



**WADEM**  
WORLD ASSOCIATION FOR DISASTER AND EMERGENCY MEDICINE

# **Disasters and Public Health: Implementing the Sendai Framework Panel Discussion**

**Yasmin Khan**

**Virginia Murray**

**Ngoy Nsenga**

**Jonathan Abrahams**



# Why discuss Sendai implementation?



## Objectives

1. To describe principles of disaster risk reduction (DRR) relevant to public health
2. To contribute to the development of strategies for implementation of the Sendai framework
3. To share knowledge on the development of the World Health Organization (WHO) Thematic Platform and opportunities for collaboration





## Panelists

- Yasmin Khan, Chair, Public Health Ontario
- Virginia Murray, Public Health England
- Ngoy Nsenga, WHO Office for Africa
- Jonathan Abrahams, WHO Headquarters



**Sendai Framework  
for Disaster Risk Reduction  
2015 - 2030**



## Questions for plenary discussion

- What are the opportunities and challenges in using the Sendai Framework for disaster risk reduction for population health gain?
- How can the Sendai Framework improve research to build public health evidence for the implementation of the Framework?





Public Health  
England

Protecting and improving the nation's health



Thursday 26 April 2017

# Disasters and Public Health: Implementing the Sendai Framework

Professor Virginia Murray, Public Health England

Public Health Consultant in Global Disaster Risk Reduction,

Vice-Chair UNISDR Scientific and Technical Advisory Group

Member of the WHO Collaborating Centre on Mass Gatherings & Global Health Security





# DISASTER IMPACTS / 2000-2012

\*Disasters refers to drought, earthquake (seismic activity), epidemic, extreme temperature, flood, insect infestation, mass movement (dry & wet), storm, volcano, and wildfire / Data source: EM-DAT: The OFDA/CRED International Disaster Database / Data version: 12 March 2013 - v12.07  
OCHA Humanitarian Symbol (2012): <http://reliefweb.int/map/world/world-humanitarian-and-country-icons-2012> / Find out more about UNISDR: <http://www.unisdr.org>





# Number of Climate-related Disasters Around the World (1980-2011)

 **3455**  
**FLOODS**

 **2689**  
**STORMS**

 **470**  
**DROUGHTS**

 **395**  
**EXTREME TEMPS**

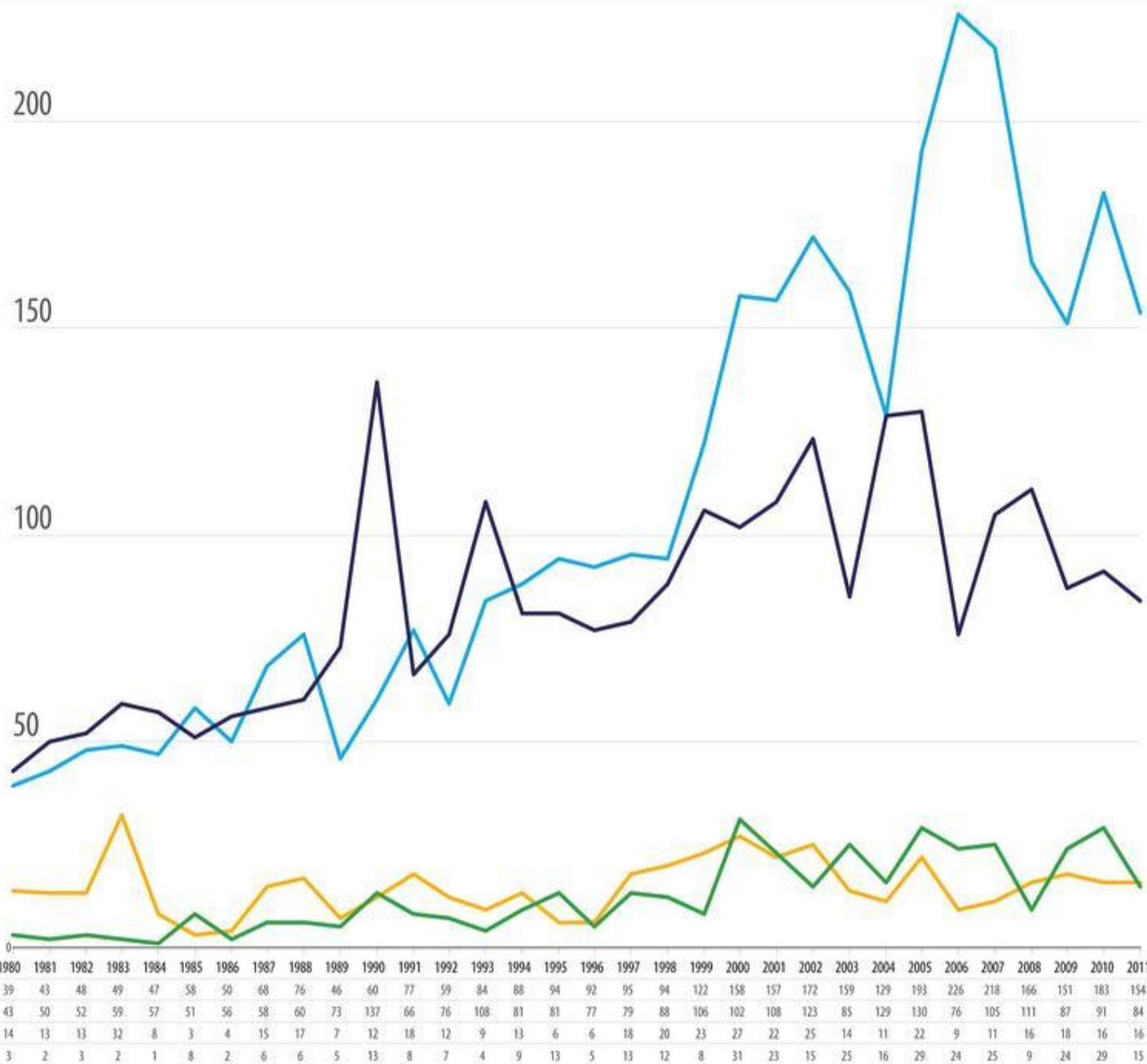
 **UNISDR**  
The United Nations Office for Disaster Risk Reduction  
<http://www.unisdr.org>

Version: 13 June 2012

DATA SOURCES

EM-DAT - <http://www.emdat.be/> - The OFDA/CRED International Disaster Database; Data version: 13 June 2012 - v12.07

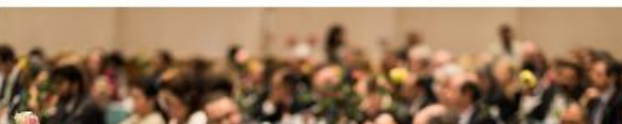
Humanitarian Symbol Set (2008):  
<http://www.unisdr.org/map/guideline.php>



# 25 years of international commitment to Disaster Risk Reduction











# Sendai Framework for Disaster Risk Reduction 2015 - 2030



United Nations

# 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 2015-2030

Main result of the 3<sup>rd</sup> UN World Conference on DRR, Sendai, March 2015

Outcome:

The substantial reduction of disaster risk and losses in **lives, livelihoods and health** and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.





# Sendai Framework for Disaster Risk Reduction 2015-2030

## Four priorities for action

1. Understanding disaster risk;
2. Strengthening disaster risk **governance** to manage disaster risk;
3. **Investing** in disaster risk reduction for resilience;
4. Enhancing disaster preparedness for **effective response**, and to “Build Back Better” in recovery, rehabilitation and reconstruction.
  - i) *at National and Local Levels*
  - ii) *at Global and regional levels*



# Priority 1 Understanding Disaster Risk

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- 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**;



# Primary Categories of Macro-Threats



**1 Financial Shock**



**2 Trade Dispute**



**3 Geopolitical Conflict**



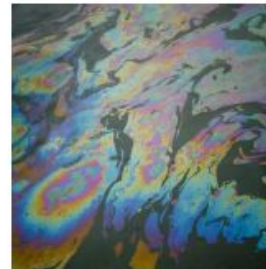
**4 Political Violence**



**5 Natural Catastrophe**



**6 Climatic Catastrophe**



**7 Environmental Catastrophe**



**8 Technological Catastrophe**



**9 Disease Outbreak**



**10 Humanitarian Crisis**



**11 Externality**



**12 Other Shock**



- (k) In the post-disaster recovery, rehabilitation and reconstruction the creation of and to reduce disaster risk by "Building Back Better" education and awareness of disaster risk;
- (l) An effective and meaningful global partnership and the international cooperation, including the fulfilment of respect development assistance by developed countries, are essential management;
- (m) Developing countries, in particular the least developed countries, landlocked developing countries and African countries and other countries facing specific disaster risk challenges, need timely provision of support, including through finance, **technology building** from developed countries and partners tailored to the identified by them.

#### IV. Priorities for action

20. Taking into account the experience gained through the Implementation Framework for Action, and in pursuance of the expected outcome of focused action within and across sectors by States at local, national, and regional levels, the following four priority areas:

**Priority 1: Understanding disaster risk**

**Priority 2: Strengthening disaster risk governance to manage disaster risk**

**Priority 3: Investing in disaster risk reduction for resilience**

**Priority 4: Enhancing disaster preparedness for effective response and recovery, rehabilitation and reconstruction**

21. In their approach to disaster risk reduction, States, regional and local authorities and other relevant stakeholders should take into consideration the specific characteristics of each of these four priorities and should implement them, as appropriate, in line with their respective capacities and capabilities, in line with national laws and policies.

22. In the context of increasing global interdependence, concerted international enabling environment and means of implementation are essential to contribute to developing the knowledge, capacities and motivation to all levels, in particular for developing countries.

##### Priority 1: Understanding disaster risk

23. Policies and practices for disaster risk management should be based on a comprehensive understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure, hazard characteristics and the environment. Such knowledge can be derived from pre-disaster risk assessment, for prevention and mitigation and implementation of appropriate preparedness and effective response.

##### National and local levels

24. To achieve this, it is important:

- (a) To promote the collection, analysis, management and use of risk information and ensure its dissemination, taking into account the needs of users, as appropriate;
- (b) To encourage the use of and strengthening of baselines and indicators of disaster risk, vulnerability, capacity, exposure, hazard characteristics and effects at the relevant social and spatial scale on ecosystems and communities;

- (c) To develop, periodically update and disseminate, as appropriate, information, including risk maps, to decision makers, the general public and at risk of exposure to disaster in an appropriate format by use of information technology;
- (d) To systematically evaluate, record, share and publicly access information to understand the economic, social, health, education, environment impacts, as appropriate, in the context of event-specific hazard information;
- (e) To make non-sensitive hazard-exposure, vulnerability, risk, disaster information freely available and accessible, as appropriate;
- (f) To promote real time access to reliable data, make use of space-based information including geographic information systems (GIS), and use information technology innovations to enhance measurement tools and the dissemination of data;
- (g) To build the knowledge of government officials at all levels, civil society, as well as the private sector, through sharing of good practices and training and education on disaster risk reduction, including training and education mechanisms and peer learning;
- (h) To promote and improve dialogue and cooperation among local authorities, communities, other relevant stakeholders and policymakers in policy interface for effective decision-making in disaster risk management;
- (i) To ensure the use of traditional, indigenous and local knowledge, appropriate, to complement scientific knowledge in disaster development and implementation of policies, strategies, plans, programmes, with a cross-sectoral approach, which should be taken into account;
- (j) To strengthen technical and scientific capacity to capitalise on existing knowledge and to develop and apply methodologies and models to assess vulnerabilities and exposure to all hazards;
- (k) To promote investments in innovation and technology development and solution-driven research in disaster risk management interdependencies and social, economic, educational and environmental disaster risks;
- (l) To promote the incorporation of disaster risk knowledge, including mitigation, preparedness, response, recovery and rehabilitation education, as well as in civic education at all levels, as well as in training;
- (m) To promote national strategies to strengthen public education risk reduction, including disaster risk information and knowledge, social media and community mobilization, taking into account specific needs;
- (n) To apply risk information in all its dimensions of vulnerability, exposure, communities, countries and assets, as well as hazard and implement disaster risk reduction policies;
- (o) To enhance collaboration among people at the local level to disseminate information through the involvement of community-based organizations.

##### Global and regional levels

25. To achieve this, it is important:

- (a) To enhance the development and dissemination of science-based methodologies and tools to record and share disaster losses and relevant disaggregated data and statistics, as well as to strengthen disaster risk modelling, assessment, mapping, monitoring and multi-hazard early warning systems;
- (b) To promote the conduct of comprehensive surveys on multi-hazard disaster risks and the development of regional disaster risk assessments and maps, including climate change scenarios;
- (c) To promote and enhance, through international cooperation, including technology transfer, access to and the sharing and use of non-sensitive data and information, as appropriate, communications and geospatial and space-based technologies and related services, maintain and strengthen in situ and remotely-sensed earth and climate observations, and strengthen the utilization of media, including social media, traditional media, big data and mobile phone networks, to support national measures for successful disaster risk communication, as appropriate and in accordance with national laws;
- (d) To promote common efforts in partnership with the scientific and technological community, academia and the private sector to establish, disseminate and share good practices internationally;
- (e) To support the development of local, national, regional and global user-friendly systems and services for the exchange of information on good practices, cost-effective and easy-to-use disaster risk reduction technologies and lessons learned on policies, plans and measures for disaster risk reduction;
- (f) To develop effective global and regional campaigns as instruments for public awareness and education, building on the existing ones (for example, the "One million safe schools and hospitals" initiative; the "Making Cities Resilient: My city is getting ready" campaign; the United Nations Sendai Award for Disaster Risk Reduction; and the annual United Nations International Day for Disaster Reduction), to promote a culture of disaster prevention, resilience and responsible citizenship, generate understanding of disaster risk, support mutual learning and share experiences, and encourage public and private stakeholders to actively engage in such initiatives and to develop new ones at the local, national, regional and global levels;
- (g) To enhance the scientific and technical work on disaster risk reduction and its mobilization through the coordination of existing networks and scientific research institutions at all levels and in all regions, with the support of the United Nations Office for Disaster Risk Reduction Scientific and Technical Advisory Group, in order to strengthen the evidence base in support of the implementation of the present Framework, promote scientific research on disaster risk patterns, causes and effects, disseminate risk information with the best use of geospatial information technology, provide guidance on methodologies and standards for risk assessments, disaster risk modelling and the use of data, identify research and technology gaps and set recommendations for research priority areas in disaster risk reduction, promote and support the availability and application of science and technology to decision-making, contribute to the update of the publication entitled "2009 UNISDR Terminology on Disaster Risk Reduction", use post-disaster reviews as opportunities to enhance learning and public policy, and disseminate studies;
- (h) To encourage the availability of copyrighted and patented materials, including through negotiated concessions, as appropriate;
- (i) To enhance access to and support for innovation and technology, as well as in long-term, multi-hazard and solution-driven research and development in the field of disaster risk management.

## Priority 3. Investing in disaster risk reduction for resilience

- (i) Enhance the **resilience of national health systems**, including by integrating disaster risk management ... especially at the **local level**; ....; and promoting and enhancing the training capacities in the field of **disaster medicine**; and **supporting and training community health groups in disaster risk reduction approaches in health programmes**, in collaboration with other sectors, as well as in the implementation of the **International Health Regulations (2005)** of the World Health Organization






## Priority 3. Investing in disaster risk reduction for resilience

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- People with **life threatening and chronic disease**, due to their particular needs, should be included in the design of policies and plans to manage their risks before, during and after disasters, including having access to life-saving services;







## Priority 4: Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction

- Establish a **mechanism of case registry** and a database of mortality caused by disaster in order to improve the prevention of morbidity and mortality;
- Enhance recovery schemes to provide **psychosocial support and mental health services** for all people in need;




## Priority 3. Investing in disaster risk reduction for resilience

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- **Enhance cooperation between health authorities and other relevant stakeholders to strengthen country capacity for disaster risk management for health**, the implementation of the International Health Regulations (2005) and the building of resilient health systems;





## Priority 4: Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction

- Promote the **resilience of new and existing critical infrastructure, including water, transportation and telecommunications infrastructure, educational facilities, hospitals and other health facilities,** to ensure that they remain safe, effective and operational during and after disasters in order to provide live-saving and essential services;





# INTERNATIONAL CONFERENCE ON THE IMPLEMENTATION OF THE HEALTH ASPECTS OF THE SENDAI FRAMEWORK FOR DISASTER RISK REDUCTION 2015 – 2030

**10 - 11 MARCH 2016 | BANGKOK, THAILAND**



**Bangkok Principles for the implementation of the health aspects  
of the Sendai Framework for Disaster Risk Reduction 2015-2030**

The International Conference on the Implementation of the Health Aspect of the Sendai Framework for Disaster Risk Reduction 2015-2030, held on 10-11 March 2016, in Bangkok, Thailand, recommended the following measures that could assist countries in implementing the

**Ensure coherence and alignment of national, regional and global DRR frameworks and those related to emergency and disaster risk management for health** such as the International Health Regulations (2005) and the Global Health Security Agenda.

manage health risks of emergencies and disasters with appropriate levels of resources to support implementation.

- Increase the participation of health sector representatives in multi-sectoral emergency and disaster risk management committees and platforms at all levels

## 'Bangkok Principles for the International Conference on the Implementation of the Health Aspects of the Sendai Framework

- Promote **systematic integration of health** into national and sub-national disaster risk reduction **policies and plans** and the **inclusion of emergency and disaster risk management programmes**
- Stimulate ... **investment in emergency and disaster risk reduction**, including in health facilities and infrastructure
- **Integrate disaster risk reduction into health education and training and strengthen capacity** building of health workers in disaster risk reduction







## Pacific Platform for Disaster Risk Management 2016

### Outcome Statement

**ACKNOWLEDGE the need for the region to follow International Health Regulations and support the WHO Safe Hospital Programmes.**

Islands region in the context of sustainable development;

[http://www.unisdr.org/files/50790\\_ppdrm2016outcomestatement.pdf](http://www.unisdr.org/files/50790_ppdrm2016outcomestatement.pdf)

Development Agenda and the Paris Agreement on Climate Change, as well as related



**EFDRR**  
EUROPEAN FORUM  
FOR DISASTER RISK REDUCTION  
*Turkish Chairmanship*

## 2017 European Forum for Disaster Risk Reduction Open Forum

### Istanbul Outcomes

12. Ensure that standards for disaster risk reduction such as the **International Health Regulations** and the **Safe Hospital Initiative** are implemented at European country level.

The 2017 EFDRR Open Forum provided the opportunity of shaping up views on disaster risk reduction in Europe as preparation and contribution to the Global Platform for Disaster Risk Reduction (22-26 May 2017, Cancun, Mexico)



# UNISDR

The United Nations Office for Disaster Risk Reduction

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NEWS ARCHIVE

## UN backs accountability on disaster losses



*Ambassador Cristián Barros Melet of Chile introduces the resolution at the United Nations General Assembly (Photo: UNISDR)*

2 February 2017, NEW YORK/GENEVA – The United Nations General Assembly today adopted a resolution containing indicators for measuring global progress in reducing disaster losses.





# General Assembly

Distr.: General  
1 December 2016

Original: English

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**Seventy-first session**

**Agenda item 19 (c)**

**Sustainable development: disaster risk reduction**

## **Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction**

### **Note by the Secretary-General**

The Secretary-General has the honour to transmit herewith the report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction established by the General Assembly in its resolution [69/284](#) for the development of a set of possible indicators to measure

# Target A

**Global target A: Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality between 2020-2030 compared with 2005-2015.**

|                |   |
|----------------|---|
| A-1 (compound) | Number of deaths and missing persons attributed to disasters, per 100,000 population. |
| A-2            | Number of deaths attributed to disasters, per 100,000 population.                     |
| A-3            | Number of missing persons attributed to disasters, per 100,000 population.            |

*The scope of disaster in this and subsequent targets is defined in paragraph 15 of the Sendai Framework for Disaster Risk Reduction 2015-2030 and applies to small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters caused by natural or man-made hazards, as well as related environmental, technological and biological hazards and risk.*



Public Health  
England



World Health  
Organization



Collaborating Centre for Oxford University and CUHK  
for Disaster and Medical Humanitarian Response  
CCOUC 災害與人道救援研究所

# WHO Thematic Platform for Health Emergency and Disaster Risk Management

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1. Collaborating Centre for Oxford University and The Chinese University of Hong Kong for Disaster and Medical Humanitarian Response
2. Nuffield Department of Medicine, University of Oxford
3. FXB Center for Health & Human Rights, Harvard University
4. Public Health England
5. UNISDR Scientific and Technical Advisory Group
6. Integrated Research on Disaster Risk (IRDR) Scientific Committee
7. World Health Organization
8. Tehran University of Medical Sciences
9. WHO Kobe Centre for Health Development
10. The Faculty of Medicine, The Chinese University of Hong Kong

*With contributions from:*

*Alistair Humphrey (Canterbury District Health Board, New Zealand), Olivier Hagon (Geneva University Hospitals), Diana Wong (Monash University), Ada Fong (The Chinese University of Hong Kong)*





Public Health  
England



World Health  
Organization



Collaborating Centre for Oxford University and CUHK  
for Disaster and Medical Humanitarian Response  
CCOUC 災害與人道救援研究所

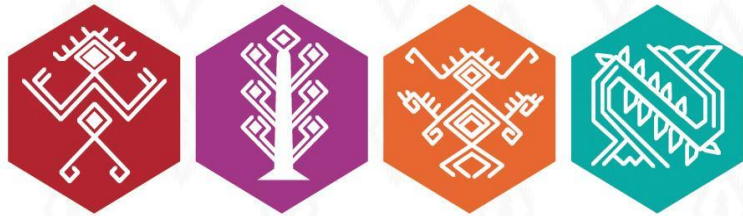
# WHO Thematic Platform for Health Emergency and Disaster Risk Management

For those who would like to get engaged in this development of the  
WHO Thematic Platform for Health-EDRM Research Group  
please contact the current co-chairs  
Emily Ying Yang Chan at [emily.chan@cuhk.edu.hk](mailto:emily.chan@cuhk.edu.hk) and  
Virginia Murray at [Virginia.Murray@phe.gov.uk](mailto:Virginia.Murray@phe.gov.uk).

# Disasters and Public Health: Implementing the Sendai Framework

- The Sendai Framework provides a **method to enhance capabilities to plan and prepare for, respond to, and recover from disasters and other public health emergencies.**
- **Offers an opportunity to engage at a global level with stakeholders on guidance and policy issues that could impact state and local preparedness**





**#MEXICOGP2017**

# **2017 Global Platform for Disaster Risk Reduction**

22-26 May 2017 - Cancun, Mexico



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# Implementing the Sendai Framework: AFRO Perspective

WCDEM 2017  
Toronto, April 2017

Dr. Ngoy Nsenga  
WHO/AFRO

# Disaster Built-in Environment in AFRO Region

## Conflicts and Social Unrests

**Climate change**



**Social Vulnerability**



**Rapid urbanization**



**Weak Health Systems**



**Limited DRM-H Governance**

# Paradigm Shift

From Hazard-based.....



To RISK-BASED PLANNING



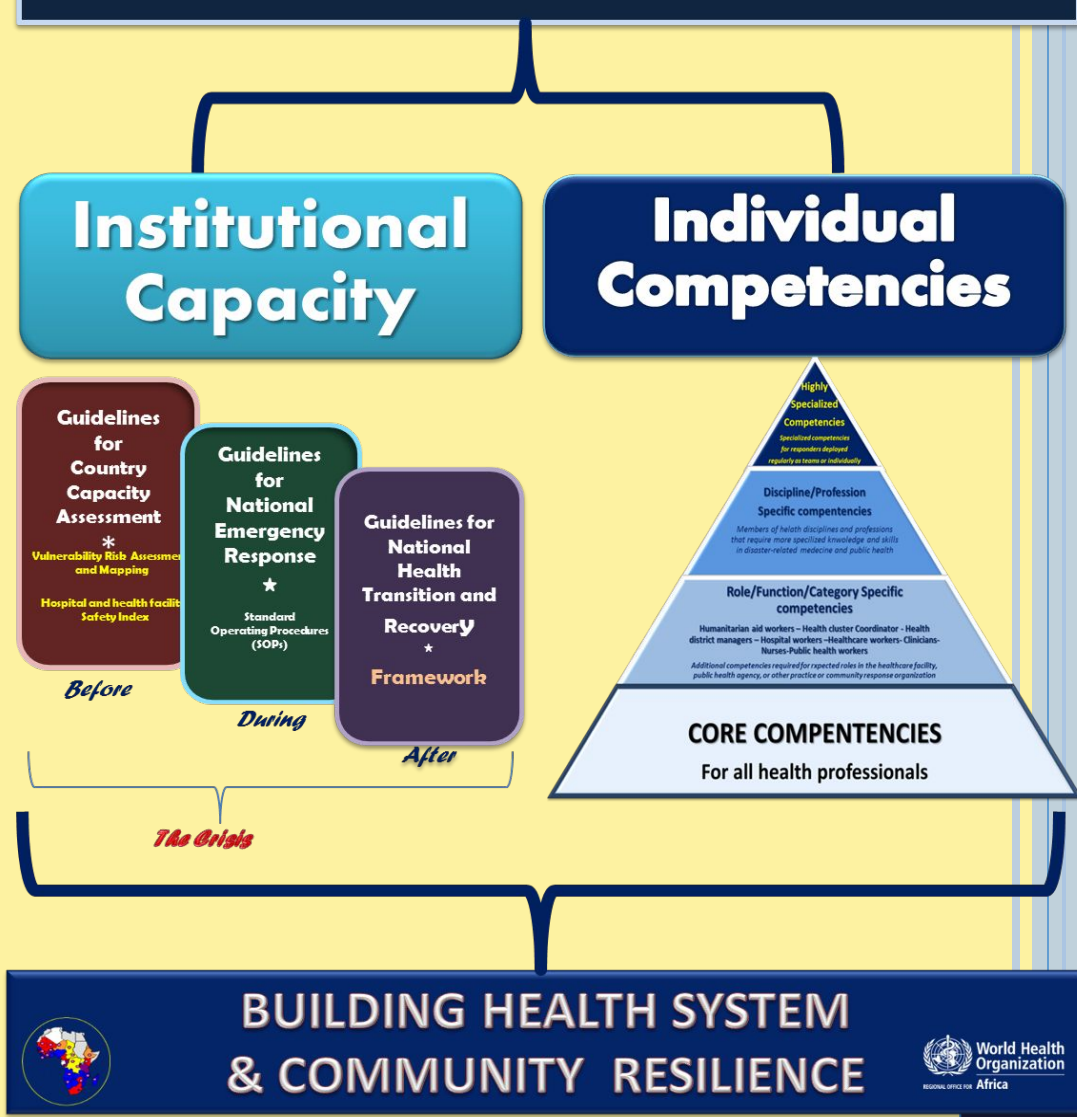


Strategic approach

Policy

Tools  
Impact

# REGIONAL HEALTH SECTOR STRATEGY FOR DISASTER RISK MANAGEMENT



# Progress...

- ☐ Induction Briefing conducted for 43 countries
- ☐ First phase of Country Capacity Assessment (CCA) conducted in all 47 countries
- ☐ Second phase of Health Sector CCA conducted in 11 countries: Sierra Leone, Tanzania, Kenya , Uganda, Ethiopia, DRC, Angola , Eritrea, Cameroon, The Gambia , CAR
- ☐ Multi-hazard VRAM conducted in three countries: Tanzania, Uganda, South Sudan,
- ☐ Hazard-Specific VRAM conducted for cholera in Tanzania
- ☐ Training curriculum implemented in two Teaching Institutions: University of Pretoria, Makerere University,

# Next Steps

- ☐ **Integrate DRM-H Assessment and M&E Framework with IHR-JEE**
- ☐ **Conduct 2<sup>nd</sup> phase of CCA in the remaining countries**
- ☐ **Develop DRM-H Training Package, based on the existing curriculum**
- ☐ **Institutionalize DRM-H training in collaboration with Teaching Institutions**
- ☐ **Revise DRM-H Guidelines and Tools: VRAM**



# THANK YOU



WS27: Public Health - Implementing the Sendai Framework  
Thursday, 27 April 2017, 12:05PM - 12:55PM

# WHO HQ perspective of success factors and challenges to the implementation of health emergency and disaster risk management

Jonathan Abrahams

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# Further information

More information at:

<http://www.who.int/hac/techguidance/preparedness/en/>

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WHO HQ

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# Challenges or facing the facts?

- Number of people affected & exposure – increasing?
- Health effects = death, injury, disease, disability, and other societal outcomes
- High demands on the health system
- Moving the focus from health events to health outcomes using a risk management approach

# Barriers to implementing Health EDRM

- Weak national multisectoral DRM systems
  - Health sector interaction?
- Weak national health systems in parallel universe to health emergency management systems
  - Risk assessments missing
  - multisectoral/interdisciplinary action needed
  - Where to focus? Communities or institutions?

# Barriers to implementing Health EDRM

- Capacity development may not address priorities
- Limited focus – re hazard, latest disaster, parallel systems
- Health workers
  - part-time, response oriented, high turn over
  - technical training available, but few trained in Health EDRM with a managerial focus
- Body of knowledge and evidence is weak
  - Research/academic capacity (except in USA) is limited



# Barriers to implementing Health EDRM

- People's health has not been an explicit primary purpose of multisectoral DRM
  - Saving lives and health in “social” outcomes – BUT
  - injury, illness, disability, continuity of services missing
- Health is seen as a sector :
  - Rather than: universal outcome, human right, source of vulnerability
  - Epidemics/pandemics not usually addressed within DRR
- Response and conflict/violence missing from DRR
- 3.03 trillion dollars on international aid
  - USD13.5 bn (0.45%) on disaster prevention and preparedness (GFDRR)

# Key Success Factors for Health EDRM

- Sustained investment in long-term programmes with committed champions
  - stable EDRM-H unit in MoH – all hazards
  - full-time professional staff and defined budget.
- Health well-coordinated and respected by multisectoral actors
- Window of opportunity after major emergencies and disasters
- Leveraging resources for one hazard for all-hazards systems
- Long-term WHO support to countries makes difference - (Latin America & Caribbean, Bangladesh, Indonesia, Iran, Nepal, Philippines, Viet Nam)

# Some advances

- All the work that you all do!
- Health in the Sendai Framework
- National, regional and global strategies
- WHO Policy framework on emergency and disaster risk management that links:
  - All-hazards approach
  - Linking prevention, preparedness, response and recovery
  - Bridging Health EDRM with health systems, IHR, resilience
  - All sectors contributions to health outcomes
- WHO Thematic Platform on EDRM including research

## Questions for plenary discussion

- What are the opportunities and challenges in using the Sendai Framework for disaster risk reduction population health gain?
- How can the Sendai Framework improve research to build public health evidence for the implementation of the Framework?







**WADEM**  
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# Thank you



**Sendai Framework  
for Disaster Risk Reduction  
2015 - 2030**

