

13 OCTOBER

**INTERNATIONAL DAY  
FOR DISASTER RISK REDUCTION**

**International cooperation for  
developing countries to reduce their  
disaster risk and disaster losses**

**#DRRDay #OnlyTogether**

# **Understanding Disaster Risks and Management**



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# Key Messages in understanding disaster risks and DRR

Disaster Risks are becoming more complex

Reducing the vulnerability and increasing the resilience are the key DRR strategies

Participation of multiple stakeholders including the community is the key

Disaster Risk Reduction should be part of overall development planning and development projects

Disaster Risk Reduction needs a holistic and multidisciplinary approach

# Global Policy Frameworks

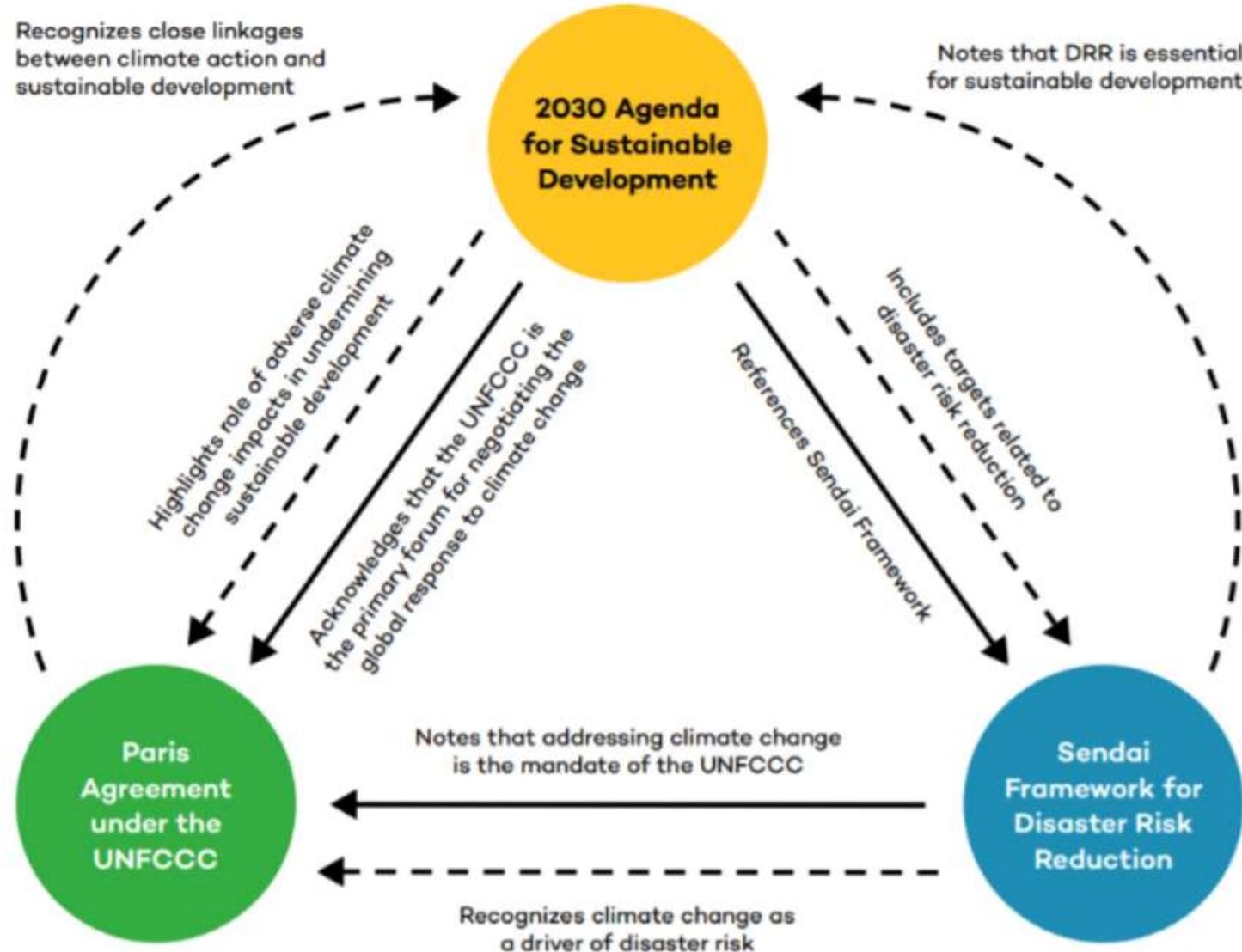


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# Sendai Framework



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## 1 OUTCOME

The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries

## 1 GOAL

Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience

## 4 PRIORITIES

Understanding disaster risk

Strengthening disaster risk governance to manage disaster risk

Investing in disaster risk reduction for resilience

Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation and reconstruction

## 7 TARGETS

- ↓ DISASTER MORTALITY BY 2030
- ↓ NUMBER OF AFFECTED PEOPLE BY 2030
- ↓ ECONOMIC LOSS BY 2030
- ↓ INFRASTRUCTURE DAMAGE BY 2030
- ↑ DRR NATIONAL/LOCAL STRATEGIES BY 2020
- ↑ INTERNATIONAL COOPERATION BY 2030
- ↑ EWS AND DR INFORMATION BY 2030

# DRR and SDGs



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Sendai Framework  
for Disaster Risk Reduction  
2015-2030

SUSTAINABLE  
DEVELOPMENT GOALS



Source:  
Preventionweb

# Disaster Phases

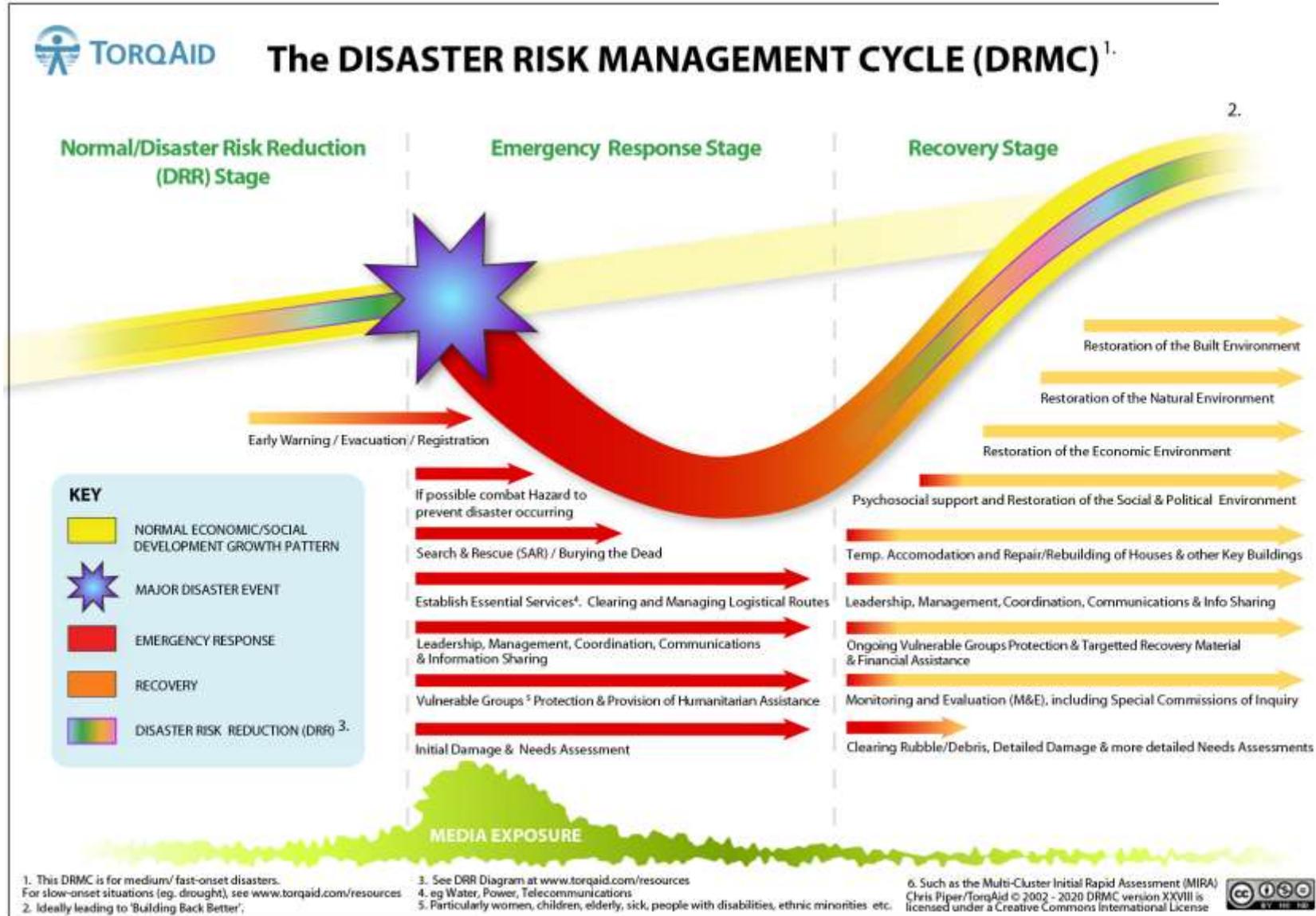


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# Understanding Disaster Risks and Management



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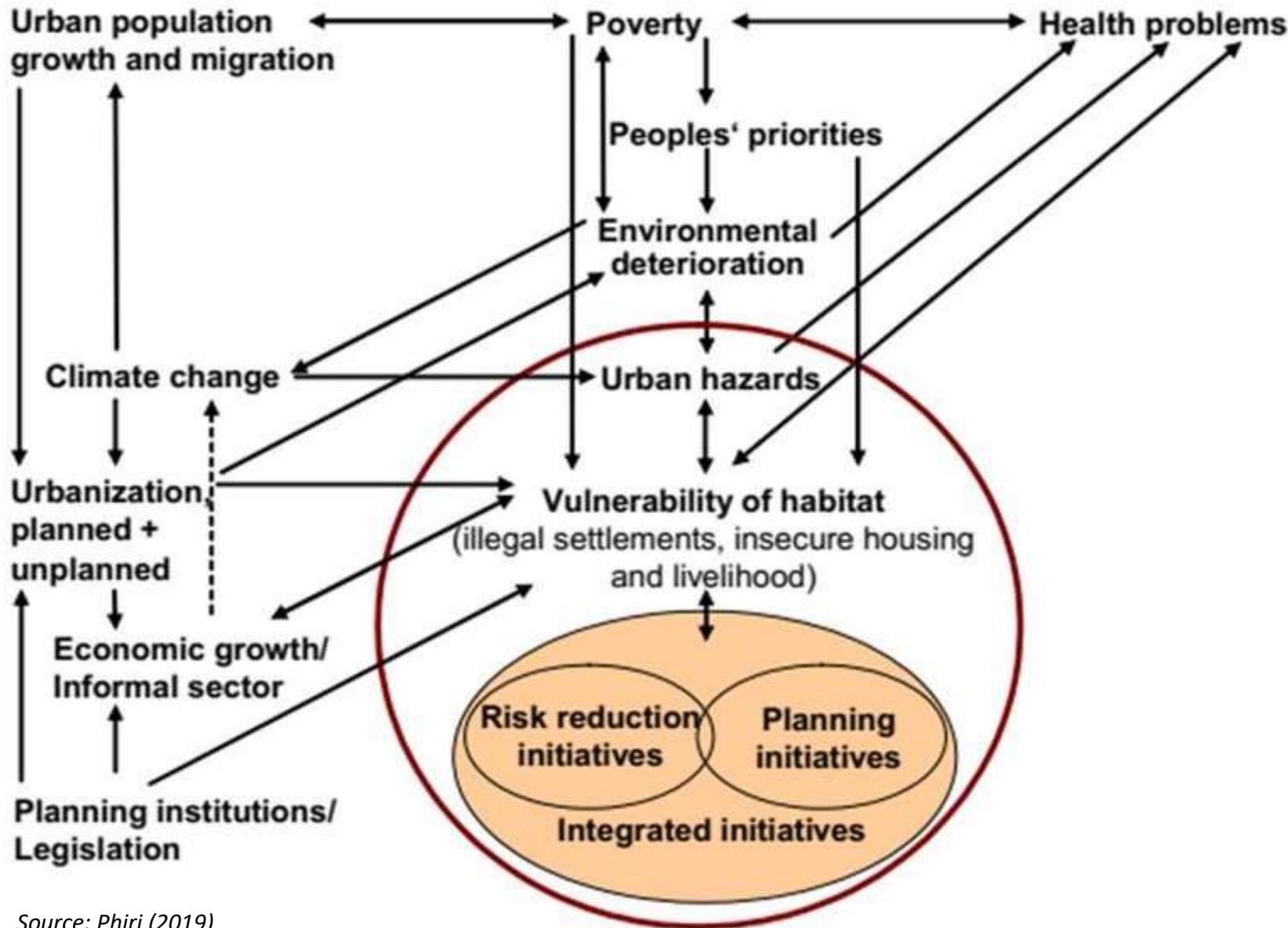
(Source: UNDRR 2019)



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**Risk is complex**

Source: Phiri (2019)

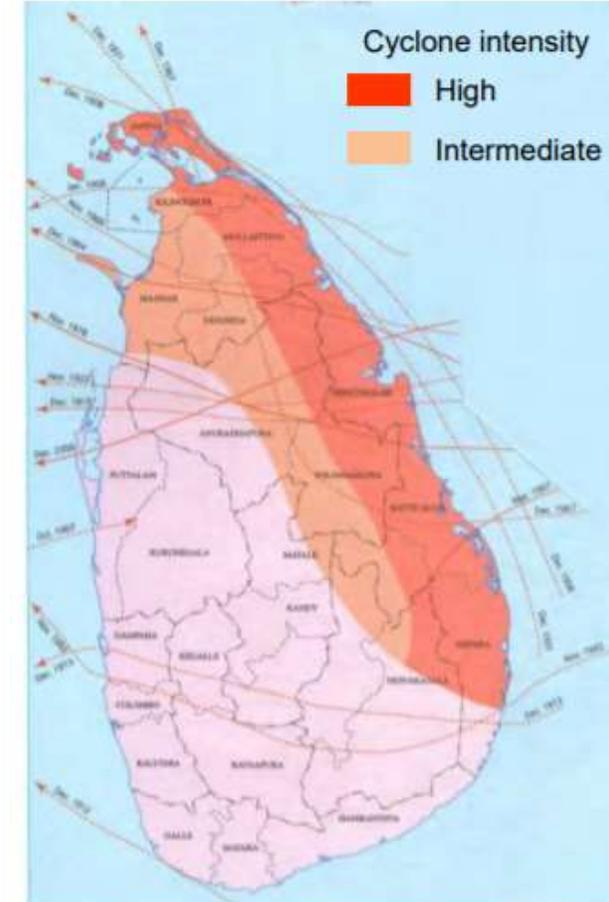
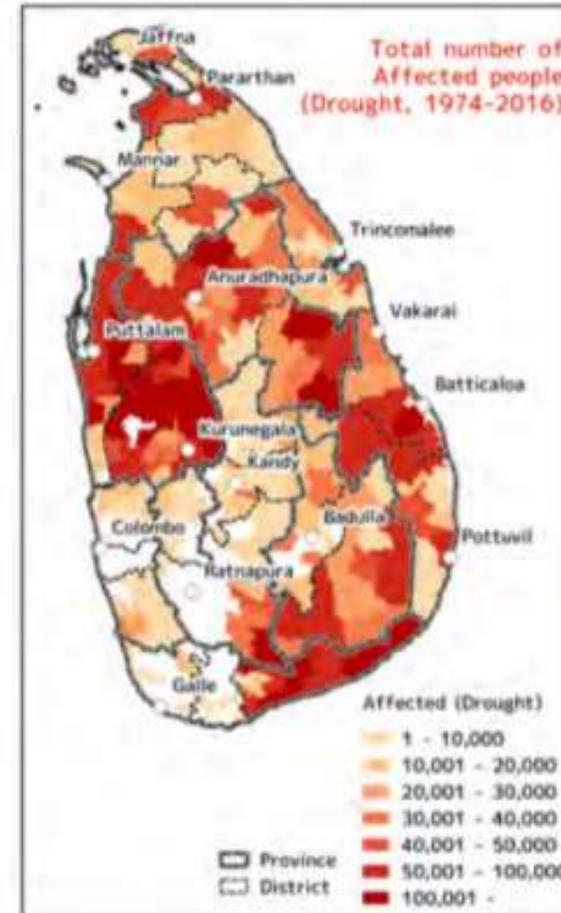
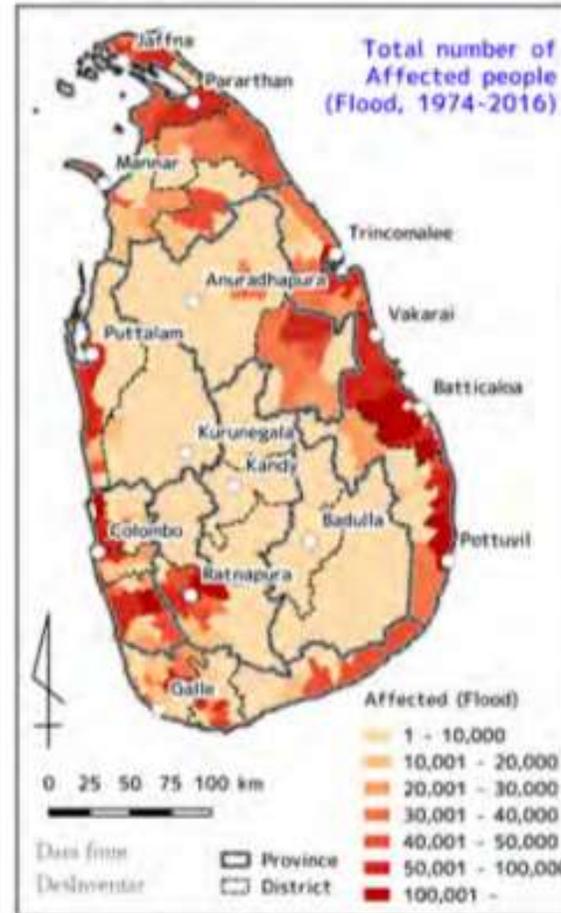
# Disaster Risks

# Flood & Drought + Cyclone /Tsunami



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# Ampara District

# Disaster Risks

# Flood & Drought + Cyclone /Tsunami

Sri Lanka:

17% of the population – Extreme climate hotspots

73% - moderate climate hotspots

(World Bank, 2018)



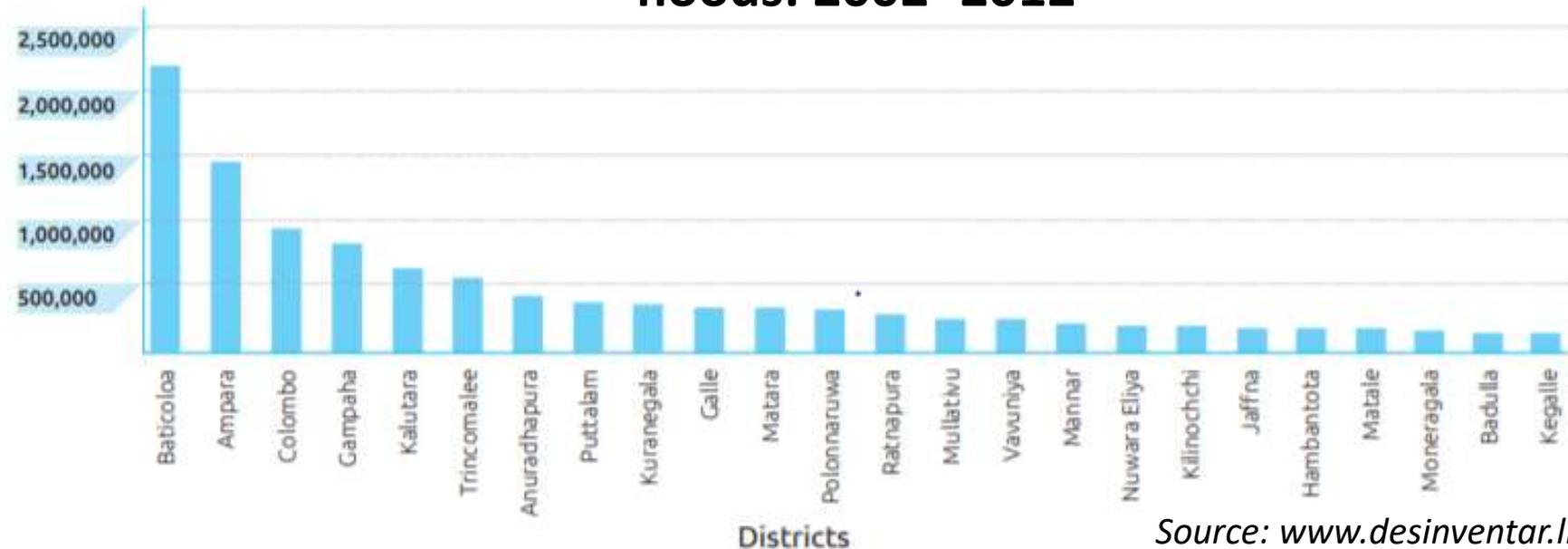
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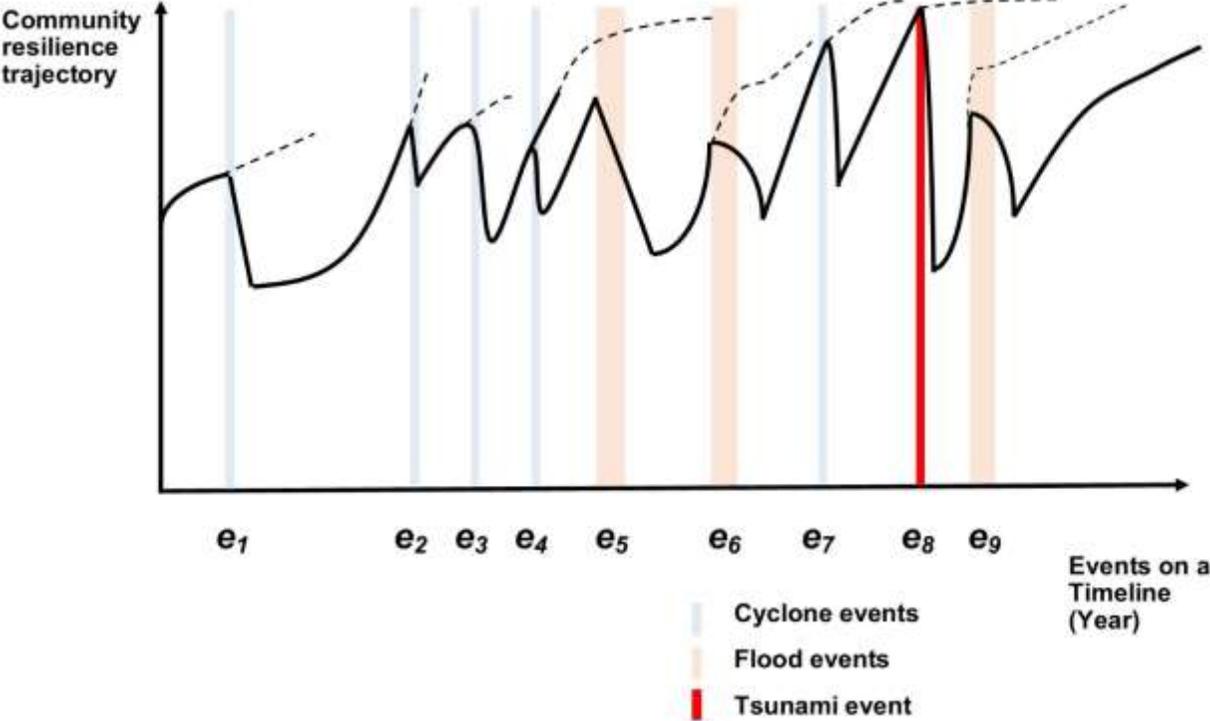
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**Cumulative number of people affected by floods: 2002 -2012**



Source: [www.desinventar.lk](http://www.desinventar.lk)

# Ampara District



Disaster	Disaster Event (Year/Date)	Description about the Disaster
----------	----------------------------	--------------------------------

Cyclone	1845	No historical records found.
	1891	Called "mini cyclone." No other records available.
	9 March 1907	Called "major cyclone," between midnight and 7 a.m. in the morning.
	1921	Mini cyclone.
	23 November 1978	Major cyclone, many houses were partially damaged and severe loss of livestock were reported.

Flood	1933	Flooding due to rain over the four-month period.
	December 1957	Major flood and severe damage to many infrastructures.
2010 (During December/January)	Minor flood due to heavy rain in the residential areas, major damage to paddy fields.	

Tsunami	26 December 2004	The worst disaster in the history of Sri Lanka
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Other	1935 famine	Due to no rain for more than six months, all paddy fields were abandoned leading to large scale famine.
	1917 epidemic	Later in 1940, 1970, 1980, and 2006 many different infectious diseases were reported.
	2020-21 COVID19 pandemic	COVID19 infectious disease started spreading in 2021 and had three severe waves

# Other risks to human lives/properties

**Drought**

**Heat waves**

**Sea erosion**

**Forest Fire**

**Air pollution**

**Epidemic/  
Pandemic**

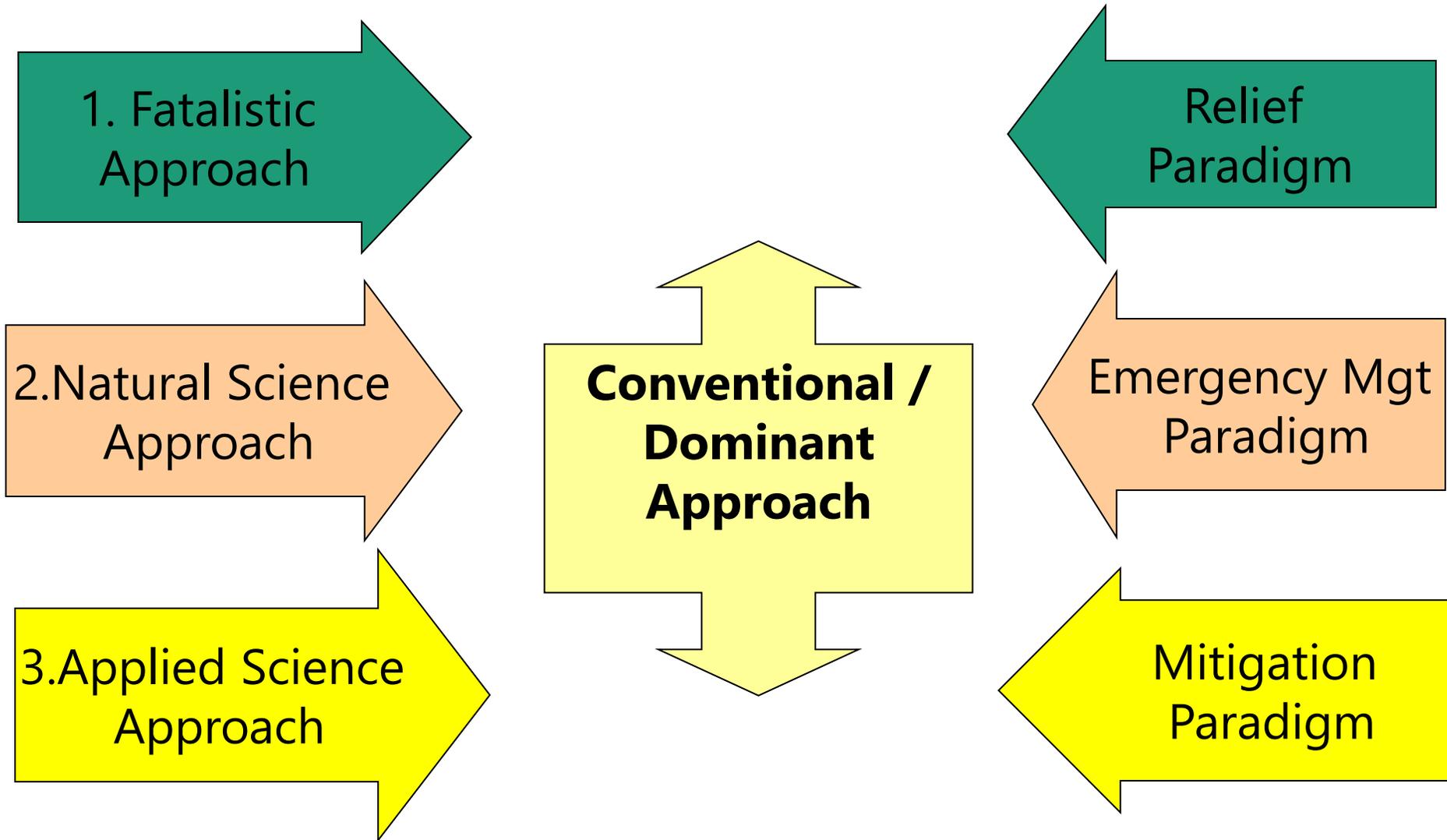
**Chronic Diseases  
(CKDu)**

**Industrial accidents/  
Fire**

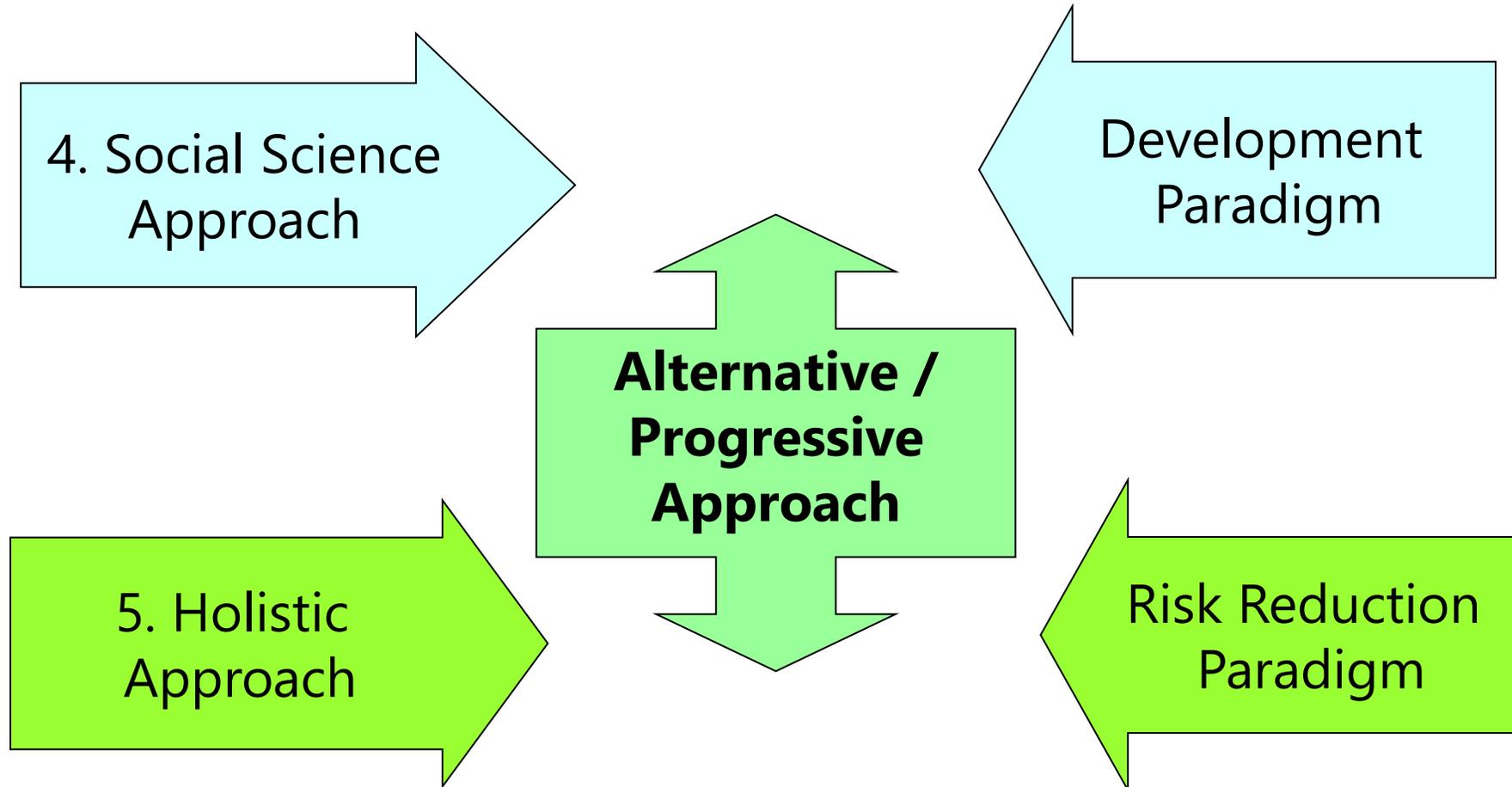
**Traffic Accidents**

**Human Elephant Conflict**

# Paradigm Shift in Disaster Management



# Paradigm Shift in Disaster Management





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“Build  
Back  
Better”



“Build  
Better  
Before”



Risk Reduction is  
integrated  
(Risk-Sensitive  
Development)

“Reducing Existing Risk”

“Prevent Creating New Risk”



#DRRday #Dr. AMA. Saja



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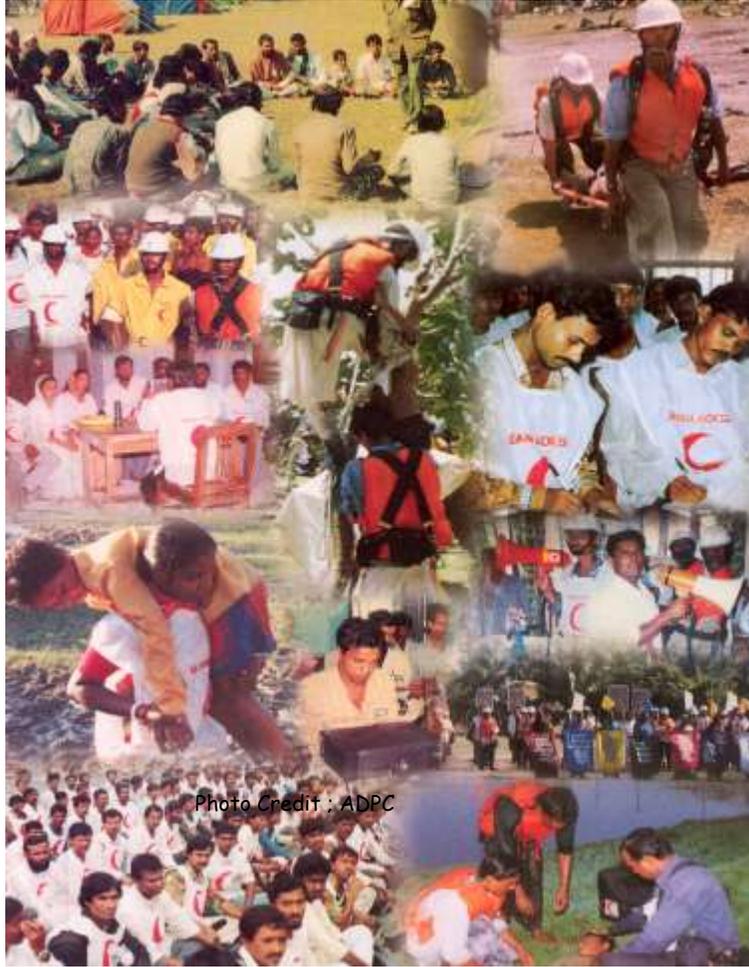
# Vulnerability

# Resilience



# Disaster Risk Reduction

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A broad range of activities designed to:

- Prevent the loss of lives
- Minimize human suffering
- Inform the public and authorities of risk
- Minimize property damage and economic loss
- Speed up the recovery process

Prevention –Mitigation -Preparedness

# Approaches to Disaster Risk Reduction (DRR)

Technology-based Disaster Risk Reduction

Ecosystem-based Disaster Risk Reduction

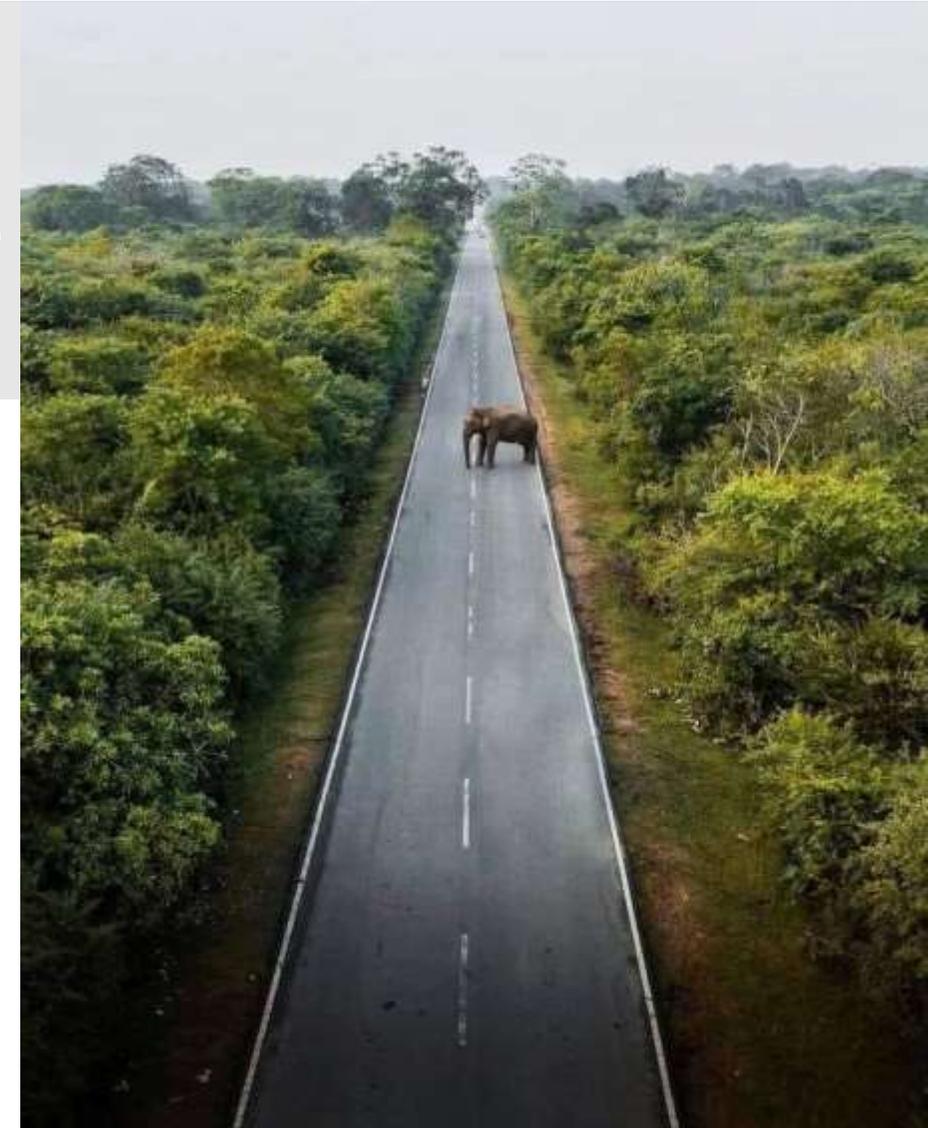
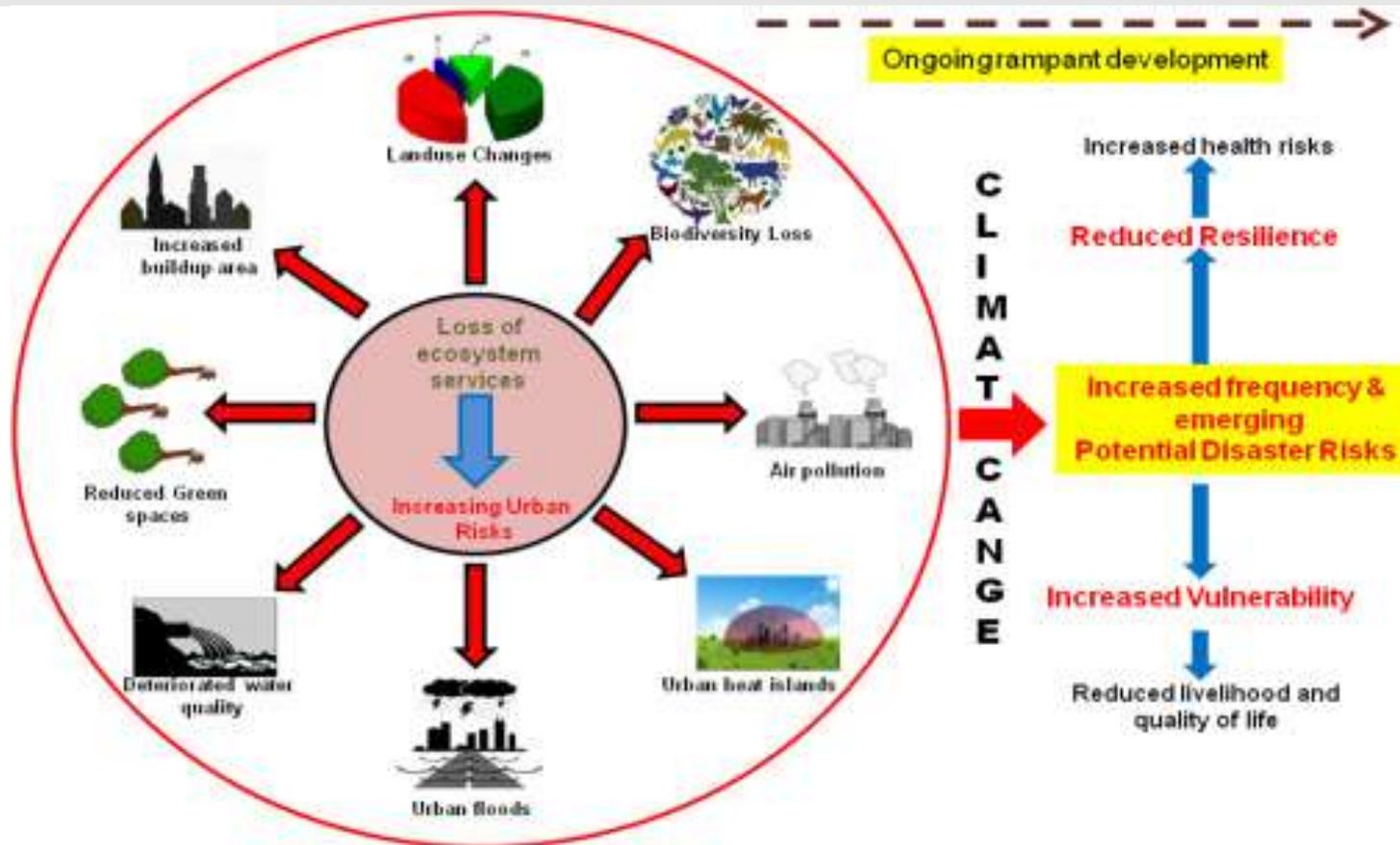
School-  
based DRR &  
Child-Led  
DRR

Community-  
based  
Disaster Risk  
Reduction

Risk-  
Sensitive  
Development

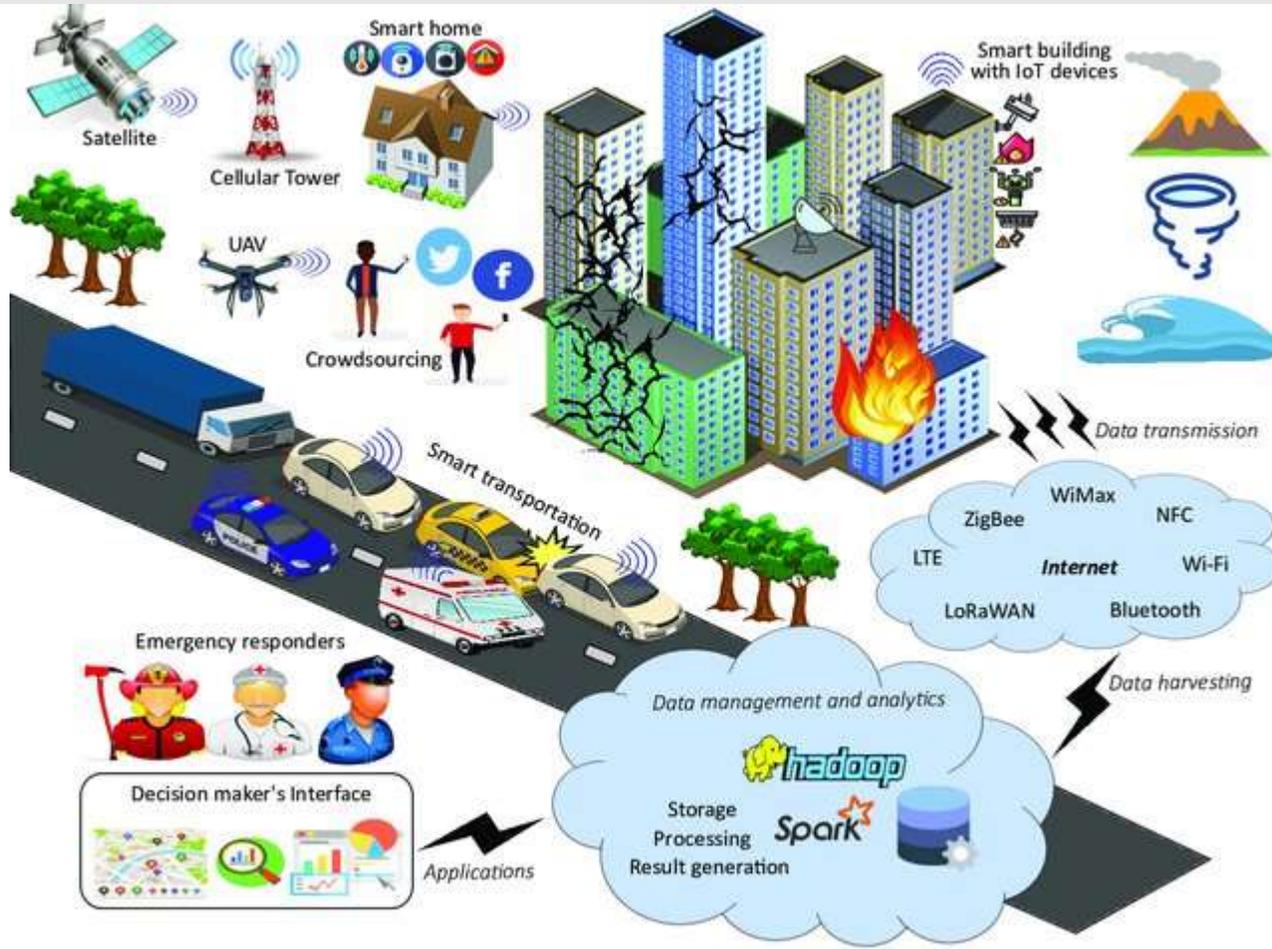
# Ecosystem-based Disaster Risk Reduction

Sustainable management, conservation and restoration of ecosystems to mitigate disaster risks, aims to accomplish sustainable and risk-sensitive development

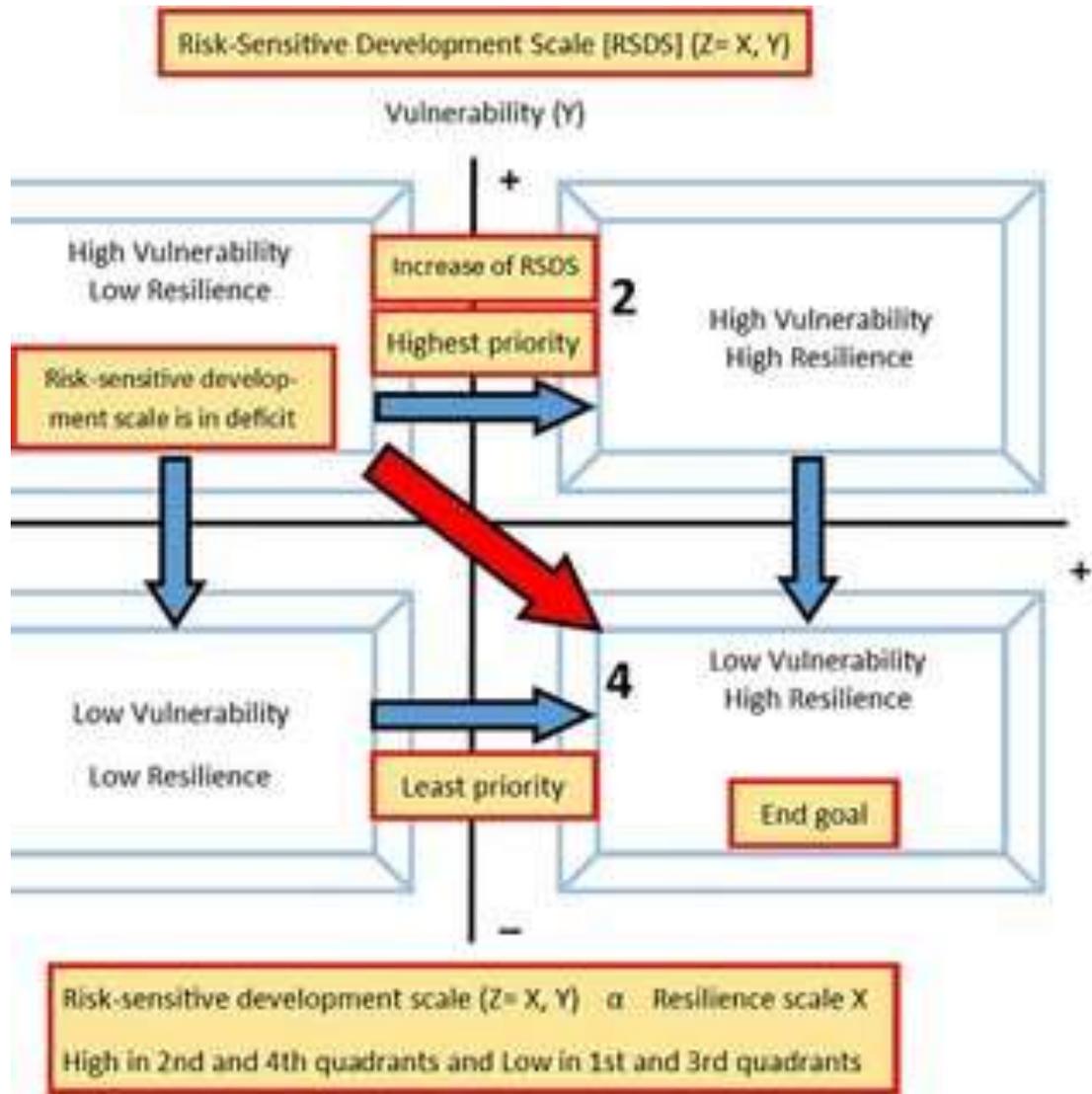


# Technology-based Disaster Risk Reduction

Science, Technology, and Innovation for disaster and risk resilience through the use of for example, low-cost sensors and application of Artificial Intelligence and advanced ICTs infrastructure



# Risk-sensitive Development



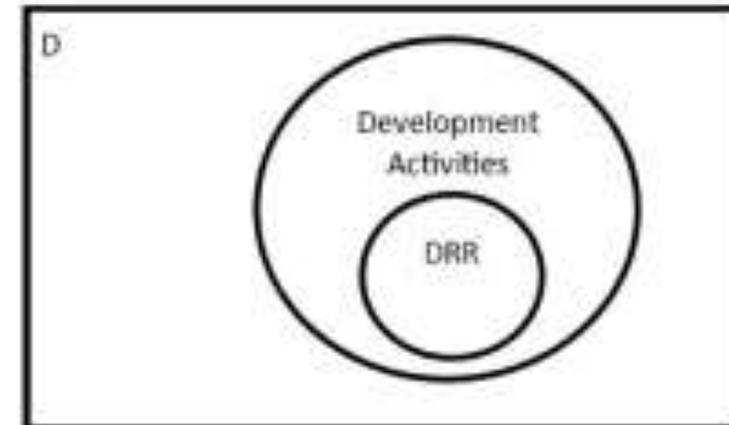
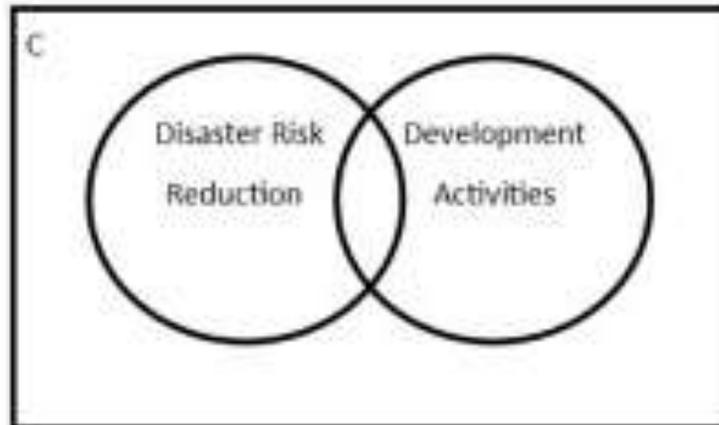
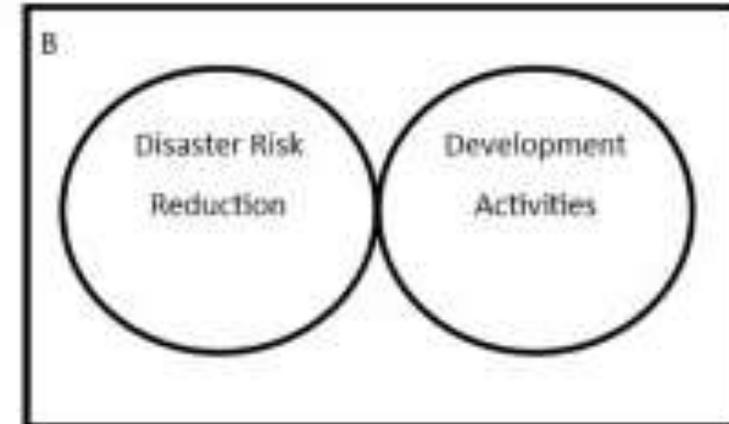
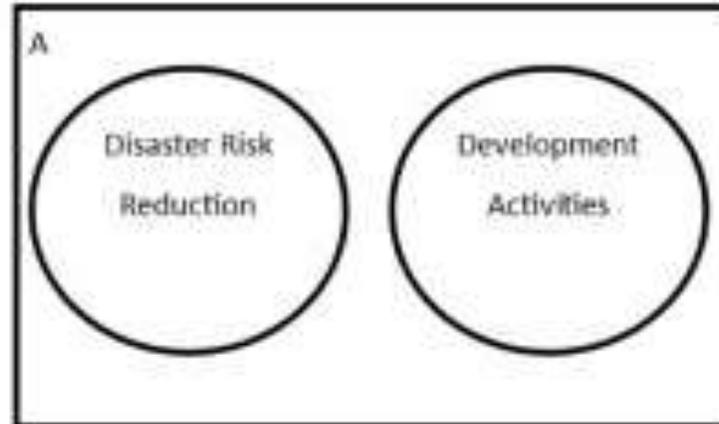
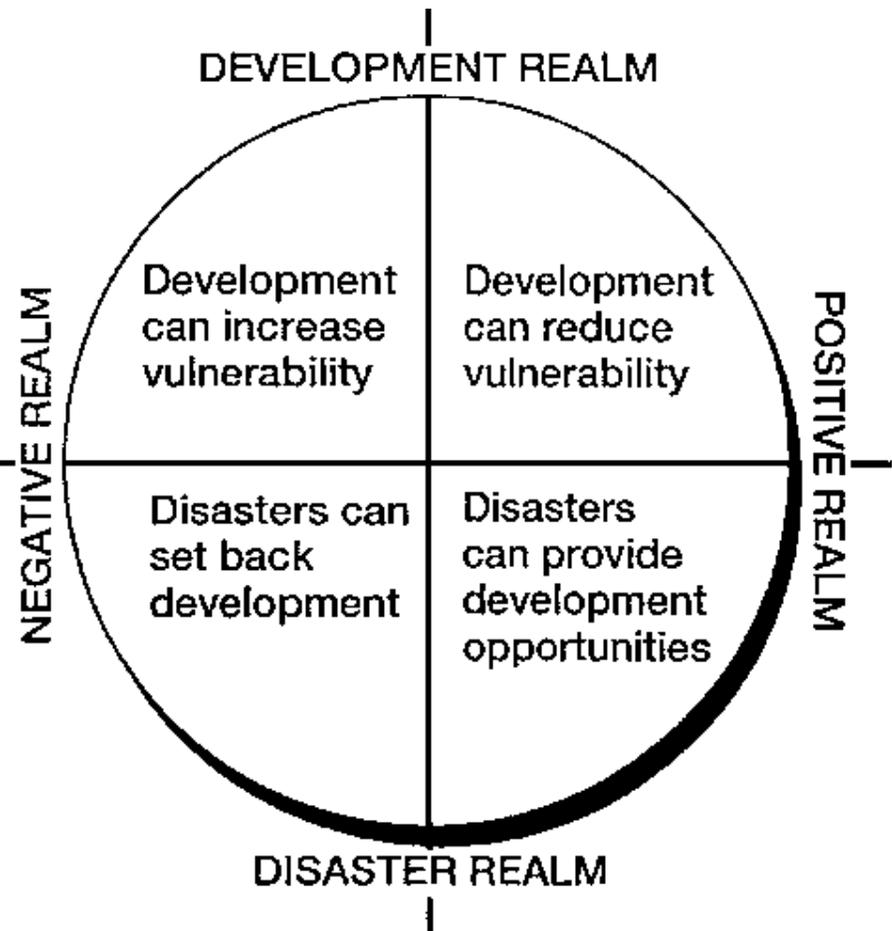
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# Risk-sensitive Development



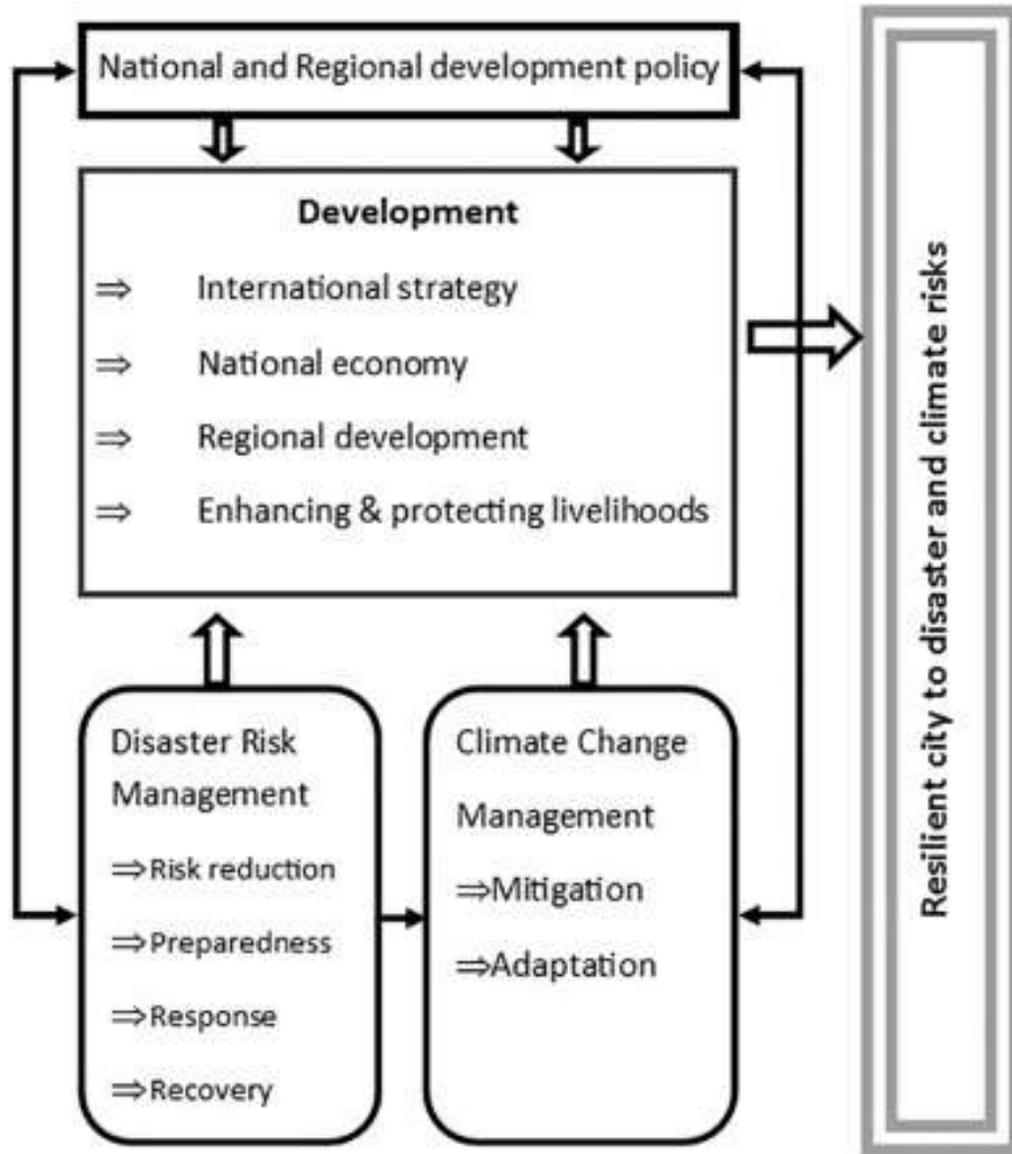
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# Risk-sensitive Development



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# Risk-sensitive Development

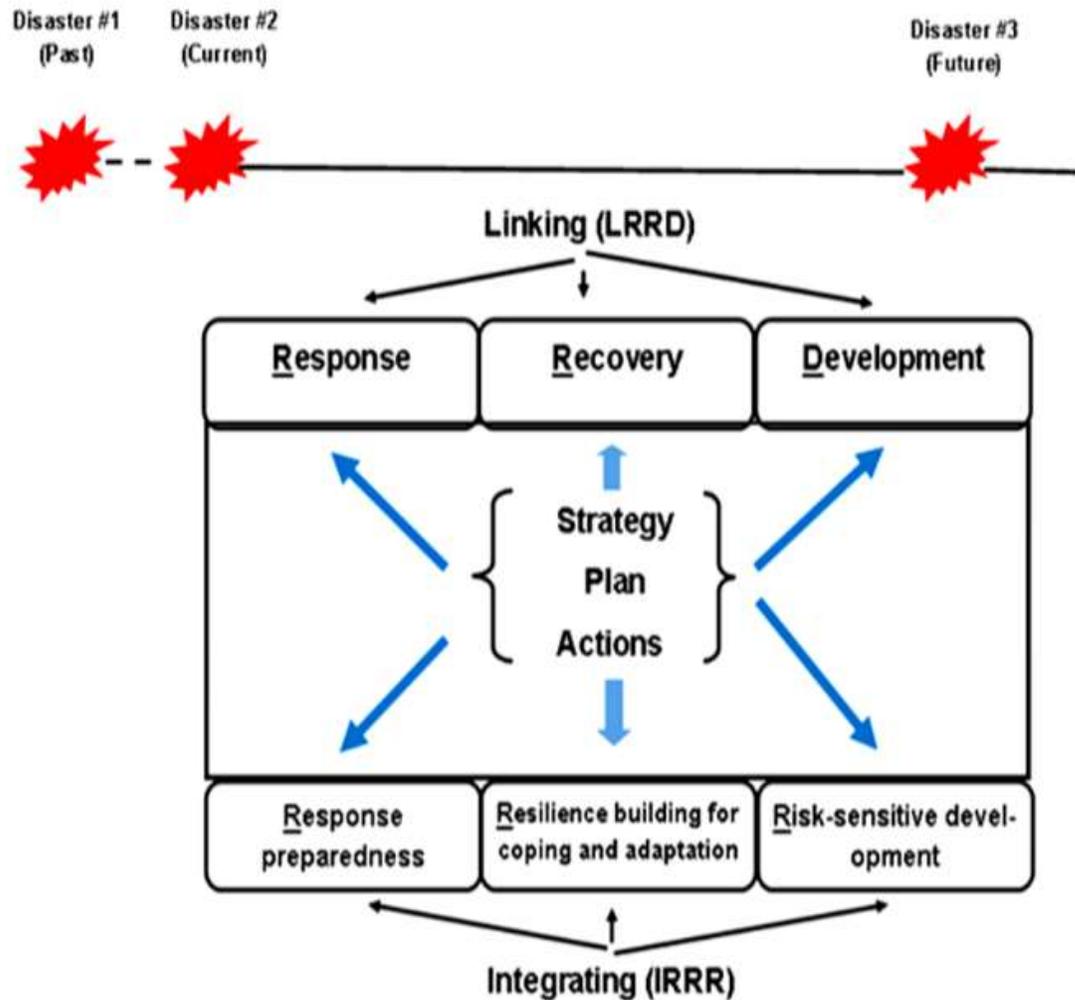
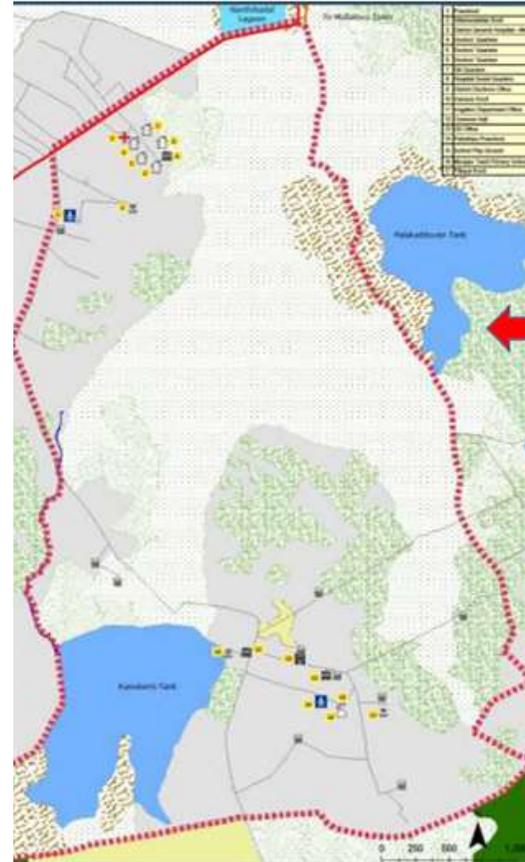


Figure 1: LRRD and IRRR framework in key disaster phases.



a



b



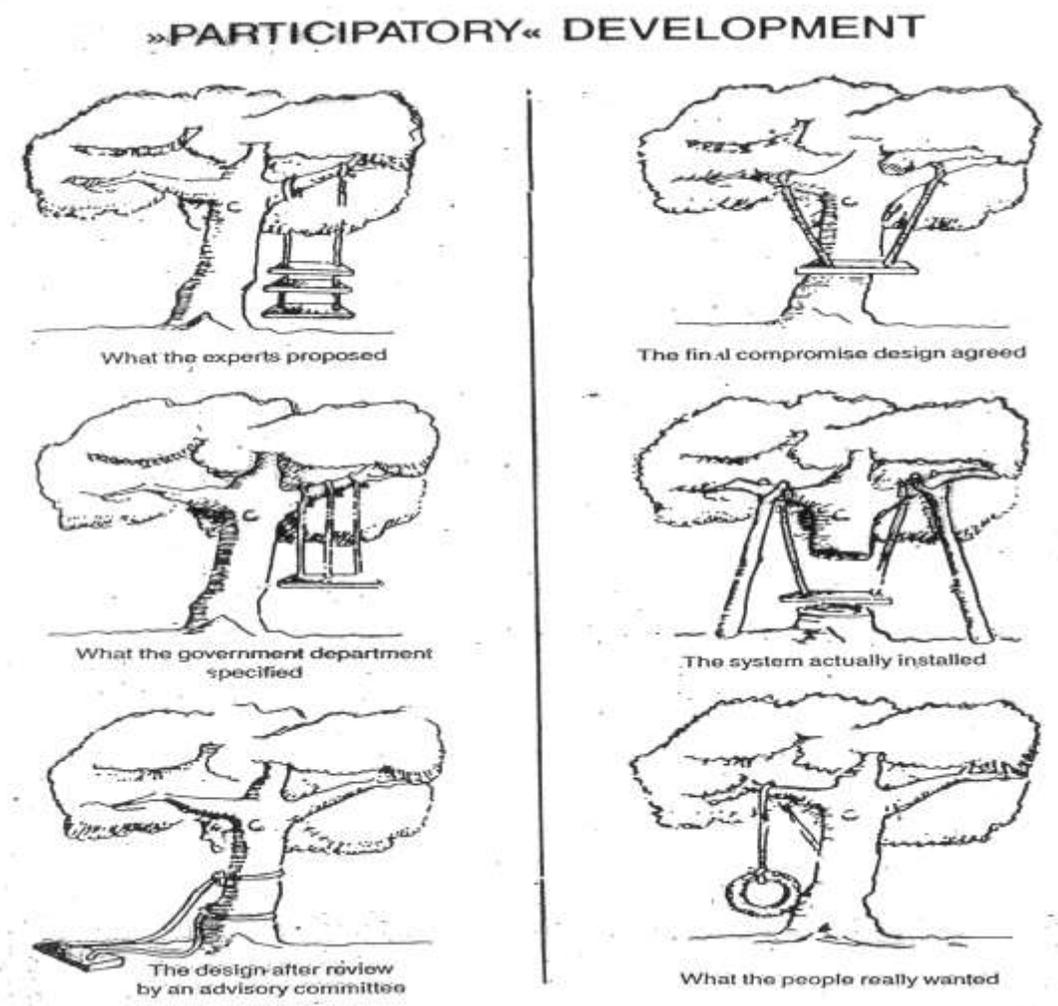
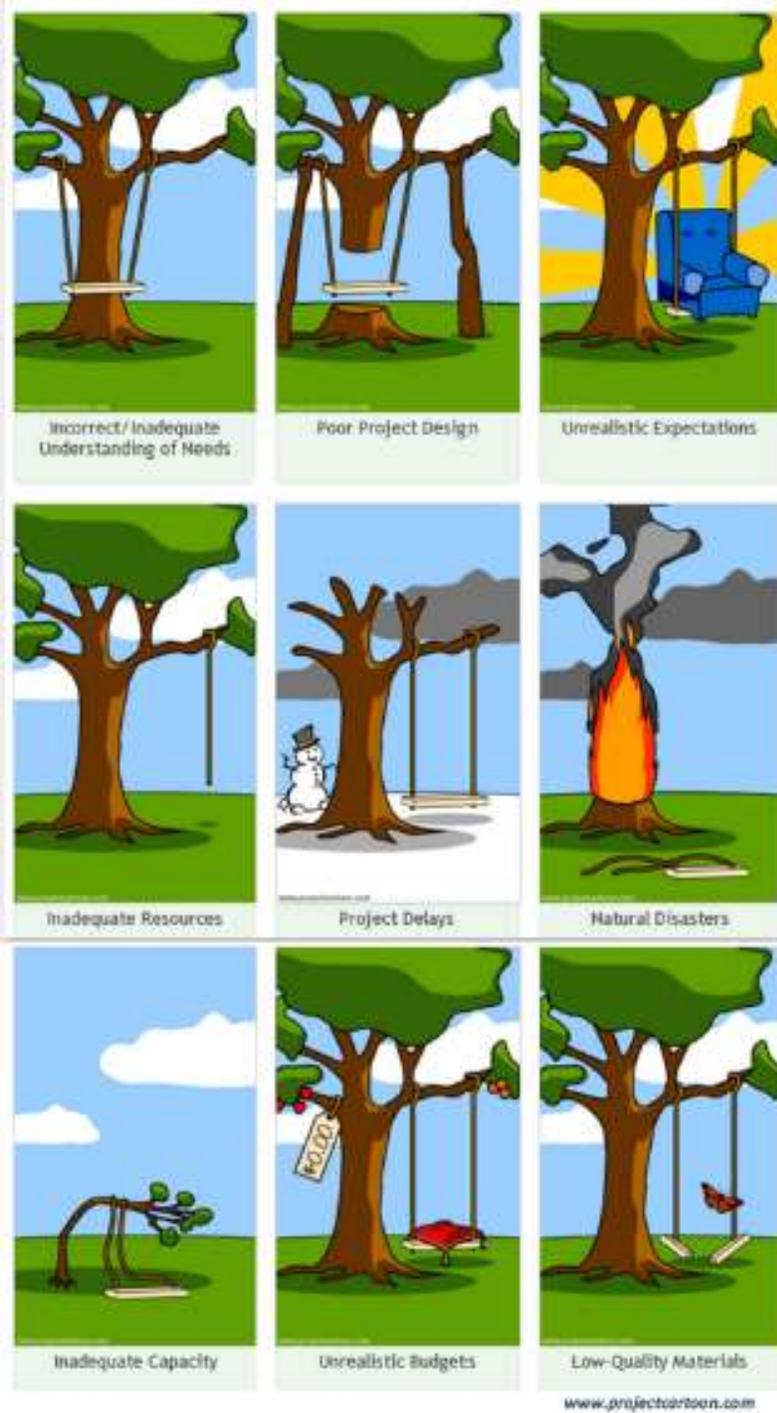
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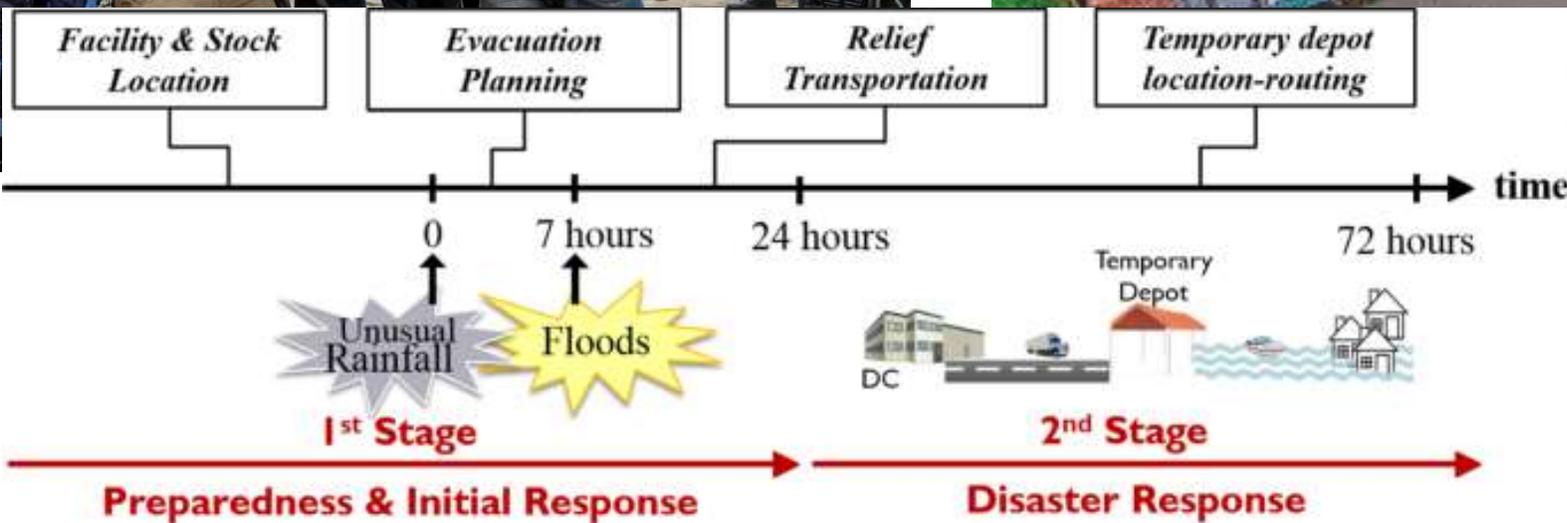
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# Projects in the development sector





# Disaster Response Preparedness



In crisis situations  
In complex emergency scenario



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Participation of multiple stakeholders including the community is the key

Disaster Risk Reduction should be part of overall development planning and development projects

Disaster Risk Reduction needs a holistic and multidisciplinary approach

# Coordination Collaboration Complementary Community Service



*Live, Love, Learn, Lead, & Leave a Legacy*

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## EMERGENCIES DO HAPPEN.



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