



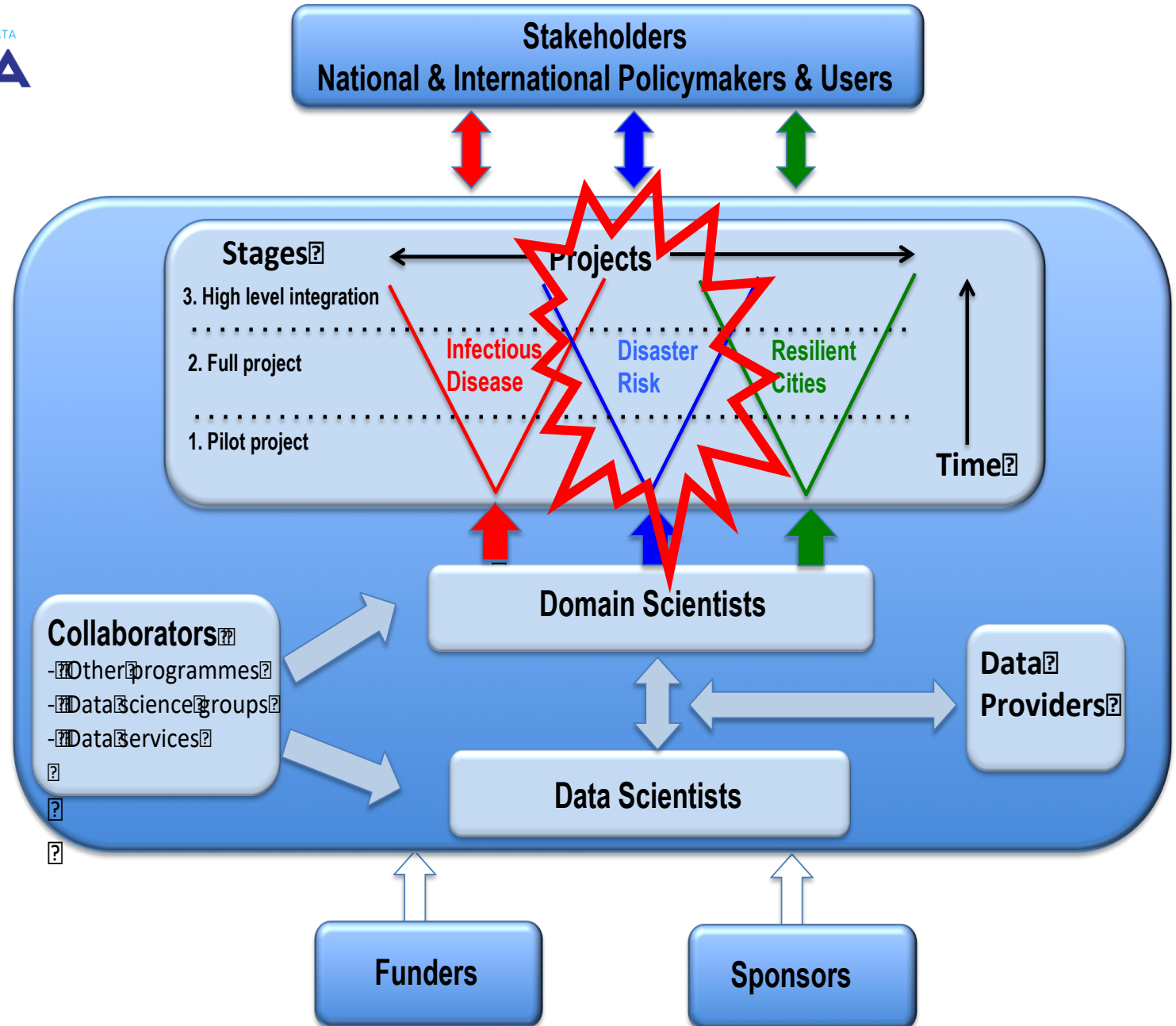
IRDR Disaster Loss DATA project

Virginia Murray & Bapon Fakhruddin
22nd Science Committee Meeting, Xiamen, China
8 October 2019

Update on IRDR DATA Project Plan 2018-2020

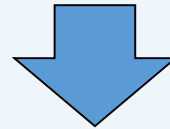
- **Objectives:** to deliver the IRDR DATA Project objectives and to partner if requested with UNDRR with other data partners
- **Scientific Questions:** Sendai Framework coherence with SDGs and Paris where possible in collaboration with partners such as the CODATA data availability, interoperability and standardisations including Hazard Terminology
- **Activities include**
 - Work continues CODATA (and CAST) for Data interoperability (Bapon at Dagstuhl workshop 8-11 October 2019)
 - UNDRR/ISC Hazard terminology and classification (session on 9 October)
 - UNDRR/ISC Data Group/ UNISDR GRAF and GAR/UNSDSN TReNDS/ Global Partnership/UN Statistical Commission/ CODATA and CODATA LODGD/ UN World Data Forum/WHO HQ and WHO Kobe Centre and others
- **Deliverables:** Includes delivery of hazard project early 2020
- **Support:** Need to grow DATA network and partnerships and project funding

Data Interoperability and standardisation Challenges in Disaster Risk Reporting



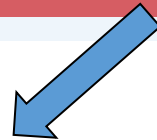
Sendai Framework/SDGs: mortality

- Global target 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*



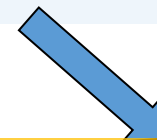
Indicator

Number of deaths attributed to disasters per 100,000 population



Component

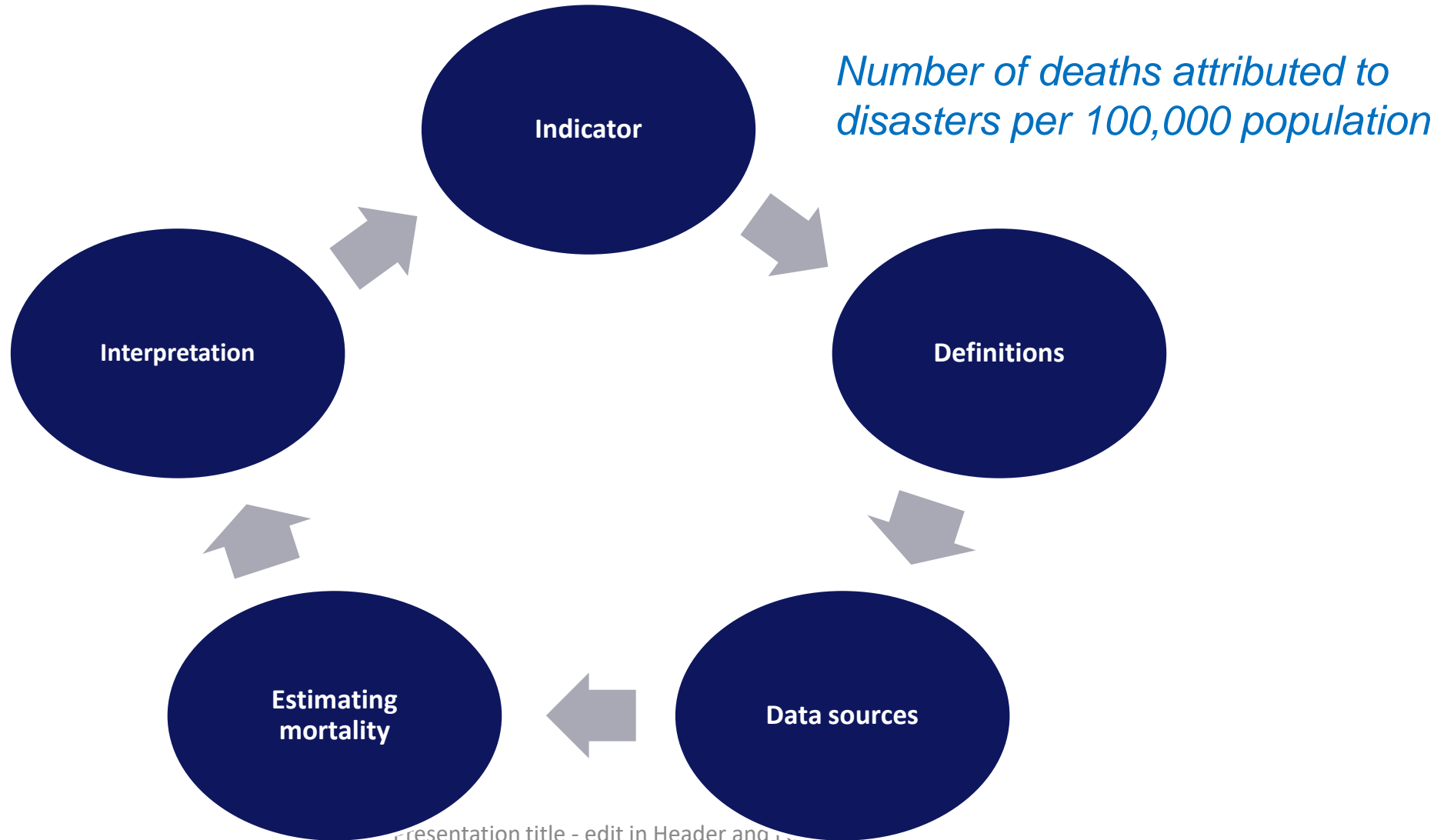
Number of deaths attributed to disasters



Component

Represented population

Disaster mortality data



Disaster Risk Reduction: Why Do We Need Accurate Disaster Mortality Data to Strengthen Policy And Practice?

- Dell D Saulnier, Department of Public Health Sciences, Karolinska Institutet, Stockholm, Sweden
- Helen K Green, Thomas D Waite, Public Health England, London, United Kingdom
- Rohaida Ismail, Norlen Bin Mohamed, Ministry of Health, Putrajaya, Malaysia
- Chhea Chhorvann, National Institute of Public Health, Phnom Penh, Cambodia
- Virginia Murray, Public Health England, London, United Kingdom;
Integrated Research on Disaster Risk (ISC/UNISDR)

<https://reliefweb.int/report/world/disaster-risk-reduction-why-do-we-need-accurate-disaster-mortality-data-strengthen>





UNDRR/ISC Technical Working Group on the Hazard Terminology Review and Classification



- Launched at the Science and Policy Forum of Global Platform, Geneva, May 2019
- Task Team consisting of UN agencies (including WMO and WHO) and scientific community representatives, and input from the insurance industry and international humanitarian organisations



Rapid Damage Mapping

- With support from China-GEO, CODATA LODGD, IRDR and Tonkin + Taylor International, integrate pre-existing set of satellite images, P3 Arial photographs and AI for ringing the full, mind-numbing extent of the hazard effects map into sharp relief.
- More than 7 RDM were supported to the NDMO/Red Cross/UNOCHA within 24hrs to 48hrs period time to take immediate response
- Canterbury Earthquake Sequence - NZ
- Tropical Cyclone Winston – Fiji
- Tropical Cyclone Gita – Tonga
- Kaikoura Earthquake – NZ
- Sulawesi Earthquake and Tsunami – Indonesia
- Tropical Cyclones Idai and Kenneth – Mozambique
- Honiara Flood – Solomon Islands

Building Damage Categories

NO OBSERVED DAMAGE
partial loss of amenity/roof



How many homeowners are generally unaffected?



LIMITED SHELTER
partial loss of amenity/roof



Defining characteristics:
1. < 50% roof loss; or
2. Intact common rooms (family living space/kitchen) with cover

How many homeowners are affected, but can remain in their homes?



LACK OF SHELTER
substantial loss of amenity/roof



Defining characteristics:
1. > 50% roof loss; or
2. No common rooms (family living space/kitchen) with cover

How many homeowners need to evacuate?

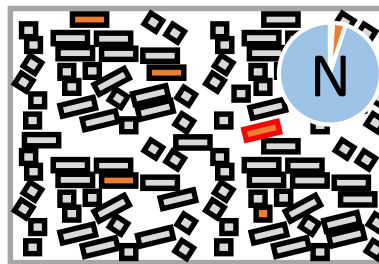
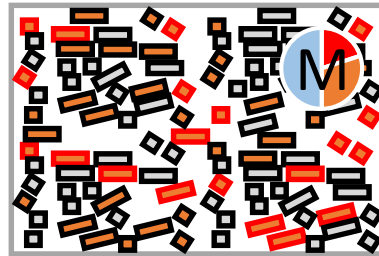
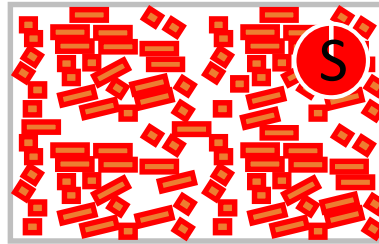


SEVERE

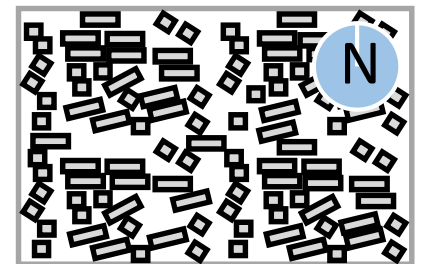
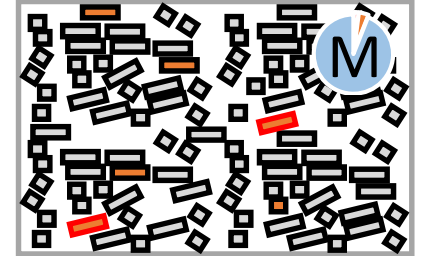
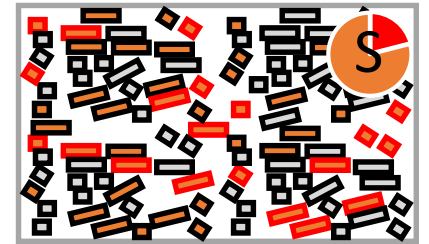
MODERATE

NONE TO MINOR

As much as...

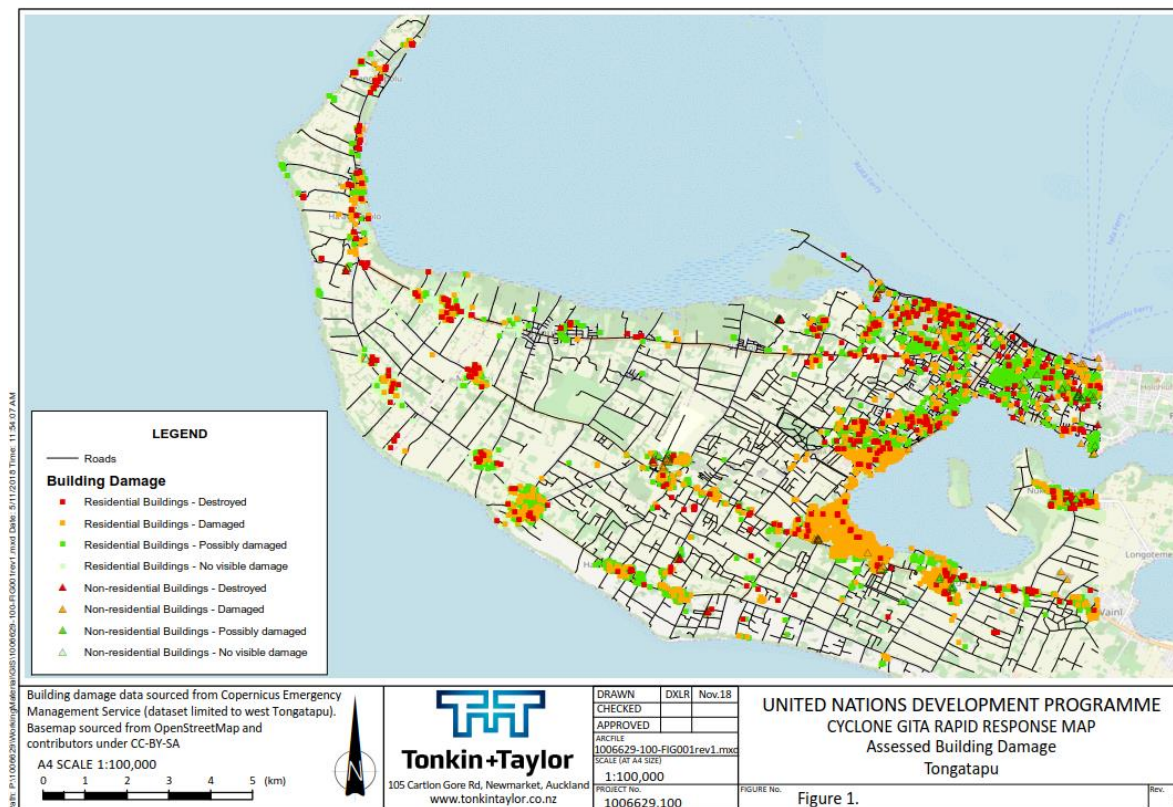


As little as...



Tropical Cyclone Gita – Tonga

- Tropical Cyclone Gita made landfall in Tongatapu and ‘Eua on 12 February 2018
 - US\$96.2 million worth of damage and US\$67.9 million worth of losses.
 - 55% of the population being affected
- Bapon and team provided geospatial outputs that were updated daily
- GIS viewer showed building damage assessments and village statuses to triage aid



Tropical Cyclones Idai and Kenneth – Mozambique

- March and April, 2019 Cyclone Idai and Kenneth impacted the coastal areas of Beira Quissanga and Macomia
- Bapon and partners provided the World Food Programme with insights into:
 - Where potentially inundated areas were located
 - The associated roads that could be affected
- Both digital (shape files for internal GIS) and static maps were produced to show potential damaged areas



IRDR Data Newsletters



Coastal Flooding

Indonesia is making progress

The UN Group

The group's goal is to show technologies in order to

GeoMesa

GeoMesa is an open source software analytic

Comments Needed

The second draft for the White Paper has been structured but

Stealth - Spies



England and Wales

Sir James Bevan, the Chief Executive of the Environment Agency, said these sentiments



Call to raise the level of ambition

The Global Platform for Disaster Risk Reduction said enough countries are putting in place national disaster risk reduction strategies to reduce the existing

Global Platform 2019: Walk with

Participants called for a balance between the fast and slow and social and economic

Green infrastructure nature's best friend

UN Member States have called for increased investment in green infrastructure for disaster risk reduction

Successful ministerial event - Climate and European Council

An action plan was agreed upon, emphasizing



News



"If you ask us for ideas, act on them" - Youth call out UN, world leaders on climate action

The Youth Climate Action Summit brought youth climate champions together from more than 140 countries and territories to a platform to share their solutions on the global stage, and deliver a clear message to world leaders: we need to act now to address climate change.

Global Partnership for Sustainable Development Data - Data for Now Initiative

The Data For Now initiative seeks to increase the sustainable use of robust methods and tools that improve the timeliness, coverage, and quality of SDG data through collaboration and partnership, technical and capacity support, and information sharing.

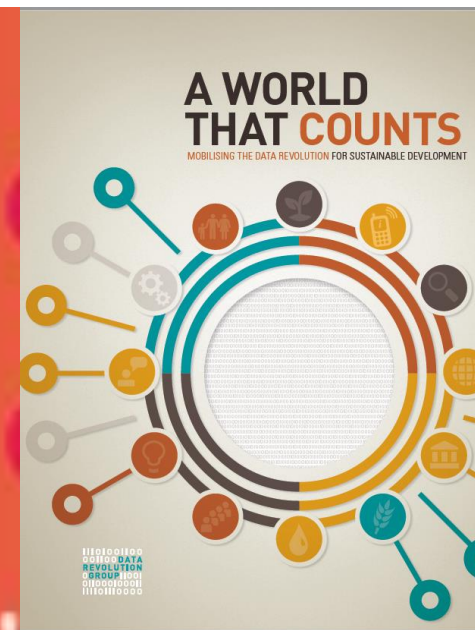
We could be losing the race against climate change, new UN report says

Scientists behind a landmark study of the links between oceans, glaciers, ice caps and the climate delivered a stark warning to the world on Wednesday: slash emissions or watch cities vanish under rising seas, rivers run dry and marine life collapse.

Counting on The World to Act

A Roadmap for Governments to Achieve Modern
Data Systems for Sustainable Development

EXECUTIVE SUMMARY



TRENDS
Thematic Research Network
on Data and Statistics

Linked open data for global disaster risk reduction



Next Generation Disaster Data Infrastructure

A study report of the CODATA Task Group on Linked Open Data for Global Disaster Risk Research

Please join us for a panel discussion, where we will share our knowledge and best practices on:

- The application of big data for rapid damage mapping (RDM)
- Opportunities to strengthen the RDM capacity of emergency response organisations

We will also launch a white paper on *Next Generation Disaster Data Infrastructure*.

Date: Thursday 19 September 2019

Venue: The Friendship Hotel of Beijing

Time: 11.00 am - 12.30 pm



Bapon Fakhruddin



Guoqing Li



Carol Song



Edward Chu



Lianchong Zhang



Virginia Murray

Session Chair: Professor Virginia Murray

11:00-11:05: Introduction of LODGD- Prof Virginia Murray

11:05-11:30: Launching of white paper - Next Generation Disaster Data Infrastructure - Prof Edward Chu

11:30- 11:40: Rapid Damage mapping for 24-72 hrs disaster response: Lesson learned- Dr Bapon Fakhruddin

11:40- 11:50: Extensive data framework for FAIR (Findable, Accessible, Interoperable and Reusable) science and its potential to help the disaster risk reduction research and communities - Carol Song

11:50-12:00: ChinaGEO disaster data response mechanism by Dr. Lianchong Zhang & Prof Guoqing Li

12:00-12:20: Discussions, Q and A.

Supported by

Acknowledgements

- Qunli Hang, John Handmer and others – IRDR
- Simon Hodson, Geoffrey Boulton and others – CODATA
- Helen K Green and others, Global Disaster Risk Reduction, Public Health England
- Jonathan Abrahams and others, Disaster Risk Management, World Health Organization
- Dell D Saulnier and others, Centre for Research on Healthcare in Disasters, Karolinska Institute, Sweden
- Andrew Collins and others – UNISDR STAG and ISC Data working group
- Jessica Espey and UNSDSN Thematic Research Network on Data and Statistics (TReNDS)

