



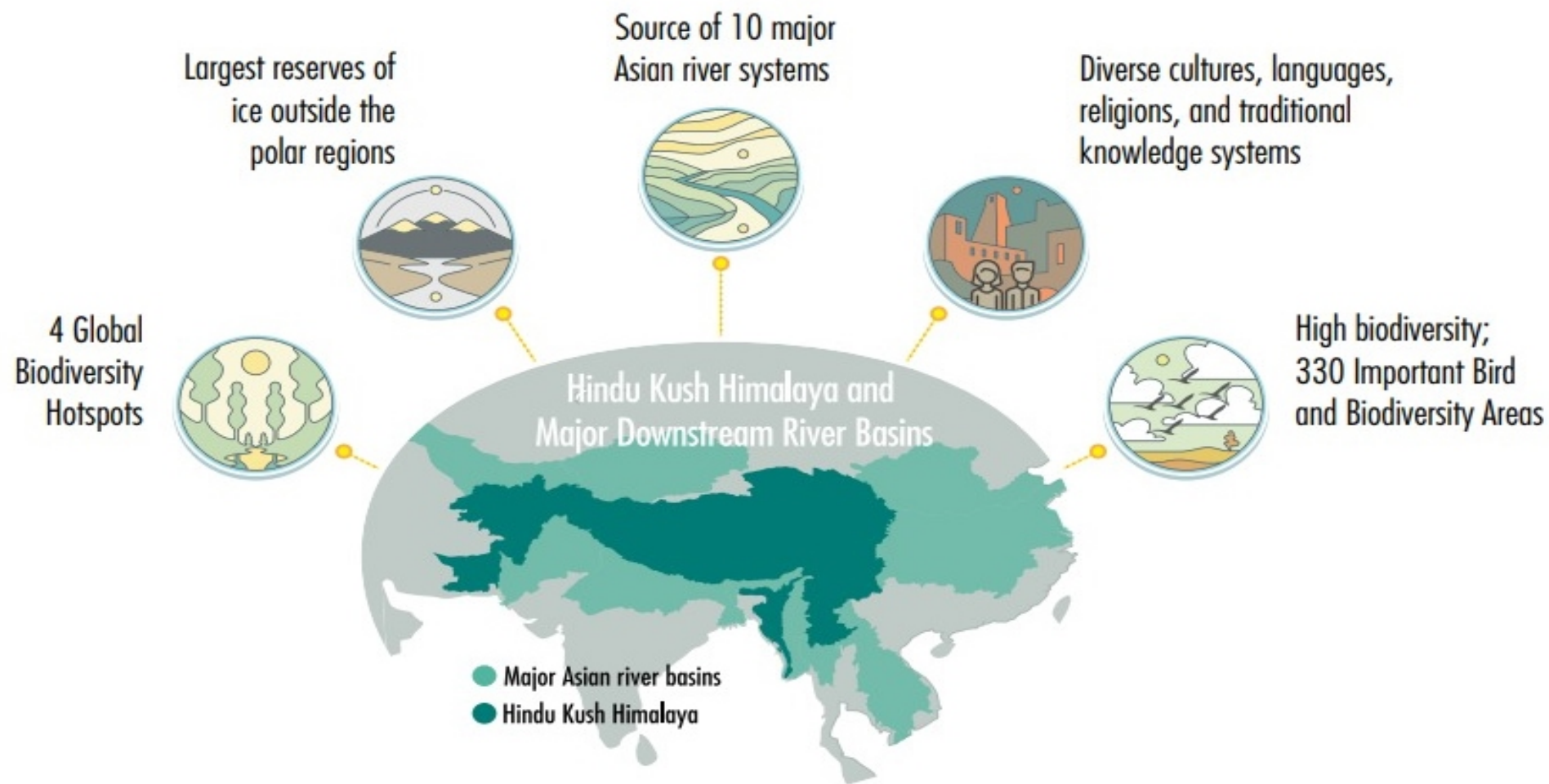
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07 March 2022, Dhaka, Bangladesh

Climate services in the HKH region for informed decision making

International Centre for Integrated Mountain Development

A regional mountain knowledge, learning, and
enabling centre devoted to sustainable mountain
development for mountains and people





240 million

people depend directly on the HKH for their lives and livelihoods

1.9 billion

people depend on the HKH for water, food, and energy

> 35%

of the world population benefits indirectly from HKH resources and ecosystem services

Key Issues in the HKH region

Multi-hazard environment

Upstream-downstream linkages

Climate change and variability

Connectivity and physical access

Governance



Challenges

Increase in intensity and frequency of disasters

Inadequate climate observing network

Lack of sharing of data and information

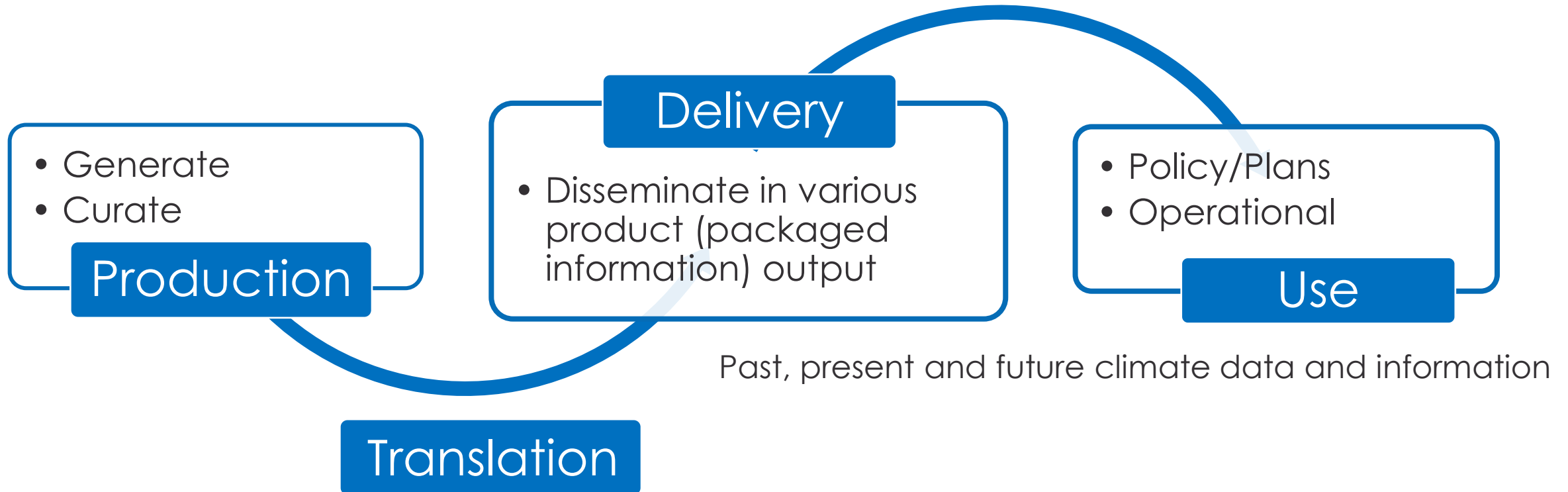
Inadequate and varying capacity

Limited tailored climate services that is actionable and gender responsive.

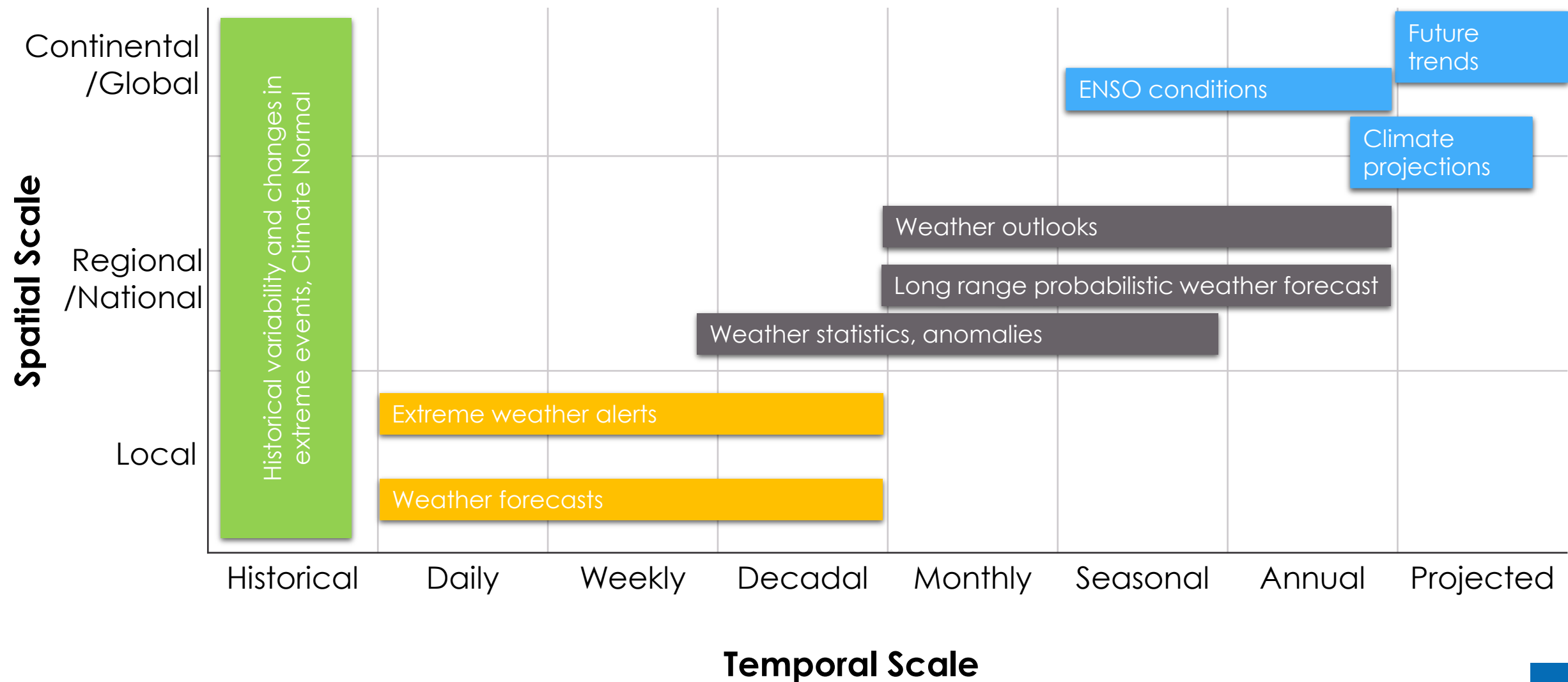


What is Climate Service?

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



Climate services: Spatial and temporal



Users, government, private sector, research,
agriculture, water, health, construction, disaster reduction,
environment, tourism, transport, etc.

User interface

Climate Services Information System

Observations
and monitoring

Research, modelling,
and prediction

CAPACITY BUILDING

Global framework for climate services

five pillars of GFCS

to support more robust adaptation
planning and policy decisions

increasing resilience to climate
change



Implementation Plan of the Global Framework for Climate Services

Climate risk sensitive growth sectors

Agriculture: Climate change is detrimental to agriculture systems.

Tourism

Water and energy

Health

Disasters – floods, droughts, forest fire, extreme temperatures/heat waves, air pollution

Results in loss of productivity, infrastructure, property and lives.

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

Support the implementation of the GFCS in the HKH region





Climate Services initiative

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

Outcome: Improved capacities of mandated institutions and understanding of end users in making best use of climate information services for decision making and long-term resilience building.

Change pathways:

- Build partnerships and user interface
- Co-develop services
- Strengthen capacity

Needs and priorities in the HKH (ARRCC)

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
- Build Institutional capacities in the access and use of Climate change projections
- Co-develop and 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)

Institutional capacity building: climate projections

Stakeholder consultation and need identification

- Identification of the needs and priorities through regional and national consultations held in 2019
- Online survey for training need identification

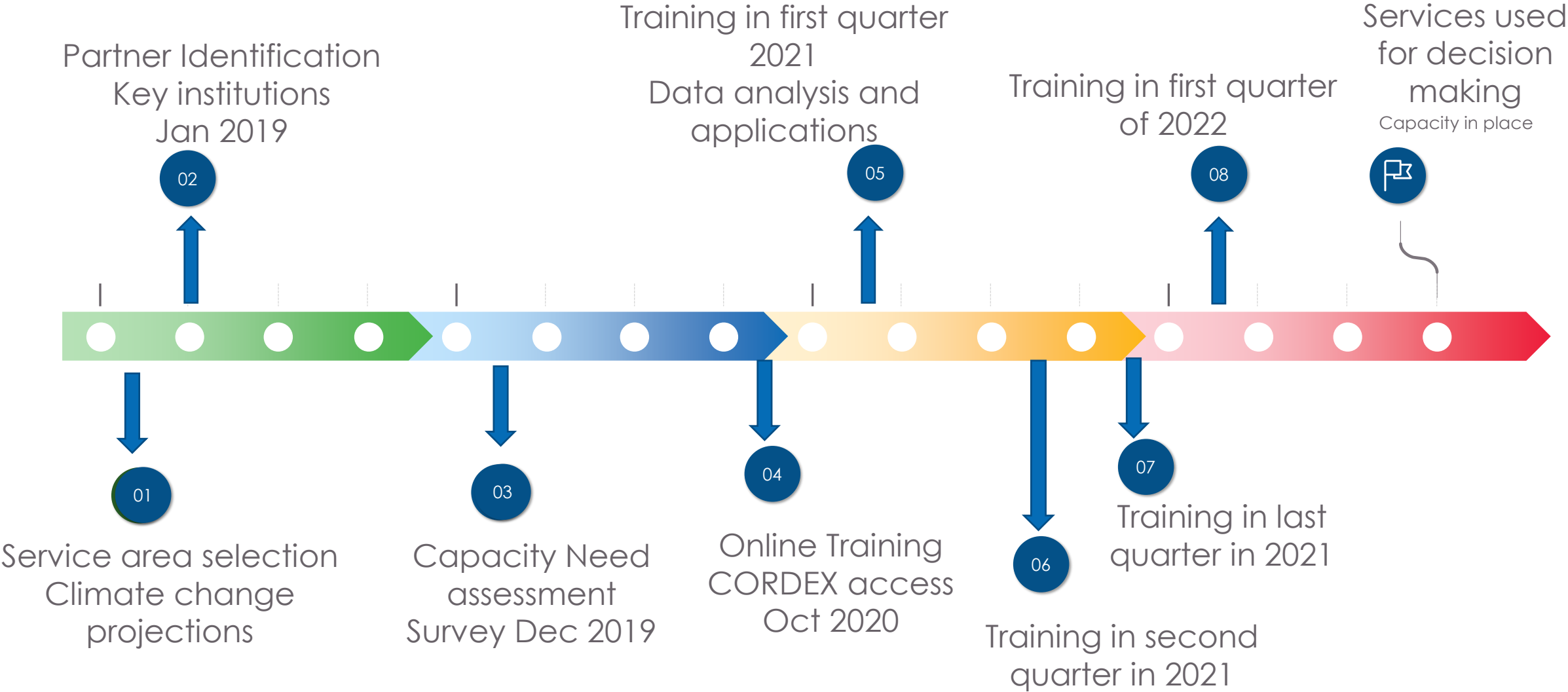
International and regional partnerships

- UK Met Office, World Climate Research Programm (WRCP), IITM-Pune

Dedicated institutional capacity building approach

- Partnership from the beginning (shared vision and commitments)
- National hydro-meteorological agencies on board (Afghanistan, Nepal, Bangladesh, Pakistan)
- Series of capacity building activities planned for 2020-2022
- Development of software's and tools
- **Co-generating knowledge** to develop national climate change projections and sectoral implications

Institutional Capacity Building Approach



Training programme

Objective: The training aims to build knowledge and skills for analysing climate change projections using CORDEX regional climate model simulations for professionals in Bangladesh.

Date	Description
DAY 1, 7 March	Pres-assessment survey, installation of softwares, Introduction of participants, fundamental concepts of climate change science and introduction to CORDEX datasets
DAY 2, 8 March	CORDEX data extraction and management for the analysis
DAY 3, 9 March	Selection of representative models from the 17 CORDEX simulation runs (Aphrodite reference data sets)
DAY 4, 10 March	Visualization of future scenario based on selected models
DAY 5, 11 March	Uncertainty analysis, Group work presentations and road ahead

Expected outcomes

- Better understand climate model projections using 17 regional climate simulations
- Select representative models which best replicate historical climate cycles
- Prepare CORDEX datasets in areas of interest and compare them with reference datasets
- Visualize spatial and temporal variation in climate change projections
- Interpret uncertainty in model results



Thank you

Let's protect
the pulse.