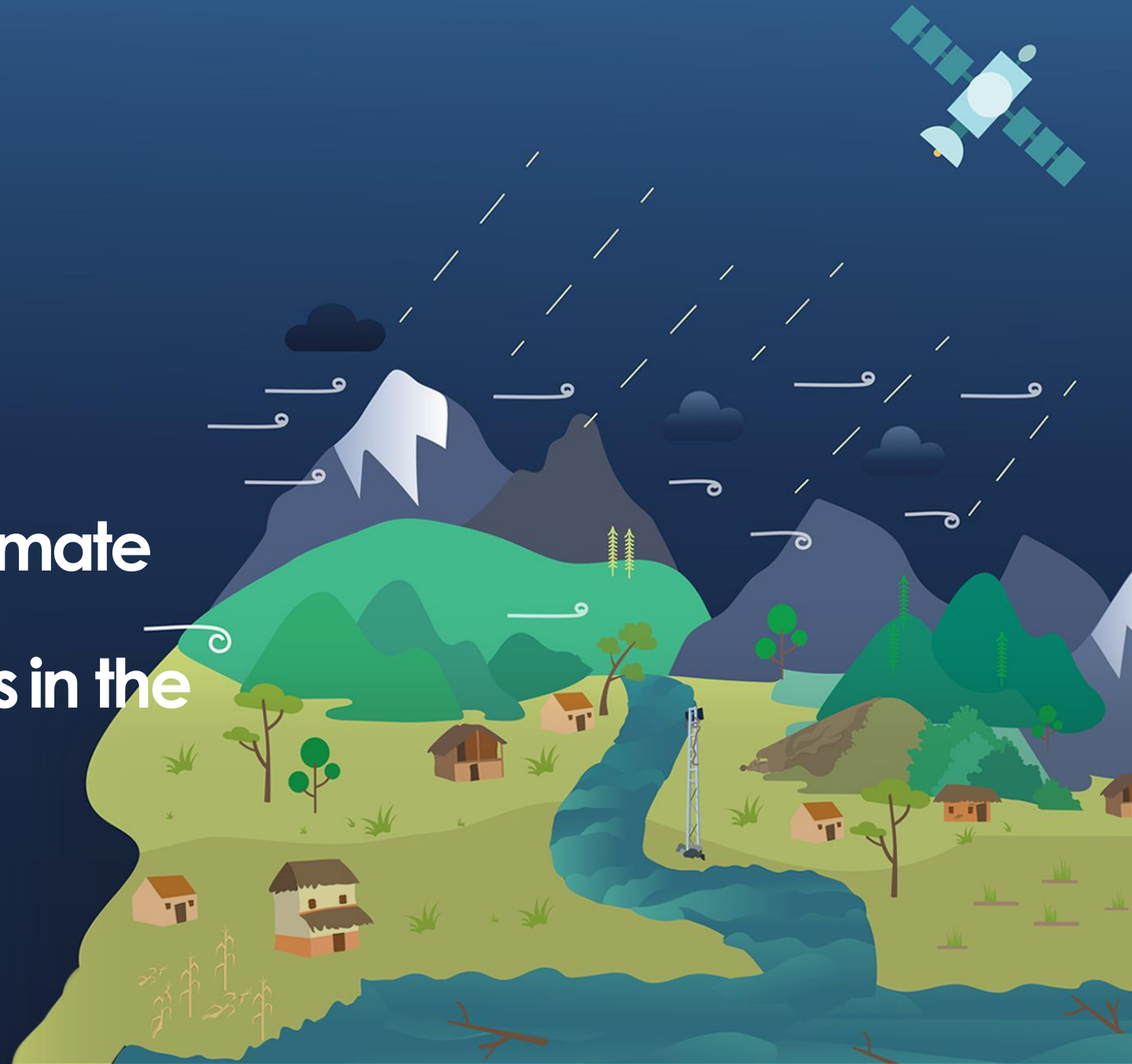


JOINT RESEARCH PROPOSAL

on

**Assessing the Impact of Climate
Change on Water Resources in the
Indus Basin**

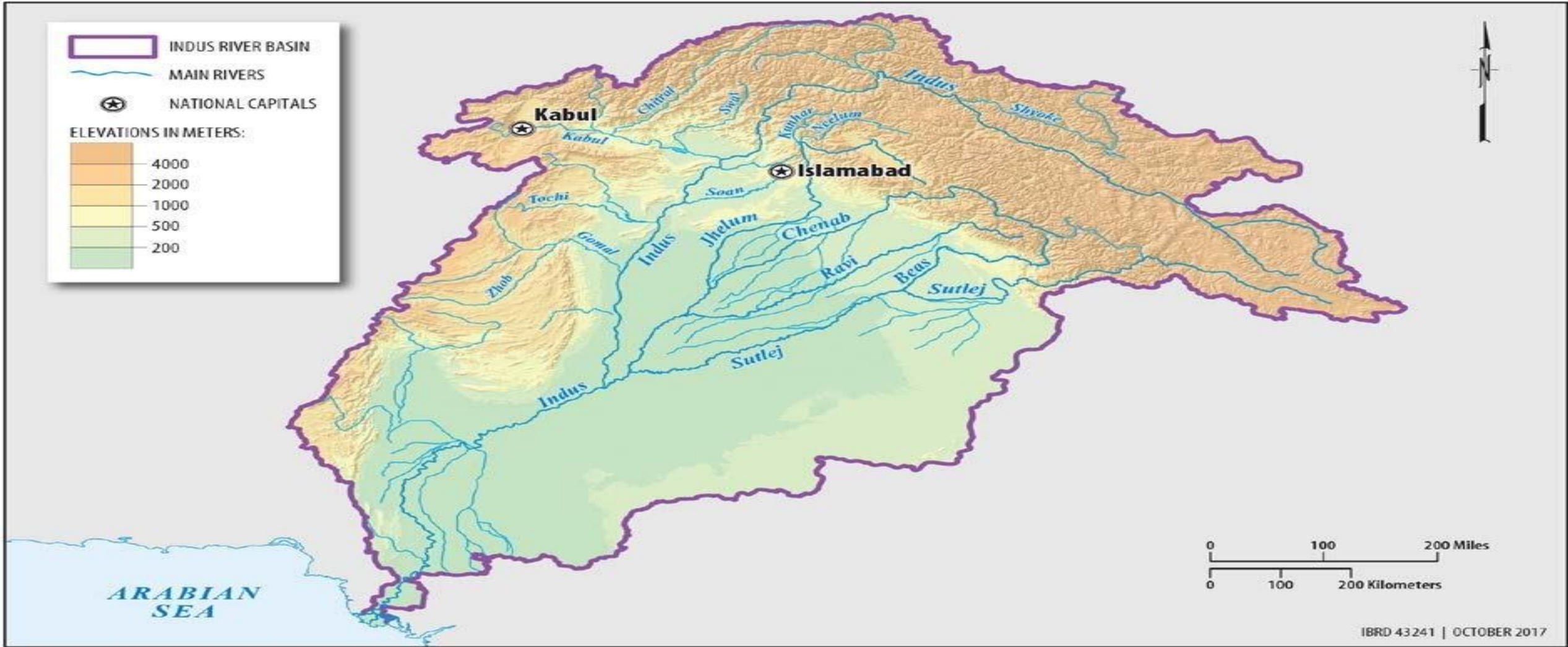


Background

- Abu Dhabi Dialogue started 2 decades ago on major river basins
- South Asian Water Initiative (SAWI)
- SA River Basins For a Singapore
- Joint Proposal Concept Quito
- Lahore, Vienna



Indus Basin



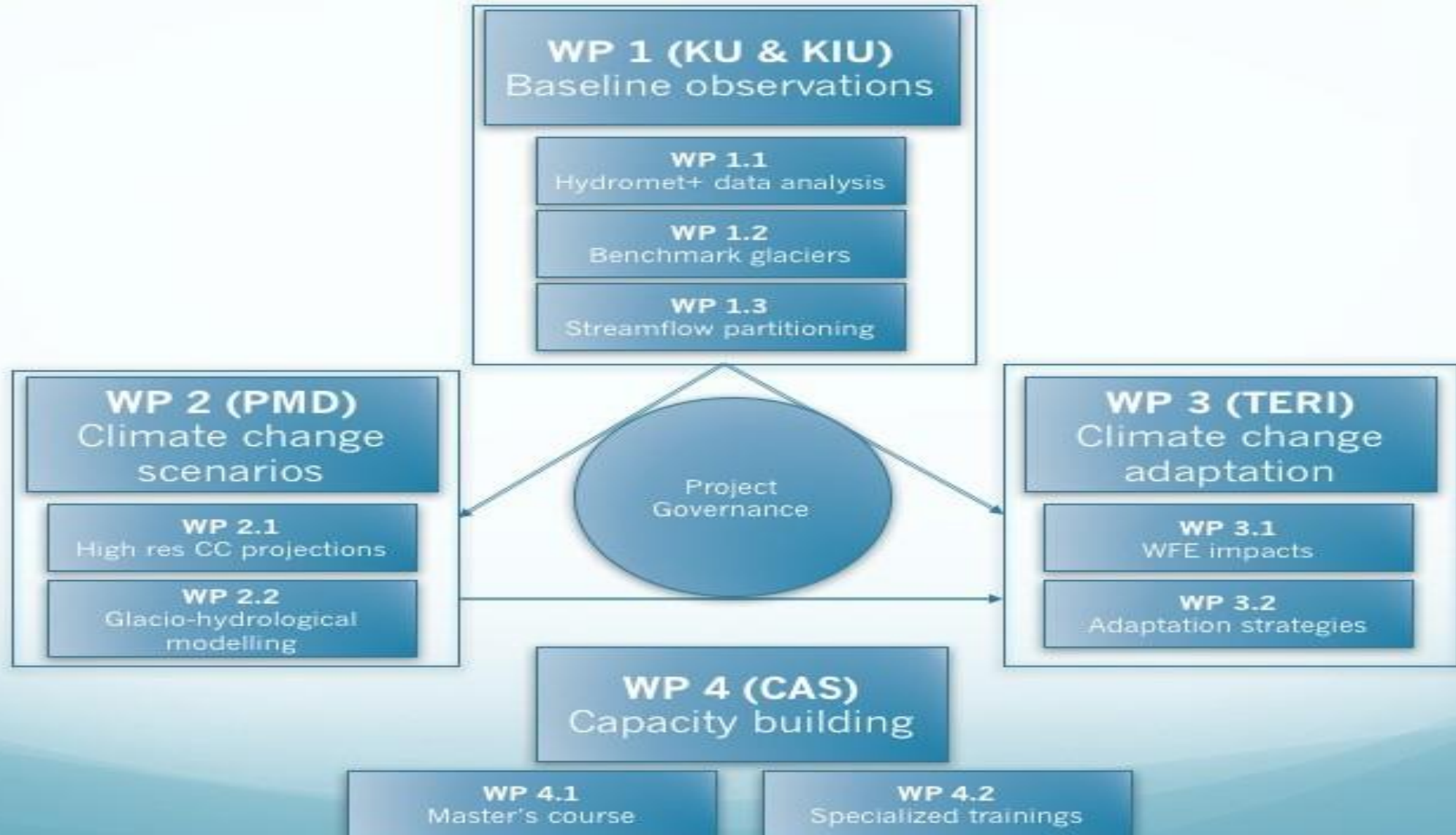
Objectives

- Establish long-term monitoring sites in each of the four countries sharing the Indus Basin in order to better understand the spatial and temporal patterns of weather, snowpack, glacier mass balance and black carbon throughout the UIB;
- Enhance our understanding on climate system dynamics and future trends of summer and winter weather systems;
- Develop scenarios to understand the impacts that climate may have on glaciers and water resources in the UIB;
- Utilize insights from all the above activities to construct develop robust adaptation strategies using a sophisticated modelling framework;
- Build capacity of human resources in the basin; and
- Disseminate and share information learned through the program with relevant parties.

Key Questions

- How much water is stored in the Indus basin cryosphere and how does it move through the system?
- How can the available datasets be most effectively used to understand the contribution and interactions of snow, glaciers and river flows in the basin under changing climate?
- What will be the future monsoon dynamics and winter precipitation pattern? What will be their differential impact on water resources of the basin?
- How will future climate change affect the cryosphere in the Indus basin and hence the overall water balance of the basin?
- To what extent can use of Regional Climate Models (RCMs) reduce uncertainty in the spatial distribution of future climate change within the basin? Can this improve projections of climate change impacts on the cryosphere and water availability?
- How can stakeholders in the basin best adapt to the impacts of climate change to mitigate the adverse impacts on their livelihoods?

Research Design



Budget Estimate

Budget for WP 1: USD 3,424,480

Budget for WP 2: USD 1,183,360

Budget for WP 3: USD 328,000

Budget for WP 4: USD 1,359,000

Program Governance USD 766,600

Total Program Budget USD 7,061,440

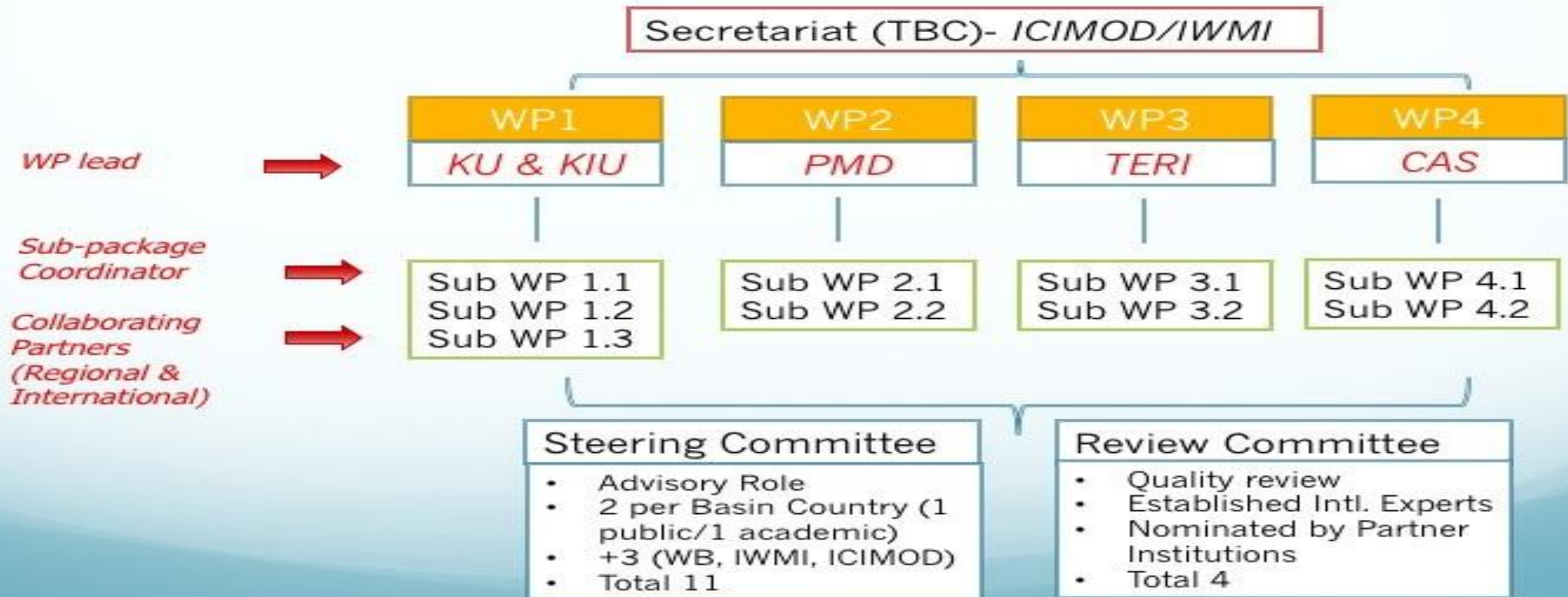
Proposed Timeline

	Year 1	Year 2	Year 3	Year 4	Year 5
Work Package 1 - Baseline observations					
WP 1.1	■	■	■	■	
WP 1.2	■	■	■	■	■
WP 1.3	■	■	■	■	
Work Package 2 - Climate change scenarios					
WP 2.1	■	■	■	■	■
WP 2.2	■	■	■	■	■
Work Package 3 - Climate change adaptation					
WP 3.1	■	■	■	■	■
WP 3.2	■	■	■	■	■
Work Package 4 - Capacity building and knowledge exchange					
WP 4.1		■	■	■	
WP 4.2	■	■	■	■	■



Governance

Agreed Governance Structure- Joint Research Proposal/Program





Thank you

**Let's protect
the pulse.**