Climate services in the HKH region for informed decision making at the local level

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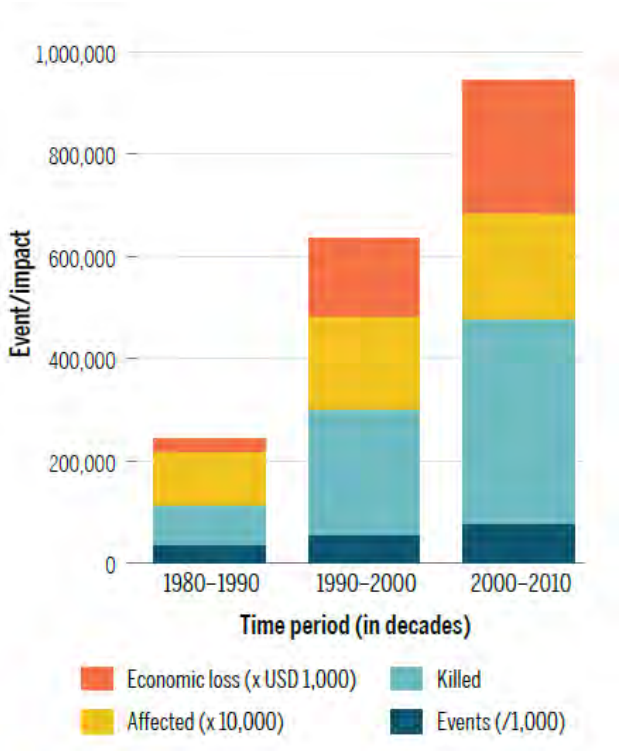
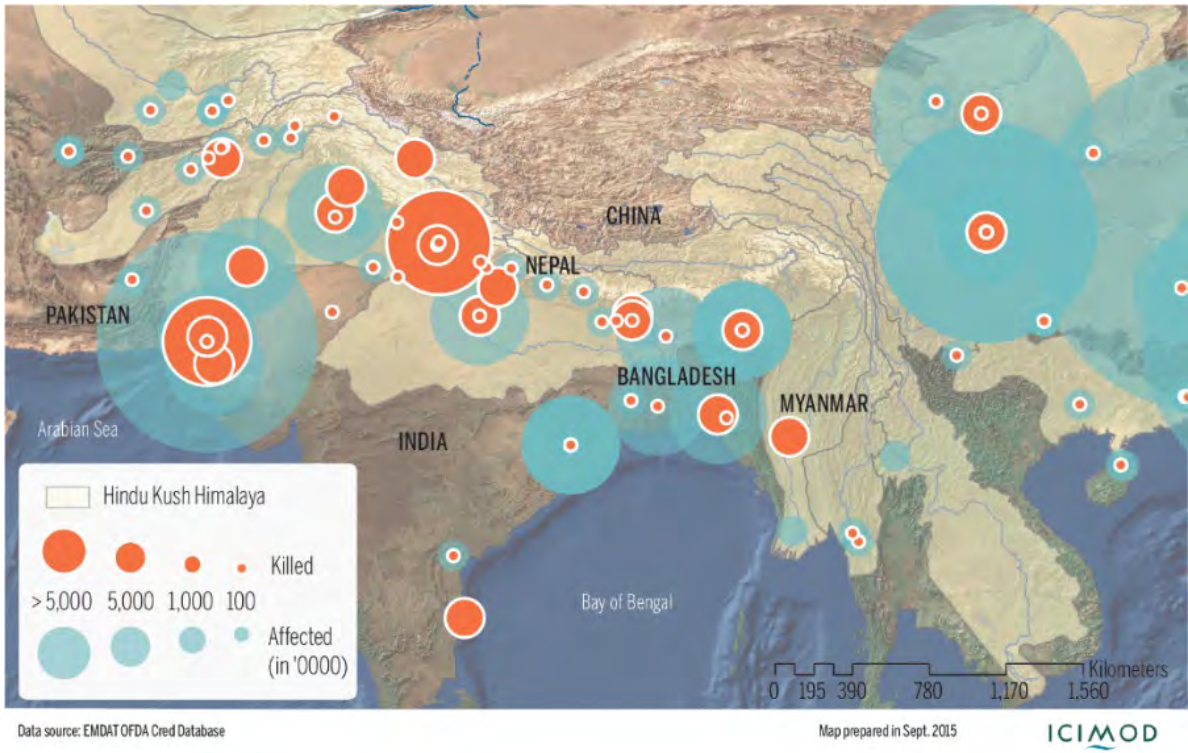
The economic and human impacts of natural disasters are increasing

1/3 of disasters are floods

Transboundary floods - shared vulnerability across national borders





Source: Vaidya et al., 2019 (HIMAP report)

Challenges

Increase in intensity and frequency of flood disasters

Inadequate climate observing network

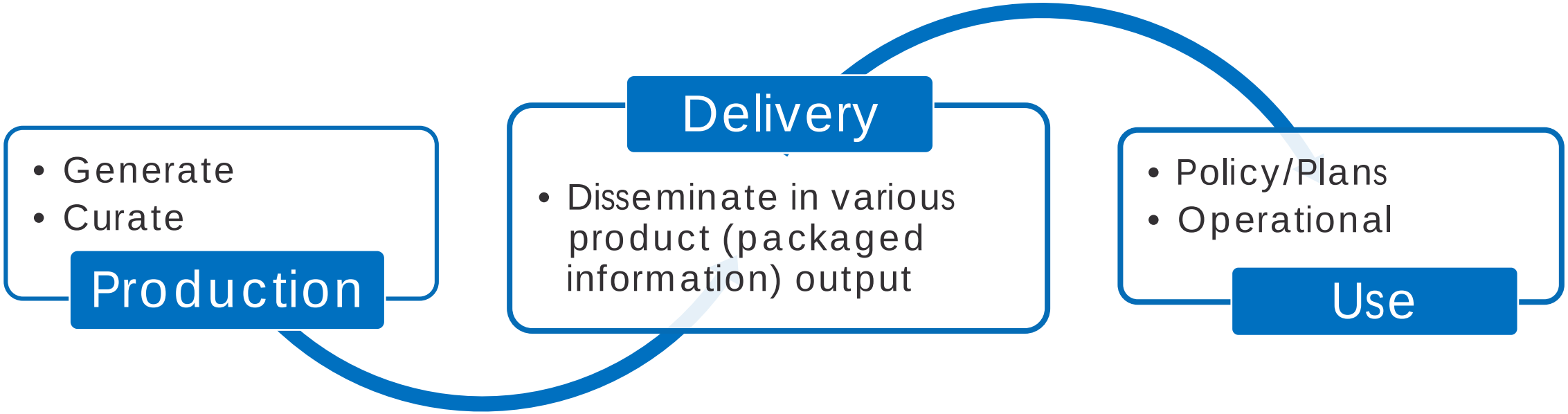
Lack of sharing of data and information

Inadequate and varying capacity

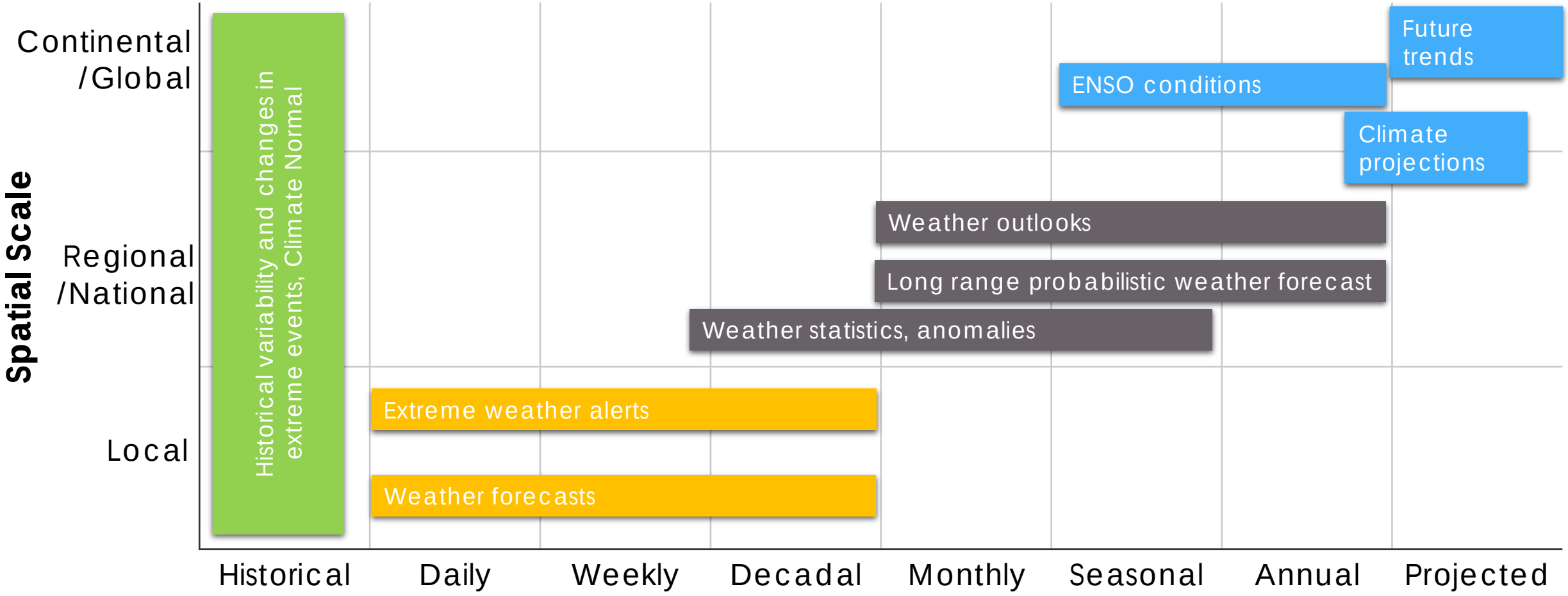
Limited tailored climate services that is actionable and gender responsive.

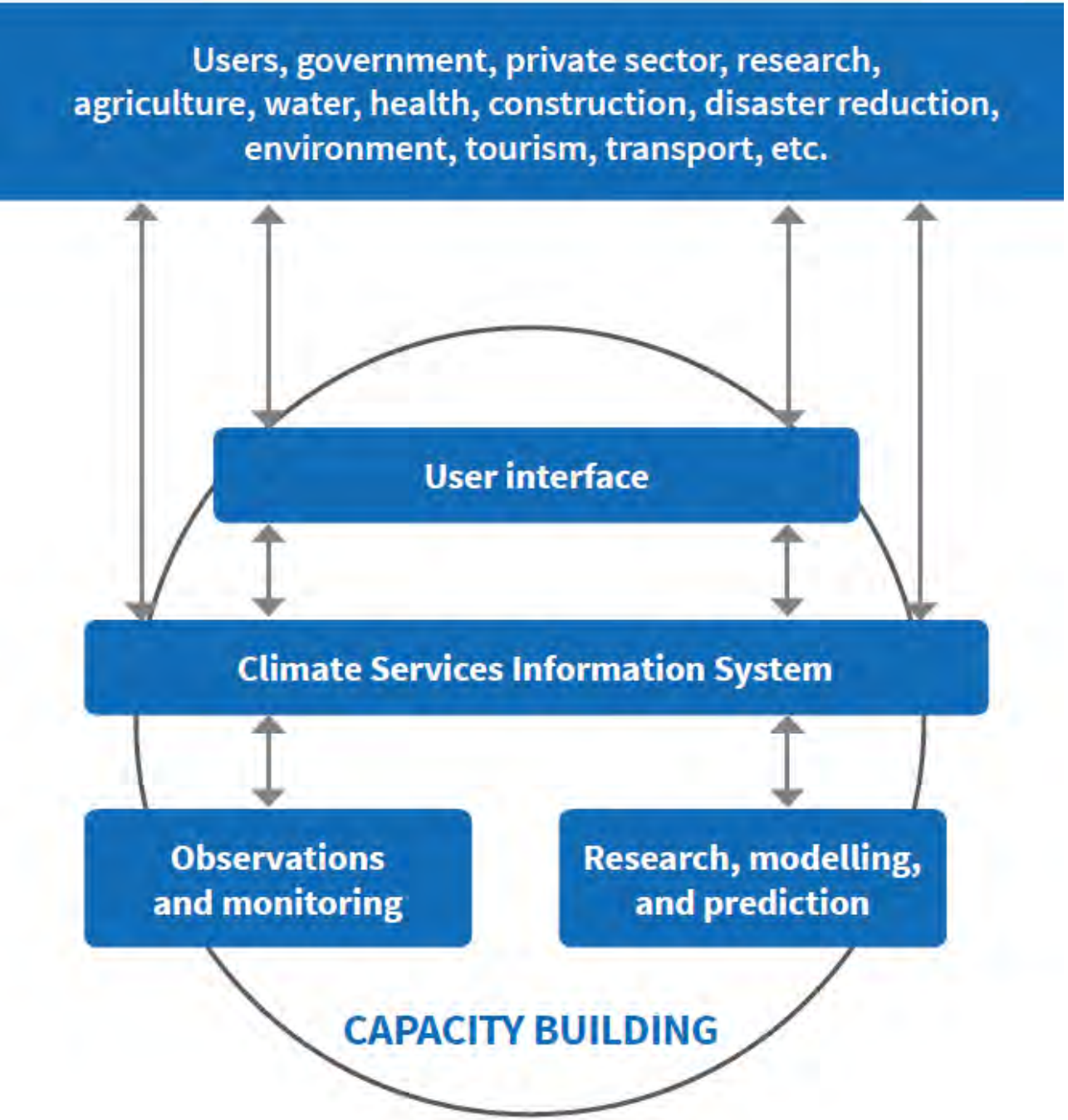
What is Climate Service?

Science-based information and forecasts that empower decision-makers at different levels to anticipate and manage climate related shocks and opportunities.



Climate services: Spatial and temporal





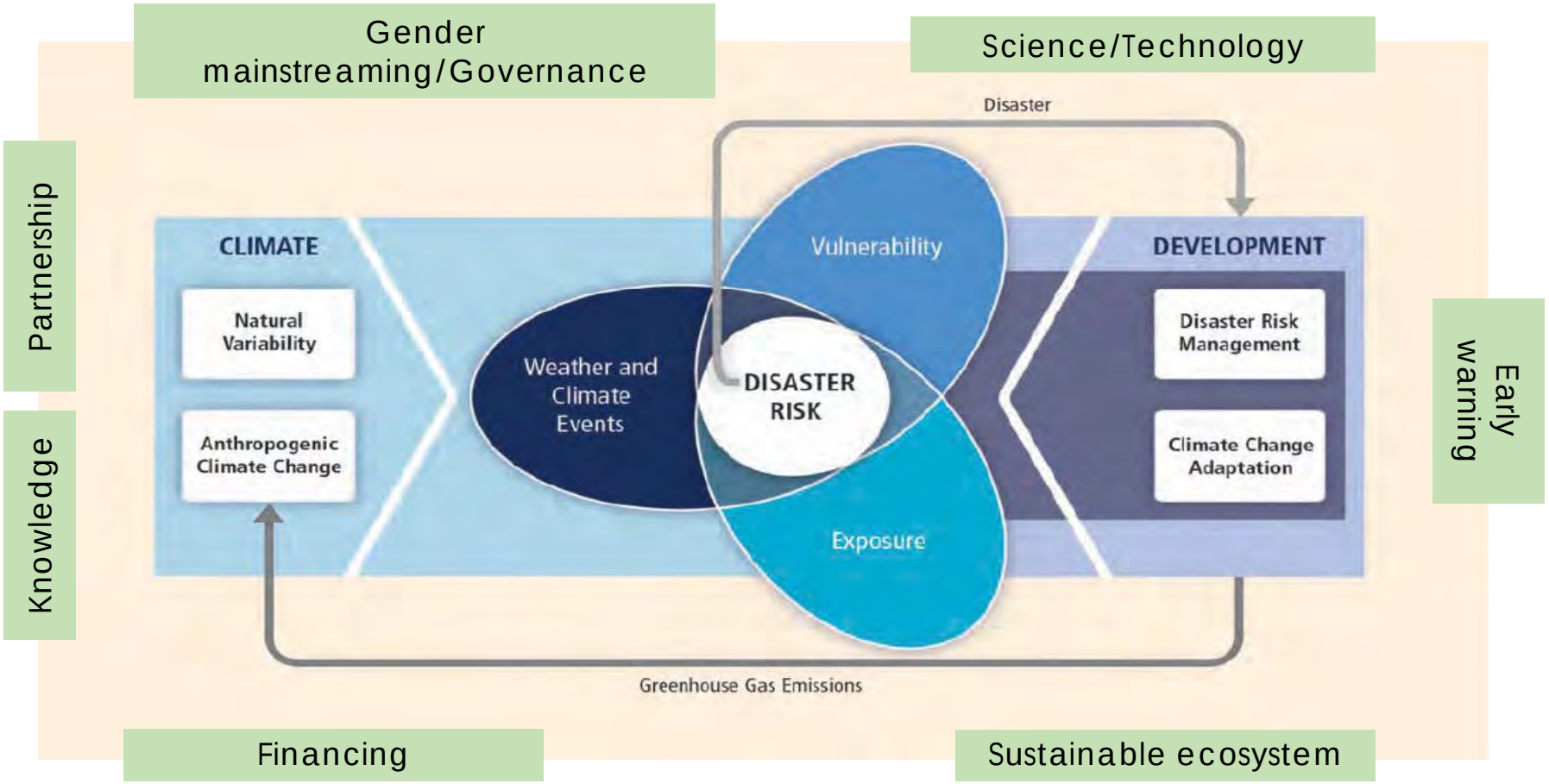
Global framework for climate services

five pillars of GFCS

to support more robust adaptation planning and policy decisions

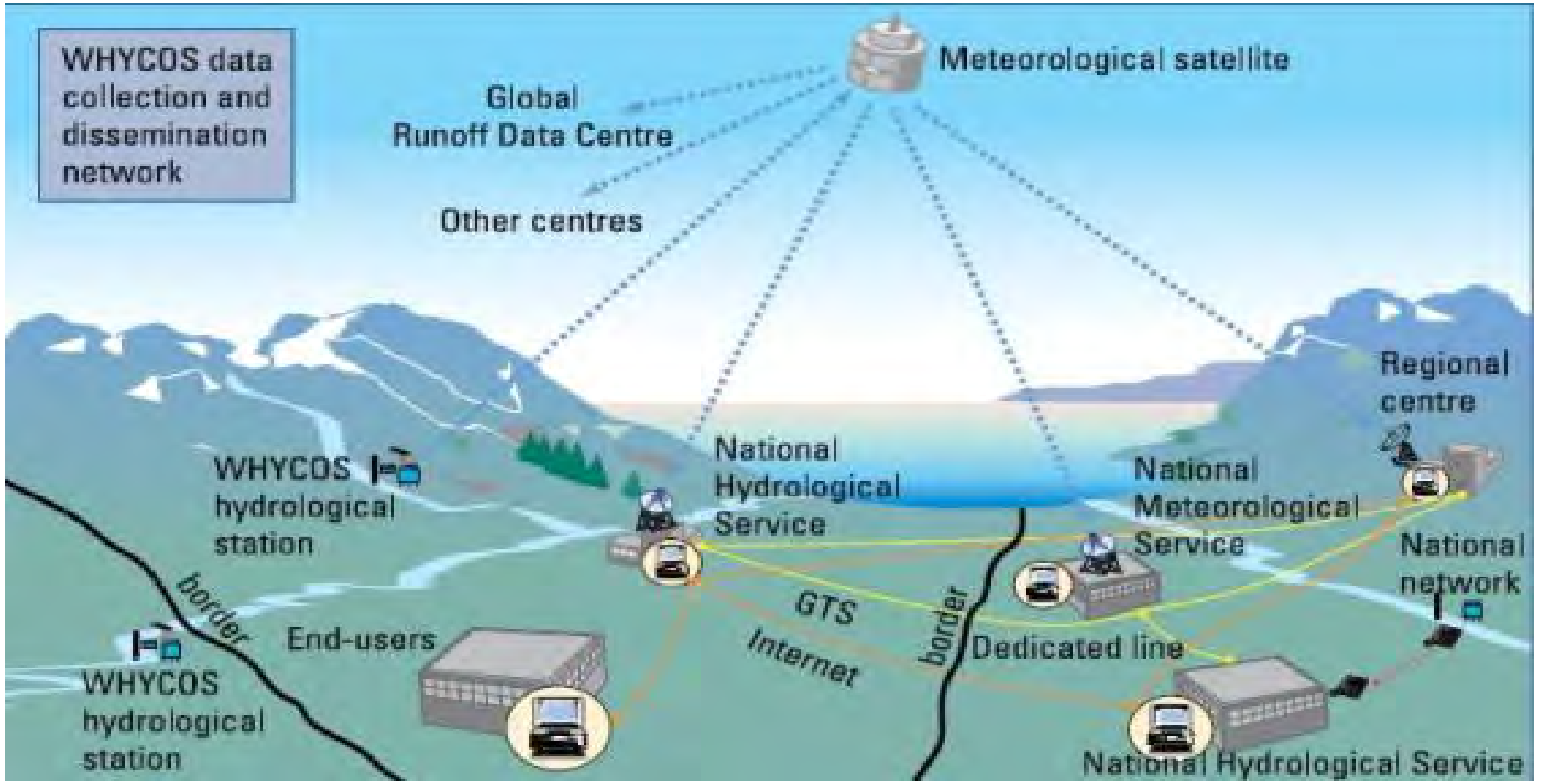
increasing resilience to climate change

Reducing risk, vulnerability and exposure

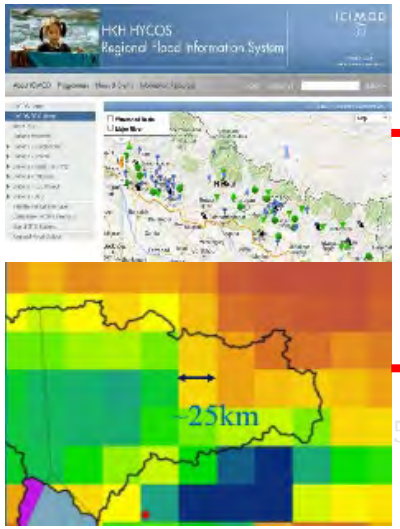


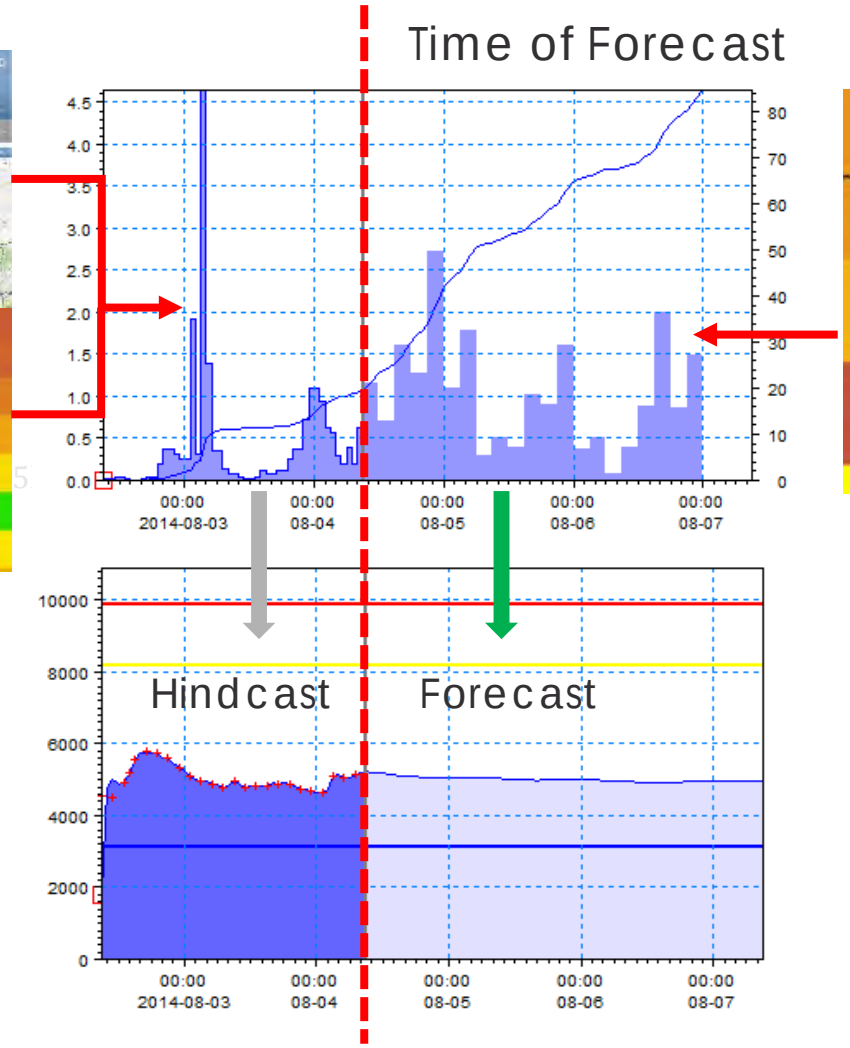
Source: IPCC, 2012 (SREX report)

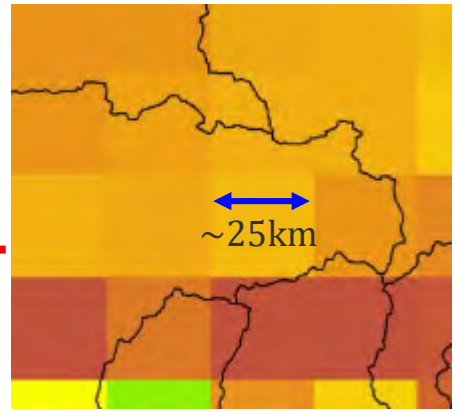
HKH HYCOS – promoting regional flood early warning



Regional flood outlook







Hindcast (Observed RT data, GPM, NASA

Quantitative Precipitation/ Temp Forecast (GFS, NOAA)

Regional Drought Monitoring and Outlook System

An integrated information platform linking weather and climate data with agriculture practices in the region to inform short- to medium-term agri-advisories

Allows characterization of droughts through accurate, reliable, and timely estimates of their severity and impacts.

Localizing climate services in Chitwan

Impact: Improved livelihood and enhanced resilience of people as a result of reduced risks and vulnerabilities with the use of climate information services.

Outcome: Improved capacity of local institutions, extension workers and farmers of Chitwan to integrate climate information services in their decision making.

Change pathways:

- Build partnerships
- Develop user service
- Strengthen capacity

Understanding climate services landscape in Chitwan

- Stakeholder consultations - types of users, needs, priority areas, type and method of service, their awareness, cultures, ability to use and capacity building requirements
- Understand and map the user landscape
- Identify the gaps and the needs

Agriculture Stakeholder recommendations

Develop information system that could reach to the farmer's level.

Establish information system in each district and municipality that addresses livestock, fisheries, crops, bees.

Capacity development at various levels.

Common needs and priorities in the HKH

To bridge the gap between climate information providers and users

- Strengthen capacity in the use of advanced tools in forecasting and data assimilation: impact-based forecasting, seasonal outlooks and climate projections
- Institutional strengthening and coordination of all actors and activities
- Tailor climate information to the needs of specific users for societal benefits
- Awareness, enhancing capacity, communication and dissemination of climate information to various types of users (language, sociocultural norms and mode)

Opportunities

Enhance partnerships in science and delivery of products and services

Dialogues between users and stakeholders to co-design and co-develop services

Build capacity, learn and co-create innovative solutions to understand, interpret and use

Using EO and geospatial tools for monitoring, assessing, and forecasting

Harmonize climate data and information and its use across the HKH region

Space for collating, curating, and sharing data

Platform to facilitate knowledge sharing and cooperation on science and data

HKH Climate Services Centre

Addressing transboundary issues

water, air pollution, disasters, GLOFs

Build institutional and individual capacities and co-develop appropriate solutions

Space for introducing and exchanging new technologies and approaches

Thank you
Let’s protect
the pulse.