

# Understanding Disaster Risk: Concepts, Trends and Coherence in Disaster Risk Reduction

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# UNDRR

UN Office for Disaster Risk Reduction



## SENDAI FRAMEWORK

FOR DISASTER RISK REDUCTION 2015-2030

With the support of



Ministry of  
the Interior and Safety



Incheon  
Metropolitan City





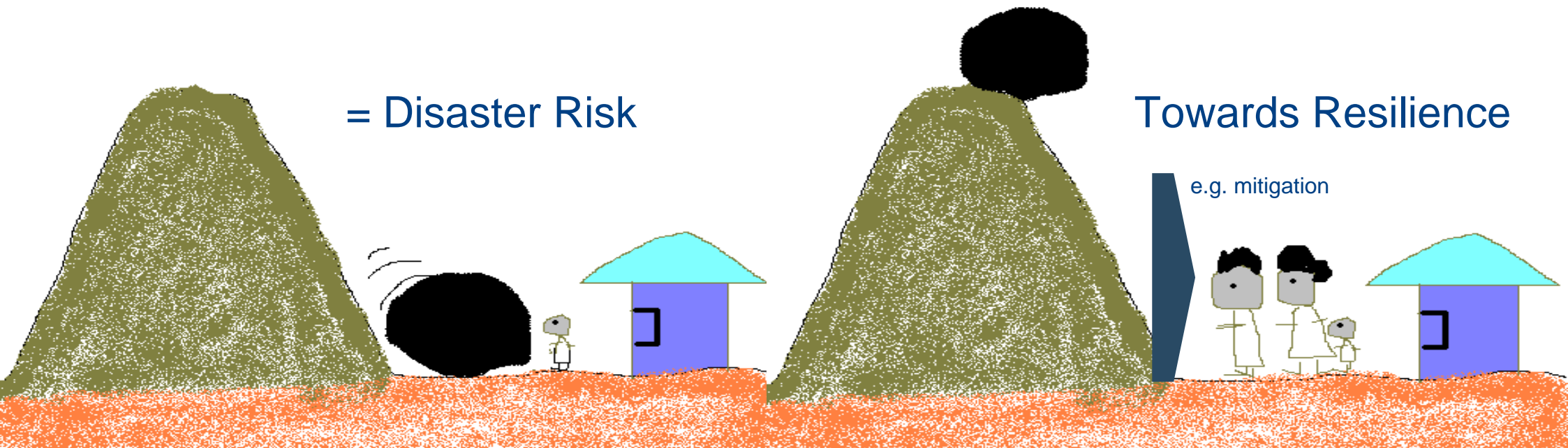
# DRR Concepts

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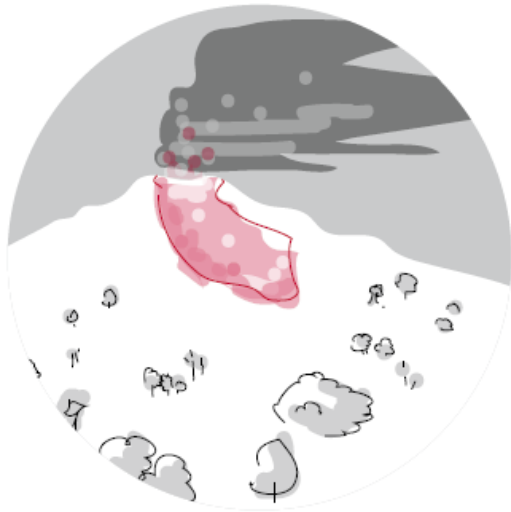


# a simple picture of disaster risk



# Understanding Risk

## Risk and the context of hazard, exposure and vulnerability



There is no such thing as a **natural disaster**, only **natural hazards**



We make **choices** as to where we inhabit, how we build and what research we do



Risk is the combination of **hazard, exposure** and **vulnerability**



**Death, loss** and **damage** is the function of the context of hazard, exposure and vulnerability



Disasters are not natural







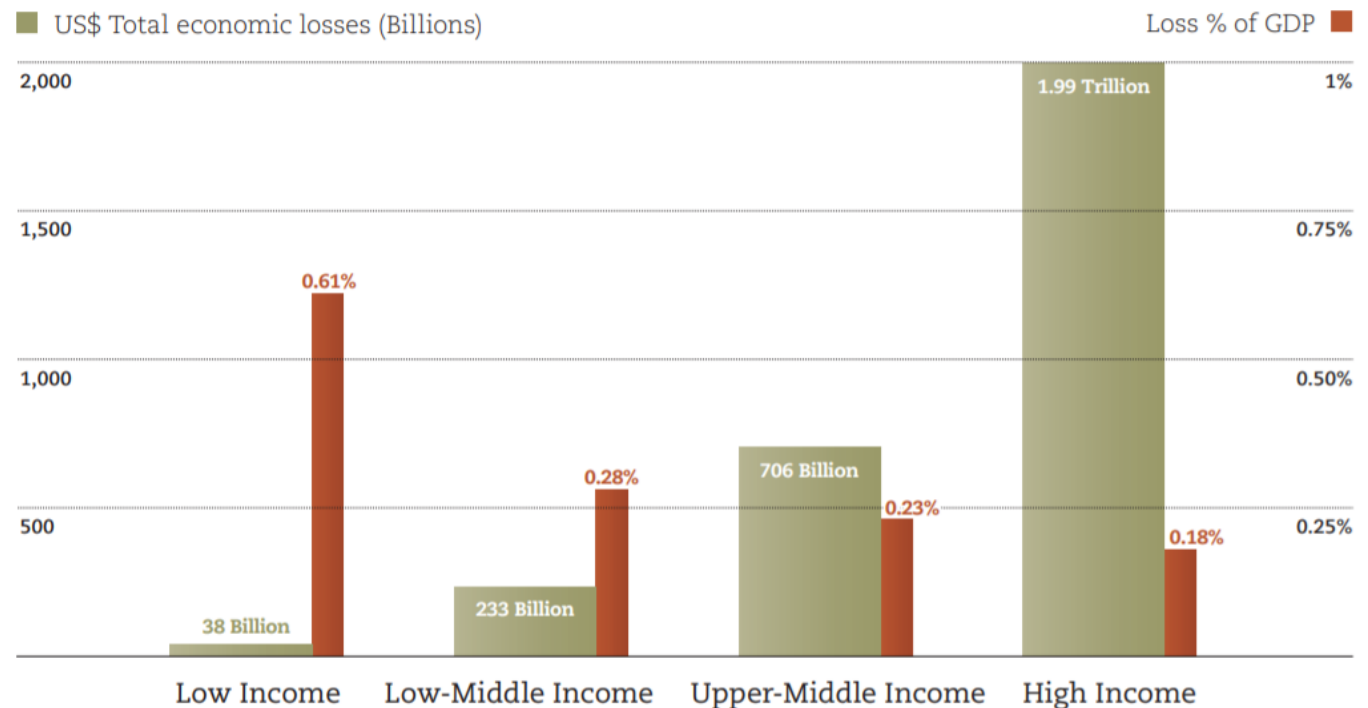
# Disaster Trends

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## Impact in numbers

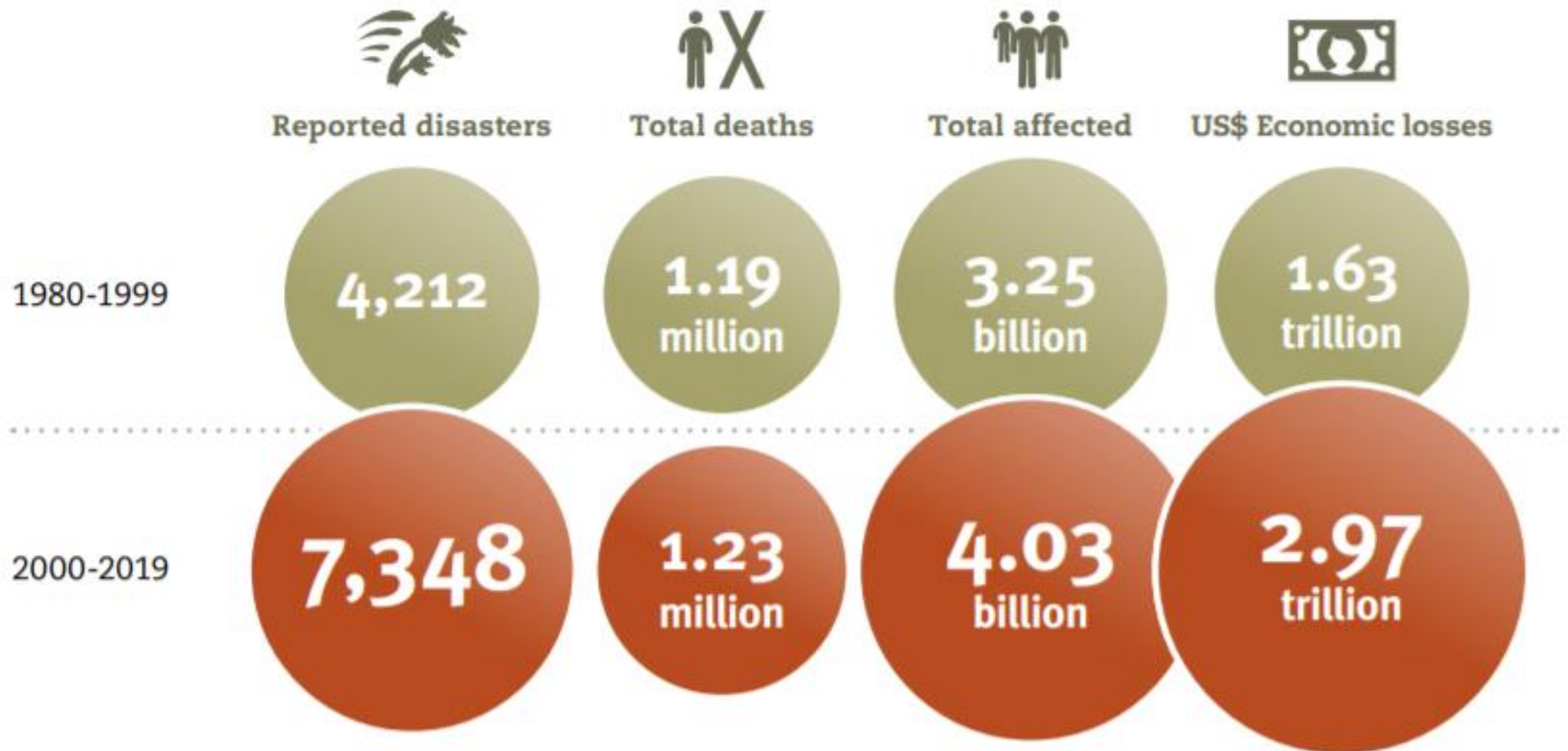
# Climate and disaster risk – driving inequality and crises

- Hazards and climate change do not affect everyone equally – and never have.
- Climate and disaster risks do not exist in a vacuum – they exacerbate existing vulnerabilities, other risks and can be exacerbated by instability and shocks.





# The Growing Human Cost of Disasters: Disaster ~~Loss~~





# WEF Global Risk Report

## Perceptions of Risk: Top 5 Global Risks in Terms of Likelihood





# WEF Global Risk Report

## Perceptions of Risk: Top 5 Global Risks in Terms of Impact

	1st	2nd	3rd	4th	5th	6th	7th
2021	Infectious diseases	Climate action failure	Weapons of mass destruction	Biodiversity loss	Natural resource crises	Human environmental damage	Livelihood crises
2020	Climate action failure	Weapons of mass destruction	Biodiversity loss	Extreme weather	Water crises		
2019	Weapons of mass destruction	Climate action failure	Extreme weather	Water crises	Natural disasters		
2018	Weapons of mass destruction	Extreme weather	Natural disasters	Climate action failure	Water crises		
2017	Weapons of mass destruction	Extreme weather	Water crises	Natural disasters	Climate action failure		
2016	Climate action failure	Weapons of mass destruction	Water crises	Involuntary migration	Energy price shock		
2015	Water crises	Infectious diseases	Weapons of mass destruction	Interstate conflict	Climate action failure		





Development  
disrupted

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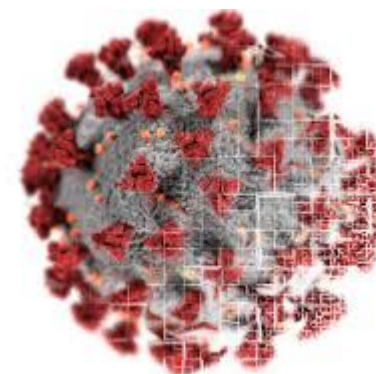
# A Changing Environment

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- **Intensifying** disaster **trends** & more **frequent** events
- **Resource scarcity** and degradation (land, water, food, energy, biodiversity)
- Increasing risk of “unchecked” **urbanization** coupled with **high exposure** of population and assets in high risk areas.
- Increasing **governance challenges**, coordination, accountability, legislations, institutional mechanisms, migration, conflict, all affecting human security
- **Equity, poverty, inclusion** – all being fundamental development challenges contributing to vulnerability
- Inter-dependency and **complexity of risk drivers**
- **Climate change** [extreme events, slow onset disasters (drought)]

## ‘New’ Hazards: Impact of COVID-19

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- COVID-19 is likely to cause the **first increase in global poverty since 1998**, when the Asian Financial Crisis hit.
- In 2020, **COVID-19** is threatening cities and communities, **endangering not only public health, but also the economy and the fabric of society**.
- The World Bank estimates that COVID-19 is pushing between **88 and 115 million people into extreme poverty in 2020 and as many as 150 million by 2021**.
- Many of these “**new poor**” will be people living in cities and who are **self-employed**, mostly working in **the informal sector**.
- **Cities are on the front line** of coping with the pandemic and its lasting impacts.



# Multiple Breadbasket Failure

## CURRENT CONTEXT

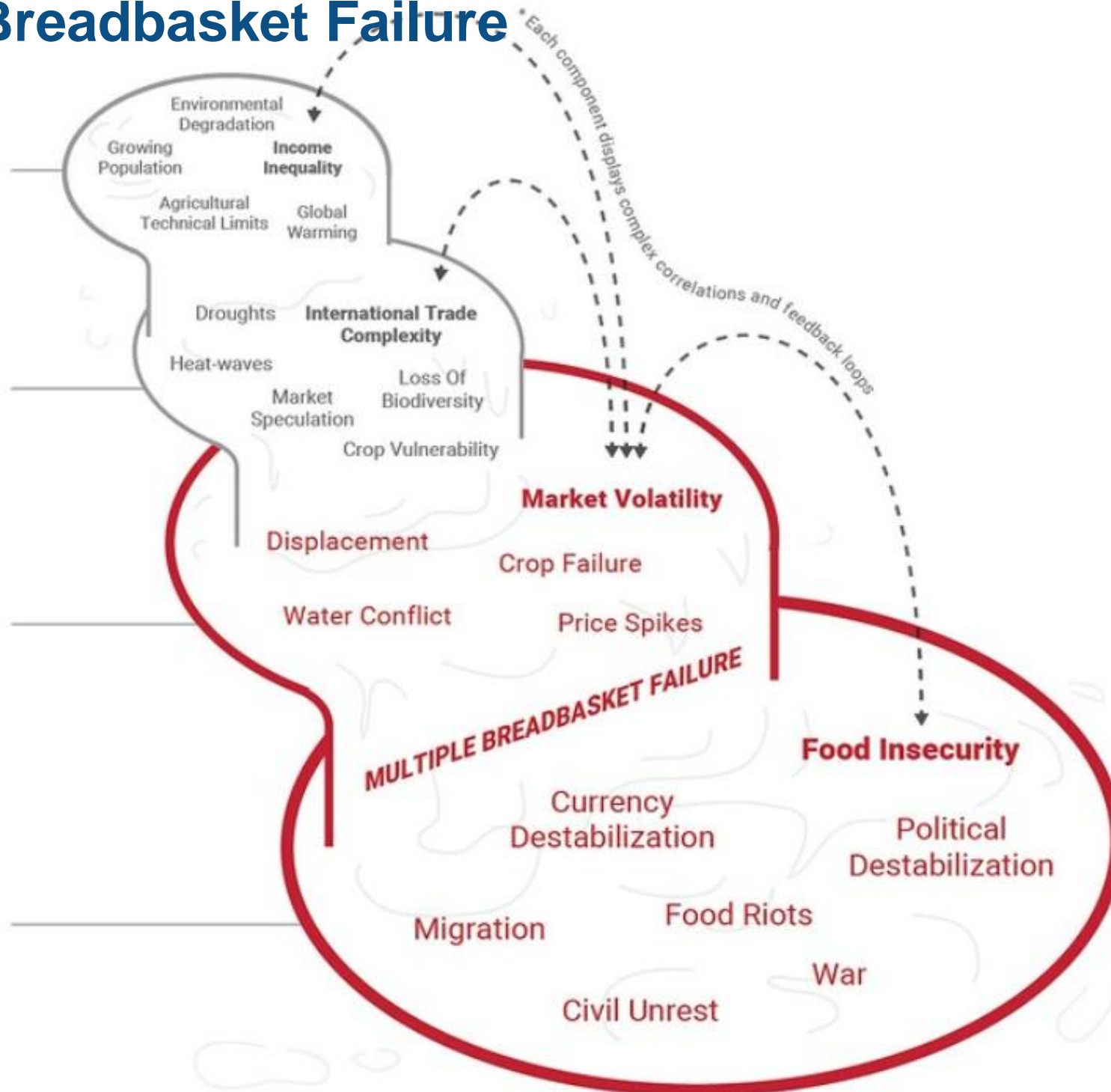
Capacity to absorb negative events is being reduced slowly (e.g. population growth pushing the limits of agricultural technology)

## BUILDING STRESSORS

## SUDDEN AND GRADUAL TIPPING POINTS

An event of great magnitude or multiple failures at the same time could suddenly exceed all remaining capacity

## SYSTEMIC FAILURE



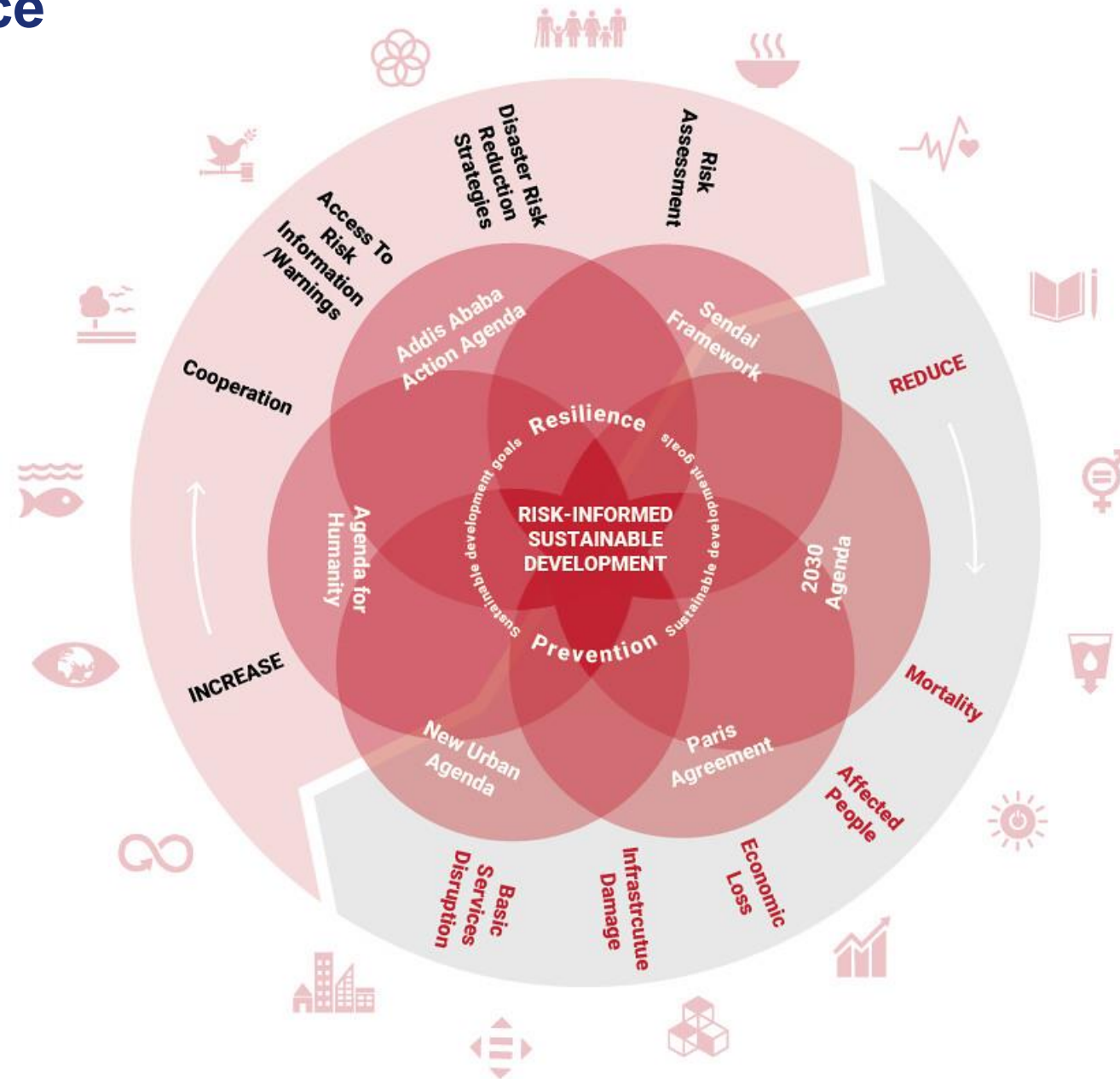
# Towards System Risk Governance

“Innovation curve” – from destructive to regenerative approaches





# Risk-informed Sustainable Development: Integrated Risk Governance



# **Recommendations to integrate climate change adaptation, sustainable development and disaster risk reduction**

- **Using the process to formulate and implement national adaptation plans** as a framework for practical integration of the three post-2015 agendas across various sectors and levels of governance;
- **Joint decision-making processes, tools, metrics and strategies;**
- **Ensuring that relevant data, science and knowledge**, including traditional knowledge, is generated and made available to inform progress collectively across the agendas;
- **Working in coordination, collaboration and cooperation** with all relevant stakeholders, including local governments and communities, to ensure that the three agendas are successfully achieved with complementarity and efficiency of efforts;
- **Taking a systems approach** to integrating efforts and looking for cross-cutting entry points such as risk management.



## **Discussion**

**What are the goals and targets of key national policies other than the DRR strategy?**

e.g. the national development plan, sectoral plans, Nationally Determined Contributions (NDCs) and climate change adaptation plans, the national security plan, health emergency plans

**Can disaster risk jeopardize any of them?**

# Key Resources

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**Disaster Risk Reduction Terminology** <https://www.undrr.org/terminology>

**Sendai Framework for Disaster Risk Reduction 2015-2030, UN** <https://www.undrr.org/implementing-sendai-framework/what-sf>

**The Global Assessment Report 2019 with link to 2017 Global Risk Atlas & 2013, 2011, 2009 GARs**  
<https://gar.undrr.org>

**Understanding Disaster Risk** <https://www.preventionweb.net/understanding-disaster-risk>

**The Global Risks Report 2020, 14th Edition, World Economic Forum**  
<https://www.weforum.org/reports/the-global-risks-report-2020>

**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)

**Words Into Action**, including National and Local DRR Strategies, Disaster Displacement and Nature-based Solutions <http://www.preventionweb.net/sendai-framework/words-into-action>

**View all UNDRR GETI National Workshop Recommended Reading and Sources on PreventionWeb:**  
<https://www.preventionweb.net/collections/geti-national>



# Thank You

**UNDRR**

**Global Education and Training Institute (GETI)**

4F Songdo G-Tower,  
175 Art Center-daero,  
Yeonsu-gu, Incheon  
Republic of Korea