

# Accelerating climate change adaptation for disaster risk reduction and resilience in Asia and the Pacific

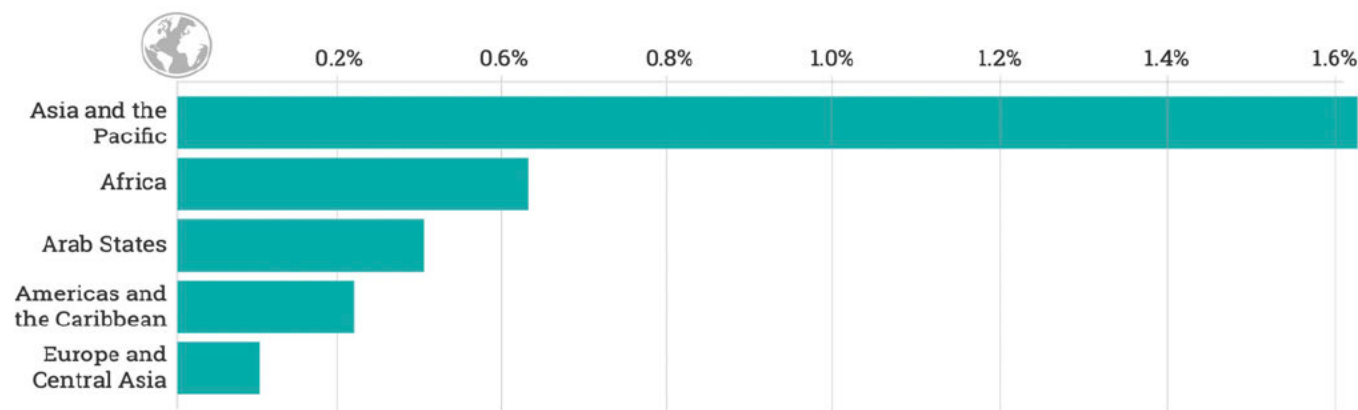
Sanjay Srivastava, Ph D  
Chief of Disaster Risk Reduction, ESCAP

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The 5th International Climate Change Adaptation Platforms Meeting  
25th October 2024  
Tsukuba, Japan

# Why climate adaptation for DRR is so critical in Asia - Pacific?

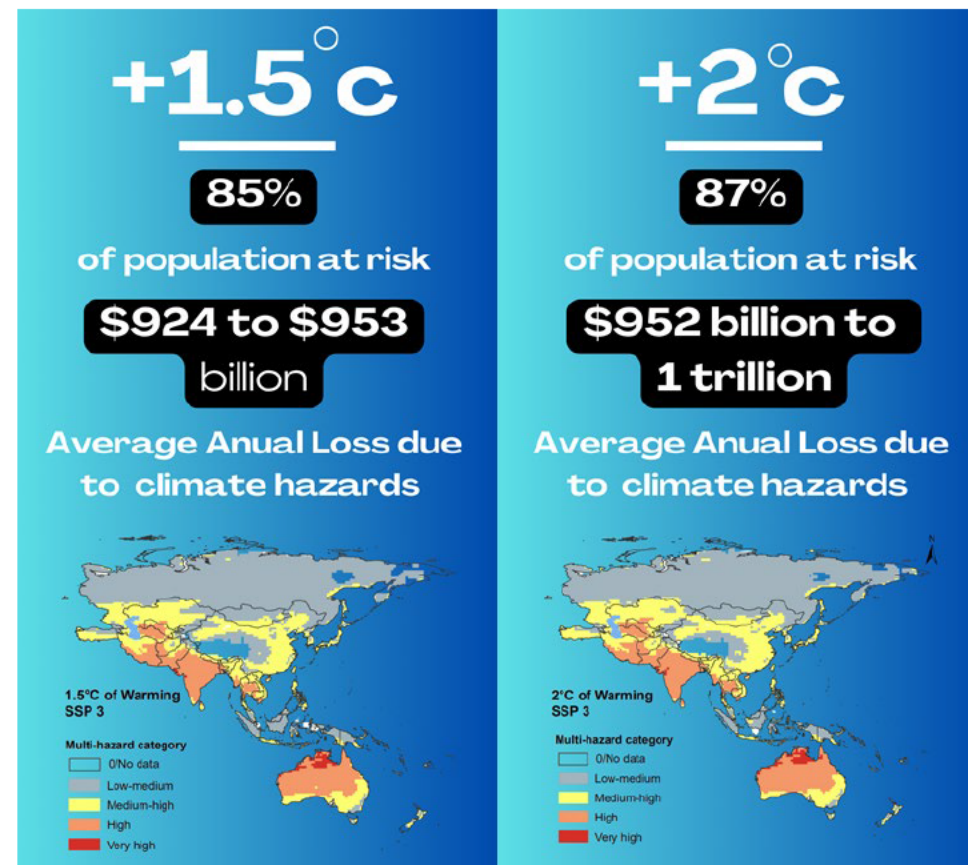
- Asia-Pacific remains the most disaster impacted region. Since 1970, two million people have lost their lives, equivalent to 105 lives being lost to disasters every day.
- The LDCs/SIDS accounts for mortality five times as compared to the rest of the Asia-Pacific
- The cost of inaction is on the rise, regression on SDG 13, Sendai targets off the tracks



The highest share of economic loss by region is borne within Asia-Pacific, where countries lose on average 1.6% of GDP to disasters

Source: GAB 2021

## A Riskscape@1.5 and 2.0 warming: Intensifying and emerging hotspots



## Emerging and intensifying risk hotspots: Population exposed under 1.5 °C and 2 °C warming scenarios compared to baseline

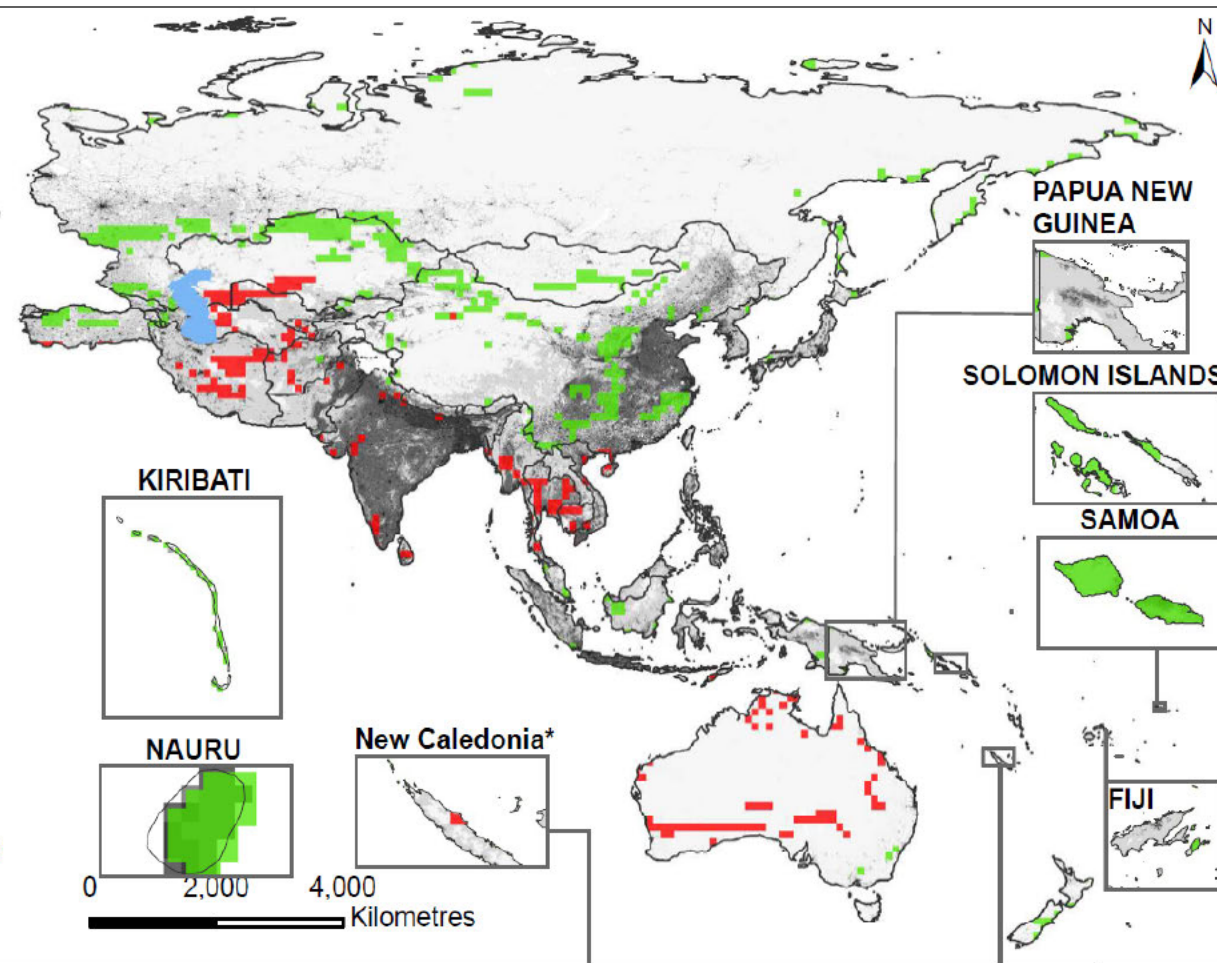
2°C of Warming  
SSP 3

Areas with increasing  
multi-hazard risk  
compared to baseline

- Intensifying
- Emerging

Actual population

- 0/No data
- 1 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 501 - 2,000
- 2,001 - 1,325,545



# Seizing the Moment

TARGETING TRANSFORMATIVE  
DISASTER RISK RESILIENCE

## Asia-Pacific Disaster Report 2023



# A Twin-track strategy: EW4All and Transformative Adaptation

**Early  
Warnings  
for All**



1

Develop early warning systems for all at the regional level,  
Develop and implement a regional strategy in support of the  
global and country-level implementation of the four pillars of  
multi-hazard early warning systems

2

Facilitate cooperation and policy dialogue on transformative  
adaptation, which protects lives, livelihoods and food, energy  
and other critical systems, scaling up of innovations to address  
transboundary hazards.

3

Continue data-driven analysis available in the Risk and  
Resilience Portal to support transformative adaptation and  
requests the secretariat to deepen its analytical research,  
knowledge-sharing and capacity development



# A portal that assesses risks and their potential impacts



**RISK AND RESILIENCE PORTAL**  
An Initiative of the Asia-Pacific Disaster Resilience Network

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[REGIONAL COOPERATION](#) ▼

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## Asia-Pacific Risk & Resilience Portal 2.0

Bridging the science policy gap for informed action

⌘ Data Explorer

**700+**  
Datasets

**100+**  
Policy documents

# Asia Pacific Risk & Resilience Portal

Bridging the science-policy gap for informed action

Data Explorer

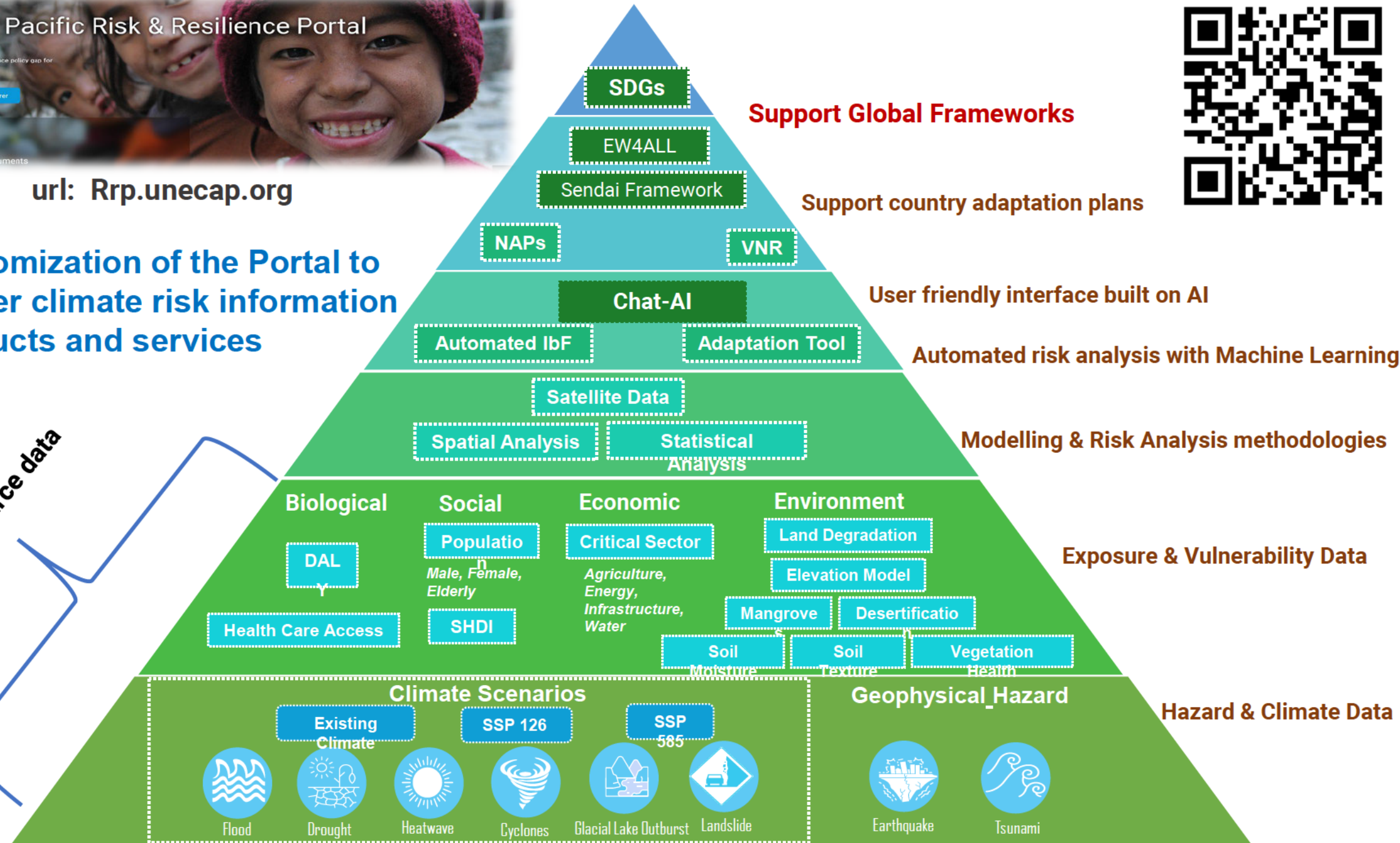
700+ Datasets

100+ Policy documents

url: [Rrp.unecap.org](http://Rrp.unecap.org)


Customization of the Portal to deliver climate risk information products and services

Open source data





# Cooperation in Adaptation Solution Tool



**NATURAL LANGUAGE ADAPTATION SOLUTION TOOL** From insight to impact for a climate-ready world

Tutorial FAQ Feedback


MAIN PANEL

Map Table Methodology 1 + ADD PANEL

Asia Pacific - All Solutions

Welcome to Natural Language Adaptation Solution Tool. A dynamic platform utilizing Natural Language Processing (NLP) to add

Parameter	Risk and Resilience
<p><b>Country</b></p> <p>Asia Pacific region</p>	<p>Find in this panel</p>
<p><b>Risk and Resilience</b></p> <p>Hazard, vulnerability and exposure</p>	<p><b>Reduce Hazards</b></p> <p>How can hazards impact communities?</p>
<p><b>Source Data</b></p> <p>All data in table view</p>	<p><b>Reduce Vulnerability</b></p> <p>How can vulnerability impact communities?</p>
<p><b>Reset</b></p> <p>Revert all parameters to default. Your information will not be restored.</p>	<p><b>Reduce Exposure</b></p> <p>How can exposure impact communities?</p>



**ADAPTATION CASE STUDIES DATABASE**

- AP-PLAT
- WORLD BANK
- ADB
- RENATURE COMPENDIUM

**Flood Adaptation Recommendations**

**Risk**

**Hazard**

**Exposure**

**Vulnerability**

**Actions to Reduce Hazards**


**Actions to Reduce Vulnerability**

**Actions to Reduce Exposure**



# Harnessing the synergy of platforms

Towards innovative solutions  
for adaptation and resilience




Asia-Pacific Risk & Resilience Portal 2.0  
Bridging the science-policy gap for informed action

700+ Datasets  
100+ Policy documents

**01**

**Risk and Impacts**



**AP-PLAT**

**02**

**Risk visualization with Granularities**

**Adaptation measures/best practices**



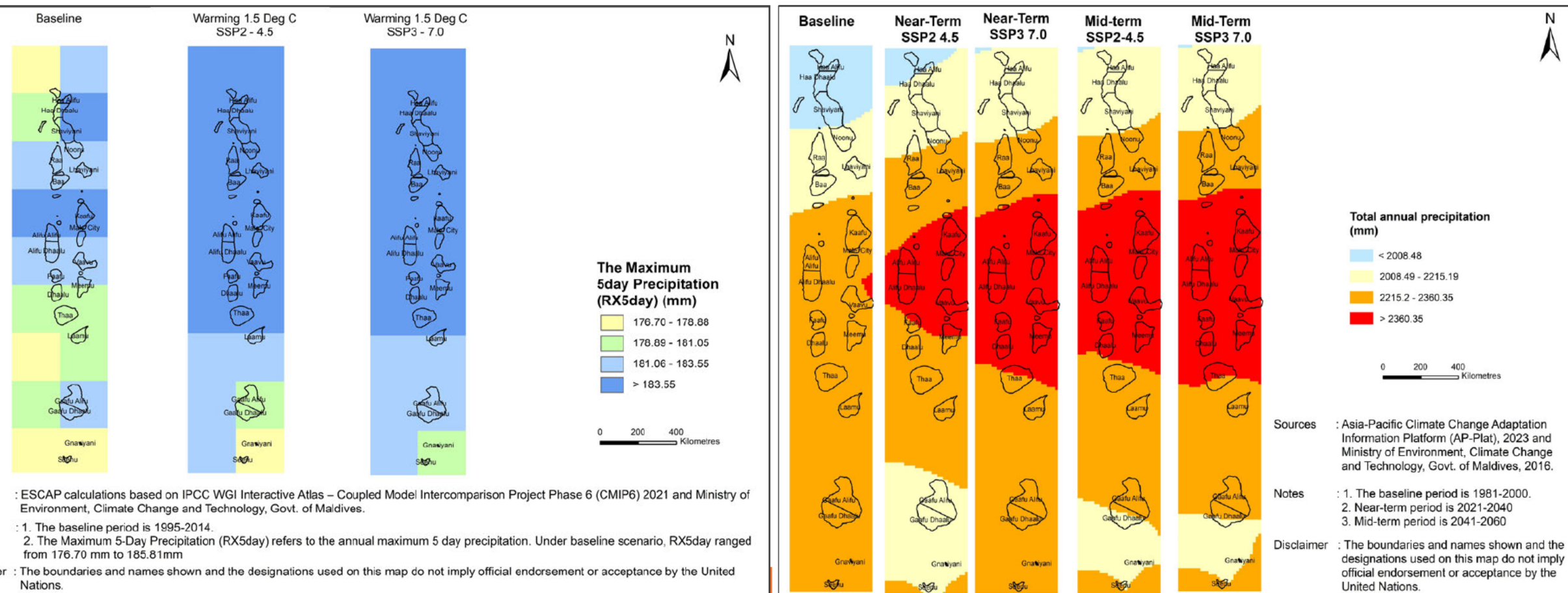
**SDG ACCELERATION ACTIONS**

**03**

**Adaptation pathways**  
NAP/VNR/CCA for disaster risk reduction

# EW4All Maldives: Downscaling with AP-Plat Support

Downscaled climate projection data with a 5 km spatial resolution received from AP-Plat enabled a more granular analysis of risk hotspots (right) than the usual 100km spatial resolution (left)





 **DONATE TO THE SDGs**

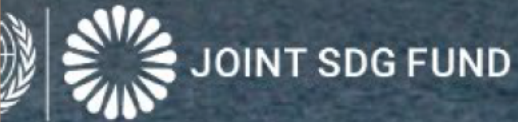
SDG INVEST

BREAKTHROUGH ALLIANCE

TEAM

CONTACT

言語を選択



WHO WE ARE ▾

HOW WE WORK ▾

WHERE WE WORK

EVENTS

RESOURCES ▾

LATEST ▾

**DONATE**



**BLOG**

Published on May 7, 2024



**+ Credits**

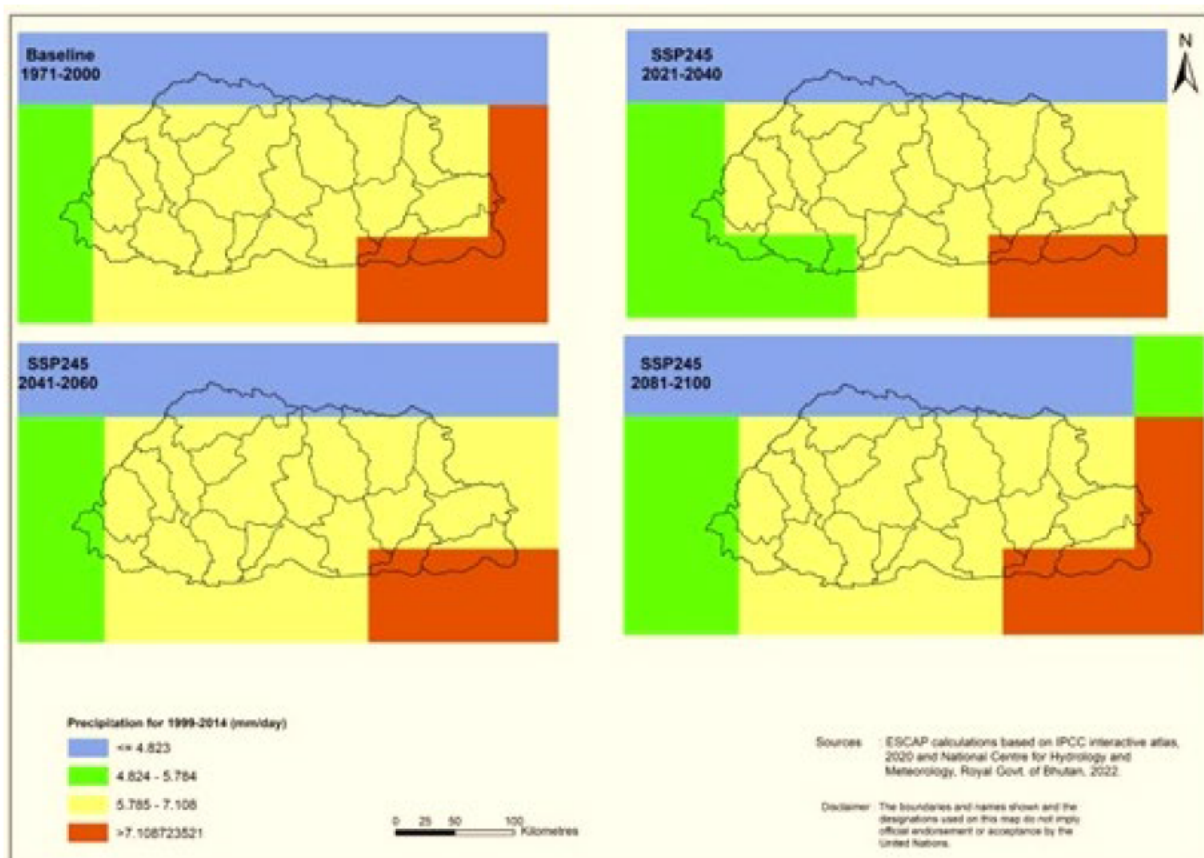
# Building Resilience in the Face of Climate Change: Empowering Communities in the Maldives



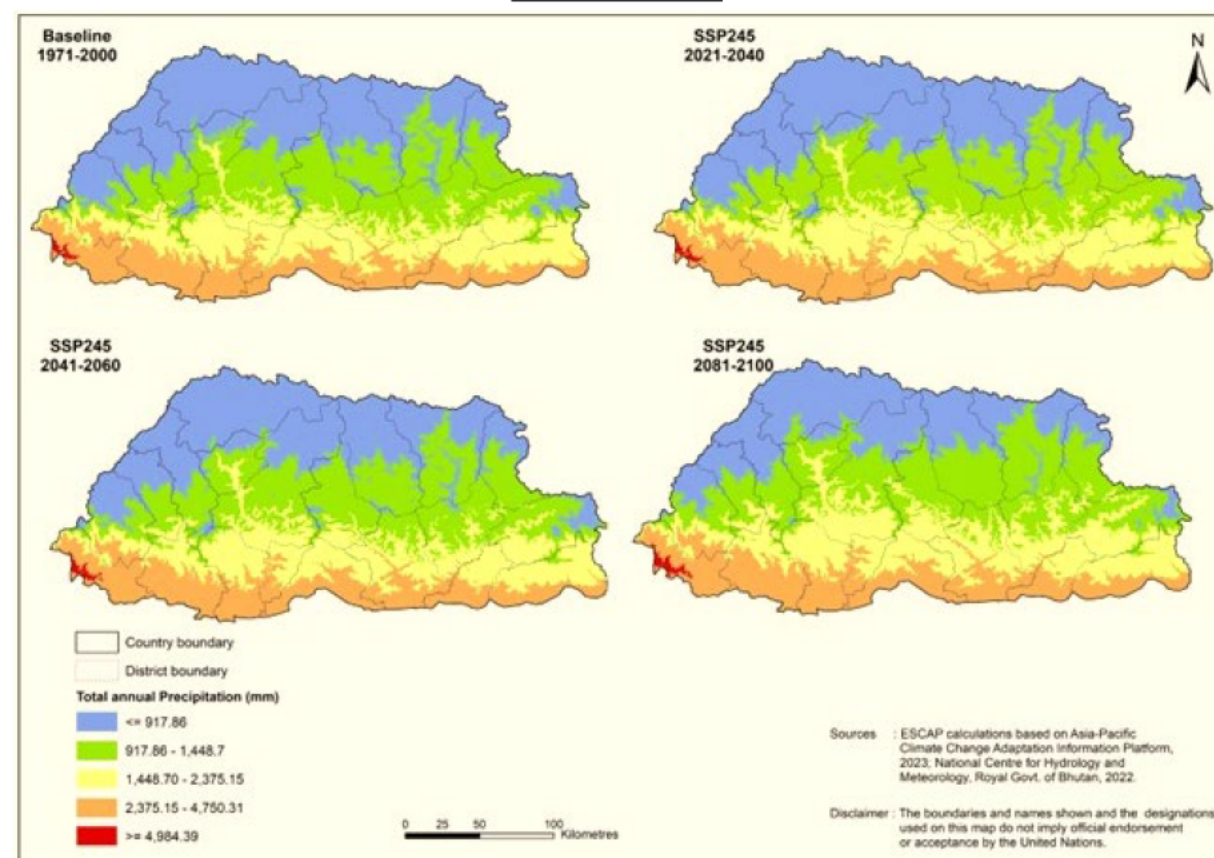
# Bhutan: Downscaling with NIES training

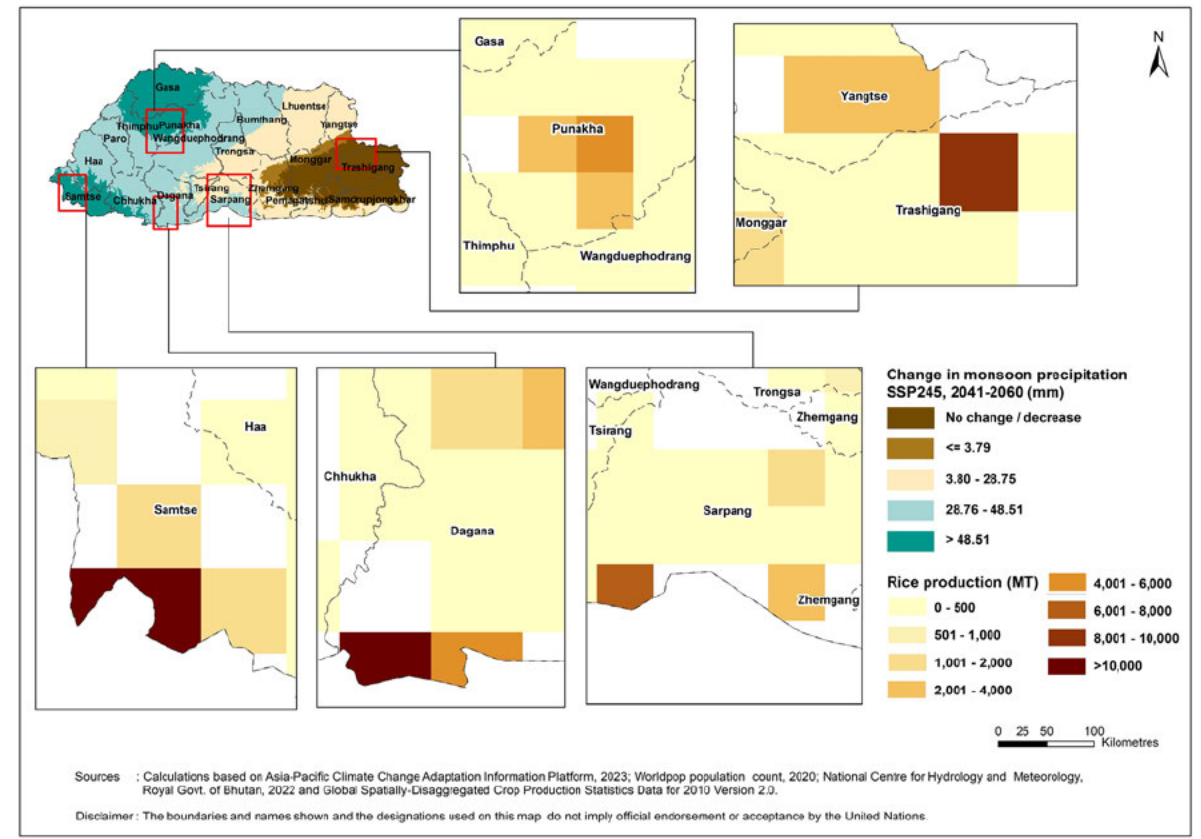
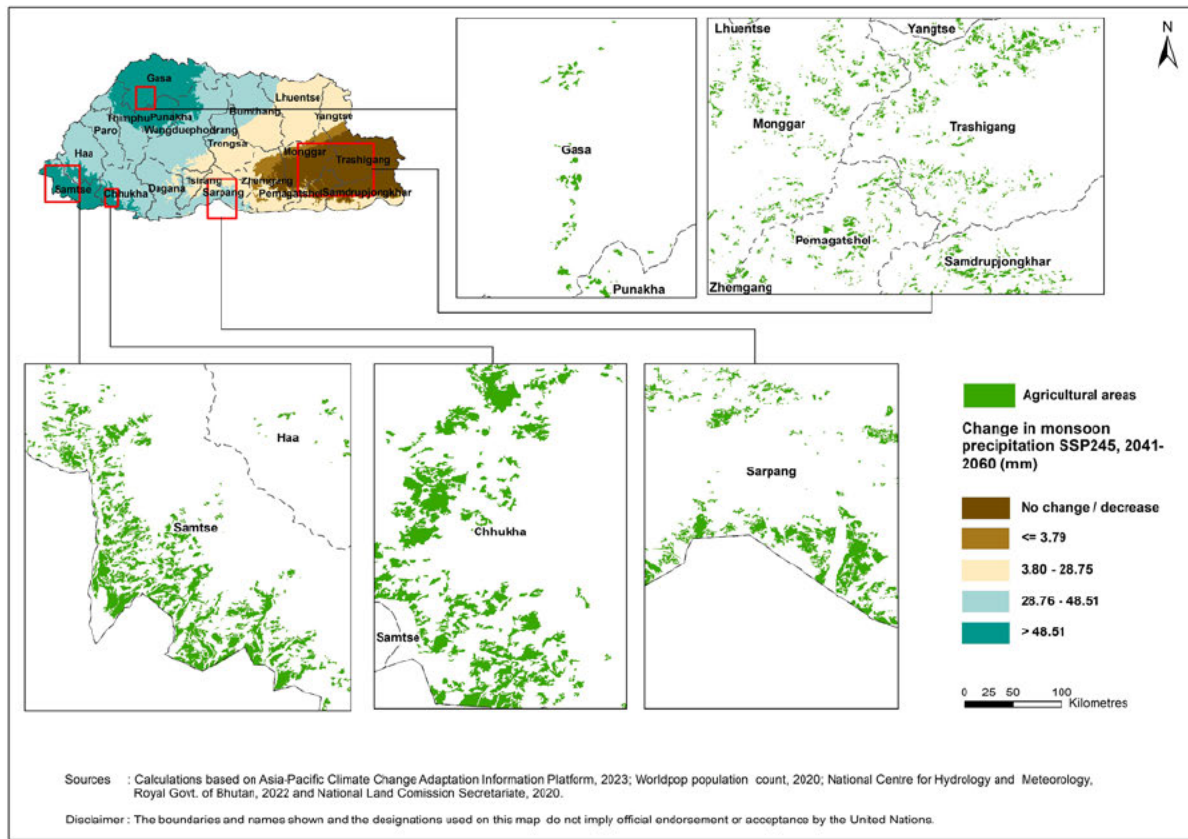
With NIES support, provided climate projection downscaling training (to a 1km resolution) for Bhutan

**100km x 100km**



**1km x 1km**

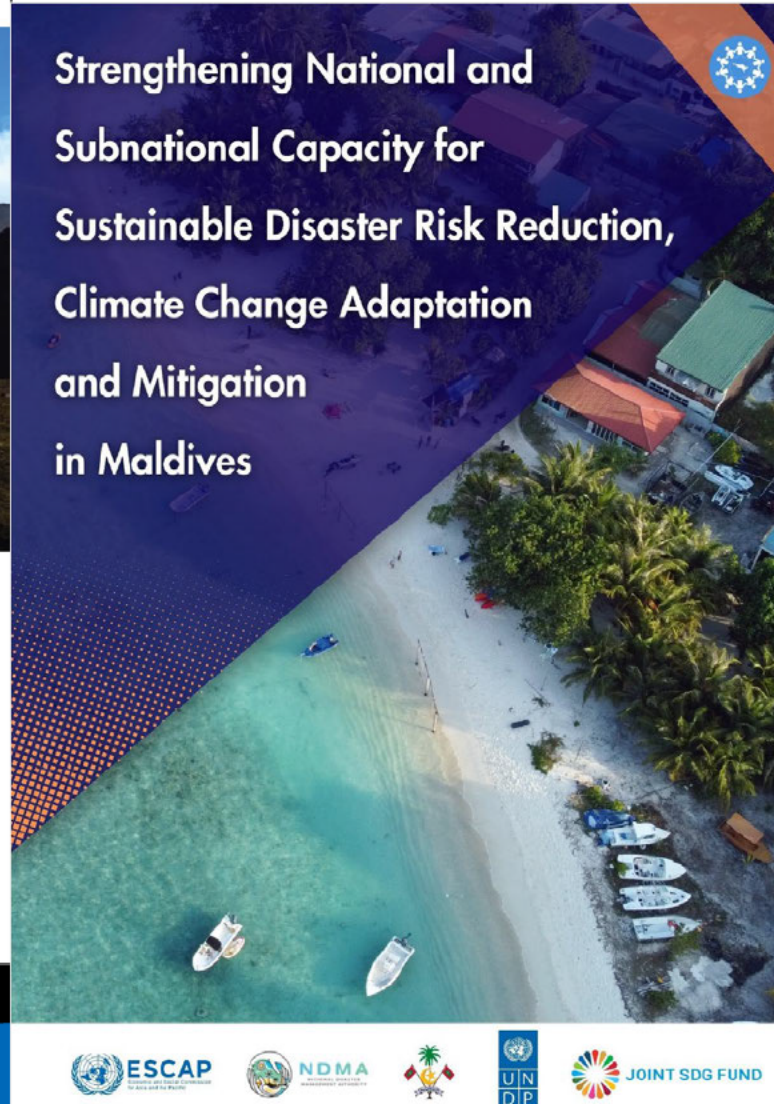
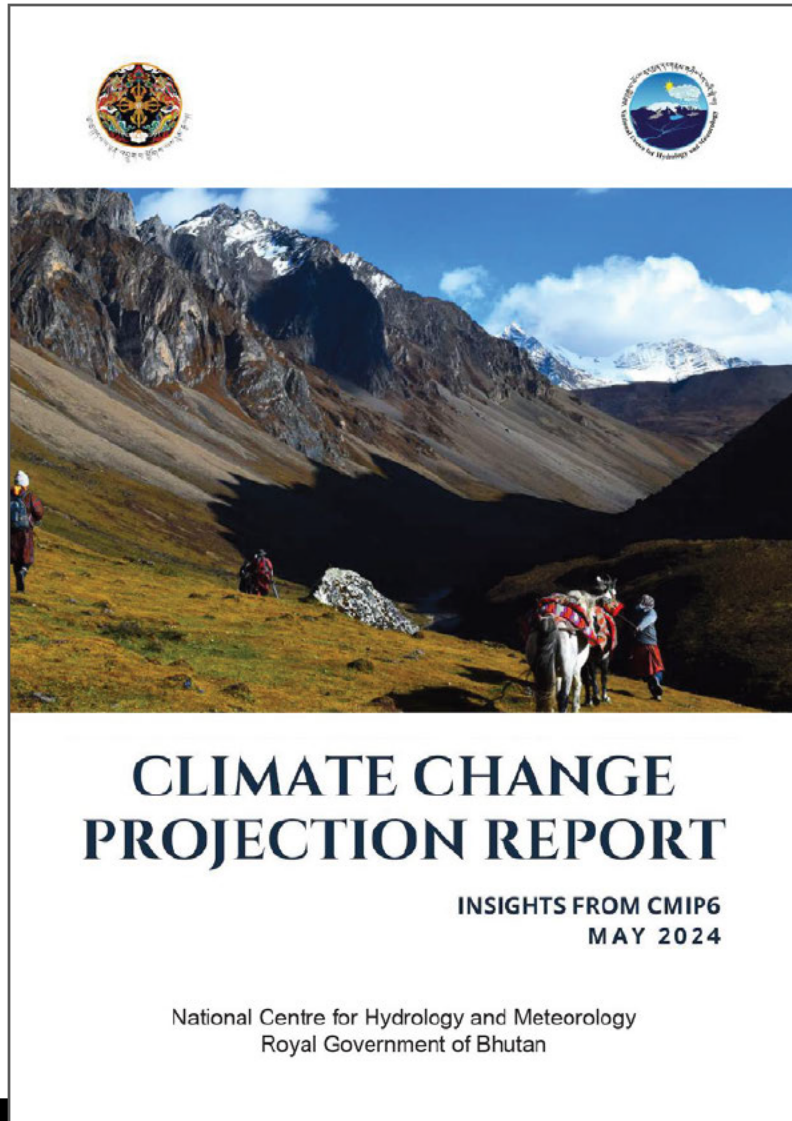




- **Areas with significant agriculture in west and south-western part of the country are likely to be exposed to high to very high increase in monsoon precipitation. In the east there is likelihood of less precipitation than normal.**
- **The rice producing areas in the east may face water scarcity like situation while the ones in the west,**



# Ap-Plat –ESCAP Collaboration




- Leveraging on the downscaled methodology developed by AP-Plat ESCAP has demonstrated risk analytics at the national and sub-national level in Bhutan and Maldives.
- The methodology is now being replicated across the Asia-Pacific and for some target countries to showcase climate risk for specific sectors like water, energy and agriculture.
- The downscaled climate projection will help to identify risks at the local



# Harnessing the synergy of platforms


Towards innovative solutions  
for adaptation and resilience



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Developing the science-policy gap for informed action

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**01**  
**Risk and Impacts**



**AP-PLAT**

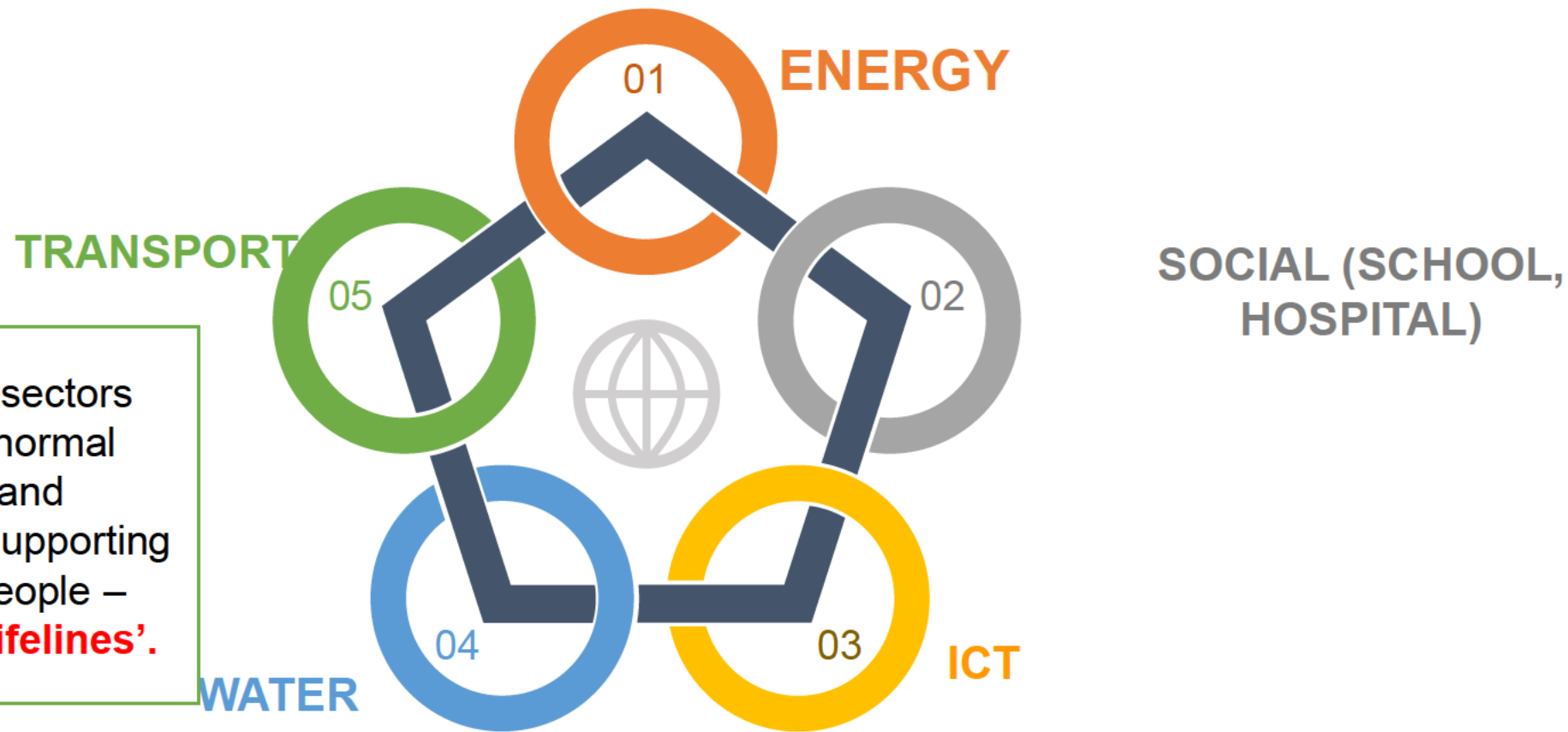
**02**  
**Risk visualization with Granularities**  
**Adaptation measures/best practices**



**CDRI**  
Coalition for Disaster Resilient Infrastructure

**03**  
**Global Infrastructure Risk Model and Resilience Index (GIRI).**  
Risk metrics across infrastructure sectors – hazard specific

# Early warnings to protect critical Infrastructure to avoid cascading impacts, supply chain disruptions



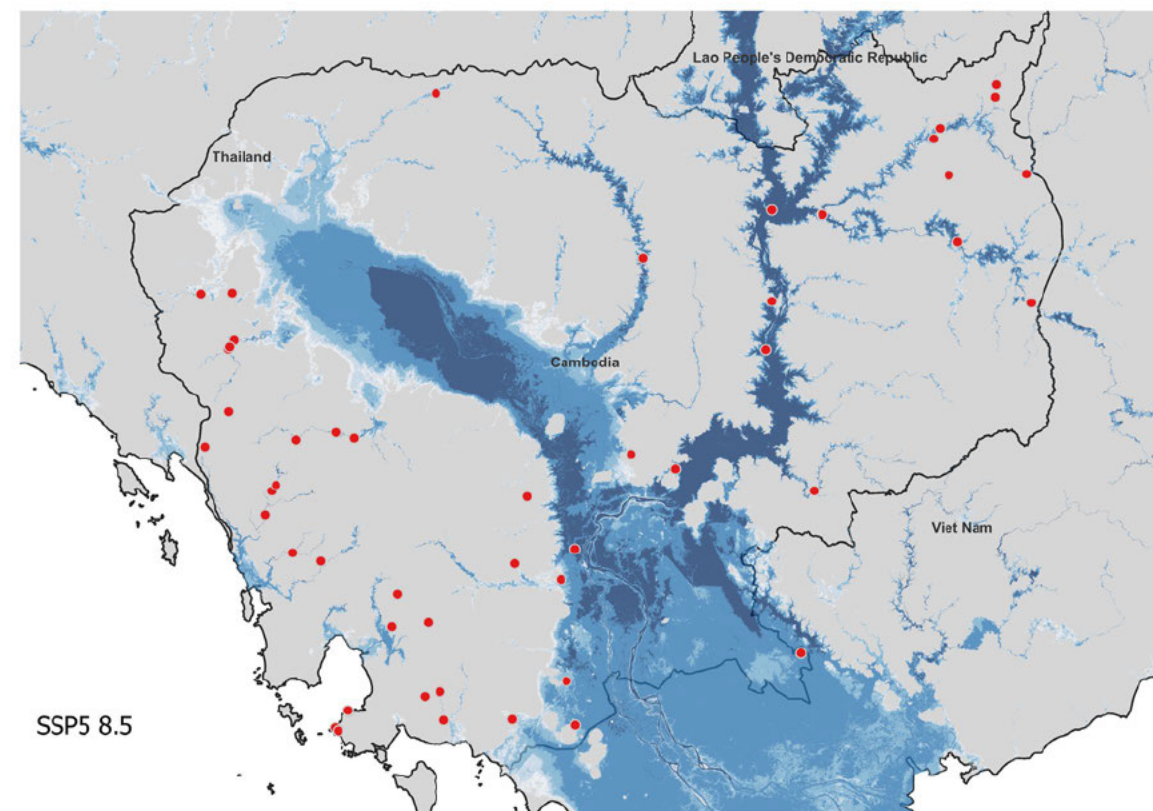
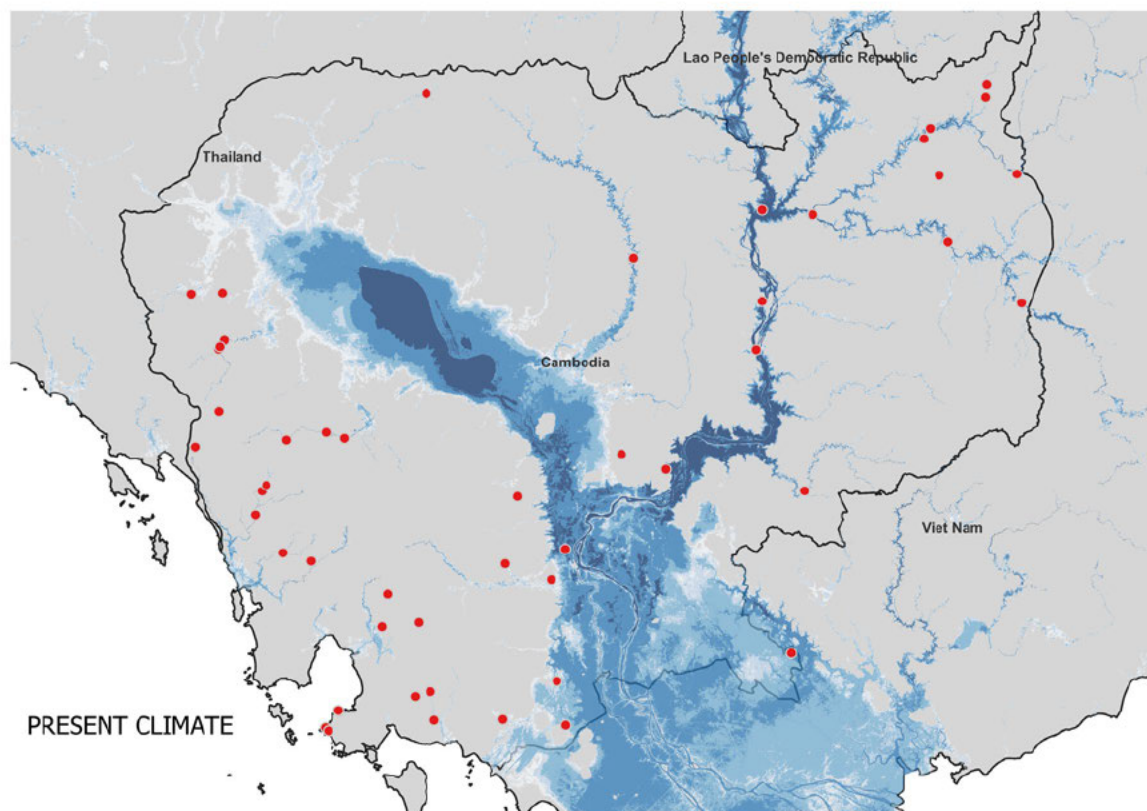
Critical infrastructure sectors vital for securing the normal functioning of States and businesses, and for supporting the everyday life of people – often referred to as **‘lifelines’**.

These sectors are not single systems but networks, which means that a local emergency could quickly spread and lead to severe disruptions;

These sectors are also interconnected and more interdependent, especially with the digitization of services.

# EW4All Cambodia: Climate projection of hazards

Estimate the impacts of floods on power plants under different climate scenarios (at 100m resolution)



Disclaimer: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.  
Sources: ESCAP calculations based on IPCC WGI Interactive Atlas - Coupled Model Intercomparison Project Phase 6 (CMIP6) 2021; GIRI CDRI (2023); and UN Geospatial.



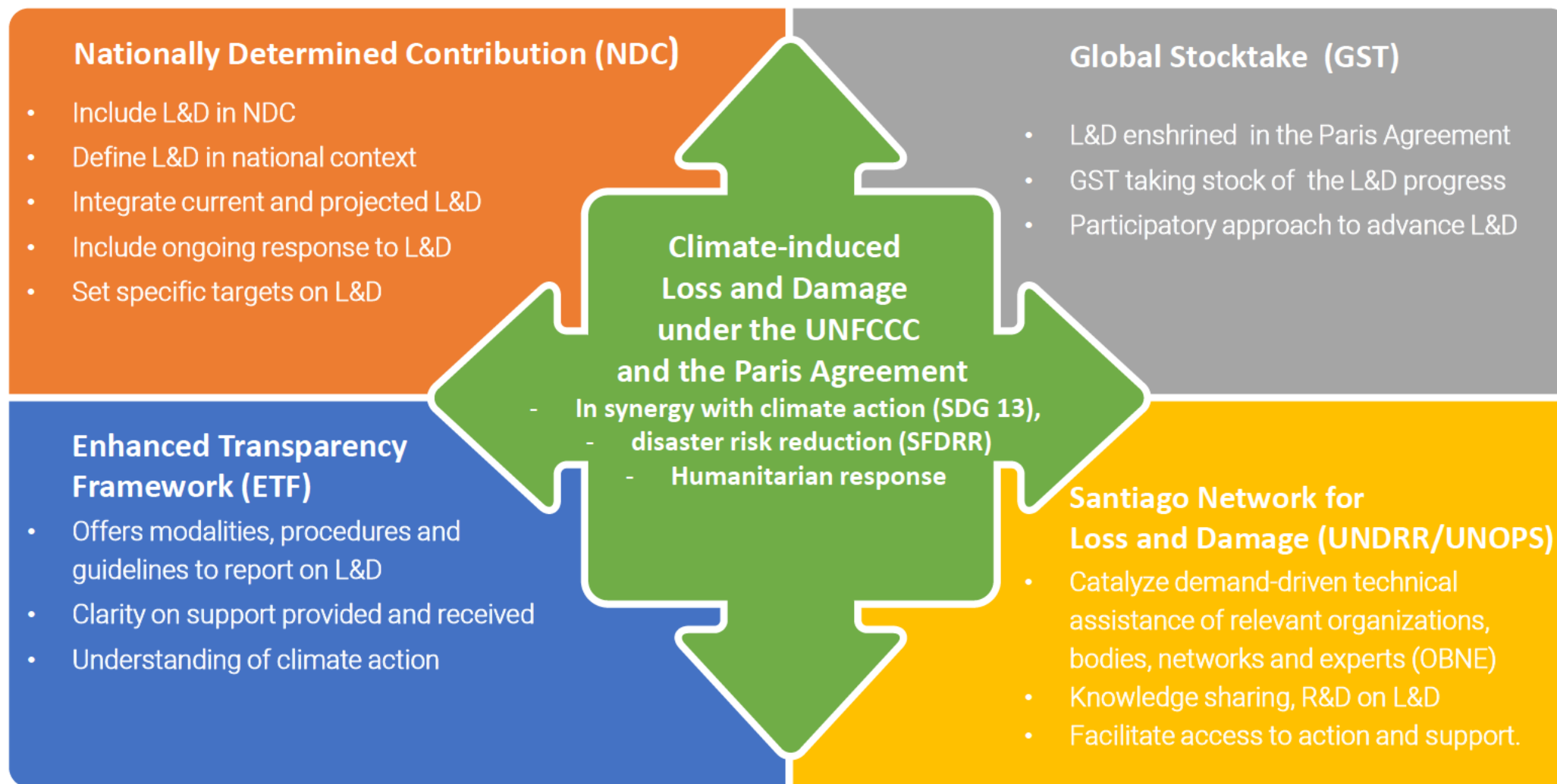
## Moving forward 2: Cooperation in Loss and Damage

- ESCAP and NIES can collaborate on Loss and Damage particularly on assessment of impact, calculating adaptation costs and identifying priorities and stocktaking of adaptation measures
- ESCAP through Santiago Network and its OBNE work invites NIES to jointly develop technical assistance projects in Loss and Damage

**SANTIAGO**  
NETWORK

ESCAP a part of OBNEs

# Translating L&D into action: Build on UNFCCC framework





# Agenda of Climate induced L&D in Nepal's Climate Commitments



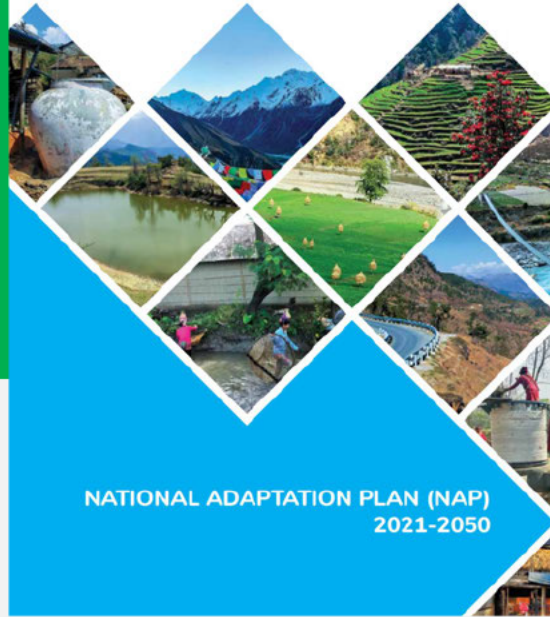
Second Nationally Determined Contribution (NDC)

Government of Nepal  
Kathmandu

December 08, 2020



GOVERNMENT OF NEPAL



NATIONAL ADAPTATION PLAN (NAP)  
2021-2050

National Adaptation Plan incorporates adaptation and resilience milestones to be achieved in the short-term (by 2025), medium-term (by 2030) and long-term (by 2050).

01

By 2025, a national strategy and action plan on Loss and Damage (L&D) associated with climate change impacts will be devised.

02

By 2030, a multi-hazard monitoring and early warning system covering all the provinces will be established.

03

By 2025, climate-sensitive diseases surveillance systems will be strengthened through the integration of climate and weather information into existing surveillance systems.

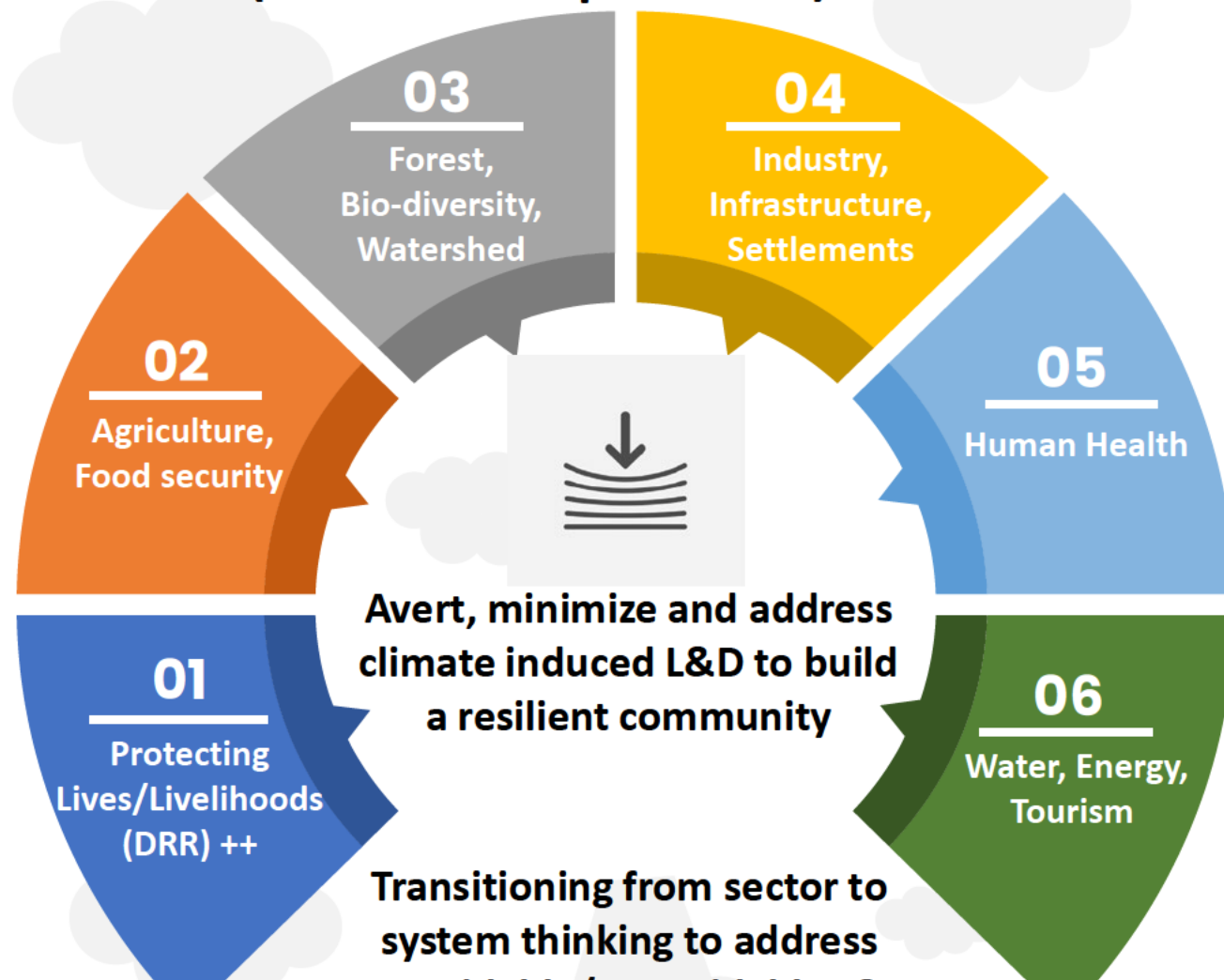
04

By 2025, climate risk assessment mechanisms will be integrated into WASH program planning and implementation cycle.

05

By 2022, a Climate Finance Strategy, and National Capacity on Climate Finance Management will be formulated.

# Pathways for local resilience synergistic actions through DRR, CCA and L&D (Based on Nepal's NAP)





# National Framework of L&D Fund

## Financing instruments

Building national capacity to  
Mainstream L&D is s key challenge

### Adaptation Finance

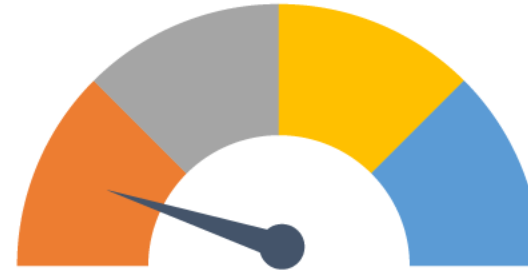
Preventing and building  
resilience



### L&D Finance

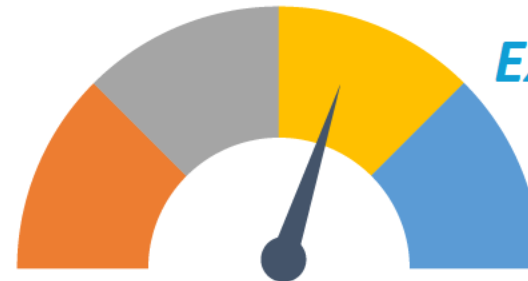
For unavoidable and partly  
losses and damages

*Contributions from Fund for  
responding to loss and  
damage*



### Ex Ante and Ex Post Finance

Preparedness, Early Warnings,  
Response, Recovery and  
Reconstruction



### Emergency Finance

Humanitarian response,  
emergence assistance



## Addressing loss and damage of agrifood systems to protect poor



## Loss and damage @ COP 29 Baku: 4 key takeaways

23 August 2024

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# Run-up to COP29: Climate induced loss and damage to agri-food systems cries for attention

PREMIUM

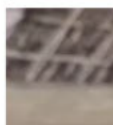
Updated - October 18, 2024 at 01:13 PM. | Thiruvananthapuram

Precious funds must address challenges of breaking poverty trap and safeguarding livelihoods, says UN-ESCAP

BY VINSON KL

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COMMENT



# Wayanad, Sichuan landslides set Loss and Damage agenda for COP 29

Updated - September 02, 2024 at 02:08 PM. | Thiruvananthapuram

Extreme weather events signal escalating complexity of climate-related risks in Asia-Pacific, says UN-ESCAP



# THANK YOU



<https://rrp.unescap.org/>