



Proactive Regional Planning (PRP): Overview and progress on an ambitious plan to chart a more optimal and sustainable Mekong responsive to climate change and changing conditions

Mr Sophearin Chea, Chief River Basin Planner, MRC Secretariat



Content of the Presentation

- 1 Background and progress of PRP
- 2 Objective and process of PRP
- 3 PRP's Upgraded DSF
- 4 PRP's Planning Workstream
- 5 Stakeholder Engagement for PRP

Background and progress

- Change in Mekong natural flow regime, challenges from rapid development, increasing water-related emergency situation, climate change; large trade-offs between economic and environmental dimension 📌 **BDS 2021-2030 focuses on regional cooperation towards:**
 - More proactive regional planning
 - Coordination of basin operational management
 - Modernisation of data and information tools and sharing
 - More integrated Mekong-Lancang management arrangement
- 2020 – 2030 BDS's output 3.1.1: “The BDP and associated national plans are informed by the findings of a more PRP approach”
- PRP Concept Note and ToR agreed by MCs in April 22.
- Inception Report and upgraded DSF design report discussed with MCs.
- PRP work currently on-going.



Objectives of PRP

Broad objective

- To improve the shared basin-wide knowledge base, analytical capacity, institutional mechanisms, and stakeholder interaction to support Mekong Basin countries to improve water security and build climate resilience

Specific objective

- To provide new options for basin countries to consider enhancing their national or joint plans in ways that increase overall benefits and decrease costs

Development objective:

- To prepare an adaptive basin plan that supplements current national plans with a suite of significant joint investment projects and related enabling activities that will increase regional water security and create win-win outcomes for the basin countries

Scope of works Phase 1 (2023-2024)

- In Phase 1, the initial basin plan with initial planning pathways up to 2050 will be developed through a participatory approach informed by the assessment of alternative basin-wide development scenarios and using the upgraded DSF
- Phase 1 comprises the following steps:
 - Inception and work planning
 - Phase 1 DSF improvements
 - Preparation of inputs (addressing remaining knowledge gaps) – four strategic studies
 - Scenario formulation and preparation of assessment methodology
 - Initial assessment of scenarios
 - Development of initial adaptive basin plan, with a conceptualisation of ‘no-regrets’ investment projects and enabling activities

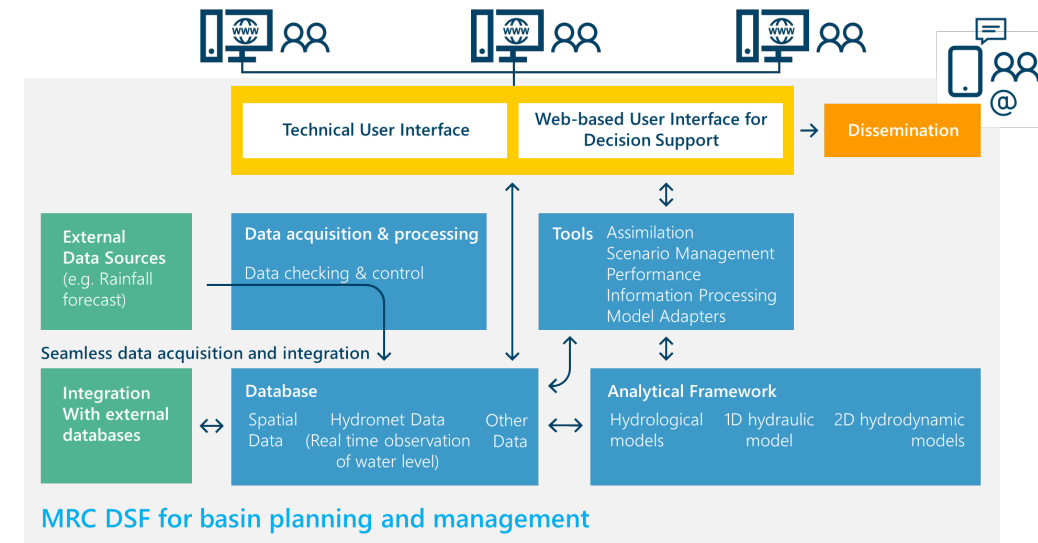
Scope of works Phase 2 (2025-2027)

- In Phase 2, the initial basin plan, which includes the initial planning pathways up to 2050, will be finalized and negotiated between the basin countries
- Phase 2 comprises the following steps:
 - Inception and work planning
 - Phase 2 DSF improvements
 - Refinement of scenarios and assessment methodology
 - Full scenario assessment, comparison, and decision support
 - Finalisation of the adaptive basin plan
 - Conceptualisation of priority investment projects; enabling activities and agreements

The Upgraded DSF

Phase 1 of the project provides an **upgraded DSF that can effectively support river basin management** processes in the Mekong Basin with:

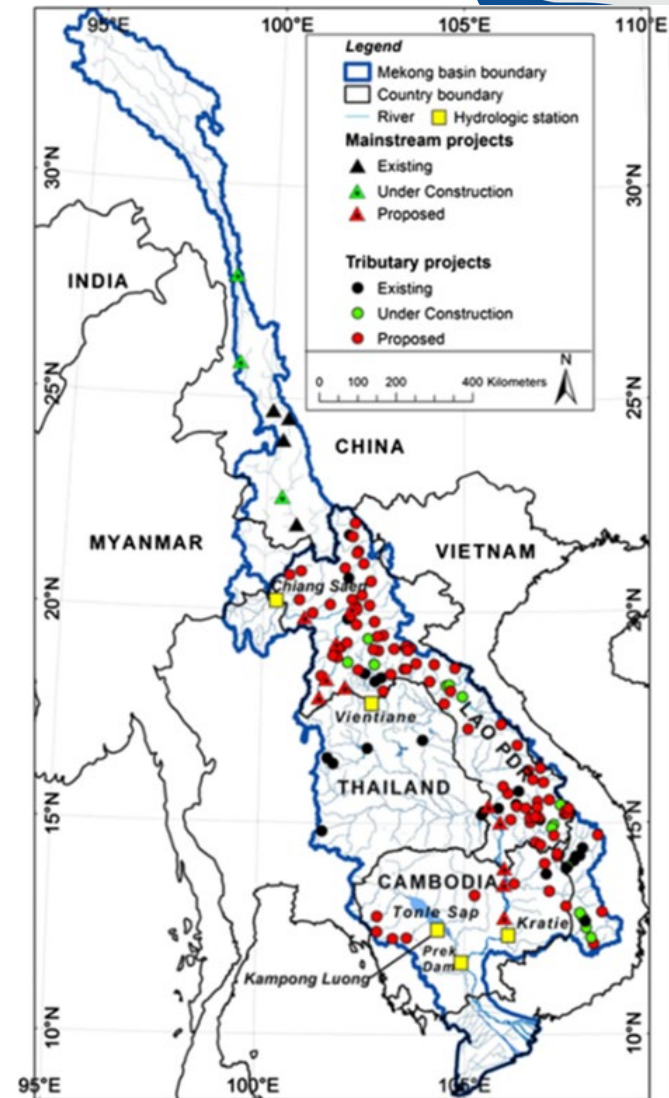
- **An Information Management System** with temporal and spatial data, metadata and documents about the basin.
- **A modular river basin modelling system** to simulate the relevant water-related dimensions on time scales ranging from hours to decades.
- **Analytic and presentation tools** supporting impact assessment
- **Operational capabilities of the DSF** with water status displays of near-real-time reservoir conditions (water levels, release flows), visualization maps to support PMFM compliance and easy-to-use ‘what-if’ tool enabling analysis of effect of changed reservoir operation.
- **Adapters for the current models** SWAT, Source and HEC-RAS for these models to integrate into the Upgraded DSF to access updated model input data.
- **Web interface** for public online access



PRP Study 1 - Storage options

Objectives:

- Identify potential measures options, in order to address flood and drought issues, and provide realistic options for better water, food and energy security:
 - Natural (green) and constructed (grey) water storage
 - Watershed management → *water/sediment conservation*
 - Floodplain management → *risk management & reduction*
 - Coordination of basin management options → *joint operating strategies of water management infrastructure.*



PRP Study 2 – Hydrological limits for key wetland assets and river flows


Objectives:

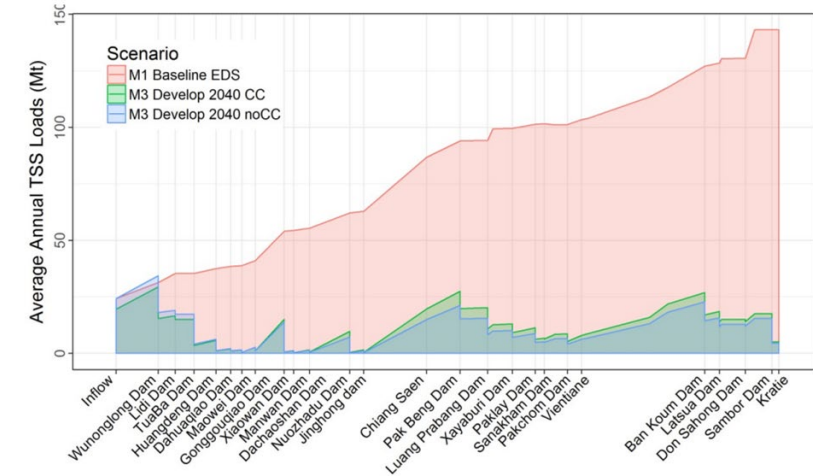
- Identify key wetland assets based on existing documentation and expert judgement
- Identify hydrological limits for each of the key wetlands
- Formulate advice on potential additions or changes in PMFM thresholds.



PRP Study 3 – Basin-wide sediment transport

Objectives:

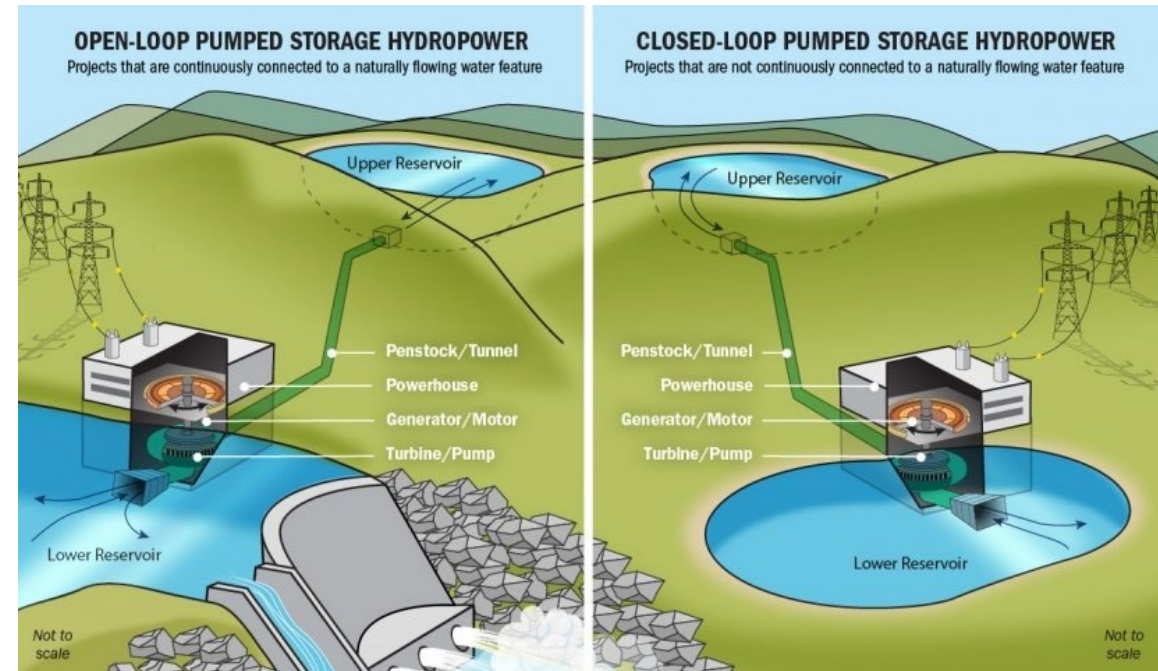
- Review the existing information/studies on sediment flows and management in the river basin.  A qualitative analysis to assess the impacts of land use changes on the sediment influx to the tributaries.
- Identify effective and feasible measures to address sedimentation in reservoirs and mitigate its negative impacts:
- Identify the extraction and use of sediments mined in the river system to assess the impacts and formulate realistic.



PRP Study 4 – Water-energy integration

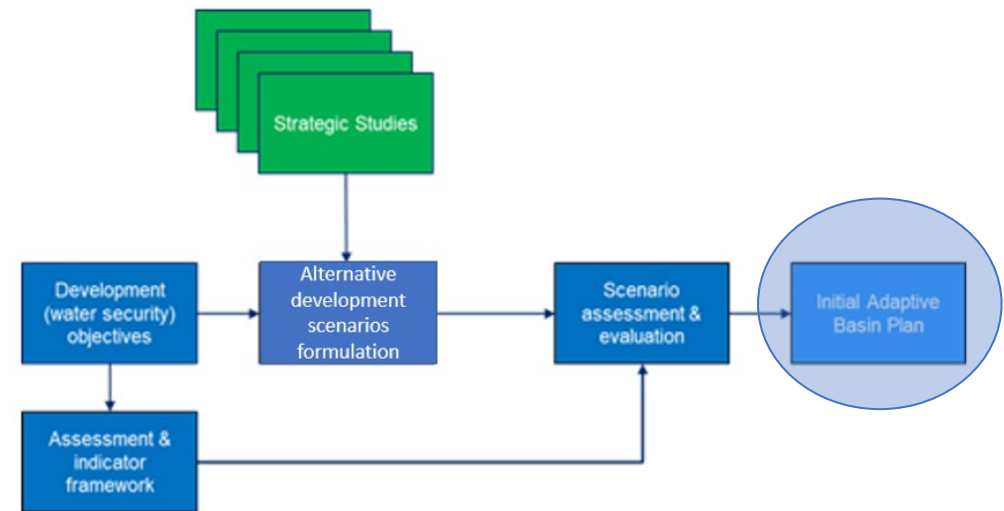
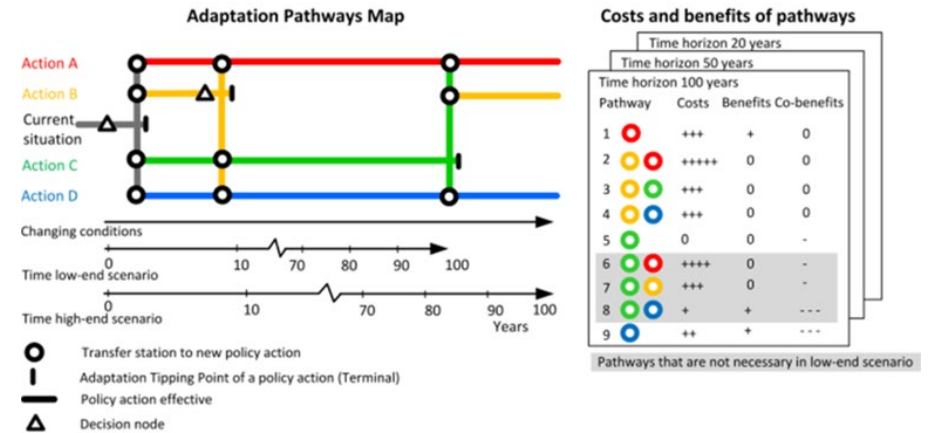
Objectives:

- Identify potential water and energy system interactions:
 - Development of floating solar in a hybrid arrangement at existing and future hydropower reservoirs.
 - Development of inter-seasonal (multi-purpose) storages for hydropower generation.
 - Development of pumped storage systems on new and existing dams



Initial Adaptive Basin Plan

- Builds on SOBR, BDS, national plans, scenario assessments,
- Includes concept notes for no-regret investment projects and enabling activities
- Identifies supplementary investment projects for further consideration and assessment in Phase 2
- Adaptive pathways (with adaptive strategies and tipping points) as opposed to the traditional long-term fixed plan
- Serve as a solid basis for Phase 2
 - Detailed/full envi-socio-economic assessment
 - Final adaptive basin plan



Stakeholder Engagement and Consultation

- Consultation with Member Countries will be conducted throughout the PRP process through national and regional meetings.
- The MRCS and the NMCSs, supported by national experts, are responsible for consolidating national inputs, the organization of stakeholder engagement with technical inputs and participation from the consulting firm experts.
- The data and information sharing between LMC Water Center and MRC play a critical role in complementing the strategic studies under PRP
- Consultation with other stakeholders will be through MRC regional consultation forum and relevant meetings.



Thank you.

