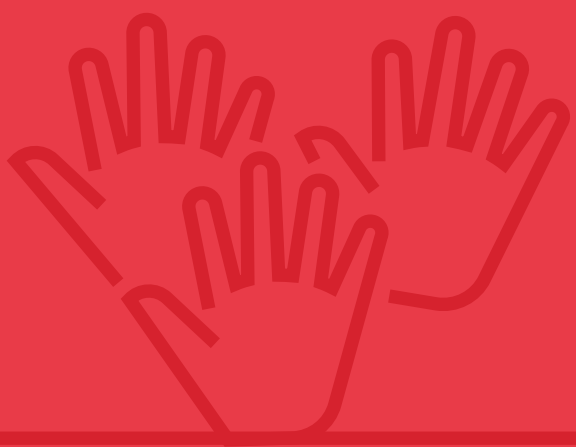
BOX 2.4: WORKING WITH COMMUNITIES IN URBAN ENVIRONMENTS

Responding to disasters in cities poses challenges not encountered in rural environments. These difficulties have been laid bare during the COVID-19 pandemic. A 2021 report by the German Red Cross explored how National Societies responded to COVID-19 in cities and found many experienced difficulties (German Red Cross, 2021). For example, more people in cities were **distrustful** of the government and other authorities compared to rural areas. This was partly driven by the large numbers of migrants and refugees in cities; these groups are often wary of the authorities. National Societies that had a pre-existing presence in the cities were more trusted.

Compared to rural areas where everyone knows everyone, cities are anonymous. People might live there because they can go unnoticed. These marginalized people are often among the most vulnerable – yet their very anonymity in urban areas means it is difficult for humanitarians and other actors to find and help them. The solution is for humanitarians and other disaster risk managers to build up a strong presence in urban communities long before disasters occur. This will build **trust** and enable the identification of vulnerable people (PrepareCenter.org, no date).

Malaysia 2021 *The Malaysian Red Crescent Society worked together with the state of Pahang health department and the local communities to vaccinate migrants in the district of Cameron Highlands. The collaboration between the Ministry of Health and Protect Health Corporation Sdn Bhd (ProtectHealth) was the first of its kind to be led entirely by a humanitarian organisation. The Malaysian Red Crescent Society successfully vaccinated more than 7,000 migrants from at least 10 different ethnic groups in Kuala Lumpur, Selangor and Sabah. © Nazir Sufari*

> **Local volunteers are trained to spot signs and symptoms of diseases with epidemic potential. Because they work in the communities they are from, they are more likely to be trusted than outsiders.**



Local actors can only achieve all this with sustained capacity and infrastructure investment. This enables local teams to retain members, resources and knowledge, and to engage in local coordination mechanisms. Instead of bursts of short-term funding during crises, such programmes require stable, long-term support. They also require access to overheads to strengthen institutional capacity (see Chapter 3).

Some donors are now seeking to address this issue. One is the European Commission's Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO). DG ECHO has partnered with IFRC on a new Pilot Programmatic Partnership (PPP), which offers strategic, flexible, longer term and predictable funding for National Societies engaged in preparedness work (IFRC, no date d). The scheme will help communities to prepare for epidemics and other disasters. The launch of the Financial Intermediary Fund for Pandemic Prevention, Preparedness and Response, hosted by the World Bank, also recognizes the need for more consistent, flexible funding (WHO, 2022a). However, how much of this funding will flow to local actors and programmes is still to be decided by its board. A third ambitious initiative is Africa Frontline First, which has set a target of deploying 200,000 CHWs in 10 countries by 2030 (Africa Frontline First, no date).

Finally, local actors need to be integrated into wider health and governmental systems. As well as financing, they must be supported institutionally through governance and coordination mechanisms. The auxiliary role accorded to National Red Cross and Red Crescent Societies is one example of a mechanism by which local actors can be integrated and work closely with the government and health system. It is "a specific and distinctive partnership, entailing mutual responsibilities and benefits, based on international and national laws, in which the national public authorities and the National Society agree on the areas in which the National Society supplements or substitutes public humanitarian services" (IFRC, no date e). During the COVID-19 pandemic, states could have made more use of mechanisms such as the auxiliary role that allow them to be assisted by local actors in emergencies. Again, preparedness is key: these coordination mechanisms will be most effective if they are set up in advance of future emergencies.

BOX 2.5 / CASE STUDY
REDUCING VACCINE HESITANCY IN THE SYRIAN ARAB REPUBLIC

The Syrian Arab Red Crescent has been listening to people's concerns about the COVID-19 vaccines in order to understand why they are hesitant to take it – and then help them to overcome their fears (IFRC, no date f).

In one instance, a community circulated a rumour about a judge dying after receiving the COVID-19 vaccine. The judge had previously declared that he would take the vaccine, but he passed away before receiving it. After his death, the community rejected the vaccine, assuming it was the main reason for his death.

The Syrian Arab Red Crescent's Community Based Health and First Aid (CBHFA) team urged the judge's family to help dispel rumours. First, all the judge's family members received and advocated for the vaccine. Second, the CBHFA team held group meetings and invited a judge's family member to confirm that the vaccine was not the reason behind the judge's death. Following these sessions, people's trust in the COVID-19 vaccine grew, and most community members rushed to get the vaccine.

On another occasion, during a focus group discussion with five women, one of the women said that the COVID-19 vaccine paralyzed her sister. The other women believed her. However, during the discussion, it became clear that the woman's sister had multiple health issues that contributed to her illness and paralysis. After understanding her medical history, and following ongoing discussions with the Syrian Arab Red Crescent CBHFA team, the women received their first dose of the vaccine.

Syria 2021 *Throughout 2021 and 2022, Syrian Arab Red Crescent has been working to ramp up the vaccination rates in different areas of Syria. For example, volunteers are conducting vaccine awareness home-to-home visits in Hama and Sweida, the are providing training sessions for volunteers in Deir ez-Zor and many other locations -and they are conducting awareness sessions in Lattakia and other locations. © Syrian Arab Red Crescent*

2.3.2 Engage communities in all phases of the public health emergency management cycle

Communities must be active participants in all phases of health and disaster management. Too often they have been treated as passive recipients of assistance. This is not only patronising; it is also ineffective. The most impactful forms of response are those developed collaboratively in the full knowledge of each community's needs, vulnerabilities, beliefs and capacities (IFRC, 2021e). A 2022 review of COVID-19 responses in 177 countries concluded that: "Efforts to improve pandemic preparedness and response for the next pandemic might benefit from greater investment in risk communication and community engagement strategies to boost the confidence that individuals have in public health guidance" (COVID-19 National Preparedness Collaborators, 2022).

Crucially, local leadership enables better communication and feedback. When healthcare and disaster teams work closely with communities, they have an opportunity to find out critical information such as who is most at risk, what they need to manage that risk, their level of health literacy, and who they are prepared to trust (see Box 2.6). This information enables more appropriate preparation and response. It is particularly important to focus on marginalized and vulnerable communities, which need greater engagement efforts to meet their information needs. Community engagement and accountability is thus at the heart of preparedness (see Chapter 1 for more on preparedness and Chapter 5 for more on community feedback data).

IFRC has identified five guiding principles that underpin people-centered community systems (IFRC, no date g). They are based on extensive experience of public health responses, including but not limited to COVID-19. Successful community health systems must be:

1. **Community led.** Health programmes are more effective if they are managed, governed and implemented by communities themselves. People are more likely to take action in their communities if they can lead on all aspects, from assessing their own needs to implementation of the programme and evaluating its results (WHO, 2021). For example, in the Democratic Republic of the Congo, Red Cross volunteers worked with communities to develop messages in support of measles vaccinations. They held participatory workshops, which were attended by community health partners, community health workers, religious and traditional leaders, and local administrative and health authorities. The aim was to co-create solutions to outbreaks. Volunteers collated rumours and feedback, which were used to develop key engagement strategies. Key messages were then adopted by health authorities, fostering commitment to amplify them widely (IFRC, 2022a).

2. **Informed by data**. To maintain trust, we must listen, respond and act on what communities are telling us. It is essential to understand how they perceive the disease and the response. Responders must also determine the key drivers of community behaviour, plus their questions, suggestions and capacities. Social data, including community feedback data, is just as important as epidemiological data (see Chapter 5 for more on data collection and analysis). For example, the IFRC undertook community research into people's experiences of the pandemic, including vaccine acceptance, across Latin America and the Caribbean. Researchers interviewed 7,743 people in nine countries. Levels of vaccine acceptance were generally high: only two out of ten people asked would refuse it, except in Jamaica where five out of ten would.

However, there were access issues. Migrants and indigenous populations reported higher constraints due to distance, long waiting times, inconvenient opening times and inadequate services (IFRC, 2022b).

3. **Accountable.** Health systems must be accountable, transparent and responsive to the voices, priorities and needs of people and communities. Communities must be able to participate in the governance of the health system, planning of health interventions and approaches, and in the delivery and oversight of services. Such widespread community participation in monitoring and evaluation makes programmes more sustainable and enables better use of resources. To achieve it, governments must invest in boosting communities' capacities, for example their health literacy, including knowledge of health rights. One instance of good practice enabled HIV patients to assess the delivery of their treatments. The programme ran from 2017 to 2019 in 11 countries in West and Central Africa. Respondents reported that it often took many weeks to get their viral load test results. However, as the project went on and the feedback was absorbed, this and other indicators improved (The Global Fund, 2020).

4. **Coordinated and collaborative.** Community engagement should be integrated in strategies, policies and procedures. It must also be harmonized within the public health, humanitarian and development responses. Coordination efforts should enable partnerships between local actors, the private sector, states, response partners and communities themselves. For example, to help manage COVID-19 the Eswatini Ministry of Health created a Risk Communication and Community Engagement Technical Working Group. As part of this, a 'dynamic listening group' collects questions, rumours and feedback from multiple sources – including Talkwalker, a social listening tool that monitors what people say about COVID-19 on social media. This creates a real-time picture of people's beliefs and alerts the government to problems; for example, many reported that vaccination centres were too far to travel (IFRC, 2022c).

5. **Inclusive and diverse.** Support should be prioritized to the most vulnerable, marginalized or at-risk groups. Community engagement and accountability approaches must be accessible, culturally appropriate, gender-sensitive and equitably accessible to people with disabilities. As many groups as possible should be represented in local decision making. For example, in the UK, the British Red Cross has a Refugee Support Team that works closely with people seeking asylum. Many of these people faced barriers in accessing health services, so the British Red Cross worked to address this. It produced informational materials in 20 languages, working with people with lived experience to ensure they were relevant. It also supported pop-up vaccination clinics for people outside the health system, for example by raising awareness in advance and helping people book appointments (IFRC, 2022d).

BOX 2.6 / CASE STUDY
IT IS CRUCIAL TO ASK PEOPLE WHAT THEY REALLY NEED

When the COVID-19 outbreak began, the Cameroon Red Cross rapidly began collecting community feedback. Their aim was to find out people's perceptions of the new coronavirus, and what they needed. They collected information through a range of channels, from a hotline and social media sites to focus group discussions and volunteers delivering messages in communities (Cameroon Red Cross, 2021).

The Cameroon Red Cross analysed the feedback in real time to guide its response to COVID-19. They focused on five of the country's most affected regions. The feedback helped them to craft compelling and understandable messages, and to identify the most vulnerable communities.

Based on the surveys, the Cameroon Red Cross translated its messages into over 20 local languages, ensuring that the majority of the affected populations could understand them. They also learned that some people did not believe COVID-19 was real, and devised messages to address this.

The surveys also helped to identify communities that lacked access to safe water. This was crucial because hand washing was one of the main actions people were advised to take to protect themselves – yet many could not do so. Using a geographical analysis of the survey responses, the Cameroon Red Cross identified communities that urgently needed new water points and water storage equipment, and provided these.

Finally, the surveys revealed that many people perceived COVID-19 to be a disease that only affected the elderly. As a result, there was a risk that young people would not adopt safe practices – putting both themselves and their communities in danger. In response, the Cameroon Red Cross worked with a young influencer to engage with younger people about the risks they faced and how to wear a face mask correctly. They also helped to produce talk shows on community radio, as previous analyses had shown these were widely trusted.

KEY RECOMMENDATIONS

Integrate recognized and trained local actors into health systems. This can be done formally or through more collaborative arrangements. Local actors, including community health workers and volunteers, can play key roles in primary healthcare and health systems strengthening at the local level. They can provide certain essential services like community-based preparedness and surveillance, routine vaccinations and task shifting. Depending on their qualifications, some can provide pre-hospital care. Local actors can also act as bridges between health systems and the communities they serve. But in order to do this, they must be integrated into health policy frameworks. Depending on the country's laws, there are a range of options to do this. Health systems must coordinate with local actors, and sustained support (via training, supervision, financing, coordination and legal facilities) must be provided for their activities.

Include local actors in national health emergency preparedness plans for prevention, early action and response. Recognized local actors, whether paid or volunteer, can be thought of as the bridge between national authorities and communities. When adequately trained, supervised and supported, they can provide a wide range of services to help relieve overburdened health systems and increase access to health countermeasures for the hardest to reach, as shown in this report. However, they cannot do this without support and legal facilities to carry out these tasks. The latter may include, as appropriate, prioritization in the distribution of PPE and pandemic response products, exemptions (as appropriate) from restrictions on the movement of goods and personnel, access to physical and mental health services, access to data and information, and so on.

Work with communities to design, implement and monitor health emergency preparedness plans for prevention, early action and response. Community knowledge and buy-in are critical to our ability to design, implement and monitor public health emergency preparedness and response plans. Tangible examples of ways to ensure this include: joint risk and vulnerability assessments, co-design of local and national preparedness measures, joint preparedness exercises, monitoring and evaluation, training for prevention, early detection and response programmes, and regular revision of procedures in view of new threats or lessons learned.

Develop meaningful two-way dialogues with communities about their health needs and concerns. The most effective health interventions are those developed in collaboration with the communities that need them. This means engaging regularly with all communities, especially those that are vulnerable or marginalized. Practitioners must determine what those communities need and want, what their capacities and beliefs are, and their vulnerabilities. Furthermore, it is essential to collect and analyse feedback from those communities, both to develop better health systems and to create lasting relationships of trust. Community partnerships need joint accountability and so must be oriented by evidence. This helps to foster the community trust, civil responsibility and public solidarity needed for health emergency and disaster readiness. Social-behavioural data and community perspectives must drive our work, and community-centred action must become the norm.

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Colombia 2021 *The Colombian Red Cross, in response to the humanitarian needs of transcontinental migrants, developed actions with a first response approach for the municipality of Necoclí, Antioquía. It is in permanent coordination with territorial entities, in turn guaranteeing situational monitoring from the beginning of the migratory route. The Colombian Red Cross, with its Movement partners and the support of the German Red Cross and ECHO, continues to respond in a timely and effective manner to the needs of migrants throughout the national territory.*
© ECHO / German Red Cross

3 GLOBAL SOLIDARITY

Enables greater access to pandemic products and services

Contents

INTRODUCTION

The COVID-19 pandemic is a global emergency that requires global solidarity. In some areas, such as scientific research into the coronavirus, this international cooperation was forthcoming and resulted in unprecedented advances. But many facets of the pandemic response were hampered by a lack of solidarity. They include the sharing and distribution of personal protective equipment, vaccines, diagnostics, oxygen and other forms of treatment for serious cases. This was exemplified by the inequity in vaccine distribution: some countries were giving their citizens booster doses in 2021, while people of other nations did not receive their first doses until 2022, after thousands of preventable deaths and the unnecessary destruction of millions of expiring, unused doses. **It is critical that the international community reforms its processes to enable a far more equitable response in future crises.** Reform is needed on both the supply side – so that all countries promptly receive adequate supplies – and in the systems for ensuring the vaccines and other essentials reach the people who need them equitably. Alongside this, humanitarian funding remains in need of significant reform: in particular by increasing flexibility, decreasing earmarking, and improving support for locally led responses.

Definitions

Pandemic response products: Tangible products such as personal protective equipment (PPE), vaccines, diagnostics, oxygen and other forms of treatment for serious cases. Access to pandemic response products depends, in part, on the supply and distribution of these products globally, but also on strong domestic health services and information, including at the community level.

3.1 WHAT WE SAW
SUCCESSES AND FAILURES OF GLOBAL SOLIDARITY

COVID-19 caused a truly global crisis. Every single nation and territory has been impacted. Such an unanticipated emergency demanded exceptional measures. In particular, it demanded exceptional levels of solidarity. Ideally, the solidarity mechanisms would have been established prior to the pandemic.

There have been some positive initiatives that demonstrated impressive collaboration (see Box 3.1). One such case was research into the SARS-CoV-2 virus and the disease it causes – or at least, its basic presentation and symptoms. Over the course of the pandemic research has been a triumph of international collaboration, in which data was freely shared between countries on an unprecedented scale. A meta-analysis released in August 2022 identified 346,267 studies involving researchers from 189 countries. It characterized these numbers as the result of an "overwhelming global scientific reaction" (Cao and Hou, 2022). The genome of the SARS-CoV-2 virus was first sequenced by Chinese researchers and released online on 10 January 2020 (Zhang et al, 2020). A detailed description of the virus followed in a scientific journal just 14 days later (Zhu et al, 2020). As the virus spread around the world, dozens of other institutions similarly shared genetic and other data. This flood of publicly available information helped to drive the rapid development of vaccines and other treatments.

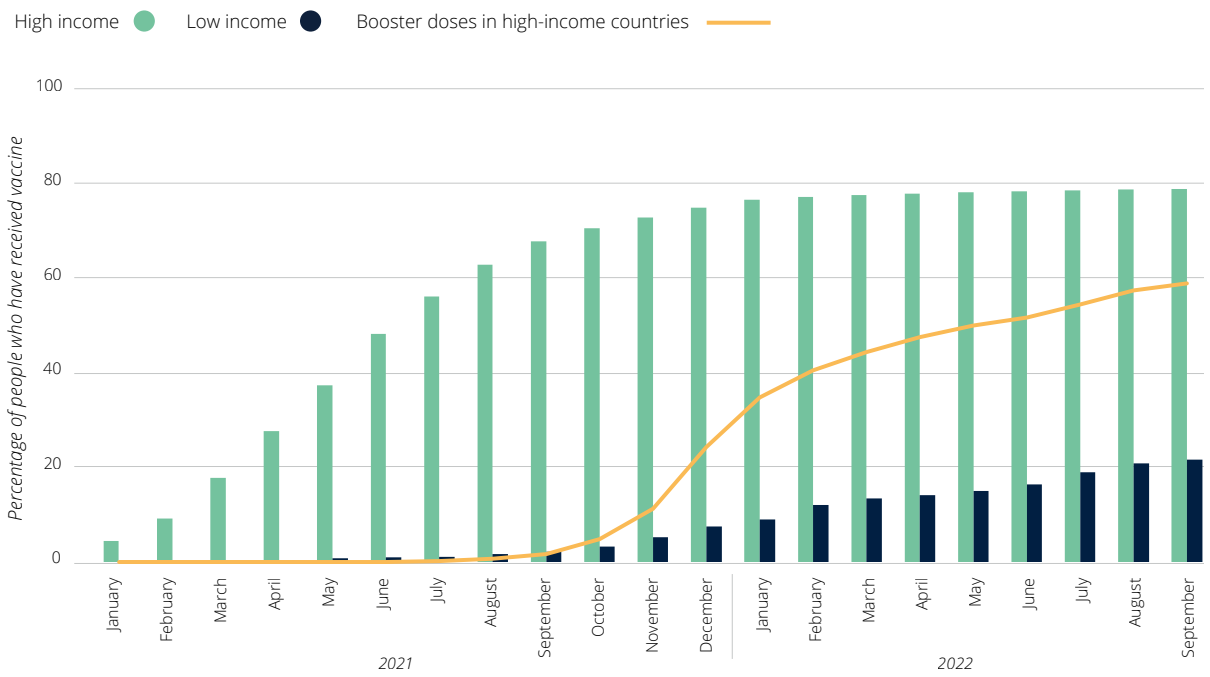
Alongside this scientific effort was an international initiative to achieve **equitable** access to COVID-19 health technologies. The Access to COVID-19 Tools Accelerator (ACT-A) was launched in April 2020 by the G20 group of countries. Its stated aim was "to ensure all people have access to all the tools to defeat COVID-19" (WHO, 2020). To do so, ACT-A brought together governments, scientists, businesses, civil society, philanthropists and global health organizations (WHO, no date c). It focused on four areas: diagnostics, therapeutics, vaccines and health systems (WHO ACT-A, 2020).

ACT-A has had significant successes and notable failures. By the end of March 2022, it had delivered over 167.8 million tests, awarded US$184 million to countries for therapeutics and other hospital equipment, and delivered US$463 million of personal protective equipment (PPE) (WHO ACT-A, 2022). An independent report published in October 2021 found that, despite significant problems, ACT-A had "played an additive and important role in accelerating the development and delivery of critical tools and has responded to country needs" (WHO ACT-A, 2021). More recently, in October 2022 the World Health Organization (WHO) released an external evaluation of ACT-A (WHO and Open Consultants, 2022). It found that ACT-A enabled "an unprecedented level of coordination and collaboration between global health agencies", which accelerated the response to the pandemic. However, it also found that ACT-A's coordination model was too "informal" and should not be replicated in a future pandemic. There was insufficient transparency and accountability, and the governments of low-income countries did not have enough representation. Finally, ACT-A was always under-funded, despite raising US$23.5 billion, and struggled to disburse funds quickly. Such problems were arguably the inevitable result of ACT-A being formed during the pandemic, instead of such mechanisms being developed in advance.

There were already efforts to improve access to vaccines even before the pandemic. Notably, the Coalition for Epidemic Preparedness Innovations (CEPI) was founded in 2017 by a consortium of charities and governments. The aim was to establish a global fund for vaccine development to accelerate this process. CEPI was initially focused on six diseases, including Ebola and Zika. However, in January 2020 CEPI also began funding urgent development of COVID-19 vaccines (CEPI, 2020). CEPI has received some criticism for a lack of transparency in its agreements with vaccine developers (Usher, 2021). Nevertheless, its programme helped to ensure that vaccines were developed, tested and approved quickly – saving millions of lives in certain countries (CEPI, 2022).

These are some of the success stories. However, the pandemic has also exposed enormous failures in global solidarity. **While the development of vaccines was a great success of international cooperation, actually producing them quickly, distributing them equitably and delivering them to the communities that needed them has been a calamity.** As of 7 November 2022, according to the WHO, just 68% of the world's population has received a dose of COVID-19 vaccine to date (WHO, no date d). The WHO's original target, since revised (WHO Immunization, Vaccines and Biologicals, 2021b), was for 70% of the population to be fully vaccinated, meaning at least two doses, by mid-2022 (WHO Immunization, Vaccines and Biologicals, 2021a).

Figure 3.1: People in low-income countries received vaccines months after people in high-income countries



Source: UNICEF, World Bank

Shockingly, as of 2 November 2022, only 26% of those living in low-income countries have been vaccinated with a single dose (UNDP Data Futures Platform, no date). A report from data analytics resource Pandem-ic in October 2022 highlights the international inequalities (Schellekens, 2022). It shows that, in absolute terms, unvaccinated people are disproportionately found in Africa, South Asia and Southeast Asia – in low- and low-middle-income countries. Similarly, as late as June 2022, almost one billion people in Asia and the Pacific had not had a single dose of COVID-19 vaccine (IFRC, 2022a). Vaccination rates are also very low in Africa, with 24% of the population fully vaccinated and a further 6% having received one dose (Mathieu et al, no date). For instance, as of 2 November 2022 just 5.8% of the population of the Democratic Republic of the Congo had received at least one dose and 3.8% were fully vaccinated (COVID19 Vaccine Tracker, no date).

How has this enormous injustice occurred? The answer is complex, but a key contributor is a failure of solidarity: a combination of economic self-interest, lack of political courage and failure to take the pandemic's impacts sufficiently seriously. Another key contributor is lack of preparedness. Many of the mechanisms mentioned above were created only shortly before or well into the pandemic. This did not leave time for the creators to fully anticipate or address the extremely complex processes involved in the development, production, distribution and administration of pandemic response products like vaccines, therapeutics and diagnostics. In section 3.2 we explore what happened in more detail.

Madagascar 2022 *In Madagascar, as of September 2022, a low rate of vaccine coverage has been achieved with 5.4% of the total Malagasy population vaccinated. © MangaFeo / IFRC*

BOX 3.1 / CASE STUDY
VACCINE SOLIDARITY FROM THE RED CROSS SOCIETY OF CHINA

The invention of the first COVID-19 vaccines in 2020 provided hope for the world. However, many countries were unable to provide vaccines for the whole of their population. In response, members of the International Red Cross and Red Crescent Movement supported each other to deliver vaccines to those in need.

The Red Cross Society of China (RCSC) worked actively to provide vaccines to other National Societies and countries. Some were donated by RCSC itself; others came from donors but were delivered by RCSC. In total, RCSC has provided 2.1 million doses of the COVID-19 vaccine to other nations.

Table 3.1: Donations of vaccine doses by the Red Cross Society of China (RCSC) to other countries, 2021–2022

Date	Number of vaccine doses	Recipient country
June 2021	100,000	Ethiopia (Xinhua, 2021a)
July 2021	150,000	Syrian Arab Republic (Xinhua, 2021b)
July 2021	50,000	Lebanon (RCSC, 2021a)
August 2021	100,000	Cambodia (Xinhua, 2021c)
August 2021	100,000	Thailand (Thai Red Cross Society, 2021)
September 2021	200,000	Indonesia (Embassy of the People's Republic of China in the Republic of Indonesia, 2021)
September 2021	100,000	Nepal (RCSC, 2021b)
September 2021	100,000	Georgia (RCSC, 2021c)
October 2021	200,000	Bangladesh (RCSC, 2021d)
November 2021	200,000	Pakistan (Xiaoyu, 2021)
November 2021	100,000	Laos (RCSC, 2021e)
December 2021	200,000	Myanmar (RCSC, 2021f)
October 2022	500,000	Nicaragua (RCSC, 2022)

3.2 WHAT WE LEARNED OUR GLOBAL SYSTEMS OFTEN REDUCE SOLIDARITY

Our global institutions were not ready for COVID-19 – despite multiple initiatives directed at epidemic and pandemic preparedness, and despite the lessons learned from multiple previous outbreaks in recent decades like H1N1 influenza and Zika. Many known vulnerabilities were left unaddressed (IPPPR, 2021). Hard political choices needed to be made before the pandemic, but were not (Sachs et al, 2022). As a result, systems that should have been coordinated across the globe were disjointed and produced chaotic results.

3.2.1 Why we did not see equitable sharing of pandemic response products

Many key pandemic response products, including medicines and vaccines, were concentrated in rich countries. For example, the drug remdesivir, which was for several months the only one licensed to treat COVID-19, was bought up in large quantities by wealthy nations (Cheng and Marchione, 2020). This should not have come as a surprise to anyone: inequitable access to vaccines is a long-standing problem (Hinman and McKinlay, 2015). Similarly, a WHO report from before the pandemic highlighted that nearly 2 billion people had no access to basic medicines (WHO, 2017).

Early in the pandemic, months before COVID-19 vaccines were demonstrated to work, initiatives were launched to achieve equitable global distribution (WHO, no date b). Unfortunately, these initiatives have had only partial success.

One crucial vaccine equity project is COVID-19 Vaccines Global Access (COVAX) (WHO, no date a). It was created as part of ACT-A in early 2020; CEPI, WHO and United Nations Children's Fund (UNICEF) are key partners. Another leader of COVAX is GAVI, the Vaccine Alliance: a public–private partnership focused on vaccine access in poor countries (GAVI, no date a). COVAX set out to purchase doses of vaccine and distribute them to countries that would otherwise struggle to afford them. There was also an additional facet. National vaccination programmes often fail to reach people in humanitarian crises, so COVAX included a 'Humanitarian Buffer' that can secure up to 5% of its vaccine doses for "populations of concern" (GAVI, 2021a).

COVAX began distributing vaccines in February 2021 (BBC News, 2021). As of August 2022, it had delivered 1.6 billion doses to 146 countries. This is a significant number, but it masks multiple difficulties with both the timeliness of deliveries to countries and getting the vaccines into people's arms once they arrive.

The precise difficulties have changed over time. In 2021, COVAX struggled to obtain vaccines in sufficient doses. This was partly because governments began working with manufacturers to secure vaccines even before it was created. Many countries also did not allow flights in or out. However, in 2022 supply was

no longer a problem. Rather, method of delivery, timing of delivery and in-country vaccination capacity were issues. For instance, there were major difficulties addressing in-country logistics, vaccine distribution into communities, cold chain management, and country-specific messaging to encourage vaccine uptake and reduce vaccine hesitancy. Unless these problems are addressed, they will bedevil future vaccine distribution efforts. Alongside all this, the 'Humanitarian Buffer' – the mechanism that addressed vulnerable and marginalized populations that governments did not have the capacity to vaccinate quickly themselves – also struggled. By September 2021, not a single dose had been distributed (Bentley and Zerie, 2021). Even once vaccines did start moving, humanitarians reported that the buffer system was "opaque" and "unwieldy", leading to "consuming contractual wrangling" and months-long delays (MSF, 2022a).

By 2022, the situation looked very different (Paton, 2022). Since December 2021, vaccines have been shipped in significant quantities to low- and middle-income countries (GAVI, no date b). By February 2022, supply had outstripped demand for the first time (Guarascio and Rigby, 2022). Manufacturers struggled to sell their vaccines, and COVAX struggled to distribute purchased doses (Braithwaite, 2022). Some countries began turning down certain shipments, particularly if the vaccines had a short shelf-life that required implementing rapid mass vaccination campaigns and made distribution challenging (Dunleavy, 2022). Overstretched health systems that struggle to receive shipments of an ordinary size were (and still are) struggling to cope with huge quantities of vaccines being dumped on them. They would have been better able to use staggered shipments delivered over many months.

The bitter irony of this situation is that the doses arguably arrived too late. By the time countries received them, many people had already had COVID-19, and there was a popular but incorrect perception in many countries that the pandemic was over. As a result, the increased shipments coincided with a decrease in people's perceived risk from COVID-19. Furthermore, the late arrival was itself a deterrent; for example, some people had lost interest ('pandemic fatigue') or were suspicious of late-arriving vaccines. This has led to reduced demand for the vaccines, whereas if the doses had arrived in 2021 it is likely demand would have been higher (WHO, 2022a).

IFRC attempted to mitigate some of these problems by attempting to work with the COVAX Humanitarian Buffer and by sourcing vaccines directly. However, both attempts proved largely unsuccessful.

However, vaccine supply is far from the only problem. Getting vaccines into a country is one thing. It is also necessary to transport them within-country to the communities that need them, organize vaccination drives, and persuade people of the vaccines' merits – sometimes in the face of vaccine hesitancy. Only if this entire logistical system works do the doses end up in people's arms (Box 3.2). Unfortunately, there has been a lack of operational cost funding available to support this on-the-ground implementation (IAVG, 2021). Very little of COVAX's money was available on a flexible basis to organizations like NGOs that were trying to deliver vaccines within-country (WHO, 2022b).

Delivering vaccines was always going to be a challenge, especially in countries with fragile health systems. It is difficult to maintain a cold chain to preserve the vaccines, difficult to get access to last-mile communities, and difficult to find enough trained personnel to administer the vaccines. There is also a considerable community engagement and accountability challenge to overcome vaccine hesitancy. Unfortunately, the near-total lack of support for in-country logistics has meant that, in many countries, it has barely been possible to even attempt to surmount these challenges. The August 2022 report *Mapping COVID-19 Access*

Gaps looked at 14 countries and territories with low vaccination rates, and it found multiple reasons for low uptake. They include (but are not limited to): "proximity to vaccination centres and distrust of government (Democratic Republic of the Congo and Haiti), insecurity and violence (Haiti, Nigeria), continuing issues with predictability of supply, insufficient workforce to reach nomadic populations (Somalia), and suspicion due to legitimate concerns from historical memory of experimentation on Black bodies by white colonisers" (ITPC, 2022).

Finally, one problem has loomed over all phases of the global vaccine rollout. That is the question of indemnification and liability. The manufacturers of the COVID-19 vaccines initially couldn't purchase insurance for their products as the level of risk was too high. Instead, governments agreed to carry much of the risk. However, limited provisions were made for actors. COVAX established a No Fault Compensation Programme, which protected actors by offering compensation to anyone harmed by a vaccine delivered via COVAX (GAVI, 2021b), but this expired very rapidly. As a result, the potential legal risks were passed on to organizations distributing the vaccines. In theory, anyone who became ill after having the vaccine could pursue legal action against those organizations – potentially bankrupting them. This risk led many governments and organizations to refrain from distributing COVID-19 vaccines (Tharakan and Hart, 2021).

There is now a risk that this exceptional situation will ossify into a long-term problem. At this point, several vaccines have been widely approved and tests have shown them to be both effective and without major risk. Nevertheless, most manufacturers have not resumed their purchase of insurance. This potentially sets an alarming precedent for other vaccines – COVID-19-related or otherwise.

Somalia 2021 *Amram Ismail, a 24-year-old pregnant mother of five, washes her hands as part of the COVID-19 protocols, prior to receiving antenatal care at the Somali Red Crescent Clinic. The IFRC is supporting the Somali Red Crescent in the implementation of an integrated health care programme – which includes mobile clinics and nutrition programmes and COVID-19 response. © IFRC Africa*

BOX 3.2 / CASE STUDY
DELIVERING COVID-19 VACCINES IN IRAN

Local actors have key roles to play in distributing vaccines within countries, especially to vulnerable and last-mile communities.

The Iranian Red Crescent Society is the only humanitarian organization in the country granted permission to facilitate imports of COVID-19 vaccines. It has managed to secure the import of more than 120 million COVID-19 vaccine shots (IFRC, no date).

The Iranian Red Crescent Society is running 10 field hospitals and 173 immunization centres launched in conjunction with Iran's Ministry of Health. All these centres are involved in COVID-19 vaccination efforts. Crucially, The Iranian Red Crescent Society has been mandated to facilitate vaccinations of three to four million refugees in the country (subject to vaccine availability).

Iran 2021 *The Iranian Red Crescent has mobilized thousands of volunteers for the coronavirus response and managed to secure the import of more than 120 million COVID-19 vaccine shots to Iran. The Red Crescent is the only humanitarian organization in the country granted permission to facilitate the coronavirus vaccine imports. © Iranian Red Crescent*

3.2.2 Faults in humanitarian funding

Humanitarian funding is one of the key mechanisms of global solidarity. It supports those who are most in need and have the least financial capacity to manage risks and impact. During the COVID-19 pandemic, global humanitarian appeals have raised enormous sums of money and significantly mitigated the impacts of the crisis. But the quantities raised were nowhere near enough. Nor did the money always find its way to those most in need. In this section we explore the faults in the humanitarian financing system, which affect the global response to disease outbreaks and other crises. Put simply, there is not enough money, and for multiple reasons what there is does not always reach those who need it most.

On sheer scale, humanitarian donations for COVID-19 were enormous (IRC and Development Initiatives, 2021). In 2020, donors committed or paid US$6.8 billion to the COVID-19 response (UN OCHA, no date a). This included US$3.8 billion to the UN's Global Humanitarian Response Plan (Development Initiatives, 2022a). From 2021 onwards the UN has not run a specific COVID-19 appeal, but humanitarian funding can still be marked to the COVID-19 emergency. UN data indicates US$1.5 billion was marked for COVID-19 in 2021, while 2022 has seen US$540.1 million as of 7 November (UN OCHA, no date a). However, as of October 2022, IFRC alone has raised over CHF 399 million for its COVID-19 appeal, which is closing at the end of 2022. Meanwhile, National Societies raised CHF 2.4 billion through their governments or individual gifts (IFRC GO, no date).

However, these sums were inadequate. In 2020, donations only covered 40% of the Global Humanitarian Response Plan's funding requirements (Development Initiatives, 2022a). In other words, the pandemic response received less than half the money it needed. A particularly extreme example was Nepal, which ran a national COVID-19 response appeal in 2021. It received only US$7.4 million of a target of US$83.6 million – meaning 91.2% of the requirements were unmet (UN OCHA, no date b).

This pattern is replicated across the humanitarian sphere and has been for many years. According to the *Global Humanitarian Assistance Report 2022*, global humanitarian funding has plateaued since 2018. In 2021, US$31.3 billion was donated globally, compared to US$30.5 billion or US$30.6 billion in each of the previous three years. This reveals that the COVID-19 pandemic did not drive an increase in overall humanitarian donations. Instead, some donations simply shifted towards COVID-19, neglecting other needs. The result is that humanitarian needs were not being met before the pandemic, and are still not being met. For UN-coordinated appeals, the percentage of total requirements met has fluctuated between 51% and 65% since 2012, never even approaching 100%. In 2021 just 53% of requirements were met (Development Initiatives, 2022b). Furthermore, increasing numbers of people are facing protracted crises, meaning their countries have had five or more consecutive years of UN-coordinated appeals. According to the *Global Humanitarian Assistance Report* 2022, in 2021, the number of countries experiencing a protracted crisis rose to 36, from 34 in 2020. These countries accounted for 74% of all people in need (Development Initiatives, 2022b).

Alongside this is the matter of where the money goes. There is a need for fair and equitable distribution of resources (Emanuel et al, 2020). It should be noted that this is far from trivial because there are multiple ethical values in play (O'Sullivan et al, 2022). Nevertheless, humanitarian money and efforts are not optimally distributed. Disproportionate amounts go to certain countries and regions, and to certain crises or types of crisis. As a result, those most in need often go wanting. In 2021 10 countries received 60% of country-allocable international humanitarian assistance. Yemen was the largest recipient, receiving

US$2.7 billion or 12% of the total (Development Initiatives, 2022b). There is no question that Yemen's needs are severe – but other countries and regions also require significant assistance. There is evidence of regional favouritism in the allocation of aid (Bommer et al, 2022), and of ethnic favouritism (Bommer et al, 2018). Further, some conflict zones have been neglected (Narang, 2016). There is also evidence of aid being diverted to highly prominent sudden-onset crises, as appears to have happened in the case of Ukraine (Development Initiatives, 2022c). While funding choices are always political, it is important to de-politicize humanitarian aid as much as possible.

There is a need for greater localization of funding. Direct funding of local actors is more cost effective. It links funding decisions more closely to those who know the context best. Providing money directly to **local actors** and national actors gives them more resources and flexibility (see Chapter 2). Direct funding from donors also enables local actors to better influence donor funding priorities. Local actors also get greater input into programme design and delivery. Furthermore, they are more likely to be able to access overhead funding than if they received funding through an international intermediary organization.

IFRC's own global appeal for COVID-19 innovated by localizing. Of the money raised by the Secretariat, 50% had been transferred directly to National Societies as of September 2022.[1] Similarly, as of September 2022, 70% of funds raised by the IFRC Membership was spent domestically. However, the wider humanitarian system is struggling to achieve such localization. According to the *Global Humanitarian Assistance Report 2022*, half as much funding was provided directly to local and national actors in 2021 (US$302 million) than the previous year (US$603 million). Local and national funding had increased in 2020, largely driven by the COVID-19 response. However, this was mainly due to fluctuations in funding to national governments rather than civil society, and in any case this trend quickly went into reverse (Development Initiatives, 2022b).

The IFRC's COVID-19 appeal also succeeded in reducing earmarking – at least at first. Donors often insist that their money be spent on specific regions or projects, and this earmarking impairs humanitarian responses by reducing flexibility. COVID-19 exemplified this problem because case numbers peaked at different times in different places. At the beginning of the pandemic, the IFRC Secretariat tried to encourage unearmarked donations and did not accept earmarking at the country level. Many donors were willing to oblige, and in subsequent evaluations external donors reported they were satisfied with IFRC's handling of the appeal. However, by the third quarter of 2020 IFRC was struggling to attract unearmarked funding and was pressured into accepting more targeted funding. This had a detrimental impact on the response. Some regions and countries suffered funding shortfalls, and National Societies had to scale back their plans. As a consequence, what was a highly nimble and effective response has been partly constrained by donors earmarking their money (IFRC, 2022b). A similar pattern was seen globally. In March 2020, the Inter-Agency Standing Committee released guidance requesting simpler and more flexible funding (IASC, 2020). The *Global Humanitarian Assistance Report 2022* later found that nine UN agencies got more unearmarked funding in 2020, but less in 2021 (Development Initiatives, 2022b).

In summary, humanitarian funding has a number of long-running problems, which were highlighted by the COVID-19 pandemic. Levels of funding are not sufficient to meet the global need. Donations that are made do not always go to the communities most in need, partly because of earmarking by donors. Finally, funding is insufficiently localized.

1 Approximately a further 30% was spent on global and regional procurement of in-kind goods, which were then sent to countries for distribution by National Societies.

3.2.3 Consequences of solidarity failure

The lack of global solidarity was not only a moral and humanitarian failure; it was one of the factors that enabled the SARS-CoV-2 virus to spread faster and further, and to infect and kill more people. One study estimated, based solely on vaccine provisions, that vaccine hoarding has cost more than a million lives (Ledford, 2022). This in turn created more opportunities for the virus to mutate and for those mutations to spread (Otto et al 2021). This increased the chances of the virus evolving into newer variants like omicron, which is both highly infectious and partially able to escape the vaccines (Callaway, 2021).

The result was a significant impact on health, livelihoods, economies and society. Ultimately, we cannot measure the final cost, as the virus continues to spread and evolve. It should be a truism that nobody is safe until everybody is safe. The failures of the international community mean that even now, over two years into the COVID-19 pandemic, nobody is safe. We cannot stop pushing for global solidarity: the COVID-19 pandemic is not over, and even if it was the risk of global health crises shows no sign of diminishing.

Spain 2020 *Volunteers caring and transporting people with Covid-19 Sollana © Mikel Poncela*

3.3 WHAT WE NEED TO DO PROMOTE GLOBAL SOLIDARITY AT THE INSTITUTIONAL LEVEL

If our global institutions and systems are preventing true global solidarity, even in a vast emergency like the COVID-19 pandemic, our global institutions and systems need to be reformed. In this section we explore some promising avenues: first for ensuring more equitable access to disease outbreak essentials like vaccines, and second for improving the distribution of humanitarian funding.

3.3.1 Ensuring equitable access to vaccines and other outbreak essentials

The solutions here differ for pre-existing products like face masks and existing medicines and novel ones like newly developed vaccines.

For existing products, a natural buffer against potential shortages is the increasing of stockpiles for those products that can predictably serve in many types of outbreaks. Greater reliability can be achieved by expanding and maintaining multiple stockpiles, in multiple countries and regions. Stockpiles must be regularly updated, as many pandemic response products have expiration dates. A key challenge is identifying how wide an array of products to stockpile. This entails the need for more flexible solutions at the production level.

Similarly, it is dangerous to rely on a handful of countries or factories to produce all the world's supplies. Redundancy may not be maximally economically efficient, but it creates a more resilient system. It would be wise to boost regional or even domestic production of health technologies. Instead of a few facilities, mostly in the developed world, factories on every continent could in theory manufacture health essentials for **local and/or regional** use. Many countries want to do this. Indeed, the African Union has a goal of producing 60% of Africa's routine vaccinations locally by 2040 (Africa CDC, 2021). Several steps have already been taken in this direction. Pharmaceutical company BioNTech – co-developer with Pfizer of the first approved mRNA COVID-19 vaccine – has begun constructing a vaccine production facility in Kigali, Rwanda (Parrett, 2022). In January 2022, South Africa opened a new vaccine manufacturing plant in Cape Town (Arthur, 2022). Also in South Africa, Aspen Pharmacare has signed a deal with the Serum Institute of India to manufacture and sell four vaccines in Africa (Mukherjee, 2022). Such localized production should improve **equity** by ensuring fairer access to health technologies.

Supply problems could also be mitigated if governments and international organizations became ready for faster decision making and action to obtain and disseminate key materials at scale. This would require investing in improved procurement processes. However, it is possible that such global inequities are inevitable, so long as the production of pandemic response products is primarily determined by market forces and no enforceable global agreement exists by which states agree to share access when supplies are squeezed.

Indonesia 2022 *A 5.6 earthquake hit Cianjur, a district in West Java. Palang Merah Indonesia (PMI, Indonesian Red Cross Society) coordinated with the government and humanitarian agencies. In total, PMI mobilized personnel conducting assessment, evacuation, first aid, and established temporary shelters. Resources mobilized by PMI included 11 water tank trucks. © Garry Lotulung*

> **Getting vaccines into a country is one thing. It is also necessary to transport them within the country to the communities that need them, organize vaccination drives, and persuade people of the vaccines' merits.**

Another challenge to adequate production was that companies were prevented from production due to intellectual property (IP) laws and the exorbitant cost of IP purchases. IP rights can be waived on vaccines, allowing third party companies to manufacture them. Consequently, at the World Trade Organization (WTO) in October 2020, India and South Africa proposed that pharmaceutical companies be forced to waive their rights to COVID-19 health technologies. Currently, patented medicines cannot be freely manufactured because states have committed to protect relevant IP rights under the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement). The proposed waiver would have allowed states to more freely permit the manufacture and sale of patented COVID-19 health technologies, without sanctions. Most WTO member countries supported this, but decisions must be unanimous and several members opposed it (Pilkington et al, 2022). A limited waiver was eventually agreed in June 2022, but it only applies to certain countries and only to COVID-19 vaccines – other medical essentials are excluded (MSF, 2022b). However, past experience suggests progress can be made on these IP issues (Adesina et al, 2013). For instance, there have been successful initiatives to improve both accessibility and pricing of HIV therapeutics (D'Angelo et al, 2021).

A further step will be to broaden the range of organizations that can distribute or administer pandemic response products, so long as it is done with the government's approval. If organizations, like National Societies, are able to better support governments to administer vaccines at the national level, following government-approved mandates and approval processes and using national storage facilities, vaccine rollouts would likely be improved in two crucial ways. First, humanitarian organizations can help organize campaigns to reach last-mile communities that governments struggle to reach thereby alleviating the pressure on governments to administer all doses within relatively short timeframes (Box 3.3). Success in the aforementioned steps should enable all countries and relevant organizations to obtain health essentials like vaccines. However, there are additional requirements. Countries should be told well in advance that shipments are coming. Deliveries should occur at the time promised to avoid the many problems caused by delays. Shipments should only include products accepted by the receiving country. Furthermore, products should be tailored to the receiving country; for example, vaccines that require a complicated cold chain are less suitable for countries with minimal infrastructure.

Just as importantly, it is necessary to ensure that the products are used; for example, that the vaccines are actually used to vaccinate people, and they do not simply sit on an airport tarmac until they decay. For this, there is a need for considerable in-country logistics support. This includes transportation, cold chain and trained personnel to administer the vaccines. Equally essentially, there must be coordinated risk communication and community engagement programmes to advise people on the benefits of the vaccines, find out any concerns they have about them, and assist them in registering and obtaining the vaccines. A significant tranche of all future funding for health essentials must be devoted to these logistical and communication challenges (DeLand, 2022). For instance, in Iraq the International Committee of the Red Cross (ICRC) has supported almost all the Ministry of Health's vaccination centres: it provides financial incentives to staff, as well as refrigerators, laptops and PPE. Meanwhile, in Mozambique the ICRC has provided fuel to transport vaccines, healthcare teams, and Mozambiquan Red Cross volunteer facilities, including in Cabo Delgado where over 800,000 people have been displaced by armed conflict in the past few years (ICRC, 2022).

BOX 3.3 / CASE STUDY
COVID-19 VACCINATIONS FOR PRIORITY GROUPS IN LEBANON

In early 2021, Lebanon was struggling to contain COVID-19. January saw a surge, with around 5,500 daily confirmed cases (World Bank, 2021). The situation was further complicated by the aftermath of the Port of Beirut explosion in August 2020.

In response, the World Bank re-allocated US$34 million from an existing health resilience project to support vaccines. The project set out to provide vaccines for over 2 million people, beginning in February 2021. The rollout focused on priority groups including high-risk health workers, the over-65s, epidemiological and surveillance staff, and people with co-morbidities (World Bank, 2021).

The IFRC joined the project in February 2021 to perform oversight and supervision (IFRC, 2021). IFRC's role was to monitor multiple aspects of the rollout, from supply chain management tasks like temperature maintenance to service delivery at vaccination sites, eligibility of vaccine recipients, and capturing client perspectives and feedback.

Lebanon 2021 *Lebanese Red Cross personnel at a medical services tent provide support to affected communities after the Beirut Port Explosions in August 2020. © Lebanese Red Cross*

3.3.2 Fixing humanitarian funding

Many of the problems with the quality of humanitarian funding could be solved by implementing the pledges made in the Grand Bargain (IASC , no date). This agreement was launched at the 2016 World Humanitarian Summit in Istanbul, Türkiye. It initially involved 18 donor countries and 16 international aid organizations. It has since grown to 64 signatories and in 2019 covered around 84% of all donor humanitarian contributions (IASC, no date).

The Grand Bargain's aim was to improve the efficiency and effectiveness of international humanitarian aid. Donors made 51 commitments, including reducing national earmarking of funds and channelling 25% of international emergency funding as directly as possible to local or national organizations (IASC, 2016). In addition, the Grand Bargain requires a significant increase in multi-year funding. This would put humanitarian operations on a much more sustainable footing and enable far greater preparedness (see Chapter 1), community engagement (see Chapter 2) and data-driven methods (see Chapter 5). Finally, the Grand Bargain calls for greater cooperation between humanitarian and development actors, which have traditionally been siloed.

Unfortunately, while some progress has been made towards the Grand Bargain targets, the majority remain unmet. A 2021 independent review identified a number of examples. For instance, the proportion of funding that is multi-year and unearmarked has not increased since 2016, even though some donors have shifted towards such predictable and flexible forms of donation. Similarly, while there has been a normative shift towards localization, this has not yet resulted in major changes in funding availability (Metcalfe-Hough et al, 2021). A 2022 update found only limited progress on these issues, although it did note a shift towards greater transparency on funding data (Metcalfe-Hough et al, 2022).

In 2021, negotiations began for a revised set of mechanisms for cooperating around the Grand Bargain, or Grand Bargain 2.0 (Alexander, 2021). This was finalized at the end of the year and will run until 2023, after which there will be another stocktake. It was not yet clear at the time of writing if the signatories would agree to continue the initiative (IASC, 2021). Donors and other actors must meet the Grand Bargain's commitments before the initiative is considered finalized.

Finally, to meet the logistics challenges discussed in 3.3.1, it is necessary to bolster health capacities within countries. Doing so requires more predictable international humanitarian funding so that personnel and resources can be retained (IFRC, 2018).

KEY RECOMMENDATIONS

Enable regional production and distribution of all pandemic response products. Countries must be able to manufacture and distribute their own vaccines, PPE and other equipment. This regionalized approach will create redundancies, reducing the likelihood of shortages of the type seen during the COVID-19 pandemic and instead ensuring that far more communities receive the pandemic response products they need in future emergencies. Establishing such regionalized production requires an investment in human resources and training, as well as concerted engagement with the communities hosting the production facilities.

Create viable global distribution mechanisms for new pandemic response products like vaccines. Strong mechanisms, such as the International Coordinating Group, do exist but not for high-risk products. It is necessary to devise a new mechanism to ensure that vaccines and other pandemic response products reach the populations that need them – including those communities that governments are unable to cover. These mechanisms must enable pandemic response products to be distributed or administered by local and humanitarian organizations with oversight from governments. They must also include measures to avoid unbalanced and unsustainable legal risks for local actors and lower-middle-income countries, such as being held liable for the adverse effects of both newly developed and more proven pandemic response products. This can be achieved by ensuring manufacturers resume purchase of indemnification and liability insurance as soon as it is available (once a product is proven safe and effective).

Strengthen in-country capacity to get pandemic response products to communities. Provide support for logistics like transportation and cold chain, enabling the delivery of vaccines and other pandemic response products to last-mile communities. Complement this with effective community engagement and accountability programmes to maximize uptake of proven pandemic response products. Again, there is a need for additional investment in human resources to ensure vaccinators are trained and logistics are prepared ahead of time.

Reform humanitarian funding to make it more predictable, flexible and accessible to local actors. These commitments have already been made in the Grand Bargain and should be followed through. This will enable a more sustainable and equitable response to epidemics and other disasters, including greater preparedness. Greater accessibility of funding for local actors will also enable more community-driven actions.

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Ethiopia 2022 *In 2021 Boru was a beneficiary of an Ethiopian Red Cross Society multipurpose cash grant to support with food insecurity following the East Africa locust invasion. A joint assessment led by the Food and Agriculture Organization indicated that the invasion caused large crop losses and widespread destruction of vegetation and pastures. One million Ethiopians faced severe food insecurity as a direct result of the locust infestation. © Matthew Carter / IFRC*

SOCIO-ECONOMIC INEQUITIES

Strengthen social protection systems for communitites

Contents

INTRODUCTION

In the long run, communities and societies need to become more resilient to a range of hazards. This is partly a matter of developing infrastructure and policies specifically directed at hazards such as disease outbreaks, but that is not enough. The most resilient societies are those in which the great majority of the population is thriving. Such societies have fewer inequities; provide more people with full and productive employment, decent livelihoods and access to affordable healthcare; and exhibit a high degree of trust between people and institutions. To build resilient and thriving societies, countries need to improve all of their essential systems and services, not just those related to health but also others such as education, social protection, and water and sanitation. These are not only contributing factors to inequity but also critical enablers in reducing outbreak risks and impacts. In particular, **nations must expand and improve their social protection systems and remove legal and practical barriers preventing people from accessing services.**

Definitions

Social protection programmes: Help individuals and families, especially the poor and vulnerable, to cope with crises and shocks, find jobs, improve productivity, invest in the health and education of their children, and protect the aging population (World Bank, 2022a). They include direct services, such as shelter or employment programmes, as well as financial assistance, notably through cash transfers.

Drivers of disease are the conditions that help diseases spread. They include poor nutrition, unsanitary living conditions, poor hygiene, environmental factors and other conditions that are strongly associated with socioeconomic inequity.

4.1 WHAT WE SAW
THE PANDEMIC FLOURISHED ON SOCIOECONOMIC INEQUITIES

It was sometimes said that the COVID-19 pandemic was a great equaliser because everyone experienced it together, with even the most privileged feeling some of the effects. However, the truth is that the effects of the pandemic, especially the socioeconomic effects, were felt very differently across the world. Even more concerning is the fact that existing inequities were aggravated by the pandemic or by measures adopted to respond to it. In particular, the crisis had its most severe impacts on populations that were already left behind, for example those who were marginalized, forgotten, discriminated against or already affected by certain conditions of vulnerability, such as poverty, isolation and humanitarian crises. Alongside this, there have been severe impacts on government systems and services, such as social safety nets.

At the same time, the COVID virus's spread and mutation was partly driven by inequities.

The socioeconomic impacts of the COVID-19 pandemic and response are arguably as severe as the health consequences. In January 2022, the UN reported that ongoing waves of COVID-19 infections were one of the main factors slowing the global economic recovery (UN DESA, 2022). The report predicted that developing countries will take a greater long-term hit than wealthier nations, and that in Africa the absolute number of people living in poverty would rise through 2023.

Similarly, an IFRC report based on National Red Cross Red Crescent Societies' experience during COVID-19 found that millions of people were experiencing "reduced employment and loss of income; increased food insecurity; fewer protections against violence; and exacerbated mental health issues" (IFRC, 2021b). People who were already vulnerable were more severely impacted. For instance, people in insecure low-paid jobs were more likely to lose them altogether, especially in the informal economy. This held true even in countries where reported rates of COVID-19 were often low: government restrictions such as closure of non-essential businesses meant households lost income and suffered food insecurity in early 2020, while receiving little outside assistance (Furbush et al, 2021). In this way, COVID-19 amplified existing inequalities, heightened conditions of vulnerability, and undermined resilience and coping strategies.

4.1.1 Inequities worsened the spread and impact of the virus

One of the most apparent consequences of socioeconomic inequities was to accelerate the spread of the virus, and to unleash more severe impacts on those already most vulnerable (OECD, 2022).

For instance, in many countries women are still expected to perform their traditional gender roles such as caring for family members in the home. The Organization for Economic Cooperation and Development (OECD) estimates that women carry out up to 10 times as much care work as men (OECD, 2020). This put

them **at greater risk of contracting COVID-19** as they had more contact with infected family members (Connor et al, 2020). While death rates from COVID-19 have often been higher among men, middle-aged women are **more prone to the lingering symptoms dubbed 'long COVID'** (Torjesen, 2021).

Similarly, economically disadvantaged migrants and refugees have been at increased risk of contracting the coronavirus due to their living and working conditions (WHO, 2021). They often found themselves unable to comply with preventative measures to keep themselves safe. It is virtually impossible to self-isolate and maintain physical distance when you live or work in overcrowded conditions, including in dormitories or camp or camp-like settings.

Discriminated and excluded communities in many countries were more likely to experience the primary and secondary health impacts of COVID-19, and they often experienced more severe socioeconomic impacts (IDS, 2020). In the UK, virtually every minority ethnic group faced higher risks of death from COVID-19 than the country's white British population. Often this was because they were more likely to work in health and social care or to live in overcrowded areas – increasing their chances of exposure to the virus (Platt, 2021). In the US, Native Americans were significantly more likely to be hospitalized with the virus than white people – highlighting the risks faced by indigenous groups (Weeks, 2021).

Poverty was also a risk factor for COVID-19. In Mexico, a 2021 study revealed that the poorest population groups had lower rates of COVID-19 survival. The researchers compared nearly 250,000 COVID-19 patients diagnosed between February and July 2020. People living in municipalities with extreme poverty were at a 9% higher risk of dying compared to those living in non-poor municipalities (Millán-Guerrero et al, 2021). In Afghanistan, people often had no choice but to be outside in markets selling goods or trading them for food, risking infection (Glinski, 2020). Similarly, in England working-age adults living in the poorest areas were almost four times more likely to die than those living in wealthy areas. Two key factors were limited statutory sick pay and the difficulty of accessing isolation payments, both of which made it harder for poor people to self-isolate. At the same time, people living in deprived areas were significantly more likely to have pre-existing health conditions, making them more vulnerable (Mahase, 2021).

Some groups were also more physically vulnerable to COVID-19, and not enough was done to mitigate these risks. Persons with disabilities often have health conditions that make them more vulnerable to COVID-19. As a result, persons with disabilities died at higher rates. Older people are also more prone to severe health impacts from COVID-19 for similar reasons, and this can be exacerbated by social factors such as living conditions. Older people often live with family members in a crowded space, in contexts where other alternatives are unavailable, or in institutional settings like nursing or retirement homes. Both settings carry a greater risk of infection (WHO, no date). Alternatively, older people live alone, with reduced ability to call for help, reduced access to information, and less inclination to detect a problem (IFRC, 2020b).

4.1.2 Livelihoods were impacted and poverty worsened

The socioeconomic disruptions caused by the pandemic and response led to an increase in poverty, including extreme poverty. The number of people at risk of falling into poverty increased, and this seems to be a lasting effect because of the ongoing uncertainty about the global economy. One study estimated

that the number of people living in extreme poverty rose by 115 million in 2021, largely due to the pandemic (Mendez Ramos and Lara, 2022). The World Bank has forecast that global poverty rates will be just as high in 2022 as they were in 2019, meaning several years of progress have been lost (World Bank, 2022b).

People working in informal sectors and/or without contracts were significantly impacted. As a result, several groups faced especially large livelihood losses. For example, women's livelihoods were disproportionately harmed. A 2020 report by UN Women found that women's employment was 19% more at risk than men's during the pandemic. This was partly because they were more likely to work in the informal sector without a contract and partly because they often worked in services and tourism; both were severely affected by the restrictions governments imposed to control the disease. The UN estimated that the gender poverty gap will widen by 2030 as a result. While in 2021 there were 107 women in poverty for every 100 men, by 2030 that could rise to 110 (Azcona et al, 2020).

Migrants, including asylum seekers, refugees and other displaced persons, faced similar livelihood losses. In many instances, their livelihoods were precarious and they had limited access to government support services. Those with undocumented or irregular status were at particular risk. Many migrants work in informal labour, without contracts or other protections. They were often the first to be laid off when businesses ran into difficulty and many did not have access to government-related socioeconomic support measures, or had only limited access (Jones et al, 2021). In Türkiye, by late 2021 many refugees had adopted negative coping strategies, such as eating less preferred and cheaper food (Turkish Red Crescent, 2021).

In addition, most countries' economies are not optimized for persons with disabilities. For instance, remote and hybrid working have generally been discouraged, even though they enable persons with disabilities to work. The pandemic saw a huge increase in remote working, but many employers are now pushing employees back into the workplace. Any loss of income is especially harmful for the households of persons with disabilities due to the extra costs of assistive devices and other essentials. As a result, the economic disruption of the pandemic has placed persons with disabilities at high risk of being pulled into poverty (UN OHCHR, 2020a).

4.1.3 Education was disrupted for millions of children

In many countries schools were closed, in some cases for many months. The extent and duration of the disruption varied greatly: some countries like Denmark only closed schools for one to two months, but others like Mexico and the United Arab Emirates kept at least some schools closed for almost a year (Leon Rojas et al, 2022; Meinck et al, 2022). In September 2021, the United Nations Children's Fund (UNICEF) estimated that schoolchildren had lost a total of 1.8 trillion hours of in-person learning (UNICEF, 2021). Migrant children were particularly impacted because their education was often already disrupted by barriers such as enrolment issues and language barriers (You et al, 2020).

School closures interrupted children's education, along with physical and social activities, both of which are critical to their development. In many cases, schools adapted by switching to remote learning (see Box 4.1). However, this did not work for everyone, particularly those with poor internet access or limited space. For example, among refugees in Türkiye, 31% of children could not access their online learning

In many countries, social protection systems are limited, despite major boosts during the COVID-19 pandemic. Only 46.9% of the world's population is covered by social protection benefits.

(Turkish Red Crescent, 2020). When children are temporarily cut off from education, a significant number never return (Save the Children 2020). School closures also had additional knock-on effects. For instance, the loss of access to school meals was significant for children living in poverty, who often get a significant proportion of their nutrition at school. A study by the Humanitarian Observatory of the Argentine Red Cross found that children were "particularly vulnerable" to psychosocial harms (Argentine Red Cross, 2021). Children who could not physically attend school often displayed anxiety, low mood, sleep and appetite disorders, and impaired social interactions. The researchers concluded: "In emergency situations, school is a fundamental space for emotional support, educational continuity and social and material support to students and their families".

4.1.4 Social isolation was prevalent and mental health was harmed

Many people experienced severe social isolation. Often this was due to government restrictions on movement. However, even outside of enforced lockdowns, people who felt particularly vulnerable due to their higher risk of infection (as a result of underlying health conditions, disabilities or age) had to isolate themselves to avoid contracting the virus. Alongside this, many people experienced mental health impacts: in 2020 it was reported that about one in three people were suffering stress, anxiety or depression (Salari et al, 2020).

Many older people were already isolated or experiencing mobility challenges. This made it harder for them to get the information about what to do during the pandemic and to obtain essential food and medicines (UNSDR, 2020). Furthermore, their social ties with friends, family and neighbours were often severely disrupted. For example, in Armenia, older people reported that daycare centres that acted as social hubs were closed (Armenian Red Cross Society, 2021).

Mental health impacts were severe for older people, at least in some countries. In the UK, some older people experienced anxiety, depression, low mood and loss of hope. Even when restrictions were eased by the government, many were still too afraid to go out. There is also evidence of new and emerging cognitive decline, which may have been exacerbated by the pandemic (Age UK, 2020).

Children and young people have experienced similar harms (Global Youth Mobilization, no date). In a survey of adolescents and young people in Latin America and the Caribbean, 27% reported feeling depressed at some point and 15% reported feeling depressed in the previous seven days. Furthermore, 46% reported having less motivation to do things they normally enjoy. They had also become more pessimistic about the future (UNICEF, 2020).

Similarly, many persons with disabilities rely on specific support to be able to access essential services. As a result, movement restrictions sometimes had a more significant negative impact on persons with disabilities than those without (UN OHCHR, no date). For example, rules requiring people to attend medical appointments alone reduced accessibility for people who need an assistant (UN OHCHR, 2021).

There is considerable evidence of mental health impacts on children, some of which are at least partly attributable to school closures (IFRC, 2021f). A meta-analysis of 17 systematic reviews identified a wide range of mental health symptoms including anxiety, depression, sleep disorders, suicidal behaviour and stress-related disorders.

4.1.5 Violence against vulnerable groups increased

Violence against women increased during the pandemic. One survey reported that since the pandemic approximately 40% of women feel more unsafe in public spaces, 25% say household conflicts have become more frequent, and 70% say verbal or physical abuse by a partner has become more common (UN Women, 2021). Restrictions such as lockdowns put women in particular at **greater risk of sexual and gender-based violence**. Women with abusive partners found themselves effectively shut in their homes, often for months on end. This meant they spent more time in contact with their abusers, while also being unable to get help. In early 2020 in South Africa, the first week of the national lockdown saw a 30% increase in gender-based violence cases compared to the same period in 2019 (MSF South Africa, 2020).

Multiple factors contributed to increased violence against children. These include "movement restrictions, loss of income, isolation, overcrowding and high levels of stress and anxiety" (End Violence Against Children, 2020). School closures meant some children found themselves confined to their homes with abusive relatives, and they reported more incidences of violence as a result (Ritz et al, 2020). Informal networks of support from family members and friends were disrupted. While some children were able to communicate with loved ones online, there was also an increase in online bullying (Bhatia et al, 2021).

LGBTQ+ people have also suffered increased rates of violence, for example being confined with disrespectful family members or subjected to selective arrests. In some countries, they have been "singled out, blamed, abused, incarcerated and stigmatized as vectors of disease" (UN OHCHR, 2020b).

4.1.6 Many groups were excluded from essential services

For those on the ground, a critical issue was lack of access to government services. Even before the pandemic, migrants living in precarious situations, including those who lacked residence documents or had irregular status, faced barriers to essential services like healthcare, shelter, food and legal assistance. Sometimes this was because they were explicitly excluded from government programmes. However, indirect factors or practical barriers also played a role. For instance, many migrants fear arrest or deportation, live in places where there are no adequate health services, or face language barriers (IFRC, 2018). The barriers were exacerbated during the pandemic (Red Cross Red Crescent Global Migration Lab, 2021a). Many migrants and refugees could not obtain COVID-19 testing and tracing to determine if they had the disease. Nor could they obtain treatment if they fell ill. In some cases, lockdowns and border closures left people stranded without support or at risk of becoming undocumented (IFRC, 2020c). Finally, migrants were often initially excluded from vaccination plans – especially undocumented migrants – and this has not yet been fully remedied (see Chapter 3) (Red Cross Red Crescent Global Migration Lab, 2021b).

4.1.7 The widespread harms of disasters

None of this should come as a surprise. Diseases like tuberculosis are preventable but continue to devastate lives and communities because poverty enables them to spread (Moutinho, 2022). COVID-19 is not unusual in this respect. More broadly, it is well established that disasters of any kind can have enormous socioeconomic consequences, including worsening inequities. For instance, poor people are disproportionately affected for three main reasons. First, they are more likely to be exposed to hazards as they are often forced to live in less desirable and more exposed areas, such as on river banks and in flood zones with poor shelter standards. Second, they often lose a larger fraction of their wealth when hazards occur. And third, they have less ability to cope and recover due to a lack of financial reserves and alternative places to live (Hallegatte et al, 2020). Similarly, disasters are not gender neutral; instead, women are often more severely affected than men, particularly in their economic opportunities (Llorente-Marrón et al, 2020). For example, gender-based violence often increases following a disaster (IFRC, 2015). Likewise, violence against children and human trafficking also both tend to increase (IFRC, 2021e). In this respect, the COVID-19 pandemic has operated much like any other kind of disaster, just on a vastly larger scale. If we are to minimize the impacts of future hazards like disease outbreaks, we must address these inequities now.

Burkina Faso 2020 *As the number of confirmed cases of COVID-19 increases in Burkina Faso, volunteers from Burkinabe Red Cross are carrying out series of sensitization and mitigation activities against COVID-19 in internally displaced persons' camps in Kaya. A spread of the virus among internally displaced persons could be devastating. © Burkinabe Red Cross Society*

BOX 4.1 / CASE STUDY
EDUCATING CHILDREN IN ZIMBABWE THROUGHOUT THE PANDEMIC

The Red Cross Independent College (RCIC) in Harare, Zimbabwe, was established in 2015 (IFRC on Facebook, 2018). The school started with a small number of orphans and vulnerable children with financial support from donors. Donations ended in 2019, so the school also enrolled fee-paying students to cover its running costs.

In response to the COVID-19 pandemic, the Zimbabwean government implemented lockdowns, including closing schools (Rwezuva et al, 2021). This posed a challenge to the RCIC, both educational and financial. As a mitigatory measure, the government introduced National Radio Lessons, which increased access to learning opportunities for the learners (Mokwetsi, 2020).

To continue the children's education, the RCIC administration decided to switch to online platforms. Prior to the pandemic, this had not been a popular option in Zimbabwe, so many schools did not have engaging online educational programmes prepared. The RCIC was no different. Students and parents were also hesitant about online education at first. Additionally, because RCIC has both boarders and day pupils, some students could not be reached as they lived outside Harare.

Online lessons began with a number of fee-paying students. Access to digital technology and the internet was an immediate problem. Some students and parents did not have smartphones or internet access, so could not join the classes. RCIC was unable to provide technological support to them, but it did provide internet access for teachers. The best solution the school found was to use Google platforms like Meet and Classroom, alongside WhatsApp messaging.

Consequently, some students opted not to join. Some parents choose to hire private tutors instead of paying school fees. Others sent their children for extra lessons in their own communities, although these were declared illegal by the government.

The online lessons made a difference, but the school shutdown still impacted the RCIC. All students were affected differently, but for many their grades have declined. Syllabus coverage was disrupted and online lessons were not as productive as in-person classes. The poorest students, unable to access the internet, were left out. Finally, students' grades in national examinations also fell as the exams continued despite the disruption to education.

The challenges of the pandemic underlined the RCIC's need for a functional and well-equipped computer lab and reliable internet services. The teachers still need support accessing technology. The RCIC also plans to use online learning during non-emergency times, alongside traditional classes, in order to normalize it ahead of future crises.

4.2 WHAT WE LEARNED
WE CAN'T NEGLECT THE SOCIOECONOMIC IMPACTS OF HAZARDS

The socioeconomic impacts of COVID-19, and other disasters, highlight that we must respond to hazards in a holistic manner. They are systems problems in which a single shock ramifies throughout society, creating multiple impacts. Even if COVID-19 could somehow be eliminated tomorrow, the ripples of the pandemic would spread for years to come.

The 17 Sustainable Development Goals (SDGs) offer a framework for thinking about the whole-of-society impacts of hazards and how to reduce overall vulnerability (UN DESA, no date). The goals range from "no poverty" to "sustainable cities and communities". While the targets are listed separately, there are many synergies. For instance, one goal is "clean water and sanitation", which contributes to "good health and wellbeing". The diverse impacts of COVID-19 can be seen in our progress towards the SDGs, which has been slowed and in some cases reversed (Lekagul et al, 2022). According to *The Sustainable Development Goals Report 2022*, it is unlikely that the SDGs will be achieved as intended by 2030 (UN DESA, 2022a). COVID-19 erased more than four years of progress on poverty, halted progress on universal health coverage, and contributed to 147 million children missing over half of their in-person schooling in 2020–2021 (see Box 4.2).

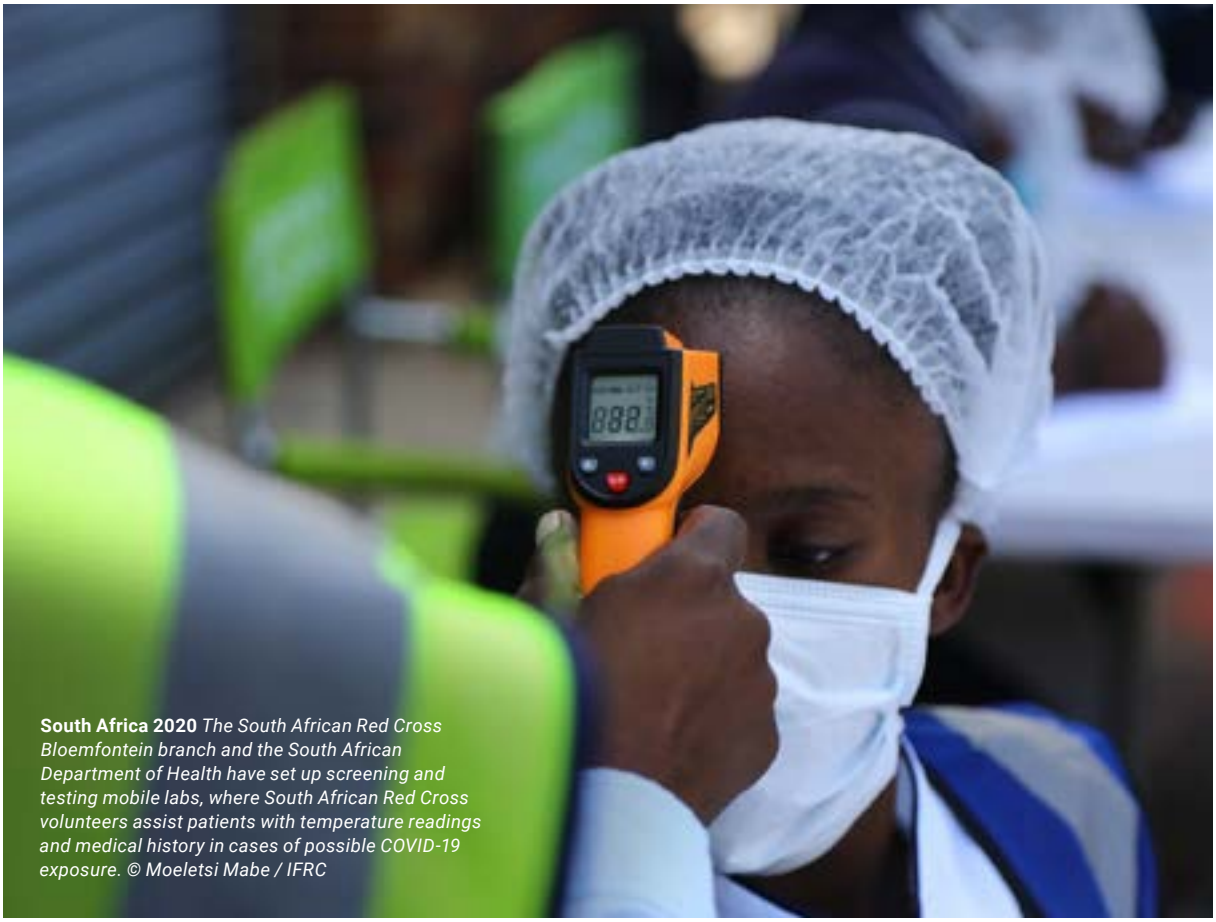
People who are affected by multiple discriminations are inherently more vulnerable to disease outbreaks and other hazards. Inequities lead to economic stresses, uneven access to essential services like healthcare, and political tensions. Societies in which this occurs widely have fewer capacities for coping with hazards. They are more prone to major disruptions such as collapses of essential services. In such inequitable communities, even a small hazard can be the straw that breaks the camel's back. However, by reducing inequities, bolstering social safety nets and boosting livelihoods, it is possible to reduce societal vulnerability.

Social protection systems, including social safety nets, were crucial for helping people to endure the shocks of the pandemic (Tirivayi et al, 2020). Many governments rolled out new schemes, for example making unconditional cash transfers to members of the public. A 'living review' by the World Bank found that 3,856 social protection and labour measures had been planned or implemented by 223 economies by January 2022. Many were introduced in a rush early in the pandemic: in March 2020, an average of 180 were created every week. During 2020 and 2021, countries invested over US$3 trillion in these interventions. Cash transfer programmes were the most prevalent (see Box 4.5), although in-kind donations of goods like food were also common (Gentilini et al, 2022).

Unfortunately, these social protection systems were sometimes slow to respond and did not reach everyone who needed help. Slow responses were extremely problematic because many people had

limited reserves of cash or food (see Box 4.3). For instance, Malawi announced in April 2020 that it would provide urban cash transfers, roughly when the government also announced a lockdown. However, there were multiple delays and payments did not begin until February 2021 (Bastagli and Lowe, 2021).

Similarly, social protection schemes often did not cover everyone. In many countries, the COVID-19 handouts were far more comprehensive than previous mechanisms. However, this was often regarded as a temporary necessity for the duration of the emergency, rather than a shift towards a more inclusive form of social protection for the long term. In some cases, negative stereotypes about recipients were created and/or reinforced. In South Africa, women were primarily contacted as a means to reach the people for whom they cared, rather than to address their own welfare. Women were also disqualified from receiving grants if they were already receiving a child support grant. Gender advocates have expressed concern that these arrangements will negatively affect women's rights. Meanwhile, in Peru, marginalized urban populations were sometimes perceived as 'dirty' or 'disorganized' and therefore a public health threat, and these perceptions were exacerbated during the pandemic (Bastagli and Lowe, 2021).



South Africa 2020 *The South African Red Cross Bloemfontein branch and the South African Department of Health have set up screening and testing mobile labs, where South African Red Cross volunteers assist patients with temperature readings and medical history in cases of possible COVID-19 exposure. © Moeletsi Mabe / IFRC*

BOX 4.2 / CASE STUDY

SUSTAINABLE DEVELOPMENT GOALS DELAYED IN LATIN AMERICA AND THE CARIBBEAN

The Sustainable Development Goals (SDGs) were agreed by the United Nations in 2015, and nations committed to achieve them by 2030. However, the COVID-19 pandemic contributed to delays in multiple targets.

In a 2022 report, IFRC found that multiple SDG targets are now set to be missed in Latin America and the Caribbean. It assessed the pandemic's impact on six SDGs and concluded that all had been delayed, some by decades. For instance, the eradication of extreme poverty in the region had been set back by 30 years (SDG 1), diets had deteriorated (SDG 2), and 10% of jobs were lost (SDG 8) (IFRC, 2022d).

Brazil 2021 *The Brazilian Red Cross is responding to the COVID-19 emergency by delivering humanitarian assistance to vulnerable populations and carrying out psychosocial support and hygiene promotion tasks. © Brazilian Red Cross*

BOX 4.3 / CASE STUDY
DELAYS IN SOCIAL PROTECTION DURING THE PANDEMIC

In May 2020, Peru announced that it would roll out a quasi-universal scheme of cash transfers called the Bono Familiar Universal. This replaced three pre-existing emergency schemes, each of which was aimed at a limited group of recipients.

Households that were already registered began receiving payments in May. However, those who needed to register for the first time had to wait until August for their first payment. These people had to endure a strict lockdown that lasted from mid-March to the end of June (Lowe et al, 2021). People who were not previously registered were mainly informal workers and informal domestic employees from disadvantaged backgrounds and vulnerable groups.

Peru 2020 *The Peruvian Red Cross have been distributing food supplies, kitchens and utensils to different Ollas Comunes (spaces self-managed mainly by women, where they organize to cook for their community, prioritizing children and the elderly) in different parts of Lima, capital of Peru. This distribution was in Villa Maria del Triunfo. © Peruvian Red Cross*

4.3 WHAT WE NEED TO DO
BOOST SOCIAL PROTECTIONS TO HELP COMMUNITIES THRIVE

Another crisis like COVID-19 will surely arrive, and it could take many forms (see Chapter 1). Before it happens, we need to strengthen all of our systems, if we are to be ready.

Much of the focus of this report is on health systems: how to bolster them at the community level (Chapter 2) and the international level (Chapter 3), how to improve our collection and analysis of health data (Chapter 5), and how to improve health law (Chapter 6). However, we need to go further. COVID-19 has been a multidimensional crisis and the same will be true of future major hazards (UNDP, no date). Much like COVID-19, the next crisis will have its most severe impacts on the most vulnerable; cause lost livelihoods and worse poverty; disrupt children's education; threaten everyone's mental health; and increase violence against vulnerable groups. That means all of society needs to become more resilient.

If we again consider the SDGs, the delays caused by COVID-19 can be reversed by strong action. A 2021 report by the UN Development Programme concluded that, even before the pandemic, we were unlikely to achieve many targets by 2030 as planned (Abidoye et al, 2021). However, the report also argued that progress can be accelerated by targeted interventions in key areas, including social protection. This would be enough to overcome most of the losses caused by COVID-19 and enable many more countries to reach their targets by 2030.

Similarly, some of the disruptions to education have been ameliorated by concerted action. 33 National Red Cross and Red Crescent Societies supported the education of 4.2 million people, either by continuing their education and/or by enabling them to safely return to schools (IFRC, 2022a). This was achieved through a number of programmes, including: risk communication and hygiene promotion in schools; in-kind or cash assistance for distance learning equipment and materials; and home-schooling support to learners.

Given the severe impacts of inequities during the pandemic, there is an urgent need to significantly improve social protection, including social safety nets (Cuevas Barron et al, 2021). In many countries, social protection systems are limited, despite major boosts during the COVID-19 pandemic. Only 46.9% of the world's population is covered by social protection benefits (ILO, 2021). Yet social protection systems are essential to help people survive disasters and thrive afterwards, so they must be built up (Climate Centre, no date). The Risk-informed Early Action Partnership (REAP) has argued that social protection is crucial for climate-vulnerable populations (REAP, 2021); their arguments apply equally well to pandemics and other hazards. Similarly, from an early stage IFRC's Emergency Appeal for COVID 19 included socioeconomic impacts as one of its three main pillars (see Box 4.4).

BOX 4.4 / CASE STUDY
EMERGENCY SOCIAL SAFETY NET SOCIAL PROTECTION FOR REFUGEES IN TÜRKIYE

Social protection schemes can help the most vulnerable people through a severe shock. This is illustrated by the experience of refugees living in Türkiye during the COVID-19 pandemic.

Türkiye is home to more than 4 million refugees: the largest refugee population in the world. Many have fled the ongoing conflict in Syria. Despite major efforts from Türkiye's government, many are living in precarious circumstances. In response, the Emergency Social Safety Net (ESSN) launched in 2016. As of late 2022 it hands out monthly cash donations to over 1.5 million of the refugees (see Box 4.5). Funded by the European Union, it is run by the IFRC and the Turkish Red Crescent Society, alongside government institutions (IFRC, no date).

The ESSN is the largest humanitarian programme in the histories of the EU and IFRC (ECPHAO, no date). It exemplifies how humanitarian organizations can bolster national social protection schemes by reaching vulnerable people that would otherwise be excluded – thus improving **equity**.

When the COVID-19 pandemic began in early 2020, many refugees became unable to work due to restrictions. 78.4% of ESSN beneficiary households and 81.2% of non-beneficiary households reported that at least one household member lost their job due to COVID-19.

In response the ESSN distributed the IFRC's largest cash transfer ever. Money was given to 1.8 million refugees: each family received the equivalent of about EUR 128. For many, this was their only income during lockdowns. A report published in 2021 found that refugees who received the cash transfers were less likely to resort to negative coping strategies compared to non-recipients. They also had lower average debt (IFRC, 2021a).

The best social protection systems are shock responsive, meaning they automatically begin providing assistance when certain warning signs of a disaster are observed. Aid is often best delivered in the form of cash or vouchers (see Box 4.5) (UNDP, 2021).

It is essential to ensure that everyone is registered with the social protection system. This ensures people do not fall into poverty, or suffer disproportionate impacts on their health, as a result of future crises (World Bank, 2022c). In many countries, governments are unable to reach some communities. Furthermore, some individuals may not have identity documents or regular immigration status and so cannot register. In some cases, people may simply be unaware that the social protection system even exists. Humanitarians and other local actors with strong ties to local communities can play a key role in connecting people, including migrants, with social protection systems, helping them to register and ensuring they receive help (CashHub, 2020b).

The COVID-19 era has demonstrated that social protection systems can be improved dramatically if the political will is there. For example, the government of Ecuador worked with the World Bank to expand and improve its social protection systems. Emergency transfers were expanded in early 2020, first delivering two monthly installments of US$60 to 400,000 vulnerable households, and then a one-off payment of US$120 to over 400,000 additional beneficiaries. Alongside this, the government reduced the average time needed to access unemployment benefits from 60 days in 2019 to 6 days. It also created a Migratory Registry to ensure public services were provided to Venezuelan migrants and refugees (World Bank, 2021).

However, social protection systems by themselves are not a solution to all inequities. Discrimination and violence demand other solutions. One is to protect people's rights in law (see Chapter 6). More broadly, the shift towards thriving communities must prioritise equity and inclusion. It is essential to reach everyone – especially populations that are marginalized, underrepresented or discriminated against, and groups that experienced higher or increased vulnerabilities in the COVID-19 pandemic and other recent disasters, and suffered disproportionately as a result. There is a complex interplay between violence, discrimination and exclusion: they are inseparably linked and must be addressed together (IFRC, 2022c). The more this vicious cycle of violence, discrimination, exclusion and vulnerability can be broken, the better the chances of holistic, sustainable and equitable solutions for the next disease outbreak and other hazards.

Achieving this form of resilience requires joined-up action from humanitarian, development, health, peace and climate actors. There also needs to be contributions from civil society, including faith-based institutions. While these fields are distinct, they should not be siloed. Only by taking this holistic whole-of-society approach will we truly recover from the COVID-19 pandemic. It was not simply a health crisis: it caused enormous economic harm, set back human rights and triggered social crises. If we want to ensure that such a calamity does not happen again, a truly coordinated effort is necessary. The focus must be on enhancing communities' capacities and helping them to take the lead in shaping their own futures.

BOX 4.5: CASH TRANSFERS AS A FORM OF SOCIAL PROTECTION

One of the most important forms of assistance is cash transfers. Compared to other forms of aid, cash transfers often offer the greatest possible flexibility to recipients, granting them dignity and agency. Such transfers have been a crucial form of social protection during the COVID-19 pandemic (CashHub, 2020a). They have helped people escape falling into poverty, or falling further, when their livelihoods were impacted.

Like all forms of aid, there are limits. Cash transfers are only viable if factors like local market conditions are suitable. Furthermore, they require a high degree of **trust, both by donors and by recipients** – the latter because cash transfers necessitate handling personal data like bank account details and legal status.

However, these issues are offset by the enormous advantages of cash transfers. A key plus point is their scalability. It is possible to help large numbers of people quickly, with relatively minimal resources and staff. For example, in early 2020 the IFRC paid out the largest set of cash transfers in its history: EUR 46.4 million to more than 1.7 million refugees living in Türkiye (see Box 4.4) (IFRC, 2020a). Similarly, in the Caribbean, IFRC National Societies provided thousands of people with cash and similar forms of aid such as supermarket vouchers. By April 2022, the Jamaica Red Cross had provided 805 cash cards. It has also distributed food packages to 10,000 families. Similarly, the St Lucia Red Cross provided cash cards, supermarket vouchers and food packages to over 3300 affected families (IFRC, 2021c). Many National Societies used cash transfers for the first time. The Azerbaijan Red Crescent Society gave cash and vouchers to nearly 1,000 vulnerable families who were badly affected by the pandemic (IFRC, 2021d).

Cash transfers are continuing to grow in usefulness. For example, the ongoing conflict in Ukraine has driven millions of refugees to neighbouring countries, and IFRC and National Societies have responded in part with cash transfers (IFRC, 2022b). By late May, over CHF 4.3 million had been delivered. The response was accelerated by a new self-registration app that enabled thousands of refugees to enrol themselves, allowing volunteers the time to support individuals with more complex needs (Polish Red Cross, no date).

KEY RECOMMENDATIONS

Include responding to inequalities in every health emergency and disaster response. It is crucial to tackle inequities in preparedness and response for every crisis, disaster and pandemic. It is necessary to assess, analyse and respond to inequities during every disaster response. Key actors (including local actors) must have the attitude, motivation and capacity to analyse who is most affected because of inequities, exclusions and barriers – and they must develop strategies to ensure those people's needs are met. To achieve this, we need a much stronger focus on tackling inequity in relevant public health emergency/disaster law, policy and planning (see Chapter 6); specific data collection methods to identify areas of inequity; as well as bespoke training for responders.

Expand and improve social protection systems as much in advance of crises as possible. The COVID-19 pandemic highlighted that societal inequities can exacerbate hazards like disease outbreaks. Therefore, reducing inequities by boosting social protection can contribute to improving the overall resilience of society. Social protection systems must be built up so they cover more of the global population, particularly those who need it most as identified by inclusive vulnerability and risk assessments. They must be shock responsive and serve as an agile tool of crisis response, delivering aid in a way that people can use flexibly, such as cash. Local actors have a key role to play in ensuring everyone is registered, including vulnerable and marginalized people.

Address formal and informal barriers to essential services like health. Inequities are often perpetuated by discrimination and other barriers to access that are systemic and less tangible. During the pandemic, groups like undocumented migrants often struggled to get COVID-19 testing, treatment or vaccines. Sometimes systems legally exclude some groups or communities; sometimes they create disincentives, such as fear of arrest or unaffordable services. Just as often, services are unavailable in – or do not prioritise – certain communities, which fuels disaffection and mistrust. All of these barriers must be addressed in laws, policies, plans and training to ensure the safety, dignity and wellbeing of all members of society.

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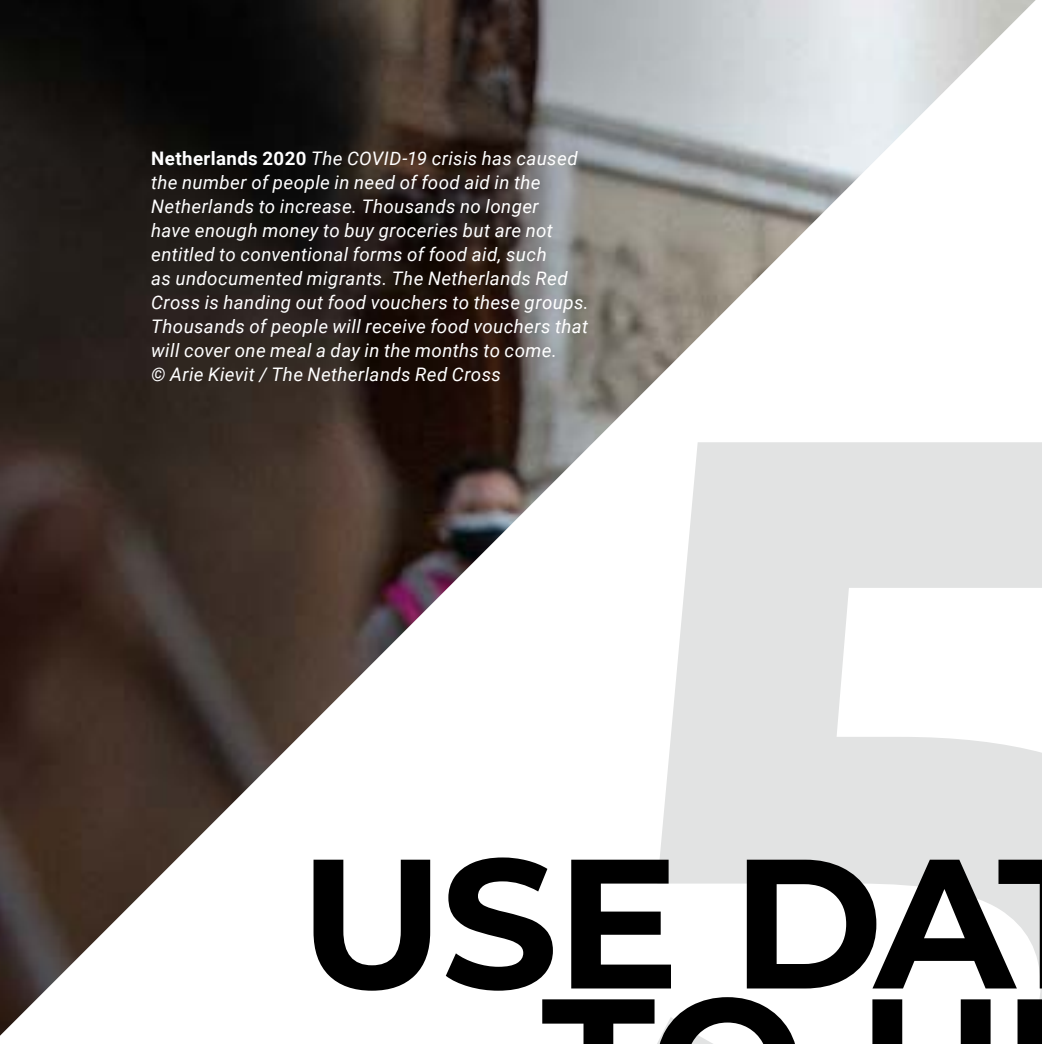


Netherlands 2020 *The COVID-19 crisis has caused the number of people in need of food aid in the Netherlands to increase. Thousands no longer have enough money to buy groceries but are not entitled to conventional forms of food aid, such as undocumented migrants. The Netherlands Red Cross is handing out food vouchers to these groups. Thousands of people will receive food vouchers that will cover one meal a day in the months to come.*
© Arie Kievit / The Netherlands Red Cross

5 USE DATA TO HELP COMMUNITIES

Data collection and analysis must be strictly focused on communities' needs as determined by them

Contents

INTRODUCTION

Data and digital technologies are essential to the management of any emergency or disaster. They are needed at all stages, from understanding the situation, planning and implementation, through to monitoring and evaluation. The COVID-19 pandemic saw great triumphs in data collection. However, there were major gaps around quality, consistency and use of data. Furthermore, the data was often not acted upon.

If future emergencies are to be handled better, we must improve our ability to store, manage and use data to inform decision making. Doing so will, in turn, create more demand for data in the future, giving rise to even more informed decision making. **The aim must be to collect, manage, analyse and disseminate data and information to support decision making.** It is crucial to do a better job of collecting data about the people at risk, including their contexts, the local dynamics of power, and the socio-behavioural factors shaping their perceptions and attitudes. We must improve our feedback loop with communities so they have greater control over the data they hand over and over the resulting decisions. At the same time, we must learn to make better use of data by combining and triangulating disparate datasets and linking them to actions.

5.1 WHAT WE SAW
WE HAD HUGE VOLUMES OF DATA ON COVID-19 BUT THEY WERE NOT ALWAYS HARNESSED

Humanity's response to the COVID-19 pandemic was shaped by data. Huge volumes of data were rapidly collected and shared, enabling rapid decision making on everything from the initial public health and social measures to vaccine development and uptake. However, some kinds of data were not collected in sufficient quantity, completeness or detail. Furthermore, the available data was sometimes not used to drive decisions. There are many lessons here for future public health emergencies and for future disaster management, both in the successes and in the failures.

5.1.1 The data gathered during the COVID-19 pandemic

On the face of it, the COVID-19 pandemic was a triumph for the sharing and gathering of timely data. There is more data globally available on COVID-19 than for many outbreaks or public health emergencies, or even many other disasters. For example, new variants of SARS-CoV-2 like alpha and omicron were sequenced and openly published rapidly compared to previous outbreaks (Nextstrain, no date). This bounty of data extends beyond virology and epidemiology. Many countries have generated good estimates of excess mortality, economic impact, educational impact, and much more. There has also been data on people's knowledge, perceptions and attitudes, including online metadata, socio-behavioural data collected through social media, and community feedback data. All this is far better than the data usually available in emergencies.

Nevertheless, there are major issues with our data on COVID-19. In particular, there are huge global disparities in data availability. Countries that had better data had the opportunity to design more effective and equitable responses. But many countries had limited data on which to rely. Under-reporting has also been widespread.

This is exemplified by disparities in diagnostic testing. The countries that were most successful at controlling the pandemic in 2020, before the development of effective vaccines, typically had highly effective test-and-trace systems. This was partly thanks to their recent experience responding to highly transmissible respiratory pathogens, notably severe acute respiratory syndrome (SARS) in 2003. As of 25 October 2022, the Republic of Korea has seen only 28,952 confirmed deaths from COVID-19 (WHO, no date), a remarkable achievement for a densely populated nation of over 51 million people. It emphasized testing and tracing from the outset, rapidly developing diagnostic test kits to determine who had the virus. In conjunction, infected people were told to self-isolate. Crucially, they were supported in doing so, ensuring

that self-isolation did not cause them to lose their livelihoods and thus bolstering compliance (Cohen and Kupferschmidt, 2020). Enforced self-isolation without state support causes disproportionate financial harm to the poor and vulnerable; the Republic of Korea's approach mitigated this and thus promoted **equity**. Likewise, people's willingness to report and share data was crucial to the success of the strategy and reflects a degree of **trust** in the Republic of Korea's authorities and health systems. This data-driven approach enabled the Republic of Korea to tightly control the first wave of the virus. Crucially, the country did so without resorting to full lockdowns; while there were restrictions, the rapid and accurate data collection meant such maximal tactics were unnecessary (Kang et al, 2020). The country did eventually see larger waves of COVID-19 cases, but only after large vaccination campaigns that created significant immunity (IFRC GO, no date b).

Unfortunately, in many countries and regions, diagnostic testing was not available, or there were practical and logistic problems that meant in practice many people did not have access to tests. According to FIND, the global alliance for diagnostics, just 21.3% of tests administered to date have been used in low- and lower-middle-income countries, even though 50.8% of the global population lives in those countries (FIND, no date). Rates of testing vary sharply. In the US, an average of 27 tests have been performed every day for every 1,000 people – but in Malaysia the equivalent figure is just two (FIND, no date). Even some higher income countries have struggled with testing. In the UK in early 2020, the government began a limited programme of testing and contact tracing, only to abandon both in March of that year. It took several months to get the test-and-trace system functioning again. In its absence, the UK government was faced with spiking case numbers and chose to implement repeated, prolonged lockdowns (Majeed et al, 2020). In contrast, where local actors were integrated with governments (see Chapter 2), they were able to contribute to testing (see Box 5.1). Meanwhile, Djibouti rapidly built capacity for diagnostic testing and performed over 17,000 tests between March and May 2020 (Elhakim et al, 2020).

Lebanon 2021 *From February 2021 until July 2022, IFRC implemented independent monitoring of Lebanon's COVID-19 vaccination campaign, in collaboration with World Bank. © IFRC*

5.1.2 Our data on other kinds of disasters is also incomplete

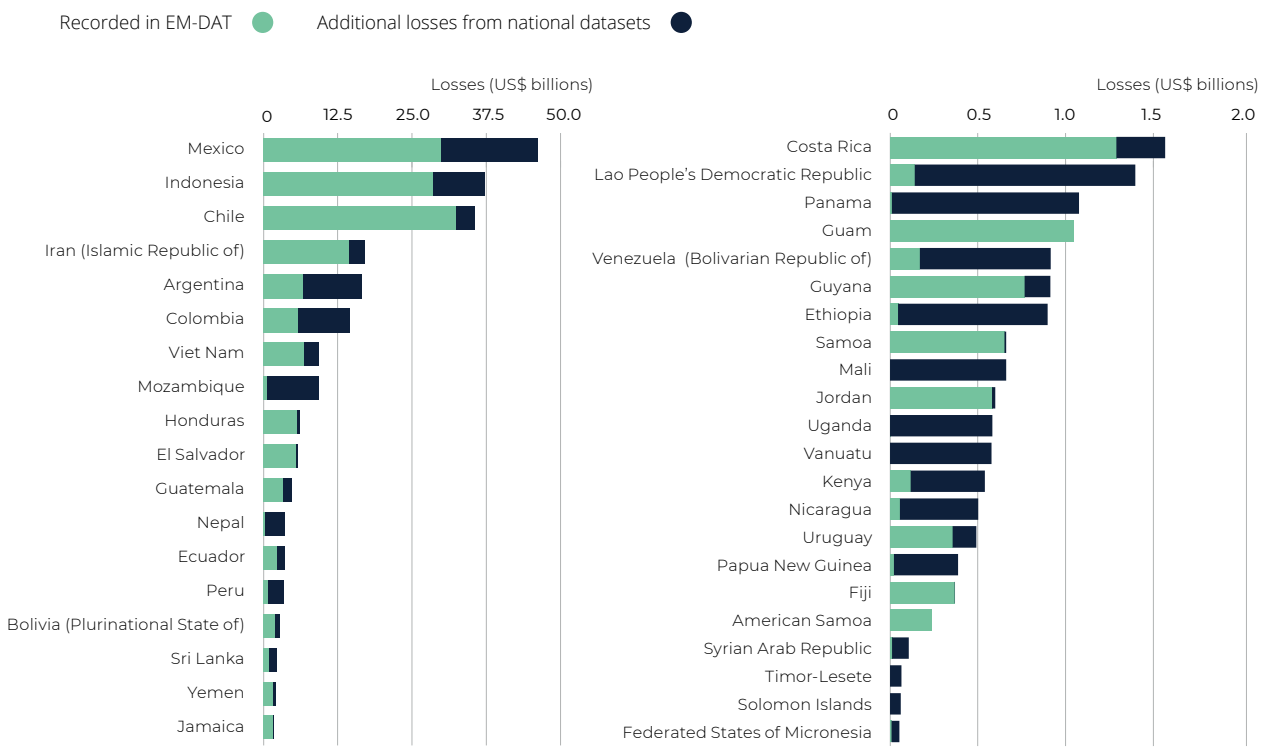
The COVID-19 pandemic was one of the biggest crises the world has faced in years and generated more data than most disasters. When we broaden the scope of our vision/analysis, we see that the 'data landscape' is just as patchy, or worse, when it comes to other disasters.

On the positive side, record keeping has improved enormously in recent decades and disasters are far better monitored than they were even 20 years ago (UNDRR, 2022). For example, hydrometeorological hazards are now monitored by satellites and a vast network of weather stations – although significant gaps remain (World Bank, 2021). Similarly, global telecommunications and enhanced early warning systems alert people to avoid tsunamis and tell disaster agencies where earthquakes have occurred so that they can respond more quickly. Nevertheless, the gaps in the global disaster dataset and breakdowns in the chain of communication channels continue to inhibit effective alerts and actions (Wallemacq and House, 2018).

While the impacts of large-scale disasters are generally recorded and available via databases like EM-DAT (EM-DAT, no date a), the impacts of small and medium-sized events are less well recorded and shared. Indeed, these often-overlooked small-scale disasters occur in such numbers that their cumulative toll is very large (see Figure 5.1). Global data records are also strongly biased towards events that occur in high-income countries, where reporting is most comprehensive, and events that cause large numbers of fatalities (UNDRR, 2015). This is particularly true for economic impacts (UNDRR, 2020). The largest reported financial losses are often in high-income countries, but this is largely based on insurance data and reflects confounding factors like the higher values of property in those regions (IFRC, 2020b). Countries often do not keep their data on economic losses in a centralized database, and many databases are hazard-specific rather than multi-hazard (OECD, 2016).

A key issue is the lack of standardization across disaster types and regions. Conspicuously, disease outbreaks like the COVID-19 pandemic are generally treated separately from other forms of disasters. For instance, in the EM-DAT international disaster database, two of the criteria for declaring an event a disaster are that 10 or more people are reported killed, or 100 or more people are reported affected (EM-DAT, no date b). Disease outbreaks are not defined in the same way. A single case of a disease can constitute an outbreak if it occurs in a region where that disease is not endemic. For instance, the first case of COVID-19 was clearly an outbreak. However, a single extra case of cholera in a region where the disease is endemic would not constitute an outbreak. The situation is further complicated by the political interests that affect whether an outbreak or epidemic is declared. It is therefore difficult to analyse disease outbreaks alongside other hazards like earthquakes. Partly for this reason, diseases are poorly reflected in global disaster datasets like EM-DAT. Indeed, EM-DAT does not have an entry for COVID-19.

Figure 5.1: Global disaster datasets are often incomplete. The international EM-DAT database misses many disasters that are recorded in countries' national datasets



Source: UNDRR, 2015

BOX 5.1 / CASE STUDY
PHILIPPINES RED CROSS DELIVERS COVID-19 TESTS

The Philippines Red Cross was a pioneer in delivering COVID-19 testing services to complement those put in place by government authorities. It did so from early in 2020 (IFRC, 2020a). By September 2021, it had administered four million tests (Philippine Red Cross, 2021). The Philippines Red Cross also offers saliva-based tests, which are cheaper and less invasive (Philippine Red Cross, 2022).

Philippines 2021 *The Philippine Red Cross started using the saliva RT-PCR test. It is a faster, cheaper, and less invasive but reliable way to detect the presence of COVID-19. © Philippine Red Cross / IFRC*

5.2 WHAT WE LEARNED
WE HAVEN'T COLLECTED AND USED ENOUGH OF THE RIGHT KINDS OF DATA

Enormous volumes of data have been collected during the COVID-19 pandemic. However, many crucial types of data have been under-gathered. This needs to change if we are to reduce the risks and impacts of future disease outbreaks. To understand this, consider the full range of types of data that would ideally be available in future crises. They can be roughly divided into three categories of question:

1. **To what potential hazards are communities exposed?** All communities face a wide range of hazards. These include different types of diseases, from airborne viruses like SARS-CoV-2 to parasites spread by mosquitoes like malaria. Such pathogens occur alongside other types of hazards, such as storms and conflicts. Hazards may overlap and reinforce one another (see Chapter 1).

2. **Who is at risk? In particular, who is most vulnerable and why?** If responders are to help people withstand a hazard like a disease outbreak or hurricane, they must know what their vulnerabilities are and the forms of aid they most need. For instance, if people are living in overcrowded conditions, they will not be able to self-isolate to reduce the spread of a disease. In this case, personal protective equipment like face masks would be more useful than advice on social distancing (RCCE Collective Service, no date b).

3. **What are those people's attitudes, beliefs and needs?** Put another way, what are the behavioural and social drivers that affect their willingness to take particular actions (WHO, 2022)? For instance, a key challenge of the COVID-19 pandemic, and other disease outbreaks, has been encouraging hesitant people to take a life-saving vaccine. Vaccine acceptance can only be achieved if we first understand vaccine hesitancy. This requires understanding communities' ideas, beliefs and attitudes – and changing the response accordingly.

In the following three sections we look at each of these questions in turn. However, simply having all this data is necessary but not sufficient. It is also essential to operationalize the data: to use it to guide actions. The final section explores how to do that.

Saudi Arabia 2022 *Saudi Arabia and other countries in the Middle East and North Africa in 2022 spent the holy month of Ramadan providing Iftar meals to the most vulnerable families, workers and remote communities as well as reminding people on how to stay safe from COVID-19 and providing emergency medical services during Ramadan. Saudi Red Crescent Authority provided emergency medical services to thousands of people for them to enjoy the holy month safely and securely. © Saudi Red Crescent Authority*

5.2.1 Identifying hazards using data

The first step is to identify the hazards communities face. A key challenge is identifying the diseases that pose a hazard, whether they are endemic pathogens that have been circulating for decades or emerging diseases like COVID-19. This requires disease surveillance.

At the beginning of the COVID-19 outbreak, health systems would have benefitted from stronger community and participatory surveillance methods, including community-based surveillance (IFRC Health & Care, 2020). (The value of the community-based surveillance diminishes once a disease becomes widespread.) Signs and symptoms related to disease and/or other hazards are typically identified first by local actors with strong links within the communities in which they live. These local actors can also provide the first line of data and information sharing within the public health or animal health surveillance system (see Chapter 2). Capitalizing on this enables rapid detection of disease outbreaks, which may spread more widely if not rapidly contained. If a person begins to show signs and symptoms of illness the first people to know will be family, friends and neighbours. The most effective disease surveillance systems tap into these social networks. Community-based surveillance is most effective when integrated into the wider health surveillance systems, which can then respond to alerts from local actors. Such an active, responsive use of data helps to build and maintain **trust** between governments, humanitarians and communities, enabling more effective responses when threats emerge (McGowan et al, 2020).

Community-based surveillance has once again proven its value during the COVID-19 pandemic. For example, in Niger an existing community-based surveillance network established to monitor for polio was adapted to scan for COVID-19 (Maazou et al, 2021). Between April and November 2020, 150 community health workers were trained in how to spot and manage COVID-19. The community health workers reported 143 valid alerts, including two positive COVID-19 cases, and assisted in the contact tracing of 37 individuals. Alongside this, they raised awareness of COVID-19 prevention strategies among over 2 million people. Similarly, the IFRC has supported community-based surveillance capacity in multiple countries, including through its ongoing Community Epidemic and Pandemic Preparedness Programme (CP3) (IFRC, no date a). For example, community-based surveillance for COVID-19 has been carried out by Indonesian Red Cross volunteers at a monitoring station in Karangmojo village, where volunteers also distributed COVID-19 prevention information. However, as we saw in Chapter 2, many health systems do not yet effectively integrate local actors like community health workers.

Going further, health practitioners must develop integrated disease surveillance that tracks pathogens in both humans and animals. This is key because many disease outbreaks are zoonoses, where a disease passes from animals to humans (and many in turn can also pass from humans to animals). COVID-19 is a notable example of a zoonosis; the closest known relatives of SARS-COV-2 are found in Asian bats (Morens et al, 2020). Crucially, it is not yet clear how this happened, and this is partly due to our limited information on the viruses bats harbour and on interactions and transmission pathways between bats, other animals and humans (Worobey et al, 2022). There are many other examples of zoonotic diseases, for example people most often catch rabies from dogs. Therefore, the best way to stop outbreaks at source (see Chapter 1) is to monitor the health of both humans and relevant animals concurrently, and their shared environments. Traditionally, human and veterinary medicine have been siloed, with little cooperation or interaction between the two fields. This urgently needs to change.

Integrated surveillance of animal and human health is a key component of the related 'One Health' and 'Planetary Health' frameworks. In One Health, human health is understood not as a singular problem but as part of a global social-ecological system (Mremi, 2021). Similarly, Planetary Health emphasises the many ways humanity has disrupted Earth's natural systems (The Lancet, 2015), with knock-on consequences for all life including ourselves (Planetary Health Alliance, no date).

Similar lessons apply to non-disease hazards. In particular, local surveillance again has its advantages. It is better at capturing minor but recurrent disaster risks, or 'extensive risk'. These are often overlooked by global databases like EM-DAT and handled solely by local responders. However, globally they are highly significant. Mortality and economic loss from extensive risk has increased in recent decades (UNDRR, 2015).

Finally, it is crucial to monitor multiple classes of hazard simultaneously, from diseases to floods and algal blooms. One reason is that all communities face multiple potential hazards (see Chapter 1), so it is a mistake to over-monitor for one class of hazard at the expense of the others. It is natural that in the wake of COVID-19 there will be increased monitoring for disease outbreaks, and this is a good thing. However, it should not come at the expense of seismometers to track earthquake risk and other classes of hazard. It is also worth remembering that hazards interact, so that the presence of one hazard increases the risk of another. For example, floods disrupt supplies of clean water leading to an increased risk of water-borne diseases, so risk mapping and flood forecasts are vital mechanisms for providing early warning of outbreaks.

5.2.2 Using data to identify the people most at risk

To respond effectively to hazards like diseases and hurricanes, we need better information on who is most at risk. Risk is typically defined by exposure to a hazard (see section 5.2.1) combined with a factor of vulnerability. For example, two people may be similarly exposed to SARS-CoV-2, but if one is vaccinated he or she will have reduced vulnerability to severe illness and death. In one study conducted in the US in early 2022, people who had received a booster dose of COVID-19 vaccine were less likely to be hospitalized with COVID-19. People who had not had a booster were 2.5 times more likely to be hospitalized, while unvaccinated people were hospitalized 10.5 times more often (Havers et al, 2022). It's therefore not enough to know who is being exposed to SARS-CoV-2; practitioners also need information on who is vaccinated, previous infections and much more.

There are various tools to assess risk. Many are hazard-specific. For example, the Zurich Flood Resilience Alliance has developed a tool called the Flood Resilience Measurement for Communities (Flood Resilience Portal, no date). Similarly, the US Environmental Protection Agency has the Community Health Vulnerability Index, which they use to identify communities facing high health risks from wildfire smoke in order to prioritize public health strategies (US EPA, no date). Such indices are useful but by themselves do not capture the full range of hazards a community faces. In contrast, the IFRC uses the Enhanced Vulnerability and Capacity Assessment (EVCA) to help communities assess all kinds of hazards they can identify and what means they have to manage the associated risks (IFRC VCA, no date). The EVCA identifies the hazards facing a community and who is most at risk, then works through potential responses. Communities conduct the assessment themselves, with the IFRC's guidance (see Chapter 2). In a multi-hazard world, such comprehensive vulnerability assessments are indispensable.

Unfortunately, the COVID-19 pandemic highlighted limits to our information about the people most at risk. This issue should not be overstated, as considerable information was and is available. For example, even early in the pandemic it was possible to make predictions about likely outcomes of COVID-19 in different populations based on their age and chronic disease structure. There is also meaningful data on which countries are most at risk; for example, the INFORM Epidemic Risk Index incorporates a wide range of data to estimate countries' risk of epidemics (EC DRMKC, no date), and the Global Health Security Index performs a similar analysis (Global Health Security Index, 2021). However, community-level vulnerability data is not always discoverable at scale. Nor is there an easy way of overlaying other forms of risk information. This means it remains very challenging to continuously update risk indices that assess multiple, overlapping hazards, which is what communities actually face (see Chapter 1).

Efforts are now underway to catalogue EVCA-type data on a global level. IFRC has begun tagging the information it holds to make it discoverable on its vcarepository.info website (IFRC, no date c).

To help communities prepare for future hazards, disaster risk assessments need to be performed more widely and regularly. Assessments like the EVCA should become more standardised, incorporate more observational data, and be rolled out to exposed communities around the world. They should be validated with more observational data and repeated regularly to ensure the information remains up to date. This scaling up requires a significant increase in institutional capacity in disaster risk management. It is therefore dependent on long-term funding. Health and disaster risk management teams need to be put on a sustainable funding model, instead of the long-standing situation where they receive surges of money only when a disaster strikes. One way to do that is to integrate this work into longer term preparedness programming. Again, it is more cost-effective to prepare for hazards ahead of time – including by collecting data on who is at risk.

5.2.3 Identifying what people need and believe

To help people effectively, health workers and humanitarians must understand who they are. They must gather data on their needs, environment, concerns, knowledge, practices and behaviours (Baggio, 2021). Only with this information can practitioners determine whether the solutions being offered are the most appropriate. In other words, to prepare for disease outbreaks and other hazards, it is necessary to put community engagement and accountability at the heart of the planning process. Health workers and humanitarians must recognize community members as equal partners. Their diverse contexts, needs, priorities and preferences should guide all policy choices.

People's needs do not always conform to outsiders' preconceptions. For example, since 2020 it has been natural to assume that COVID-19 is the greatest source of health worry for everyone, but this is not true for everyone (see Box 5.2). For some communities, other diseases, or other hazards, remain more of a threat. These included non-communicable diseases that required continuing care, cholera, hurricanes, and complex humanitarian contexts like that seen in the Sahel. Similarly, it is tempting to send food parcels to people experiencing a food shortage, but depending on their circumstances they may need cash more. The environment in which people live always shapes the vulnerabilities they have and the forms of assistance they need. Factors like these will shape the kinds of assistance that people consider relevant and are willing to accept, and the actions they will take to shape changes in their own lives and communities.

Alongside this, it is vital to find out about people's beliefs, concerns and perceptions. For instance, they are at the heart of vaccine confidence and uptake. Mistrust and hesitancy about interventions like vaccines and face masks have been stumbling blocks throughout the pandemic. Yet the social and economical factors driving these behaviours have historically been neglected, including in many parts of the COVID-19 response. To correct this, disease outbreak plans must emphasize social data and community feedback (see Box 5.3). A community-centred approach requires plans and measures to be sensitive to context, agile and receptive to change (see Chapter 2).

Failing to act on lessons from community engagement can backfire. The 2018–2020 Ebola outbreak in the Democratic Republic of the Congo was marked by unprecedented violence against all responders. A 2022 study highlights issues with the way community feedback data was used by decision makers, leading to breakdowns of trust. The study found that the decision makers in the Ebola response were often medical personnel and epidemiologists, who regarded the evidence from the community feedback as lacking rigour: it was qualitative and they preferred quantitative data. As a result, the feedback was often disregarded. Furthermore, 'evidentiary inertia' was a feature of the response. This meant that even when there was a demonstrated need to change practice, the size and scale of the response made it difficult to change course within a reasonable timeframe.

This often led to mounting frustration in the communities being listened to. The volunteers receiving and analysing the feedback became aware of increasingly frequent threats, which soon manifested in attacks on health facilities and staff. Had the feedback been taken more seriously, some of this violence might have been avoided. The researchers recommend that community feedback systems be deployed as a matter of course in future outbreaks, and that acting on this feedback be normalized (McKay et al, 2022).

In contrast, an example of health workers embracing community data is the Collective Service. Founded in 2020 as a partnership between the IFRC, United Nations Children's Fund (UNICEF) and the World Health Organization (WHO), it aims to help create a coordinated, community-led and data-driven approach to build preparedness for future disease outbreaks. The Collective Service has developed and launched a socio-behavioural data dashboard, which compiles, structures and measures socio-behavioural data and evidence from almost 250 data sources around the globe. This information builds a bridge between people's needs and responders, enabling resources and attention to be focused on the most vulnerable people's most pressing needs (RCCE Collective Service, no date a).

At the heart of all this data gathering is **trust**. It is essential that communities have a high degree of trust in the people involved. For example, during risk assessment the information gathered is often of a sort that would normally be considered private, such as whether a person is vaccinated against COVID-19 or whether their partner is abusive. Communities will only provide such information to people and organizations in whom they place trust. Therefore, it is essential that such data is held securely and handled responsibly. It is also crucial that communities have access to their own shared data, so it is necessary to enable digital access for them. All this means engaging closely with key stakeholders in the community, ranging from religious leaders to teachers and traditional healers (Community Engagement Hub, no date).

BOX 5.2 / CASE STUDY
COVID-19 WASN'T ALWAYS PEOPLE'S BIGGEST FEAR

Local actors are well placed to listen to community feedback and find out what people are most afraid of. "You feel a duty to listen to what patients are going through," says Suzanna, a volunteer team leader with the Lebanese Red Cross in Aley.

Lebanon has been experiencing a severe economic crisis and this looms large in many people's minds. "I remember there was one patient in my hometown, an older woman," says Suzanna. "Even more than COVID-19, she was worried about how to provide for her grandchildren" (IFRC, no date d).

Lebanon 2021 *Lebanon has been in the grip of a compounded humanitarian crisis since late 2019. Following the devastating Beirut Port Explosions in August 2020, Lebanese Red Cross provided unconditional cash assistance to over 11,000 affected families as well as cash assistance to small businesses, shelter repair support, relief items, and essential medical services. © Lebanese Red Cross*

BOX 5.3 / CASE STUDY
TO HELP CONTROL DISEASE OUTBREAKS, EMBRACE COMMUNITY FEEDBACK DATA

From 2018 to 2020, the Democratic Republic of the Congo endured an outbreak of Ebola – the 10th recorded in the country. Early in the outbreak, the Democratic Republic of the Congo Red Cross and the IFRC developed a community feedback mechanism to gather community perspectives on the Ebola outbreak and response (Earle-Richardson et al, 2021). This feedback data was analysed and used to inform policy and programming collectively at all levels of the response, both to improve the response and to engage communities in the fight against the virus.

A study published in February 2022 demonstrated the value of this approach. During the outbreak, many communities wished to continue to honour their dead. This seemed to create a conflict because procedures for safe and dignified burials meant bodies were interred in sealed bags to reduce the risk of the disease spreading. However, compromises were found. In the North Kivu region it was important that family members could see the faces of the dead, so clear windows were added to the body bags. This allowed funeral rites to be honoured while maintaining health security, and it built a degree of trust (McKay et al, 2022).

Democratic Republic of the Congo 2019 *Well trained and well protected Red Cross teams have been providing safe and dignified burials since the onset of the outbreak, approaching every burial as if the person was infected. This protects not only themselves, but communities as well. By engaging communities in the Ebola response, teams have been able to better understand concerns from communities. © Corrie Butler / IFRC*

5.3 WHAT WE NEED TO DO CREATE AND USE A DATA ECOSYSTEM FOR HEALTH AND HAZARDS

What does a better collection of health and hazard data look like? The guiding principle should be that the data and evidence must be as useful as possible. It must be suitable to help answer key questions and inform decision making.

5.3.1 Building the new hazard data ecosystem

It is crucial that disparate data sources be integrated as much as possible. For example, data from community-based surveillance needs to be integrated directly into local and national health surveillance systems. This poses considerable technical challenges. However, two positive developments should facilitate better global datasets on disasters.

First, the IFRC is convening a group of key partners to develop an improved global database of disasters: the Global Crisis Data Bank. This database will curate information from the IFRC's global network of 192 National Societies, plus other sources including the UN and national and local governments. The National Societies are an under-utilised resource. While some maintain their own databases or support government databases, many do not – yet their staff and volunteers have access to a huge amount of information about natural hazards, the people impacted by them, and responses by humanitarians and other actors. The Global Crisis Data Bank will synthesize these three kinds of information by providing a system through which National Societies can readily upload the information they have, in a universal and accessible format. The entire dataset will be made available through the IFRC's GO platform (IFRC GO, no date a) (see Box 5.4). The project's initial phase is being funded by the US Agency for International Development (USAID) and is being implemented in partnership with United Nations Office for Disaster Risk Reduction (UNDRR), United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA), the World Meteorological Organization, the World Bank/Global Facility for Disaster Reduction and Recovery, academia – including the EM-DAT team at the Centre for Research on the Epidemiology of Disasters hosted by the Catholic University of Louvain – and others. Development is currently underway, with a view to bringing an initial version of the Global Crisis Data Bank online by 2025.

Second, the UN is also supporting disaster data through the newly formed UN Complex Risk Analytics Fund (CRAF'd) (CRAF'd, no date). The scheme was launched in October 2021. CRAF'd will offer funding for disaster data initiatives, with the aim of creating "a stronger data ecosystem". This will enable humanitarians and other actors to better anticipate disasters, to prevent them where possible, and otherwise to respond effectively. UNDRR also has ongoing projects supporting national disaster loss accounting systems (DesInventar, no date), while the World Bank has established its Global Crisis Risk Platform (World Bank, 2018). All these platforms offer useful foundations on which to build.

> **Just 21.3% of tests administered to date have been used in low- and lower-middle-income countries, even though 50.8% of the global population lives in those countries.**

A key challenge for all such integrated hazard datasets is standardization. As we have seen, disparate methods of recording data have hampered attempts at integration and holistic analysis. While some impacts like economic losses and fatalities have been well recorded, other impacts such as displacement and building damage are defined and recorded differently around the world. Second-order impacts, such as loss of livelihoods or access to services, have been even more difficult to record.

One initiative that points the way forward is the Common Alerting Protocol (CAP), with caveats (GDPC, no date). This is a standardized message format for emergency alerts, which can work across multiple communications media. CAP enables rapid and systematic dissemination of health and hazard data across an entire country, prompting the public to take the necessary actions to protect themselves. The CAP illustrates that it is possible to create a standardized system for conveying complex, usable information to multiple audiences. The key is to adapt such global standards to local contexts. To this end, the IFRC has built the Alert Hub to amplify the use of CAPs (IFRC Alert Hub, no date). This digital service enables National Societies to work with national authorities to adapt messaging to suit local languages, cultures and preferences (IFRC, no date b). It should be stated that, at this point, adapting such a standardized approach for all health-related hazards remains a challenge because alerts and key messages must all be disease-specific. Discussions on how to address this challenge are ongoing.

5.3.2 Turning data into real learning and, most importantly, action

Societies can have short memories for traumatic events like pandemics. There is an understandable desire to forget, and many other issues to deal with. Famously, the 1918 influenza pandemic left little cultural footprint. Something similar is happening in 2022, with many public figures declaring that the COVID-19 pandemic is over despite ongoing waves of infection. There is a risk that, despite all the data and documentation, the lessons of the pandemic will be forgotten.

Governments and other actors, including humanitarian organizations, need to embed the lessons they've learned from the pandemic for the long term by translating them into institutional changes. States are currently trying to do this by amending laws related to health and hazards and by creating new ones (see Chapter 6). Here are three additional ways to ensure that this process of learning and adaptation actually takes place.

Make learning a standard institutional practice. Many organizations, from governments to community-level aid organizations, are set up in a way that prioritizes existing practices at the expense of learning and adaptation. Decisions are often based on people's experiences rather than data (Hankey, 2020). However, in a world beset by multiple hazards, all changing in complex ways, this static approach is inadequate. Instead, learning must become a central aim of every organization and government department involved in health and disaster management, whether a government department or a community health centre. This entails challenging but necessary cultural shifts, like prioritizing experimentation and enabling dialogue between groups (Senge, 1990). If a local volunteer finds a better way to solve a problem, their colleagues should feel empowered to embrace and disseminate the new approach. In 2021, IFRC released an app called

V-Community for volunteers to exchange knowledge freely, regardless of geography or language (Google Play, no date). However, for major changes to occur, organizations must trust their people and create an environment of psychological safety. IFRC's Learn to Change initiative is trying to create environments where genuine change can occur (Learn to Change, no date).

Manage and organize data so it is accessible and comprehensible. The volume and range of data on disasters and emergencies is growing ever larger. This is a good thing, but data is more noise than signal if not managed correctly. To learn from this firehose of data, and make decisions based on it, we must make it both available and understandable. The COVID-19 Dashboard created by teams at Johns Hopkins University is a prominent example (Johns Hopkins University, no date). The site compiles data from a wide range of sources and synthesizes it in easily understood formats like world maps and graphs. UNICEF Data and Analytics has built a comprehensive site presenting its data on multiple aspects of children's wellbeing (UNICEF, no date). Similarly, the World Bank's Data Catalog collates all its data on development in a single site so that users can easily find, download and share (World Bank Data Catalog, no date). IFRC has moved in this direction with its online databases. The GO platform "aims to make all disaster information universally accessible and useful" by maintaining an up-to-date record of all the emergencies to which the IFRC network is responding (IFRC GO, no date a). It also has data about risks that National Societies face and imminent events to which they may need to respond. A new dashboard was added in 2022 that visualizes learnings from COVID-19 according to subject and location (IFRC GO, no date c). Furthermore, GO also collects instances of learning and challenges from National Societies' response operations and categorizes them, enabling peer learning (IFRC GO, no date d). Meanwhile the Federation-wide Databank and Reporting System (FDRS) collects data annually from the IFRC's 192 National Societies. It shows their finances, how many people their programmes reach, and more (IFRC FDRS, no date). This information can be used by members of National Societies, and other humanitarian actors, to guide decision making. Finally, the Data Entry and Exploration Platform (DEEP) assists in needs assessment by enabling structured management of secondary data (DEEP, no date). GO, FDRS and DEEP are models of good information management that others can emulate.

Consider staffing and capacity needs to power this change. Embracing learning and managing information will enable better responses to hazards. However, digital technologies and data are ultimately powered and translated by human beings. Planning, reinventing processes, and collecting and analysing data all require dedicated staff with the time and security to iterate and improve. In contrast, when organizations are short staffed they dash from crisis to crisis, repeatedly reinventing the wheel. This is particularly true for humanitarian organizations, which often find themselves underfunded during 'good times' and shed staff and volunteers, along with all their shared knowledge, only to have to rapidly redeploy when a new emergency occurs (see Chapter 3). When organizations like National Societies have more predictable staffing and financial resources, they have time to absorb lessons from each crisis and reform their practices for next time. Similarly, with greater access to necessities like databases, and the training to use them, learning can become a regular practice (Johnston, 2022). Alongside this, digital and data literacy in communities should be prioritized. This gives communities agency over the flow of their data. Likewise, data literacy and analysis should be performed as locally as possible. This way, communities and local actors can become core participants in the use of data (see Chapter 2).

BOX 5.4 / CASE STUDY
THE ROLE OF IFRC GO IN THE COVID-19 PANDEMIC

GO is one of IFRC's primary data platforms. Launched in 2018, it receives and visualizes data from National Societies all around the world. It includes data on emerging hazards, appeals and National Society responses (IFRC GO blog, 2020).

COVID-19 posed a considerable challenge for the GO team, which has rapidly developed multiple new features. They added a COVID-19 dashboard; this provides key data in an interactive way, helping to guide analysis of the ongoing pandemic response. It includes case and mortality trends, humanitarian severity level, vaccination implementation and acceptance rates, and pandemic data. The database enabled National Society teams to quickly access all the relevant information, even when movement restrictions meant they were working remotely for weeks at a time (IFRC GO blog, 2021).

KEY RECOMMENDATIONS

Link crisis data to action. All data collection should be focused on shaping and driving actions that are beneficial to people and communities. For example, it should identify people's vulnerabilities so they can be protected or their capacities so that they can be built on. To achieve this, we must design information products and services to support evidence-based decision making. The right data must be supplied to the right people at the right time. Alongside this, we must ensure preparedness for effective response in terms of information technology, information management, and digital emergency operations centre platforms.

Agree on a common set of indicators and update those that proved to be flawed. We need an internationally agreed set of indicators for hazards, risks and vulnerabilities. They must be easily shared and understood, including by local actors, and adaptable to a wide range of emergencies and disasters.

Build integrated crisis data systems and invest in the human beings who analyse and communicate their findings. Such systems must collect useful data on the multiple hazards communities face, the impacts of those hazards, who is most at risk, and our societal responses. Community-based surveillance has proven its value once again during the COVID-19 pandemic: it should be expanded and integrated into wider health systems. The data formats must be standardized as much as possible to enable easy comparison and overlaying of multiple datasets. Furthermore, it is essential to collect more sociological and qualitative data to understand people's needs, contexts and attitudes. Only with such sociological data can responses be designed appropriately.

Ensure community insights and feedback drive data collection and use, and decision making. Communities must have a strong role in the collection, analysis and use of crisis data. Everyone must have access to the digital world to give them agency over their data and prevent digital exclusion. Community feedback data must be gathered during all phases of emergency management and its messages listened to and implemented. This requires emergency management teams to become more responsive and agile. Integrating community perspectives into decision making requires coordinated efforts, financial sustainability, and long-term capacity strengthening of local organizations and community systems.

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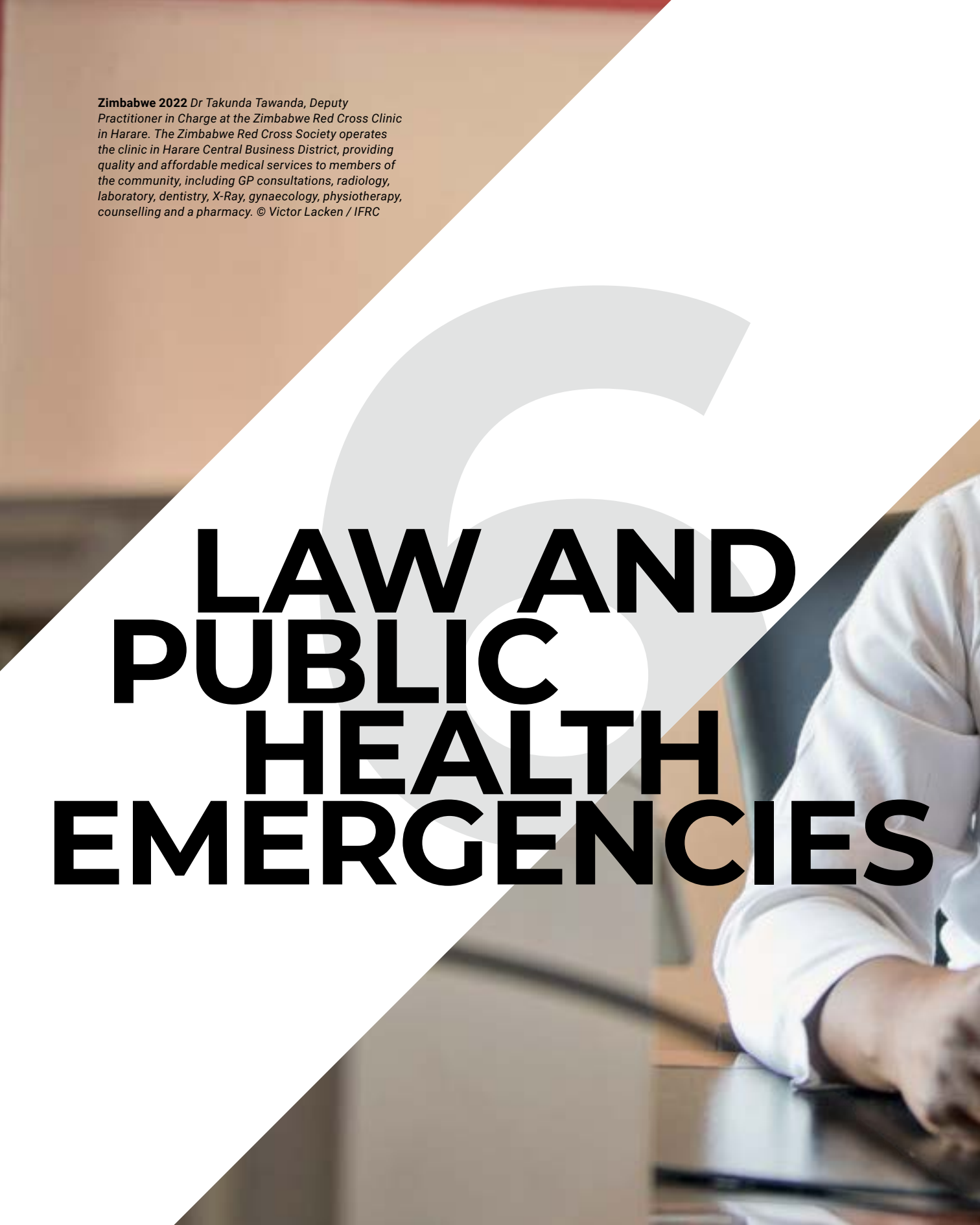

Zimbabwe 2022 *Dr Takunda Tawanda, Deputy Practitioner in Charge at the Zimbabwe Red Cross Clinic in Harare. The Zimbabwe Red Cross Society operates the clinic in Harare Central Business District, providing quality and affordable medical services to members of the community, including GP consultations, radiology, laboratory, dentistry, X-Ray, gynaecology, physiotherapy, counselling and a pharmacy. © Victor Lacken / IFRC*

6 LAW AND PUBLIC HEALTH EMERGENCIES

Laws and policies are the basis of a successful response to a public health emergency

Contents

INTRODUCTION

The COVID-19 pandemic revealed serious deficiencies in legal preparedness for public health emergencies. These deficiencies exist at both international and domestic levels, and they span both the content and implementation of existing instruments. Inadequate legal frameworks have contributed to the COVID-19 pandemic becoming a protracted global health emergency. Nevertheless, there is reason for optimism. The COVID-19 pandemic has boosted recognition of the importance of legal preparedness for emergencies, which was previously neglected in the health sphere. It has also helped to identify key areas for improvement, notably by highlighting gaps in the content of, and compliance with, the International Health Regulations (2005). The current negotiations on a new, wide-ranging international pandemic instrument are an opportunity to strengthen international legal preparedness for public health emergencies, drawing on the important lessons from the COVID-19 pandemic. However, international efforts to strengthen legal preparedness will also need to be replicated at the domestic level, with technical and financial support from the international community when needed, if they are to translate into practical action.

Definitions

Legislation, laws and instruments: This chapter considers the role of law in public health emergencies. This predominately means the legislation and/or legal instruments (the acts, ordinances, statutes, regulations and orders – often referred to as hard law) that create the framework for public health emergency risk management. It also means the policies, plans and guidance which, although not legislation per se, can often play an important role and are sometimes referred to as soft law (IFRC, 2021).

Legal facilities are special legal rights that are provided to a specific organisation (or a category of organisations) to enable it or them to conduct operations efficiently and effectively. Legal facilities may come in the form of positive rights (i.e. to do a particular thing), access to simplified and expedited regulatory processes, or exemptions from ordinary laws (IFRC, 2021).

6.1 WHAT WE SAW
PUBLIC HEALTH EMERGENCY LAWS WERE DRAFTED IN HASTE

As discussed in the preceding chapters, the COVID-19 pandemic revealed serious and widespread deficiencies in our efforts to prevent health risks and prepare for **public health emergencies (PHEs)**.

In many countries, particularly in the first few months of the pandemic, the response was chaotic and disorganized. As discussed in Chapter 1 section 1.1.1, different government actors struggled to coordinate their actions and develop effective and accessible communication strategies, and health systems and workers found themselves overwhelmed by unexpectedly high numbers of cases requiring hospitalization, global shortages of essential supplies including oxygen and personal protective equipment, insufficient staffing, and inadequate emergency protocols.

One of the root causes of the chaos was gaps in the content and implementation of laws and policies, at both the international and domestic levels. Legal frameworks have the potential to create an enabling environment for effective and timely prevention, preparedness for, response to, and recovery from PHEs. International law can create reciprocal obligations for states to cooperate and coordinate with one another in the management of health risks and PHEs. Meanwhile, national and subnational laws can establish the architecture for comprehensive and effective domestic systems for managing health risks and PHEs. They can also mitigate many of the key challenges discussed in this report, from ensuring that effective prevention and preparedness takes place (Chapter 1) to facilitating the participation of local actors and communities (Chapter 2) and protecting vulnerable groups from disproportionate health and socioeconomic impacts (Chapter 4). However, this potential was not realized, contributing to states' lack of capacity to face the COVID-19 pandemic.

When the COVID-19 pandemic began, states had to develop new laws at lightning speed, often without adequate time for robust debate or consultation with experts and stakeholders. While some degree of emergency law-making may be inevitable in the face of a major emergency, the weaknesses and gaps in existing laws necessitated a huge volume of emergency law-making. Partly due to their rapid development, these new laws also had gaps and unintended consequences, undermining the effectiveness of the response. As will be seen in this chapter, to avoid repeating these mistakes in future outbreaks, epidemics or pandemics we need to invest in **legal preparedness** for PHEs.

6.2 WHAT WE LEARNED
THERE WAS A LACK OF LEGAL PREPAREDNESS BOTH INTERNATIONALLY AND DOMESTICALLY

In mid-2021, two major reports were released examining the functioning of international and domestic legal frameworks during the COVID-19 pandemic. The reports documented multiple failings.

Firstly, the International Health Regulations (IHR) Review Committee, established by the Director-General of the World Health Organization (WHO), published a report on the functioning of the IHRs during the COVID-19 response (WHO, 2021).

Secondly, IFRC published a report entitled *Law and Public Health Emergency Preparedness and Response: Lessons from the COVID-19 Pandemic* (IFRC, 2021). The following sections of this chapter draw on these two reports to identify, in turn, the major weaknesses and gaps in domestic and international legal and policy frameworks relating to PHEs.

6.2.1 Weaknesses and gaps in domestic laws and policies

Both the IHR Review Committee COVID-19 report and the IFRC law and PHE report found that many states' domestic legal frameworks for PHEs were outdated or not fit for purpose when the COVID-19 pandemic struck (IFRC, 2021; WHO, 2021). Some states had laws dating back to the early 1900s or even the late 1800s (IFRC, 2021). The IFRC law and PHE report, which is based on research in a sample set of 32 states, identified the following common weaknesses and gaps in domestic laws and policies relating to PHEs.

- **Need for greater integration:** In most cases, PHEs are managed through a mix of both general disaster laws and specific PHE laws (IFRC, 2021). Integration between these different types of laws is needed to avoid conflicts, duplications or gaps in the practical arrangements they create (for example leadership, roles and responsibilities, and coordination mechanisms) (IFRC, 2021). As discussed in Chapter 1, integration is also key to creating a multi-hazard system that can manage increasing, compounding and overlapping risks.
- **Lists of prescribed diseases:** Some states have laws targeting a list of prescribed diseases including, in some cases, diseases that are no longer prevalent (for example smallpox) (IFRC, 2021). If a law applies only to a list of prescribed diseases it cannot be used to address novel or emerging health risks such as COVID-19.

- **Lack of provisions on prevention and recovery:** While domestic laws and/or policies generally do address PHE preparedness and response, the prevention and recovery phases are noticeably absent from many states' laws and policies (IFRC, 2021). This is a major omission because – as discussed in Chapter 1 – many health risks, including zoonotic spillover from animals, can be prevented.
- **Need for more detailed preparedness provisions:** While laws and/or policies do generally make some provision for PHE preparedness, there is scope for clearer and more detailed provisions, including creating enforceable preparedness duties (for example contingency planning, training) for key actors (IFRC, 2021). As discussed in Chapter 1, boosting preparedness is critical because prevention has its limits; despite our best efforts, it is inevitable that some disease outbreaks will occur.
- **Absence of an all-of-society and all-of-government approach:** Domestic legal and policy frameworks rarely explicitly provide for the participation of non-governmental actors in PHE preparedness and response through, for example, the allocation of formal roles and responsibilities or inclusion in coordination mechanisms. This is a major gap given that – as discussed in Chapter 2 – local actors and communities need to be at the centre of epidemic and pandemic prevention, preparedness and response.

In addition to these general weaknesses and gaps, some of the practical challenges that arose during the pandemic had, as their root cause, a lack of exceptions to 'situation normal' laws. In some countries, public financial management and procurement laws inhibited fast-tracking the procurement of drugs and medical products (WHO, 2021). Efforts to optimize the use of the health workforce were hindered by professional licensing laws that did not allow practitioners to move between different subnational jurisdictions, or for retired practitioners and final-year students to practise (WHO, 2021).

In some cases, the laws that were rapidly introduced to respond to the COVID-19 pandemic had gaps and unintended consequences, ultimately undermining the effectiveness of the response. For example, lockdowns, border closures and export restrictions were not always subject to clear exemptions for humanitarian actors (though exemptions were generally provided for other frontliners, such as medical personnel). This impeded humanitarian actors' ability to assist those most in need, both from the COVID-19 pandemic and from the many other disasters and crises that continued to occur (IFRC, 2021). These types of restrictions also had negative impacts on vulnerable groups, including restricting access to health and social care for older people, causing migrants to become stranded without livelihoods and creating barriers to people fleeing domestic violence (IFRC, 2021).

Finally, The *Lancet* Commission on lessons for the future from the COVID-19 pandemic identified a widespread failure to formulate policies that addressed the unequal impacts of the pandemic (Sachs et al, 2022). Indeed, as discussed in Chapter 4, the COVID-19 pandemic had its most severe impacts on vulnerable groups that were already left behind, who suffered disproportionate health and socioeconomic impacts. On this point, the IFRC law and PHE report found that legal and policy measures introduced to protect and assist vulnerable groups during the COVID-19 pandemic were more prevalent in states with more resources and had to be introduced by rapidly making new laws and policies, rather than relying on existing provisions (IFRC, 2021).

6.2.2 Weaknesses and gaps in international law

When the COVID-19 pandemic struck, there were also major weaknesses and gaps in the international legal framework relating to PHEs. The most important international instrument relating to PHEs is the International Health Regulations (IHR) (2005) (IHR, 2005). This international treaty is legally binding in 196 states, including the 194 Member States of the World Health Organization (WHO). The IHR's central aim is to prevent, protect against, control and provide a public health response to the international spread of disease (IHR, 2005). Unfortunately, gaps in both the content and implementation of the IHR undermined the management of the COVID-19 pandemic.

The IHR requires states parties to implement 'core capacities' (IHR, 2005 art 13(1), Annex 1A) for surveillance and response to public health events which, if they had been fully implemented, should have strengthened their preparedness for a pandemic. However, there have been widespread deficiencies in states' implementation of the core capacities, notwithstanding the fact that the final date for full implementation of the core capacities was June 2012 (WHO, 2011; WHO, 2015; WHO, 2016; WHO, 2021; Bartolini, 2021). Self-reported data reveals ongoing inadequacies: in 2021, the average implementation rate for the 13 core capacities was 65% (e-SPAR, no date). Partly underlying the deficiencies in IHR implementation is the fact that the IHR lacks enforcement mechanisms: it 'has no teeth' (e-SPAR, no date).

The IHR Review Committee COVID-19 report found the "vast majority" of countries had low or moderate levels of national preparedness and identified critical gaps in governance, subnational capacity, and essential public health functions like testing, contact tracing and treatment (WHO, 2021). The committee concluded that lack of compliance of states parties with certain obligations under the IHR, particularly on preparedness, contributed to the COVID-19 pandemic becoming a protracted global health emergency (WHO, 2021). The committee also expressed concerns regarding the information-sharing obligations under the IHR, stating that renewed commitment is needed with respect to the notification provisions under the IHR, including provision of sufficient information by states parties to the WHO (WHO, 2021).

In addition to these weaknesses in implementation of the IHR there are gaps in the content of the treaty itself. As the IHR Review Committee COVID-19 report found, the IHR does not cover several of the elements necessary for the comprehensive global management of health risks and PHEs (WHO, 2021). Key gaps in the IHR include:

- Prevention and management of zoonotic risks as part of a One Health approach.
- All-of-government and all-of-society coordinated national health emergency planning and preparedness.
- Benefit sharing for countries in need (for example access to antivirals, vaccines and other medical countermeasures).
- Sharing of pathogens, specimens and genome sequencing information (WHO, 2021).

Meanwhile, the IFRC law and PHE report identified another important gap in the IHR. The core capacities do not reference the need for domestic authorities to develop an early warning system to provide clear and actionable early warnings of health risks to the general population (IFRC, 2021). This is a significant omission given the importance of early warnings in preventing or impeding the spread of infectious diseases. Thus, even if all states parties fully implemented the IHR, this would not be enough to ensure the effective global management of health risks and PHEs.

Italy 2020 *As requested by Italian authorities, an Italian Red Cross team is on the Rubattino ferry boat taking care of 183 migrants rescued by two vessels in the Mediterranean sea and now in quarantine. The Italian Red Cross team is providing a wide range of services: health, psychological support, COVID-19 tests, restoring family links, cultural mediations, distribution of hygiene kits and masks, and food distribution. © Italian Red Cross*

6.3 WHAT WE NEED TO DO CONTINUOUSLY IMPROVE LEGAL PREPAREDNESS

International and domestic law has the potential to provide the foundation for preventing, preparing for, responding to and recovering from PHEs far more effectively and quickly. To realise this potential, it is necessary to invest in **legal preparedness** for PHEs. Legal preparedness refers to having in place well-designed, well-understood and well-implemented laws, policies and plans for PHEs. Importantly, legal preparedness is not just an outcome, but equally an ongoing process that entails regularly reviewing and updating laws and ensuring they are fully implemented (IFRC, 2022).

At the domestic level, legal preparedness means developing laws, policies and plans that provide the architecture for a comprehensive system for managing health risks and PHEs. To this end, domestic laws need to, amongst other things, assign clear roles and responsibilities, create coordination mechanisms, establish state of disaster/emergency mechanisms, and allocate financial resources. Additionally, they should contain legal provisions to mitigate the common legal problems that arise during PHEs. In many cases, this entails developing targeted exceptions to 'situation normal' laws, to fast-track the availability of the necessary relief personnel, goods and equipment.

Achieving domestic legal preparedness is a continual process involving regularly reviewing and updating laws, policies and plans relating to PHEs. Governments need to review and update these instruments periodically (for example once every five years) to ensure that they do not become outdated (IFRC, 2022). This should also take place after a significant PHE occurs to enable the identification and implementation of lessons learned (IFRC, 2022). A good example of this is the legal reforms introduced by the Republic of Korea following the Middle East respiratory syndrome (MERS) outbreak of 2015, which resulted in the country having a high level of legal preparedness to face COVID-19 (see Box 6.1). Furthermore, as laws can only be as effective as their implementation, governments also need to ensure their full implementation through developing operational procedures, training actors (especially concerning their roles and responsibilities), and dissemination and awareness raising for the public (IFRC, 2022).

IFRC has developed an assessment tool to guide the review of existing laws, policies and plans relating to PHEs. Called the Guidance on Law and Public Health Emergency Preparedness and Response (PHE Guidance) (IFRC, 2022), it is designed to assist domestic decision makers to identify critical legal and policy issues, and to evaluate how well those issues are currently addressed by existing laws and policies. The guidance comprises nine key questions. For each question, there is a rationale, a set of targeted sub-questions, and a list of possible laws and policies to consider. When a country completes a review using the PHE Guidance and other relevant guidance documents, it can identify weaknesses and gaps that need to be addressed, either by amending or developing new laws and policies (WHO, 2009a; WHO, 2009b; WHO, 2009c).

Legal preparedness is not just an outcome, but equally an ongoing process that entails regularly reviewing and updating laws and ensuring they are fully implemented.

Netherlands 2020 *This events center in the Dutch city of Maastricht has been set up as a temporary hospital unit for COVID-19 patients if the hospitals in the region get overcrowded. Nearly 280 beds with full equipment have been set up. Red Cross volunteers will support nursing staff with non-medical activities such as handing out meals to patients and offering comfort to patients. © Arie Kievit / Netherlands Red Cross*

At the international level, legal preparedness requires two broad categories of obligations. The international community must ensure that legal instruments create both types of obligation. First, it is necessary to have international legal obligations concerning how states manage health risks and PHEs in their own territories, both to ensure minimum good practice and to avoid the spread of health risks to other states. This includes, for example, obligations to address the risks of emergence and transmission of zoonotic diseases and to provide early warning of new health risks to the public, or principles, such as equity, that should guide domestic laws. Second, international legal obligations are needed to facilitate cooperation and coordination between states in the management of health risks and PHEs. This includes sharing and facilitating access to information, pathogen samples, genome sequencing data, diagnostics, therapeutics and technology. Such obligations need to be well implemented; based on experience with the IHR, this may require strengthening compliance through mandatory external or peer-review evaluation mechanisms (WHO, 2021; IFRC, 2021).

Fortunately, two endeavours to improve the international legal framework are currently underway. Firstly, a new international legal instrument governing pandemics is being negotiated under the auspices of the Intergovernmental Negotiating Body, which was established by the World Health Assembly in December 2021 (WHA, 2021). Secondly, in parallel, a Working Group on Amendments to the International Health Regulations (2005) has been mandated by the World Health Assembly to consider targeted amendments to the IHR (WHA, 2022). These processes will culminate in 2024, when both the working group and the Intergovernmental Negotiating Body report to the 77th World Health Assembly with, respectively, a proposed package of targeted amendments to the IHR and a draft pandemic instrument (WHA, 2021; WHA, 2022).

Through these parallel processes, the international community has an opportunity to strengthen international legal preparedness for PHEs, drawing on the important lessons from the COVID-19 pandemic. In addition to addressing the gaps identified by the IHR Review Committee COVID-19 report, it will be critical that any new pandemic instrument:

- First, addresses equity in its broadest sense, not only in terms of access to medical countermeasures (for example therapeutics and diagnostics) but also in terms of access to health countermeasures, a broader term that also encapsulates information and primary healthcare (among other things). Equally, addressing equity in its broadest sense means recognizing the social determinants of health and the need for related legal and policy measures during PHEs, as well as a protections for access to basic health services, regardless of legal status.
- Second, addresses basic principles guiding domestic legal and policy frameworks, which could include, inter alia, the need for whole-of-society and whole-of-government frameworks, the need for legal facilities and protections for frontline responders, or an obligation related to early warning and early action within countries.
- Finally, recognizes the importance of community engagement and the role of local actors and communities in the management of health risks and PHEs, and specifies what that might entail, bearing in mind the variety of domestic legal contexts.

BOX 6.1 / CASE STUDY

LEGAL PREPAREDNESS PAID DIVIDENDS WHEN COVID-19 HIT THE REPUBLIC OF KOREA

When the first case of COVID-19 was detected in the Republic of Korea on 20 January 2020, the country was well prepared — including legally prepared.

The Republic of Korea's main law regulating pandemic prevention, preparedness and response is the Infectious Disease Control and Prevention Act. It was passed in 2010 to implement the International Health Regulations (2005) and provided the legal basis for the response to the 2015 Middle East respiratory syndrome (MERS) outbreak. Unfortunately, the infectious disease response system did not function effectively early in the MERS outbreak, which grew to be the largest outside the Middle East with 186 confirmed cases and 38 deaths (Moon, 2021; WHO, no date; Yang et al, 2021).

Afterwards, the National Assembly swiftly updated the Act to implement lessons learned (MHW RoK, 2015). The changes to the Act underpinned comprehensive reforms to strengthen the country's system for preventing and responding to disease outbreaks (Moon, 2021). Some of the key changes were:

- Establishing an information system to systematically collect and analyse infectious disease-related information.
- Allowing the Minister of Health and Welfare to quickly designate a new infectious disease; previously this took three months, slowing down containment measures.
- Providing quarantine officers and epidemiological investigators with powers to take on-the-spot measures to stop an infectious disease spreading (for example evacuating residents).
- Permitting the government to collect information from patients and medical institutions and share that information widely, including with the public.
- Stipulating a minimum number of epidemiological investigators to be assigned to the central, city and province levels (MHW RoK, 2015).

By 2017, the country had made large improvements. A WHO Joint External Evaluation found that its impressive preparedness derived from its recent experience with the MERS outbreak in 2015, and that it now had comprehensive laws, policies, plans and manuals in force (WHO, 2017).

The Republic of Korea's efforts paid dividends when COVID-19 emerged. The country succeeded in controlling case numbers in February and March 2020, without stringent lockdown measures (Yang et al, 2021). The 2015 reforms were a key enabling factor. The revised Act permitted the Minister of Health and Welfare to rapidly designate COVID-19 as a new infectious disease. It also ensured there was an existing network of 134 epidemiological investigators at central, city and province levels. These investigators sprang into action, accurately tracking the spread of the virus. The revised Act also enabled the government to collect information from patients and medical institutions and share it with the public; this was not possible for legal reasons during the MERS outbreak (Moon, 2021).

KEY RECOMMENDATIONS

The international community must boost international legal preparedness for PHEs. This requires adopting a new international pandemic instrument and updating the IHR to underpin the effective and equitable global management of health risks and PHEs. Any new pandemic instrument should address equity in its broadest sense, promoting equitable access to health countermeasures both between and within states. Any new pandemic instrument should also emphasize the importance of community engagement and the role of local actors and communities in the management of health risks and PHEs. Finally, it should set the basic principles guiding domestic legal and policy frameworks.

National and subnational governments must strengthen domestic legal preparedness for PHEs. They can do so by reviewing their laws, policies and plans and updating them to address the weaknesses and gaps identified. The IFRC's Disaster Law team stands ready to work with governments to review and update existing instruments to ensure they are fit for purpose. Specifically, in many countries domestic legal and policy frameworks relating to PHEs need to be updated to:

- Enhance integration with general disaster laws and policies to avoid conflicts, duplications or gaps in the practical arrangements they create (for example leadership, roles and responsibilities, and coordination mechanisms).
- Be broad enough to address novel and emerging health risks rather than applying only to a list of prescribed diseases.
- Address all aspects of managing PHEs from prevention through to preparedness, response and recovery.
- Include clearer and more detailed provisions on preparedness, including legally requiring key actors to perform key preparedness actions and providing them with the support they need to do it (for example contingency planning).
- Facilitate the participation of all actors and stakeholders (especially local actors and communities) through the allocation of formal roles and responsibilities, inclusion in coordination mechanisms and consultation.
- Provide legal facilities to all recognized frontline responders, including authorized local actors such as National Societies, to facilitate their movement and that of the goods they need, and give them priority consideration for access to pandemic response products to protect them.
- Introduce legal provisions to mitigate the common legal problems that arise during PHEs, including targeted exceptions to 'situation normal' laws that impede the availability of relief or medical personnel, goods and equipment.
- Include early warning, early action obligations towards their own populations.
- Include legal protections to guarantee equal access to essential health countermeasures, including pandemic response products, for the most vulnerable groups and communities, regardless of legal status and on the basis of need.

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Mediterranean Sea, International Waters 2021 *On board the Ocean Viking ship, IFRC cultural mediator Abdelfetah Mohamed supports survivors rescued at sea. Crew aboard the Ocean Viking search for persons who are in danger of drowning and then care for them aboard as they make the journey to safety. Thousands die each year as they escape Libya and attempt to cross the Mediterranean Sea. © Alexia Webster / IFRC*

LOOKING TO THE FUTURE

Conclusions and recommendations

CONCLUSIONS

The ability to prevent, detect and respond early to public health emergencies alongside other shocks and stresses is a humanitarian, social and economic necessity for two reasons. The first is that these shocks and stresses, including extreme weather events, are growing more frequent and intense, and our ability to merely respond to them is limited. The second is that the conditions for the spread of contagious disease outbreaks, including population growth, unplanned urbanization, international travel and commerce, will continue to grow for the foreseeable future. We simply cannot afford to wait anymore. We must invest in much stronger preparedness systems. By doing so, we will be investing in our future.

However, while the data indicates there has been some progress in the area of disaster risk reduction, in that fewer hazards appear to become emergencies, the same cannot be said about epidemic and pandemic prevention and preparedness. Technological and epidemiological advances are there, but strong preparedness systems, including health systems strengthening, are found to be severely lacking. To be sure, humanity was not prepared for the COVID-19 pandemic. Moreover, even the most advanced preparedness systems often neglect the role and added value of local actors and communities, an aspect of response that the fight against HIV clearly demonstrated.

Governments and other actors must now take action to ensure we are prepared for the next health emergency.

As we have explained in this report, preparedness is not a phase of the response and should not be confused with readiness. It is a process and a set of actors, skills, infrastructure and procedures that are needed for a society to more effectively and rapidly prevent, detect and respond to public health outbreaks, epidemics and pandemics. It is worth singling out some of the aspects of preparedness that are frequently missing:

- Preparedness must go beyond the availability of medical products, services and information and focus more on accessibility. This will allow us to deliver the products, services and information to the communities that most need them, and to encourage their uptake.
- Preparedness goes beyond the ability of governments to apply a standard set of operating procedures in the event of a health emergency. Rather, it must begin with the needs, vulnerabilities and strengths of communities, for it is at this level that diseases will first be detected and controlled.
- Preparedness goes beyond our ability to face a single threat; at a time where a range of hazards and risks are growing increasingly frequent and interlinked, we must be prepared for a multitude of risks. At the local level, this frequently entails a set of basic and common procedures, together with greater risk awareness and more accessible, localized services.
- FInally, epidemics and pandemics have impacts that go beyond physical health: among others, they affect livelihoods, mental health, education and violence. Preparedness means having systems and policies in place to tackle all of these impacts.

In order to meet these criteria, preparedness must be underpinned by **trust, equity and local action**. These are mentioned in other assessments of the COVID-19 pandemic response, but they have been under-emphasised and under-analysed. A fuller understanding of all three will enable greater preparedness.

Trust At every stage of the disaster management process, it is crucial to build trust in and with communities. The value of trust is now broadly accepted, but global discussions have not given enough attention to how trust is built. There is a tendency to assume that trust is achieved by communicating more or countering misinformation; for example, that governments should provide more or better information to people. In fact, building trust is far more complex; it requires genuine two-way communication and coordination. Communities must be included in all phases of preparedness, including co-designing measures and programmes, and their concerns must be taken into account. This will have three tangible benefits: communities will 1) know their concerns and priorities matter, 2) meet and be familiar with responders far in advance of a crisis, and 3) understand better and be more receptive to difficult decisions, such as public health measures.

Equity Public health emergencies and other disasters both thrive on and aggravate existing inequities, particularly if preparedness frameworks and policies are not inclusive and co-designed with local actors and communities. Equity is now at the centre of global health policy discussions. However, it is often discussed only in terms of people's access to pandemic response products like vaccines. This is critical, but too narrow. We must ensure equal access to the full range of essential health countermeasures, which includes medical countermeasures as well as access to key health services. Equal access to health countermeasures requires proximity, affordability, legal access, and the willingness to trust these countermeasures. First, we propose this be achieved by strengthening community health systems, prioritizing the most vulnerable in legal and policy frameworks and ensuring access to health countermeasures regardless of legal status. Second, in order for shocks and stresses not to aggravate existing inequities, we believe that strengthening social protection systems in advance of a crisis is key. Third, we must make more rapid progress towards a needs-based allocation of humanitarian funding, and one that supports local infrastructure and capacity.

Local action Preparedness, while fundamentally a responsibility of governments, cannot be designed and implemented from the top. Local actors and communities, who are at the frontline of the response, should not only inform prevention and preparedness efforts but also co-design them. Unfortunately, we often fail to leverage their knowledge, training and capabilities. It is necessary to devise ways to include local actors and communities in health systems and disaster risk management programmes. Community health systems enable this by creating a bridge between communities and health authorities. To do so, they must be funded, supported and coordinated with national health systems (noting that a range of legal options to do this exist).

Bangladesh 2021 *A Bangladesh Red Crescent Society volunteer helps Subbir Hossain, a patient suspected to have COVID-19 suffering from shortage of breath in Satkhira Medical College Hospital. © Mir Hossen Roney*

The consequences of poor decisions and recommendations to address them

The findings and recommendations made throughout this report have addressed what we see as gaps in the COVID-19 response to date. Moreover, as we head into negotiations on the International Health Regulations and on a new pandemic agreement at the World Health Assembly, and as we observe the direction that some domestic authorities are taking at home, we see areas of serious concern. If left unaddressed, these issues could lead us to either repeat the mistakes of the past or aggravate existing inequities and tensions.

In the next three sections, we address our key concerns about trust, equity and local action, and how to resolve them. Finally, we present three measurable targets for the next three years.

Trust

Top-down social control measures like lockdowns and vaccine passports, when implemented without trust and transparency, **often lead to polarization and create resistance to public health measures**.

Moreover, **a narrow focus on increasing communication campaigns and countering mis-information will not build trust. It may even backfire** in situations of political and social unrest, or discrimination.

Trust can only be built through:

- **Proximity:** People trust people they know, such as local actors.
- **Education:** People trust what they understand, via health literacy programmes.
- **Listening:** People trust those who listen to them and act on their concerns, such as trained community engagement specialists who gather feedback and analyse it.
- **Access to services:** People trust those who address their needs, including their basic health and social protection needs.
- **Ownership:** People trust measures they feel ownership of and are consulted on.

Just as importantly, **building trust is a process that cannot wait until a crisis occurs**.

We urge governments to promote:

Community ownership of emergency preparedness plans: Design, implement and monitor **whole-of-society and whole-of-government preparedness plans** that leverage the capacities and knowledge of local actors and communities to prevent, detect and respond early to disease outbreaks and public health emergencies.

Active listening and community engagement: Create or scale up **meaningful, two-way community feedback mechanisms** that record community concerns, needs and suggestions, and collect and analyse them to adapt public health measures when possible and as needed.

Access to services and education through stronger community health systems: Invest in or strengthen **community health systems**. These include all the actors, infrastructures and services that promote community health, ranging from information and services to emergency preparedness and programmes addressing the determinants of health. They include water and sanitation systems, and strong mental health and psychosocial support.

Equity

Developing the supply side of pandemic response products, without addressing the demand side, undermines access and uptake of these products by countries and communities, especially the most vulnerable and hard to reach.

The international community and domestic authorities should promote:

Domestic capacities to distribute pandemic response products, including through local actors: Invest in domestic capacity to store, transport and distribute these products through better funding, training, advance notice and the necessary laws/policies to facilitate the movement and distribution of the goods. The contributions of local actors to this process are critical given their access to isolated and marginalized areas, and to disaster- and conflict-affected areas.

More flexible, predictable humanitarian funding: Where government capacities need to be complemented by international humanitarian organizations or recognized local actors, reform humanitarian funding to make it more equitable, predictable, flexible and accessible to local actors.

Community confidence and interest in pandemic response products: Invest in meaningful community engagement programmes to promote community uptake of these products. Such programmes should be complemented by transparent information on the timing, method and location of the distribution, as well as on the choice of product.

Equitable and fair distribution of indemnification and liability risk, including for humanitarian organizations, and limitations on how long manufacturers can be exempted from purchasing indemnification and liability insurance for new products.

Development and production of pandemic response products that are less expensive, easier to store and administer and just as effective. Such products are essential for countries that do not have the capacity to purchase, store or administer more expensive and complex products.

Limiting discussions of equity to the question of equitable access to pandemic response products is short sighted. There are many other concrete and critical measures that can help to address inequities in pandemic preparedness by addressing the drivers of disease outbreaks and their differentiated impacts.

The international community and domestic authorities should promote:

Equitable access to information: This includes domestic obligations to create early warning/early action systems for their populations.

Equitable access to domestic health and social protection services: This must include: guaranteeing rights to basic health countermeasures and social safety nets, regardless of legal status; strengthening social protection systems before a crisis occurs, including through joint vulnerability assessments; and increasing local access to health services through community health systems.

Equitable and needs-based access to humanitarian assistance: This should include reducing the use of earmarked humanitarian funding to allow for more flexible, needs-based assistance across countries and time. Such flexibility is essential because of the considerable variations in how disease outbreaks evolve.

Greater emphasis on multi-hazard prevention (primary, secondary and tertiary) and preparedness: This will help to mitigate or avoid the impacts that epidemics and pandemics have on the most vulnerable. It will also address the possibility of compounded shocks and stresses, such as economic or social shocks, earthquakes, weather- and climate-related events, and conflicts.

Local action

While domestic authorities will always have the primary responsibility to manage public health emergencies, **overly centralized and medicalized approaches to pandemic prevention, preparedness and response cannot address the local complexities of emergency management.** These complexities include: a variety of risk factors and drivers of disease; the unpredictable social, economic and physical/mental effects of a disease; and people's attitudes to public health measures and risk.

Moreover, **a failure to include other actors, and to leverage and support local knowledge and capacities, can rapidly lead to overwhelmed government services and systems.**

Domestic authorities can address this by:

Recognizing and integrating recognized and trained local actors into domestic emergency and health systems: This includes the design, implementation and monitoring of **multi-hazard national emergency preparedness plans and legal frameworks,** and recognizing their **contributions to health systems strengthening, especially community health systems** (in this case, we refer to approaches such as task shifting – the transfer of non-medical but health-related tasks to trained local actors).

Providing trained and recognized local actors with the legal protections and facilities they will need to carry out their tasks: This includes priority access to personal protective equipment and pandemic response products; exemptions from movement of goods and personnel as public health warrants; and the financial support, training and oversight that they need to meet quality, living and safety standards.

Working with communities to design, implement and monitor **domestic emergency preparedness plans** for prevention, early action and response.

Measurable objectives for the next three years

The next pandemic could be just around the corner: if the experience of COVID-19 won't quicken our steps toward preparedness, what will? Governments can take concrete action immediately by following this three-point plan.

1. By the end of 2023, every country should have updated **pandemic preparedness plans** and should have reviewed the relevant legislation to see if it too needs updating.

   - Plans should include **concrete measures** to strengthen equity, trust and local action.

   - Legislative reviews should bear in mind, among other things, the **need for a holistic approach** to crisis response, clarity of roles and responsibilities, and the needs of recognized local actors for personal protective equipment and appropriate exemptions from movement restrictions.

2. By 2024, **adopt a new treaty and revised International Health Regulations,** which include concrete and measurable obligations to:

   - **Strengthen** equity and trust.

   - **Promote** better domestic and international legal governance of pandemics.

   - **Invest in and support** the range of services and inputs that can be provided by recognized local actors and/or communities.

3. By 2025, **increase domestic health finance by 1% of GDP** and **global health finance by at least US$15 billion per year** (G20, 2021; WHO, 2019).

   - A much greater proportion of global financing for both public health and humanitarian action must also flow to **the local and community level**.

   - Global financing should be **more predictable and flexible** to allow for more effective and needs-based action.

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Nepal 2022 *A staff member from Nepal Red Cross Society administers the COVID-19 vaccine at the organization's vaccination booth in Kathmandu. © Tsering Lama*

Venezuela 2022 *Heavy rains in Venezuela left more than 150,000 people affected by landslides and floods in multiple states. Authorities declared a state of emergency based on the damages on local infrastructure, loss of houses and crops in rural areas. Two Disaster Relief Emergency Fund operations were active with activities in rapid relief, shelter access, livelihoods and basic needs, health, mental health and psychosocial support, water, sanitation and hygiene, and protection, gender and inclusion. © Venezuelan Red Cross*

8 TRENDS IN DISASTERS

What the data tells us

Contents

INTRODUCTION
COVID-19 DWARFS ALL RECENT DISASTERS

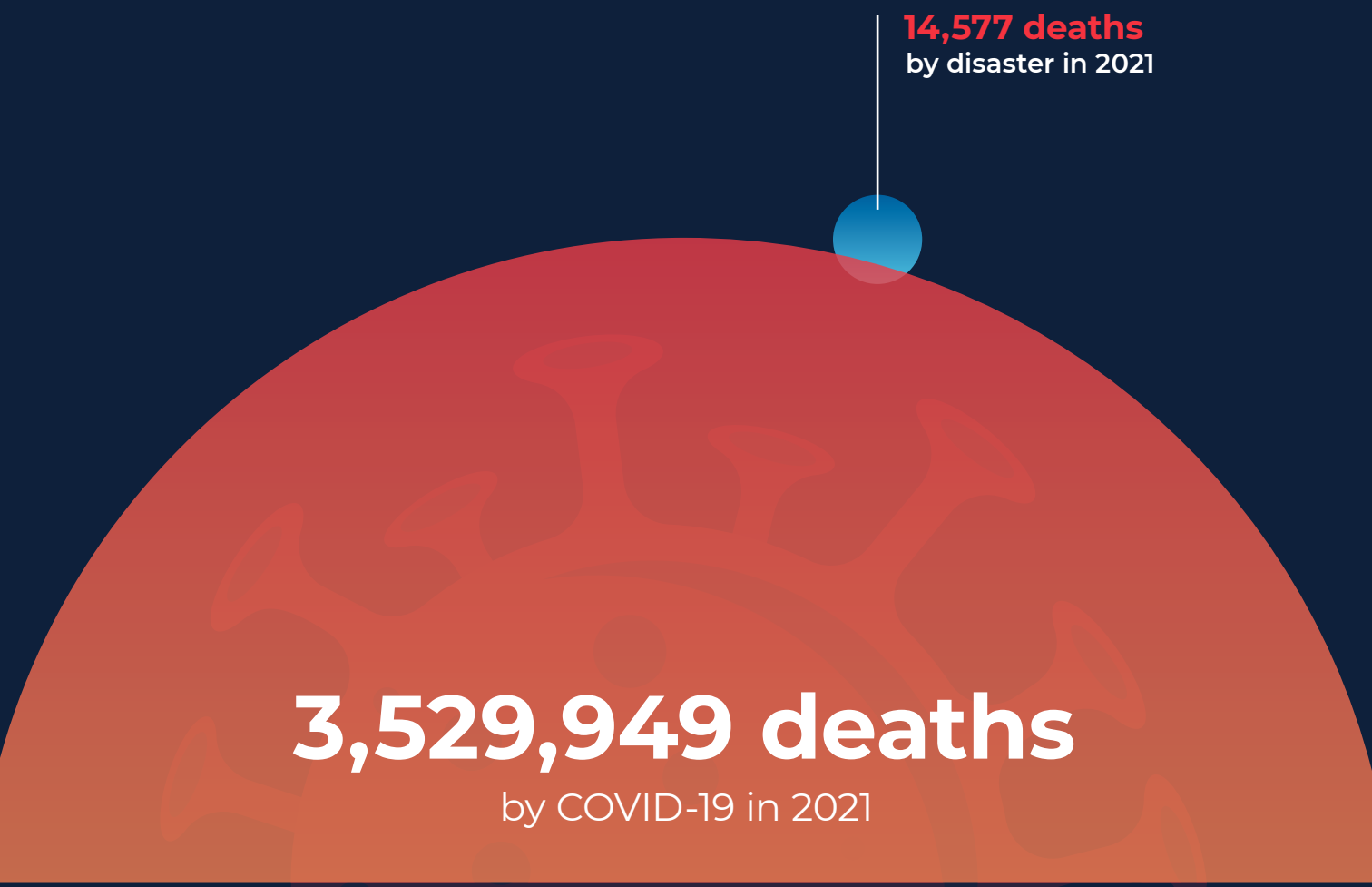
Based on the number of people affected, those killed – directly or indirectly – and the economic impacts, the COVID-19 pandemic stands out as an exceptional global disaster. As of 27 October 2022, there have been over 625 million cases of the disease and 6.5 million people confirmed dead (WHO, no date). These enormous losses have occurred within less than three years. Furthermore, the numbers are likely to be underestimates due to gaps in reporting data. Attempts have been made to estimate the true death toll by examining excess mortality figures, which are more comprehensive. These studies have a significant uncertainty, but they all point to a higher death toll. For example, the official death toll for 2020 was just over 1.8 million, but some estimates place it at 3 million (WHO, 2022). Similarly, a 2022 analysis estimates that between 1 January 2020 and 31 December 2021 there were 18.2 million deaths, compared to the official figure of 5.94 million (COVID-19 Excess Mortality Collaborators, 2022). It is not possible to state a final death count because the pandemic is ongoing.

The pandemic is taking place against a background of other hazards, many of which have also caused disasters. IFRC has analysed comprehensive disaster data for 2020–2021. During this period, there were 710 disasters triggered by natural hazards. These killed close to 30,000 people and affected over 220 million. In 2021 alone there were 378 disasters triggered by natural hazards. The majority of these were climate- and weather-related disasters (see section 8.2.1).

On all measures, the COVID-19 pandemic is vastly larger than any other single disaster that occurred in 2020 and 2021. The annual deaths from this one disease are two orders of magnitude greater than those caused by every other disaster around the world. Indeed, no other non-conflict disaster in the 21st century has been on the same scale (see Executive summary). Not since World War II have so many lives been lost (see Introduction).

In this chapter, we first examine the disasters that have occurred in 2020 and 2021. We then set them into the context of the long-term trends in disasters, in particular the rising proportion of disasters linked to climate and weather and the growing risk of disease outbreaks. These rising rates of disasters mean it is becoming increasingly common for disasters to overlap in time and/or space. Therefore, in the final section we explore what happens when multiple disasters occur simultaneously or in rapid succession.

The enormous COVID-19 death toll



3,529,949 deaths

by COVID-19 in 2021

COVID-19

83.0 million cases in 2020
1.9 million deaths in 2020

204.7 million cases in 2021
3.5 million deaths in 2021

Disasters

99.0 million people affected in 2020
15,396 deaths in 2020

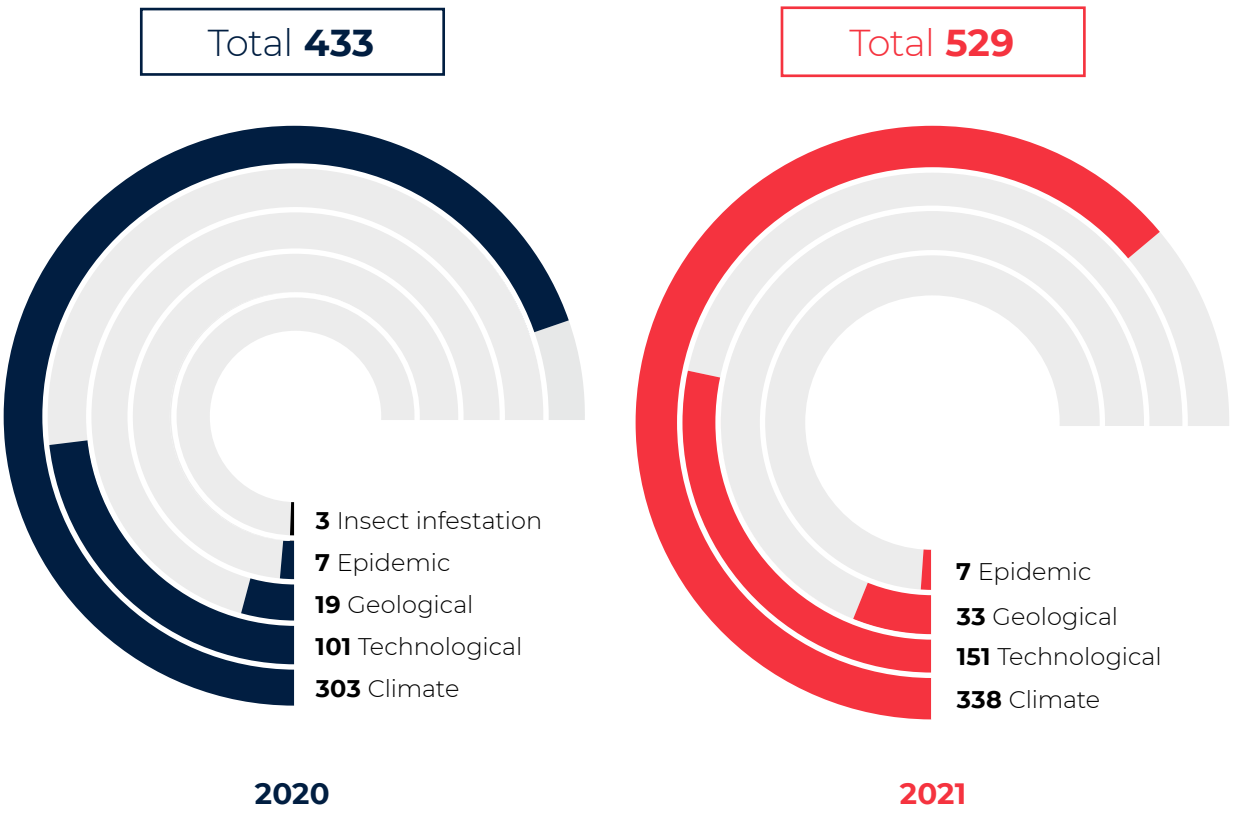
121.3 million people affected in 2021
14,577 deaths in 2021

Sources: EM-DAT, WHO
Notes: All disaster types recorded in EM-DAT are included. EM-DAT data also does not include conflicts.

8.1 DISASTERS IN 2020 AND 2021

The years 2020 and 2021 were dominated by the COVID-19 pandemic. However, the international disaster database EM-DAT does not include COVID-19 (and many other disease outbreaks). In numerical terms, climate-related disasters were the most frequent in both years, far outstripping geological disasters or those caused by human technology. This continues an ongoing trend (see section 8.2.1).

Figure 8.1: Disasters in 2020 and 2021, broken down by type

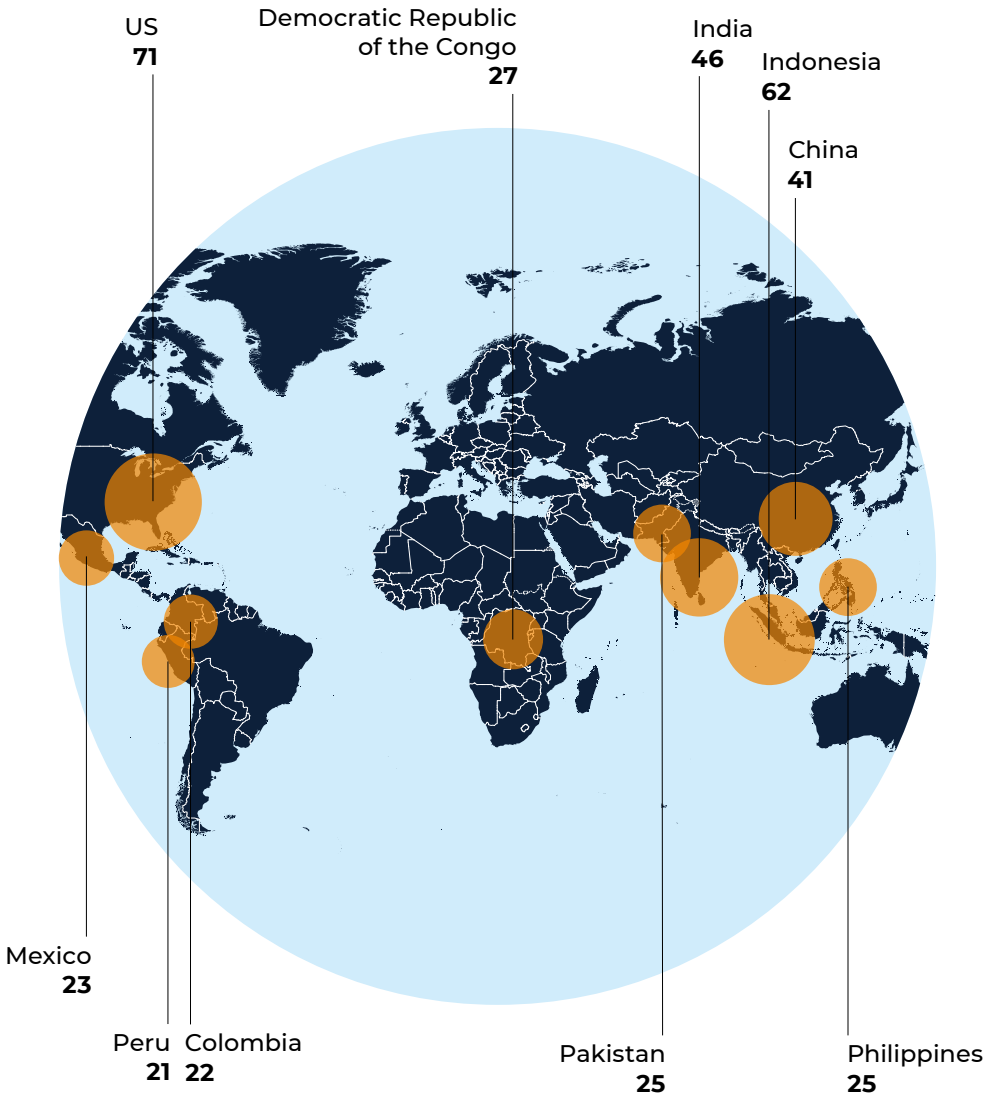


Source: EM-DAT

Notes: This analysis includes technological disasters, as well as disasters triggered by natural hazards. However, it does not include the COVID-19 pandemic.

The disasters that affected the world in 2020–2021 were not evenly spread. Some countries experienced significantly more disasters than others (see Figure 8.2). Others saw more people affected and/or killed (see Figures 8.3 and 8.4). In terms of numbers of disasters recorded, the US has the most; however, this is likely an artefact due to highly comprehensive reporting in that country compared to spotty data elsewhere. The majority of disasters are climate and weather related.

Figure 8.2: The 10 countries that experienced the greatest number of disasters in 2020–2021



Source: EM-DAT
Note: On the map, countries with larger circles experienced a greater number of disasters.

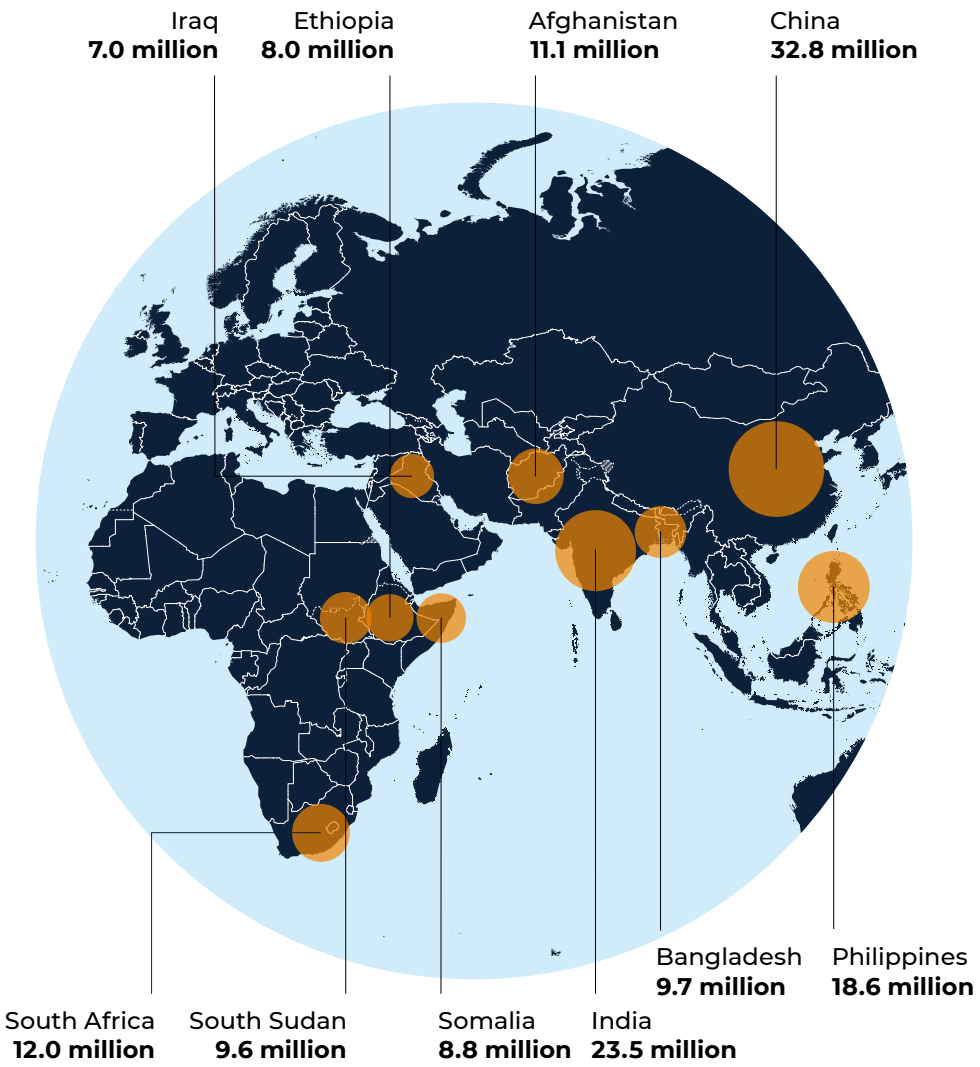
We can see a clearer picture of the impacts of disasters in 2020–2021 by looking at the countries with the most recorded disaster deaths. The 10 countries with the most deaths include some of the most populous nations, such as India and China. It is likely that the high death counts within these countries are due to the large number of people exposed and at risk, rather than the severity of the hazards. Meanwhile, Haiti was severely impacted by the magnitude 7.2 earthquake of 14 August 2021 (USGS EHP, no date). The tremor was the deadliest natural-hazard-induced disaster of 2021, partly due to the violence of the earthquake and partly due to the low resilience of many communities in Haiti. Elsewhere, three European countries (UK, France and Belgium) were all severely affected by heatwaves, although it is likely that heatwave deaths in many other countries are under-reported. Finally, Nigeria experienced an outbreak of cholera that lasted from August to December 2021 and resulted in 3,604 deaths (ReliefWeb, no date).

Figure 8.3: The 10 countries with the largest number of disaster-related fatalities in 2020–2021

Source: EM-DAT
Note: On the map, countries with larger circles saw more fatalities.

When we focus on countries with the most people affected, a somewhat different group of countries emerges. China and India had the most people affected in 2020–2021, due in part to their large hazard-exposed populations. Countries whose populations have been most affected have either been hit by multiple events (multiple floods for China, and multiple storms for India and the Philippines) or by one long-lasting event (drought for South Africa and Afghanistan). In none of these countries has a single sudden disaster produced the biggest impact on countries in terms of affected population.

Figure 8.4: The 10 countries with the most people affected by disasters in 2020–2021



Source: EM-DAT
Note: On the map, countries with larger circles saw more people affected.

8.1.1 In some countries, almost the entire population has been affected by disasters in 2020–2021

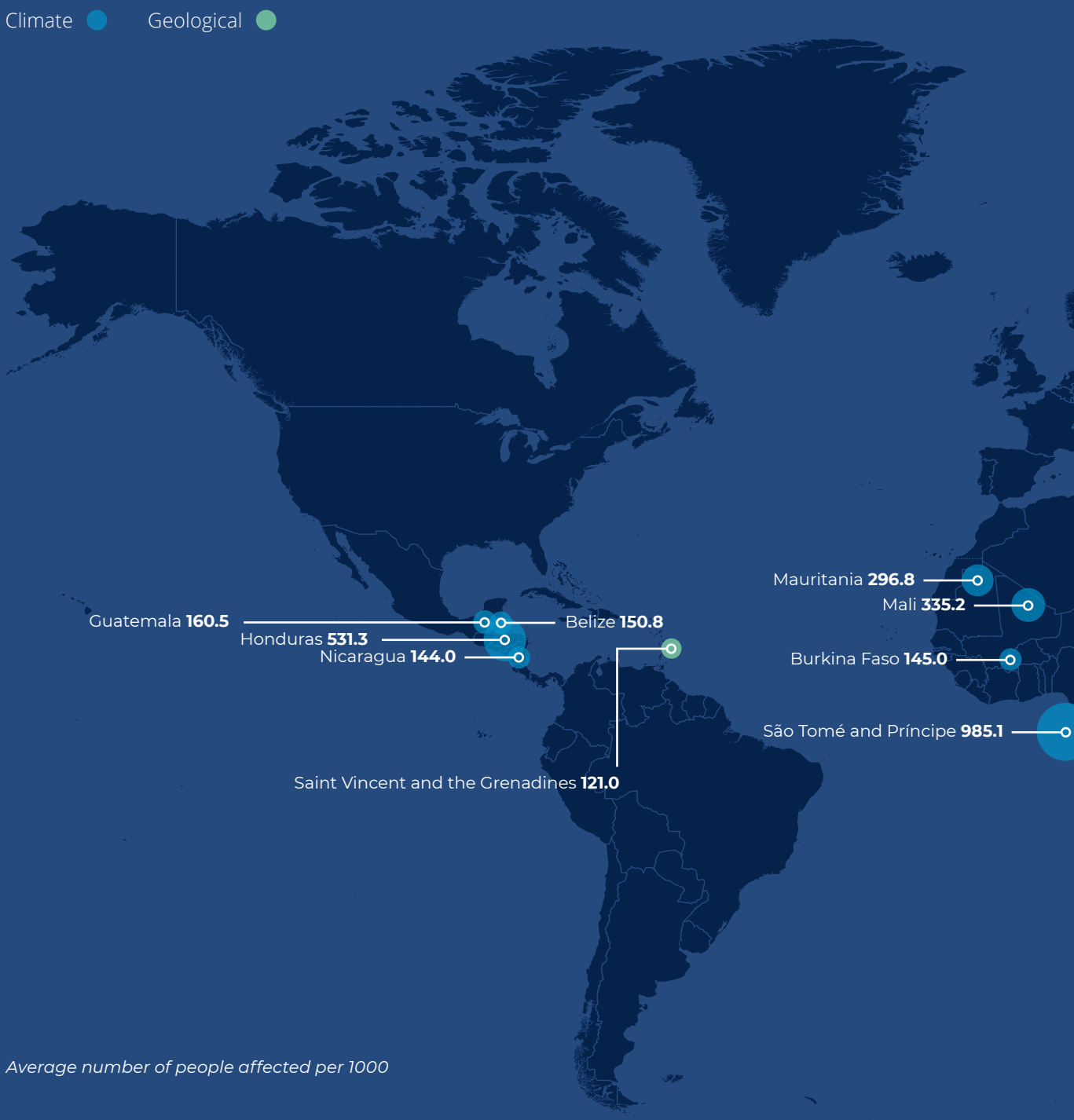
Some countries are disproportionately affected by disasters. This is revealed by the number of people affected per capita, i.e. the proportion of the total population affected in a given year. Almost everyone in São Tomé and Príncipe has been affected by climate- or weather-related disasters in 2020–2021.

There is some uncertainty around these numbers: where countries have encountered multiple disasters, some people may have been counted twice, artificially inflating the proportion of the population reported as affected.

Of the countries with the highest rate of affected population per capita, the most affected were small island developing states (UNESCO, no date), in particular those in the Pacific. Three of the top five most affected countries per capita were small island developing states, as were four of the top 10. All top 10 countries are affected due to climate-related disasters. Three of them are also suffering from conflict: Somalia, South Sudan and Mali, which are rated 2nd, 3rd and 14th respectively on the Fragile States Index (Fragile States Index, no date).

The majority of these countries have high rates of affected population per capita solely because of climate- and weather-related disasters. Only the 23rd country in the affected-per-capita ranking is in that position due to additional contributing factors: Saint Vincent and the Grenadines, which has also been affected by the 2021 La Souffrière volcanic eruptions.

Figure 8.5: The countries with the largest proportion of their populations affected by disasters in 2020–2021



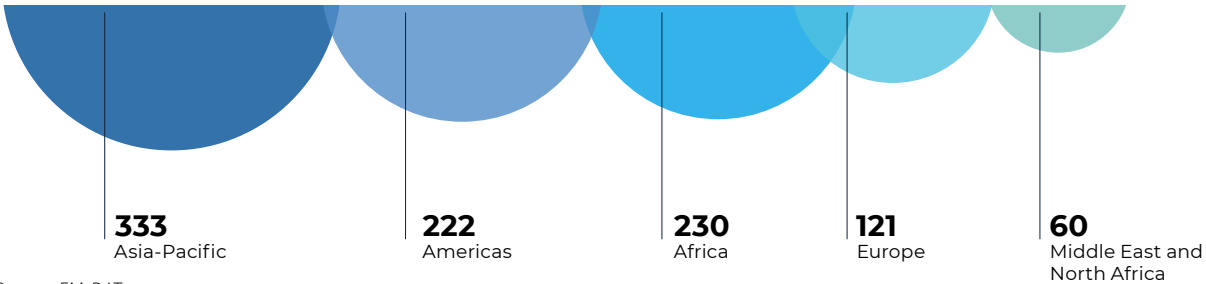
Note: The proportion affected is given per 1,000 people. On the map, countries with larger circles had a larger proportion of their population affected, while the colours of the circles reflect the predominant disaster type(s) per country.


Syrian Arab Republic 288.0
Afghanistan 283.6
Iraq 164.4
Niger 182.0
Djibouti 110.0
South Sudan 613.0
Somalia 452.1
Philippines 112.1
Palau 331.3
Solomon Islands 231.5
Tuvalu 85.1
Vanuatu 442.6
Fiji 222.0
Tonga 225.2
Lesotho 329.9
South Africa 202.3

8.1.2 Asia-Pacific has been the region worst affected by disasters

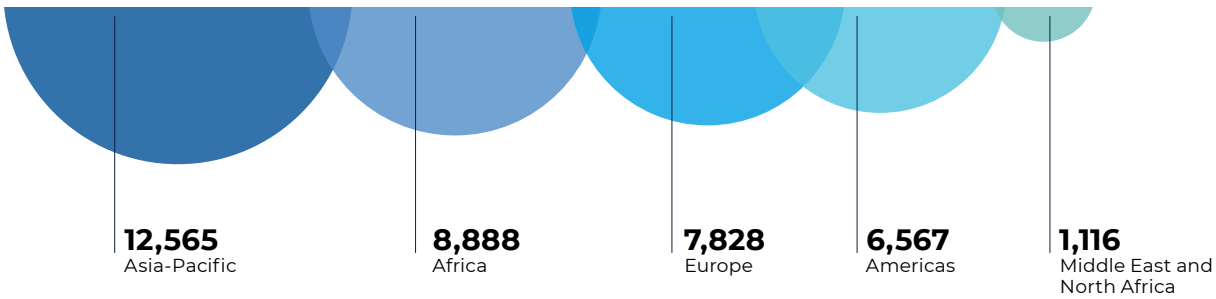
Of the five regions of the world recognised by IFRC, Asia-Pacific has been the worst affected by disasters in 2020–2021. This is true across three different measures: Asia-Pacific has seen the largest number of disasters, the largest number of deaths and the largest number of people affected.

Figure 8.6: Number of disasters in 2020–2021, by region



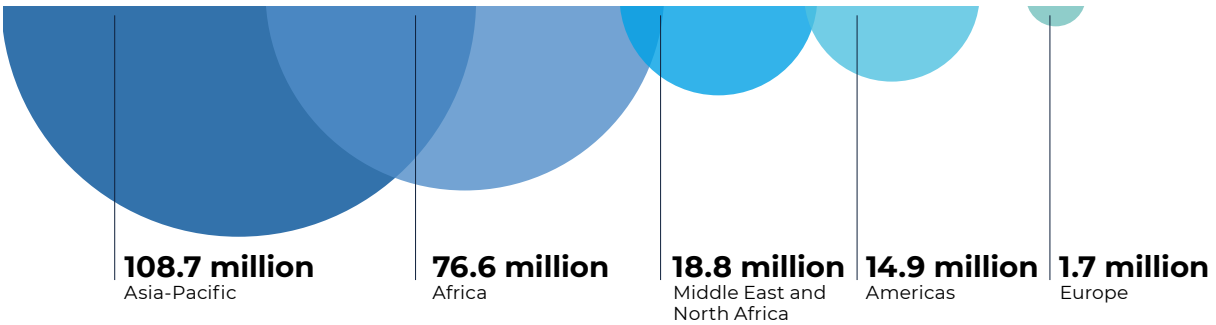
Source: EM-DAT

Figure 8.7: Number of deaths from disasters in 2020–2021, by region



Source: EM-DAT

Figure 8.8: Number of people affected by disasters in 2020–2021, by region



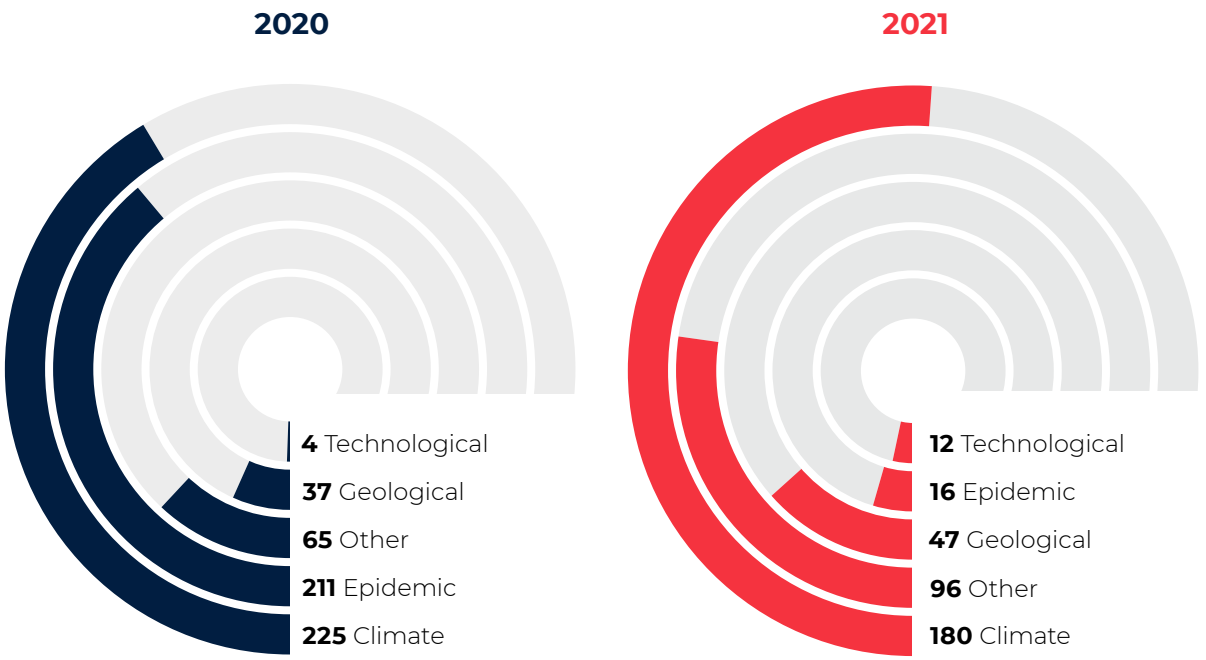
Source: EM-DAT

8.1.3 IFRC emergency responses in 2020 and 2021

In line with the large numbers of disasters recorded in EM-DAT for 2020 and 2021, National Red Cross and Red Crescent Societies also responded to large numbers of emergencies. These data come from IFRC's online GO database. While the categories do not precisely match those in EM-DAT, some similarities can be observed. In both EM-DAT disaster data and IFRC emergency data, there is a large number of climate-related hazards.

The number of emergencies responded to in 2021 was lower than in 2020. The fall was driven mainly by a decrease in the number of epidemic emergencies responded to. It is not clear why this has happened, but it cannot simply be attributed to COVID-19 being brought under a degree of control in 2021 by vaccination drives. Even when instances of COVID-19 are filtered out of the data, the fall remains. Regardless, there is no reason to think it represents the start of a long-term decline, as the number of disease outbreaks has always varied significantly year-on-year.

Figure 8.9: Emergencies to which the IFRC responded in 2020 and 2021 by disaster type



Source: IFRC GO

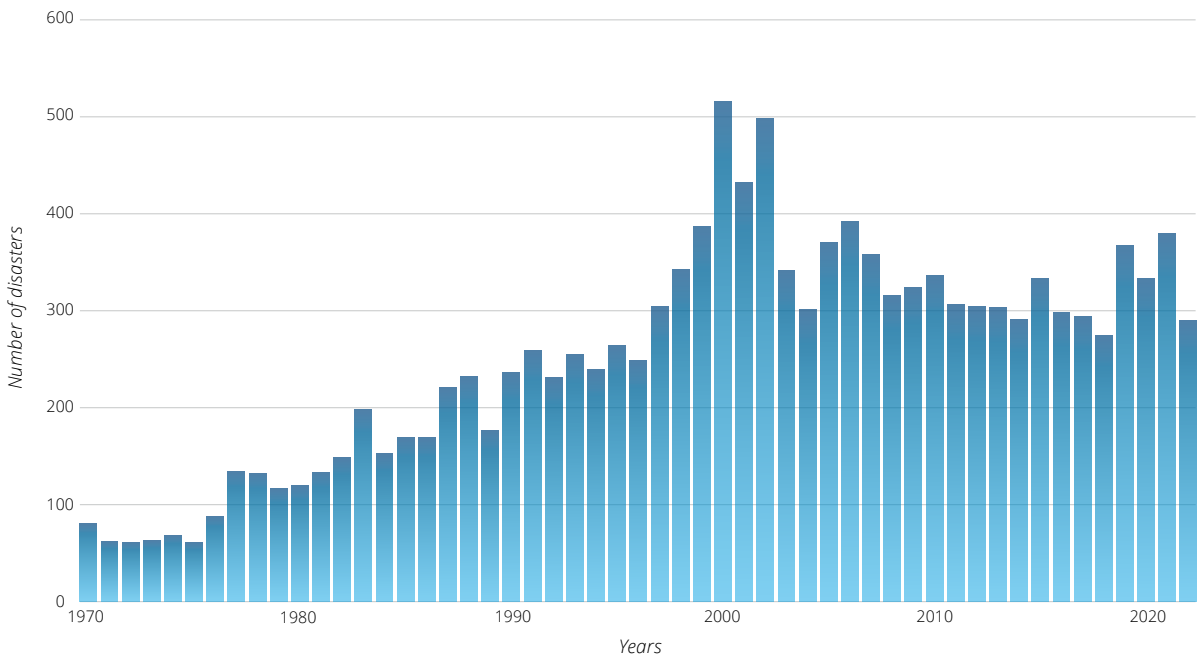
Notes: The 'climate' category includes cyclones, fires, heat waves, cold waves, droughts, floods, storm surges, pluvials and flash floods. The 'other' category includes food insecurity, population movement, civil unrest and complex emergencies.

8.2 GLOBALLY, DISASTERS ARE HAPPENING MORE FREQUENTLY

Since 1970 there has been an increase in the average annual number of disasters triggered by natural hazards. The trend is visible despite significant year-to-year variability.

Note that this dataset does not include the COVID-19 pandemic. Nor does it include a comprehensive list of other epidemiological disasters, as some are not recorded in EM-DAT. Disease outbreaks are difficult to compare to other disasters, particularly when they spread to the global scale as COVID-19 has done. For instance, if the pandemic was counted as a single prolonged disaster, it would not make a visible difference to the overall trends seen in the graph – when in fact it is the largest disaster humanity has experienced in the timespan.

Figure 8.10: Number of disasters triggered by natural hazards recorded globally per year, 1970–2021



Source: EM-DAT
Notes: Epidemics, including COVID-19, are not included in the dataset. Conflicts are also not included.

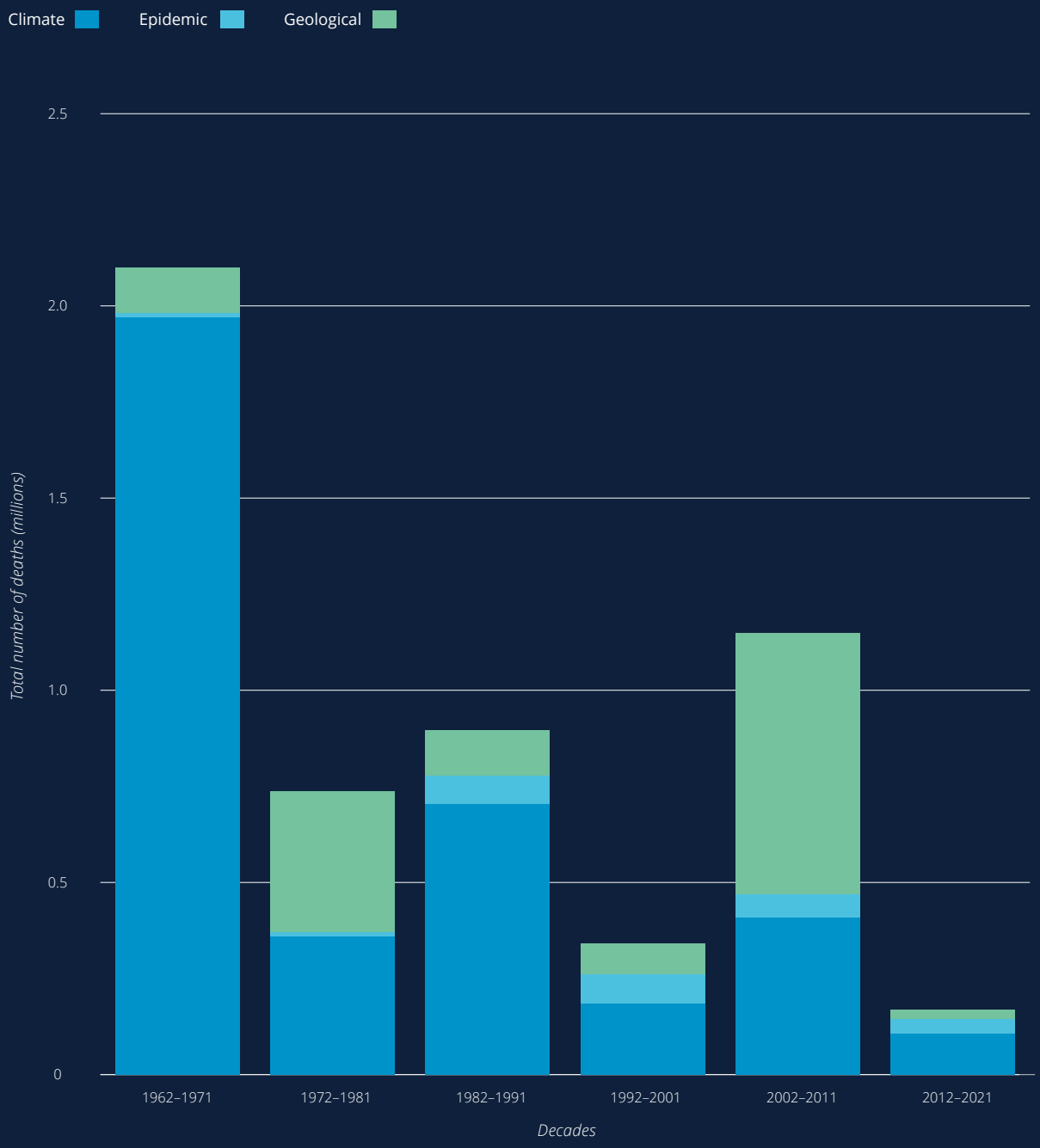
There may have been a slight drop in the average number of disasters in the last decade (2012–2021). It is unclear why this has happened and there are several possible explanations. It may be partly the result of improved disaster risk management, which has improved some communities' resilience to natural hazards (Formetta and Feyen, 2019). In line with this, the next section presents evidence of a similar decline in disaster-related deaths, which is also attributed to improved disaster risk management. While climate change and other factors are acting to increase the frequency and severity of certain natural hazards, improved disaster risk management may be reducing the number of those hazards that translate into disasters. This interpretation is appealing, but it is unlikely to be the whole explanation. Improved disaster management would reduce the impacts of events, but it would be unlikely to cause them not to be reported, except perhaps in the case of small events. Furthermore, other possibilities cannot be ruled out. For instance, the apparent decline in the number of disasters may be the result of reporting issues, such as under-reporting of small-scale disasters and bias towards events in high-income countries (see Chapter 5). Finally, stochastic effects and chance may be at work. With climate-related hazards the dominant cause of disasters, multi-year cycles in the climate system like the North Atlantic Oscillation and El Niño–Southern Oscillation are likely to impact the frequency of hazards like floods and droughts (Emerton et al, 2017; Najibi and Devineni, 2018). Conventionally, climatologists require data spanning multiple decades to demonstrate a true long-term trend; a fall from one decade to the next is not conclusive evidence of a genuine decline.

It is possible that all three factors (improved disaster risk management, gaps in reporting, and short-term climatic cycles) are at work. Regardless of the true explanation, the last decade has still seen a very high number of disasters compared to the last 60 years.

In contrast, the total number of global deaths from disasters has declined since the 1960s, according to EM-DAT. This has occurred despite a growing number of people being exposed to climate- and weather-related hazards and increases in the severity and frequency of hazards (Irfan, 2022). A major contributor to the decrease in mortality is improvements in weather forecasting and thus in early warning systems, alongside life-saving evacuations and rescue operations (WMO, 2021).

However, splitting the data by decade indicates that the largest decline was from the 1960s to the 1970s, due to a significant fall in the number of deaths from climate-related disasters. Since then, there has been no clear trend. Furthermore, the dataset does not include the 5.9 million confirmed deaths from COVID-19 in 2020 and 2021, which would significantly inflate the average for 2012–2021.

Figure 8.11: Total deaths from disasters recorded globally per decade, split by disaster type



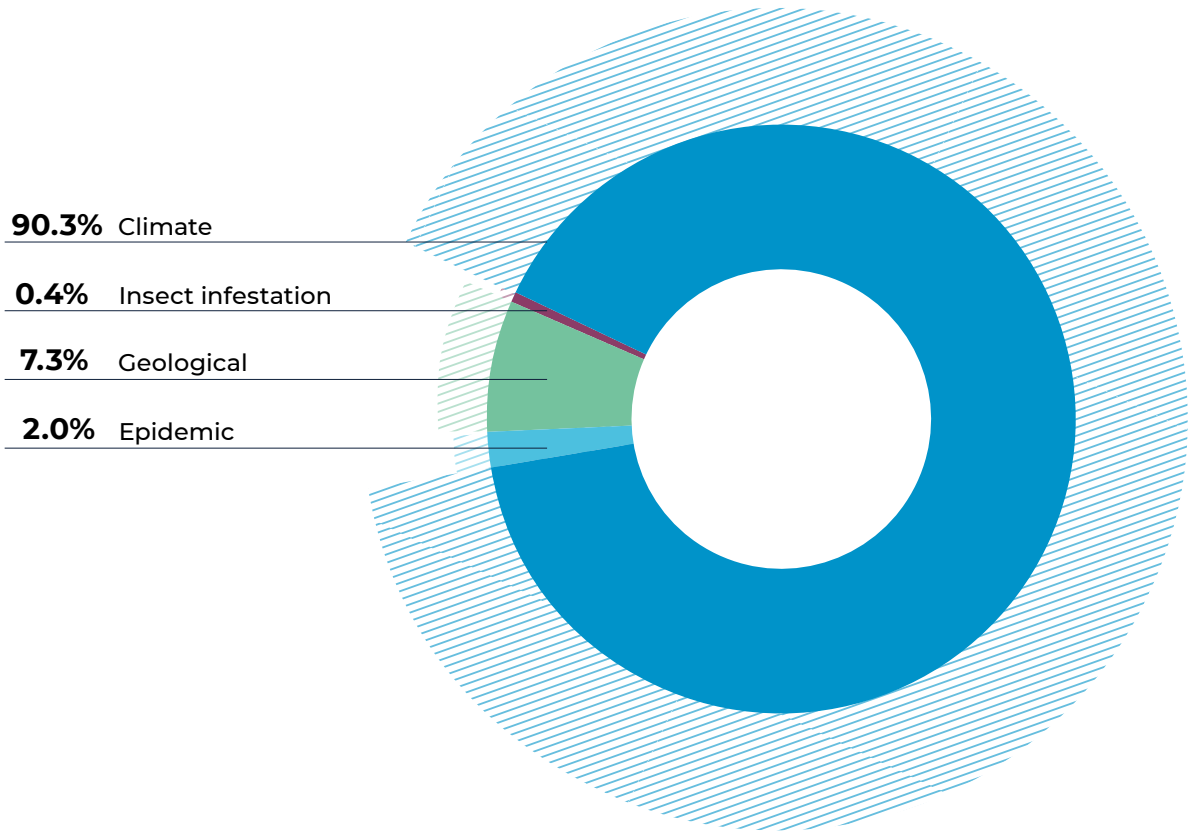
Source: EM-DAT
Note: COVID-19 deaths are not included in the 2012–2021 figures.

8.2.1 The share of disasters linked to climate continues to grow

Climate-related hazards continued to increase in prominence in 2020–2021. In those two years, 90.3% of recorded natural disasters were triggered by climate- and weather-related hazards. This compares to 7.3% by geological hazards like earthquakes and volcanic activity. The remainder were caused by epidemics (excluding COVID-19) and insect infestations such as locusts.

This adds to the evidence for increasing prominence of climate-related hazards. In the *World Disasters Report 2020*, IFRC reported that 76% of reported disasters in the 1960s were climate- and weather-related, but this proportion rose to 83% in 2010–2019 (IFRC, 2020). A re-analysis of updated EM-DAT data for this report shows that the proportion for that last decade was actually 84%. The data for 2020–2021 indicate that this trend is continuing.

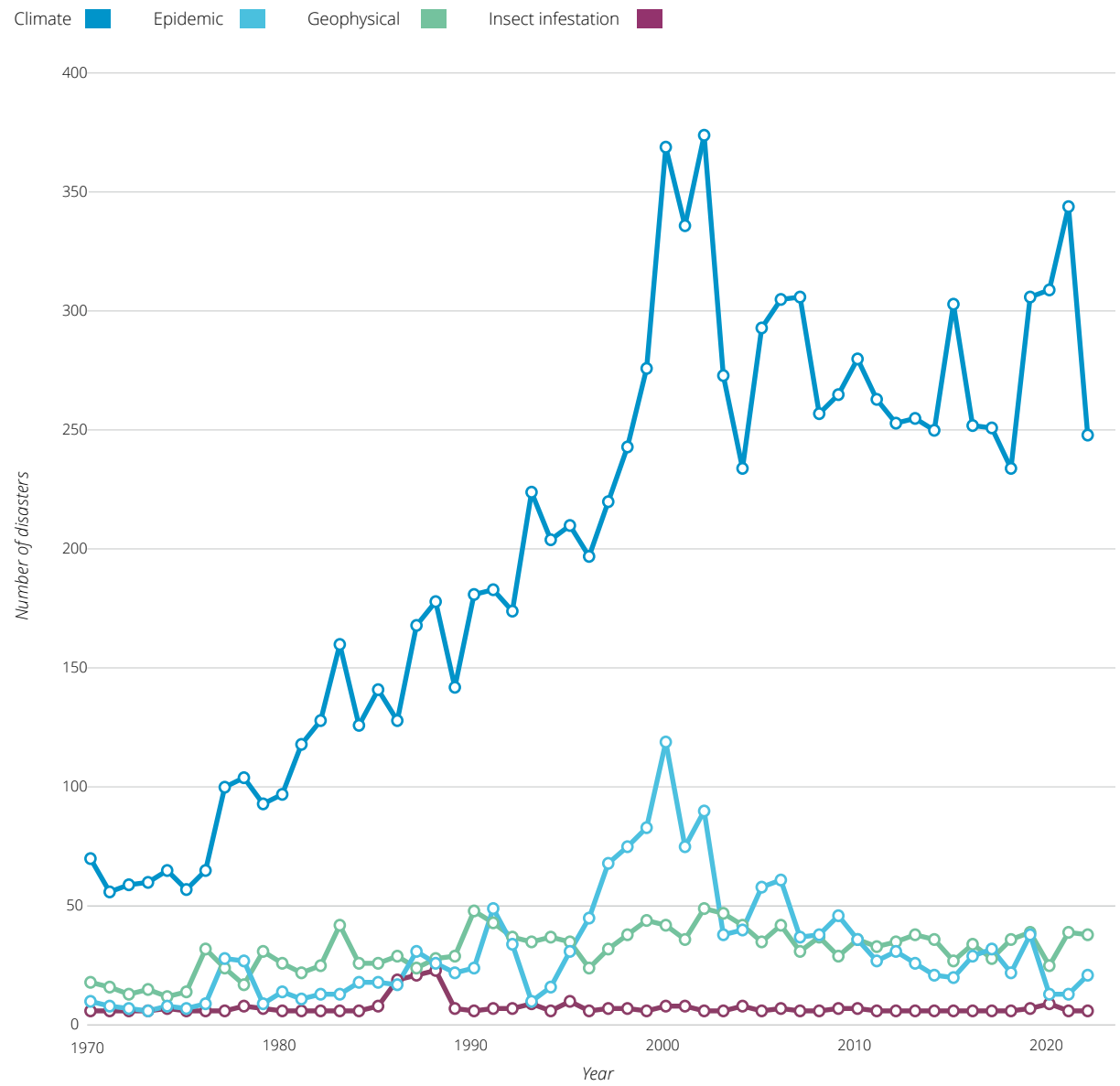
Figure 8.12: Recorded natural disasters in 2020–2021, broken down by disaster type



Source: EM-DAT
Note: Climate- and weather-related hazards were by far the largest source of disasters.

An analysis of the trends in disaster types over the last five decades clarifies what is happening. The number of climate- and weather-related disasters continues to grow, whilst geological hazards have remained stable. EM-DAT also shows no trend in epidemics or insect infestations. However, this is due to multiple omissions in its records of such biological hazards. Other lines of evidence indicate that disease outbreaks have become more frequent over the last few decades (see Chapter 1).

Figure 8.13: Number of disasters by type per year, 1970–2021

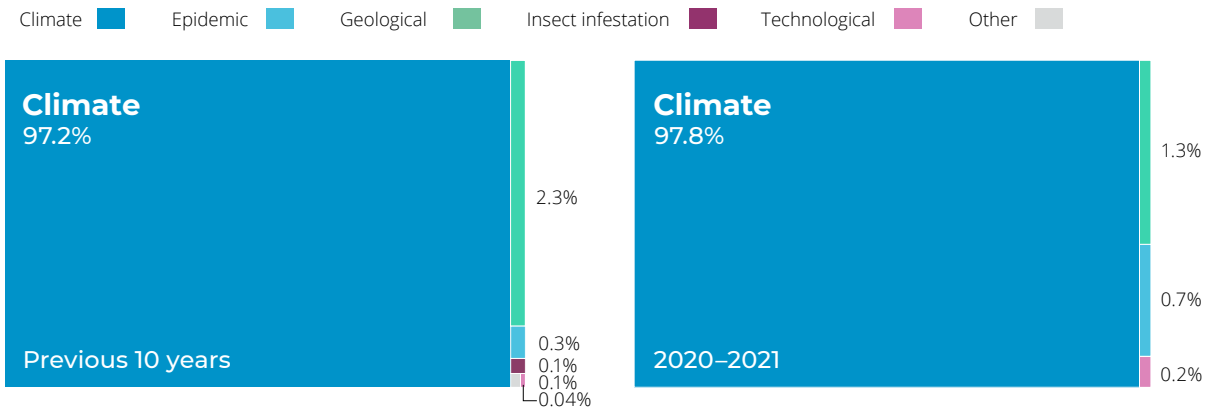


Source: EM-DAT

Notes: The number of climate- and weather-related disasters per year has increased over this period. Meanwhile the number of disasters linked to geological hazards has held steady.

A similar dominance of climate- and weather-related disasters can be seen in the people affected by disasters. Over the last 12 years, the proportion who were affected by a climate- or weather-related disaster has held steady between 97% and 98%. On average, about 100 million people are affected every year by climate- and weather-related disasters. Alongside this, disasters linked to geological hazards make up the next largest proportion of the people affected by disasters.

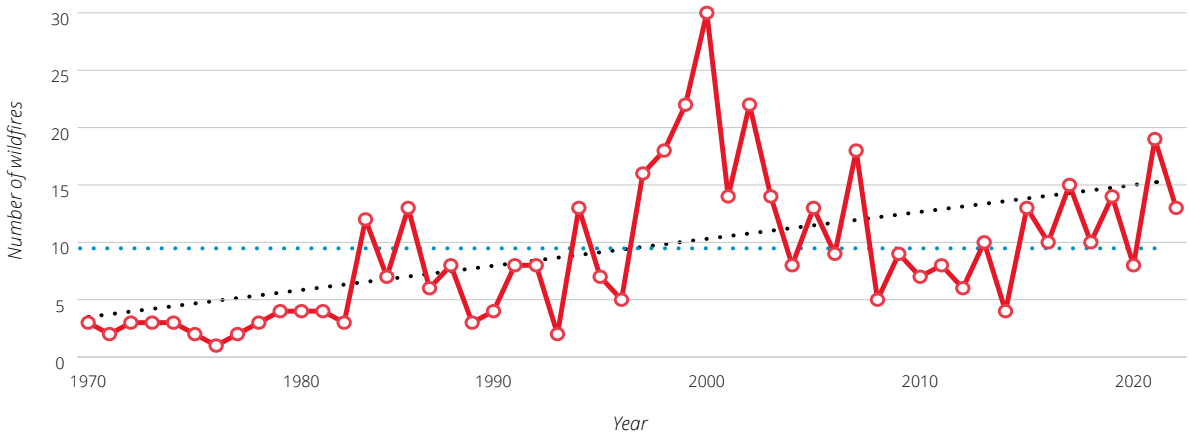
Figure 8.14: Percentage of the total number of people affected by disasters every year, by disaster type



Source: EM-DAT

In line with these analyses, over the last five decades there has been an upward trend in the number of disasters caused by wildfires, which are climate- and weather-related. This trend is visible despite high interannual variability. Current wildfire frequencies are above the levels observed from the 1960s to the 1990s.

Figure 8.15: Annual disasters caused by wildfires, 1970–2021



Source: EM-DAT
Note: The black dotted line is the trend since 1970. The blue dotted line is the average of the last 50 years.

8.2.2 Disease outbreaks are becoming more common

Over the last few decades, humanity has experienced an increasing risk of disease outbreaks (see definition in Chapter 1). The COVID-19 pandemic is the most dramatic example and stands out for the sheer number of cases and deaths. Nevertheless, it is part of a wider trend.

A 2014 study compiled disease data from 1980 to 2013 (Smith et al, 2014). This encompassed 12,102 outbreaks of 215 human infectious diseases. After controlling for confounds like improvements in disease surveillance, the researchers found significant increases in both the total number of outbreaks and the diversity of diseases. In the early 1980s there were fewer than 1,000 disease outbreaks per year, but by the late 2010s this had tripled to over 3,000. Zoonoses – diseases entering the human population from animals – were responsible for 56% of outbreaks.

Similarly, an analysis by the World Health Organization (WHO) said: "Epidemics of infectious diseases are occurring more often, and spreading faster and further than ever, in many different regions of the world". The analysis identified 1,307 epidemic events between 2011 and 2017. That equates to an average of 187 epidemic events per year (WHO, 2018).

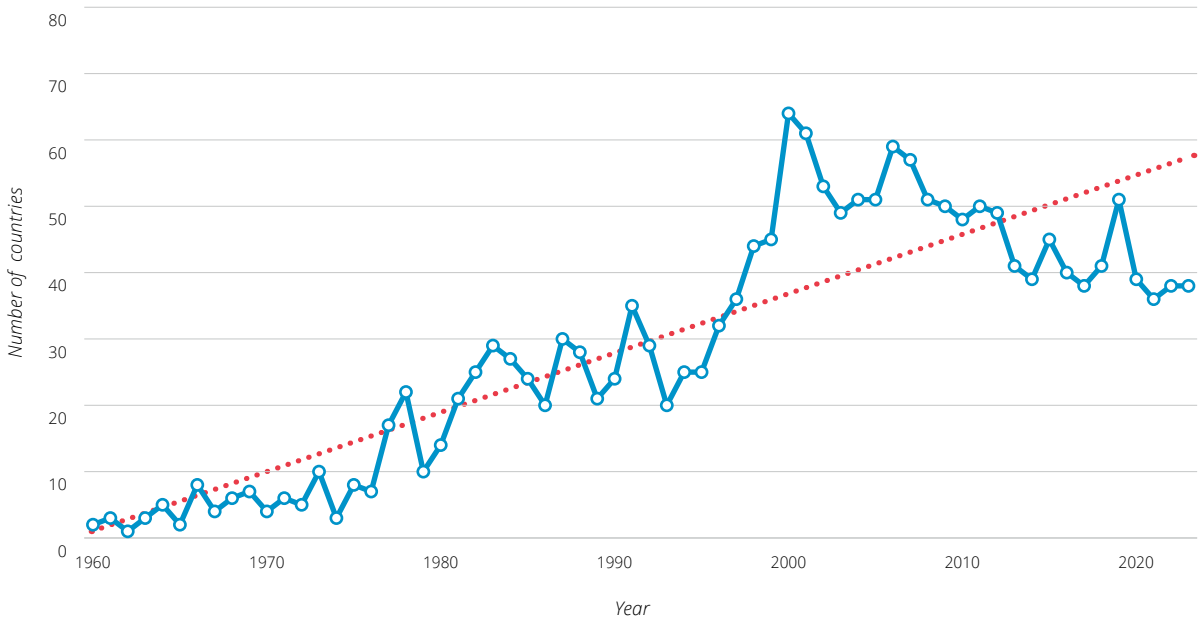
More recently, a review identified "a wave of severe infectious disease outbreaks" in the 21st century (Baker et al, 2021). These included the 2003 severe acute respiratory syndrome (SARS) coronavirus outbreak, the 2009 swine flu pandemic, the 2012 outbreak of Middle East respiratory syndrome (MERS) coronavirus, the 2013–2016 Ebola epidemic in West Africa and the 2015 Zika epidemic.

Experts cite various reasons for these epidemic trends. Baker et al, 2021 links it to dramatic changes in where people live and how much they travel. As of 2007, population density continues to increase and more people live in urban areas than rural. This creates ideal conditions for rapid spread. Meanwhile, airline flights have doubled since 2000, enabling rapid international spread. Other factors include climate change, which affects the emergence of new or modified pathogens and the re-emergence of older ones, as well as how vulnerable people are to them. Food production often favours large concentrations of animals in unsanitary conditions. Finally, other types of disasters affect people's vulnerability to pathogens, via poor sanitation, nutrition and access to health services.

8.3 DISASTERS ARE OVERLAPPING MORE AND MORE

Thanks to the increasing frequencies of disease outbreaks, and of climate- and weather-related disasters, countries are increasingly experiencing two or more disasters simultaneously. Over the last 60 years, the number of countries experiencing such overlapping disasters has steadily increased. We define overlapping disasters as instances when two disasters occur in the same country, with the second disaster starting before the first one has ended. These simultaneous disasters can take many forms: for example, wind damage from a storm combined with a separate flood event, or a heat wave combined with a wildfire.

Figure 8.16: Number of countries experiencing two or more overlapping disasters at least once in a year, 1970–2021

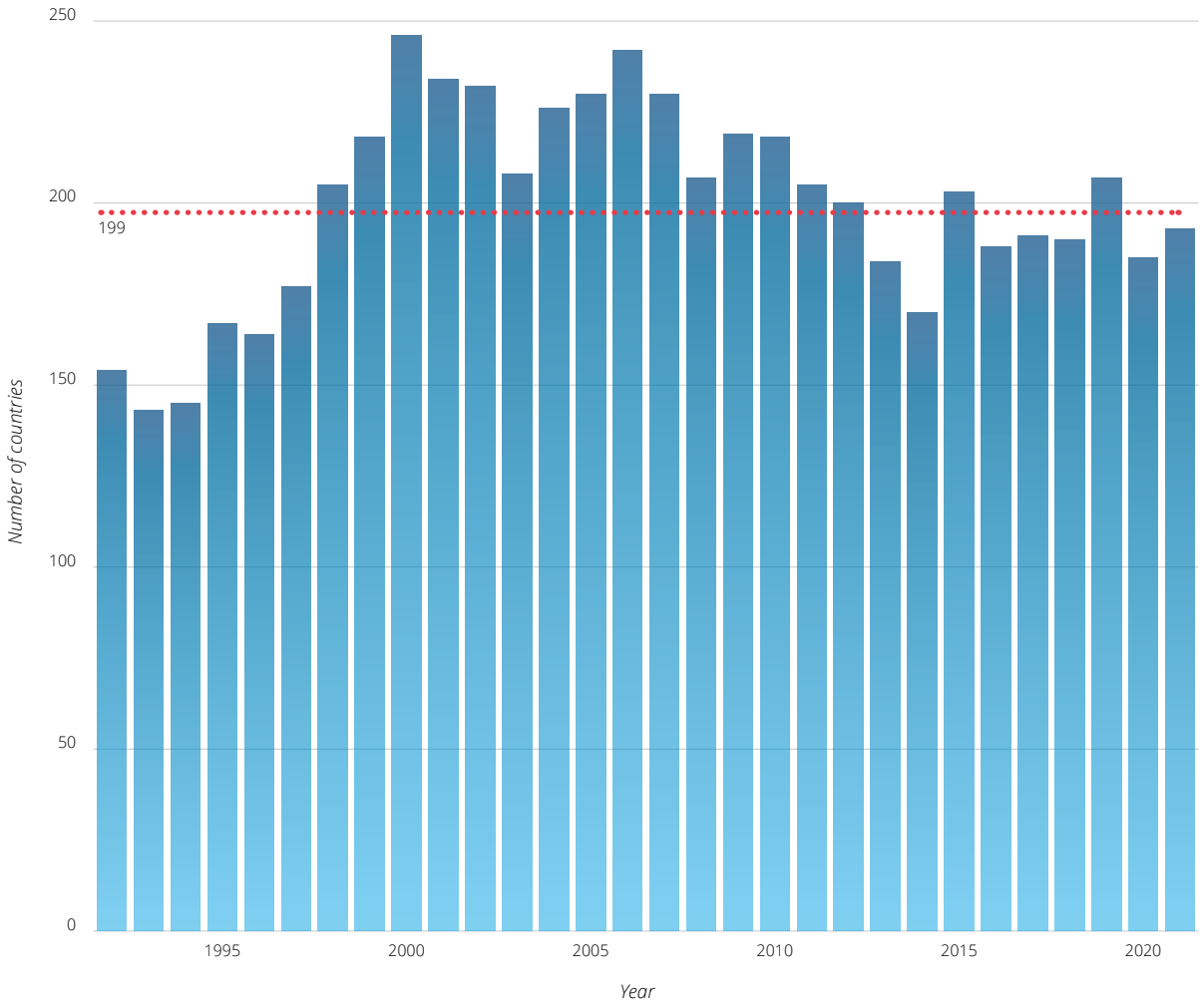


Source: EM-DAT

For the last 30 years, an average of 44 countries per year have been affected by simultaneous disasters at least once in that year. Similarly, the last 30 years have seen an average of 199 simultaneous disasters each year, much higher than previous decades. This high rate of simultaneous disasters remains clear despite considerable year-on-year variability.

This does not necessarily indicate the same population was affected, as disasters may occur in different regions of the country, particularly if its area is large. Nevertheless, simultaneous disasters are likely to impact a country's ability to respond.

Figure 8.17: Number of countries experiencing two or more simultaneous disasters at least once in a year, 1992–2021



Source: EM-DAT

This raises the question of whether the simultaneous disasters are hitting the same communities within each country. The data is often not detailed enough to make a determination, but there is some evidence. EM-DAT data indicates that, every year for the last 20 years, at least 20 of these countries were hit by two or more simultaneous disasters occuring in the same administrative sub-level. These pairs of disasters are likely to hit the same population, and to cause severe difficulties for humanitarian responders.

8.3.1 Overlapping disasters have more severe impacts

Intuitively, if two disasters occur simultaneously in the same place, each would be expected to have more impact than if they occurred in isolation. For example, response teams that were capable of handling the impacts of one disaster may find themselves overwhelmed by two. Likewise, communities with sufficient resilience to endure one disaster with minimal impacts may suffer severe harms when two disasters co-occur.

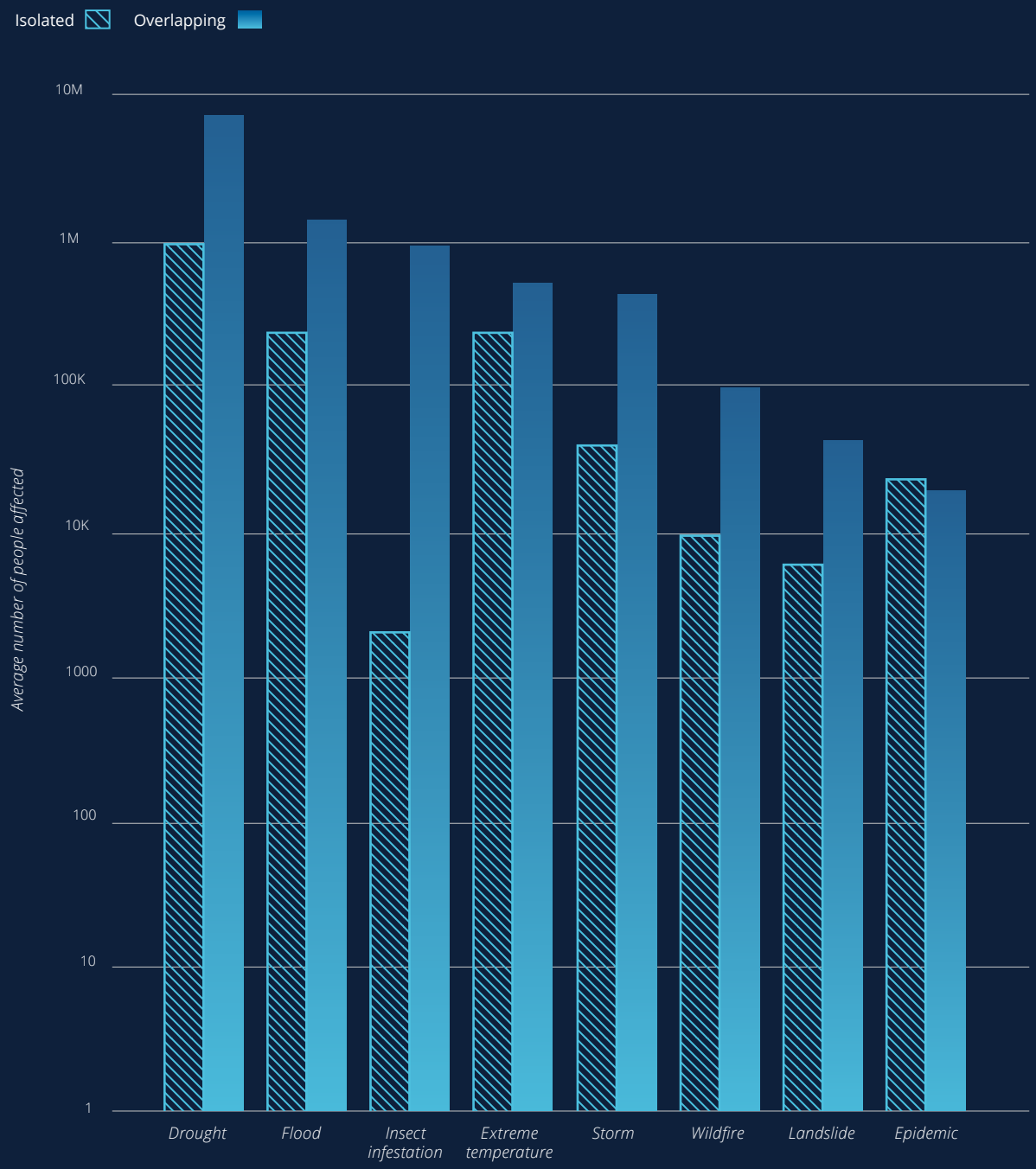
The disaster data offers some support for this. By looking over the last 60 years at the average number of affected people for any given disaster type, IFRC found that a disaster occurring simultaneously with another disaster in the same country often has more impact, both in terms of numbers of people affected and numbers of deaths.

In each analysis there is one exception: the data indicates that overlapping epidemics did not affect more people than isolated ones, and that overlapping storms did not kill more people than isolated ones. It is unclear why these two do not fit the pattern. However, it may be the result of incomplete data and/or statistical noise. The global disaster dataset is highly variable, so some unusual or contradictory results are to be expected from any analysis.

Furthermore, two caveats should be borne in mind. It has not been possible to control for these confounds using the available data.

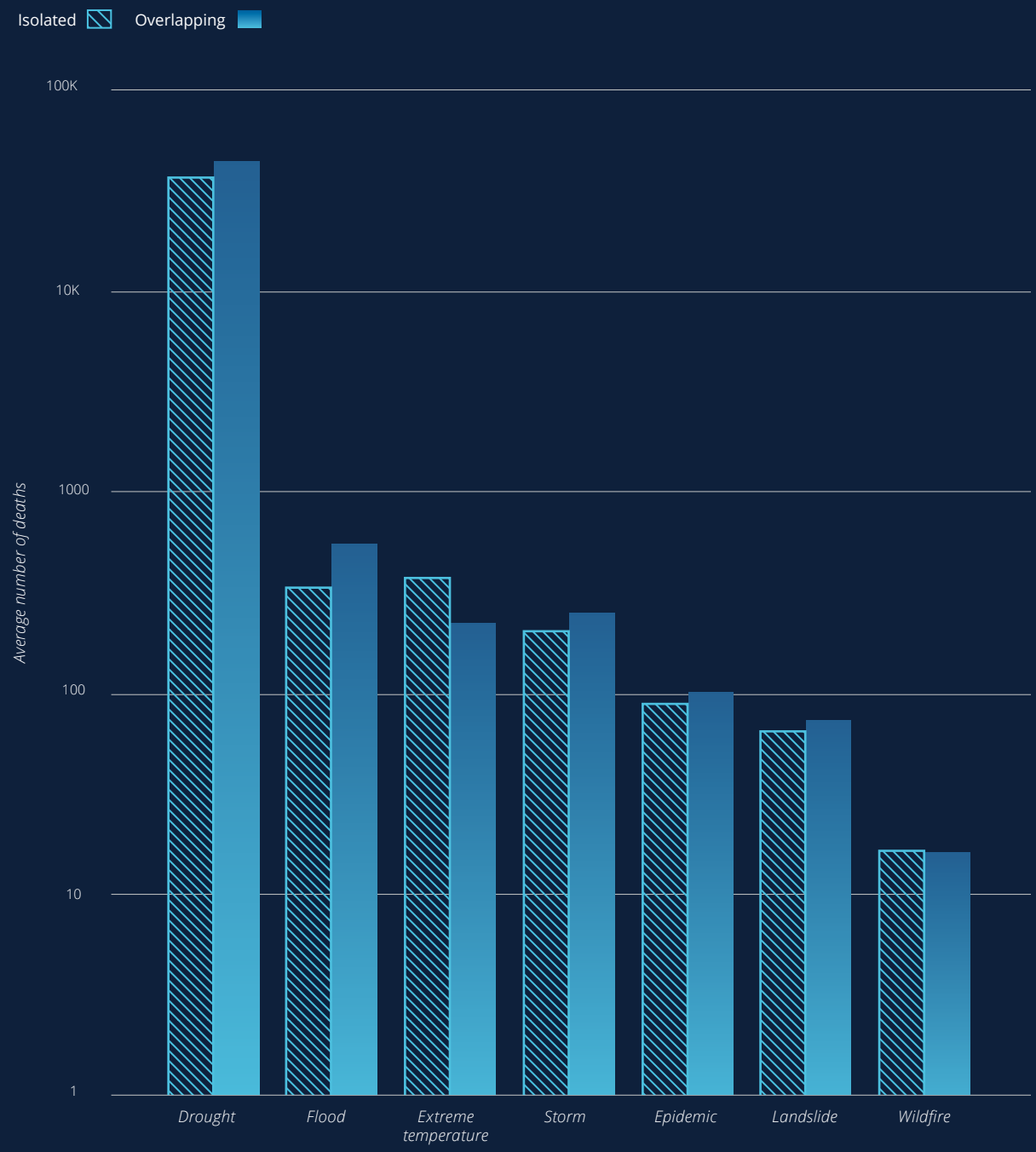
- First, disasters that occur over a longer period of time are more likely to overlap with other disasters, and are also more likely to affect a larger total number of people.
- Second, high-intensity events of the same type are also more likely to overlap due to seasonal fluctuations; for instance, the largest wildfires occur during summer and the largest storms following El Niño. In contrast, low-intensity events are more likely to be isolated.

Figure 8.18: Average number of people affected by different disaster types, isolated and overlapping with another disaster of any type



Source: EM-DAT
Note: Data is from the last 60 years.

Figure 8.19: Average number of people killed by different disaster types, isolated and overlapping with another disaster of any type



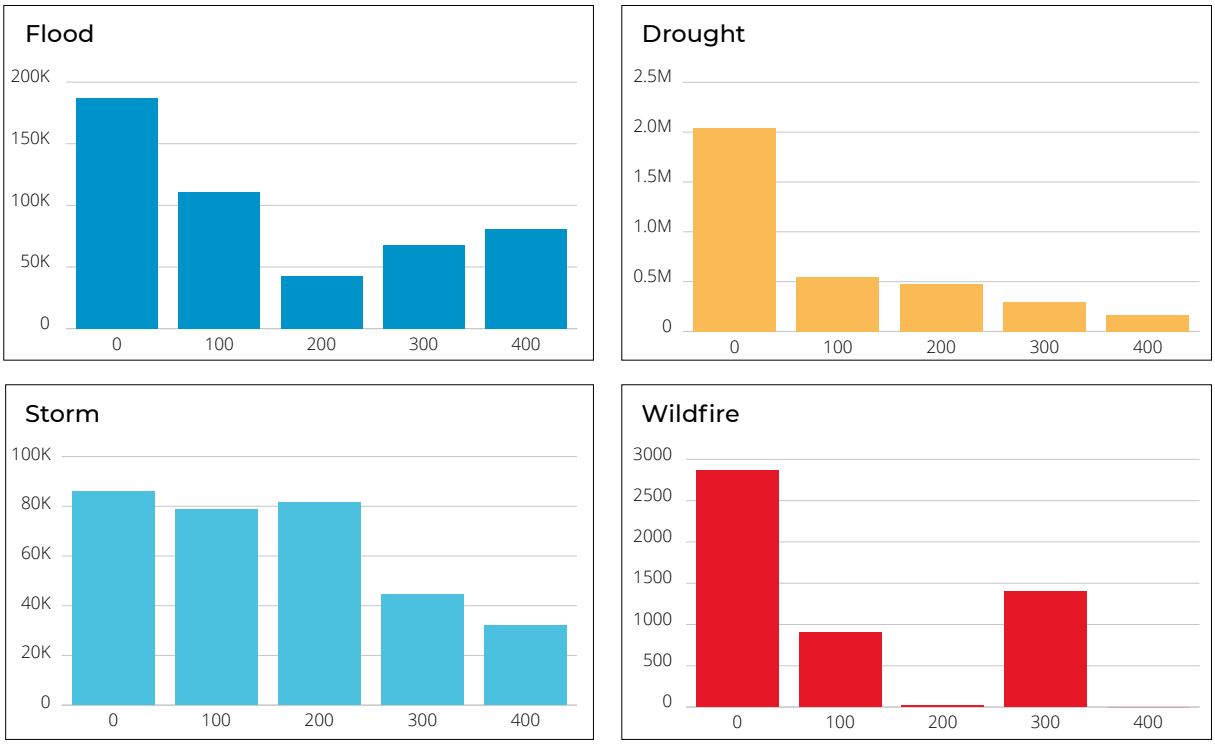
Source: EM-DAT
Note: Data is from the last 60 years.

8.3.2 Overlapping and sequential disasters in the same geographical area

We have seen that the impacts of disasters can be magnified if two or more occur in the same country at the same time, but that some countries have large geographical areas and therefore the disasters may not be physically close. In these analyses, we attempt to control for this confound. We do so by focusing on disasters that occur in the same first-level administrative division of a country, such as a province. Such disasters are more likely to be spatially close.

First, we look separately at climatic, hydrological and meteorological disasters. When these disasters occur in one first-level administrative division of a country, at the same time as another disaster or shortly after, more people are affected. This occurs regardless of the form the other disaster takes. The shorter the interval between the two disasters, the more significant the trend becomes. The analysis does not reveal why more people are affected.

Figure 8.20: Average number of people affected by flood, drought, storm and wildfire, by number of days since the previous disaster in the same first-level administrative region of a country

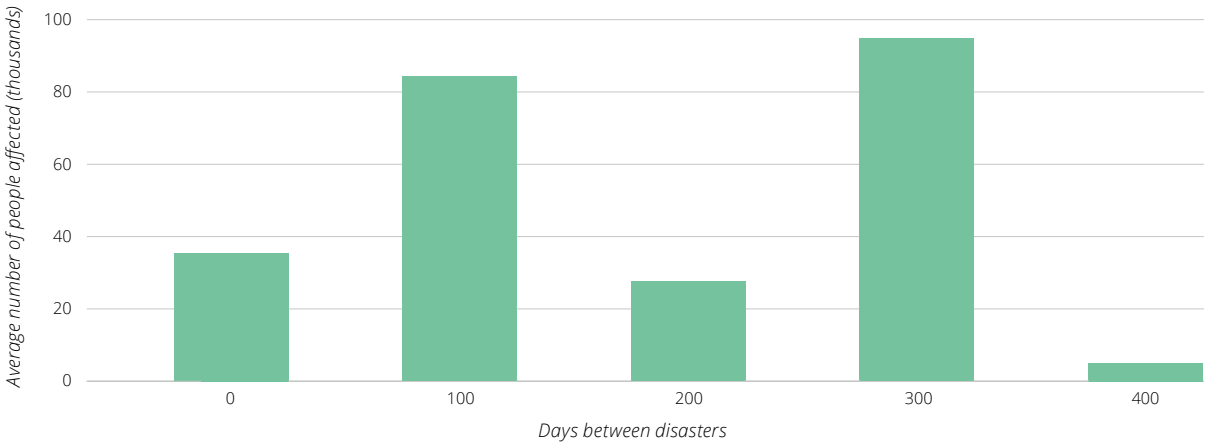


Source: EM-DAT

Notes: The analysis includes 2,452 disasters across 182 countries over 30 years. Time intervals are grouped by 100 days, with the right-most bar showing an interval of a full cycle of seasons. Disasters affect more people if they follow shortly after another disaster. The same pattern is seen for floods, droughts, storms and wildfires.

This trend is not universally observed. According to EM-DAT data, earthquakes do not affect the most people when they follow within 100 days of another disaster, but rather if the time interval is longer. At this time we do not have a clear explanation for this finding.

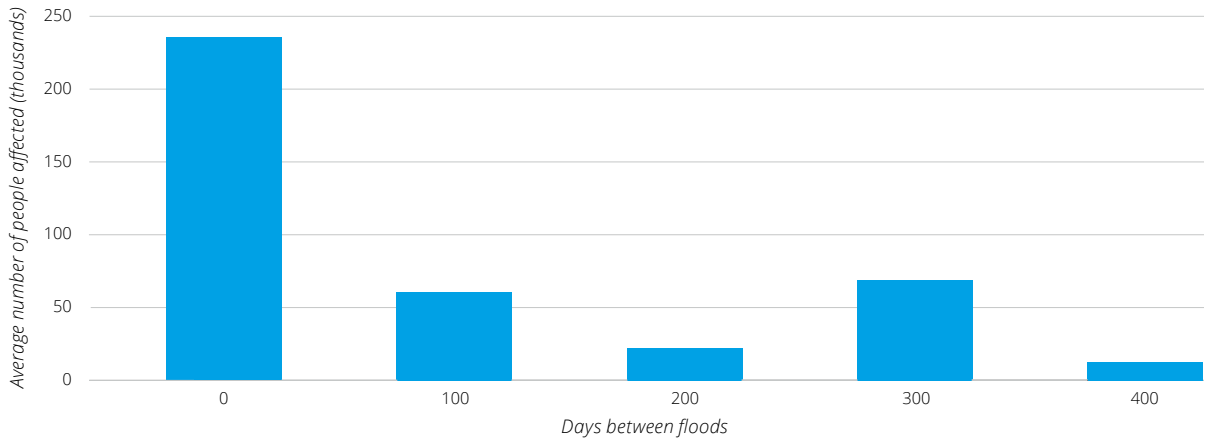
Figure 8.21: Average number of people affected by earthquake, by number of days since the previous disaster in the same first-level administrative region of a country



Source: EM-DAT
Note: Time intervals are grouped by 100 days, with the right-most bar showing an interval of a full cycle of seasons.

Finally, a follow-up analysis indicates that flood disasters are especially acute when they are preceded by another flood event, rather than any disaster type. This analysis suggests that floods occurring in rapid succession strongly potentiate each others' impacts.

Figure 8.22: Average number of people affected by flood, by duration since previous flood in the same first-level administrative region of a country



Source: EM-DAT

8.3.3 Disasters were associated with more people contracting COVID-19

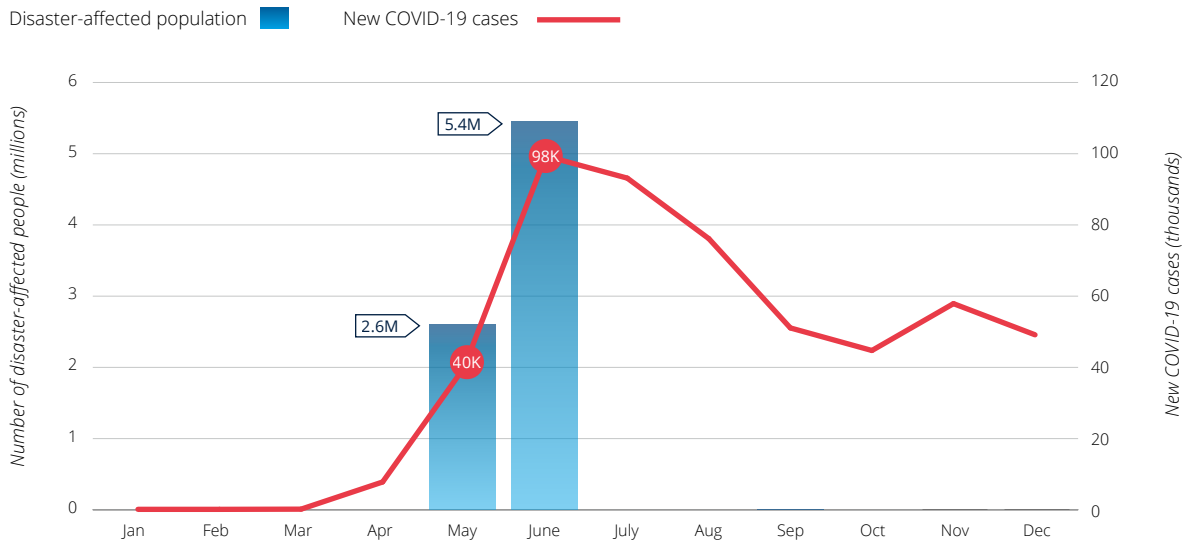
There is evidence that disasters sometimes exacerbated the COVID-19 pandemic. IFRC has identified multiple instances where the presence of a disaster was correlated with an increase in the number of people affected by COVID-19.

One such instance was observed in Bangladesh in 2020. The country was hit by Cyclone Amphan, a category 5 tropical cyclone, in May 2020 (Ellis-Petersen and Ratcliffe, 2020). There were also severe monsoon-related floods in June of that year (IFRC, 2021). The number of COVID-19 cases increased rapidly during this period, peaking in June before declining in the autumn.

A similar pattern was seen in India, where COVID-19 cases spiked in May 2021 at the time the country was struck by Cyclone Yaas (BBC News, 2021). Meanwhile, in Bolivia the pattern was observed twice. In January to February 2021, floods coincided with a rise in COVID-19 cases. A second flood in December of that year was followed by a peak in COVID-19 cases in January 2022 (ECPHAO, 2021). The Maldives and Tunisia also followed similar courses.

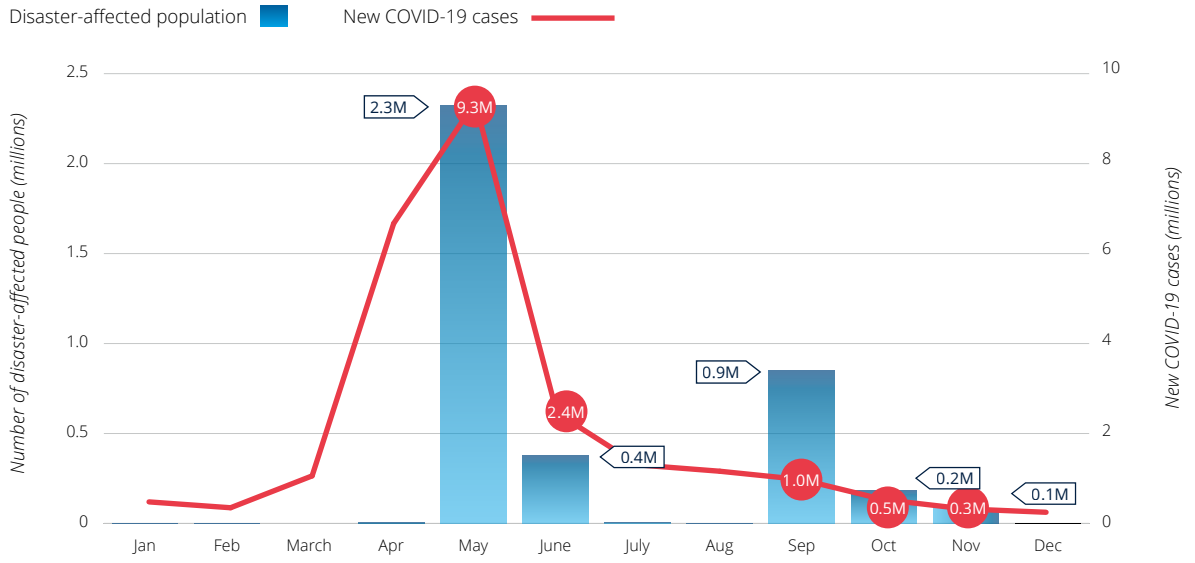
In contrast, the story played out differently in Tonga. The nation closed its borders in early 2020 to keep out the coronavirus. It was hit by Cyclone Harold on 6 April 2020, suffering significant damage, but remained free of COVID-19 throughout that year and the next. However, on 15 January 2022 the volcano Hunga Tonga-Hunga Ha'apai erupted explosively, causing widespread disruption. The country opened its borders to allow international aid to enter, and within weeks it saw a rapid rise in COVID-19 cases (BBC News, 2022).

Figure 8.23: Cases of COVID-19 spiked in Bangladesh in June 2020, when millions of people were affected by Cyclone Amphan in May and monsoon-related floods in June



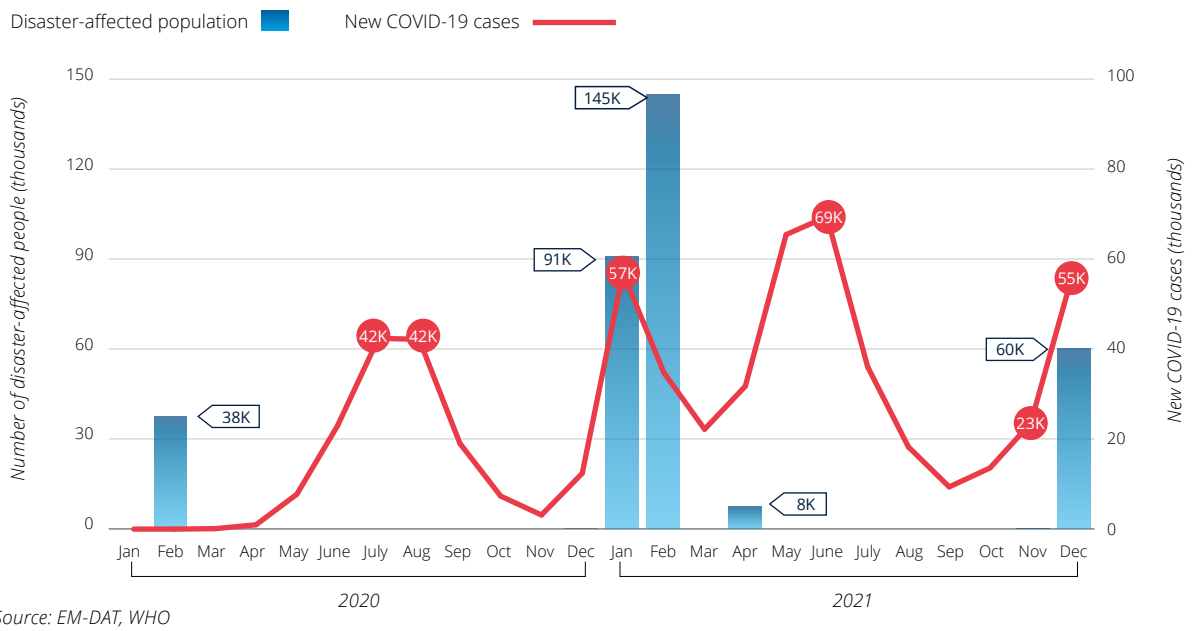
Source: EM-DAT, WHO

Figure 8.24: COVID-19 cases in India reached a peak when the country was impacted by Cyclone Yaas in May 2021



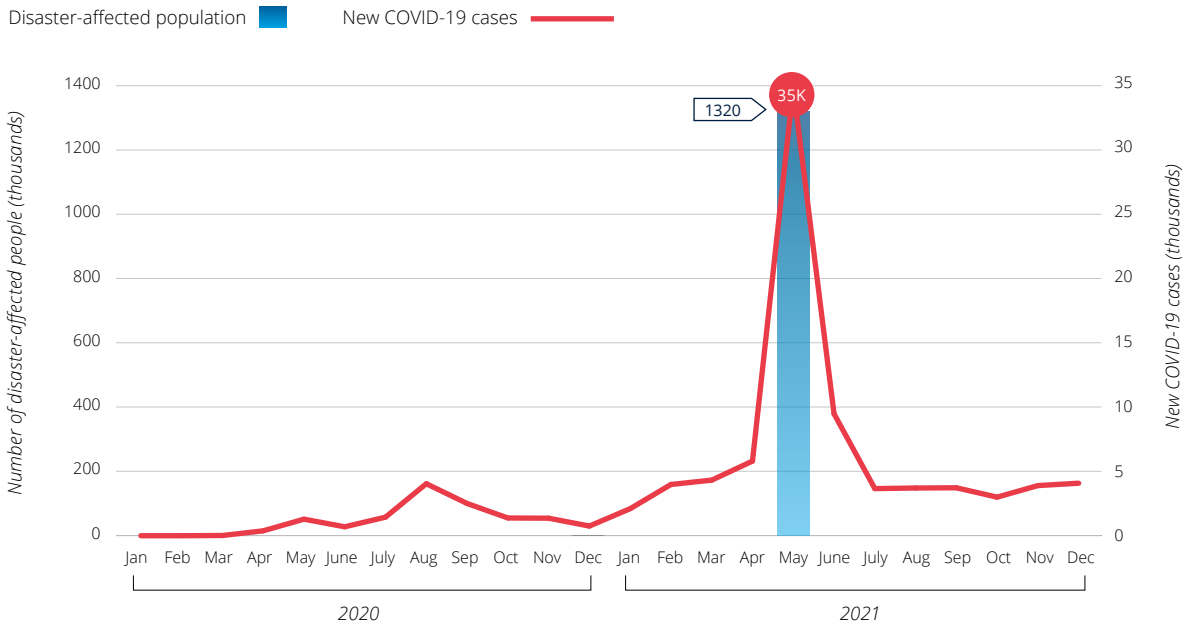
Source: EM-DAT, WHO

Figure 8.25: Repeated flooding events have struck Bolivia during the COVID-19 pandemic, in some cases coinciding with rises in COVID-19 case numbers



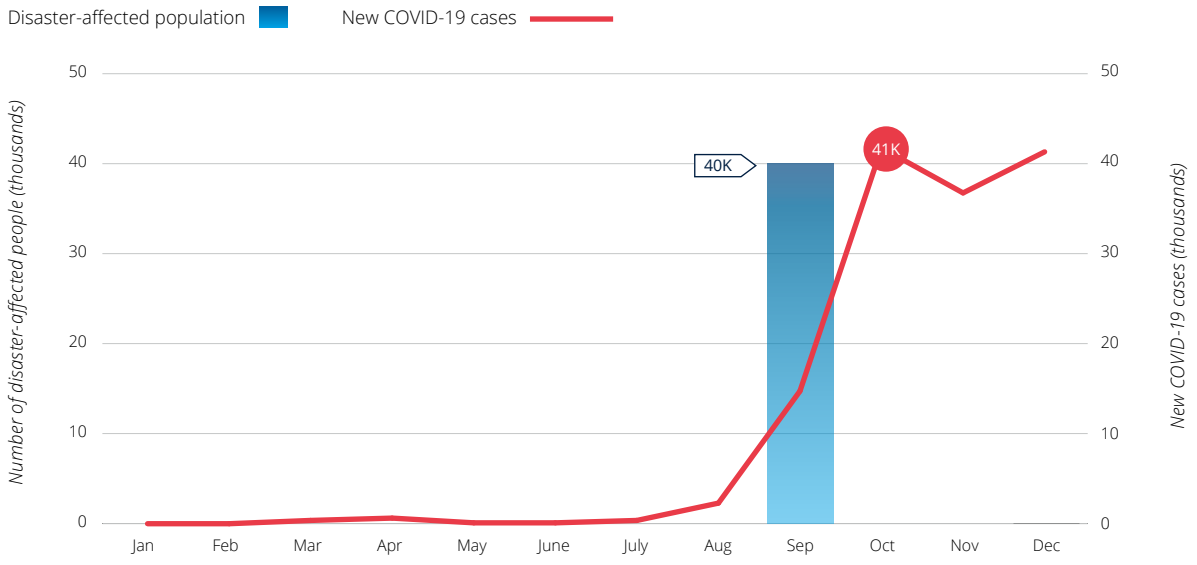
Source: EM-DAT, WHO

Figure 8.26: The Maldives saw its only spike in COVID-19 cases following Tropical Cyclone Tauktae on 16 May 2021



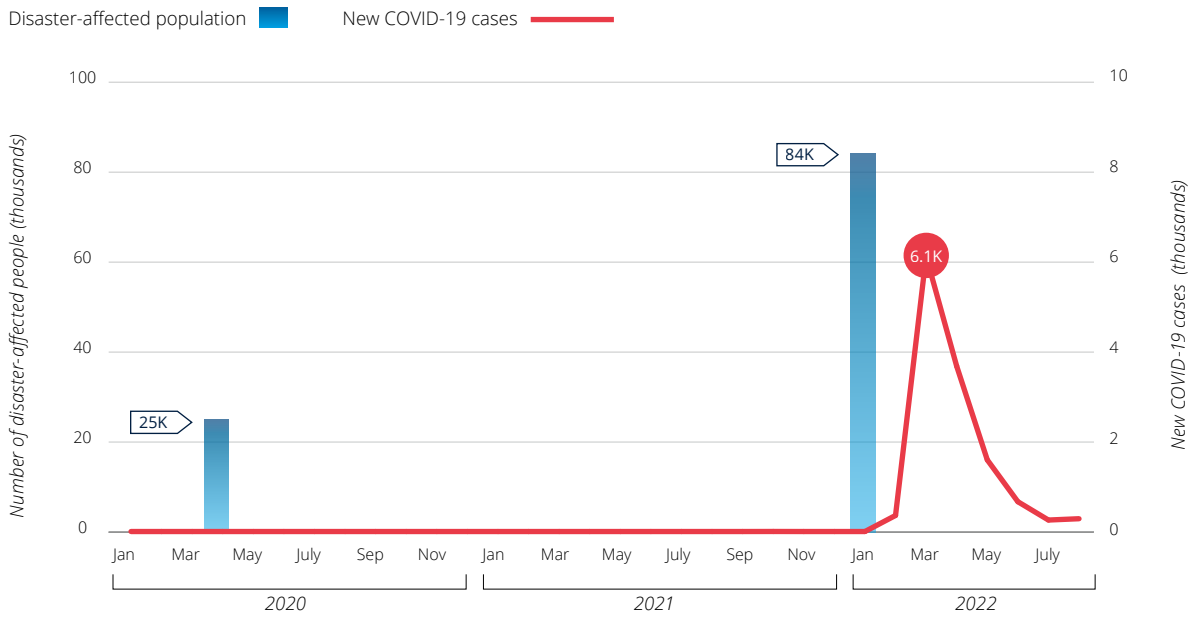
Source: EM-DAT, WHO

Figure 8.27: Tunisia only saw significant growth in COVID-19 cases after a flood on 5 September 2020



Source: EM-DAT, WHO

Figure 8.28: Tonga remained free of COVID-19 throughout 2020 and 2021, until international aid workers arrived in the wake of the eruption of Hunga Tonga-Hunga Ha'apai in January 2022



Source: EM-DAT, WHO

CONCLUSIONS

The COVID-19 pandemic stands out as the most severe disaster to strike humanity for many decades, and certainly in the 21st century. The number of deaths caused by COVID-19 since 2020 outstrips the fatalities from other non-conflict disasters from the last few decades by orders of magnitude.

Nevertheless, other disasters have continued to take place alongside COVID-19. In 2020–2021, Asia-Pacific was the most badly affected region on all measures: number of disasters, number of people affected, and number of deaths.

COVID-19 is also part of an overall trend in increasing hazards and more frequent disasters. The number of disasters occurring per year has increased over the last five decades. The proportion of these disasters caused by climate- and weather-related hazards has increased over the last few decades, based on those recorded in EM-DAT. There has also been an increase in the numbers of disease outbreaks and epidemics over the last 40 years, according to several studies. This increase is not observable in the EM-DAT data, but this is due to the database's limited representation of disease outbreaks. In contrast, the number of disasters caused by geological hazards has stayed broadly constant.

This rise in climate- and weather-related disasters, and in disease outbreaks, means disasters are increasingly overlapping in time and/or space, or occurring in rapid succession. Over the last 60 years there has been an increase in the number of instances of countries experiencing two or more disasters in the same year.

When disasters overlap or occur in rapid succession, they may exacerbate each other's impacts. There is evidence that disasters affect more people if they are closely preceded by another disaster, or if another disaster occurs at the same time in the same country – and especially if it occurs in the same first-level administrative region. Similarly, there are multiple instances where disasters triggered by natural hazards appear to have driven spikes in numbers of COVID-19 cases.

The sobering conclusion is that we now live in a multi-hazard world, in which communities will frequently be confronted with multiple hazards like disease outbreaks, floods and heatwaves. This poses a considerable preparedness challenge.

Main data sources used in this chapter

Hazard and impact data is taken mostly from EM-DAT (EM-DAT, no date). EM-DAT is the Emergency Events Database from the Centre for Research on the Epidemiology of Disasters at the Université Catholique de Louvain. It collects and compiles information on disasters from UN agencies, non-governmental organizations, insurance companies, research institutes as well as secondary data from press agencies. Using this data source facilitates a comparison of disasters through the same data collection methodology. EM-DAT data does not include war, conflict or conflict-related famine as disaster events. EM-DAT also does not include COVID-19 data.

Country populations were taken from the World Bank Databank, using the indicator 'Population, total' (World Bank Databank, no date). In all cases, we used 2021 populations. Population data was used to calculate ratios of affected people per capita.

Country income levels were taken from the World Bank's dataset on 'Lending Group (Income)' (World Bank Data Help Desk, no date).

COVID-19 numbers come from the World Health Organization (WHO) Coronavirus (COVID-19) Dashboard (WHO, no date). The dashboard presents official daily counts of COVID-19 cases, deaths and vaccine doses, as reported by countries, territories and areas.

Caution must be taken when interpreting all data presented. Differences are to be expected between information products published by WHO, national public health authorities, and other sources using different inclusion criteria and different data cut-off times. While steps are taken to ensure accuracy and reliability, all data are subject to continuous verification and change. All counts are subject to variations in case detection, definitions, laboratory testing, vaccination strategy, and reporting strategies.

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METHODOLOGY

This report was created using a desk-based collection of technical scientific analysis, policy documents, institutional reports, case studies and research at all levels. Sources included: multiple reports and case studies by IFRC and National Red Cross Red Crescent Societies; analyses by major health, development and humanitarian actors including the World Health Organization (WHO), World Bank, United Nations and others; and academic research in fields including public health, disaster risk management, development and humanitarianism. The most significant external sources are listed and briefly described in the Introduction.

Conclusions from these sources were corroborated, updated and put in context through interviews of practitioners, staff and volunteers operating in the field. Interviews were conducted with representatives, often in groups, of specialist IFRC teams and various Red Cross Red Crescent National Societies.

Draft chapters have been reviewed by IFRC specialists and senior management, representatives of National Societies, and expert external peer reviewers.

Chapter 3 analyses of vaccine donations

We compared donations of vaccines to countries of different income levels. Vaccine donation data was obtained from the United Nations Children's Fund (UNICEF) COVID-19 Market Dashboard (UNICEF, no date). This was merged with World Bank income categories for donor and recipient countries (World Bank Data Help Desk, no date). Donors and recipients were each grouped into high-, middle- and low-income countries, and doses summed for each group.

A second analysis compared recipient countries' vaccine needs with the doses actually received. Income categories were again obtained from the World Bank. Data on vaccine courses delivered as a percentage of the country's population were taken from UNICEF (UNICEF, no date). This was merged with data on the number of doses donated and delivered (UNICEF, no date) and each country's total population in 2020 (World Bank Databank, no date). This gave a ratio of doses donated compared to the percentage of the population unvaccinated and therefore in need of doses.

A third analysis explored vaccination rates by income group. Data was obtained from Our World in Data's vaccination landing page (Our World in Data, no date). Vaccination rates were extracted by date and by country and mapped for each country with its income group

Trends in disaster data methodology

EM-DAT is the International Disaster Database from the Centre for Research on the Epidemiology of Disasters (CRED) at the Université Catholique de Louvain. It collects and compiles information on disasters from public sources, UN agencies including WHO, non-governmental organizations, insurance companies and research institutes, and secondary data from press agencies. Further details are available from EM-DAT (EM-DAT, no date).

EM-DAT data covers four overall categories of disaster:

- **Climate- and weather-related events**
  - » Meteorological: Storms such as tropical cyclones, extratropical storms and convective storms (such as tornadoes, storm surges, hail, lightning, severe storms, derecho, sandstorms, winter storms) and extreme temperatures (cold waves and heatwaves).
  - » Hydrological: Floods such as riverine, pluvial/flash floods, and landslides and mudslides related to hydrological events.
  - » Climatological: Droughts and wildfires.

- **Geophysical:** Earthquakes, volcanic activities, and landslides related to mass movement.
- **Biological:** Epidemics (only emergency outbreaks), insect infestation and animal accidents.
- **Technological:** Transport accidents (air, boat, train and road), which also include migrant boat accidents and industrial accidents (including nuclear explosions and dam breaks).

For a disaster to be entered into the EM-DAT database, at least one of the following criteria must be fulfilled:

- 10 or more people reported **killed.**
- 100 or more people reported **affected.**
- Declaration of a **state of emergency.**
- Call for **international assistance.**

The EM-DAT data used in this report was downloaded on 1 September 2022.

The data in EM-DAT have some key limitations, as follows:

- **Damage:** Damage and cost estimation of disasters is largely under-reported in EM-DAT. Most (78%) records do not contain this information.

- **Affected people**: Estimates of the number of people affected and killed by disasters are not comprehensively reported. A third (33%) of records do not contain the number of people affected, and 21% do not record the number of deaths. There may also be some inconsistencies in who is classed as affected. The EM-DAT definition of affected is "people requiring immediate assistance during a period of emergency, i.e. requiring basic survival needs such as food, water, shelter, sanitation and immediate medical assistance". However, for some disasters broader definitions appear to have been used. As a result, we focused more on numbers of disasters and deaths, which leaves less room for interpretation.
- **Other hazard information:** Data on the intensity (magnitude) of climate- and weather-related disasters is limited. Half (53%) of extreme temperature events, 58% of wildfires and 65% of floods do not include information on their measurable intensity. In addition, the precise duration of hazards is not known in 15% of records. Availability of precise location is also poor: 90% of records do not include GPS locations.
- **Conflict**: EM-DAT does not include war, conflict or conflict-related famine as disaster events.
- **COVID-19:** EM-DAT does not include COVID-19 data.

Care must be taken when calculating numbers of events, or countries affected, using EM-DAT. This is because disaster events are recorded by country in the EM-DAT database; as a result, a single event that impacts several countries will appear multiple times. To calculate the number of independent events, a unique identifier was generated based on the following fields available from EM-DAT: 'Disaster type', 'Seq' and 'Year'. Total numbers of people affected and killed were then aggregated by this unique identifier. To validate these events, the data were checked against the ReliefWeb disaster database (ReliefWeb, no date).

Events with 10 or more people reported killed and/or with 100 or more people reported affected are classified as 'significant' events. The analyses presented in Chapters 2 and 3 is based only on disasters classified as 'significant'.

To compare the effect of disasters depending on whether they were concurrent or not, we compared the same disaster type in the same first-level administrative division of each country. This enabled comparisons within similar geographic spaces, climates and environments.

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THE FUNDAMENTAL PRINCIPLES OF THE INTERNATIONAL RED CROSS AND RED CRESCENT MOVEMENT

Humanity

The International Red Cross and Red Crescent Movement, born of a desire to bring assistance without discrimination to the wounded on the battlefield, endeavours, in its international and national capacity, to prevent and alleviate human suffering wherever it may be found. Its purpose is to protect life and health and to ensure respect for the human being. It promotes mutual understanding, friendship, cooperation and lasting peace amongst all peoples.

Impartiality

It makes no discrimination as to nationality, race, religious beliefs, class or political opinions. It endeavours to relieve the suffering of individuals, being guided solely by their needs, and to give priority to the most urgent cases of distress.

Neutrality

In order to enjoy the confidence of all, the Movement may not take sides in hostilities or engage at any time in controversies of a political, racial, religious or ideological nature.

Independence

The Movement is independent. The National Societies, while auxiliaries in the humanitarian services of their governments and subject to the laws of their respective countries, must always maintain their autonomy so that they may be able at all times to act in accordance with the principles of the Movement.

Voluntary service

It is a voluntary relief movement not prompted in any manner by desire for gain.

Unity

There can be only one Red Cross or Red Crescent Society in any one country. It must be open to all. It must carry on its humanitarian work throughout its territory.

Universality

The International Red Cross and Red Crescent Movement, in which all societies have equal status and share equal responsibilities and duties in helping each other, is worldwide.

The International Federation of Red Cross and Red Crescent Societies (IFRC) is the world's largest humanitarian network, with **192 National Red Cross and Red Crescent Societies** and around **16.5 million volunteers.** Our volunteers are present in communities before, during and after a crisis or disaster. We work in the most hard to reach and complex settings in the world, saving lives and promoting human dignity. We support communities to become stronger and more resilient places where people can live safe and healthy lives, and have opportunities to thrive.