

# Understanding Disaster Risk

## Concepts and Trends in Global Disaster Risk Reduction

Workshop on Coherent Disaster Risk Reduction Strategy Development in the SAARC Region

09-11 July 2019, SDMC (IU), Gandhinagar, India

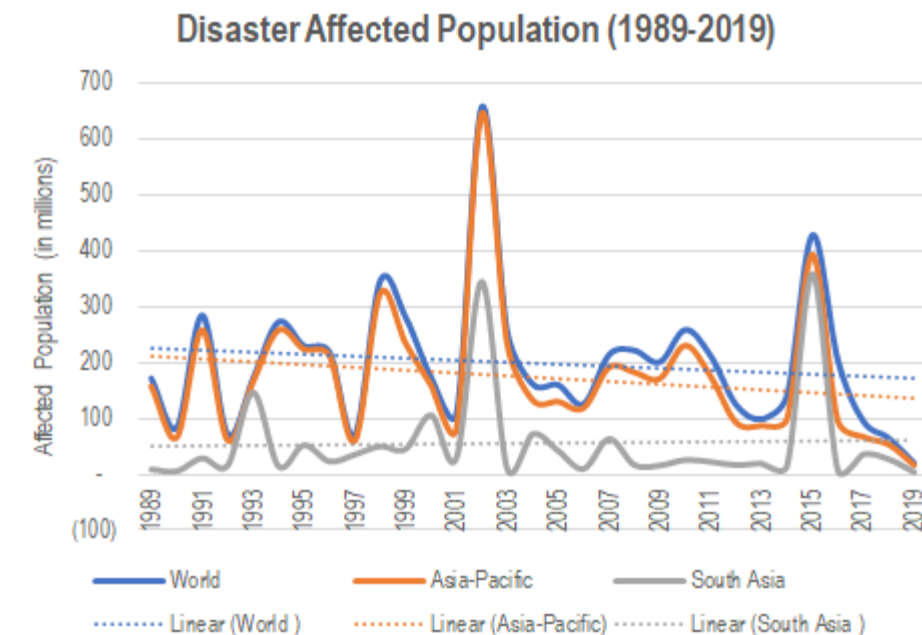
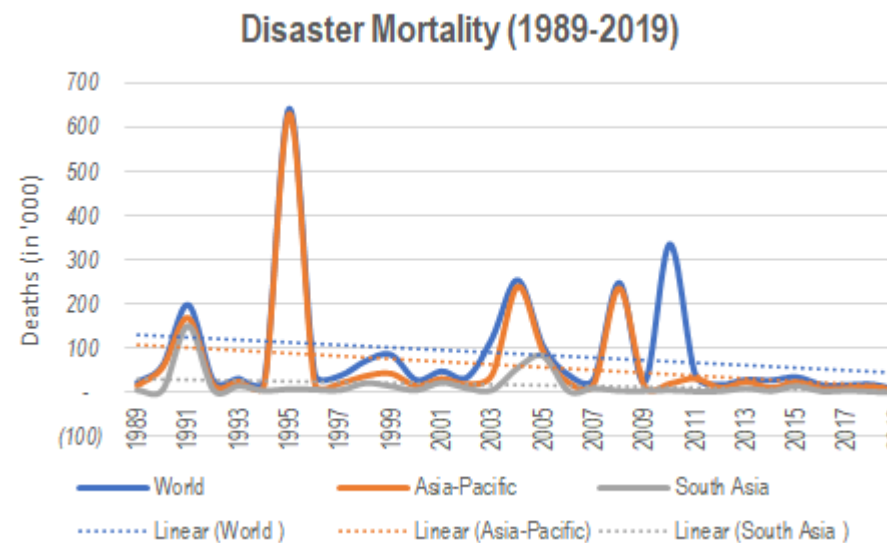
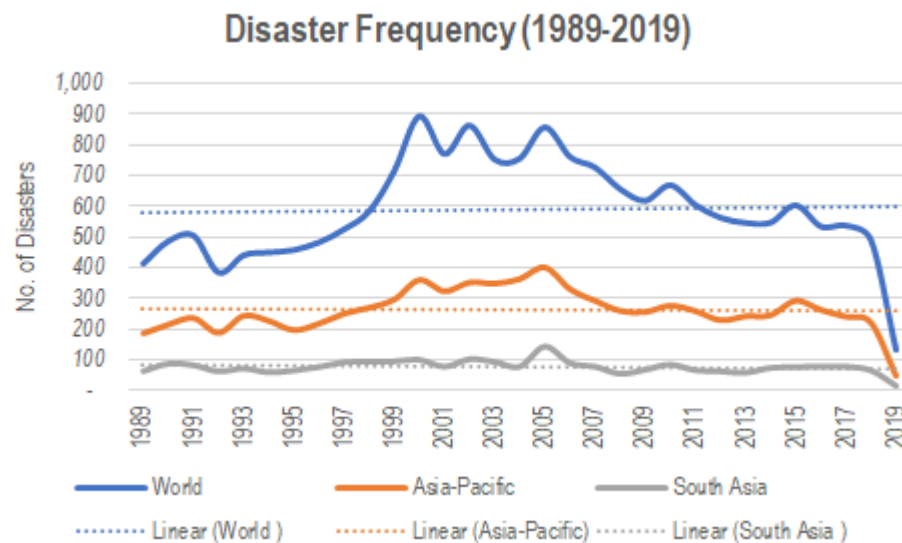
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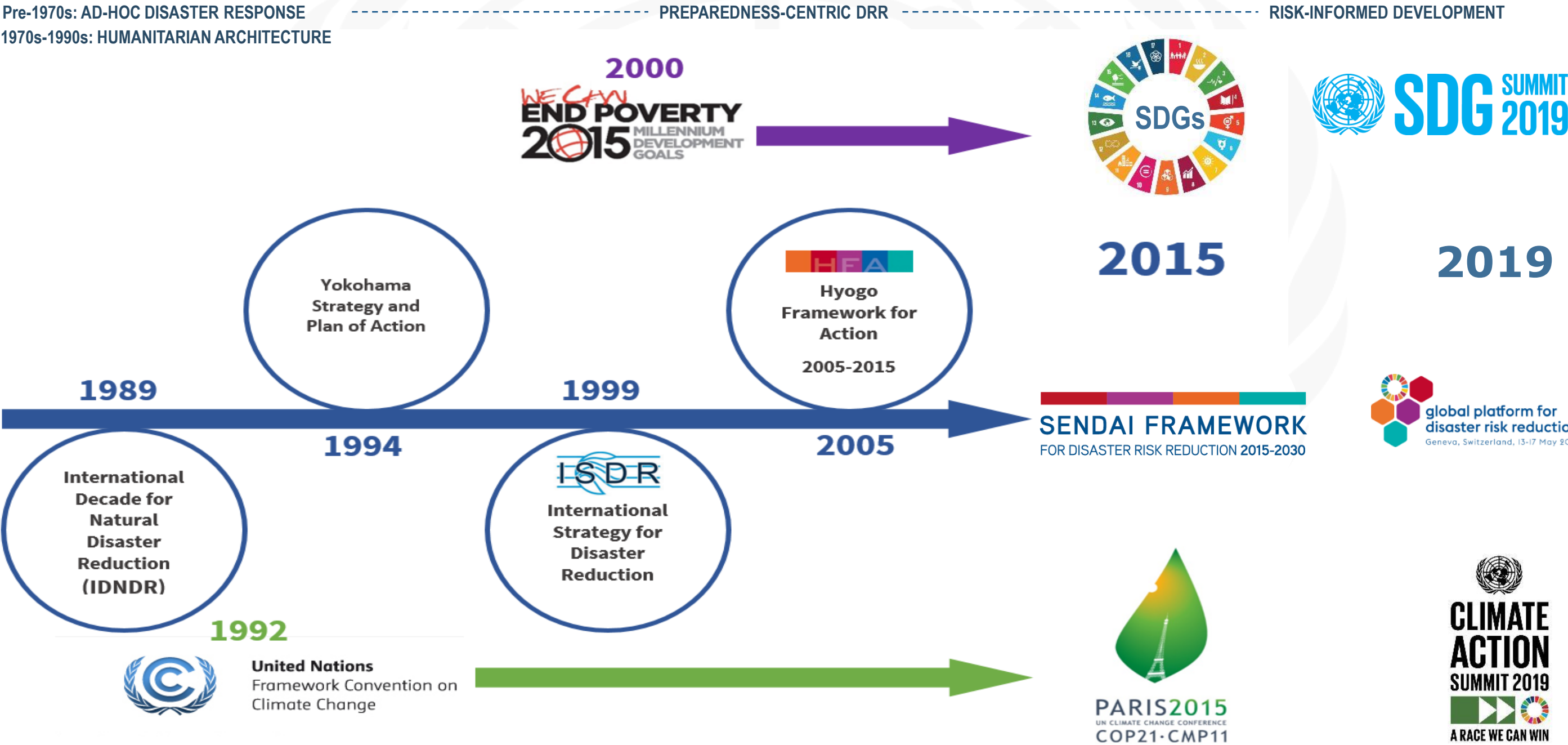
 [#ResilienceForAll](https://twitter.com/#ResilienceForAll)

# 30 Years of Disaster Impact

- *Globally:* 20,000 disasters, 2.7 million deaths and 6 billion affected
- *Asia-Pacific:* Most disaster prone region in the world – 45% of disasters, 70% of mortality and 90% of affected population
- *South Asia:* 30% of Asia-Pacific impact: Flood and Storm (most frequent); Earthquake and Storm (most mortality); Drought and Flood (most affected); Flood and Storm (most economic losses)



# 30 years of Disaster Risk Reduction





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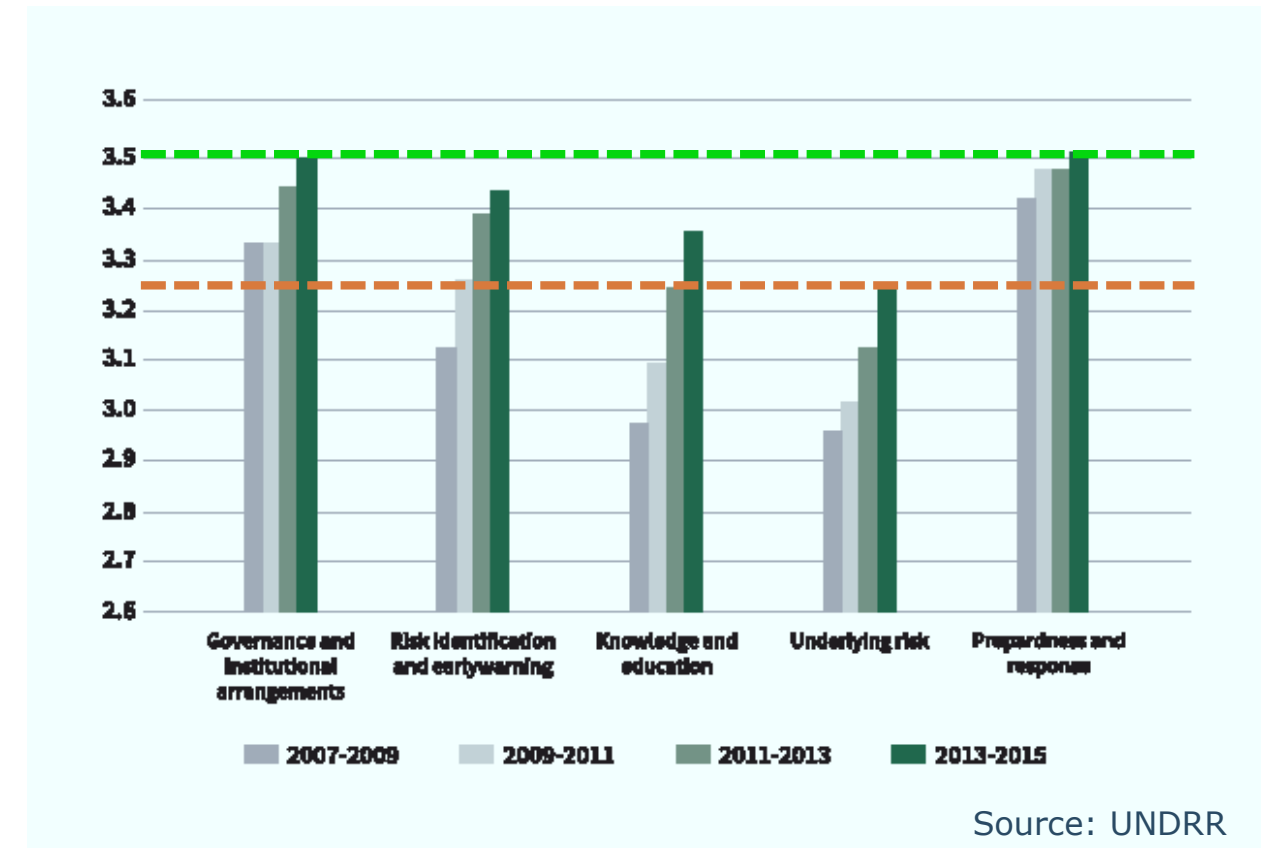
# Disasters are not Natural





# Progress and Achievements

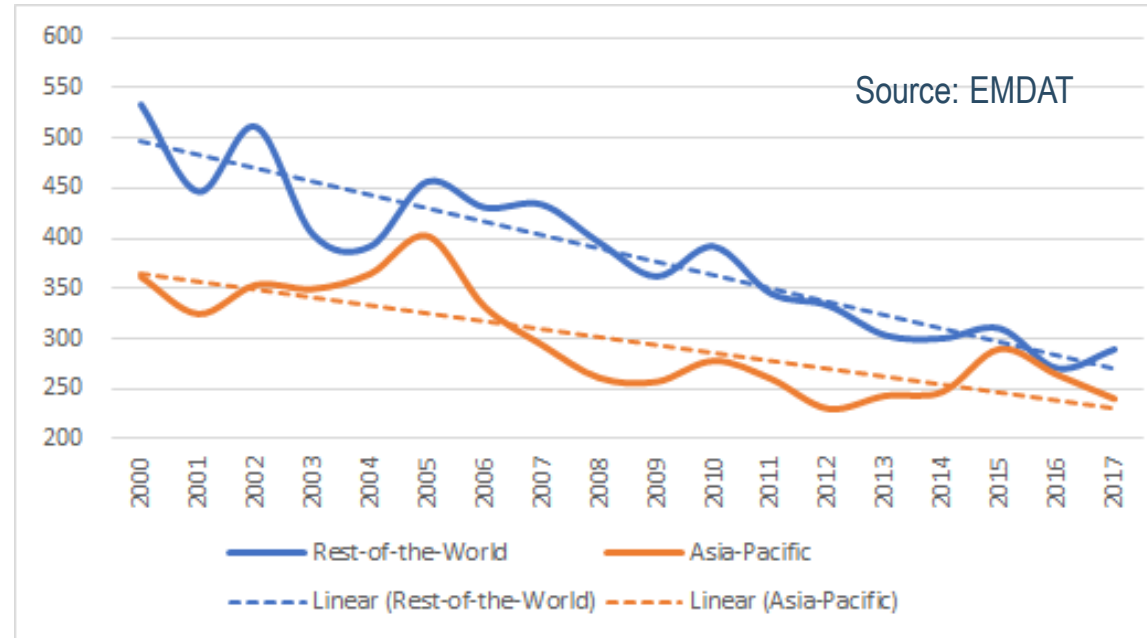
- A structured dialogue on disaster risk reduction: From global to local
  - Structured institutional structures on disaster risk management – Dedicated government institution and identified Focal Points
  - DRM policies, strategies and plans, and legislation
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- Officialization of data (Sendai Framework / SDG reporting)
  - New actors and stakeholders
  - Guidance for implementation, innovative tools and instruments



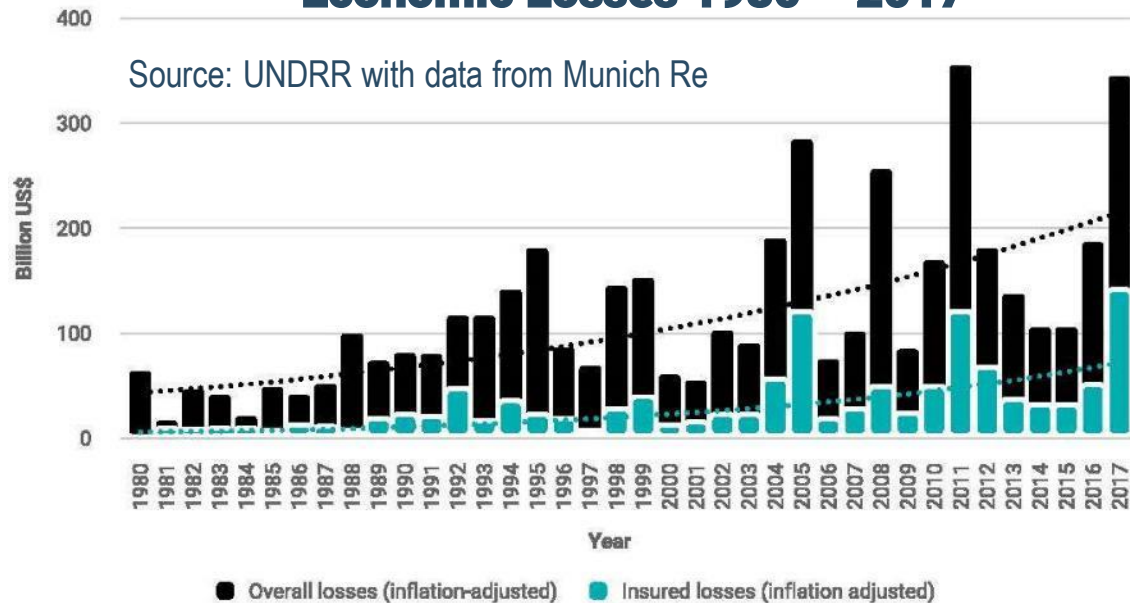
- **High progress in governance and preparedness mechanisms**
- **Low progress in addressing underlying risks**

## Disaster-Induced Mortality

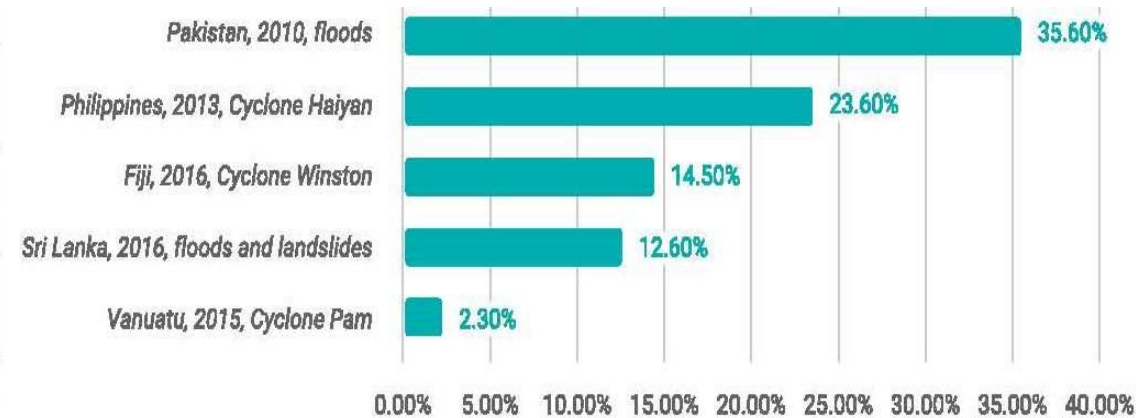
## Result



## Economic Losses 1980 – 2017



## Proportion of people falling into poverty from selected disasters

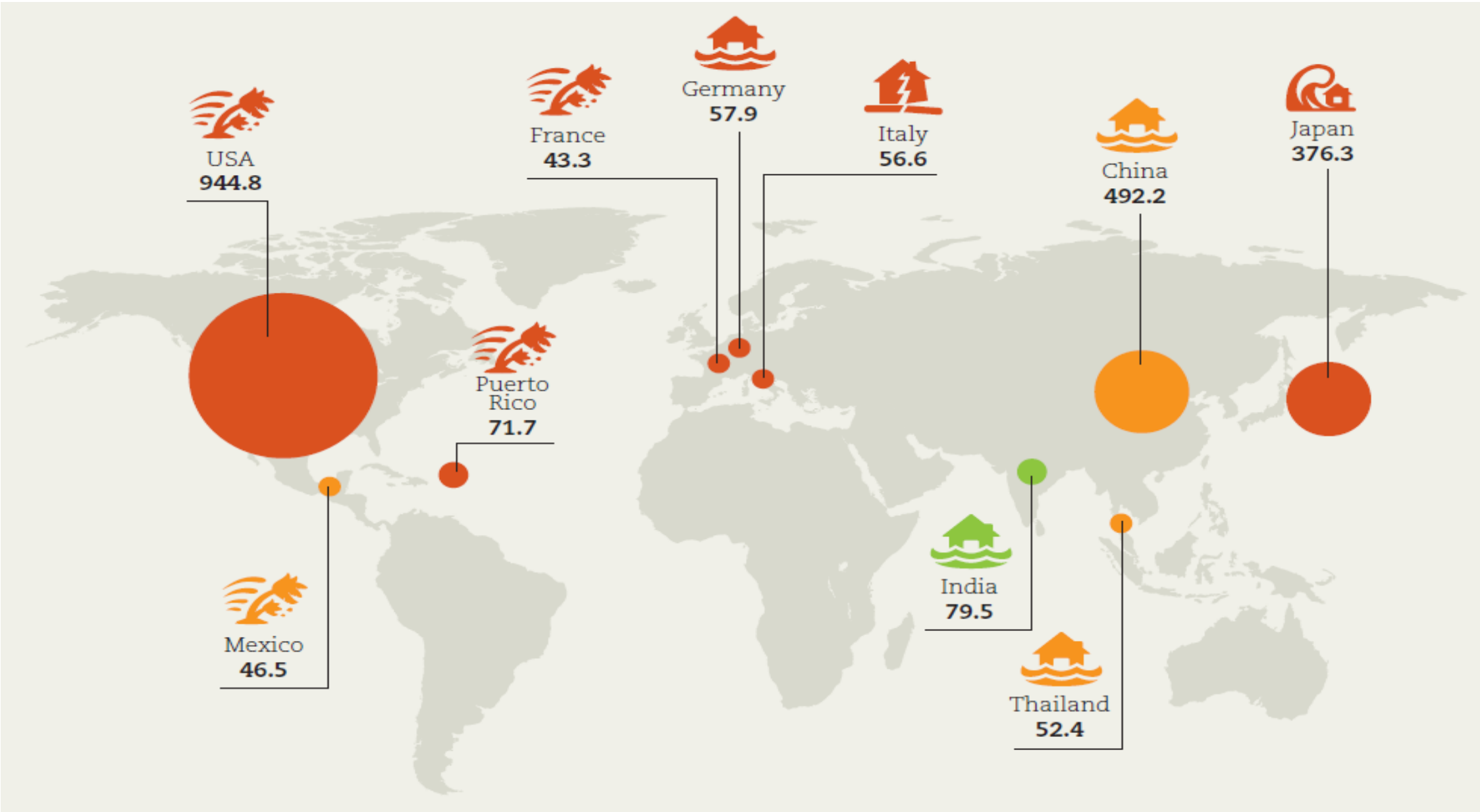


Source: ESCAP 2017

**Disasters are resulting in annual consumption losses of US\$520 billion and pushing 26 million people into poverty every year.**  
*World Bank 2016*

# Top 10 countries/territories in terms of absolute losses (billion US\$) 1998-2017

*Economic Losses, Poverty and Disasters 1998-2017* (CRED, UNISDR. 2018.)

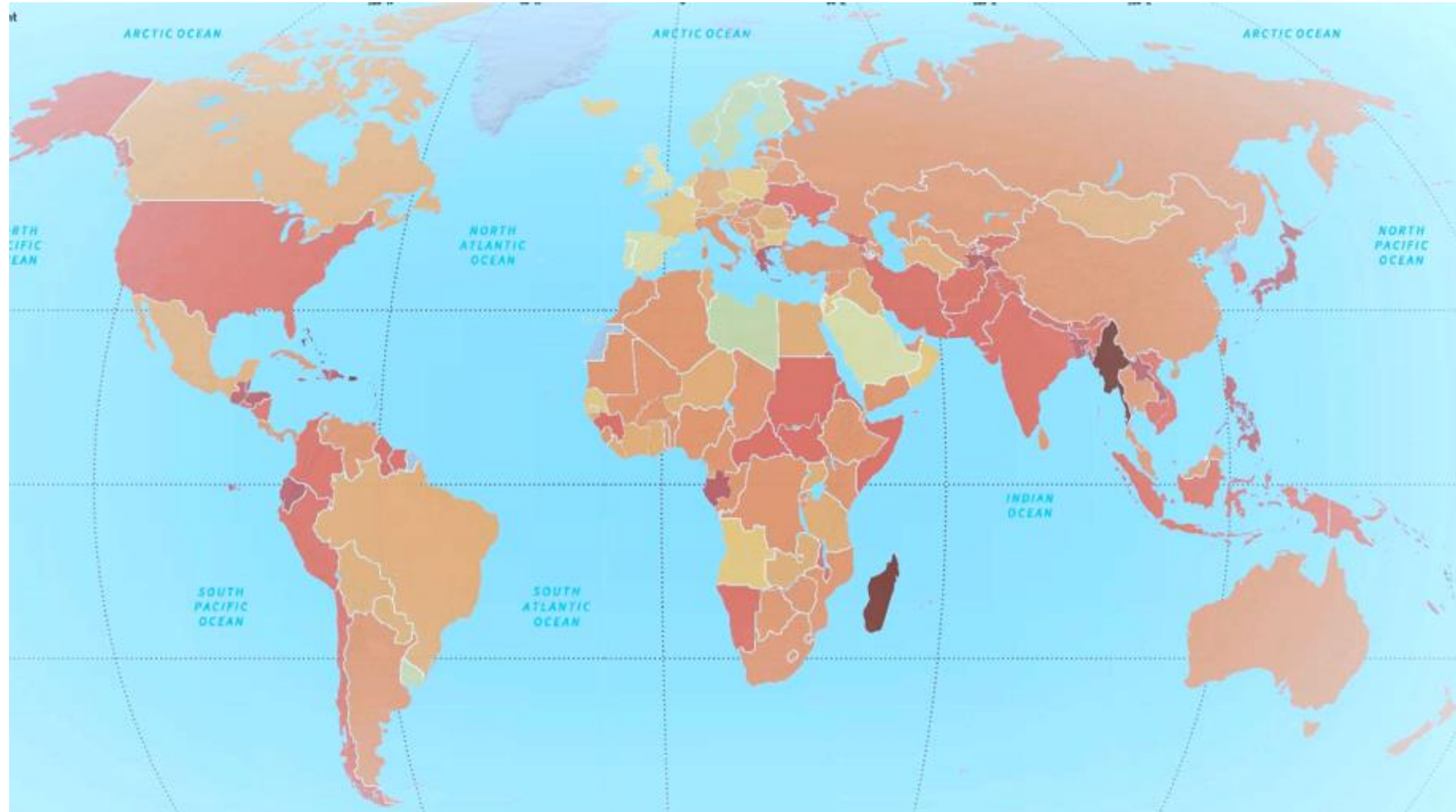


# Implications on Sustainable Development

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## Disaster risk constraints on the potential for sustainable development

- **Capital investments (e.g. infrastructure) and social expenditures (e.g. health and education) required to mitigate disaster risk**
- **However, potential disaster losses will erode these investments**
- **Risk-blind investments will create further risks**



The boundaries and names shown and the designations used on the map do not imply official endorsement or acceptance by the United Nations.



# A Changing Understanding of Risk

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- **Changing environment**

- Intensifying disaster trends & more frequent events
- Resource scarcity and degradation (land, water, food, energy, biodiversity)
- “Unchecked” urbanization coupled with high exposure of population and assets in high risk areas.
- Increasing governance challenges, coordination, accountability, institutional mechanisms, migration, conflict

- **Climate change - The great risk amplifier**

- Risk profile will continued to be altered by climate change
- “Robust difference” between impacts at 1.5°C and 2°C – average temperature, frequency of hot extremes, heavy rainfall in some regions and the probability of drought in some areas [**Exponential disaster impact**]

- **Multidimensional understanding of vulnerability**

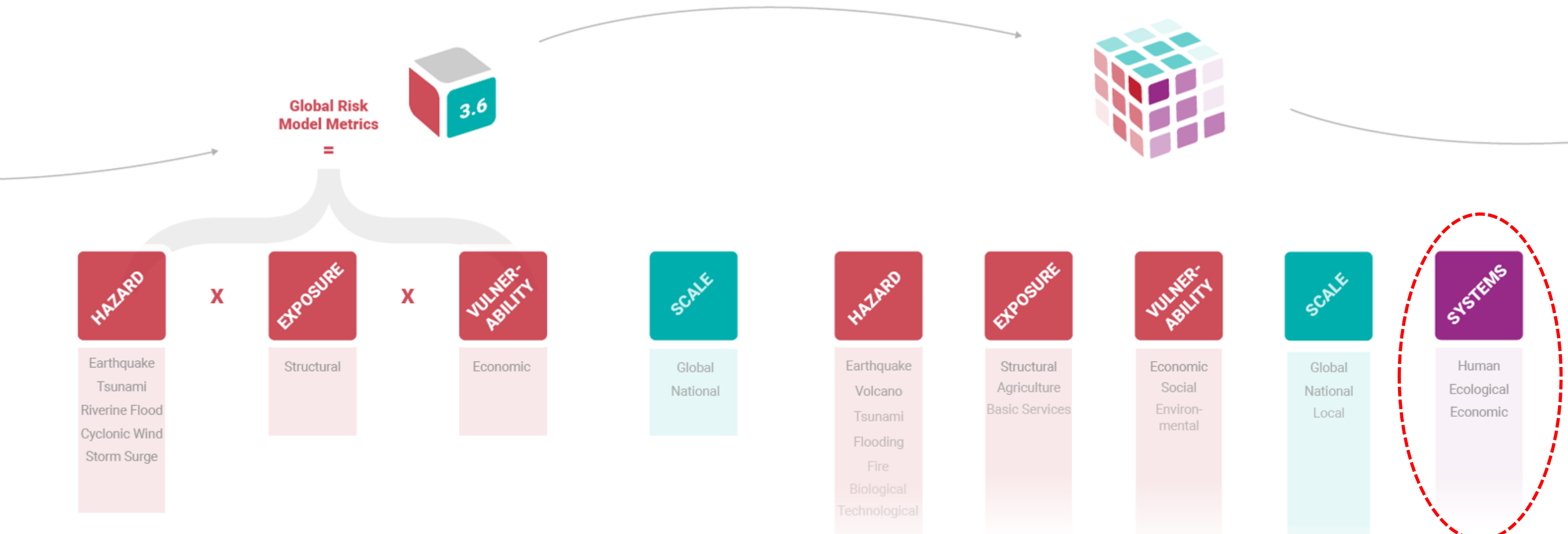
- Vulnerability is also dynamic: **Equity, poverty, inclusion** – all being fundamental development challenges contributing to vulnerability

- ➔ **Risk cannot be compartmentalized :**

- **Systemic risk: Need to understand the cascading and interconnected nature of risk**
- **Avoid compartmentalized research, hazard-by-hazard risk assessment and management**

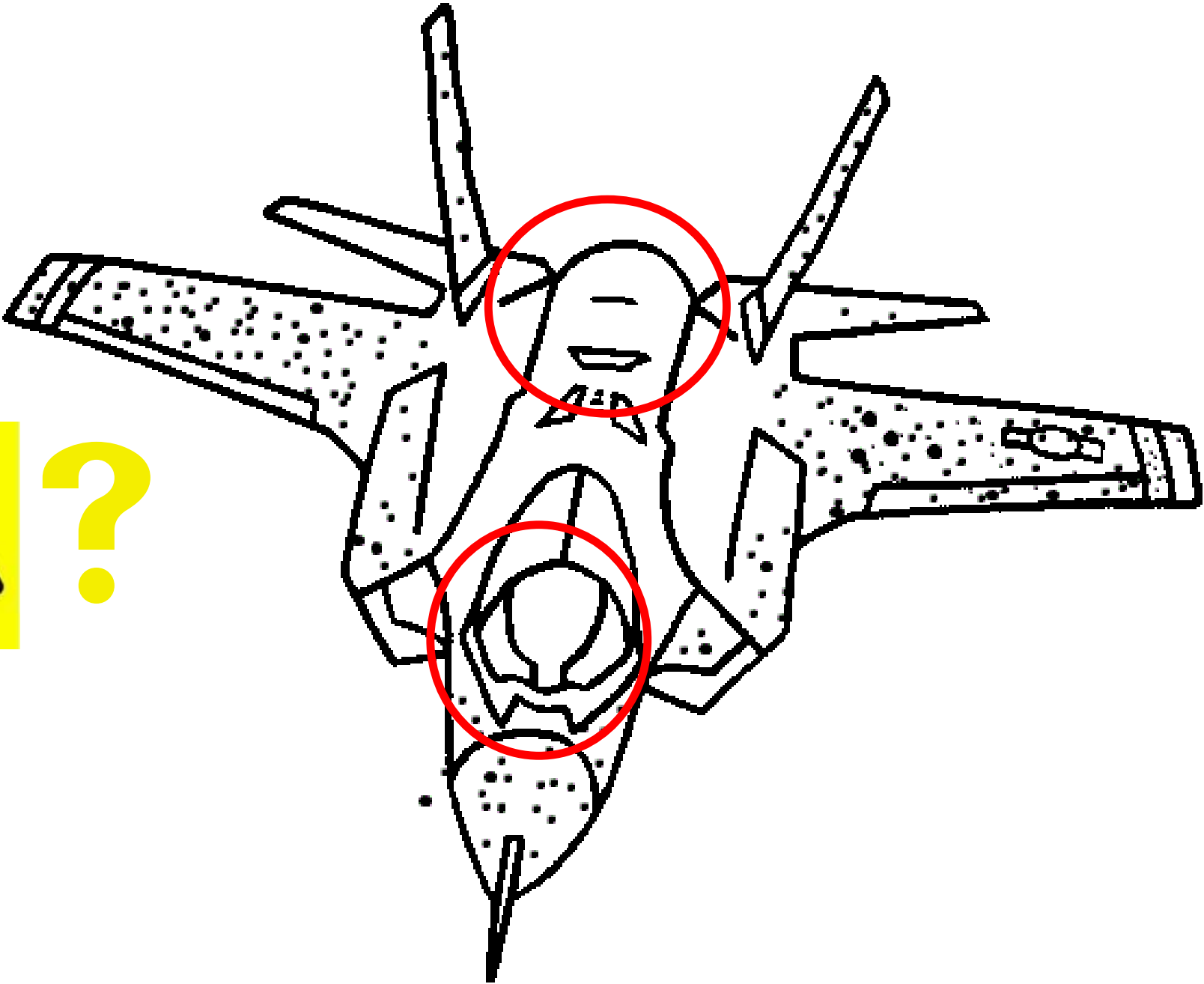
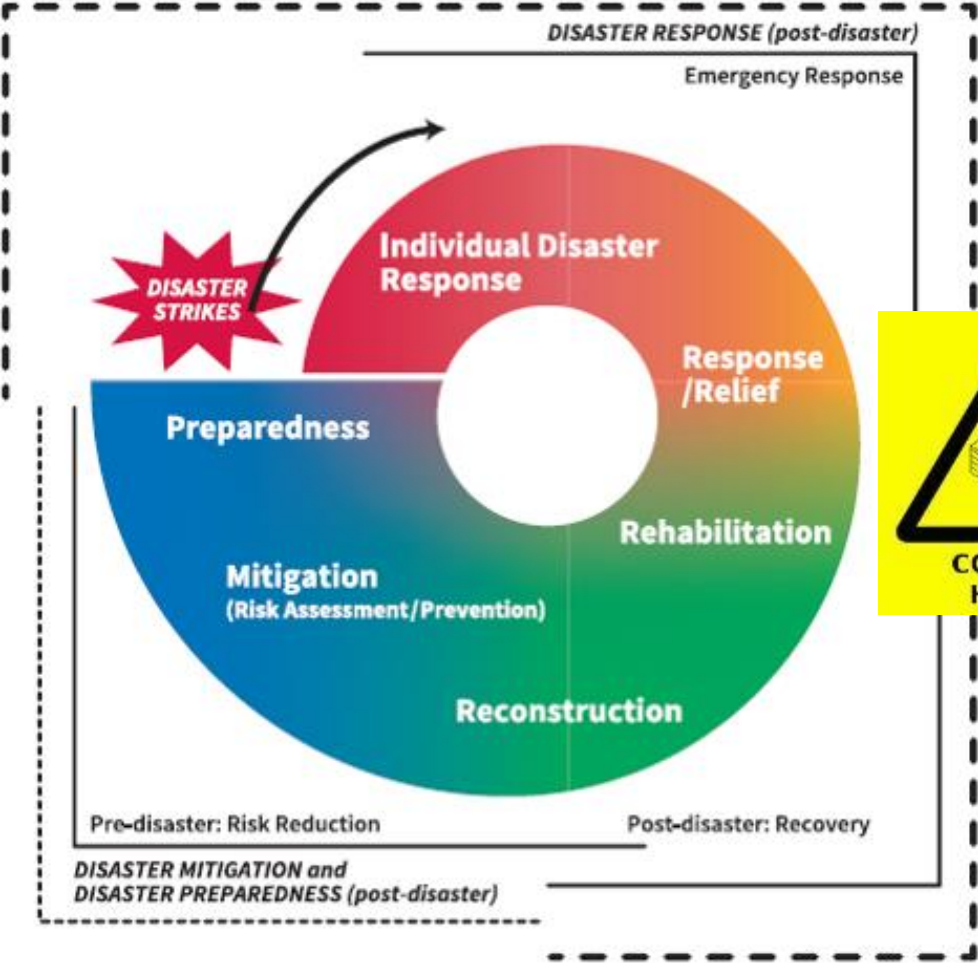
# A Changing Metrics of Risk

- We can no longer use the past as a reliable indicator of the future: Need for adaptive, anticipatory planning that seeks to identify the **drivers of risk**
- **Changing risk metrics**



# A Changing Paradigm of Disaster Risk Management

*The classic 'disaster risk management cycle'*





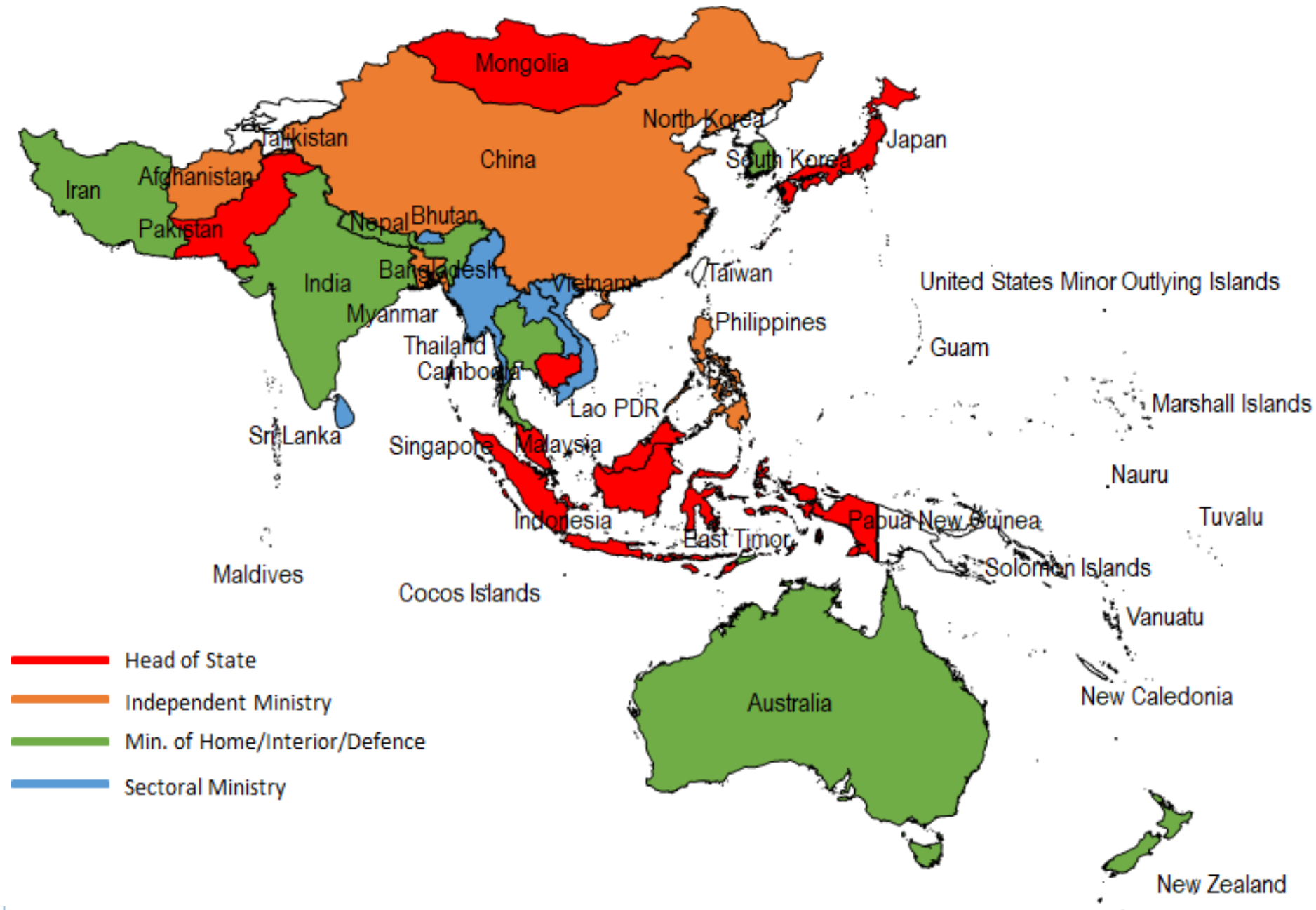


**are we ready to  
implement the new  
paradigm?**



# Institutional Landscape

- **Implementation through development plans, DRR plans, sectoral plans, hazard-specific plans**
- Horizontal: Varied levels of shared responsibilities
- **Vertical: Varied levels of devolved responsibilities**



# Towards System Risk Governance

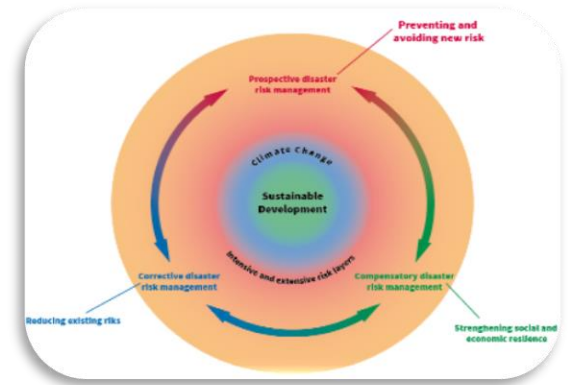
## “Innovation curve” – from destructive to regenerative approaches





# Financing Disaster Risk Reduction

- **International financing:**
  - Disaster risk reduction accounts for less than 5 percent of global ODA,
  - Post-shock assistance (response, reconstruction, relief and rehabilitation) receives 20 times the funding compared to prevention and preparedness
- **Public financing / Macroeconomics:**
  - Dedicated DRR funding?
  - Budgetary allocation a function of recent/last disasters
  - Sector-specific implementation – issues of financing and coordination
  - Local DRR funding
  - Issues of contingent liability
- **Private financing**
  - Role of business resilience

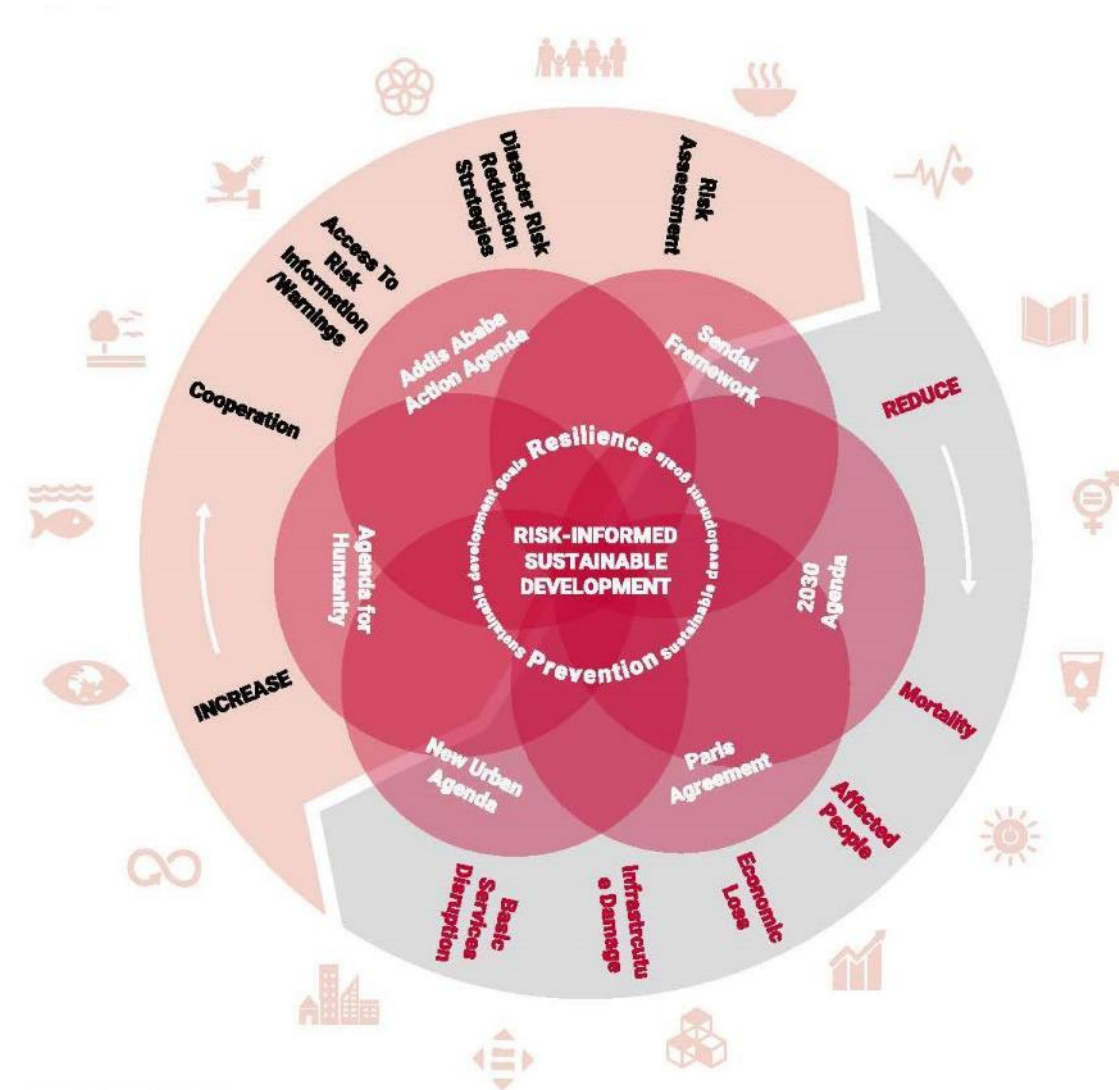


## Revisiting DRM cycle – Implementation and Financing

1. Corrective risk management:  
Mitigation / Early warning and preparedness
2. Compensatory risk management:  
Insurance, Risk Transfer, Risk Financing
3. Prospective risk management?
  - Drivers of risk

# Key Messages

- Appreciate the risk complexity and renew efforts to adopt a systems approach its understanding
- Apply the most appropriate or mix of risk management strategies in specific contexts
- Risk disclosure → Risk pricing
- Revisit public financing mechanism to invent means for financing prevention
- From 'Government' to 'Governance': A whole-of-government and whole-of-society approach
  - Inclusiveness
  - Localization
- Risk is everyone's business!



# Key Resources

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- ***Disaster Risk Reduction Terminology***

<http://www.preventionweb.net/english/professional/terminology/>

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

<http://www.preventionweb.net/drr-framework/sendai-framework>

- ***The Global Assessment Report 2019 with link to GARS 2013, 2011, 2009 & the Global Risk Atlas***

<http://www.preventionweb.net/gar/>

- ***Understanding Disaster Risk – based upon GARs 2009, 2011, 2013, 2015, UNISDR – including risk models, viewers and data***

<http://www.preventionweb.net/risk> and <http://risk.preventionweb.net/capreviewer>

- ***The Global Risks Report 2019, 14th Edition, World Economic Forum***

[http://www3.weforum.org/docs/WEF\\_Global\\_Risks\\_Report\\_2019.pdf](http://www3.weforum.org/docs/WEF_Global_Risks_Report_2019.pdf)

- ***Unbreakable, GFDRR, World Bank***

[https://www.gfdrr.org/sites/default/files/publication/Unbreakable\\_FullBook\\_Web-3.pdf](https://www.gfdrr.org/sites/default/files/publication/Unbreakable_FullBook_Web-3.pdf)

- ***View all UNISDR GETI National Workshop Recommended Reading and Sources:***

▪ <https://www.preventionweb.net/collections/geti-national/>





## 2020 ASIA-PACIFIC MINISTERIAL CONFERENCE ON DISASTER RISK REDUCTION

23-26 JUNE, BRISBANE

# Thank you

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