

THE CLIMATE, DISASTERS, AND DEVELOPMENT NEXUS: THE CASE OF THE PHILIPPINES

Rodel D. Lasco

Sustainable Development Goals (2015)

GOAL 1 END POVERTY

GOAL 2 END HUNGER

GOAL 3 WELL-BEING

GOAL 4 QUALITY EDUCATION

GOAL 5 GENDER EQUALITY

GOAL 6 WATER AND SANITATION FOR ALL

GOAL 7 AFFORDABLE AND SUSTAINABLE ENERGY

GOAL 8 DECENT WORK FOR ALL

GOAL 9 TECHNOLOGY TO BENEFIT ALL

GOAL 10 REDUCE INEQUALITY

GOAL 11 SAFE CITIES AND COMMUNITIES

GOAL 12 RESPONSIBLE CONSUMPTION BY ALL

GOAL 13 STOP CLIMATE CHANGE

GOAL 14 PROTECT THE OCEAN

GOAL 15 TAKE CARE OF THE EARTH

GOAL 16 LIVE IN PEACE


GOAL 17 MECHANISMS AND PARTNERSHIPS TO REACH THE GOALS



The Paris Agreement



Global effort to keep temperature rise below 2°C

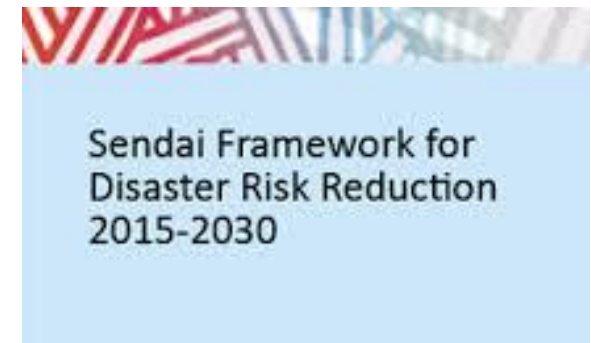
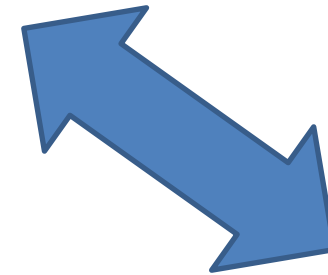
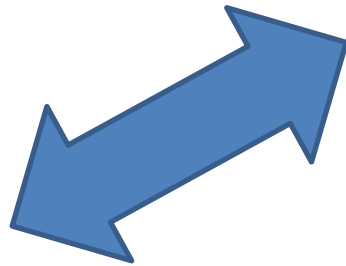


Sendai Framework for Disaster Risk Reduction 2015-2030



UN World Conference on
Disaster Risk Reduction
2015 Sendai Japan

Exploring the nexus...



SDGs and DRR

GOAL 11

Make cities and human settlements inclusive, safe, resilient and sustainable



Goal 11 Targets

- 11.5 By 2030, significantly **reduce the number of deaths** and the number of people affected and substantially **decrease the direct economic losses** relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations

Goal 11 Targets

- 11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, **resilience to disasters**, and develop and implement, in line with the **Sendai Framework** for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels

Total natural disasters, 1900-2015

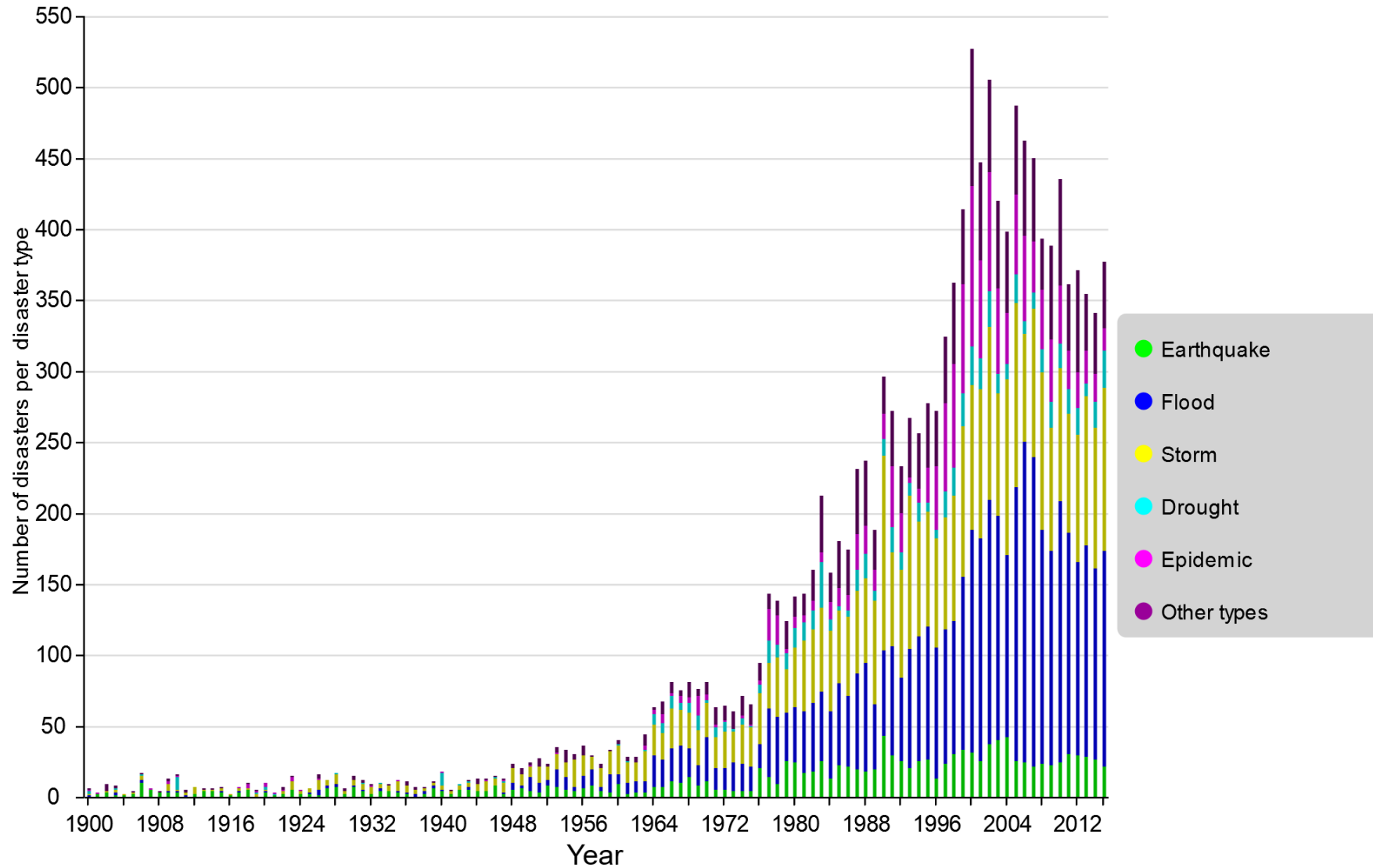
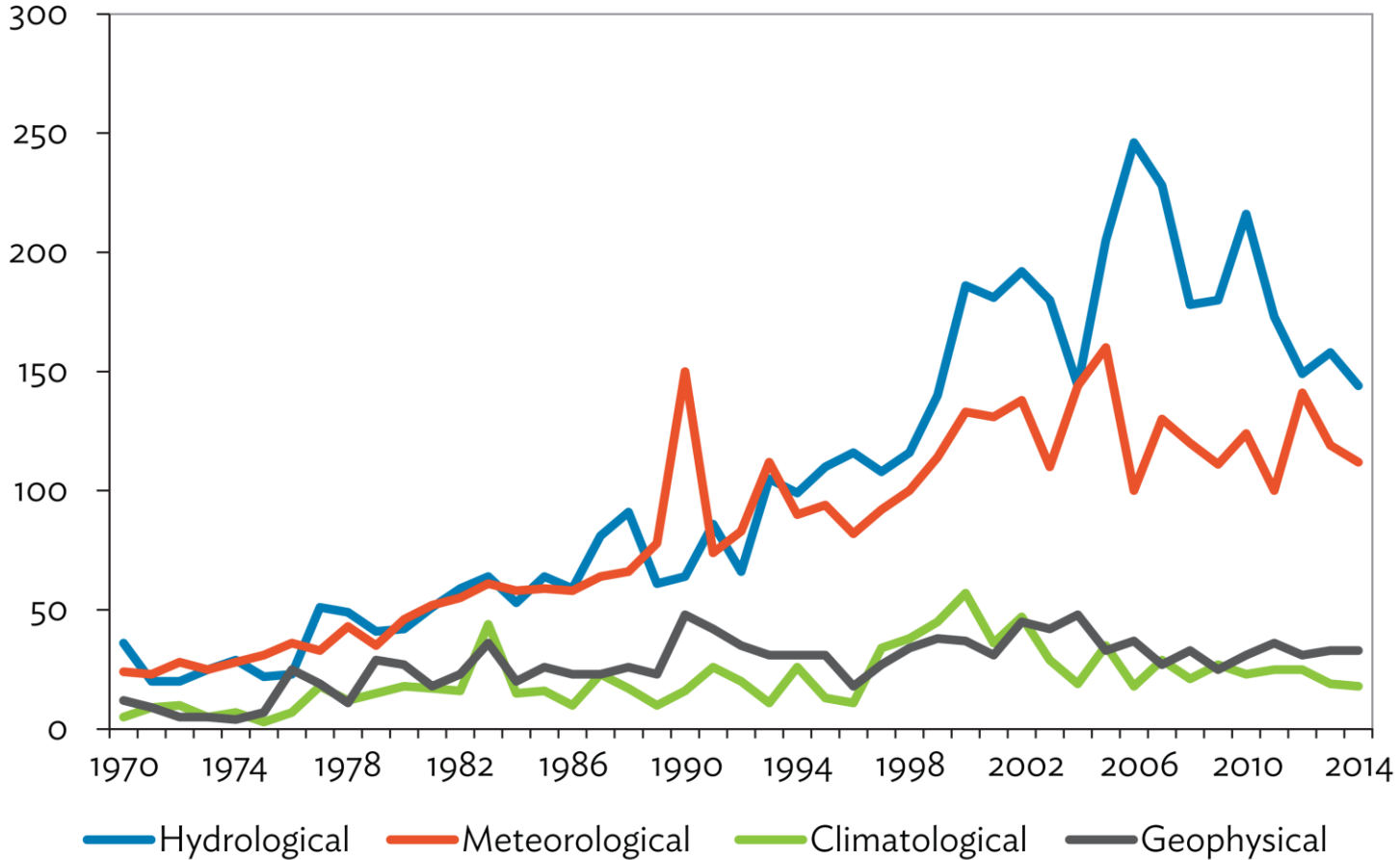


Figure 1: Global Frequency of Natural Disasters by Type (1970-2014)

Thomas and Lopez, 2015

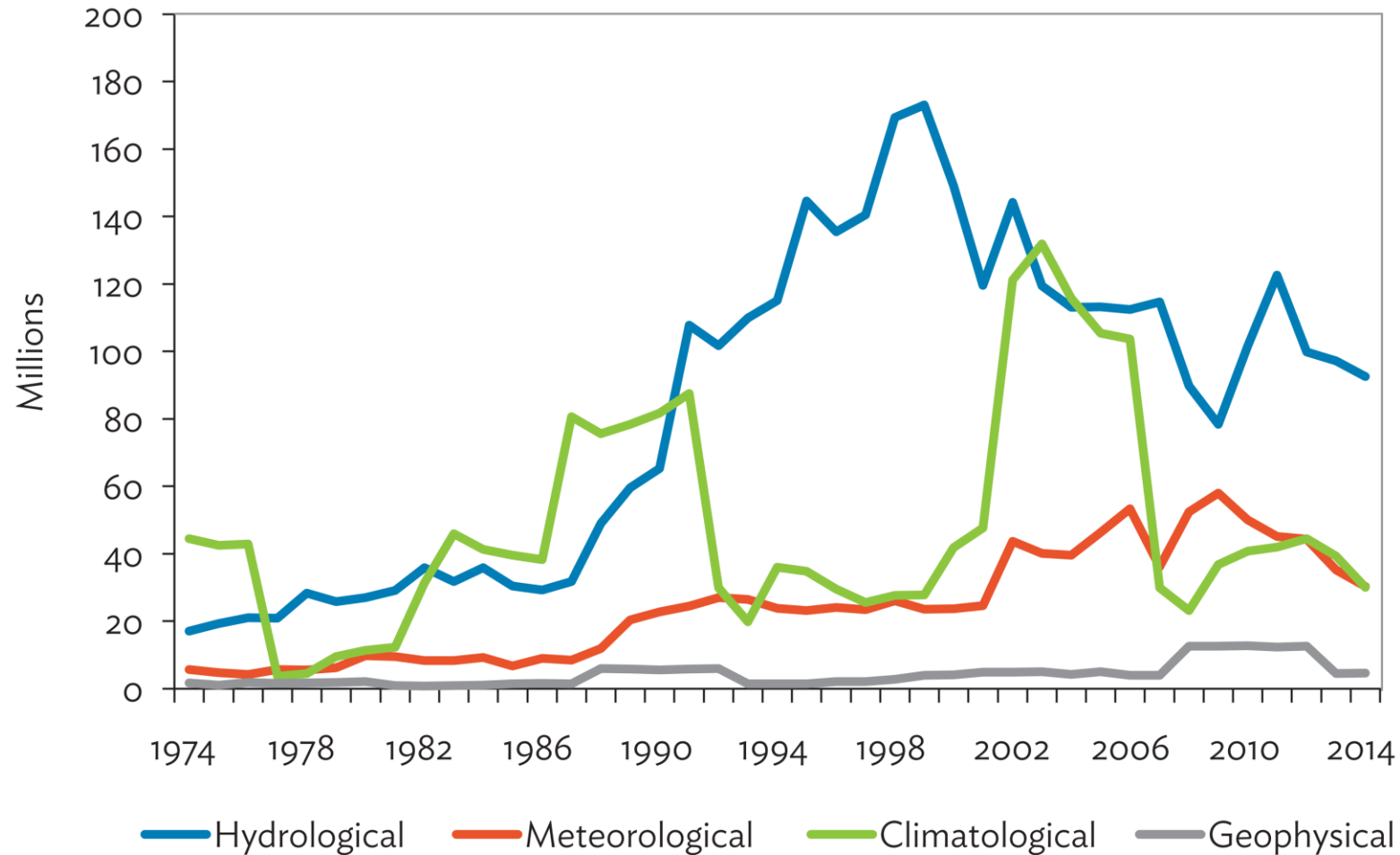


Source: Authors' estimates based on data from the Emergency Events Database (EM-DAT) of the Centre for Research on the Epidemiology of Disasters. <http://www.emdat.be> (accessed 5 March 2015).



Figure 2: People Affected by Natural Disasters: Global Trends (1970–2014)

Thomas and Lopez, 2015

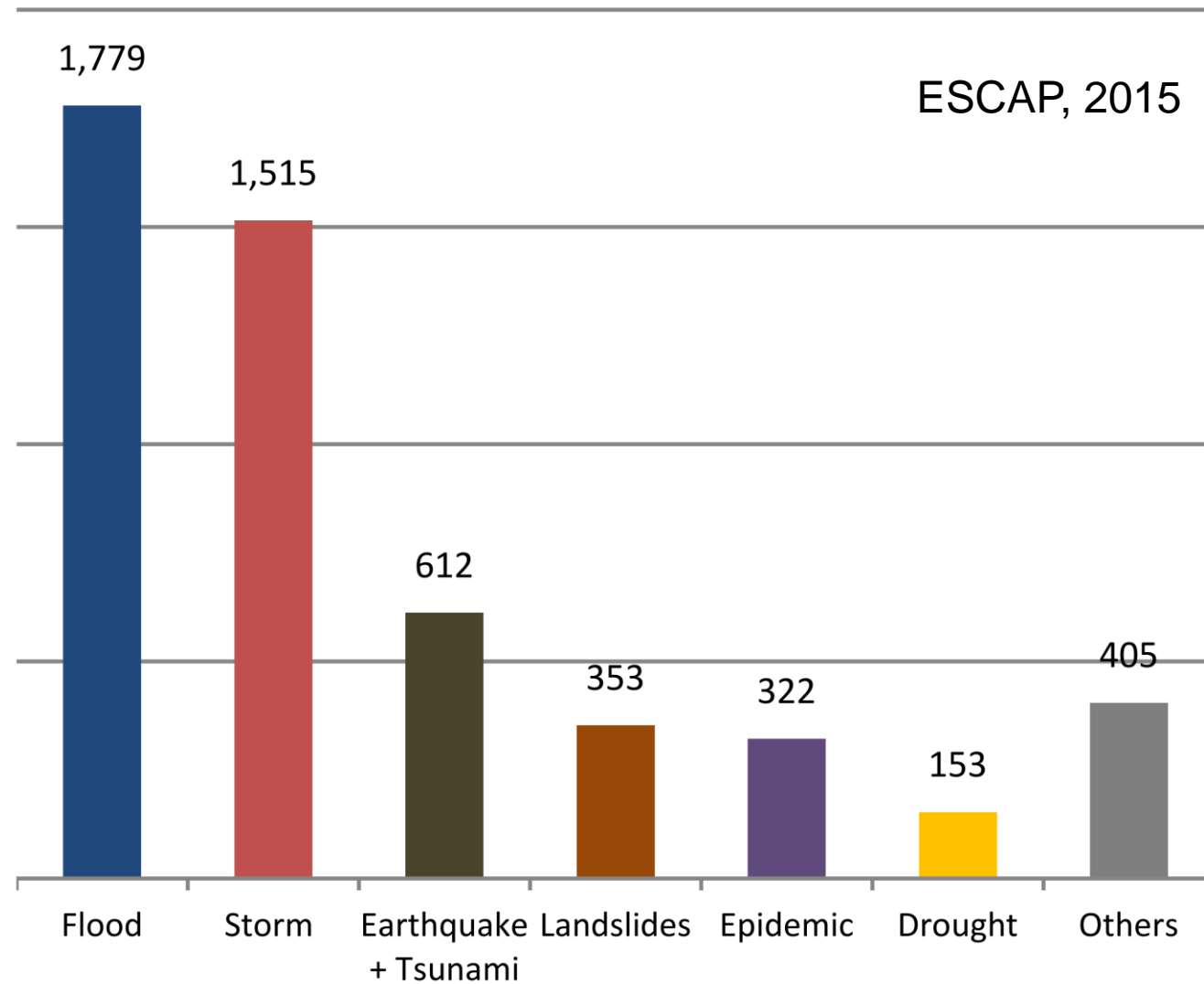


Note: The number of people affected is based on a 5-year moving average.

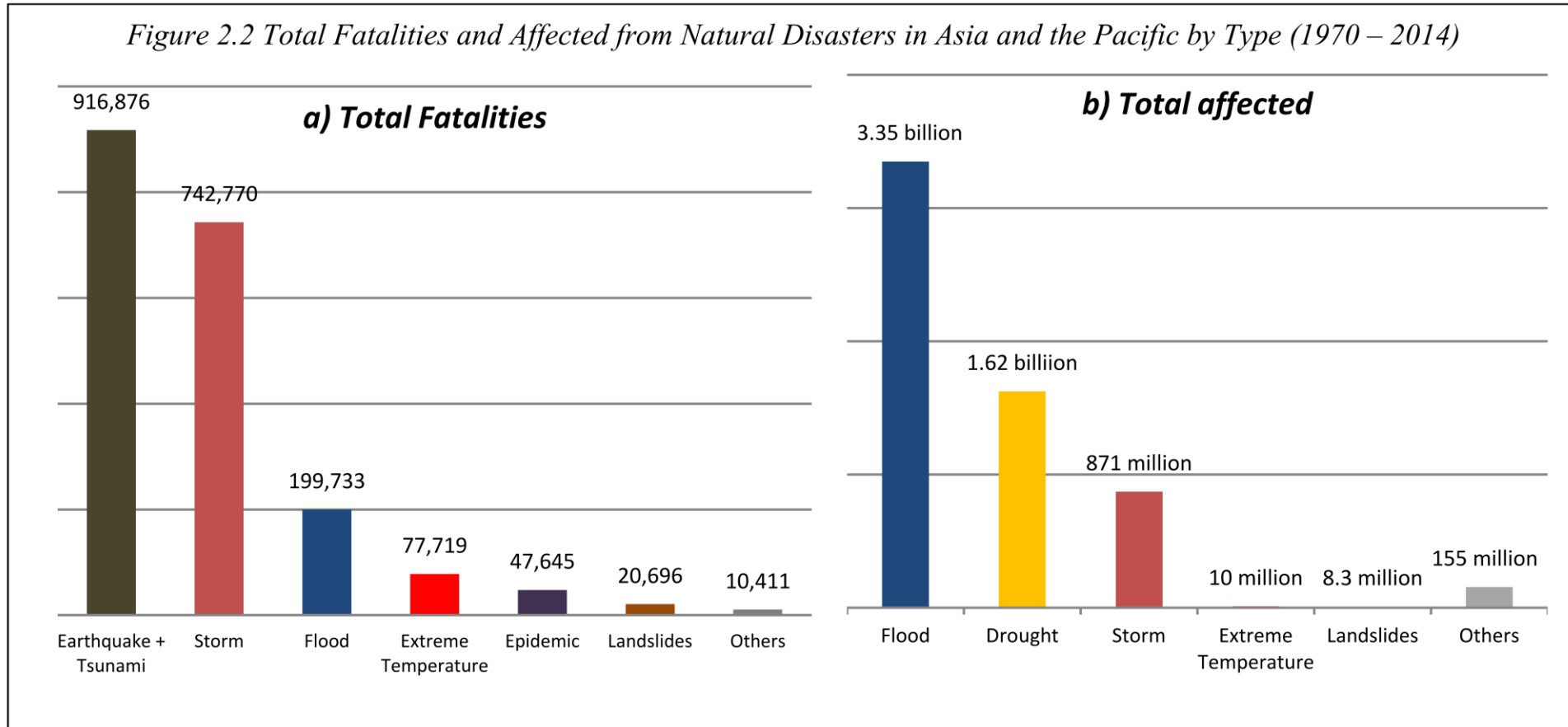
Source: Centre for Research on the Epidemiology of Disasters. Emergency Events Database (EM-DAT).

<http://www.emdat.be> (accessed 5 March 2015).

*Figure 1.2 Occurrences of Natural Disaster Events
in Asia and the Pacific by Type (1970 – 2014)*

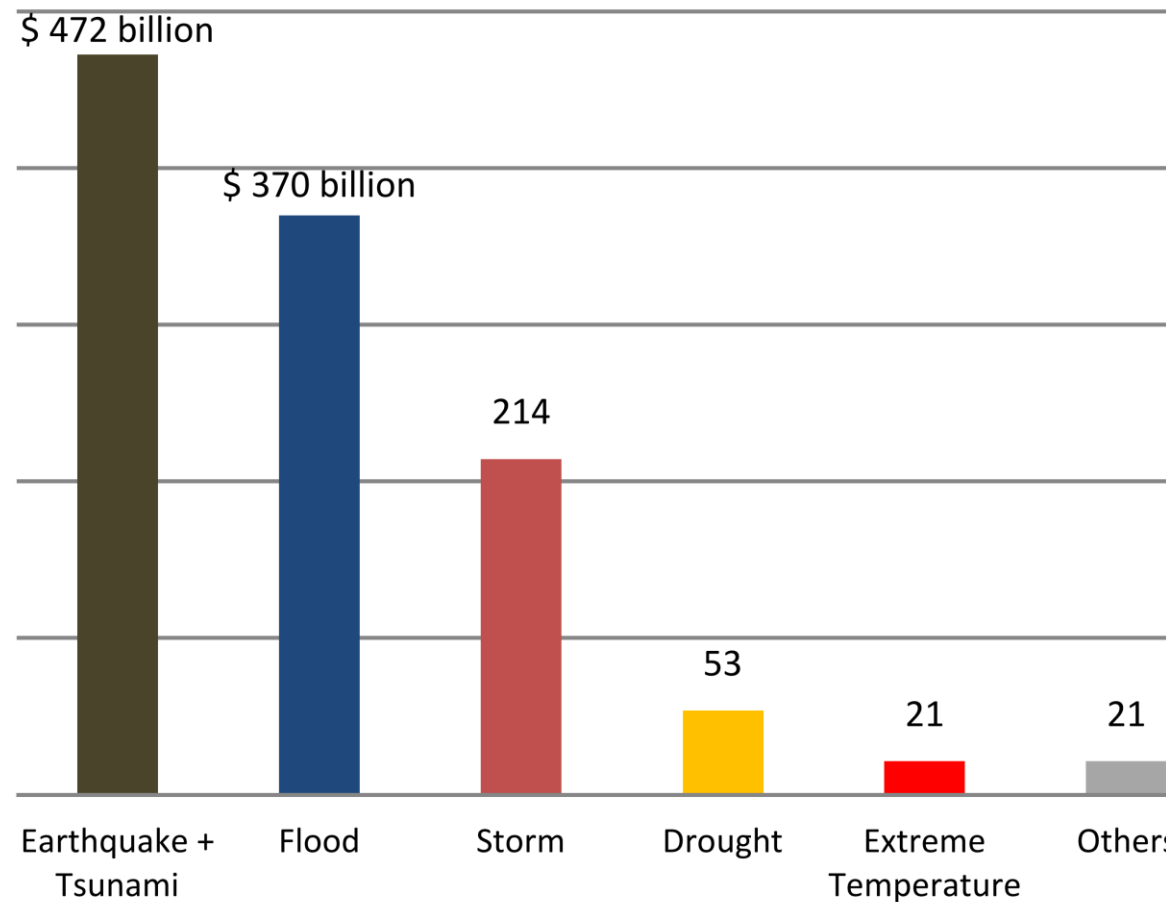


Total fatalities and affected people in Asia-Pacific



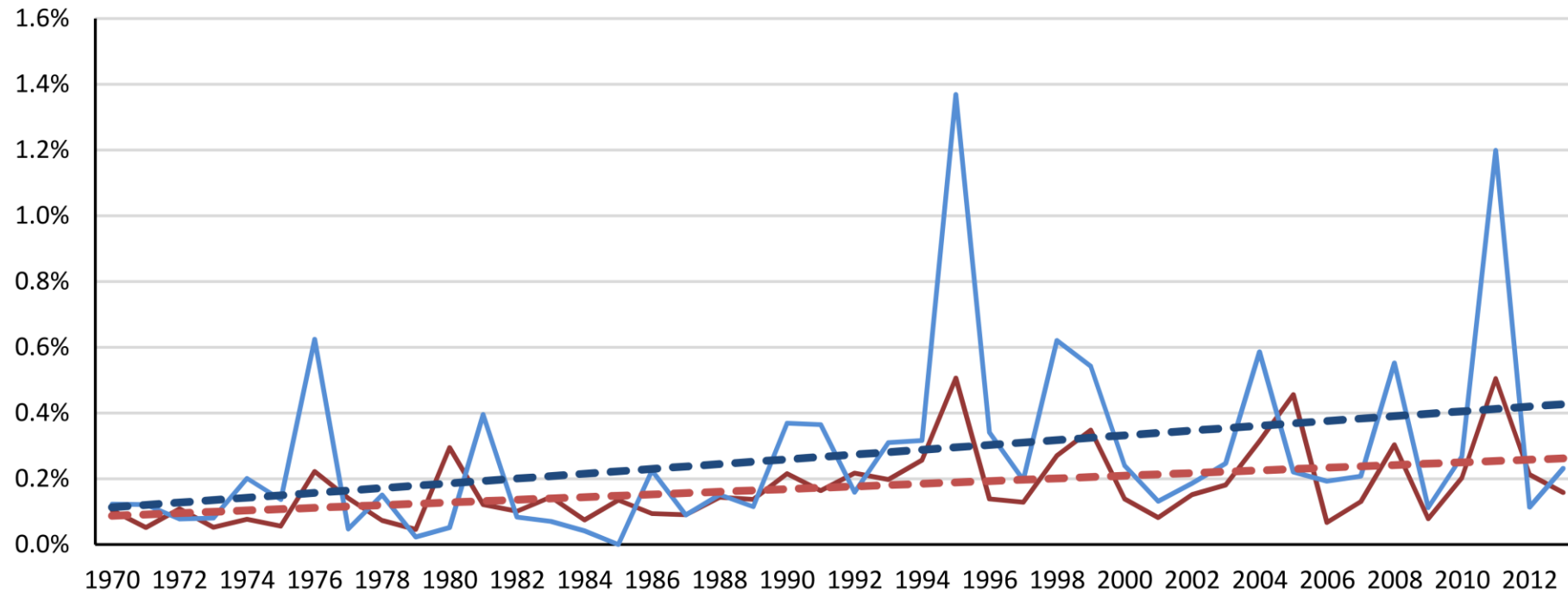
Economic losses in Asia Pacific

Figure 3.3 Economic Losses from Natural Disasters in Asia and the Pacific by Type (1970 – 2013)



GDP loss as a result of disasters

b) Economic Losses from Natural Disasters as percentage of GDP



— Global Economic Losses, % of GDP

- - - Trend of Global

— Asia-Pacific Economic Losses, % of GDP

- - - Trend of Asia-Pacific

GOAL 13

TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE
AND ITS IMPACTS*

Acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change

SUSTAINABLE DEVELOPMENT GOALS

More at sustainabledevelopment.un.org/sdgsproposal

Goal 13 Targets

- 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
- 13.2 Integrate climate change measures into national policies, strategies and planning
- 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

Increasing exposure to tropical cyclones

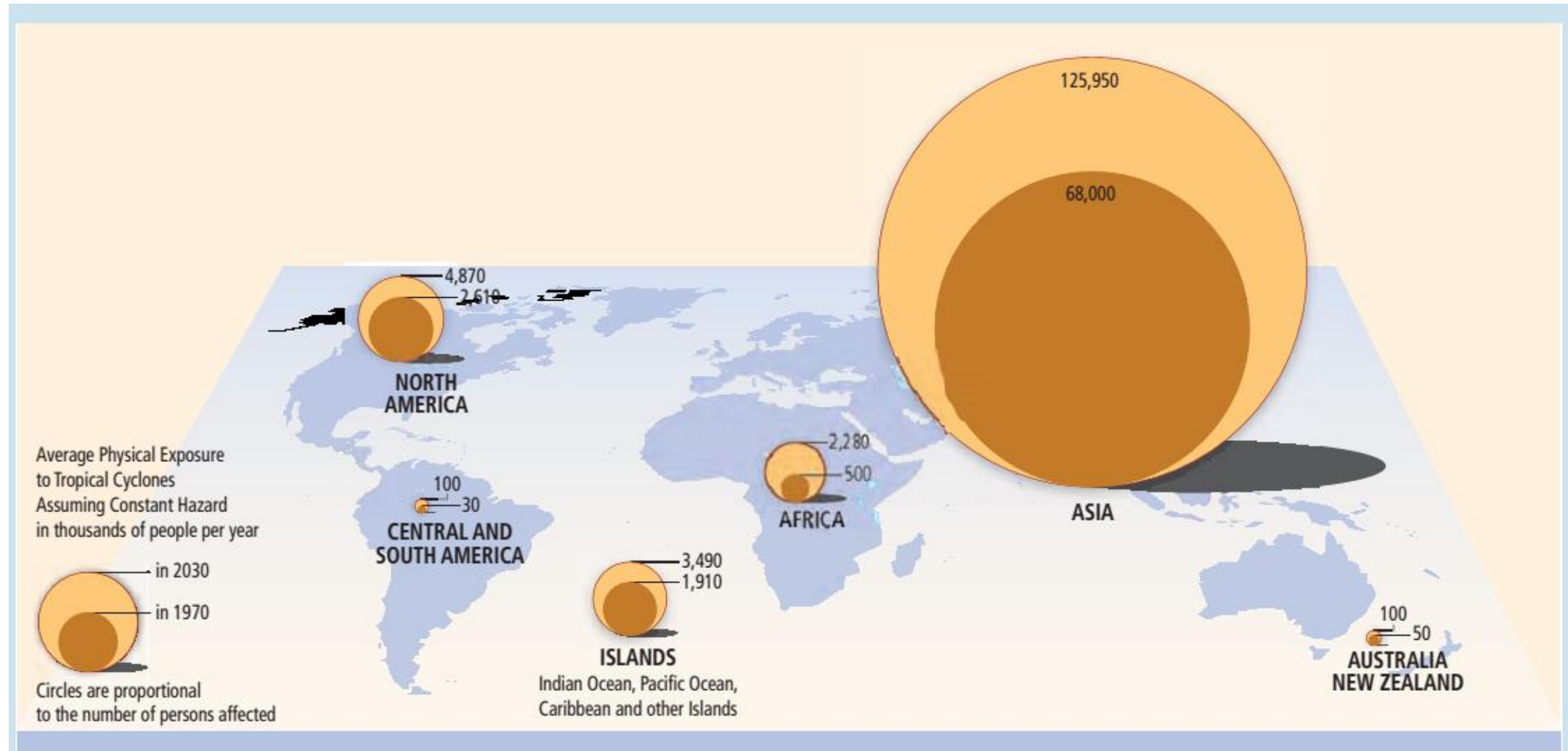


Figure 4-1 | Average physical exposure to tropical cyclones assuming constant hazard (in thousands of people per year). Data from Peduzzi et al., 2011.

Increasing exposure to floods

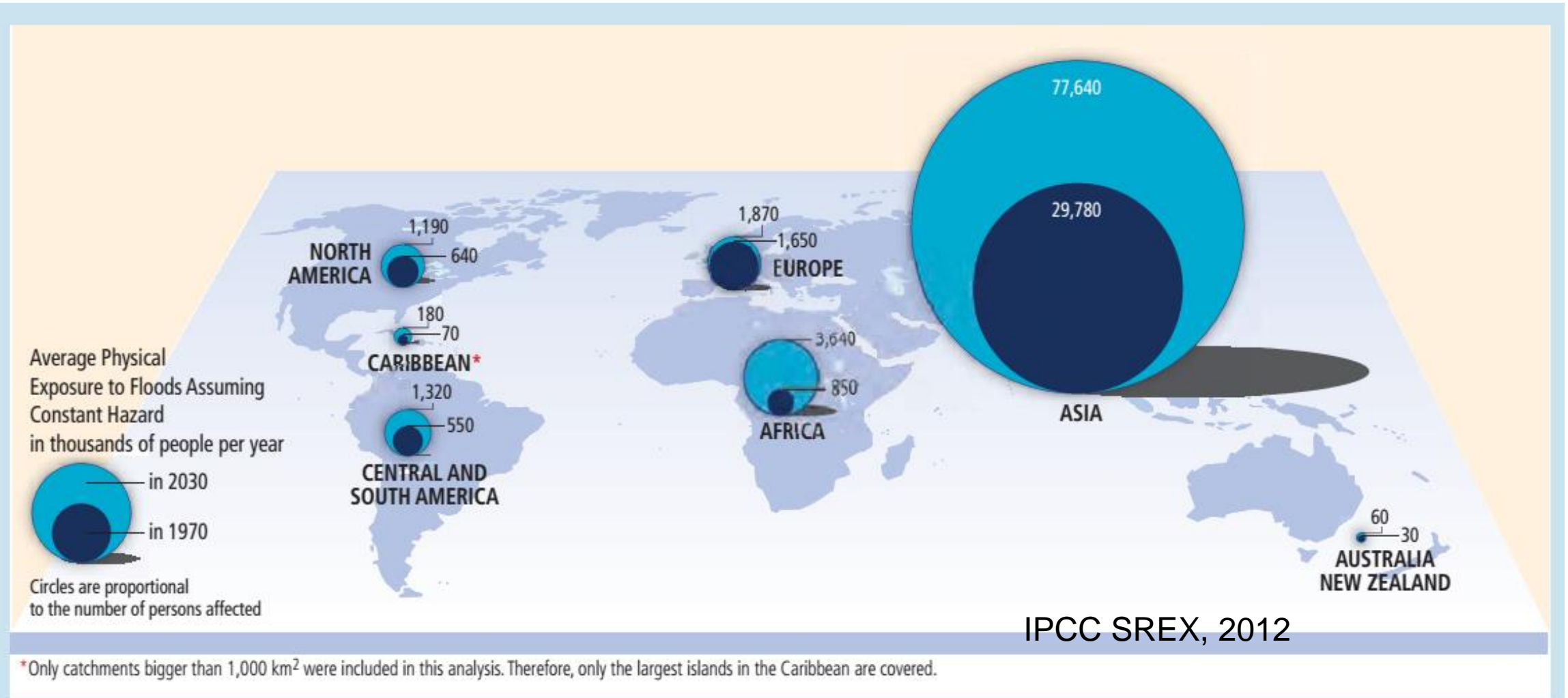
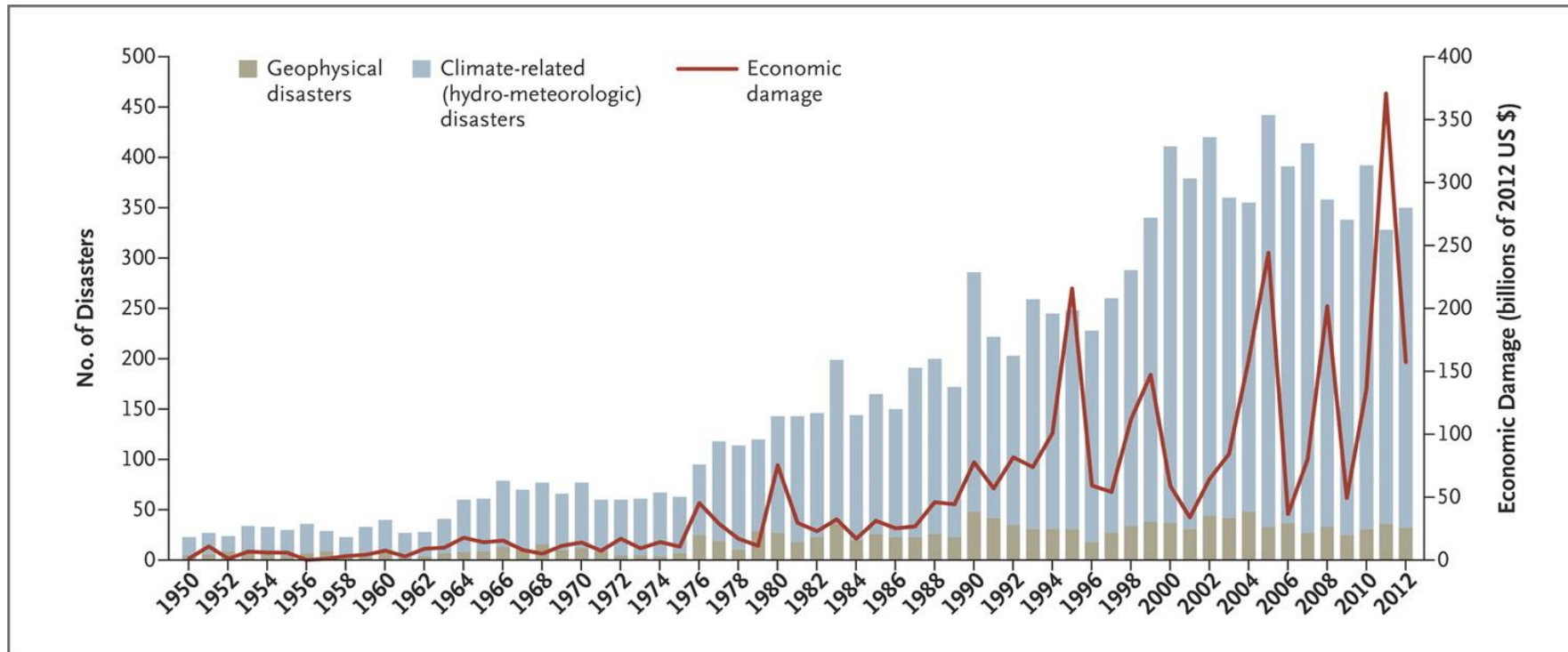


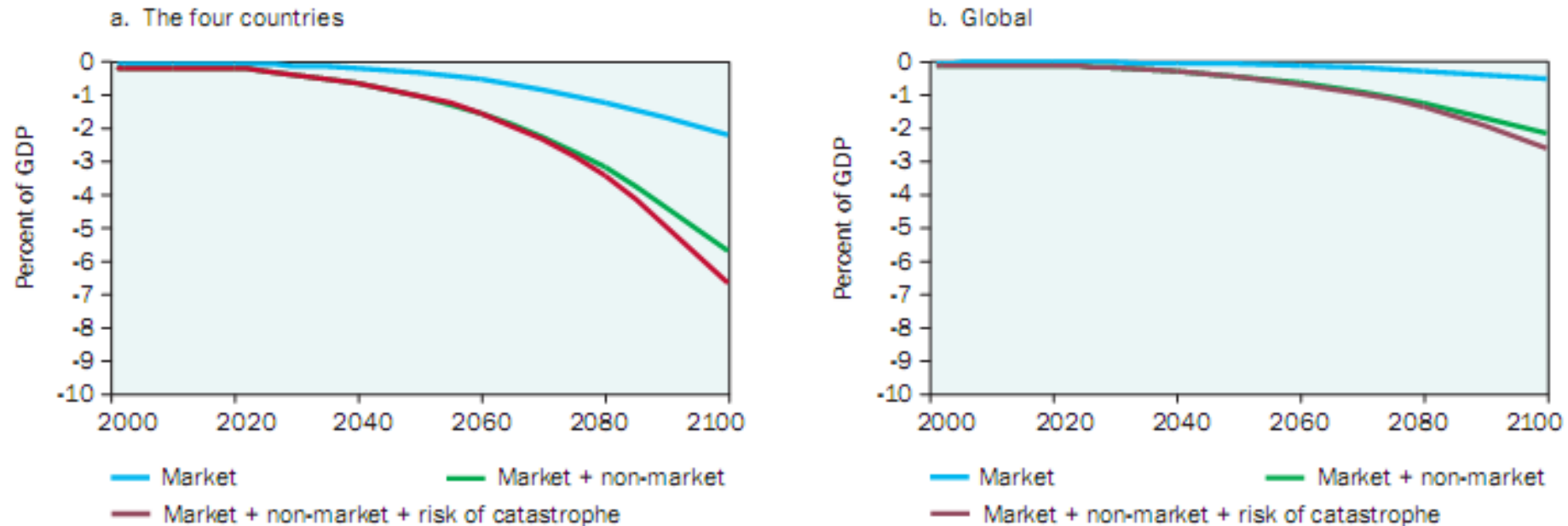
Figure 4-2 | Average physical exposure to floods assuming constant hazard (in thousands of people per year). Data from Peduzzi et al., 2011.

Increasing climate-related disasters



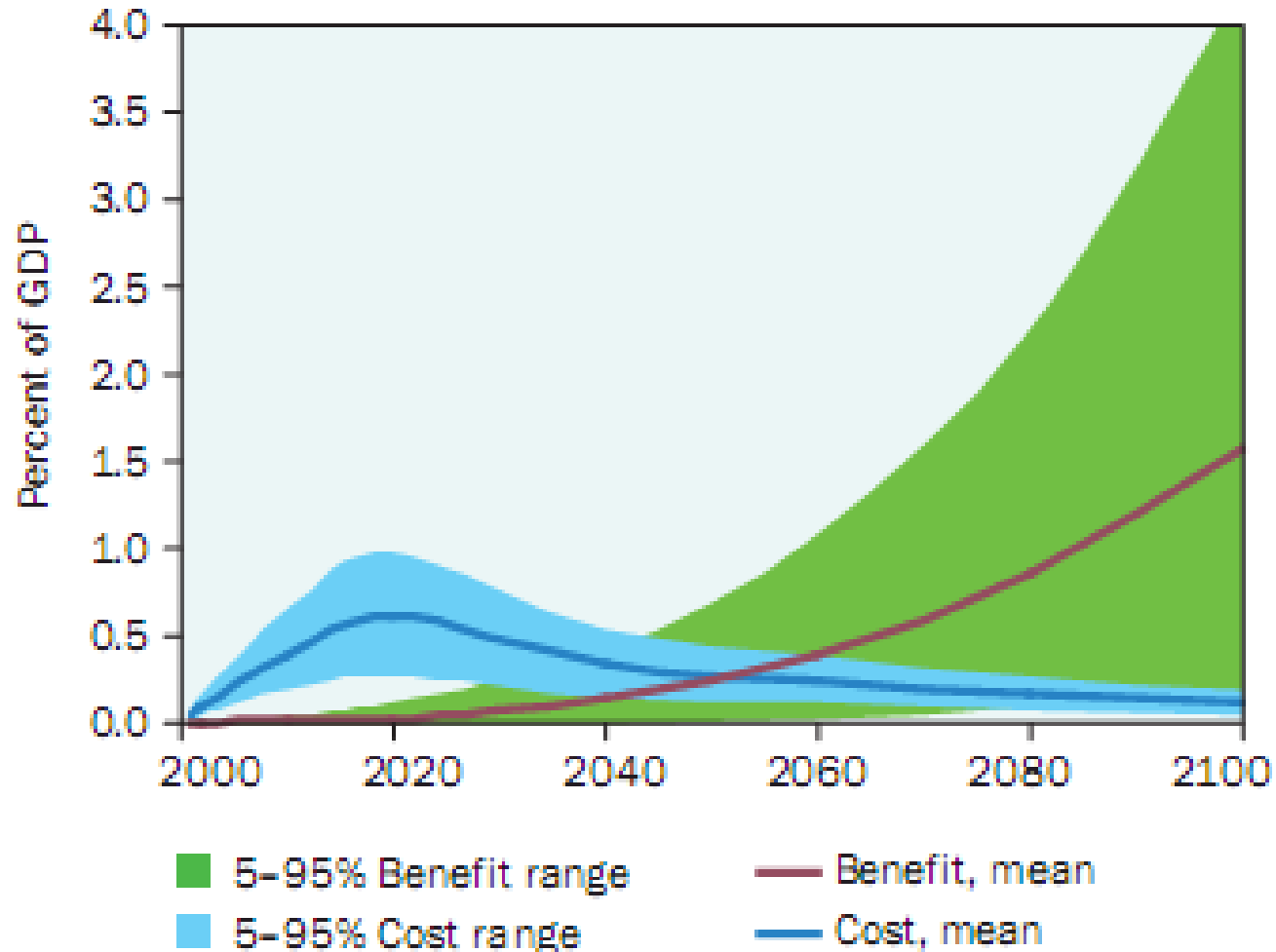
Leaning J, Guha-Sapir D. N Engl J Med 2013;369:1836-1842.

Impacts of CC on GDP of SE Asia (ADB, 2009)



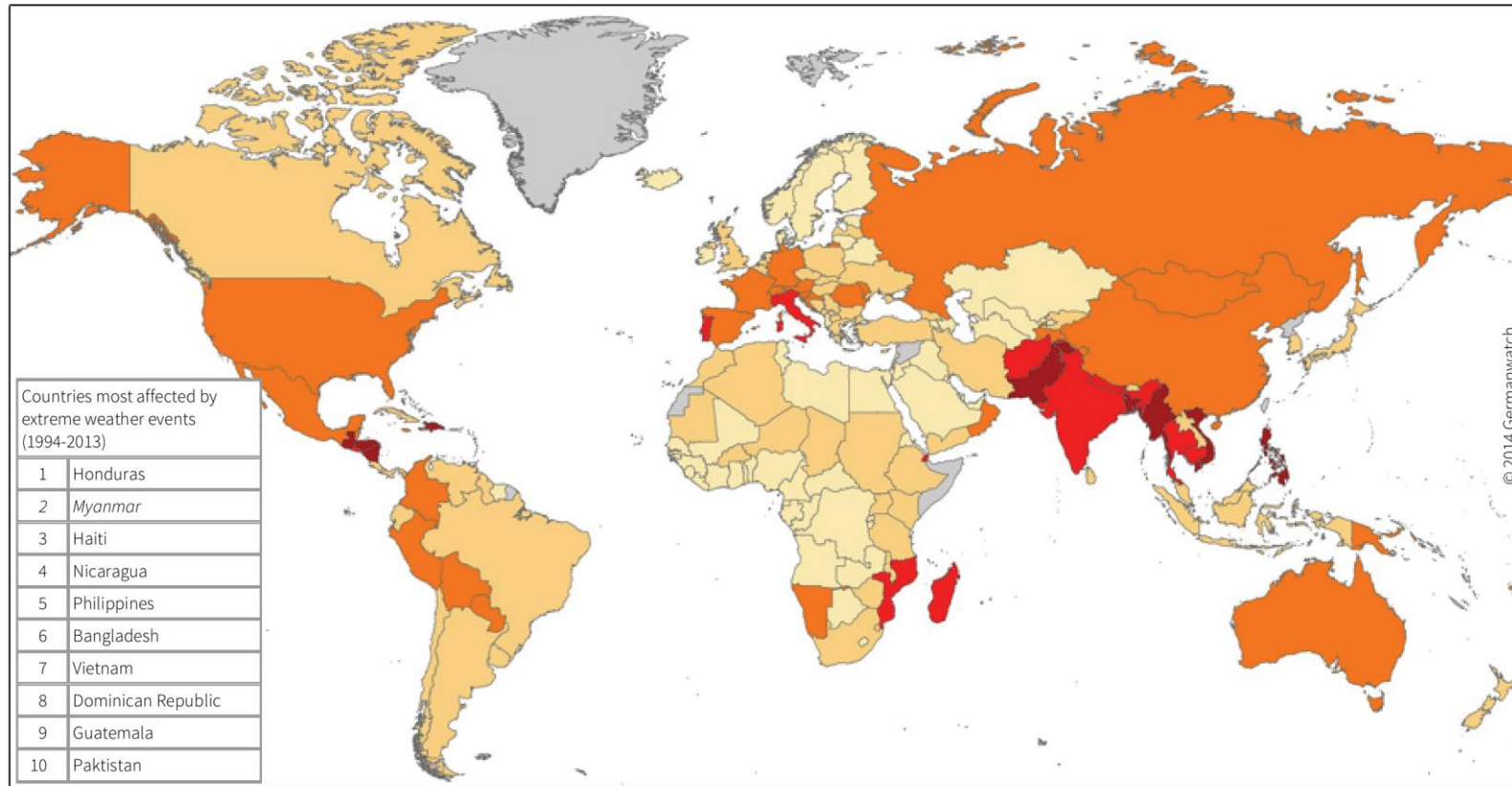
GDP could decline by up to about 7%
Worse than global average

Cost and benefit of adaptation (ADB, 2009)



Philippines: a living laboratory for SDGs, CCA, and DRRM nexus

Most at risk countries 1994-2013



Cursive: Countries where more than 90% of the losses/deaths occurred in one year/event

Germanwatch, 2015

Climate Risk Index: Ranking 1994 - 2013

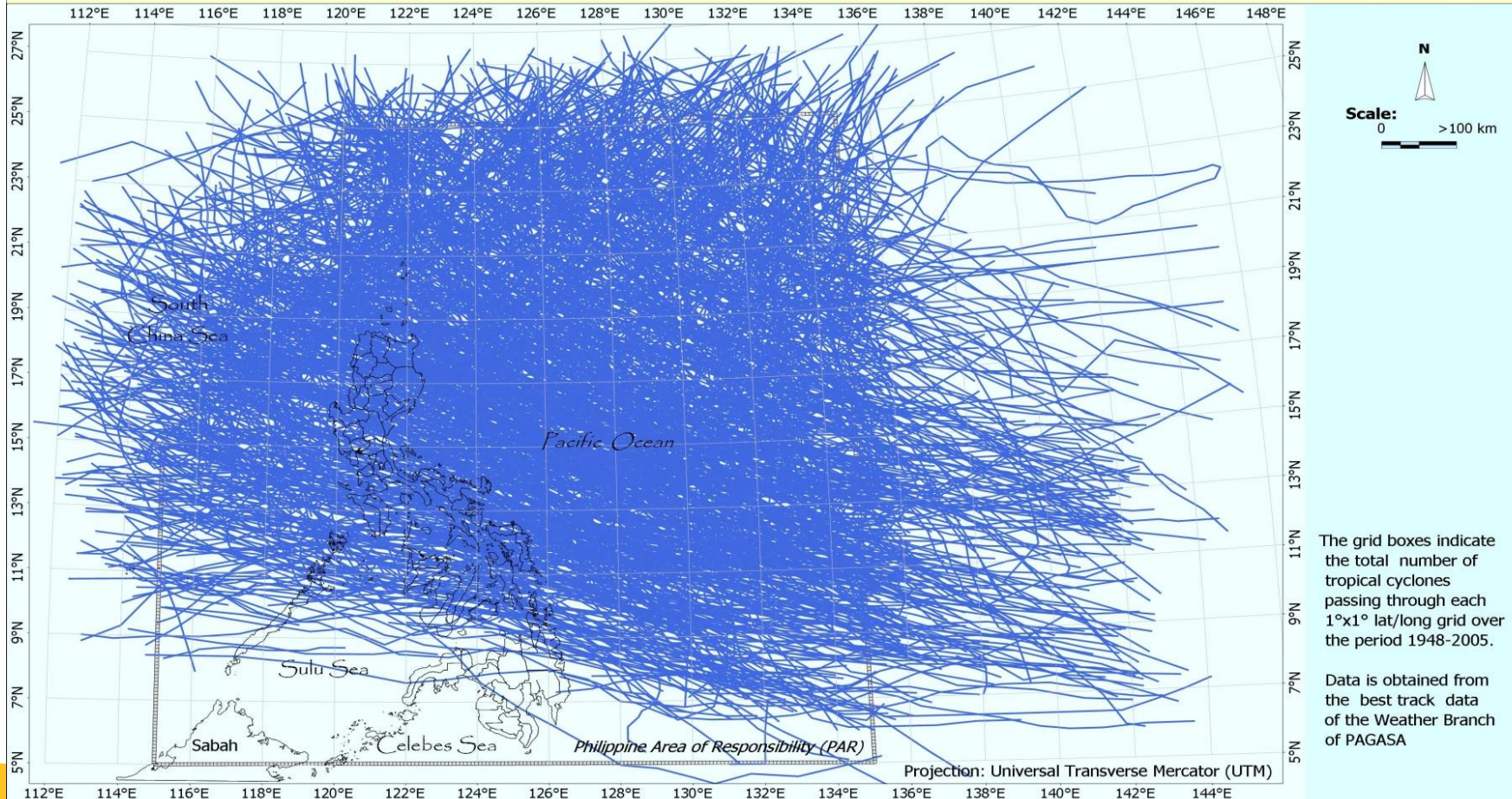


Figure 1: World Map of the Global Climate Risk Index 1994-2013

Source: Germanwatch and Munich Re NatCatSERVICE

Ground zero...

Actual tropical cyclone tracks for the period 1948-2005



Prepared by: Climate Data Section, Climatology & Agrometeorology Branch, PAGASA, DOST

In October 2009...

INQUIRER.net

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No debate: Deluge due to climate change

Philippine Daily Inquirer
First Posted 04:05:00 09/30/2009

Filed Under: Ondoy, Flood, Disasters & Accidents, Government, Weather, Climate Change

MANILA, Philippines—The massive floods that inundated Metro Manila were a chilling reminder of the need to seriously address climate change, experts said, warning that the lives of millions were at stake.



In July 2010...

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THE LONG WAIT A boy waits for his turn to fill his pails with rationed water in Barangay Sipak Almacen, Navotas City, on Thursday. Water started flowing again in many parts of northern Metro Manila. NIÑO JESUS ORBETA

Gov't calls in troops to avert water riots

By TJ Burgonio, Alcuin Papa and Jocelyn P. Uy

While claiming that the worst is over, Malacañang is deploying soldiers and civilian personnel to restore order and avert any riot in at least 177 barangays (villages) in Metro Manila now grappling with water shortage, officials said Thursday.

- AFP ready to field troops in distributing water in Metro
- Soldiers deployed to prevent riots over water
- Water flowing again in most parts of Camanava
- Water crisis splits gov't

Nation

- Court junks Trillanes plea to attend 1st Senate session
- Judge: Bail will set bad precedent
- After Arroyo son, Comelec set to OK 1-UTAK's Reyes
- 1st impeach complaint against Gutierrez
- Robredo shows what transparency at DILG is all about

23 July 2010

Super Typhoon Yolanda (Haiyan) has captured global attention

The screenshot shows the CNN website interface. At the top, the CNN logo is on the left, and navigation links for 'EDITION: INTERNATIONAL', 'U.S.', 'MÉXICO', and 'ARABIC' are on the right. Below the logo, there are links for 'TV: CNN' and 'CNN en Español', and a 'Set edition preference' link. A search bar is located on the right side of the top navigation bar. The main navigation bar includes links for 'Home', 'Video', 'World', 'U.S.', 'Africa', 'Asia', 'Europe', 'Latin America', 'Middle East', 'Business', 'World Sport', 'Entertainment', 'Tech', 'Travel', and 'iReport'. The date and time 'November 8, 2013 - Updated 0012 GMT (0812 HKT) Edited by Simon Rushton in Atlanta' are displayed. A 'Make CNN Your Homepage' button is on the right. Below the navigation bar, there is an 'EDITOR'S CHOICE' section with links to 'Scenes from the field', 'China labor camp', 'Pope's embrace', 'Super typhoon', 'Toronto's crack mayor', 'Narcoland', and 'UK survival guide'. The main content area features a 'BREAKING NEWS' section with the headline 'A 'CALAMITY' COMING' and a sub-headline 'Super Typhoon's huge winds batter coastal towns'. A satellite image of the typhoon is shown with a 'Click to play' button. The text below the image reads: 'Incredible winds are smacking the Philippines coast -- and two-thirds of the country is being affected -- as one of the strongest storms ever observed hits.' Below this text are three links: 'Hours of destructive winds', 'Haiyan storm tracker | Photos', and 'Are you there? Send your story'. To the right of the main content is an advertisement for 'MAKE EVERYBODY'S BUSINESS... YOUR BUSINESS JUST CLICK HERE' with a 'CNN' logo and the tagline 'GO BEYOND BORDERS'. Below the advertisement is a 'FOLLOW US' section with a link to 'The ITRT'. At the bottom of the page, there are two buttons: 'MALALA SUSPECT' and 'TWITTER IPO'. The bottom right corner features a 'Featured TV' section with a 'CNN TV' logo and a 'Royal Television Society 'News channel of the year'' award logo.



Tacloban City...before



Tacloban City...after









Oscar M. Lopez Center

Science for Climate Resilient Communities



- One of the strongest ever to hit land (>300 kph)
- More than 6,000 died
- More than USD 1 billion in damages

1912 reports on Tacloban storm 'killing' 15,000 resurface

By Camille Diola (philstar.com) | Updated November 19, 2013 - 12:52pm

Tweet 291 Share 39.5K googleplus 8 Email 77 Like 11k



The Washington Herald issue in November 20, 1912 published an article about a powerful typhoon that pounded on Tacloban and Capiz. Oklahoma-based newspaper Daily Ardmoreite also ran an October 1912 story of a storm that damaged Tacloban and surrounding areas.

ASIA

Natural disasters threaten

BUSINESS

Philippine GDP Growth Forecast Cut For 2013, Typhoon Haiyan Rebuilding Efforts To Give 2014 An Economic Boost

BY MORAN ZHANG



ON 11/25/13 AT 12:23 PM



Philippines losing P300 B to disasters yearly

By Prinz Magtulis (The Philippine Star) | Updated October 5, 2015 - 12:00am



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1.8K



Challenges

- How does one prepare for once in lifetime event?
- How do we communicate risk that people have never experienced before (eg storm surge)?
- How do we build better, given that the recurrence of this event can take decades or a century?
- What lessons can be more widely applied?

Accelerating the nexus

- Better coordination among agencies that deal with SDGs, disasters, and climate change
- Ensuring that local implementers are not over burdened
- The private sector and civil society can contribute significantly
- Research efforts that facilitate efforts at integration need to be supported

Thank You!!!

