

# European Open Science Conference Symposium 2022

Wednesday 16 November 2022

## Data Policy for Open Science in Disaster Situations

# Learnings from COVID-19 for public health on the need for data policy

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Member of CODATA international Science Council Executive Committee

Chair of UNDRR/ISC technical working group for Hazard Terminology and Classification Review

Co-chair of the WHO Thematic Platform Health and Disaster Risk Management Research Network

Member of Integrated Research on Disaster Risk (IRDR) Scientific Committee

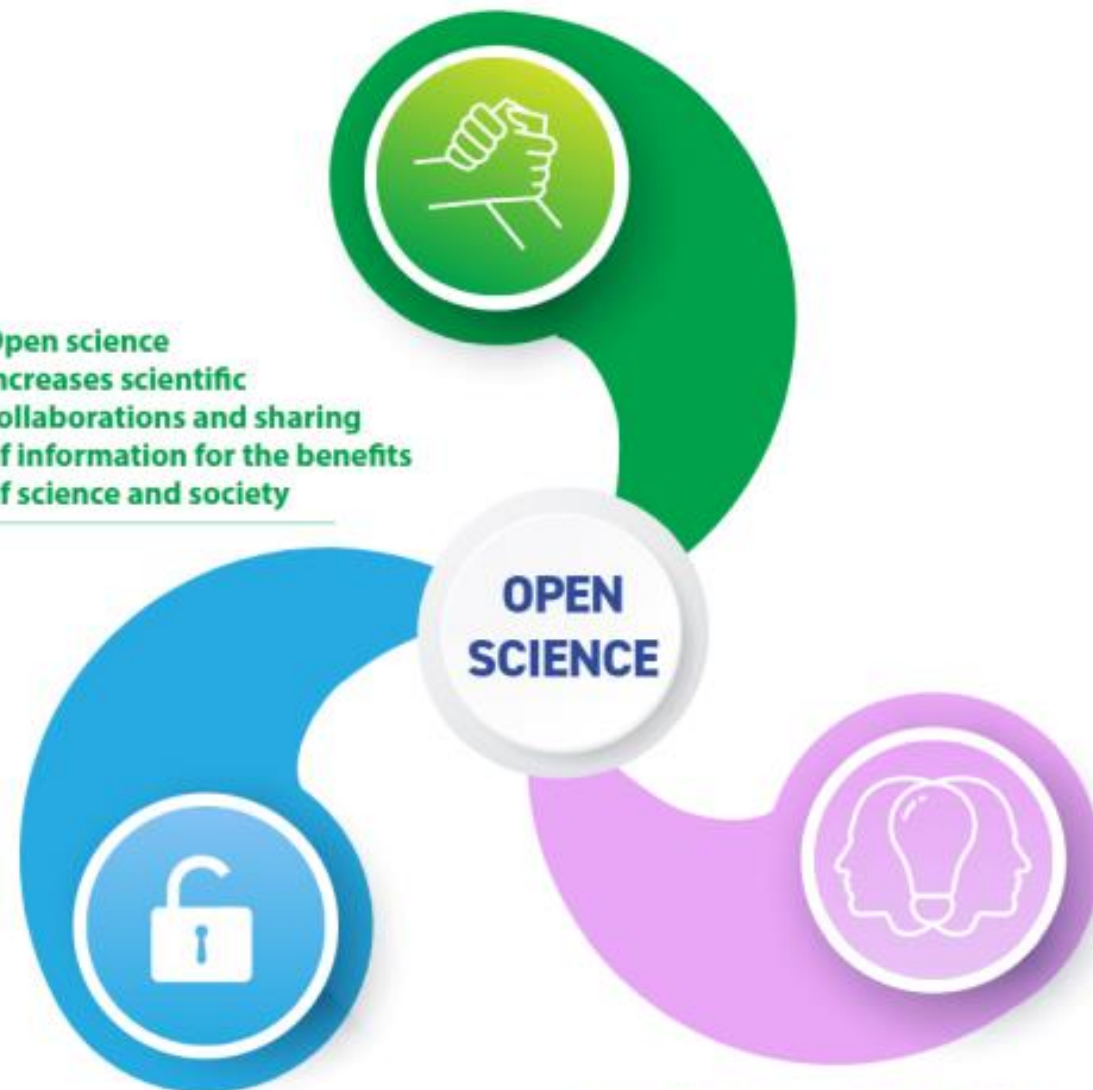
Co-Chair of IRDR Disaster Loss Data (DATA)

Member of the WHO Collaborating Centre on Global Health Security



## UNESCO Recommendation on Open Science

Open science  
increases scientific  
collaborations and sharing  
of information for the benefits  
of science and society

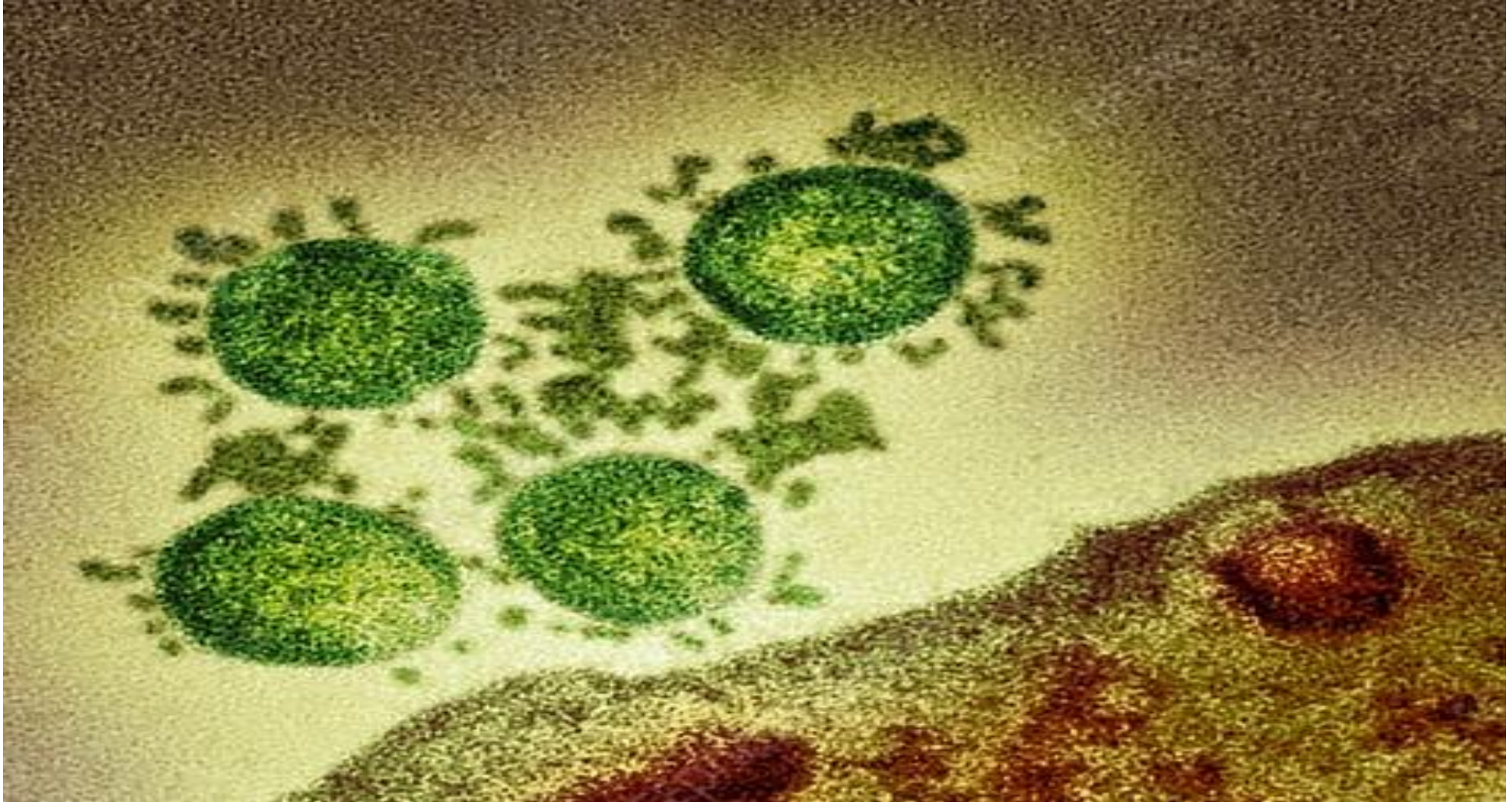


makes multilingual scientific  
knowledge openly available,  
accessible and reusable for  
everyone

opens the processes of scientific  
knowledge creation, evaluation and  
communication to societal actors  
beyond the traditional scientific  
community.



# COVID-19





Health Topics ▾

Countries ▾

Newsroom ▾

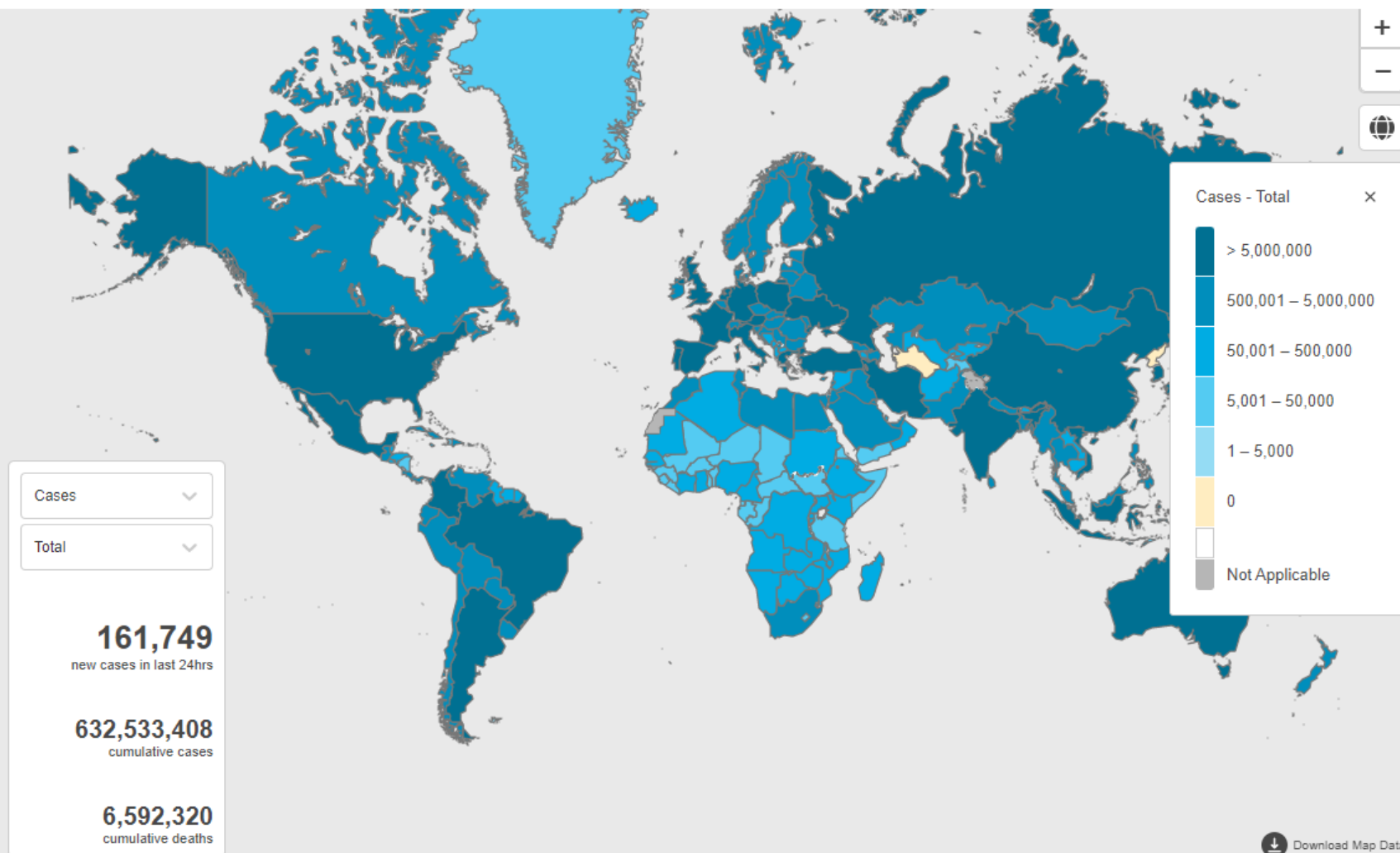
Emergencies ▾

Data ▾

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[Home](#) / [Newsroom](#) / [Spotlight](#) / A year without precedent: WHO's COVID-19 response



[Donate](#)WHO Coronavirus (COVID-19)  
Dashboard[Overview](#)[Measures](#)[Table  
View](#)[Data](#)[More  
Resources](#)

Globally, as of 6:19pm CET, 15 November 2022, there have been 632,533,408 confirmed cases of COVID-19, including 6,592,320 deaths, reported to WHO. As of 9 November 2022, a total of 12,885,748,541 vaccine doses have been administered.

<https://covid19.who.int/>



# INTERNATIONAL **HEALTH**

## REGULATIONS

(2005)

THIRD EDITION



While disease outbreaks and other acute public health risks are often unpredictable and require a range of responses, the **International Health Regulations (2005) (IHR)** provide an overarching legal framework that defines countries' rights and obligations in handling public health events and emergencies that have the potential to cross borders.

# Timeline: WHO's COVID-19 response

Click on the action circles below the chart to find out more.

● All actions ● Information ● Science ● Leadership ● Advice ● Response ● Resourcing

Cases key: ■ Western Pacific ■ South-East Asia ■ Americas ■ Europe ■ Eastern Mediterranean ■ Africa

200 000 daily cases

150 000

100 000

50 000

## ADVICE

10-12 Jan 2020

WHO published a comprehensive package of guidance documents for countries, covering topics related to the management of an outbreak of a new disease:

- Infection prevention and control
- Laboratory testing
- National capacities...

[Continue reading](#)

[All technical guidance](#)

## LEADERSHIP

30 Jan 2020

**The Director-General declared the novel coronavirus outbreak a public health emergency of international concern (PHEIC), WHO's highest level of alarm.**

The WHO Director-General reconvened the IHR...

[Continue reading](#)

[Statement](#)

## SCIENCE

11-12 Feb 2020

WHO convened a Global Research and Innovation Forum on the novel coronavirus, attended in person by more than 300 experts and funders from 48 countries, with a further 150 joining online. Participants came together to assess the level...

[Continue reading](#)

[News Release](#)

[R&D Blueprint](#)

31 Dec

5 Jan

10 Jan

15 Jan

20 Jan

25 Jan

30 Jan

4 Feb

9 Feb

14 Feb

19 Feb

# A COORDINATED GLOBAL RESEARCH ROADMAP: 2019 NOVEL CORONAVIRUS

MARCH 2020

**There is broad consensus on the need for research to: focus on actions that can save lives now; facilitate actions so that those affected are promptly diagnosed and receive optimal care; and catalyse the full integration of all innovations within each research area.**

Moreover, there is an imperative to support research priorities in a way that leads to the development of sustainable global research platforms pre-prepared for the next disease X epidemic. This will allow for accelerated research, innovative solutions and R&D of diagnostics, therapeutics and vaccines, as well as the timely and equitable access to these life-saving tools for those at highest risk.

Figure 1. Principles to guide the Implementation of the Global Research Roadmap

## Powering research

An understanding that science and research stays at the heart of the response

A global research and innovation roadmap, facilitated by WHO, to enable the implementation of priority research

## Coordinating research

A series of critical research efforts so that those affected are promptly diagnosed and receive optimal care

A commitment to develop frameworks that would accelerate development, production and access to medical countermeasures

## Committing to fair and equitable access

An unambiguous commitment to global solidarity and equitable access to advances made

A global effort to enable the scaling-up of any successful intervention

A coordinated effort to facilitate effective, fair and equitable access based on public health needs

## Facilitating future research actions

A coordinated effort to maintain repositories of products pipelines, protocols, procedures, and tools.

A series of efforts enabling critical support for regulatory and ethics, and, use of platforms for developing vaccines and therapeutics that can be useful beyond COVID-19.



© Image credit



# COVID-19 RESEARCH AND INNOVATION ACHIEVEMENTS

APRIL 2021



## Global picture of research funding aligned to WHO Research Roadmap

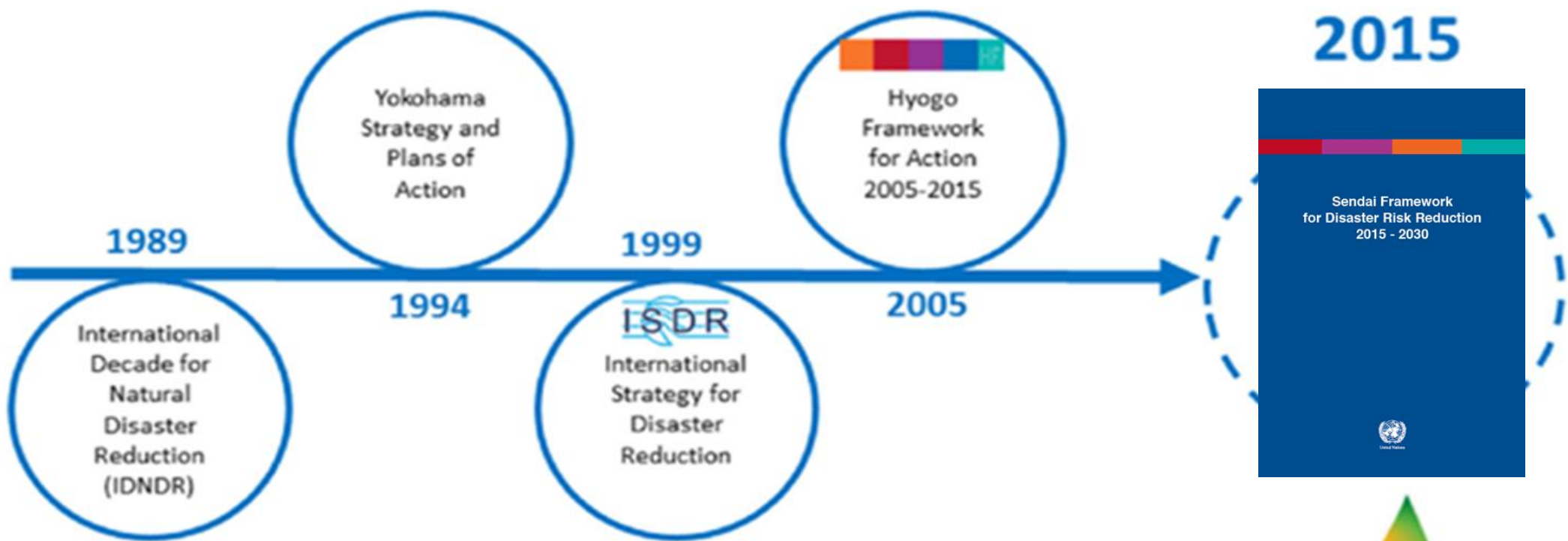
Roadmap research thematic area	WHO priority sub-area							Total funding amount (\$)
	a	b	c	d	e	f	N/A	
1. Virus: natural history, transmission	823	605	170	598	123	85	49	821.4M
2. Animal and environmental research	72	6	7				3	16.9M
3. Epidemiological studies	611	259	72	258			132	370.5M
4. Clinical characterization and management	466	767	11	651	27	7	182	1,207.9M
5. Infection prevention and control	186	311	457	308			193	288.1M
6. Candidate therapeutics R&D	796	93	17	231	43		82	629.7M
7. Candidate vaccines R&D	219	41	34	8	17		80	1,618.5M
8. Ethics considerations for research	36	15	30	47	16		25	32.4M
9. Social sciences in the outbreak response	978	168	497	170	22	38	1,634	732.8M
Unallocated							725	0.0M

Credit: UKCDR and GloPID-R COVID-19 Research Project Tracker, 2020

COVID Circle, a joint initiative between UKCDR and GloPID-R is seeking to align and strengthen the global efforts on COVID-19 in resource- limited

settings. GloPID-R is also currently in the process of growing its membership, especially in LMICs in Latin America, Asia and Africa.

[r-d-achievements-report\\_v42.pdf \(who.int\)](#)



1992

**United Nations**  
Framework Convention on  
Climate Change



**PARIS2015**  
UN CLIMATE CHANGE CONFERENCE  
COP21·CMP11

2000





# Sendai Framework for Disaster Risk Reduction 2015-2030

1 Global Outcome

13 Guiding Principles

4 Priorities for Action at all levels

7 Global Targets

7 GLOBAL TARGETS

## Reduce

**Mortality/**  
global population

2020-2030 Average << 2005-2015 Average

**Affected people/**  
global population

2020-2030 Average << 2005-2015 Average

**Economic loss/**  
global GDP

2030 Ratio << 2015 Ratio

**Damage to critical infrastructure  
& disruption of basic services**

2030 Values << 2015 Values

## Increase

Countries with national  
& local DRR strategies  
2020 Value >> 2015 Value

**International  
cooperation**  
to developing countries  
2030 Value >> 2015 Value

**Availability and access  
to multi-hazard early warning  
systems & disaster risk  
information and assessments**  
2030 Values >> 2015 Values





**SENDAI FRAMEWORK**  
FOR DISASTER RISK REDUCTION

LOGIN

## MEASURING IMPLEMENTATION OF THE SENDAI FRAMEWORK

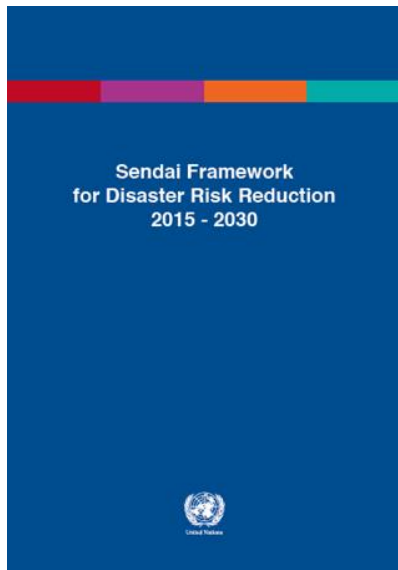
### ANNOUNCEMENT

# The Sendai Framework Monitor system is now live!

After the adoption of Sendai Framework in 2015, 38 indicators were defined to measure progress in achieving its 7 Global targets. This system is the official tool to report these indicators to both the Sendai Framework and SDG's reporting processes.

# Sendai Framework for Disaster Risk Reduction 2015-2030

**To strengthen technical and scientific capacity** to capitalize on and consolidate existing knowledge and to develop and apply methodologies and models **to assess disaster risks, vulnerabilities and exposure to all hazards**; (*paragraph 24 j*)





# HAZARD DEFINITION & CLASSIFICATION REVIEW

TECHNICAL REPORT



UNDRR  
UN Office for Disaster Risk Reduction

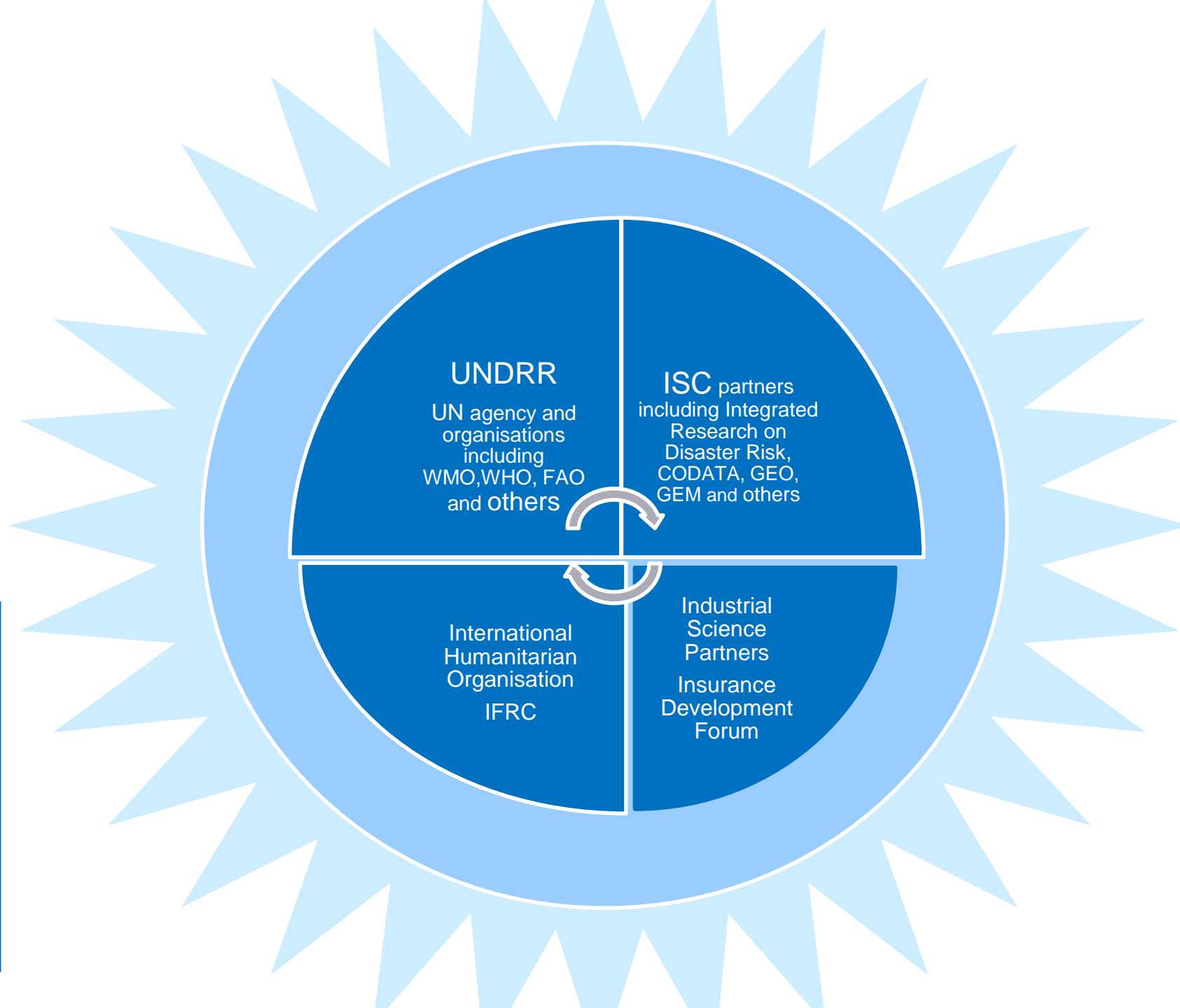


International  
Science Council

## UNDRR / ISC Hazard Definition and Classification Review TECHNICAL REPORT July 2020

<https://council.science/publications/hazards/>  
<https://www.undrr.org/publications>





# HAZARD INFORMATION PROFILES

Supplement to :  
UNDRR-ISC Hazard Definition  
& Classification Review -  
Technical Report



SENDAI FRAMEWORK  
FOR DISASTER RISK REDUCTION

International  
Science Council  
The global voice for science

UNDRR  
UN Office for Disaster Risk Reduction



UNDRR  
UN Office for Disaster Risk Reduction



International  
Science Council

## Hazard Information Profiles Supplement to UNDRR / ISC Hazard Definition and Classification Review Technical Report October 2021

<https://council.science/wp-content/uploads/2020/06/Hazard-Information-Profiles-Supplement-to-UNDRR-ISC-Hazard-Definition-Classification-Review-Technical-Report-2021.pdf>

<https://www.undrr.org/publication/hazard-information-profiles-supplement-undrr-isc-hazard-definition-classification>

## Number

# HAZARD

### Primary definition

Brief Definition of hazard: no more than 3 lines/2 sentences.

Sourced from the highest possible authority and be applicable to all parties and preferably a simple UN definition but also recognised as the highest level that UN member states can use and apply.

REFERENCE/ hyperlink/Web site

### Scientific definition

Expanded scientific definition that is preferably measurable, modellable and statistically relevant

REFERENCE/ hyperlink/Web site

### Metrics, numerical limits or defined guidelines

Any globally agreed metrics, numerical limits or guidelines defined

Should be globally agreed as a recognised standard, if it is only at a regional level than state this as a reference.

REFERENCE/ hyperlink/Web site

### Key relevant UN Conventions and regional conventions / multilateral treaty

REFERENCE/ hyperlink/Web site

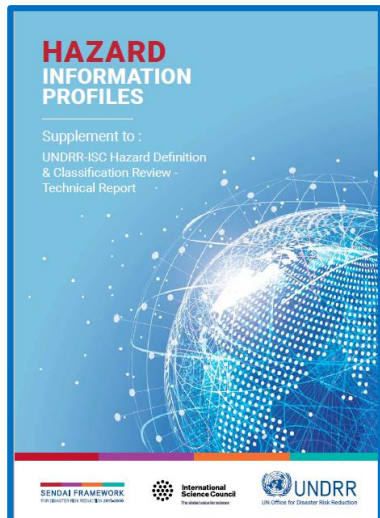
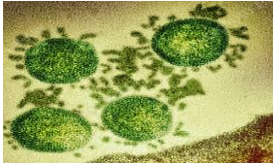
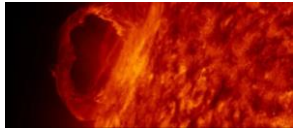
### Any essential annotations

Such as drivers, outcomes and risk management

REFERENCE/ hyperlink/Web site

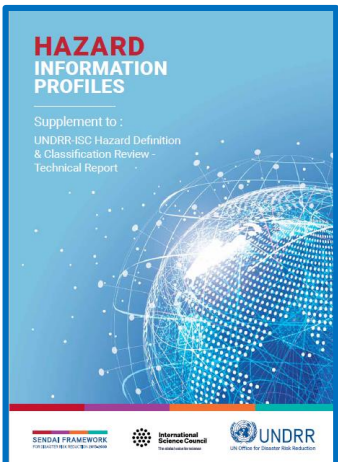
### Ownership of Definition(s)

UN or Scientific Agency or Organisation who holds the updating responsibility for the Primary Definition





# UNDRR / ISC Hazard Information Profiles



S00007 / SOCIETAL / Behavioural

## Stampede or Crushing (Human)

### Definition

Stampede or crushing is the surge of individuals in a crowd, in response to a perceived danger or loss of physical space. It often disrupts the orderly movement of crowds resulting in irrational and dangerous movement for self-protection leading to injuries and fatalities (Illiyas et al., 2013).

## Reference

Illiyas, F., S. Mani, A. Pradeepkumar and K. Mohan, 2013. Human stampedes during religious festivals: a comparative review of mass gathering emergencies in India. *International Journal of Disaster Risk Reduction*. 5:10-18.

## Annotations

### Synonyms

Crush, Mass panic, Crowd disaster.

## Additional scientific

With population growth and a constant increase in human travels, mass gatherings are becoming more frequent and attract increasing numbers of participants (Johansson et al., 2012). Mass gatherings can be defined as a concentration of people at a specific location for a specific purpose over a set period of time, and which has the potential to strain the planning and response resources of the country or the community (WHO, 2015).

### Two summary examples

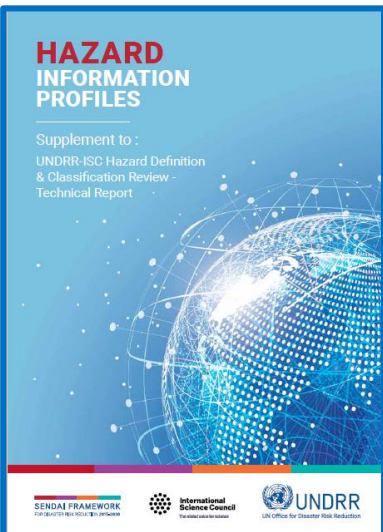
- *Brumadinho dam disaster* leading to at least 270 deaths and more than 250 people displaced (Shaw, 2019; Thompson, 2019). The disaster occurred in a period and is considered

at Brumadinho sho

Since 1970, human cases of monkeypox have been reported from the Democratic Republic of the Congo, the Central African Republic and South Sudan. In 2017, Nigeria reported the first human case. The true burden of monkeypox in the Democratic Republic of the Congo has not been established, but positive for varicella virus and some monkeypox could explain a change in the pattern of disease.

## Contents

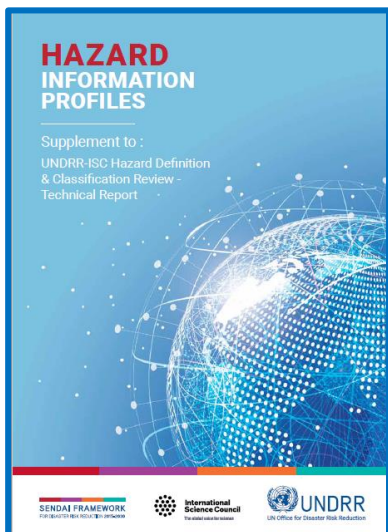




# Recommendations

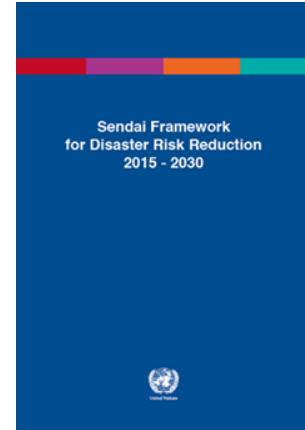
- Regular review and update
- **Use this hazard list to actively engage policymakers and scientists in evidence-based national risk assessment processes** for actions aimed at managing risks of emergencies and disasters
- **Address cascading and complex hazards and risks**





# The UNDRR/ISC Hazard Definition and Classification Review Technical Report and Hazard Information Profiles support Sendai Framework for Disaster Risk Reduction 2015-2030, Sustainable Development Goals of Agenda 2030 and Paris Agreement on Climate Change

by providing a  
**common set of hazard definitions** for monitoring and reviewing implementation





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## Early Warning systems must protect everyone within five years

Tags: [WMO](#) [Disaster risk reduction](#) [Climate change](#) [Observations](#)  
[Forecast](#) [Disasters](#)

23

Published 23 March 2022

Press Release Number: 23032022

### UN unveils ambitious target to adapt to climate change and more extreme weather

Within the next five years, everyone on Earth should be protected by early warning systems against increasingly extreme weather and climate change, according to an ambitious new United Nations target announced today.

### Latest WMO News

**"Science for Climate Action" pavilion by WMO, IPCC and MERI Foundation at COP27, Egypt**



# Data policy for Open Science in crisis situations

## Data-enabled Society for Health: Challenges and Opportunities

