



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

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# IRDR International Centre for Excellence: CCOUC Expression of Interest

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Director

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Hong Kong for Disaster and Medical Humanitarian Response (CCOUC)

30 November 2016



香港中文大學  
The Chinese University of Hong Kong





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# BACKGROUND



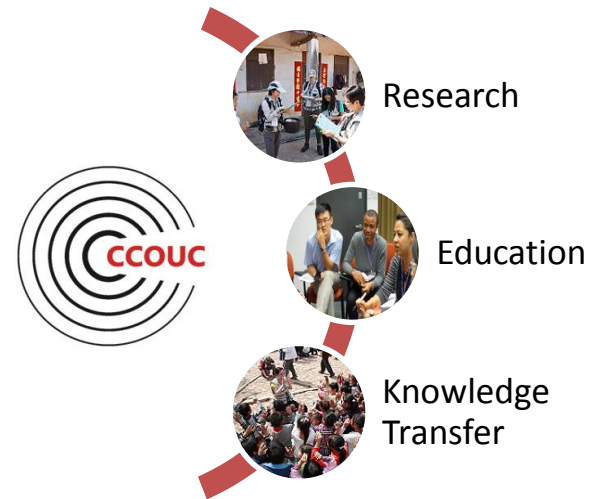
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## Collaborating Centre for Oxford University and The Chinese University of Hong Kong for Disaster and Medical Humanitarian Response (CCOUC)

- Established in **2011**
- Mission - to serve as a **platform for research, education, and community knowledge transfer** in the areas of disaster and medical humanitarian crisis policy development, planning and response.





## Health and Disaster Risk Reduction

- **Human health impact** of disasters makes disasters devastating
  - Physical, mental, social well-being
  - Health as wellbeing and not merely absence of disease
- Previous focus on disaster medicine and clinical care
- Public health: **population-wide strategies** to minimise the negative health impacts of disasters
  - Disaster preparedness
  - Building community health resilience
- Health-DRR: using public health methodologies to **establish the evidence-base** for effective health-DRR policy and practice
- Attempts to integrate or mainstream health in DRR still limited





## Health as an OUTCOME and a GOAL of Sendai Framework

**18.** To support the assessment of global progress in achieving the outcome and goal of the present Framework, seven global targets have been agreed. These targets will be measured at the global level and will be complemented by work to develop appropriate indicators. National targets and indicators will contribute to the achievement of the outcome and goal of the present Framework. The seven global targets are:

(a) Substantially reduce global disaster mortality by 2030, aiming to lower the average per 100,000 global mortality rate in the decade 2020–2030 compared to the period 2005–2015;

(b) Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 in the decade 2020–2030 compared to the period 2005–2015;<sup>9</sup>

(c) Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030;

(d) Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030;

(e) Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020;

(f) Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of the present Framework by 2030;

(g) Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030.





- Medicine
- Nursing
- Public health
- Nutrition
- Public policy
- Communications
- Geography & resource management
- Int'l relations
- Political & social science

# Organisational Structure

Advisory Committee (experts from University of Oxford & The Chinese University of Hong Kong)



Centre Director (Professor)

Assistant Professor





Assistant Director



Research Associate



Academic Manager




Program Manager




Publication Manager




Research Assistant



Research Assistant



Research Assistant




Junior RA



Assistant Lecturer



Assistant Lecturer



Project Coordinator



Admin/Fin Assistant





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# SCIENTIFIC RESEARCH



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## Climate Change and Health

- Research in collaboration with different departments of Hong Kong Government
  - Hong Kong Census and Statistics / HK Hospital Authority / Hong Kong Observatory
- Health Impact Modelling (mortality and morbidity)
- Knowledge, Attitudes & Practice
  - HK temperature warning system / help and information seeking behavior and patterns / health and environmental friendly co-benefits studies
- Development of Heat Index (HKHI)
- Hot and Cold Temperature Warning Study







# Temperature Health Impact in Hong Kong

## Hot Season

## Cold Season

Mortality ↑ by 1.8% for every increase of 1°C above 28.2 °C

Cumulative mortality\* ↑ by 3.8% for every decrease of 1°C

Hospital admissions ↑ by 4.5% for every increase of 1°C above 29 °C

Hospital admissions ↑ by 1.4% for every decrease of 1°C within the 8.2-26.9°C range

Health-related calls ↑ when max. temp. reaches 30-32 °C. About 49% of calls were for explicit health-related reasons

Help-seeking  
e.g. Clinic attendance

12.7% Required medical help  
82% Professional medical help  
18% Self-care only

2% Required medical care  
95% Professional Medical Health  
(Western 70.0%/Chinese 25.0%)  
5% Self-Care only

Mild symptoms and  
Discomfort

66.9% Have symptoms

1.9 % Heatstroke

Behavioral changes#

67.1% reported changes

88.4% reported changes

\* Cumulative mortality is used because the lagged effect of coldness towards mortality is estimated to be 3 weeks. # Behavioral changes include *amount of physical activity, appetite, frequency of social activity, mood and sleeping quality*





# Disaster Risk Perceptions

- Sendai Framework: understanding disaster risk
- Studies according to different social, economic, ethnic and cultural demographics

## Socio-demographic Predictors for Urban Community Disaster Health Risk Perception and Household Based Preparedness in a Chinese Urban City

JUNE 27, 2016 · RESEARCH ARTICLE

[Print or Save PDF](#) [Citation](#) [XML](#) [Email](#) [Tweet](#) [Like](#) 39

### REVISIONS

This article is either a revised version or has previous revisions

Edition 1 - June 27, 2016

### AUTHORS

Emily YY Chan Janice Yue Poyi Lee Susan Shuxin Wang

### ABSTRACT

**Objectives:** There is limited evidence on urban Asian communities' disaster risk perceptions and household level preparedness. Hong Kong is characterized by high population density, and is susceptible to large-scale natural disasters and health crises such as typhoons, fires and infectious disease outbreaks. This research paper investigates the rates and predictors of urban community disaster risk perception, awareness and preparedness, at individual and household levels.

**Methods:** A randomized cross-sectional, population-based telephone survey study was conducted among the Cantonese-speaking population aged over 15 years in Hong Kong. Descriptive statistics were reported. A logistic regression model was used to identify predictors of disaster risk perception and household preparedness.



[Explore this journal >](#)

BRIEF COMMUNICATION

## Travel Health Risk Perceptions and Preparations Among Travelers at Hong Kong International Airport

Kevin K.C. Hung MBChB, MPH [✉](#), Agatha K.Y. Lin RN, MPH,  
Calvin K.Y. Cheng MmedSc, PhD, Emily Y.Y. Chan MD, SM PIH,  
Colin A. Graham MD, MPH

First published: 13 March 2014 [Full publication history](#)

DOI: 10.1111/jtm.12112 [View/save citation](#)

Cited by: 1 article [Citation tools](#)

[Am score](#) 3

[Funding Information](#)

### Abstract

Four levels of pre-travel health preparations were defined to allow the measurement of general travel health preparations by the traveling public. A cross-sectional survey of 770 travelers using Hong Kong International Airport was conducted. Important gaps were found in the self-preparation domain. Length of travel was the only factor associated with



[View issue TOC](#)  
Volume 21, Issue 4  
July/August 2014  
Pages 288-291



## Human Health Security

- Population preparedness in relation to pandemic



### Vaccine

Volume 33, Issue 38, 11 September 2015, Pages 4737–4740



Brief report

### Willingness of future A/H7N9 influenza vaccine uptake: A cross-sectional study of Hong Kong community

Emily Ying-Yang Chan  , Calvin Ka-Yeung Cheng, Greta Chun-Huen Tam, Zhe Huang, Po Yi Lee

[Show more](#)

<http://dx.doi.org/10.1016/j.vaccine.2015.07.046>

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### Abstract

We conducted a population telephone survey in Hong Kong during the second wave of influenza A/H7N9 outbreak in 2014. Among the respondents, 50.5% of the respondents would like to accept A/H7N9 vaccination in future. Respondents had poor knowledge of A/H7N9 influenza and vaccines. More than 60% of respondents mixed up seasonal





# Disaster Case Studies of Asia Pacific Region

- Since early 2011
- To document the disaster experiences of medical practitioners and the public
- Research Methodology - literature review, stakeholder interviews, retrospective data analysis
- Follow UNISDR 2005 Hyogo Framework Template & the standardized approach in reporting on health crises and critical health events

## SPECIAL REPORT

### Guidelines for Reports on Health Crises and Critical Health Events

Per Kulling, MD;<sup>1</sup> Marvin Birnbaum MD, PhD;<sup>2</sup> Virginia Murray, FRCP;<sup>3</sup>  
Gerald Rockenschaub, MD, MPH<sup>4</sup>

1. Emeriti Seconded National Expert, Health and Consumers Directorate General, European Commission
2. Editor-in-Chief, *Prehospital and Disaster Medicine*
3. Professor, Consultant Medical Toxicologist and Environmental Public Health, Centre for Radiation, Chemicals and Environmental Hazards, London, Health Protection Agency, UK
4. Regional Adviser, Disaster Preparedness & Response WHO Regional Office for Europe

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E-mail: per.kulling@hotmail.com

*This publication has been sponsored by the EU project "Support health security, preparedness planning and crisis management in EU-EU accession and neighboring (ENP) countries—Health security in the European Region (2008 WHO-EURO<sup>2</sup> and the World Association of Disaster and Emergency Medicine*

**Keywords:** critical health event; disaster;

#### Introduction

The proposed guidelines for a common structure for reports on health crises and critical health events are an attempt of capturing the experiences gained and a further step for promoting a standardized methodology for sharing results and experiences. Such a common and standardized approach will facilitate the analysis and comparison of findings in order to improve preparedness planning and response and advance international collaboration and learning. If future reporting follows common standards, then the documented findings would be comparable and could be used to learn and apply lessons within an individual field of activity and to apply those lessons learned also to other related preparedness activities. It could also facilitate the implementation of joint activities and joint reports involving different sectors.

Globally applied tools, such as the Initial Rapid Assessment tool (IRA)<sup>2</sup> developed by the UN Interagency Standing Committee's (IASC)—Global Health Cluster, the UN Post-Disaster Needs Assessment (PDNA),<sup>3</sup> and UN Post-Conflict Needs Assessment (PCNA)<sup>4</sup> have been consulted during the preparation of this document and basic principles were integrated.

Following this initial attempt to propose common guidelines for a common report structure, pilot testing to evaluate their applicability and usefulness is suggested. The pilot testing should be followed by an extensive review process. The guidelines should be supplemented further with determinants and indicators when the guidelines are used for in depth reporting to evaluate crisis response operations. The development of indicators should be in line with already existing international references and guidelines and other related activities like the Sphere Project<sup>5</sup> or the framework developed for the Tsunami Recovery Impact Assessment and Monitoring System (TRIAMS) initiative.<sup>6</sup>



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# Disaster Case Studies of Asia Pacific Region





## Other Research

- Disaster Information and Resource Digital Hub
- Operational research
  - Field-based activities: needs assessments and intervention evaluation
- Policy and technical advisory support
  - 10 policy brief commitment
- Commentary



### Hong Kong's Emergency and Disaster Response System

Emily YY CHAN, May PS YEUNG, Sharon TT LO

Collaborating Centre for Oxford University and CUHK  
for Disaster and Medical Humanitarian Response (CCOUC),  
The Chinese University of Hong Kong

#### Policy Brief

October 2015



In collaboration with:



### The Disaster and Emergency Management System in China

WANG Zhe, Emily YY CHAN, Kevin Sida LIU, May PS YEUNG

Collaborating Centre for Oxford University and CUHK for Disaster  
and Medical Humanitarian Response (CCOUC),  
The Chinese University of Hong Kong

#### Policy Brief

May 2016



香港中文大學  
The Chinese University of Hong Kong



### Policy Implication of Health Impacts of Climate Change in Hong Kong

Policy Brief  
October 2016

Emily YY CHAN, Heidi HUNG, Gabriel NC LAU, Edward YY NG

Collaborating Centre for Oxford University and CUHK for Disaster and Medical  
Humanitarian Response (CCOUC), The Chinese University of Hong Kong  
Institute of Environment, Energy and Sustainability (IEES),  
The Chinese University of Hong Kong



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## Future Research Initiatives

- **Country comparisons** of global DRR practices and strategies
  - ‘Grab bag’ and integration of DRR into secondary school curriculums
- **Disaster risk perceptions** amongst vulnerable sub-groups in rural and urban areas in Nepal and Bhutan
- **Disaster health risk literacy** in the Himalayas: comparative study

### Accredited qualifications for capacity development in disaster risk reduction and climate change adaptation

Sarah L. Hemstock<sup>1</sup>; Leigh-Ann Buliruarua<sup>2</sup>; Emily YY Chan<sup>3</sup>; Gloria Chan<sup>3</sup>; Helene Jacot Des Combes<sup>2</sup>; Peter Davey<sup>4</sup>; Paul Farrell<sup>5</sup>; Sian Griffiths<sup>6</sup>; Henning Hansen<sup>7</sup>; Tim Hatch<sup>8</sup>; Ailsa Holloway<sup>9</sup>; Teuleala Manuella-Morris<sup>10</sup>; Tess Martin<sup>11</sup>; Fabrice G. Renaud<sup>12</sup>; Kevin Ronan<sup>13</sup>; Benjamin Ryan<sup>14</sup>; Joerg Szarzynski<sup>15</sup>; Duncan Shaw<sup>16</sup>; Soichiro Yasukawa<sup>17</sup>; Tiffany Yeung<sup>18</sup>; Virginia Murray<sup>19</sup>

<sup>1</sup> European Union PacTVET Project, SPC, Suva, Fiji.

<sup>2</sup> European Union PacTVET Project, The University of the South Pacific, Suva, Fiji.

<sup>3</sup> Collaborating Centre for Oxford University, Oxford, United Kingdom  
Chinese University of Hong Kong, Hong Kong, China.

<sup>4</sup> Griffith University, Brisbane, Australia.

<sup>5</sup> World Association of Disaster and Emergency Medicine, Madison, USA.

<sup>6</sup> Healthcare UK London, United Kingdom.

<sup>7</sup> International Federation of Environmental Health, London, United Kingdom.

<sup>8</sup> Alabama Department of Public Health, Montgomery, USA

<sup>9</sup> Research Alliance for Disaster Risk Reduction, Stellenbosch University, Matieland, South Africa.

<sup>10</sup> European Union PacTVET Project, The University of the South Pacific, Funafuti, Tuvalu.

<sup>11</sup> European Union PacTVET for Sustainable Energy and Climate Change Adaptation, The University of the South Pacific, Suva, Fiji.

<sup>12</sup> United Nations University Institute for Environment and Human Security, Bonn, Germany.

<sup>13</sup> Central Queensland University, Rockhampton, Australia.

<sup>14</sup> James Cook University, Cairns, Australia.

<sup>15</sup> United Nations University, Bonn, Germany.

<sup>16</sup> The University of Manchester, Manchester, United Kingdom.

<sup>17</sup> United Nations Educational, Scientific and Cultural Organization, Paris, Switzerland.

#### Abstract

Increasingly practitioners and policy makers working across the globe are recognising the importance of bringing together disaster risk reduction and climate change adaptation. From studies across 15 Pacific island nations, a key barrier to improving national resilience to disaster risks and climate change impacts has been identified as a lack of capacity and expertise resulting from the absence of sustainable accredited and quality assured formal training programmes in the disaster risk reduction and climate change adaptation sectors. In the 2016 UNISDR Science and Technology Conference on the Implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030, it was raised that most of the training material available are not reviewed either through a peer-to-peer mechanism or by the scientific community and are, thus, not following quality assurance standards. In response to these identified barriers, this paper focuses on a call for accredited formal qualifications for capacity development identified in the 2015 United Nations landmark agreements in DRR and CCA and uses the Pacific Islands Region of where this is now being implemented with the launch of the Pacific Regional Federation of Resilience Professionals, for DRR and CCA. A key issue is providing an accreditation and quality assurance mechanism that is shared across boundaries. This paper argues that by using the United Nations landmark agreements of 2015, support for a regionally accredited capacity development that ensures



## Research Outputs

- To date, CCOUC members have published over **200 publications**
  - Journal articles, international academic conference abstracts, policy briefs, training manuals)
- CCOUC has actively participated in over **60 international academic and United Nations conferences**
  - Oral and poster presentations, delivering keynote speeches, participating on panel discussions, organising health-DRR thematic sessions and side events







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# OTHER ACTIVITIES



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## Education and Training

- **Accredited Masters-level courses**
  - Disaster and medical humanitarian crisis
  - Climate change and health
  - Health and human security
  - Risk communications
  - Disaster research methodologies
  - Food security
- **Online courses**
  - Public health principles in disaster and medical humanitarian response
  - Climate change and health
  - Research methods
  - Sendai Framework – principles and practices

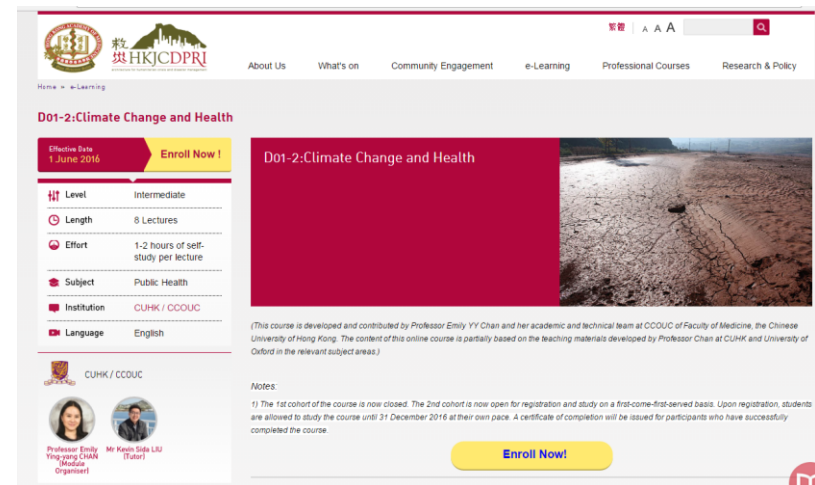


**Online COURSE**

Public Health Principles in Disaster and Medical Humanitarian Response

Enroll for this free online course to gain insight and theoretical understanding of the public health issues related to disaster and medical humanitarian relief, particularly in the Asia Pacific Region. The course comprises of 7 lessons covering ...

[Learn more -->](#)



CUHK / CCOUC

**D01-2: Climate Change and Health**

Effective Date: 1 June 2016 **Enroll Now!**

Level	Intermediate
Length	8 Lectures
Effort	1-2 hours of self-study per lecture
Subject	Public Health
Institution	CUHK / CCOUC
Language	English

CUHK / CCOUC

Professor Emily Ying-yang CHAN (Medical Organizer)

Ms Karen Sze LIU (Tutor)

**Enroll Now!**

(This course is developed and contributed by Professor Emily YY Chan and her academic and technical team at CCOUC of Faculty of Medicine, the Chinese University of Hong Kong. The content of this online course is partially based on the teaching materials developed by Professor Chan at CUHK and University of Oxford in the relevant subject areas.)

Notes

1) The 1st cohort of the course is now closed. The 2nd cohort is now open for registration and study on a first-come-first-served basis. Upon registration, students are allowed to study the course until 31 December 2016 at their own pace. A certificate of completion will be issued for participants who have successfully completed the course.

## Education and Training

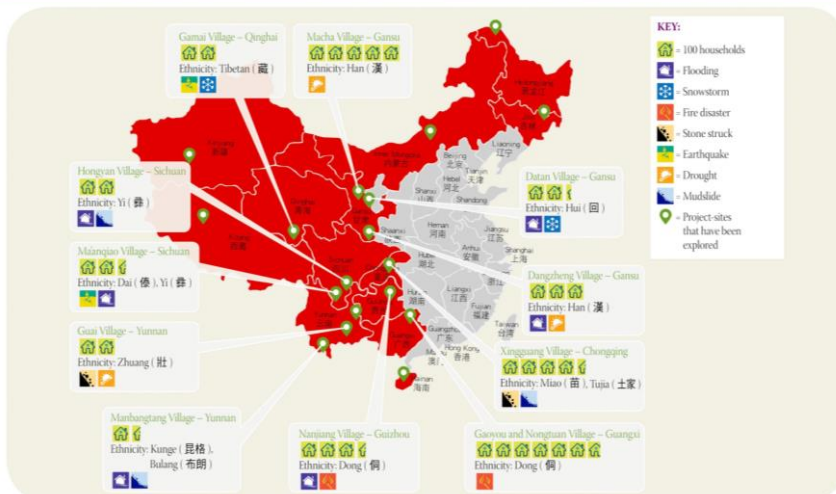
- **Certificate courses**
  - Research methodology in disaster and medical humanitarian response
- **Technical trainings and workshops**
  - Topics include: Sendai Framework / SDGs / Sphere Project etc.
  - To gov't departments & civil society organisations in Hong Kong, China, Nepal, Bhutan and DPRK
- **Train-the-trainer programmes**
- **Training manuals**
- **Fellowship Opportunities**



# Community Knowledge-Transfer

- Strengthening community resilience toward disasters through contextualised interventions
- Locations:
  - Greater China (Ethnic Minority Health Project)
  - Nepal
  - Asia-Pacific Region

Proposed and Visited Sites for Emergency Preparedness and Health Education for the Ethnic Minority Health Project





## Foci of Training



Disaster Risk  
Reduction



Climate Change



Waste  
Management



Environmental  
Health



Health Behaviour



Water & Sanitation



# Disaster Preparedness Kit

## Water & Sanitation

- ✓ Soap
- ✓ Towel
- ✓ 1.5L Water Bottle



## Food & Nutrition

- ✓ Non-perishable Food
- ✓ Food guidelines for people with NCD



## Shelter & Clothing

- ✓ Emergency Blanket
- ✓ Torch
- ✓ Multiple-purpose Knife
- ✓ Fire-starter



## Health Services

- ✓ First Aid drugs
- ✓ Picture of current medications
- ✓ Guide on First Aid and ORS preparation



## Information & Communication

- ✓ Whistle
- ✓ Family Portrait
- ✓ Copy of Identity Card
- ✓ Emergency contact information



## Basic Requirements for Health



## Contribution to International Platforms

- **UNISDR & Sendai Framework**

- Third UN World Conference on DRR (Sendai, March 2015)
- UNISDR Science & Technology Conference (Geneva, Jan 2016)
- International Conference on the Implementation of the Health Aspects of the Sendai Framework (Bangkok, March 2016)
- Asia Science & Technology Conference (Bangkok, Aug 2016)
- Asian Ministerial Conference for DRR (New Delhi, Nov 2016)
- *Global Platform for DRR 2017 (Cancun, May 2017)*

***Panel discussions, ignite stage, poster presentations,  
thematic sessions, side events, rapporteur***





## Contribution to International Platforms

- ✓ **UNISDR Asia Science Technology and Academia Advisory Group** (ASTAAG, May 2015)
  
- ✓ **WHO Thematic Platform for Health Emergency & Disaster Risk Management Research Group** (WHO-HEDRM, Sep 2016)
  - Provide expert advice and technical support to WHO and other UN agencies and partners in EDRM-H research and evidence-related activities for the implementation of Sendai Framework
  - CCOUC as Secretariat
  - Members coming from:
    - CCOUC
    - UNISDR STAG
    - WHO Emergency Risk Management and Humanitarian Response / Kobe Centre
    - Tehran University of Medical Sciences
    - Geneva University Hospitals
    - Canterbury District Health Board, New Zealand
    - Monash University







## Contribution to International Platforms

- CCOUC appointed the **Sphere Country Focal Point (health) for China** in August 2014 to promote internationally recognized minimum standards in humanitarian response for the Geneva-based Sphere Project





# CCOUC Network

## Local

## National

## International

### Academic



### Government & Agencies



香港天文台  
HONG KONG OBSERVATORY



Census and Statistics  
Department



教育局  
Education Bureau



National Health and Family Planning Commission  
of the People's Republic of China



World Health  
Organization



United Nations Office for Disaster Risk Reduction

### NGO



The Sphere Project





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# STRATEGIC PLAN



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## Integrated Research Approach to DRR

- CCOUC will continue to **integrate the strengths of other academic disciplines** into its DRR and climate change research
- It will **apply for funding** for research projects
  - Projects will seek to understand disaster risk using a transdisciplinary approach





## Develop and strengthen powerful partnerships with UN Agencies

- CCOUC will continue to engage with various **UNISDR platforms** from a **technical** (S&T, health), **regional** (Asia) and **global level** toward Sendai Framework
- The **WHO Research Group** provides opportunity to work with other UN agencies in the field of health-DRR
- CCOUC's ongoing contributions at international UN technical and academic conferences provide opportunities to strengthen these partnerships





## International Centre for Support

- Based in Hong Kong, CCOUC is well placed to be an **international centre of support** to various components of IRDR's work
- CCOUC is already impacting policy and providing technical advice for decision-making
- CCOUC can promote and disseminate the results of DRR research in its **wide network** of local, national, regional and international partners
- It can **support the professional development** of DRR researchers and practitioners through Faculty and fellowship exchange schemes





## Vision to Develop IRDR ICoE

- Thematic focus on **health and community disaster resilience**
- Role of centre: coordinate and encourage all relevant local, regional and international stakeholders to **mainstream health in DRR activities**
  - Would serve as an international thematic hub
  - Build on momentum generated within Sendai Framework to continue prioritising DRR-health as an area of focus
- Other roles: mobilise others, provide technical cooperation, build capacity, disseminate latest research findings and best practices





## Funding and Other Support

- Since its establishment in 2011, CCOUC has accumulated **over 8 million USD** in grants and funding
  - From academic institutions, government-funded grants and private donations
- Situated within The Chinese University of Hong Kong, it hosts **fully equipped office space** with the seating capacity for 20-25 staff
- It will provide limited support for scholars to come to Hong Kong to undertake **research attachments** with the centre







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**Thank you!**  
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