



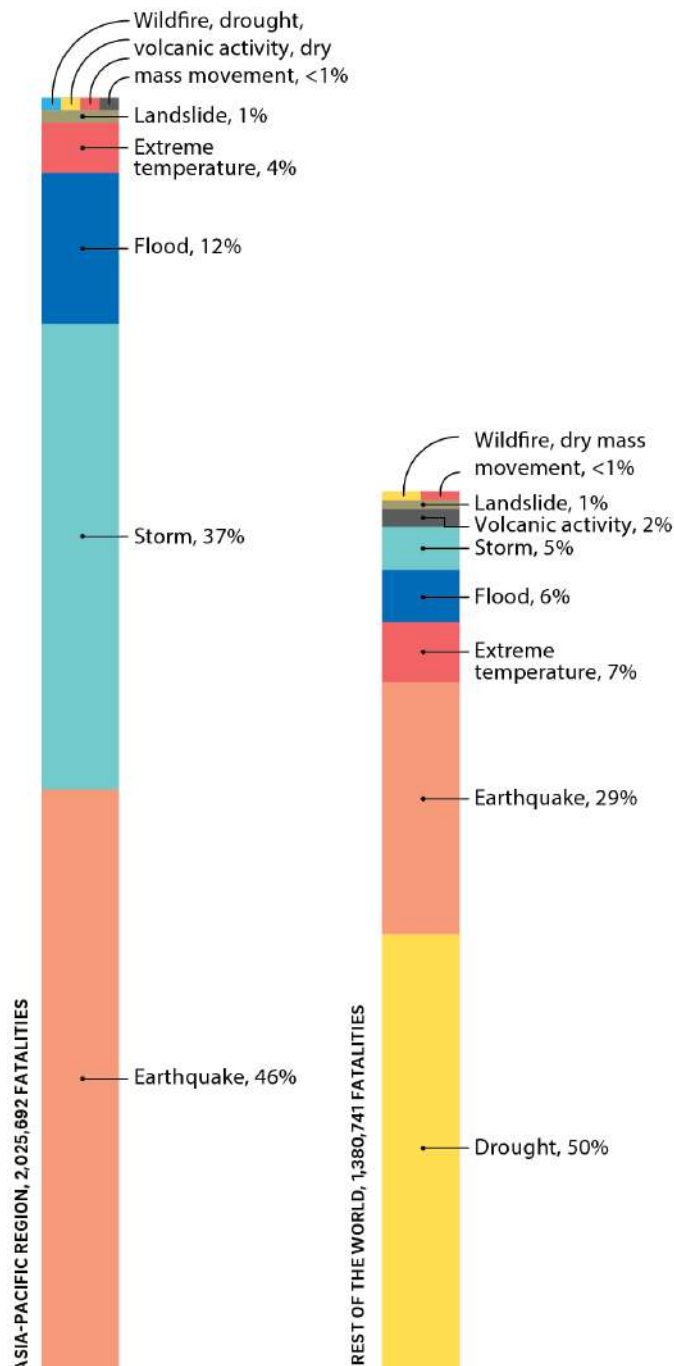
The Disaster Riskscape Across South Asia

KEY TAKEAWAYS FOR STAKEHOLDERS

Asia-Pacific Disaster Report 2019

PATHWAYS FOR RESILIENCE,
INCLUSION AND EMPOWERMENT

In Asia-Pacific region, the principal causes of natural disaster deaths were earthquakes and storms, followed by floods.



Fatalities from natural disasters, 1970-2018

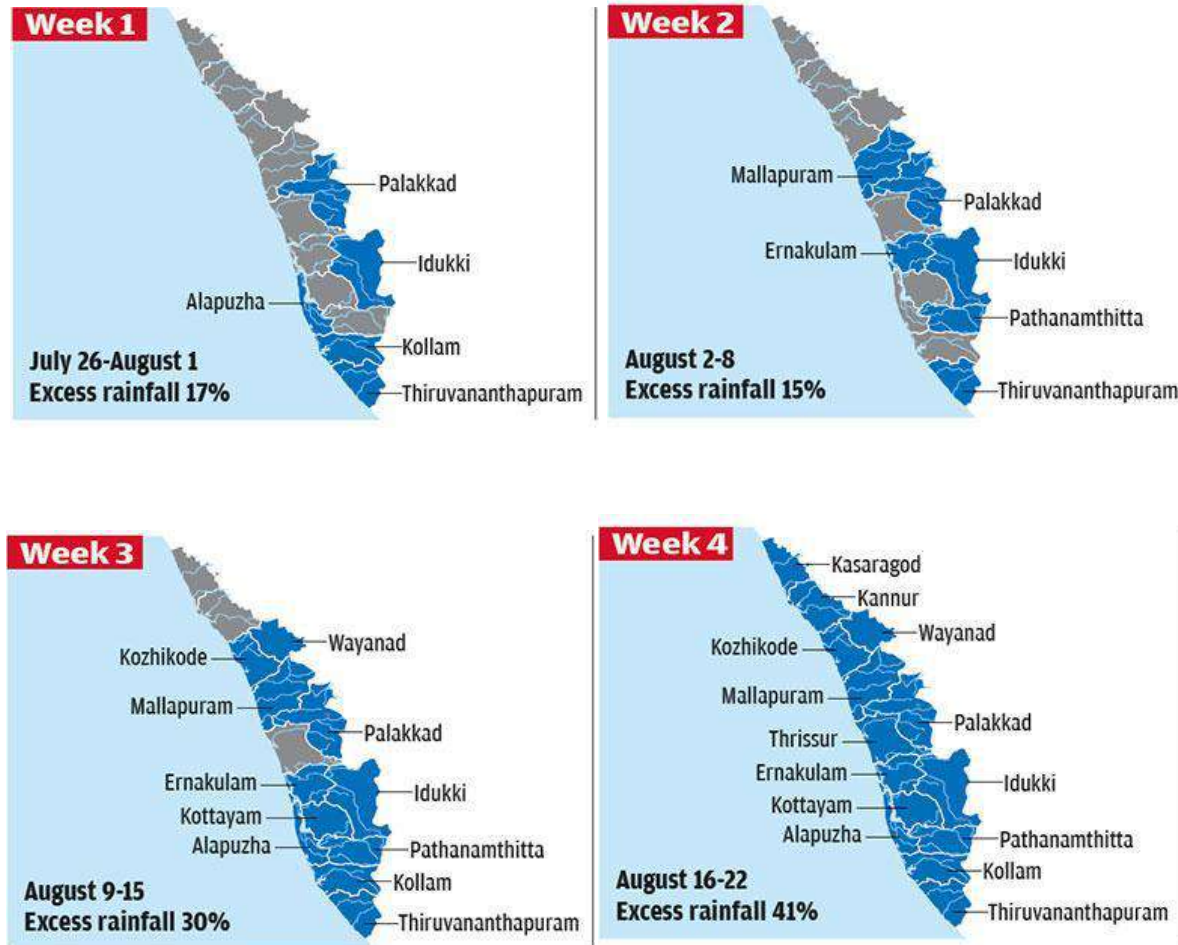
Fatalities

Asia-Pacific region: 2,025,692 South and South West Asia: ~1,000,000

Rest of the world : 1,380,741 fatalities

Source: Based on data from EM-DAT (Accessed on 30 May 2019).
 Note: From 1990, including data from countries of the former Soviet Union.

Kerala (India) Floods 2018: Extreme event, cascading impacts



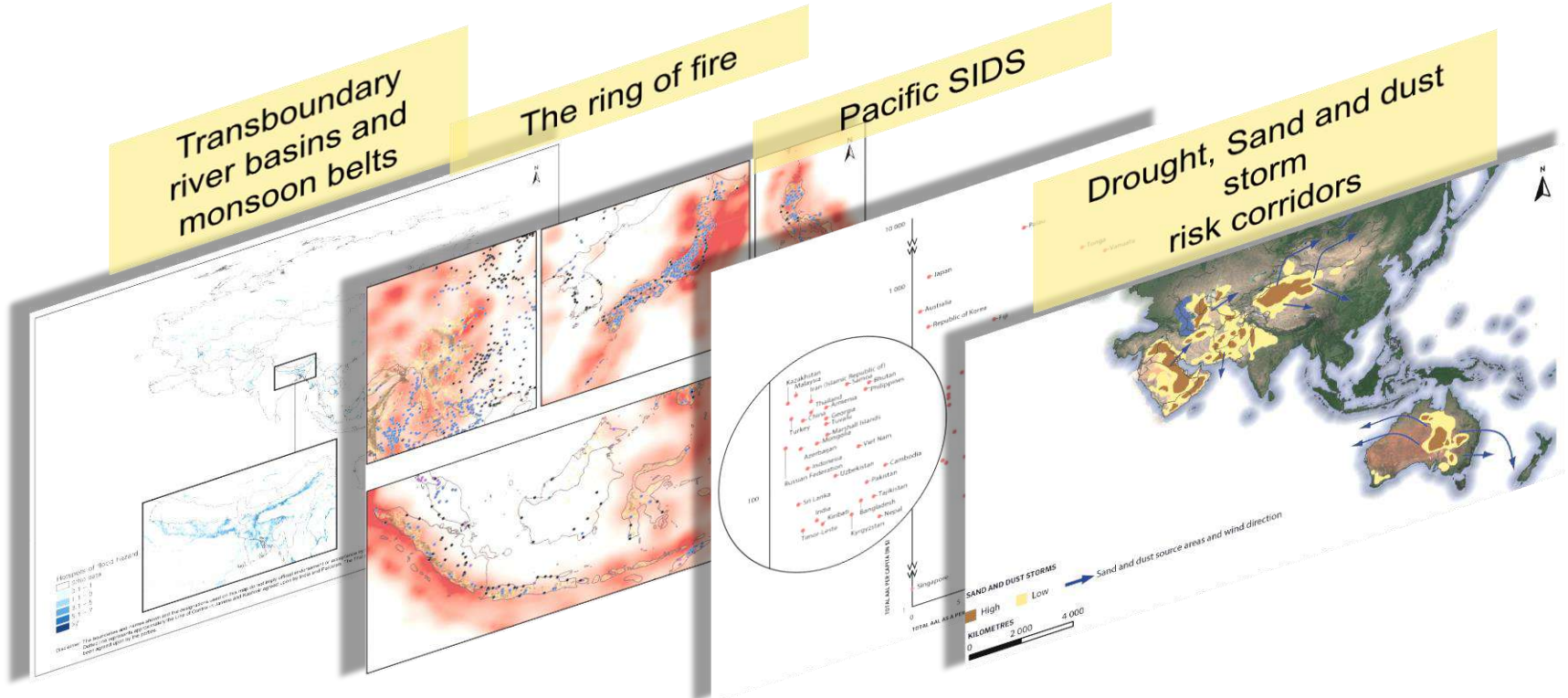
*June – August 2018
Above 1000 dead*

The torrential rains triggered several landslides and forced the release of excess water from 37 dams across the state, aggravating the flood impact

| KEY FINDINGS | Message 1

South and South-West Asia face new climate realities with 'perfect storm' hotspots of disaster and socioeconomic vulnerabilities

- Hotspots are emerging in which environmental fragility, poverty and inequality are converging in a 'perfect storm'.



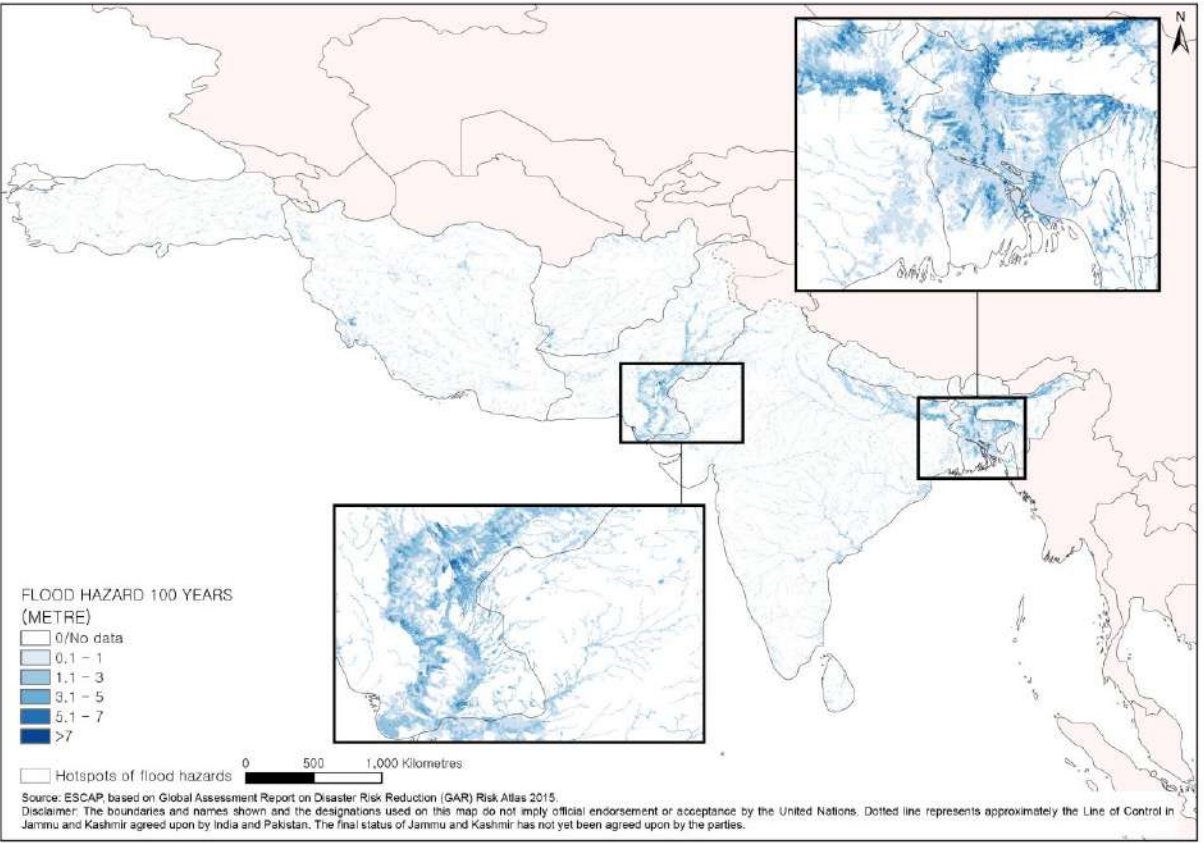
▲
South Asia

▲
South and South-west Asia

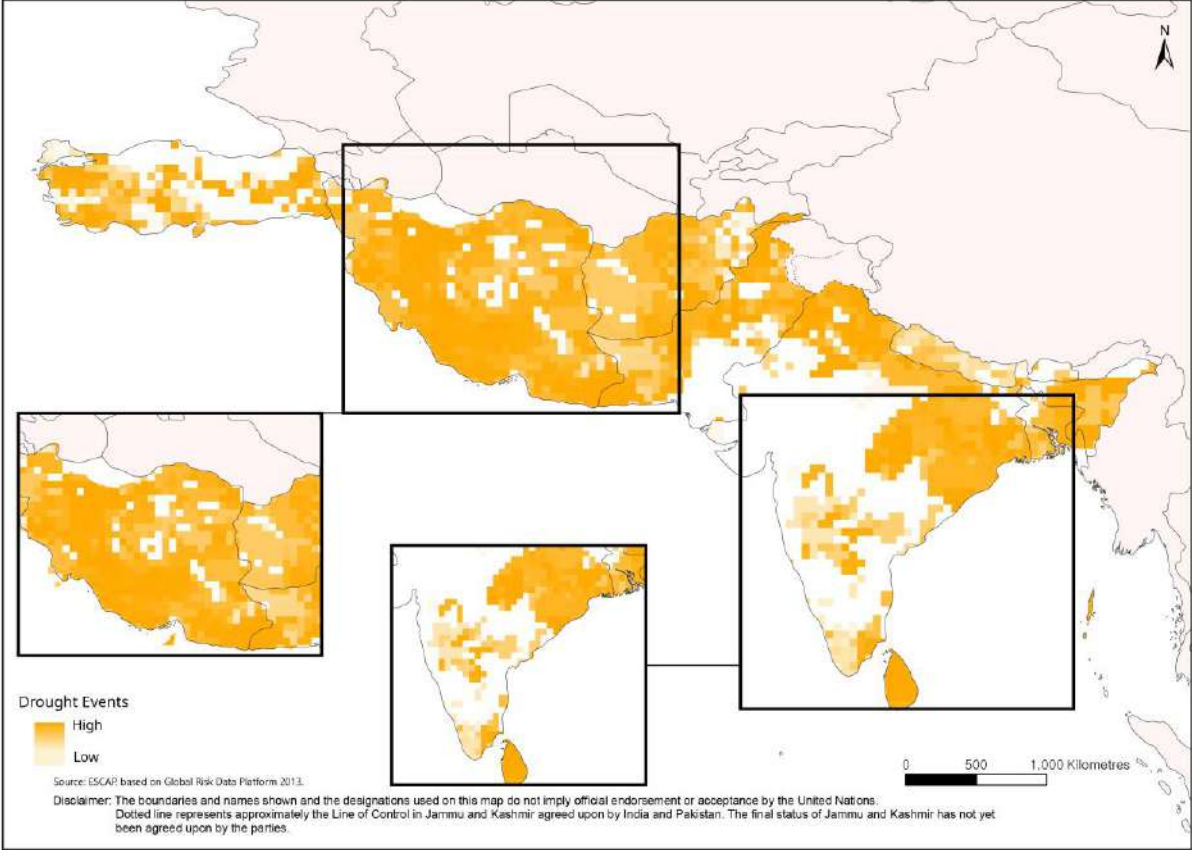
KEY FINDINGS | Message 1

South and South-West Asia face new climate realities with 'perfect storm' hotspots of disaster and socioeconomic vulnerabilities

Riverine basin floods hotspot

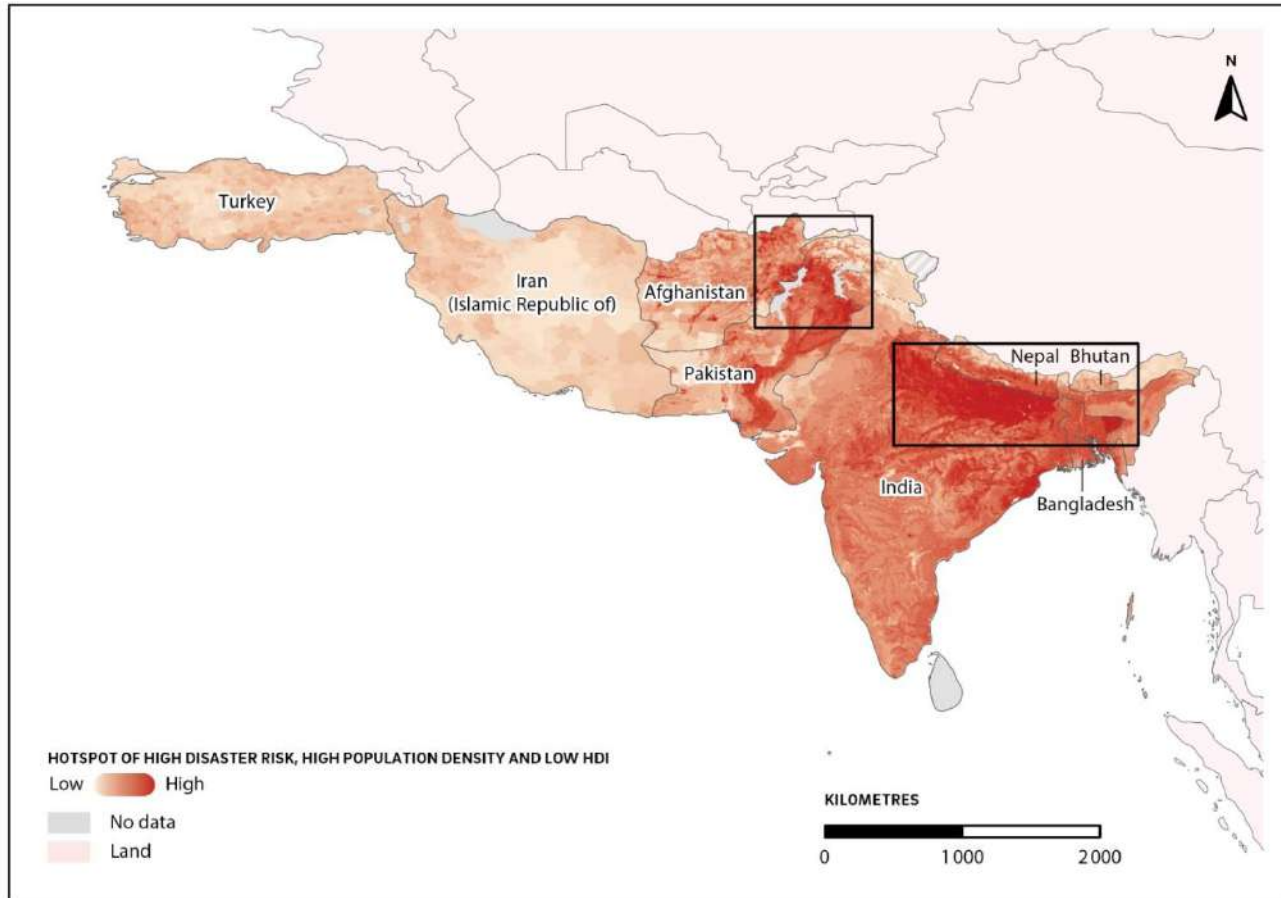


Droughts hotspot



Convergence of disaster risks with critical socio-economic vulnerabilities are threatening sustainable development in the subregion

Hotspots of high population, with low HDI and high hazard risk and land degradation



GBM basin is particularly vulnerable

- 630 million people, almost 70 per cent of whom are rural, and account for the largest concentration of poverty in the world
- The highest concentrations of socioeconomic-hazard risks are along the floodplains. The populations living there are subject to recurrent annual flooding.

Droughts and floods account for 85 per cent of the total multi-hazard AAL

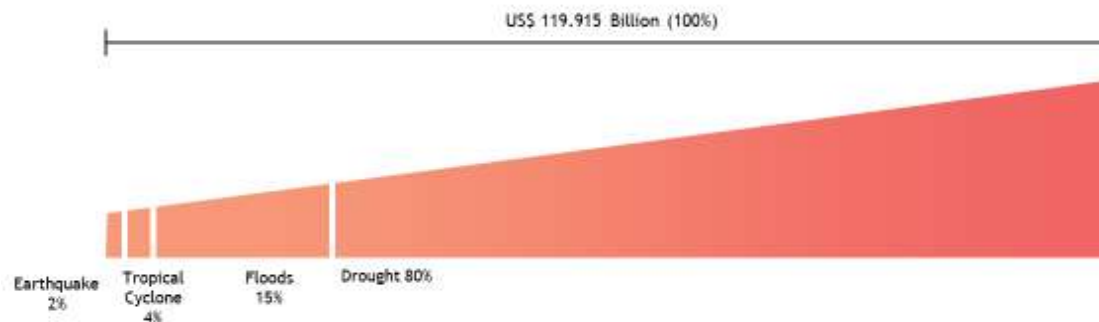
- Climate risks like floods and droughts account for most of the losses

- 76 per cent of the total AAL is from drought, whilst floods account for 13 per cent of the total AAL.

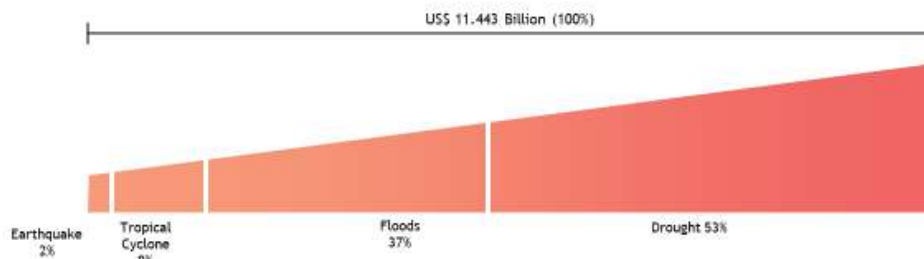
- However, the losses are also country specific.

- Bangladesh, for example has the highest loss from floods and India has the highest loss from droughts

SAARC riskscape (average annual losses) – volumetric analysis

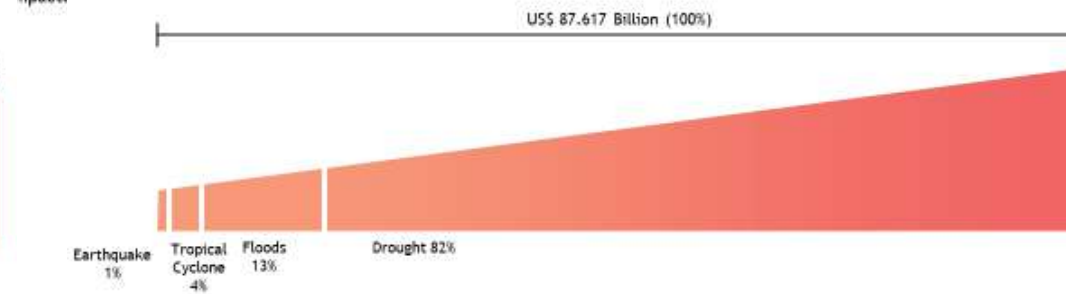


Bangladesh riskscape (average annual losses) – volumetric analysis



Source: ESCAP, based on probabilistic risk assessment.
Note: Volumetric analysis is a measurement by volume (impacted population, geographical area and economic losses).

India riskscape (average annual losses) – volumetric analysis

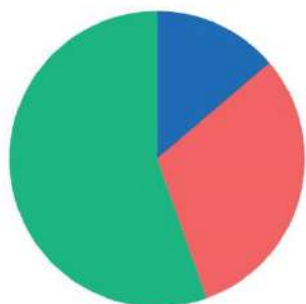


Source: ESCAP, based on probabilistic risk assessment.
Note: Volumetric analysis is a measurement by volume (impacted population, geographical area and economic losses).

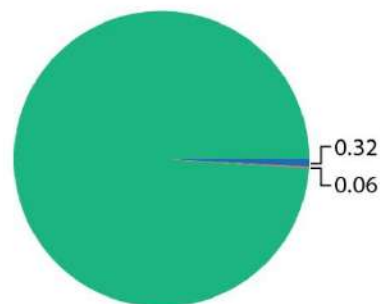
Social sectors related to people's wellbeing and livelihoods are at greatest risks from disasters

Sectoral impact of disasters on selected South and South-West countries (US\$ million)

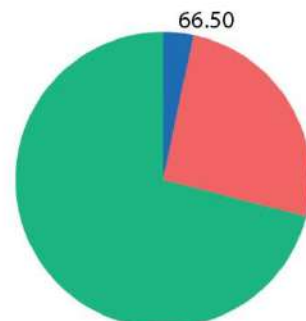
BANGLADESH, CYCLONE (2007)



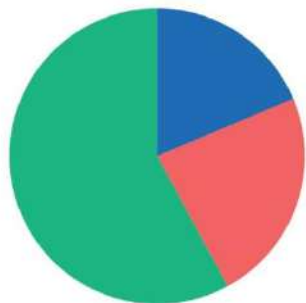
BHUTAN, EARTHQUAKE, AVERAGE (2009 AND 2011)



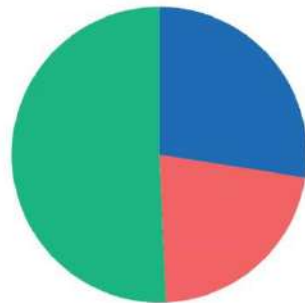
INDIA, FLOOD, AVERAGE (2008 AND 2018)



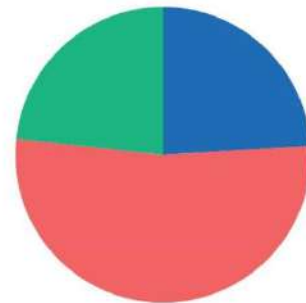
NEPAL, AVERAGE EARTHQUAKE (2015) AND FLOOD (2017)



SRI LANKA, LANDSLIDES AND FLOODS (2017)



PAKISTAN, FLOOD, AVERAGE (2010 AND 2011)



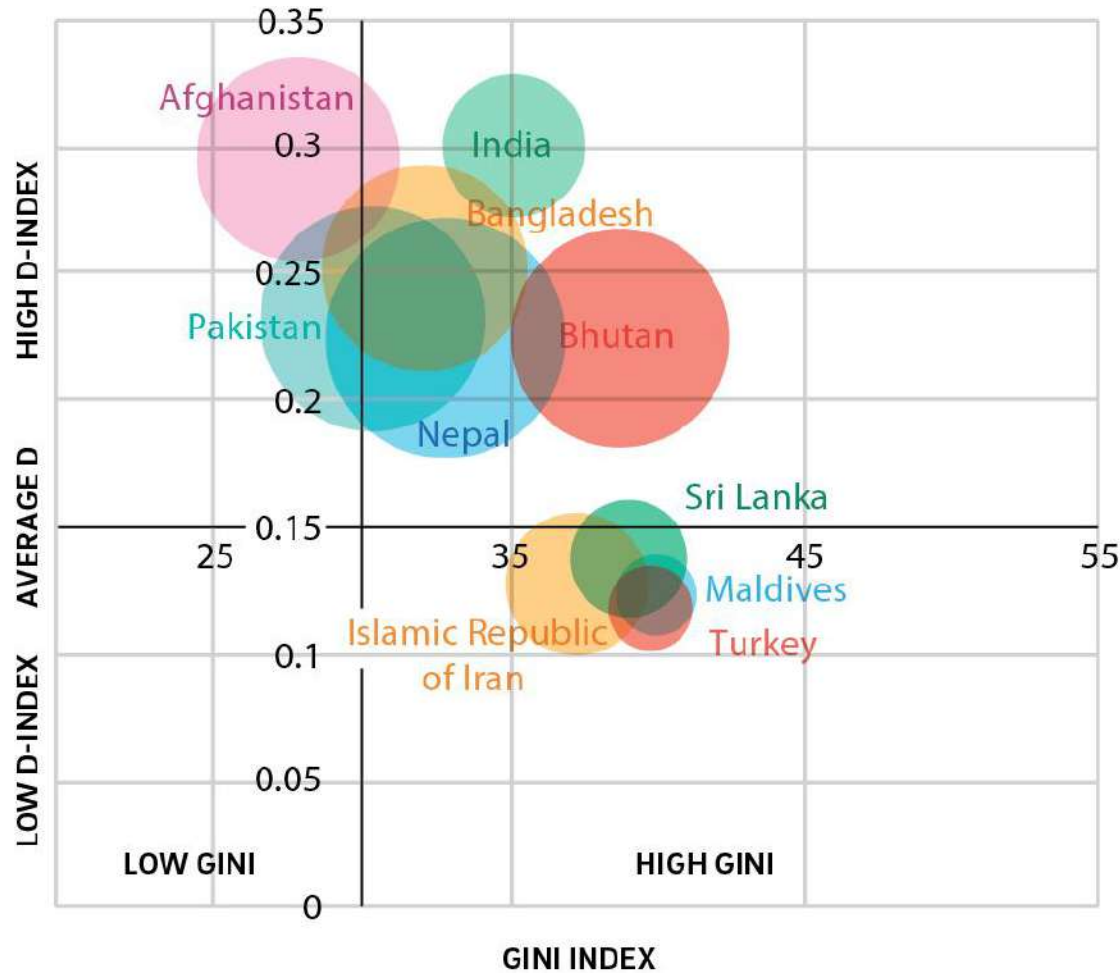
● Economic and infrastructure sectors ● Productive sectors ● Social sectors

Damage and loss assessments show that almost 43 per cent and 38 per cent of disaster impacts were on the social and productive sectors (education, health, housing and culture)

KEY FINDINGS | Message 3

Overlaps of disaster impacts with inequalities in income and opportunity can leave people more vulnerable

Overlaps of inequalities of income and opportunities and disaster losses



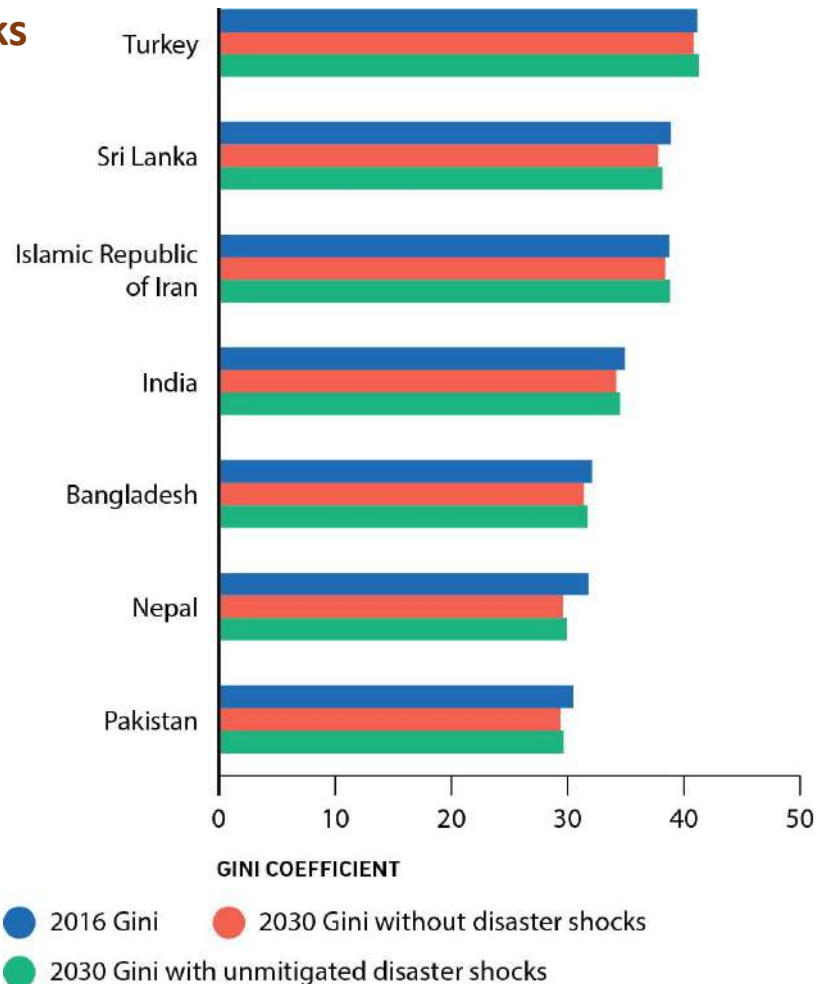
The D-index measures how all population groups fare in terms of access to a certain opportunity like education and healthcare. excludes certain groups.

Like the Gini coefficient, the D-index takes values from 0 to 1, 0 meaning no inequality, and 1 maximum inequality

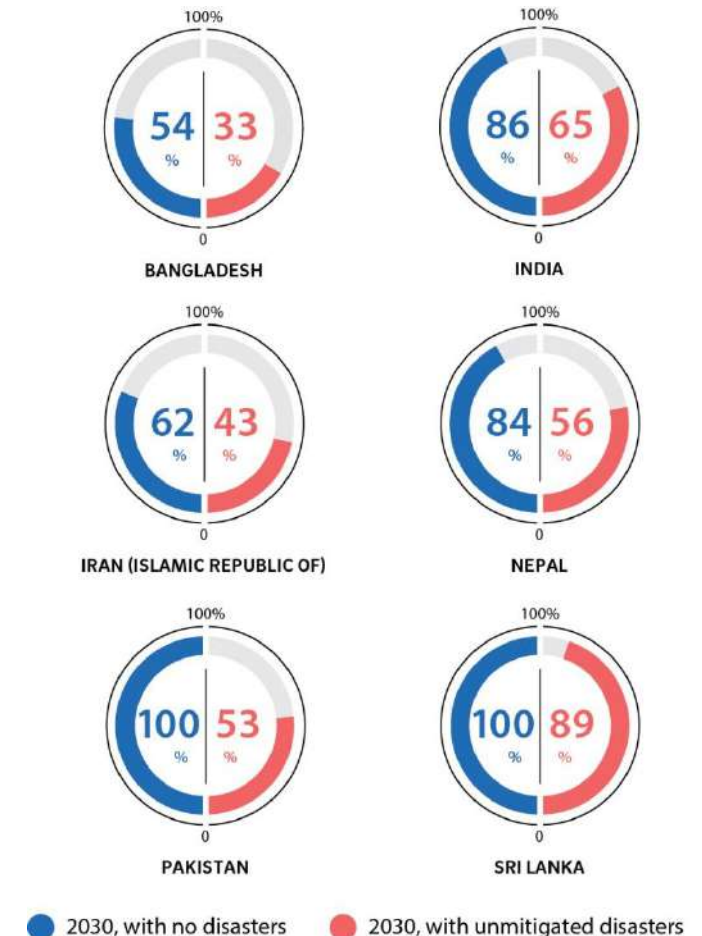
KEY FINDINGS | Message 3

If unmitigated, disasters will continue to contribute to and drive income inequality and poverty in the sub-region

Projected Gini in 2030, with and without unmitigated disaster shocks



Percent reduction in extreme poverty rates in 2030 with and without disasters



Disasters widen inequalities in opportunities that deepen poverty over generations

A 1 percentage point increase in exposure to climate events in Asia –Pacific

Income inequality



Increases the Gini coefficient
by **0.24** percent point

Deprivation and disempowerment



Increase under-five mortality rates
by **0.3** percent point

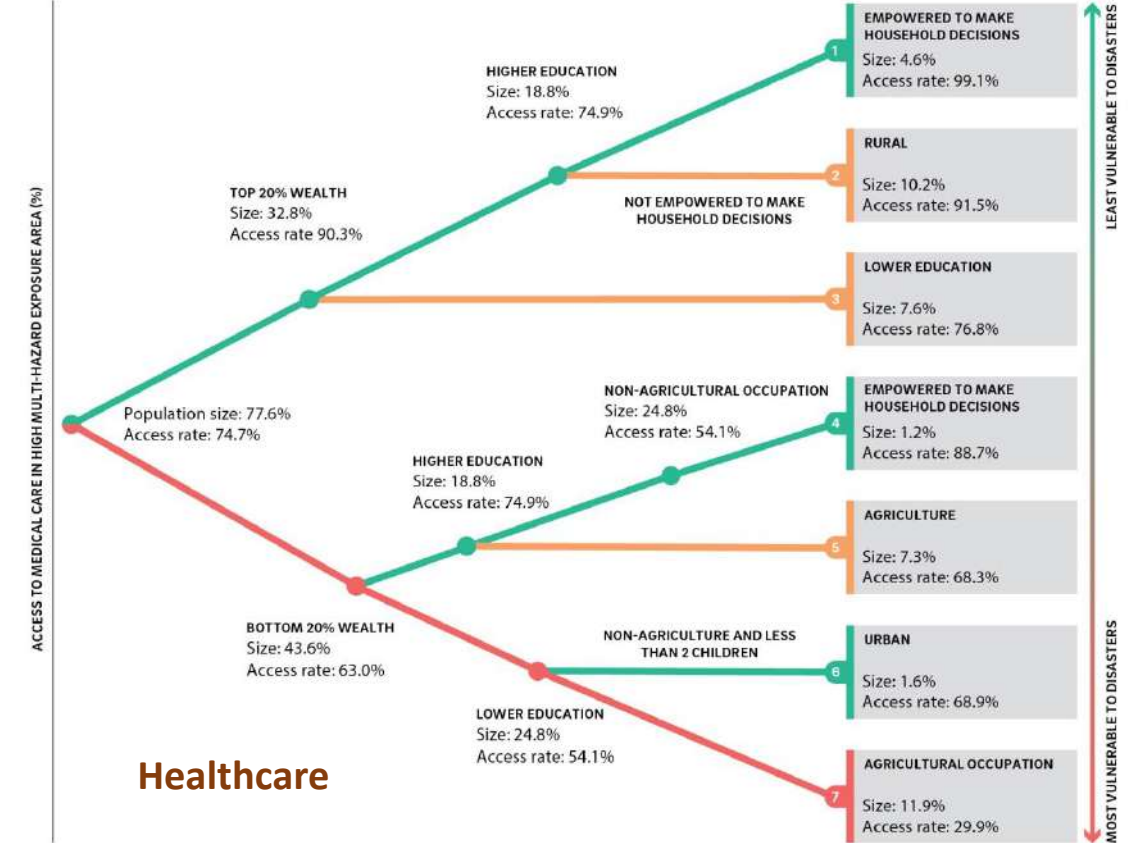
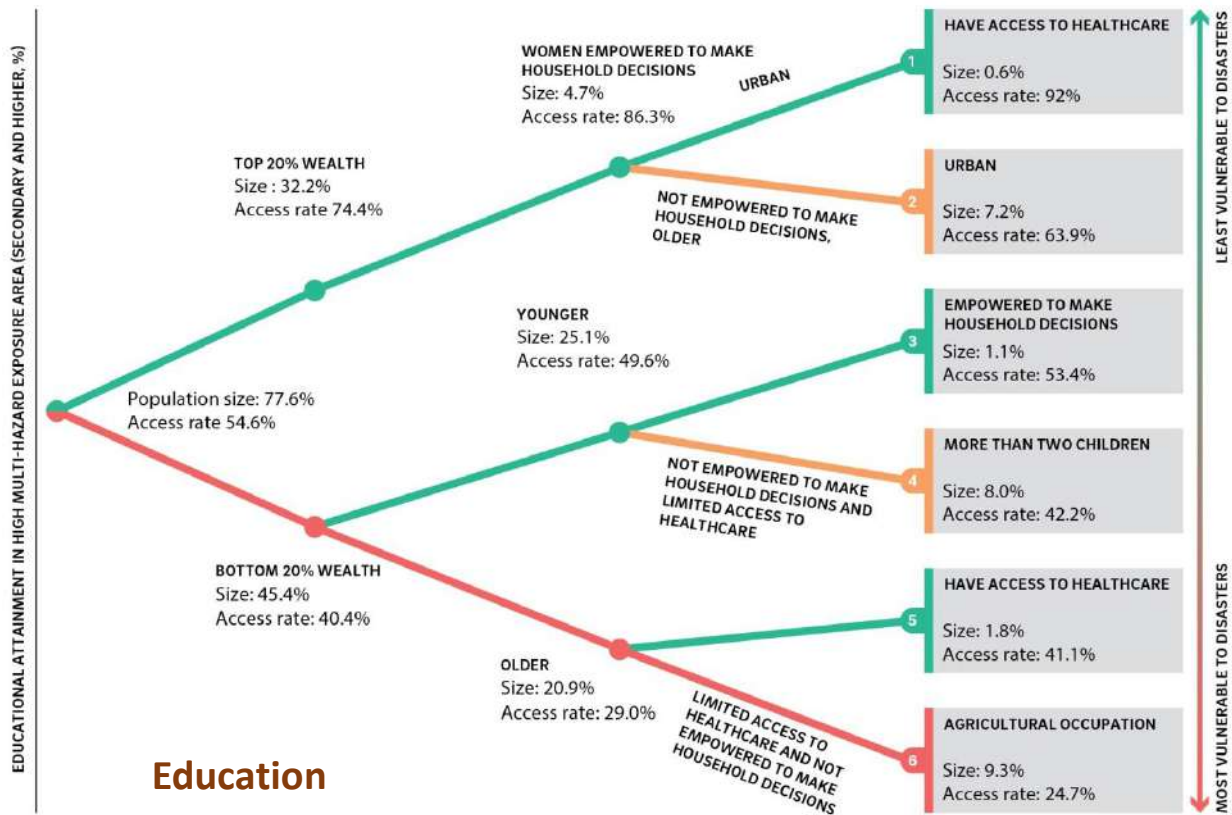


Decrease education rates
by **0.26** percent point

KEY FINDINGS | Message 3

Identifying at risk populations in high-multihazard risk areas- who gets left behind in opportunities when a disaster strikes?

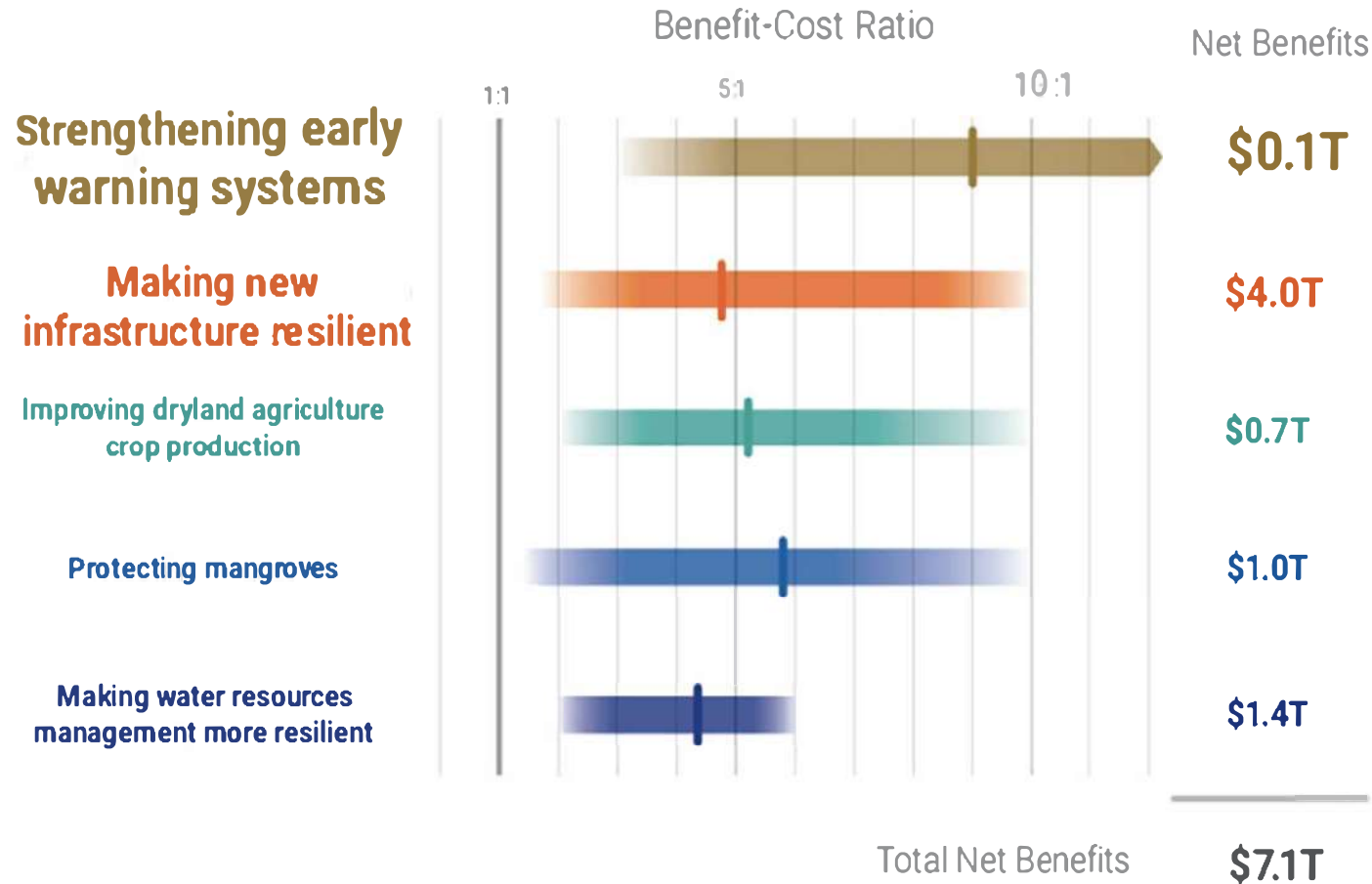
Populations at risk of losing access to opportunities in high multi-hazard risk areas in Bangladesh



Sources: ESCAP, based on Global Assessment Report on Disaster Risk Reduction (GAR) Risk Atlas, 2015, and DHS Household Survey.

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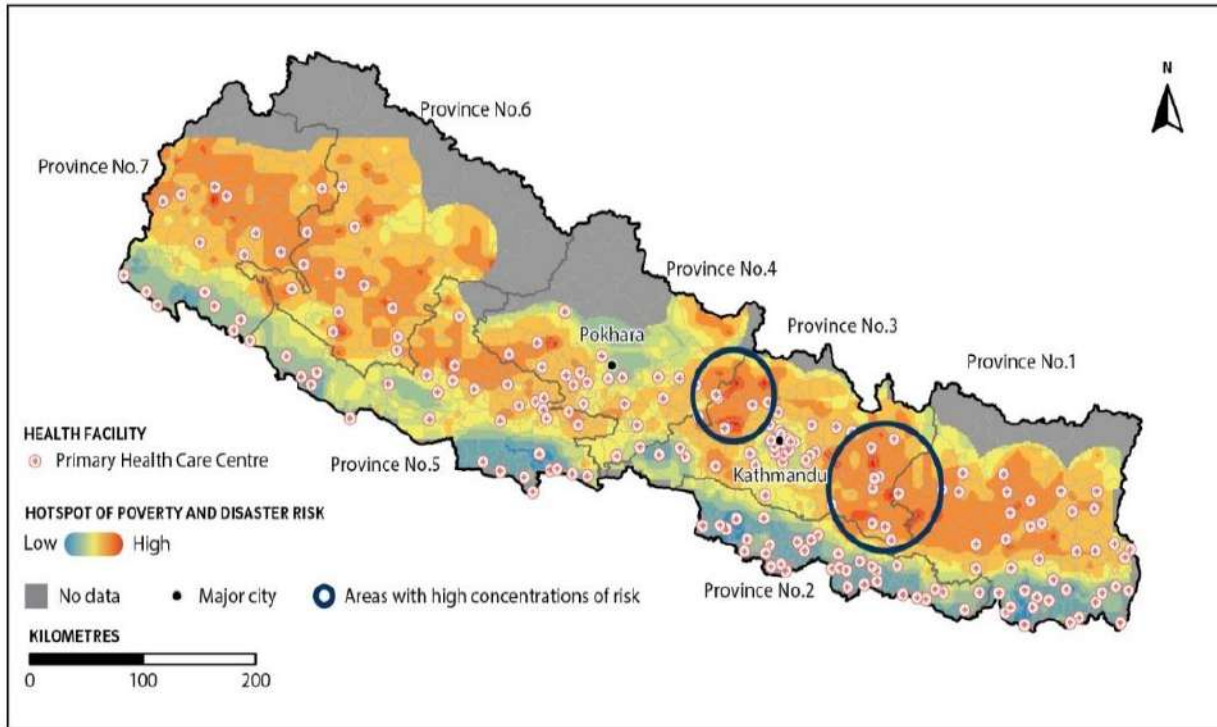
The economics of resilience



Investing \$1.8 trillion globally in these five areas from 2020 could generate \$7.1 trillion in total benefits

GIS based mapping of vulnerable communities and disaster risks can locate exactly where investments are crucial

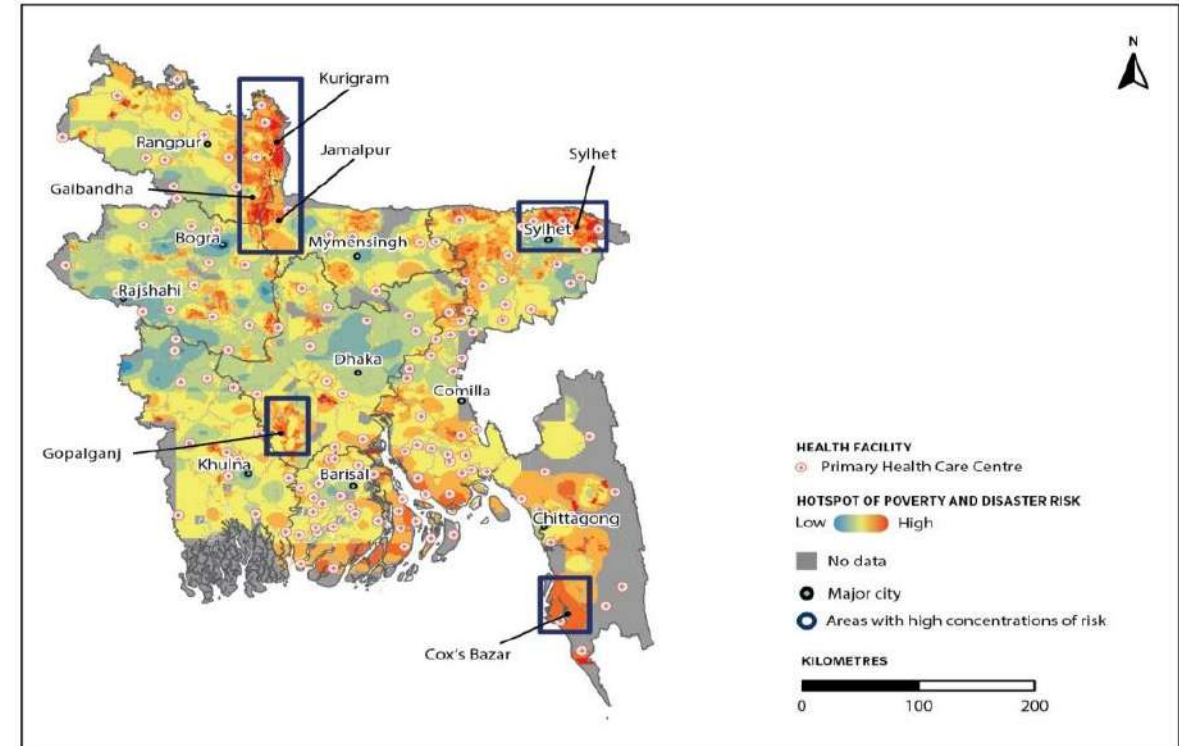
Mapping critical infrastructure that serves the most vulnerable populations during disasters



Sources: ESCAP, based on DHS Programme Household Survey for Nepal, and multi-hazard data from Global Assessment Report on Disaster Risk Reduction (GAR) Risk Atlas, 2015.

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

Nepal



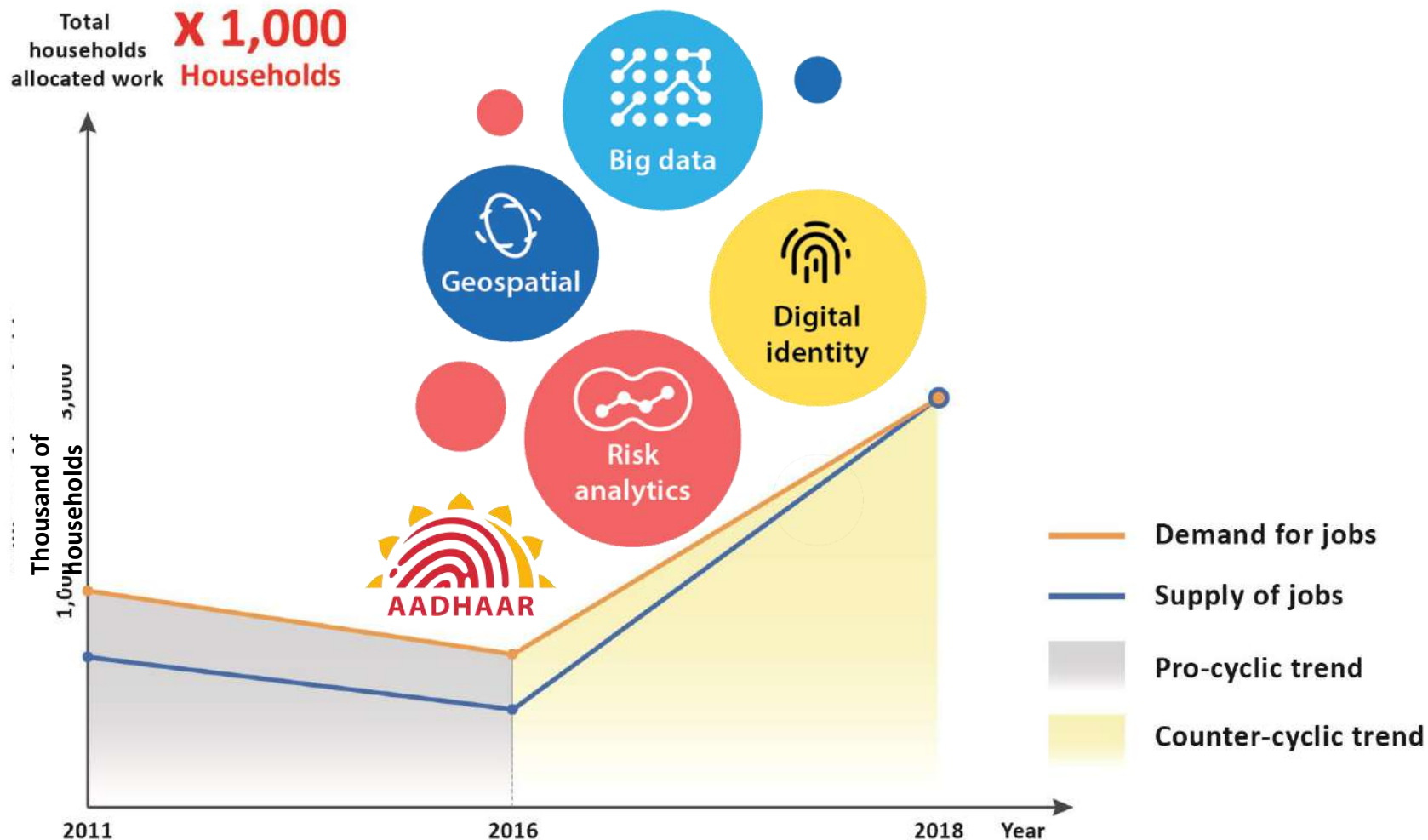
Sources: ESCAP, based on DHS Programme Household Survey and Service Provision Assessment Survey for Bangladesh, and multi-hazard data from Global Assessment Report on Disaster Risk Reduction (GAR) Risk Atlas, 2015.

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Bangladesh

Innovations enable transformative policy response that promotes inclusion and empowers at-risk communities

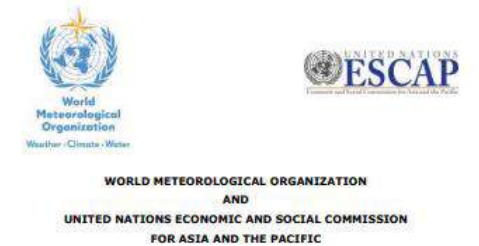
- Innovations turned a pro-cyclic into counter cyclic policy interventions
- Benefited millions of drought affected poor and vulnerable famers/landless laborers in India



Sources: ESCAP based on data from Prasad, and others 2018.

Regional Cooperation is the key for building resilience to cross border disasters and climate change

The Asia-Pacific Disaster Resilience Network



WMO/ESCAP PANEL ON TROPICAL CYCLONES



THANK YOU!

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