

# WHO Thematic Platform for Health Emergency and Disaster Risk Management Research Network

## Second Core Group Meeting

*Moving forward to effective operation for  
global impact and country benefit*

**27 November 2020**

WHO Centre for Health Development (WHO Kobe Centre – WKC)  
WHO Disaster Risk Management and Resilience Unit, Health Security Preparedness Department

## Contents

1. Background .....	2 -
2. Meeting objectives and expected outcomes .....	2 -
3. Results .....	3 -
3.1. Welcome and opening remarks .....	3 -
3.2. Session 1: Health EDRM RN progress.....	4 -
3.3. Session 2: Health EDRM RN operation plans.....	6 -
3.4. Session 3: Health EDRM RN synergies and collaboration in the context of COVID-19: lessons learned .....	7 -
3.5. Closing session: Feedback from the participants .....	9 -
4. Agreed actions for next steps .....	9 -
5. Conclusion .....	10 -
6. Annexes .....	11 -
Annex 1. Meeting Programme.....	11 -
Annex 2. List of Participants .....	13 -

## 1. Background

The global impact of emergencies and disasters on public health has been accompanied by many challenges, such as unplanned urbanization, health inequities, population ageing and climate change that increase the health risks for communities. The devastating effects of the ongoing COVID-19 pandemic have demonstrated the importance of strong capacities in preparedness to reduce the consequences of disease outbreaks, emergencies and disasters. This points to an urgent need for developing evidence-based policies, programmes and practices for effective all-hazards health emergency prevention, preparedness, response and recovery.

To address this need, WHO and partners have organized a series of meetings on Health Emergencies and Disaster Risk Management (Health EDRM) since 2016. These meetings led to the establishment of the WHO Thematic Platform for Health EDRM Research Network (Health EDRM RN) in 2018. With support and engagement of all WHO Regional Offices, the Health EDRM RN has established a global network of over 200 experts and partner institutes for research collaborations. In 2018 an expert meeting was held that identified key research areas in Health EDRM. In 2019, the first Health EDRM RN Core Group Meeting was held to discuss the network's role, operations, and priorities for collaborative activities. This included planning for the WHO Health EDRM Knowledge Hub and the development of the WHO Health EDRM Research Agenda. As one of the key achievements of the Health EDRM RN, the WHO Guidance on Research Methods for Health EDRM was developed in 2019 and 2020, in collaboration with 164 experts from 30 countries including WHO experts across HQ and all Regional Offices.

To review progress to date, the second Health EDRM RN Core Group Meeting was organized on 27 November 2020. The meeting discussed the further development of the research network in the context of the COVID-19 pandemic as well as how to move forward on the implementation of the agreed upon collaborative activities, including the Knowledge Hub and the Research Agenda.

## 2. Meeting objectives and expected outcomes

The meeting objectives were to:

- a) Share a progress report on the implementation of the Health EDRM RN Operation Plan,
- b) Provide advice from the Core Group to the WHO Secretariat on plans for the implementation of the Health EDRM RN Operation Plan, and
- c) Strengthen the collaboration and complementarity between the Health EDRM RN and other research initiatives from WHO and partners.

The expected outcomes were to

- a) increase awareness and understanding of the Health EDRM RN scope, role, progress and operational plan among the participants of the meeting,
- b) obtain inputs to the plans for implementing the Health EDRM RN priority actions, and
- c) identify opportunities for strengthening Health EDRM RN collaborations.

## 3. Results

### 3.1. Welcome and opening remarks

#### Summary

1. **Key milestones of Health EDRM RN activities** to date include expert consensus on Health EDRM key research areas in 2018, development of *WHO Guidance on Research Methods for Health EDRM* in 2019-2020, agreement to establish the *WHO Health EDRM Knowledge Hub* and the *WHO Health EDRM Research Agenda*.
2. **Linkage with existing WHO and UN global initiatives** needs to be strengthened, including the International Health Regulations (2005), 13<sup>th</sup> WHO General Programme of Work 2<sup>nd</sup> Billion on better protecting people from emergencies, and Sendai Framework for Disaster Risk Reduction 2015-2030.

Dr Sarah Louise Barber, Director, WHO Centre for Health Development and Dr Stella Chungong, Director, Health Security Preparedness Department, welcomed all participants by recognizing the esteemed co-chairs, Professor Emily Chan and Professor Virginia Murray, the dedicated support of colleagues from Japan to Health EDRM research, and the presence of partner organizations, all of WHO Regional Offices, and representatives from across WHO departments in Headquarters who have a strong commitment to research and evidence for health security, resilience and sustainable development towards Universal Health Coverage.

In her opening remarks, Dr Barber recognized the recent progress of the Health EDRM RN including the identification of key research areas and the development of the WHO Guidance on Research Methods for Health EDRM, as well as shared the vision and expectation for further development of the Health EDRM RN including launch of the WHO Health EDRM Knowledge Hub and development of the WHO Health EDRM Research Agenda. She appreciated all the core group members for their past contributions and current and future engagement.

In addition to that, Dr Chungong emphasized that evidence, research and development for all-hazards health EDRM including for sustained preparedness and the implementation of the International Health Regulations (2005) and the Sendai Framework are core functions of the

Health Security Preparedness (HSP) department which she leads. It is also at the heart of the 13th WHO General Programme of Work 2nd Billion on better protecting people from emergencies and the work of the WHO Health Emergencies Programme. She congratulated the Health EDRM Research Network on the impressive progress it has made in recent years, including the expansion of Research Network to more than 200 participants from across the world and the publication of the ground-breaking WHO Research Methods for Health Emergency and Disaster Risk Management.

Dr Chungong observed that research in the COVID-19 pandemic has been accelerated especially with respect to diagnostics, vaccines, therapeutics and social determinants, but there are many remaining gaps in evidence related to all-hazards health EDRM. The diversity and scope of the Health EDRM Research Network provides a tremendous mechanism for addressing this challenge as it covers all hazards including disease outbreaks and pandemics across prevention, preparedness, response and recovery in line with the Health EDRM Framework, applying a risk management and whole-of-society approach. The Research Network creates synergies across disaster medicine, disaster risk reduction, epidemic and pandemic preparedness and response, humanitarian action, health systems strengthening and climate change adaptation. It also supports the implementation of the Sendai Framework for Disaster Risk Reduction which provides an important bridge for the implementation of the International Health Regulations and the Sustainable Development Goals. The expansion of the representation of HQ departments in this core group meeting reflected the envisaged expanded role of Research Network in WHO with many partners in the health and research communities.

Dr Chungong concluded by recognizing the instrumental role of the Core Group in providing advice to support building the capacity of the research community and increasing the quality, volume and usage of research and evidence for Health EDRM. She advised that the HSP department will continue to support the WHO Kobe Centre and the Core Group in strengthening the Health EDRM Research Network and its priority actions, building on the lessons from COVID-19, in order to reduce the health risks and impacts of all types of emergencies and disasters.

### 3.2. Session 1: Health EDRM RN progress

#### Summary

1. **There is a need for effective dissemination of the *WHO Guidance on Research Methods for Health EDRM*** after the book is published. This could include standardized style of presentation for each chapter, webinar online, workshops at academic conferences, and links with university educational and training programs.
2. **Linkage with existing and new regional research network:** facilitate research collaboration among regions.

The session was chaired and moderated by Dr Virginia Murray, Head of Global Disaster Risk Reduction, Public Health England (UK).

Dr Ryoma Kayano, WKC Technical Officer in charge of Health EDRM, presented the progress report which outlined the inception and the rationale for establishing the Health EDRM RN as well as key achievements such as the development of the WHO Guidance on Research Methods for Health EDRM, the plans for elaborating the current research themes into the Health EDRM Research Agenda, and the proposed elements of a knowledge hub to support evidence, research and development for Health EDRM.

Dr Mike Clarke, Professor at Queen's University (United Kingdom) and Director of MRC Methodology Hub, introduced the recent effort to develop the WHO Guidance on Research Methods for Health EDRM, which is a landmark achievement given the scope, scale and focus of the guidance on Health EDRM, and the contributions of 164 experts to its development. Professor Clarke explained the production process of the book, its structure (sections and chapters), as well as the way forward, which includes the publication of the fully compiled book. The guidance covers a wide range of research methods by total 43 chapters in 6 sections. It provides concrete and practical guide on identifying and understanding the problems, determining the scope of studies, study design, as well as study implementation and dissemination, which is expected to improve the quality of research on Health EDRM. It aims to improve the quality of the policy, practice and guidance, as well as increase the research capacity and collaboration among stakeholders in the field of Health EDRM. The book is a living document to be regularly reviewed and updated. For example, next year's edition (2021) will include a chapter on COVID-19. For dissemination of the guidance, Professor Clarke suggested organizing podcasts, slideshows presentations, and webinars for the guidance as a whole and for specific chapters to raise awareness and promote its use, for example, by educational institutions offering programs on emergency risk-related research.

In the discussion, a large amount of unnecessary research and duplication of work which has not helped decision-makers, practitioners and people affected by emergencies, and needs for further effort to identify and update the research gap and standardize the research methods were emphasized (Dr Mike Clarke). Effective dissemination of *the WHO Guidance on Research Methods for Health EDRM* was recommended, which included a standardized style for the presentation of each chapter (Dr Alistair Humphrey), webinar or workshop at an academic conference such as the annual congress of the World Association for Disaster and Emergency Medicine (WADEM) (Dr Shinichi Egawa), introducing *the WHO Guidance on Research Methods for Health EDRM* for university educational program (Ms Adrienne Rashford). From Regional Offices, linking the WHO Health EDRM RN with existing and new regional research network and facilitating research collaboration was recommended (Dr Osman Elmahal Mohamed, Dr Alex Camacho).

### 3.3. Session 2: Health EDRM RN operation plans

#### Summary

1. **A WHO Health EDRM Knowledge Hub** can provide up-to-date knowledge and synthesis of Health EDRM evidence, and could connect with and learn from existing knowledge hubs.
2. **The WHO Health EDRM Research Agenda** should build on the previous effort of WHO Health EDRM RN since 2016, and address the COVID-19 related challenges.

The session was chaired by Dr Virginia Murray and moderated by Mr Jonathan Abrahams (WHO). This session involved a live presentation by Dr Virginia Murray and a video presentation by Dr Emily Y.Y. Chan, Professor and Assistant Dean, Chinese University of Hong Kong SAR (People's Republic of China).

Mr Jonathan Abrahams introduced the key points of the Health EDRM RN operational plan including core group meetings, collaborative forums/conferences, annual reports, the Health EDRM Knowledge Hub, the WHO Health EDRM Research Agenda, and the overall Health EDRM research strategy.

Dr Murray explained the rationale for developing the Health EDRM Knowledge Hub, which emerged among the key recommendations from the first Health EDRM RN core group meeting held on 17 October 2019 in Kobe, Japan. The Knowledge Hub is expected, among many other objectives, to provide up-to-date knowledge and synthesis of health EDRM evidence. Dr Murray listed a number of existing knowledge hubs operating in various areas and research fields which the Health EDRM KH may wish to connect with and/or learn from (for example, the Global Health Network, Cochrane, the Campbell Collaboration, What Works Network in the UK, the European Commission, NICE, Evidence Aid, etc.) and raised two significant questions to guide the discussion: 1) What knowledge hubs are exemplars for the Health EDRM Knowledge Hub? and 2) What advice could you provide to ensure that the Health EDRM Knowledge Hub delivers what is needed?

Dr Chan provided a landscape view of the ongoing process for developing the Health EDRM Research Agenda, which has led to the identification of five initial research themes at the 2018 Kobe Expert meeting: health data management before, during and after disasters; psychosocial management before, during and after disasters; community disaster risk literacy and needs of subgroup populations; health workforce management and development; and research methods and ethics. These themes were updated and enriched at the first Health EDRM RN core group meeting in 2019 Kobe. Dr Chan also elaborated on key milestones in the evolution of the Health

EDRM since 2016 such as the publication of the WHO Health Emergency Risk Management Framework (2019) Public Health and Disasters (Chan EYY & Show R, 2020) and WHO Guidance on Research Methods for Health EDRM (2020), as well as examples of Health EDRM research in relation to the current COVID-19 pandemic. Finally, Dr Chan provided an example of research on home care that has led to WHO Home Care Guidance for patients with COVID-19 as an illustration of how research can enhance the activities of the WHO.

In the discussion, linking Health EDRM research with climate change portfolio, including the WMO Services Commission Health Study Group, task teams on climate and health research, and the Climate and Health Science Portal was recommended (Dr Diarmid Campbell Lendrum, Dr Joy Shumake-Guillemot). From Regional Offices, linking with the newly established knowledge hub by Global Facility for Disaster Reduction and Recovery, and contribution of a series of online sessions in PAHO as an opportunity to promote *the WHO Guidance on Research Methods for Health EDRM* were suggested.

### 3.4. Session 3: Health EDRM RN synergies and collaboration in the context of COVID-19: lessons learned

#### Summary

1. **Participants identified possible collaborations with existing global and regional initiatives**, including the Project for Strengthening the ASEAN Regional Capacity on Disaster Health Management, the newly establishing ASEAN Institute on Disaster Health Management, the AFRO regional initiative, the WADEM Congress 2022, and newly established WHO European Centre for Health Preparedness for Humanitarian and Health Emergencies.
2. **The of Health EDRM RN can fill a role for COVID-19 research**, such as research gaps in pandemic preparedness and capacities to implement IHR, and capturing lessons and case studies from COVID-19 to inform policy and practice.

This session was chaired and moderated by Dr Qudsia Huda, Team Leader Disaster Risk Reduction and Resilience, WHO Health Emergencies Programme, and included presentations by Dr Tatsuhiko Kubo, Professor, Hiroshima University; Ms Tasiana Samba Mzozo, Partnerships Officer, WHO AFRO; Dr Shinichi Egawa, Professor, Tohoku University; and Dr Irshad Shaikh, Acting Head of WHO European Centre for Health Preparedness for Humanitarian and Health Emergencies.



Dr Tatsuhiko Kubo introduced an interregional joint capacity building project on Health EDRM, Project for Strengthening the ASEAN Regional Capacity on Disaster Health Management (ARCH Project) in light of the academic and scientific part of their project including the establishment of the ASEAN Institute on Disaster Health Management (AIDHM) and the region-wide implementation of the Emergency Medical Team (EMT) Minimum Data Set (MDS) and recent effort to revise the EMT MDS in the context of COVID-19.

Ms Tasiana Samba Mzozo presented an overview of COVID-19 in the African region, particularly in terms of understanding the risks, including vulnerabilities, and capacities at the community and health system level (e.g. community resistance in adopting preventative measures such as handwashing), the capacity of the health system for managing cases of COVID-19 (e.g. health workforce capacity and mental health issues among health workers), the governance of COVID-19 (the operationalization of the response to COVID-19 in WHO AFRO), and the importance of social science research for understanding factors that influence the uptake of policies and health measures by the community. She particularly underlined the need to study and understand the gender dynamics in COVID-19.

Dr Shinichi Egawa introduced WADEM 2022, which is to be held Tokyo. In particular, Dr Egawa offered that WADEM 2022 will include a training session or workshop on Health EDRM research methods, using the recently developed WHO Guidance on Research Methods for Health EDRM.

Dr Irshad Ali Shaikh gave a presentation that highlighted current issues in the reporting of key indicators for COVID-19 under the Sendai Framework. These include the overreporting of COVID-19 deaths, underreporting of COVID-19 deaths (e.g. deaths occurring at home or out of hospital), and underreporting of vulnerable populations. He also highlighted the importance of using secondary data sources to improve reporting of the COVID-19 pandemic. As a way to address these issues, the newly established WHO European Centre for Health Preparedness for Humanitarian and Health Emergencies is developing a course for countries on how to report more accurately and comprehensively.

In the discussion, COVID-19 research gap on capacities to support implementation of IHR and pandemic preparedness and possible contribution of Health EDRM RN was emphasized (Dr Nirmal Kandel).

The session highlighted the role that Health EDRM RN is playing and can play in future to strengthening research and evidence for COVID-19 among other disease outbreaks and emergencies and disasters. It was proposed that the Health EDRM RN can support capturing lessons and case studies from COVID-19 to inform policy and practice and strengthen the Health EDRM RN and its operations.

### 3.5. Closing session: Feedback from the participants

The participants provided their comments, suggestions and impressions from the discussion session:

- Research on COVID-related mental health issues could be welcomed at country levels, where mental health was a concerning issue expressed by those providing essential health services. (Dr Paula Vasconceles Lopes)
- The Health EDRM RN has a critical role to play in the current context of COVID-19, where quality evidence curation, collation, and communication are needed to guide timely policy actions (Dr Ben Taylor).
- Dissemination efforts by the Research Centre in Emergency and Disaster Medicine include e-learning activities to disseminate the guidance and reaching out to alumni for joining the Health EDRM RN (Dr Luca Ragazzoni)
- Strategies to support the implementation of the research/researchers on Health EDRM include strengthening the network, continued dialogue with policy-makers and practitioners, WKC support for research, etc. In addition to region-specific priorities, cross-regional collaboration is encouraged for the benefit of the global agenda.

### 4. Agreed actions for next steps

The participants agreed upon the next steps to advance Health EDRM RN, including the following:

- The *WHO Guidance on Research Methods for Health EDRM* will be published, and attention will be paid to the roll out of the guidance with an effective dissemination strategy. The content of the guidance will be updated with a chapter related to COVID-19 in 2021.
- To advance the Knowledge hub, the WKC will engage providers for its establishment.
- To advance the Research Agenda, A working group will be formed and the plan for developing the research agenda, including the design of a survey for inputs from stakeholders to identify research priorities, will be implemented.
- The RN agreed to expand participation. The Secretariat will send a communication to ROs inviting them to nominate one extra representative from a Member State or relevant research institution for the Core Group and to promote increased regional participation in the overall Research Network.
- To broaden the scope of activities, the operational plan will be updated with reference to activities to capture lessons from COVID-19; their application for all hazards including for disease outbreaks; the emergency continuum including prevention, preparedness, response

and recovery to reduce risks and impacts; and support implementation of the IHR, Sendai Framework, and the WHO Health EDRM Framework.

## 5. Conclusion

The meeting successfully achieved its objectives by sharing the progress of Health EDRM RN key activities with key stakeholders of WHO HQ and all Regional Offices as well as external experts, collating the inputs and advice from them to the secretariat for further effective operation and further collaboration with other research initiatives from WHO and partners. WHO thanks to the Health EDRM RN co-chairs for their contribution to facilitation of the meeting as well as the global activities of the Health EDRM RN.

The participants agreed to the proposed plan for Health EDRM RN key activities including the revision and further dissemination and utilization of WHO Guidance on Research Methods for Health EDRM, the establishment of the WHO Health EDRM Knowledge Hub, and the development of the WHO Health EDRM Research Agenda. The meeting also reached the consensus on additional efforts for country benefits, which are to be addressed by increasing regional participation including member states and other key stakeholders, as well as encouraging greater cross regional collaboration.

Health EDRM RN activities will be accelerated by proceeding with the agreed projects and addressing the context of, and lessons from, COVID-19. The strengthening of the Health EDRM RN is playing a key role in the evidence, research and development by applying all-hazards risk management and whole of society approach to inform policy, planning and practice for the implementation of IHR, Sendai Framework, Paris Agreement and the SDGs.

## 6. Annexes

## Annex 1. Meeting Programme

Health EDRM Research Network and meeting co-chairs: Emily Chan & Virginia Murray

Secretariat of the meeting: Ryoma Kayano & Jonathan Abrahams

Time:	Agenda item	Facilitator/presenter
13:00-13:20	<p><b>Opening session</b></p> <p>Welcome and opening remarks from WHO</p> <p>Opening remarks from Health EDRM RN Core Group co-chairs</p> <p>Introduction of participants</p>	<p>Moderator: <b>Sarah Louise Barber</b></p> <p><b>Sarah Louise Barber</b>, and <b>Stella Chungong Virginia Murray</b>; <b>Emily Chan</b></p>
13:20-13:50	<p><b>1<sup>st</sup> session: Health EDRM RN Progress Report</b></p> <p><i><b>Objective:</b> Share progress report on the implementation of the Health EDRM Research Network against the Operation Plan</i></p> <p><i><b>Expected outcome:</b> Awareness and understanding of the Health EDRM Research Network scope, role, progress and operational plan</i></p> <p>1. Presentation: Progress report on Health EDRM RN</p> <p>2. Presentation: WHO Guidance on Research Methods for Health EDRM</p> <p>3. Discussion</p>	<p>Chair: <b>Emily YY Chan</b></p> <p><b>Ryoma Kayano</b></p> <p><b>Mike Clarke</b></p>
13.50-14.20	<p><b>2<sup>nd</sup> session: Health EDRM RN operation plans</b></p>	<p>Chair: <b>Virginia Murray</b></p>

Time:	Agenda item	Facilitator/presenter
	<p><b>Objective:</b> Provide advice to WHO Secretariat on plans for the implementation of the Health EDRM Research Network Operation Plan</p> <p><b>Expected outcome:</b> Inputs to the plans for implementing the Health EDRM Research Network priority actions.</p> <ol style="list-style-type: none"> <li>1. Health EDRM research agenda and strategy (across prevention, preparedness, response and recovery)</li> <li>2. Health EDRM Knowledge Hub</li> <li>3. Discussion</li> </ol>	<p>Moderator: <b>Jonathan Abrahams</b></p> <p><b>Emily YY Chan</b></p> <p><b>Virginia Murray</b></p>
<b>14.05-14.30</b>	<p><b>3<sup>rd</sup> session: Health EDRM Research Network synergies and collaboration in the context of COVID-19: lessons learned</b></p> <p><b>Objective:</b> Strengthen the collaboration between Health EDRM RN and other research initiatives in the context of COVID-19</p> <p><b>Expected outcome:</b> Opportunities for Health EDRM RN collaboration to capture the experience of COVID-19</p> <ol style="list-style-type: none"> <li>1. Panel discussion</li> <li>2. Discussion</li> </ol>	<p>Chair &amp; Moderator: <b>Oudisia Huda</b></p> <p><b>Tasiana Samba Mzozo, Irshad Shaikh, Tatsuhiko Kubo, Shinichi Egawa</b></p>
<b>14.30-15.00</b>	<p><b>Closing session</b></p> <p>AOB</p> <p>Feedback from the participants</p> <p>Next step</p> <p>Closing remarks</p> <p><b>Close</b></p>	<p>Chair &amp; Moderator: <b>Sarah Louise Barber</b></p> <p><b>Ryoma Kayano, Jonathan Abrahams</b></p>

## Annex 2. List of Participants

### *Core Group of WHO Health EDRM Research Network*

- [Co-chair] **Dr Emily Ying-Yang Chan**, Professor and Assistant Dean (Development), Faculty of Medicine, Chinese University of Hong Kong, Hong Kong SAR, People's Republic of China
- [Co-chair] **Dr Virginia Murray**, Head of Global Disaster Risk Reduction, Public Health England, London, the United Kingdom
- [AFRO] **Dr Ngoy Nsenga \***, WHE Team Lead, East and Southern Africa, Nairobi, Kenya
- [AFRO] **Ms Tasiana Samba Mzozo** on behalf of Dr Ngoy Nsenga, Partnerships Officer, Emergency Response, Regional Office for Africa, Nairobi, Kenya
- [EMRO] **Dr Jehan Al-Badri \***, National Professional Officer, WHO Representative Office in Iraq, Baghdad, Iraq
- [EMRO] **Dr Osman Elmahal Mohamed** on behalf of Dr Jehan Al-Badri, Technical Officer, WHE, Regional Office for the Eastern Mediterranean, Cairo, Egypt
- [EURO] **Dr Irshad Ali Shaikh**, Operations Coordinator, WHO Country Office in Turkey, Ankara, Turkey
- [PAHO] **Dr Alex Camacho**, Director, Department of Health Emergencies, Washington DC, USA
- [SEARO] **Dr Nilesh Buddh \***, Programme Area Manager, Emergency Operations, New Delhi, India
- [SEARO] **Dr Anil Bhola** on behalf of Dr Nilesh Buddh, Country Preparedness and IHR Office, Regional Office for South-East Asia, New Delhi, India
- [WPRO] **Dr Tamano Matsui \***, Programme Area Manager, Health Emergency Information & Risk Assessment, Manila, Philippines
- [WPRO] **Dr Munehisa Fukusumi** on behalf of Dr Tamano Matsui, Medical Officer, Health Emergency Information & Risk Assessment, Regional Office for the Western Pacific
- [HQ] **Dr Ryoma Kayano**, Technical Officer, WHO Centre for Health Development (WHO Kobe Centre), Kobe, Japan
- [HQ] **Mr Jonathan Abrahams**, Technical Officer, Disaster Risk Reduction and Resilience Unit, Health Security Preparedness Department, Geneva, Switzerland

### *WHO Participants*

- Dr Sarah Barber**, Director, WHO Centre for Health Development (WHO Kobe Centre), Kobe, Japan
- Dr Stella Chungong**, Director, Health Security Preparedness Department, WHO Health Emergencies Programme, Geneva, Switzerland

**Dr Michel Yao**, Director, Strategic Health Operations, WHO Health Emergencies Programme, Geneva, Switzerland

**Dr Ihor Perehinets**, Acting Programme Manager, Emergency Preparedness and IHR, Regional Office for Europe, Copenhagen, Denmark

**Dr Qudsia Huda**, Team Leader, Disaster Risk Reduction and Resilience, WHO Health Emergencies Programme, Geneva, Switzerland

**Dr Nirmal Kandel**, Unit Head, Evidence and Analytics for Health Security, WHO Health Emergencies Programme, Geneva, Switzerland

**Dr Rudi Coninx**, Senior Policy Advisor, Interagency Policy for Emergencies, Emergency Response, WHO Health Emergencies Programme, Geneva, Switzerland

**Dr Diarmid Campbell Lendrum**, Coordinator, Climate Change and Health, Environment, Climate Change and Health Department, Geneva, Switzerland

**Dr Joy Shumake-Guillemot**, Head, WHO-WMO Joint Office for Climate and Health, Geneva, Switzerland

**Dr Andreas Reis**, Senior Ethics Officer, Health Ethics and Governance (HEG), Office of the Chief Scientist, Geneva, Switzerland

**Dr Patou Masika Musumari**, Consultant, WHO Centre for Health Development (WHO Kobe Centre), Kobe, Japan

### *Invited Experts*

**Dr Mike Clarke**, Professor/Director of MRC Methodology Hub, Centre for Public Health, Queen's University, Belfast, United Kingdom; Evidence Aid, London, United Kingdom

**Dr Ben Taylor**, Chief Executive Officer, Evidence Aid, London, United Kingdom

**Dr Alistair Humphrey**, Medical Officer of Health, Canterbury, Ministry of Health / Canterbury District Health Board, Christchurch, New Zealand

**Dr Luca Ragazzoni**, Scientific Coordinator, Research Centre in Emergency and Disaster Medicine, University of Eastern Piedmont, Novara, Italy

**Dr Shinichi Egawa**, Professor, Division of International Cooperation for Disaster Medicine, International Research Institute of Disaster Science (IRIDeS), Tohoku University, WADEM 2022 Congress Chair of Program Committee, Sendai, Japan

**Dr Tatsuhiko Kubo**, Professor, Hiroshima University, research project lead on ASEAN Regional Capacity on Disaster Health Management, Hiroshima, Japan

**Ms Maddie Weir**, Public Health England, London, the United Kingdom

**Mr Chi Shing Wong**, The Chinese University of Hong Kong, Hong Kong SAR, People's Republic of China