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

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Content of the Presentation

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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
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.