



Public Health
England

8TH PHILIPPINE NATIONAL HEALTH RESEARCH SYSTEM WEEK CELEBRATION
Tuesday 12th August 2014, Cebu, Philippines

Disaster Risk Reduction and the role of science

Professor Virginia Murray

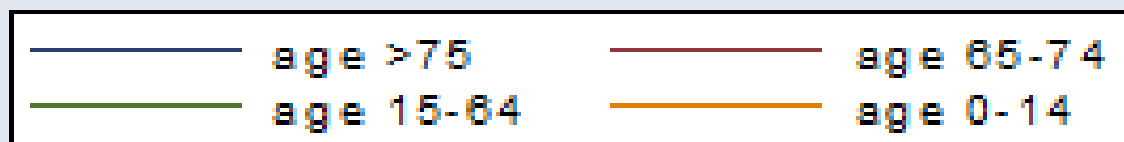
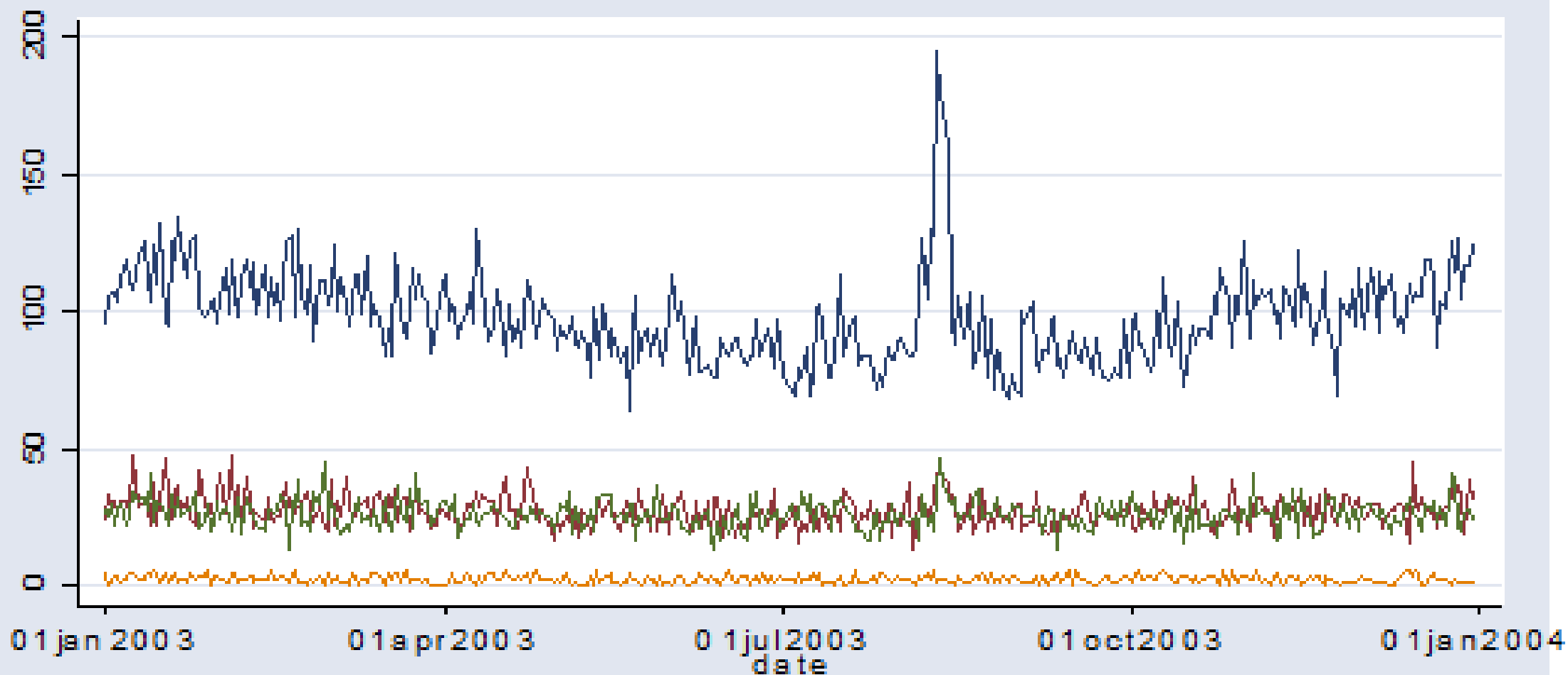
Consultant in Global Disaster Risk Reduction, Public Health England

Vice-chair Scientific and Technical Advisory Group, United Nations

International Strategy on Disaster Reduction



Daily mortality in London, 2003





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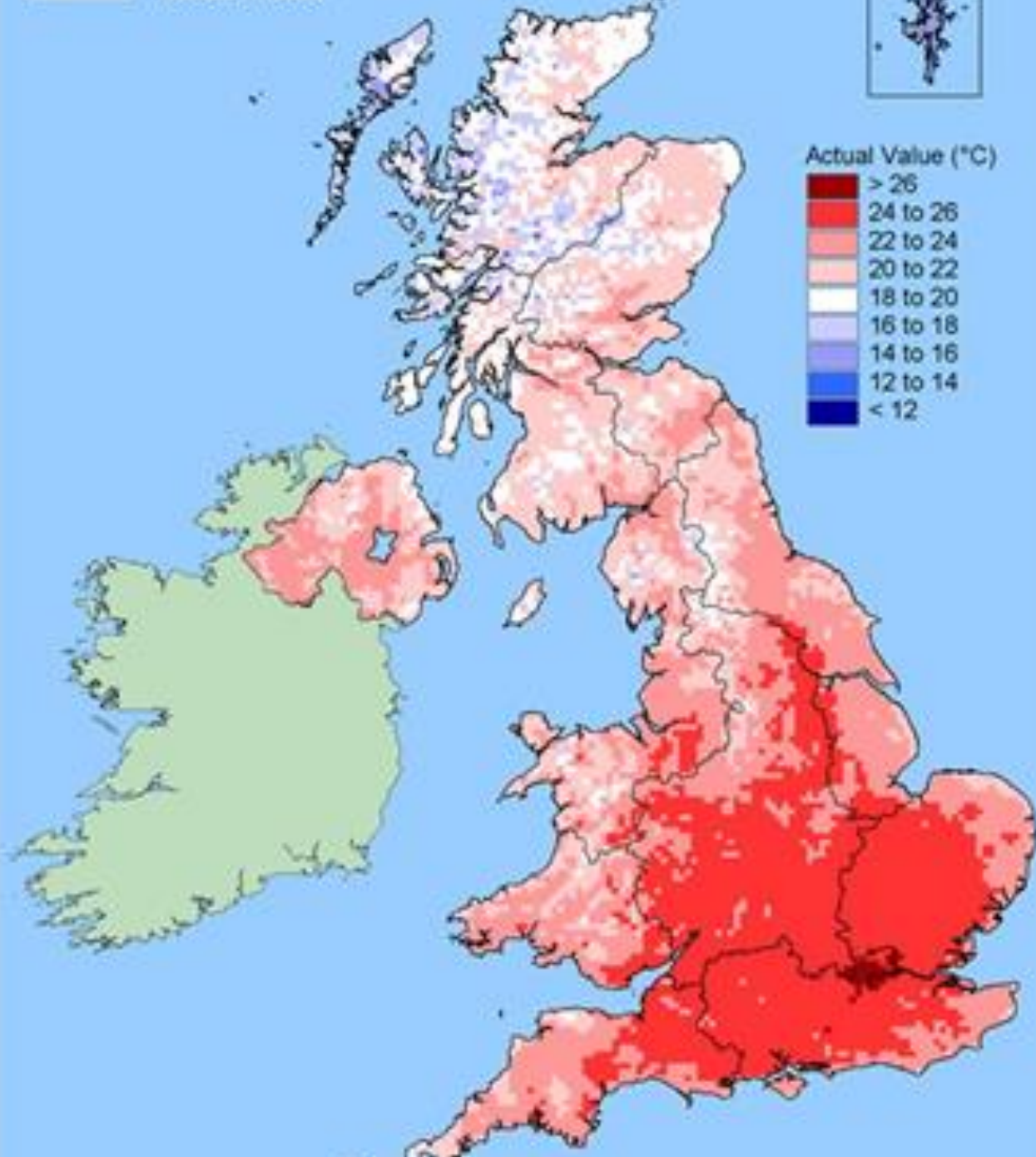
Courtesy of the Met Office

July 2013 Mean Maximum Temperature

<http://www.metoffice.gov.uk/climate/uk/summaries/anomacts>



July 2013
Mean Maximum Temperature
Actual value





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Heatwave Plan for England 2013

<https://www.gov.uk/government/publications/heatwave-plan-for-england-2013>



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NHS
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Local
Government
Association

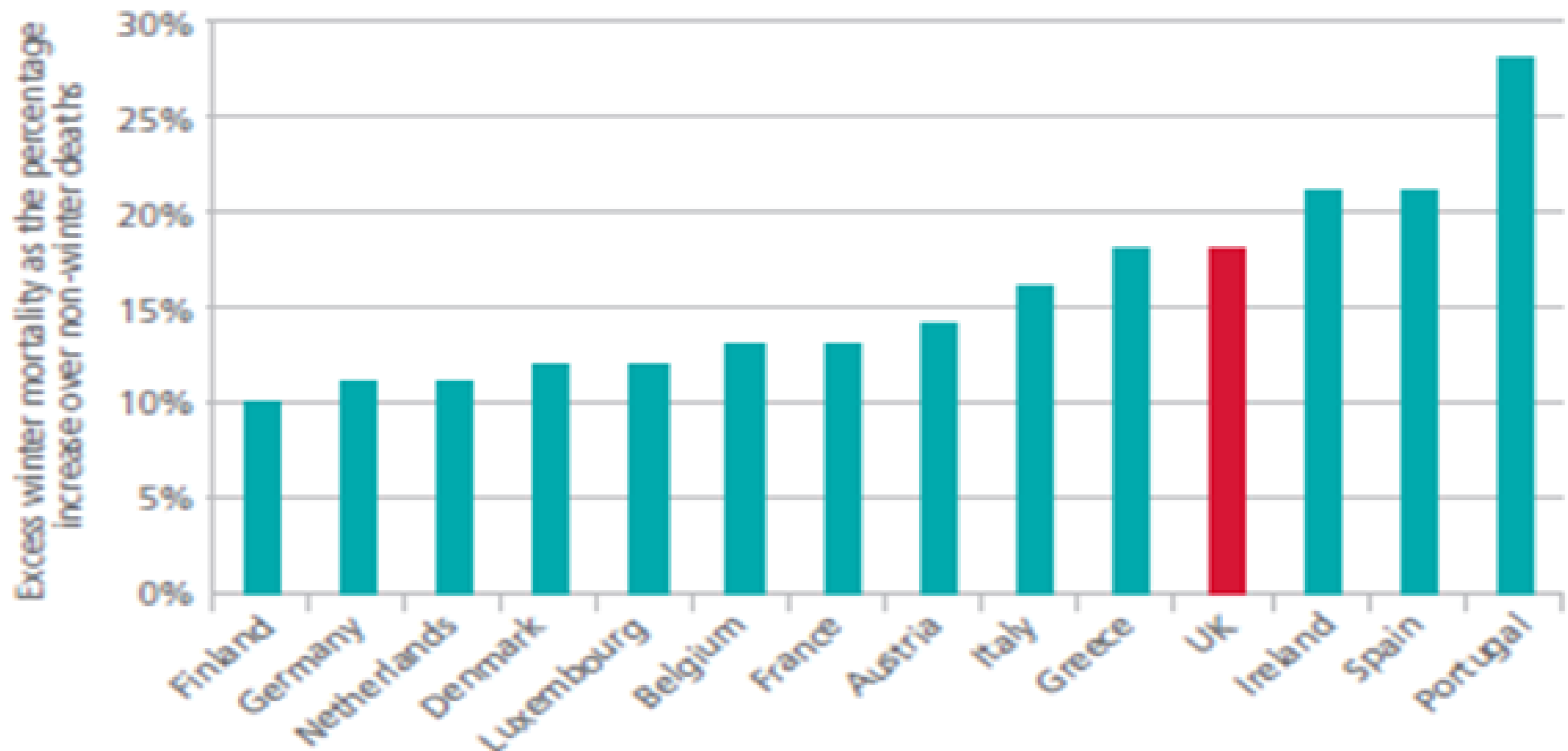
Met Office





Excess Winter Mortality

Figure 2: Excess winter mortality by country



Source: Healy JD. Excess winter mortality in Europe: a cross country analysis identifying key risk factors. *Journal of Epidemiology and Community Health* 2003; 57(10): 784-9



Guidance

Preparation and planning for emergencies: responsibilities of responder agencies and others

Organisation: [Cabinet Office](#)
Page history: Published 20 February 2013
Topics: [Public safety and emergencies](#) and [National security](#)
Primary category: [Emergencies: preparation, response and recovery](#)

How the government prepares and plans for emergencies, working nationally, locally and co-operatively to ensure civil protection in the UK.

Contents

[The Civil Contingencies Act](#)

[Emergency planning](#)

[Devolved administrations](#)

[Co-operation for emergency preparedness](#)

The Civil Contingencies Act

The [Civil Contingencies Act](#), and accompanying non-legislative measures, delivers a single framework for civil protection in the UK. The Act is separated into 2 substantive parts: local arrangements for civil protection (Part 1); and emergency powers (Part 2).



Public Health
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Cabinet Office Briefing Room

Strategic Coordinating Group (SCG) – Multi-Agency

'Others'

Police

Fire

Ambulance

'Health'
via Science and
Technical Advice
Cell)

Health
Protection

On/Off Site
Tactical
Control

SCENE OF INCIDENT
Silver control(s) (Tactical)
Individual agencies

Off Site
NHS Tactical
e.g. Hospital,
Emergency Centre

OFF SITE
Bronze
other services

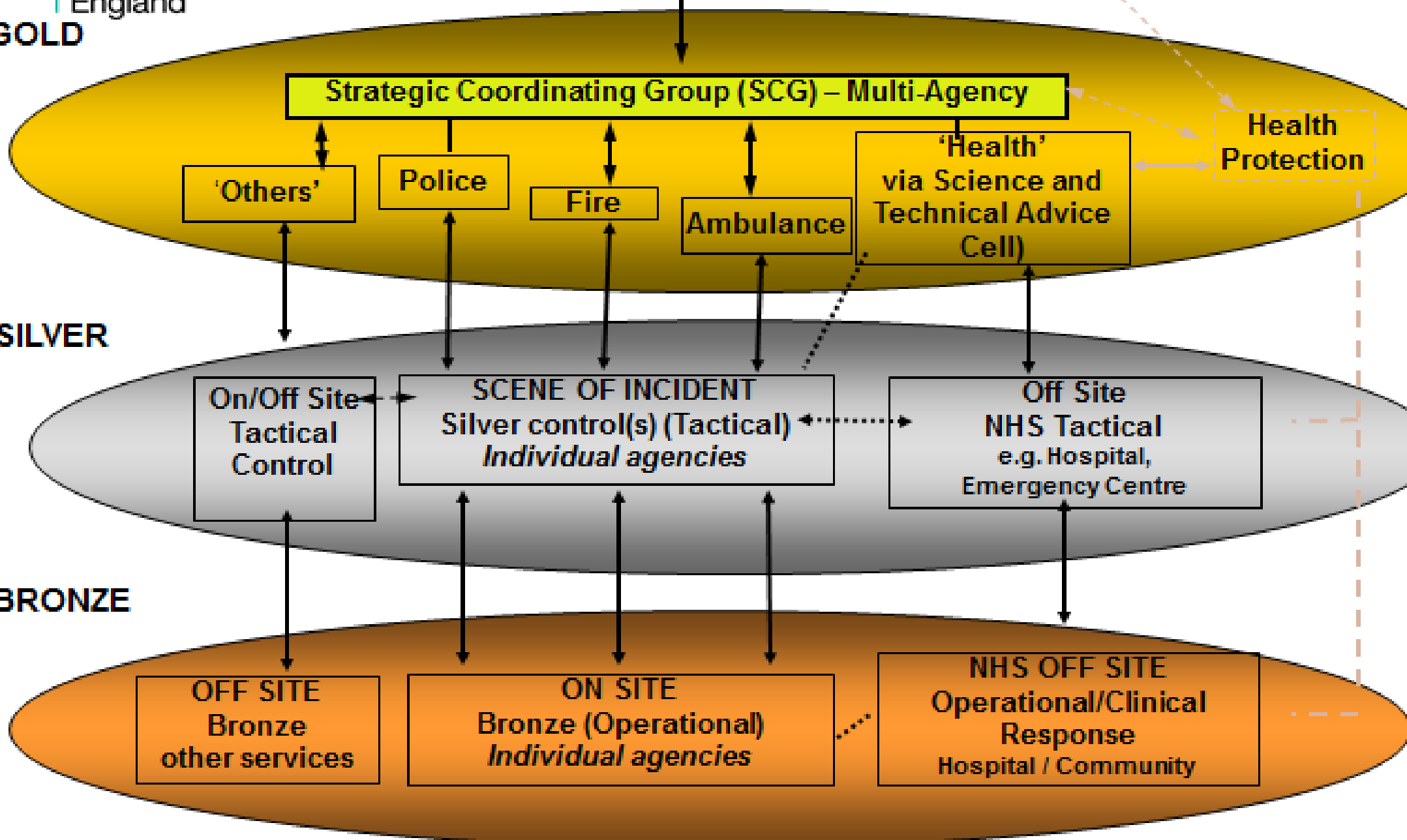
ON SITE
Bronze (Operational)
Individual agencies

NHS OFF SITE
Operational/Clinical
Response
Hospital / Community

GOLD

SILVER

BRONZE





National Risk Register 2013

Risk matrix

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211867/NationalRiskRegister2013_amended.pdf

Figure 1: Risks of terrorist and other malicious attacks

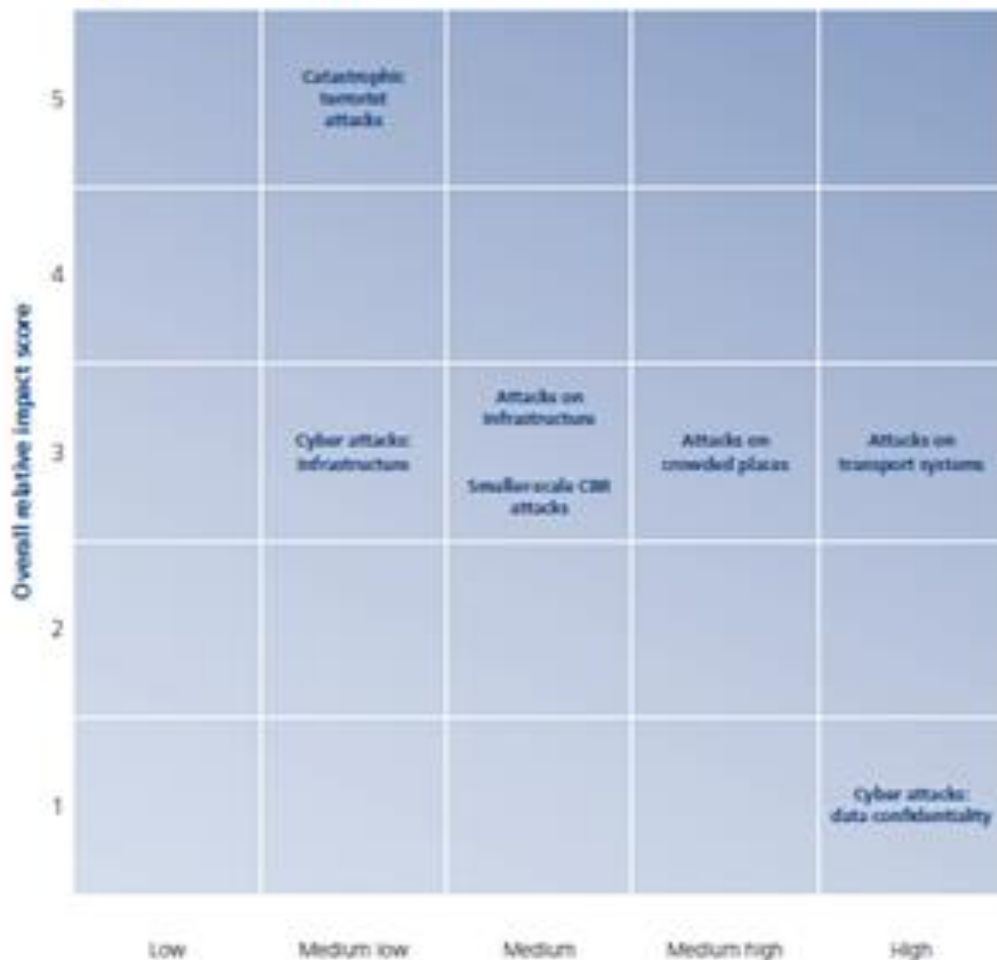
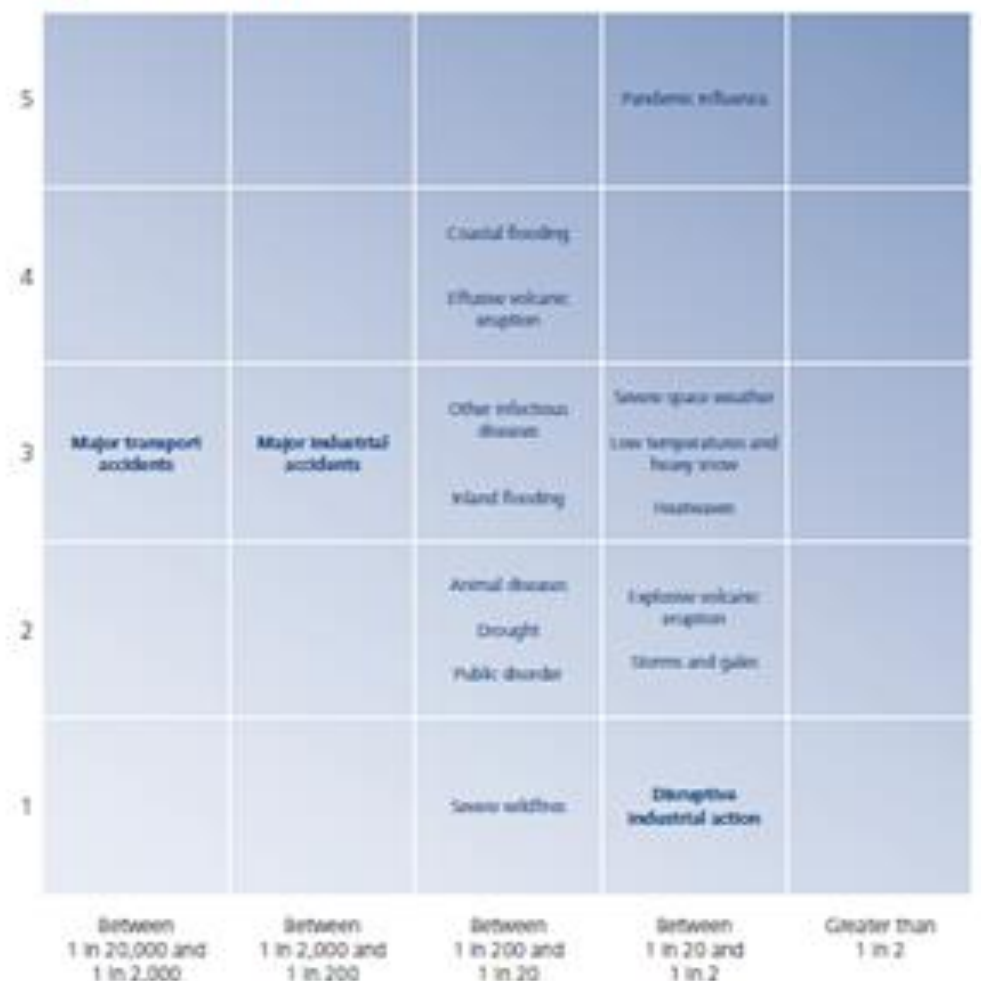


Figure 2: Other risks





Overall relative impact score

5
4
3
2
1

Major transport accidents

Major industrial accidents

Coastal flooding

Effusive volcanic eruption

Other infectious diseases

Inland flooding

Animal diseases

Drought

Public disorder

Severe wildfires

Pandemic influenza

Severe space weather

Low temperatures and heavy snow

Heatwaves

Explosive volcanic eruption

Storms and gales

Disruptive industrial action

Relative likelihood of occurring in the next five years





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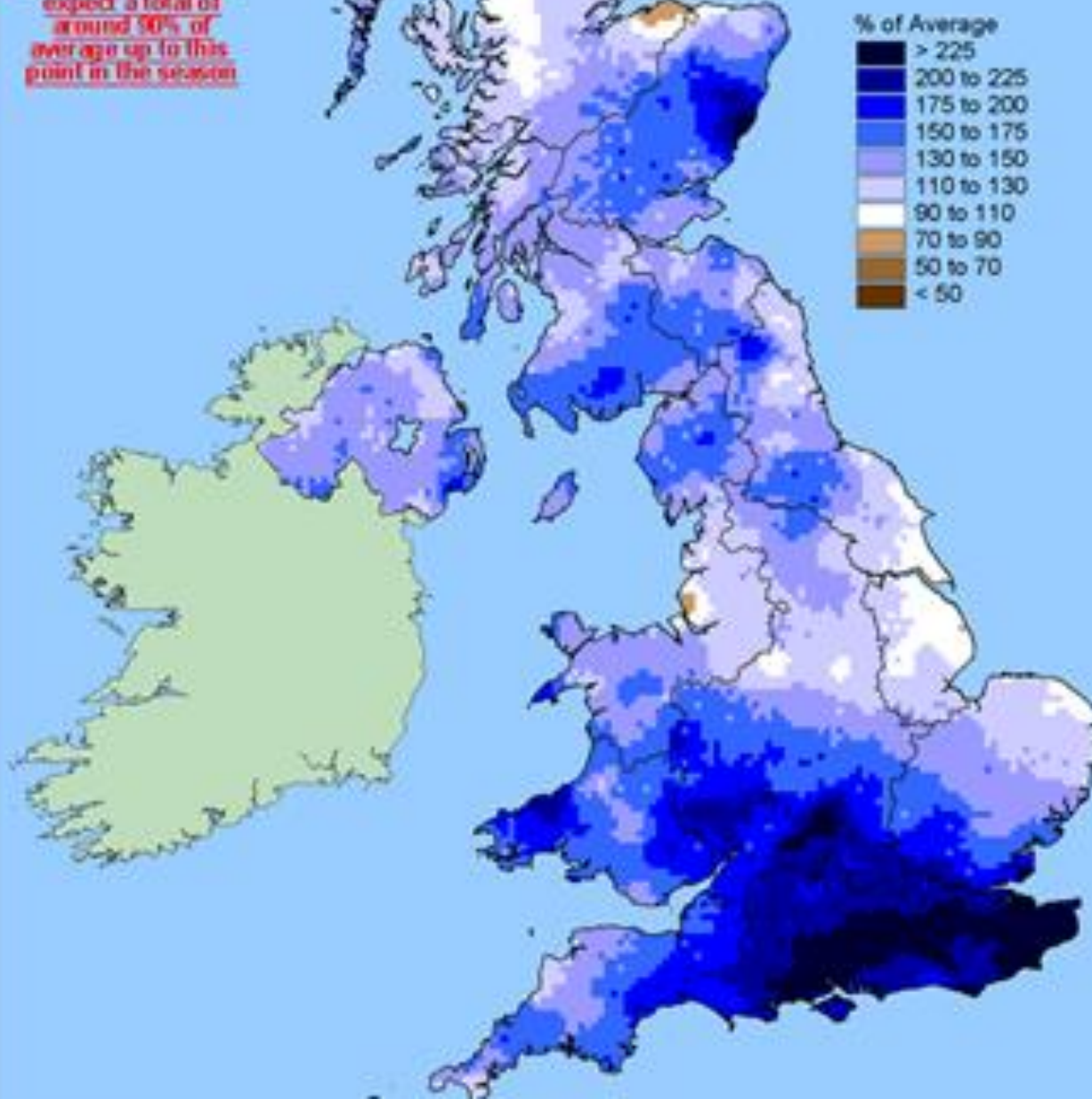
Rainfall percentage of average 1 Dec 2013 – 19 Feb 2014



1 Dec 2013 to 19 Feb 2014
Rainfall Amount
% of 1981-2010 Whole-Winter Average

Total compared to
the average for
the whole of winter

You would normally
expect a total of
around 90% of
average up to this
point in the season





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WHO Europe / Public Health England

Floods: Health effects
and prevention in the
WHO European
Region

May 2013

FLOODS IN THE WHO EUROPEAN REGION: HEALTH EFFECTS AND THEIR PREVENTION





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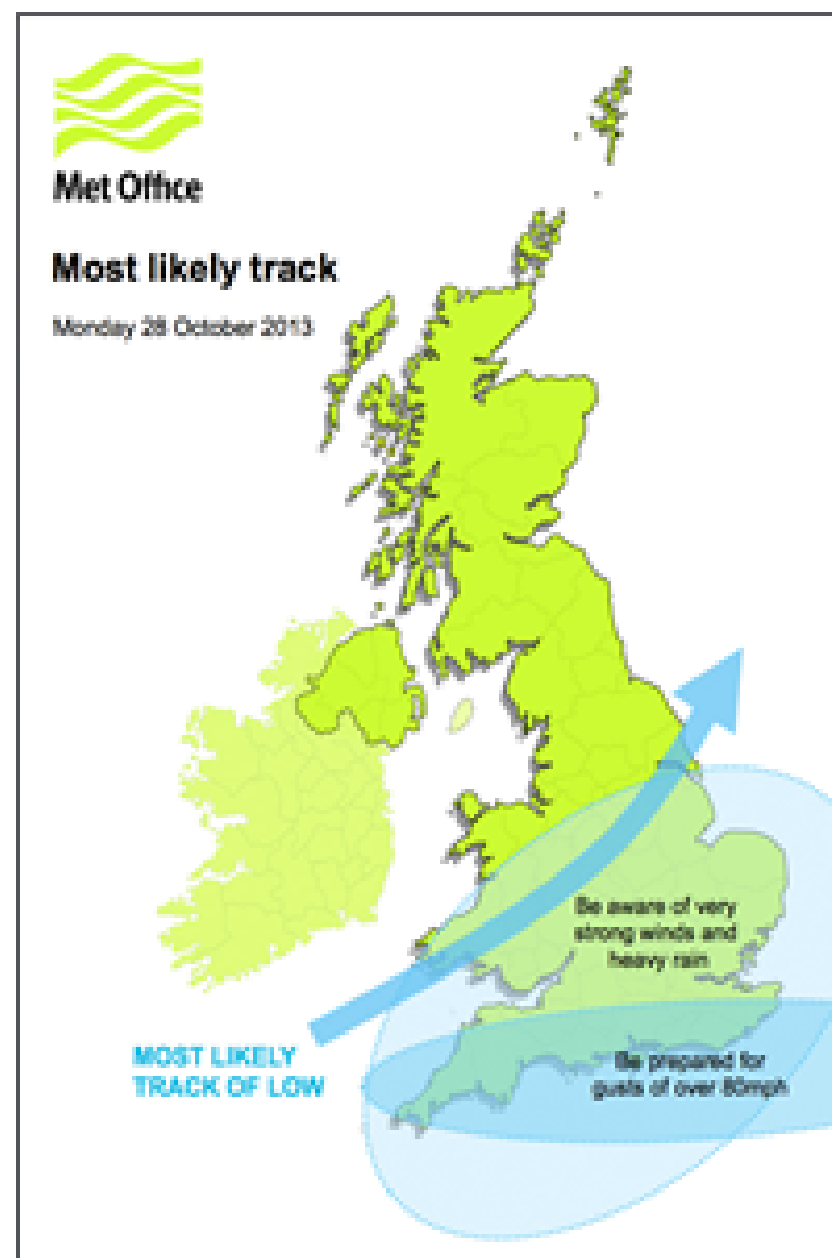
Windstorm "St Jude"

28 October 2013

- 6 day warning of windstorm
- Meteorological representation of storm location and intensity
- Wind gusts $>$ 80mph.

Actions

- Multi-agency cross-governmental response
- Cabinet Office press releases warning public of dangers
- Data: PHE surveillance, NHP, Met Office, DECC





ELSEVIER

Available online at www.sciencedirect.com

Public Health

journal homepage: www.elsevier.com/puhe



Review Paper

The health impacts of windstorms: a systematic literature review



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ABSTRACT

Introduction: This systematic literature review aims to identify documented impacts that windstorms have on human health. Windstorms occur frequently and some researchers have predicted an increase in severe gales in the future, resulting in an urgent need to understand the related patterns of morbidity and mortality.

Study design: Systematic literature review.

Methods: A systematic literature review of international evidence on the impacts of



Windstorm Health Impacts

Timeline

Health
risks:

PRE-STORM

Accidents and falls whilst securing roofs, windows and antennae

STORM

- Building collapse
- Flying debris
- Being blown into a stationary object, moving vehicle or a body of water
- Road traffic accidents
- Ocular injuries

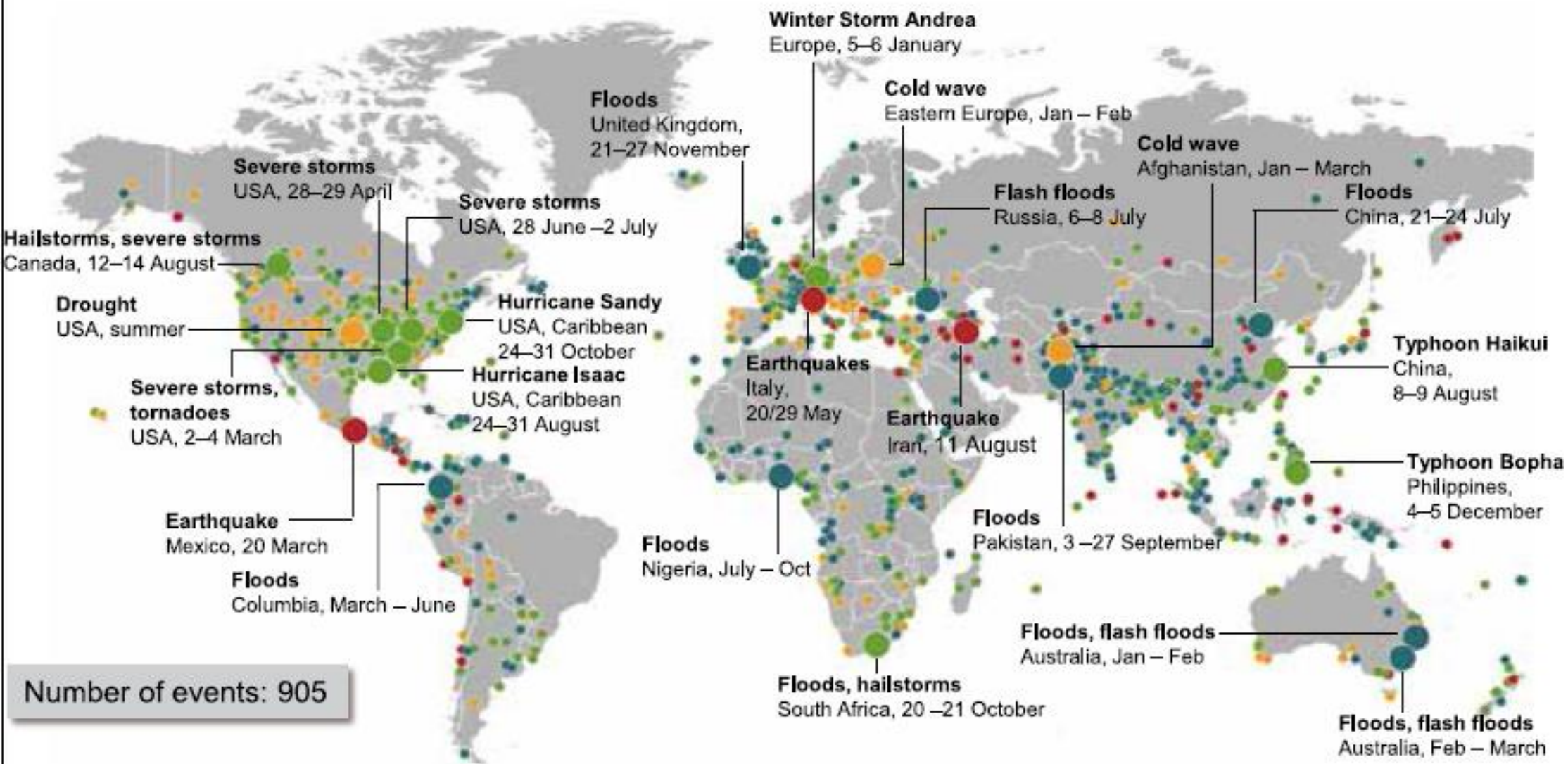
POST-STORM

- Electrocutation, burns
- Carbon Monoxide poisoning
- Accidents during clean-up (chainsaws, bonfires, etc.)
- Accidents and falls whilst repairing building damage
- Crowding and poor sanitation (if evacuation has occurred)

PSYCHOLOGICAL IMPACTS including anxiety, stress, bereavement and mental health disorders

Natural Catastrophes 2012

World map



Number of events: 905

- Natural catastrophes
- Selection of significant Natural catastrophes
- Geophysical events (earthquake, tsunami, volcanic activity)
- Meteorological events (storm)
- Hydrological events (flood, mass movement)
- Climatological events (extreme temperature, drought, wildfire)

You are here: [Home](#) » Resources following Typhoon Haiyan in the Philippines

Resources following Typhoon Haiyan in the Philippines

[ADMIN](#) • [NOVEMBER 13, 2013](#) • [EARTHQUAKES](#), [FLOOD](#), [LATEST](#)

Following the devastation caused by Typhoon Haiyan in the Philippines, Evidence Aid is working with colleagues in the disaster community to compile evidence-based resources that might help. These will be kept refreshed as information is gathered through an ongoing needs assessment.

Evidence Aid Special Collections: TheCochraneLibrary.com

The following four systematic reviews discuss the health impacts of windstorms and flooding, and ways to reduce these impacts. Short summaries of these are available [here](#).

Health impacts of windstorms: [Public Health 2013](#)

Flooding and mental health: [PLoS Currents Disasters 2012 May 30](#) / [PDF of article](#)

Infectious diseases and flooding: [Disaster Health 2013;1\(2\):1-11](#) / [PDF of article](#)

Secondary stressors and extreme events and disasters: [PLoS Currents Disasters 2012 Oct 29](#) / [PDF of article](#)

Cochrane



COCHRANE SUMMARIES

Independent high-quality evidence for health care decision making



RESÚMENES COCHRANE

Evidencia científica independiente de alta calidad para la toma de decisiones en atención sanitaria



RESUMOS COCHRANE

Evidência independente de alta qualidade para a tomada de decisão em saúde



COCHRANE SAŽETCI

Neovisni dokazi visoke kvalitete za odlučivanje u zdravstvu



COCHRANE SUMMARIES

Des données indépendantes de haute qualité pour la prise de décision en santé

The following four systematic reviews discuss the health impacts of windstorms and flooding, and ways to reduce these impacts. Short summaries of these are available [here](#).

Health impacts of windstorms: [Public Health 2013](#)

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Infectious diseases and flooding: [Disaster Health 2013;1\(2\):1-11](#) / [PDF of article](#)

Secondary stressors and extreme events and disasters: [PLoS Currents Disasters 2012 Oct 29](#) / [PDF of article](#)

Disaster evacuation and medication: [PDF of poster](#)

Power outages and extreme events and health: [PLoS Currents Disasters 2014 Jan 02](#) / [PDF of article](#)

Disaster risk management for health: [Fact sheets](#)

Disaster needs assessment: [MIRA Approach: Process, Methodologies and Tools](#)

Website for the Philippines response: philippines.humanitarianresponse.info

[Download bundle of the PDFs](#)

Photo: Caritas/ CAFOD, November 2013



[HAIYAN, PHILIPPINES, TYPHOON, TYPHOON HAIYAN, YOLANDA](#)

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COCHRANE SAŽETCI

Neovisni dokazi visoke kvalitete za odlučivanje u zdravstvu



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 **Evidence Aid** @EvidenceAid 5 Aug
Need systematic reviews for up-to-date evidence on interventions in the context of #disasters? #EvidenceAid bit.ly/1zQSSqJ
Expand

 **ODI** @odi_development 5 Aug
#Humanitarian #leadership Paul Knox Clarke of @alnap takes part in our discussion youtube.com/watch?v=Oqt34 #GlobalDev



International Strategy for Disaster Reduction

HFA



Hyogo Framework for Action 2005 - 2015: Building the Resilience of Nations and Communities to Disasters

<http://www.unisdr.org/eng/hfa/docs/HFA-brochure-English.pdf>

Hyogo Framework for Action 2005-2015

Building the resilience of nations and Communities to Disasters

1. Governance: organizational, legal and policy frameworks - **Make Disaster Risk Reduction a Priority;**
2. Risk identification, assessment, monitoring and early warning - **Know the Risks and Take Action;**
3. Knowledge management and education - **Build Understanding and Awareness;**
4. Reducing underlying risk factors - **Reduce Risk;**
5. Preparedness for effective response and recovery - **Be Prepared and Ready to Act**



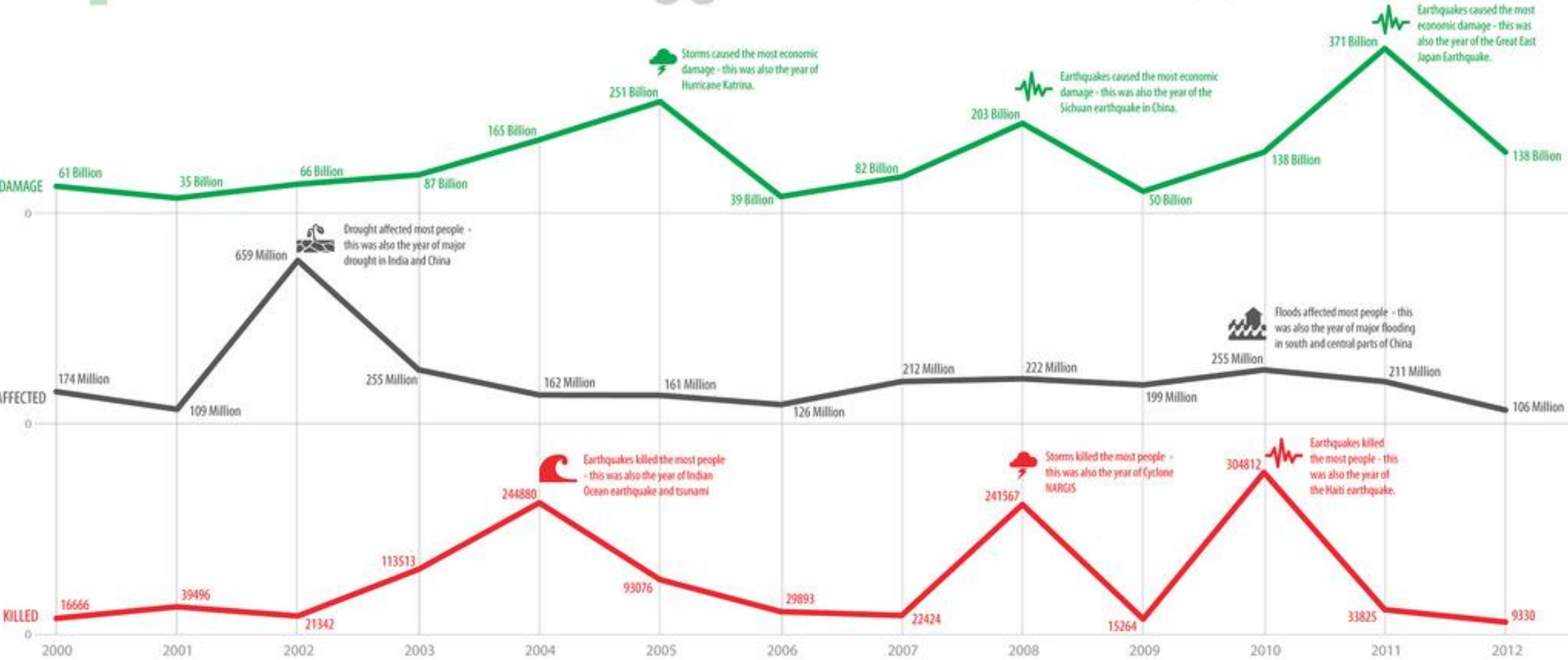
DISASTER IMPACTS / 2000-2012

*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>

\$1.7 TRILLION
DAMAGE (USD)

2.9 BILLION
AFFECTED

1.2 MILLION
KILLED



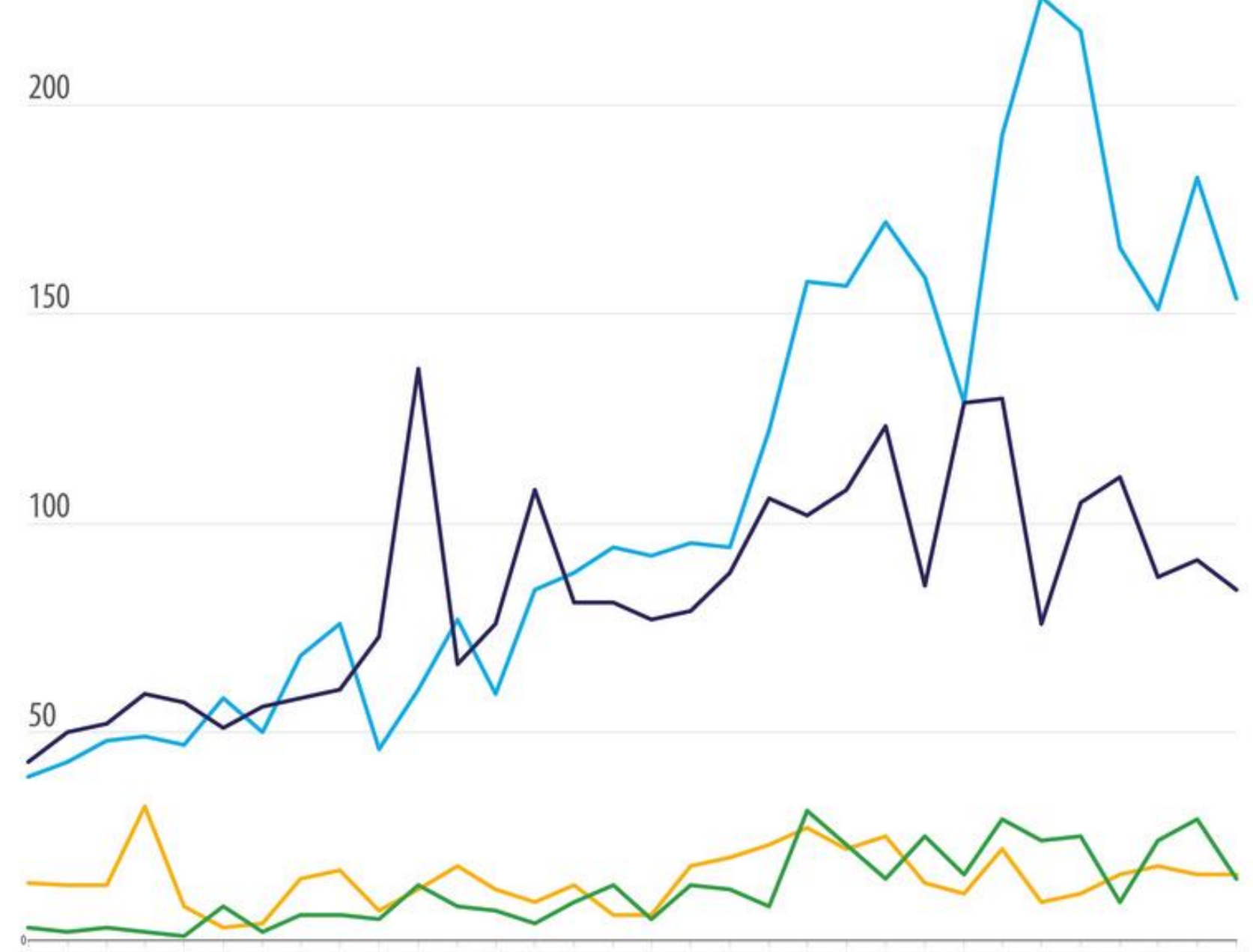
Number of Climate-related Disasters Around the World (1980-2011)

 **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>

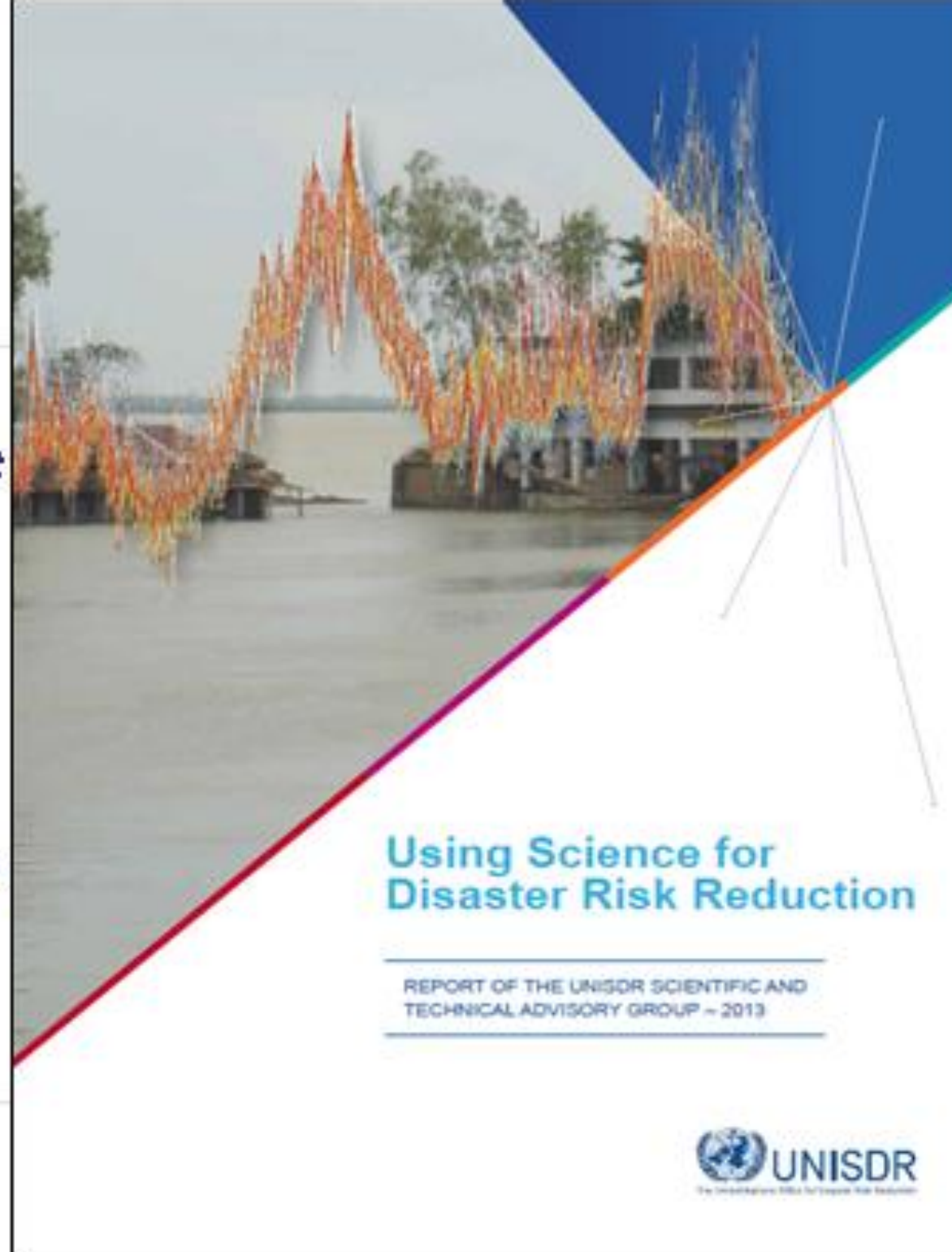
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
FLOOD	39	43	48	49	47	58	50	68	76	46	60	77	59	84	88	94	92	95	94	122	158	157	172	159	129	193	226	218	166	151	183	154
STORM	43	50	52	59	57	51	56	58	60	73	137	66	76	108	81	81	77	79	88	106	102	108	123	85	129	130	76	105	111	87	91	84
DROUGHT	14	13	13	32	8	3	4	15	17	7	12	18	12	9	13	6	6	18	20	23	27	22	25	14	11	22	9	11	16	18	16	16
EXTREME TEMPERATURE	3	2	3	2	1	8	2	6	6	5	13	8	7	4	9	13	5	13	12	8	31	23	15	25	16	29	24	25	9	24	29	15



**Report of the
UNISDR Scientific
and Technical
Advisory Group
2013**

**Using Science for
Disaster Risk
Reduction**

<http://www.unisdr.org/files/32609stagreport2013assembled.pdf>



**Using Science for
Disaster Risk Reduction**

REPORT OF THE UNISDR SCIENTIFIC AND
TECHNICAL ADVISORY GROUP – 2013



Case Studies: Objectives

- *The disaster risk reduction problem*
 - *The science*
 - *Application to policy and practice*
 - *Did it make a difference?*
- .
-

CASE STUDY 1:

Tsunami Warning and Mitigation for the Indian Ocean Region



Image 1: The 11th March 2011, Tohoku tsunami striking the eastern coast of Japan.
Source: News.com.au/photoblog.com

The Problem

On 26th December 2004, the Indian Ocean was struck by a massive earthquake and tsunami which killed 230,000 people and caused widespread destruction¹. Although we cannot prevent tsunamis, early warning of their approach combined with physical defences and well-practiced evacuation procedures can save many lives.

Prior to 2004, tsunamis were not considered a high-risk hazard, certainly not outside the Pacific Ocean. Tsunami science was a niche scientific field, with little translation of knowledge into practice, even though scientists published work on a possible ocean-wide tsunami in the Indian Ocean just months before the 2004 event². This combined with rapid population growth of coastal communities in the region set the scene for catastrophic consequences for the Indian Ocean rim in 2004.

The science

The early 1960s saw the development and acceptance of plate tectonic theory, wherein earthquakes and volcanoes were first recognised to be the direct manifestation of the forces that create oceans and build continents³. The first global seismographic network was established in 1961⁴, allowing earthquakes to be monitored worldwide.

By the 2000s, great advances had been made in earth observations, computer modelling of hazards and telecommunications. Electronic sensors were developed that could rapidly detect earthquake shaking on land and tsunami waves at sea. For instance, the United States National Oceanic and Atmospheric Administration (NOAA) developed the Deep-Ocean Assessment and Reporting of Tsunamis system, known as DART II, in which a

sensor on the ocean floor detects tsunami waves and communicates these to a surface buoy with satellite telecommunications capability⁵ (Figure 1).

Computer models were developed that simulate tsunami impacts on communities⁶; and satellites could now transmit signals to high-speed computers, empowering humans to issue local and pan-oceanic tsunami warnings in minutes⁷.

The application to policy and practice

In less than three months following the devastating Indian Ocean tsunami, scientists worked together with policymakers to form an international commitment to develop an Indian Ocean Tsunami Warning & Mitigation System (IOTWS). The IOTWS is now fully operational, comprising a set of Regional Tsunami Service Providers (India, Australia, and Indonesia) issuing tsunami advisories to all National Tsunami Warning Centres of the Indian Ocean rim countries⁸. The IOTWS also developed the first international guidelines for tsunami hazard and risk assessment⁹.

The most heavily affected nations of Indonesia, Sri Lanka and India developed new disaster management policy frameworks, governance structures and national disaster management plans to address tsunami and other natural disaster risks. For instance, the Indonesian Government developed the Presidential Tsunami Master Plan for Reducing Tsunami Risk¹⁰, which is underpinned by national-scale tsunami hazard mapping to establish tsunami shelters and strengthen warning systems for at risk coastal communities.

Did it make a difference?

The IOTWS now provides warnings to all Indian Ocean country members, reaching millions of people who had no warnings in 2004. Furthermore, tsunami hazard mapping and evacuation planning has been carried out for hundreds of coastal communities.

Gaps in tsunami preparedness were demonstrated during the 12 April 2012 magnitude 8.5 earthquake offshore of northern Sumatra, Indonesia. Although no tsunami eventuated, due to the large magnitude and location, a tsunami warning was issued in several countries. In Banda Aceh, where most of the tsunami-related deaths occurred in 2004, over 76% of the population started to evacuate soon after the earthquake¹¹. Despite this, traffic jams slowed the evacuation considerably¹², demonstrating that challenges still remain in getting dense populations to safety within very short warning timeframes.

Meanwhile, the 2011 Tohoku tsunami severely tested Japan's highly advanced warning system, seawalls and evacuation plans (Image 1). Typically 18,000 people lost their lives¹³, leaving 4% of the population located in the inundation area. In comparison, the 2004 Indian Ocean Tsunami resulted in over 20% fatalities in the inundation area¹⁴. While any fatalities are shocking, it is clear that the application of science and technology can save lives.

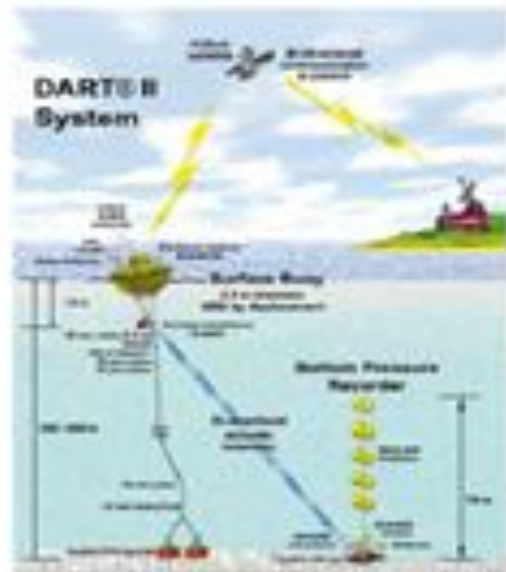


Figure 1: Overview of the DART II System for tsunami detection.
Source: National Oceanic and Atmospheric Administration¹⁵

¹ UNESCO, 2005, World's 10 Worst Disasters in History: Tsunami strikes South America, causes deaths of the world's deadliest region. <http://www.unesco.org/new/en/education-and-communication/10-worst-disasters-in-history/>

² Cheng, J., 2001. An overlooked tsunami risk in the Indian Ocean. *Journal of Earth System Science*, 112, 731-734.

³ International Geophysical Year, 1962. *The Earth's Interior*. New York: John Wiley & Sons.

³ Slonewitz, 2002. *Plate Tectonics: A History of Earth's Crust*. New York: W. H. Freeman & Co.

⁴ Slonewitz, 2002. *Plate Tectonics: A History of Earth's Crust*. New York: W. H. Freeman & Co.

⁵ Slonewitz, 2002. *Plate Tectonics: A History of Earth's Crust*. New York: W. H. Freeman & Co.

⁶ Slonewitz, 2002. *Plate Tectonics: A History of Earth's Crust*. New York: W. H. Freeman & Co.

⁷ Slonewitz, 2002. *Plate Tectonics: A History of Earth's Crust*. New York: W. H. Freeman & Co.

⁸ Slonewitz, 2002. *Plate Tectonics: A History of Earth's Crust*. New York: W. H. Freeman & Co.

⁹ Slonewitz, 2002. *Plate Tectonics: A History of Earth's Crust*. New York: W. H. Freeman & Co.

¹⁰ Slonewitz, 2002. *Plate Tectonics: A History of Earth's Crust*. New York: W. H. Freeman & Co.

¹¹ Slonewitz, 2002. *Plate Tectonics: A History of Earth's Crust*. New York: W. H. Freeman & Co.

¹² Slonewitz, 2002. *Plate Tectonics: A History of Earth's Crust*. New York: W. H. Freeman & Co.

¹³ Slonewitz, 2002. *Plate Tectonics: A History of Earth's Crust*. New York: W. H. Freeman & Co.

¹⁴ Slonewitz, 2002. *Plate Tectonics: A History of Earth's Crust*. New York: W. H. Freeman & Co.



Image 2: A child receives a rubella vaccination.
Source: Wellcome Images.

CASE STUDY 7:

Preventing Congenital Rubella Syndrome: Health disaster risk reduction through Rubella vaccination

The problem

When a woman contracts the disease rubella (or German measles) in early pregnancy, her unborn baby also becomes infected. While the woman may experience only a mild illness, the unborn baby will suffer major birth defects such as deafness, blindness, heart defects, and blood disorders. Severe learning disabilities can also occur; these may worsen throughout life and may also be associated with deformities of the skull (such as a small head size, as seen in Image 1). In some cases the unborn baby will die from the infection^{1,2}.

Rubella is an infectious disease caused by a virus. It spreads from person to person through sneezing and coughing. Outbreaks of rubella are public health disasters: in the 1950s a rubella epidemic swept through the world in the United States alone, approximately

11,000 babies died and 20,000 babies were born with birth defects^{3,4}.

The science

In the first half of the twentieth century, the link between rubella and birth defects was not known. At that time, the fact that intrauterine infections could cause fetal damage, birth defects and fetal loss was largely unrecognised. Rubella was a fairly common infectious disease, mostly occurring in children but also in adults, including pregnant women.

In 1941, an Australian eye doctor called Norman Gregg was treating babies born with eye problems. He noticed that there were many more such infants that year than in the preceding years. One day he overheard two mothers talking about how they had both suffered from rubella when pregnant⁵. This led him to review the medical records of many mothers and babies. He connected the increased numbers of such damaged infants he had observed to a large epidemic of rubella which had recently occurred⁶.

Gregg went on to show that rubella in early pregnancy could be linked to many serious birth defects in children⁷.

This was a new discovery and, at first, even the possibility that such an apparently trivial illness could be so destructive was dismissed by some influential medical voices. It took some time - and further proof from scientists in other parts of the world - before doctors and policy-makers were convinced Gregg's findings were correct. The birth defects seen in babies infected with rubella while in the womb were later named Congenital Rubella Syndrome (CRS).

The application to policy and practice

A vaccination to prevent rubella first became available in 1969. The world now had a way of preventing the harm caused by rubella infection.

Since that time, increasing numbers of countries around the world have introduced the vaccine into their national immunisation policies. This is mostly done by vaccinating all the children in a population when they are still young (Image 2).

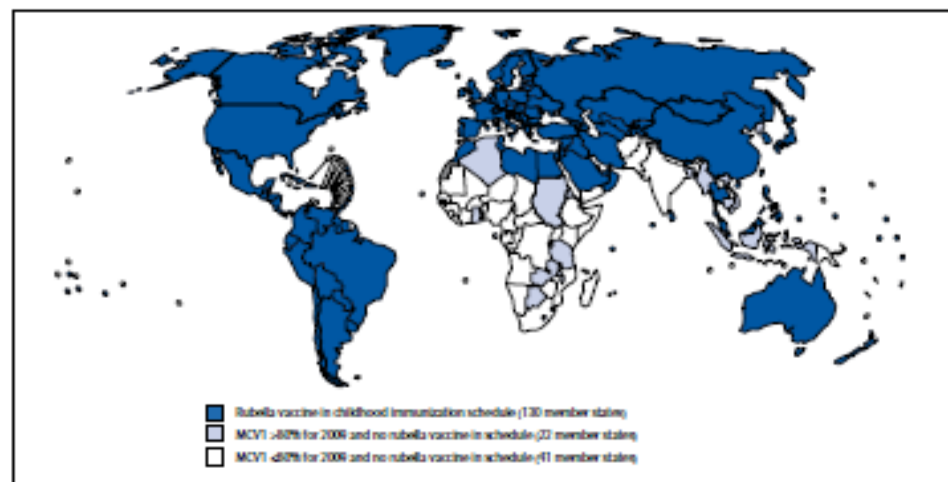


Figure 1: Countries using rubella vaccine and countries meeting WHO criteria for rubella vaccine introduction, 2009. Source: CDC, 2010⁸.

Following good progress in rubella immunisation in the 1990s, the Pan-American Health Organization (PAHO) resolved in 2003 to eliminate rubella and CRS from the region by 2010⁹.

Did it make a difference?

The number of World Health Organization (WHO) Member States using rubella-containing vaccine in their national immunisation programmes is continuing to grow, increasing from 83 of the 190 Member States (44%) in 1996 to 130 of 194 (67%) in 2009¹⁰ (Figure 1).

Rubella has been eliminated in the WHO Region of the Americas¹¹; this means less than 1 case of CRS per 100,000 births. Their experiences have been turned into guidance to support elimination in other regions of the world. Lessons identified include: high-level commitment and partnerships are essential; link political commitment with technical strategies; use proven surveillance tools; recognise outstanding performance by individual countries; provide on-going training for surveillance staff¹².

The WHO Regional Office for Europe has now set a target for elimination of CRS in its Member States^{13, 14}.

Gregg's scientific work has saved countless lives and prevented much disability, family tragedy and economic loss around the world. However, CRS still affects an estimated 110,000 infants in developing countries each year^{15, 16}, meaning the full benefits of his work are yet to be realised.



Image 1: A newborn baby with 'microcephaly' or small head size. Source: mastersinhealthcare.net.

1 US Centers for Disease Control and Prevention (CDC). Rubella: Make Sure Your Child Gets Vaccinated. <http://www.cdc.gov/rubella/rubella/> (accessed 4 April 2013).

2 CDC. Progress Toward Control of Rubella and Prevention of Congenital Rubella Syndrome - Worldwide, 2009. *Morbidity and Mortality Weekly Report*. 2010; 59(40): 1307-1310.

3 US Centers for Disease Control and Prevention (CDC). Rubella: Make Sure Your Child Gets Vaccinated. <http://www.cdc.gov/rubella/rubella/> (accessed 4 April 2013).

4 Witte JJ, Hutchinson AW. Epidemiology of rubella. *American Journal of Diseases of Children*. 1959; 119:107-12.

5 De Quadros CA, Viscoria. Preventing Disease and Protecting Health. Geneva: World Health Organization, 2004, pp.53.

6 Gregg NM. Congenital Contract following German Measles in the Mother. *Transactions of the Ophthalmological Society of Australia*. 1941; 3:35-46.

7 Gregg NM. Further observations on congenital defects in infants following maternal rubella. *Transactions of the Ophthalmological Society of Australia*. 1944; 4: 119-121.

8 Parago MR. Elimination of Rubella and Congenital Rubella Syndrome: We Did It Together! *The Journal of Infectious Diseases*. 2011; 204 (Suppl 2): 1.

9 CDC. Progress Toward Control of Rubella and Prevention of Congenital Rubella Syndrome - Worldwide, 2009. *Morbidity and Mortality Weekly Report*. 2010; 59(40): 1307-1310.

10 Simonsen L, Grijalva-Cabrera M, Seward JF, Cochi SL. Global Use of Rubella Vaccines, 1980-2009. *The Journal of Infectious Diseases*. 2011; 204:9579-9584.

11 Parago MR. Elimination of Rubella and Congenital Rubella Syndrome: We Did It Together! *The Journal of Infectious Diseases*. 2011; 204 (Suppl 2): 1.

12 Iona R, Morris-Gilgus V, Andrus JK, Castillo-Gonzalez C, Dobbin JG and the Caribbean Surveillance Group. Lessons Learned From Integrated Surveillance of Measles and Rubella in the Caribbean. *The Journal of Infectious Diseases*. 2011; 204:9620-9625.

13 CDC. Progress Toward Control of Rubella and Prevention of Congenital Rubella Syndrome - Worldwide, 2009. *Morbidity and Mortality Weekly Report*. 2010; 59(40): 1307-1310.

14 British Paediatric Surveillance Unit. 23rd Annual Report 2008-2009. London: Royal College of Paediatrics and Child Health, 2009.

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Recommendations

- 1. Encourage science to demonstrate that it can inform policy and practice*
- 2. Use a problem-solving approach to research that integrates all hazards and disciplines*
- 3. Promote knowledge into action*
- 4. Science should be key to the Post-2015 Hyogo Framework for Action*



Global Platform for Disaster Risk Reduction

Fourth session, Geneva, Switzerland
19-23 May 2013



Chair's Summary

**Fourth Session of the Global Platform for Disaster Risk Reduction
Geneva, 21-23 May 2013**

Resilient People, Resilient Planet

The biennial Fourth Session of the Platform was held in Geneva over 21-23 May 2013. Chaired by Switzerland, it brought together over 3,500 participants from 172 countries with representation from national and local governments, inter-governmental organizations, Red Cross and Red Crescent, non-government organizations, mayors and parliamentarians, representatives of local communities, indigenous peoples, children and youth, persons with disabilities, and leaders from business, academia and science. The session builds on regional platforms for disaster risk reduction convened in Africa, the Americas, Asia-Pacific, Arab States and Europe as well as many consultative and preparatory meetings convened by civil society, national and local governments and Red Cross and Red Crescent national societies.



Global Platform
for Disaster Risk Reduction
Fourth session, Geneva, Switzerland
19-23 May 2013



It is expected that the HFA2 will recognize the need to govern disaster risk reduction and resilience through clear responsibilities, strong coordination, enabled local action, appropriate financial instruments and **a clear recognition of a central role for science.**

and science. The session builds on regional platforms for disaster risk reduction convened in Africa, the Americas, Asia-Pacific, Arab States and Europe as well as many consultative and preparatory meetings convened by civil society, national and local governments and Red Cross and Red Crescent national societies.



2015 opportunities

2015 will be marked by three landmark agreements

- **a post-2015 framework for disaster risk reduction** (March 2015)
- **Sustainable development goals** (September 2015)
- **Climate change agreements** through the UNFCCC (December 2015)

Towards a post-2015 DRR Framework

- Requested by the UN General Assembly Resolution A/RES/66/199
- UNISDR is facilitating a multistakeholder consultation process and engages a full range of actors from Member States to civil society.
- Consultation events include the Global and Regional Platforms, national and local events, and targeted events of stakeholders, partners and networks.
- Builds on the *International Framework for the International Decade for Natural Disaster Reduction of 1989*, the *Yokohama Strategy and Plan of Action of 1994*, the *International Strategy for Disaster Reduction of 1999*, the *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters (HFA)*, and the *Mid-Term Review of the HFA (2010-2011)*.
- Expected to be adopted at the 3rd World Conference on Disaster Risk Reduction and endorsed by the UN General Assembly in 2015.

2013

2014

2015

Consultations started in March 2012 (with some 89 events up to the Global Platform) through 2013...

... and continues in 2014

MINISTERIAL CONFERENCES AND REGIONAL PLATFORMS ON DISASTER RISK REDUCTION

- Feb 13-15 : Africa (Arusha, Tanzania)
- Mar 19-21 : Arab States (Aqaba, Jordan)
- Sep 23-25 : Europe (Oslo, Norway)

MAY 19-23

Global Platform for Disaster Risk Reduction (Geneva, Switzerland)

SEP-NOV

UN Secretary-General's Report and UN General Assembly Resolution on the *International Strategy for Disaster Reduction*

MINISTERIAL CONFERENCES AND REGIONAL PLATFORMS ON DISASTER RISK REDUCTION

- Apr : Central Asia (Almaty, Kazakhstan)
- May 5-8 : Africa (Abuja, Nigeria)
- May 27-29 : Americas (Guayaquil, Ecuador)
- May/June : Arab States (Sharm El Sheikh, Egypt)
- Jun 2-4 : Pacific (Suva, Fiji)
- Jun 23-26 : Asia (Bangkok, Thailand)
- Jun/July : Europe (Brussels, Belgium / Ministerial Session)
- 6-8 Oct : Europe (Madrid, Spain / European Forum)

JUL 14-15

1st Preparatory Committee Meeting (Geneva, Switzerland)
Subject to an anticipated decision of the UN General Assembly in 2013

NOV 17-18

2nd Preparatory Committee Meeting (Geneva, Switzerland)
Subject to an anticipated decision of the UN General Assembly in 2013

SEP-NOV

UN Secretary-General's Report and UN General Assembly Resolution on the *International Strategy for Disaster Reduction*

MAR 14-18 / SENDAI, JAPAN

The 3rd World Conference on Disaster Risk Reduction will review the implementation of the Hyogo Framework for Action and is expected to adopt a successor framework for disaster risk reduction.

SEP-NOV

UN Secretary-General's Report and UN General Assembly Resolution on the *International Strategy for Disaster Reduction*. The UN General Assembly Session will also consider the post-2015 disaster risk reduction framework for endorsement.

Statement on establishing an international science advisory mechanism for disaster risk reduction to strengthen resilience

The imperative now

The role and value of scientific information in disaster risk reduction and resilience has long been recognised. However, it is vital that research becomes more directly actionable, coupled with more effective ways of providing evidence-based advice to support disaster policy and practice. Given the coalescence in 2015 of three major international instruments¹ under discussion, there needs to be an immediate step change in the use of science in these international efforts. In particular:

- We² call upon governments and other stakeholders engaged in preparations for the post 2015 international discussions on the successor to the Hyogo Framework for Action and the post 2015 Sustainable Development Goals to support the implementation of an Action Agenda for an international science advisory mechanism for disaster risk reduction to strengthen resilience.
- We invite scientists, scientific organisations, science networks and other entities around the world to share ideas and actions for advancing this Statement. Further details can be found here: <http://preventionweb.net>, <http://www.unisdr.org/partners/academia-research> and www.icsu.org

An Action Agenda

1. **Champion and reinforce existing and future programmes and initiatives for integrated research and the scientific assessment of disaster risk.** To strengthen the provision of actionable research, we particularly emphasise the importance of co-design, production and delivery of research with public, private and civil society stakeholders, engagement of scientists from across the world and that all the necessary natural, social and health sciences, engineering, and humanities disciplines needed are deployed to conduct research and to connect research, policy and practice on disaster risk reduction and resilience across sectors and scales.

An Action Agenda

- 1. Champion and reinforce existing and future programmes and initiatives for integrated research and the scientific assessment of disaster risk**
- 2. Establish an international science advisory mechanism for disaster risk reduction to strengthen resilience for the post 2015 agenda**



Statement on establishing an international science advisory mechanism for disaster risk reduction to strengthen resilience

- *producing periodic reports on current and future disaster risks and on the status of efforts to manage such risks at **global, regional, national and local scales.***





The IPCC Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation

Statement on establishing an international science advisory mechanism for disaster risk reduction to strengthen resilience

- *producing periodic reports on current and future disaster risks and on the status of efforts to manage such risks at **global, regional, national and local scales.***
- *monitoring progress toward internationally-agreed targets for reducing disaster losses and building resilience to disasters.*



Towards a post-2015 framework for Disaster Risk Reduction

BUILDING THE RESILIENCE OF
COMMUNITIES AND COUNTRIES

[Home](#)

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Proposed Elements of a Disaster Risk Reduction Secretary-General Report

The SRSG's 'Proposed Elements of a Secretary-General Report on Disaster Risk Reduction' was adopted by the General Assembly, as well as



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A post-2015 Framework for Disaster Risk Reduction: Draft guidance on monitoring progress

Statement on establishing an international science advisory mechanism for disaster risk reduction to strengthen resilience

- *producing periodic reports on current and future disaster risks and on the status of efforts to manage such risks at **global, regional, national and local scales.***
- *monitoring progress toward internationally-agreed targets for reducing disaster losses and building resilience to disasters.*
- *providing **guidance on terminology, methodologies and standards for risk assessments, risk modelling, taxonomies and the use of data.***





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The United Nations Office for Disaster Risk Reduction

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WHO WE ARE ▾

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WHAT WE DO

WE INFORM

TERMINOLOGY

Terminology



TERMINOLOGY ON DRR

UNISDR develop these basic definitions on disaster risk reduction to promote a common understanding on the subject for use by the public, authorities and practitioners.

The terms are based on a broad consideration of different international sources. Feedback from specialists and other practitioners to improve these definitions will be most welcome.

Statement on establishing an international science advisory mechanism for disaster risk reduction to strengthen resilience

- *convening stakeholders to identify and address demands for scientific research, information and evidence on disaster risk and resilience.*
- *enhancing the communication of complex scientific information and evidence to support the decision-making of policy makers and other stakeholders.*





UN World Conference on
Disaster Risk Reduction
2015 Sendai Japan



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The United Nations Office for Disaster Risk Reduction

5TH AFRICA REGIONAL PLATFORM AND 3RD MINISTERIAL MEETING FOR DISASTER RISK REDUCTION

• ABUJA (NIGERIA) • 13 – 16 MAY 2014 •

SUMMARY STATEMENT

AFRICA'S CONTRIBUTION TO THE POST-2015 FRAMEWORK FOR DISASTER RISK REDUCTION

[Translated in French wherein English text is the original version]

Over 900 participants from 44 countries¹ and partners gathered in Abuja, Nigeria, 13-16 May



Plataforma Regional para la Reducción del Riesgo de Desastres de las Américas

Invertir en RRD para proteger los avances del desarrollo

IV Sesión - Guayaquil, Ecuador del 27 al 29 de Mayo 2014



Secretaría de
Gestión de Riesgos



UNISDR

UNITED NATIONS INTERNATIONAL STRATEGY FOR DISASTER REDUCTION

Communiqué of Guayaquil, Ecuador

IV Session of the Regional Platform for Disaster Risk Reduction

Guayaquil, 29 May, 2014

1. We, participants at the Fourth Session of the Regional Platform for Disaster Risk Reduction in the Americas,¹ meeting in Guayaquil, Ecuador from 27 to 29 May 2014, thank the people and Government of the Republic of Ecuador, particularly the Risk Management Secretariat and the Ministry of Foreign Affairs and Human Mobility, for the hospitality and support provided for the successful carrying out of this Fourth Session of the Regional Platform:
2. Acknowledge the substantial contributions of the Hyogo Framework for Action (HFA) 2005-2015 to the formulation of strategies and policies for disaster risk management.² In order progress towards eradicating poverty, reducing inequality and achieving sustainable and inclusive development, it is necessary to assess progress and challenges in implementing disaster risk management policies at all territorial and

**The 6th Asian Ministerial Conference on Disaster Risk Reduction
Bangkok, Kingdom of Thailand 22 – 26 June 2014**



Bangkok Declaration on Disaster Risk Reduction in Asia and the Pacific 2014

We, the Ministers, and Heads of Delegation of the countries of Asia and the Pacific, attending the Sixth Asian Ministerial Conference on Disaster Risk Reduction (AMCDRR) in Bangkok, hosted by the Royal Thai Government, 22-26 June 2014;

Deeply concerned by the increasing impact and risk of disasters in the Asia-Pacific, including the super typhoon Haiyan in the Philippines; floods in Thailand, China and India; earthquakes in Pakistan; earthquake and tsunami in Indonesia and Japan, and an increasing number of medium and small scale disasters that resulted in huge social, economic and environmental losses in the region; and the adverse impacts of climate change which countries are already experiencing increased



UN World Conference on
Disaster Risk Reduction
2015 Sendai Japan

14-18 March 2015
Sendai, Japan

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Preparatory Process

PrepCom 1

• **Statements**

Consultations: post-2015 framework
for DRR

- Global Platform
- Regional Platforms & meetings

Government announcements and
voluntary commitments

Statements

The registration of Speakers and the submission of statements for the first session of the Preparatory Committee is open. More details at the bottom of the page.

See: [14 July 10h - 13h](#) | [14h - 18h](#) | [15 July 9h - 13h](#) | [15h - 18h](#)

Opening and closing statements

FINAL VERSION

**Joint UN Statement – 1st Preparatory Committee Meeting
(PREPCOM) for the Third UN World Conference on Disaster
Risk Reduction, 14-15 July 2014, Geneva**

PLEASE CHECK AGAINST DELIVERY

Excellencies, distinguished delegates, colleagues,

I am pleased to read this statement on behalf of the United Nations system, including the International Organization for Migration (IOM) and the World Bank that are working in support of regions, countries, and communities to reduce disaster risk and build resilience under the *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters* and the International Strategy for Disaster Reduction (ISDR).

Disasters devastate families, communities, and nations, and undermine development gains. They are a growing threat to people's lives and livelihoods. In the past decade, about 1.2 million human lives were lost, while economic losses are projected to rise to US\$400 billion annually.

Development cannot be sustained unless disaster risk reduction is fully integrated into risk-informed development planning and investments within and across sectors. A comprehensive approach to reducing the health, social, economic and environmental

FINAL VERSION

Joint UN Statement – 1st Preparatory Committee Meeting (PREPCOM) for the Third UN World Conference on Disaster Risk Reduction, 14-15 July 2014, Geneva

9. Strengthening science and research that informs disaster risk reduction policy and practice. In this regard, the UN system supports the proposed creation of an international science advisory mechanism to strengthen the evidence base for the implementation and monitoring of the new framework.

The Joint Statement by the UN System delivered at the First Preparatory Committee Meeting of the World Conference on Disaster Risk Reduction (WCDRR) was prepared under the aegis of the UN High Level Programmes Committee Senior Managers Group on Disaster Risk Reduction for Resilience (HLCP/SMG). The HLCP/SMG oversees the implementation of the *UN Plan of Action on Disaster Risk Reduction for Resilience*. Members are FAO, IAEA, IFAD, IFRC, ILO, IMO, IOM, ITU, UNAIDS, UNCCD, UNDP, UNEP, UNESCO, UNFPA, UNHABITAT, UNHCHR, UNICEF, UNISDR, UNOCHA, UNOPS, UNOOSA, UNWOMEN, UNWTO, UPU, WFP, WHO, WMO and the World Bank.



Public Health
England

Disaster Risk Reduction and the role of science

- Disasters are increasing in frequency
- Evidence based science is key to public health preparedness and response
- Opportunity for science to impact on policy and practice by establishing an international science advisory mechanism for disaster risk reduction to strengthen resilience



SEE YOU IN JAPAN IN 2015!



Global Platform
for Disaster Risk Reduction
Fourth session, Geneva, Switzerland
19-23 May 2013



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