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Session: Mainstreaming Climate Resiliency by Water Organization

Promoting Climate Smart Infrastructure Investments in the Mekong River Basin

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Manila, The Philippines

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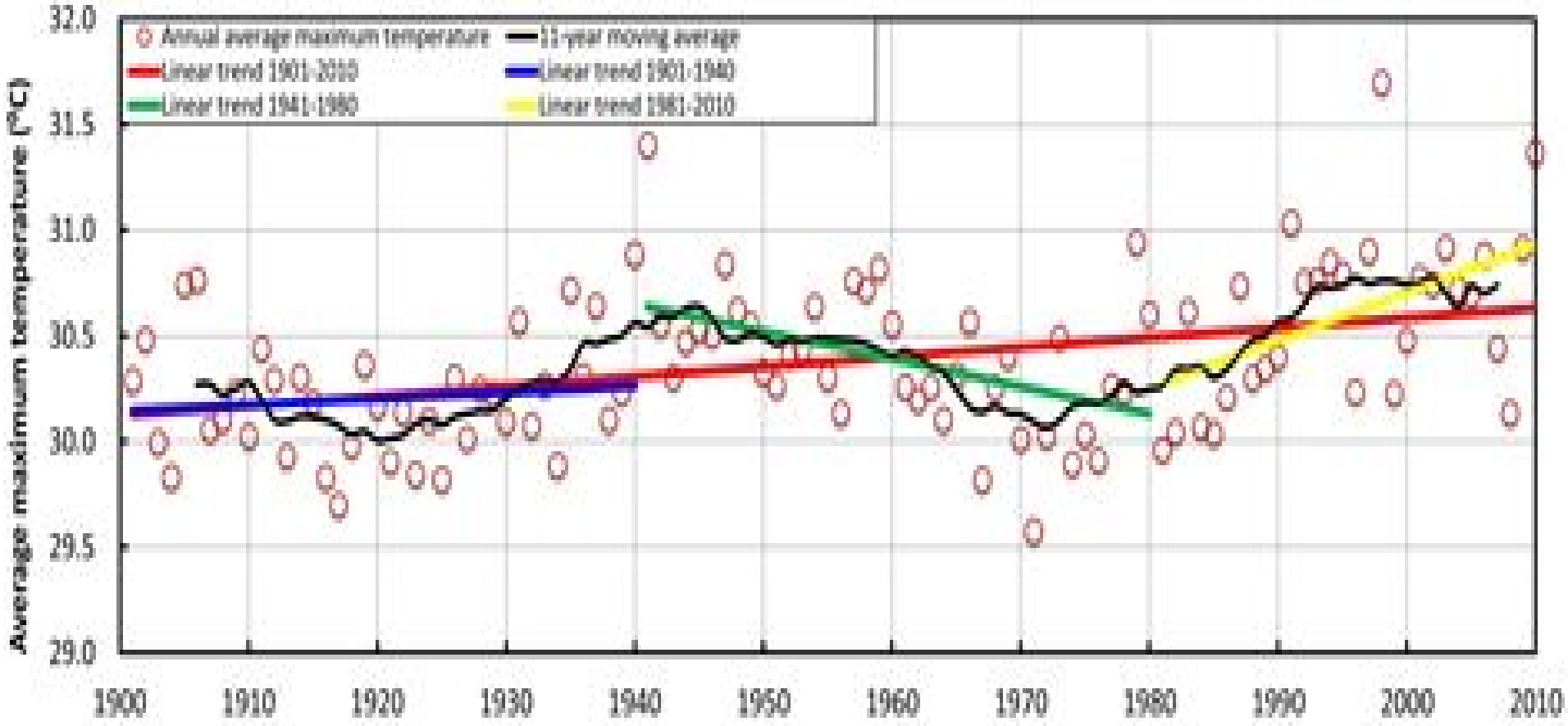
Introduction: Mekong Basin Trends and Outlooks

Selected Strategic Indicators	Key Issues	Condition	Outlook
Water flow conditions	Change in long-term flow regime	●	↔
	Rapid water level fluctuations		↘
Water quality and sediment conditions	Risks to water quality	●	
	Reduced sediment transport	●	↘
Status of environmental assets	Loss of wetlands	●	↘
	Fish populations	●	↘
Living conditions and wellbeing	Household food and water security	●	↔
	Inequality of access	●	
Employment in MRC water-related sectors	Employment	●	↔
	Gender equality		
Economic value of MRC water-related sectors	Agriculture	●	↗
	Hydropower		↗
	Fisheries and aquaculture		↔
	Navigation		↗
Climate trends and extremes	Temperature increases	●	↘
	More severe floods and droughts		↔

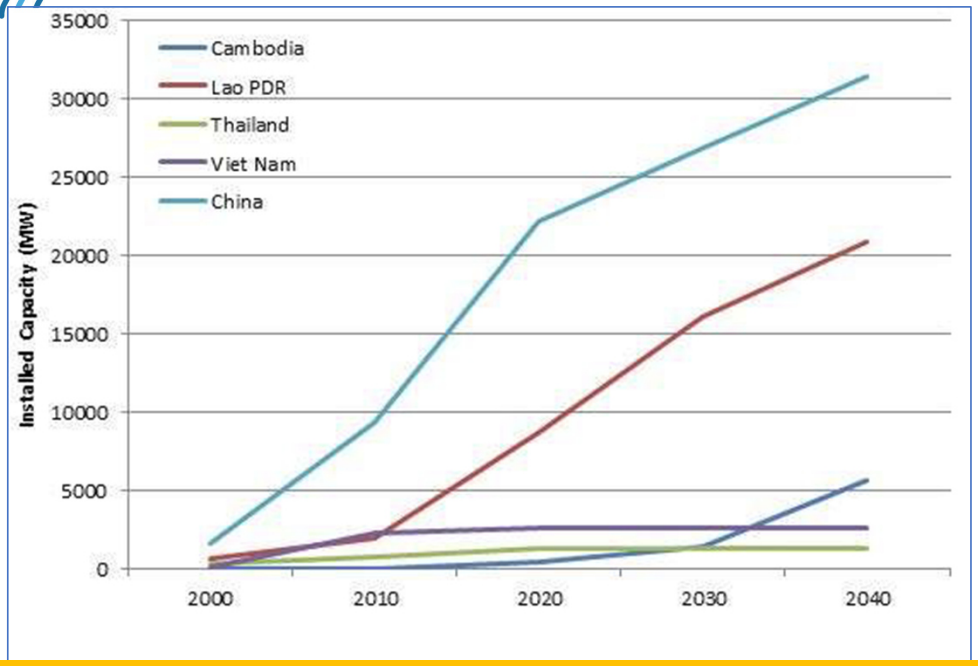
● No immediate concerns ● Some significant concerns to address ● Considerable concern ● Insufficient data

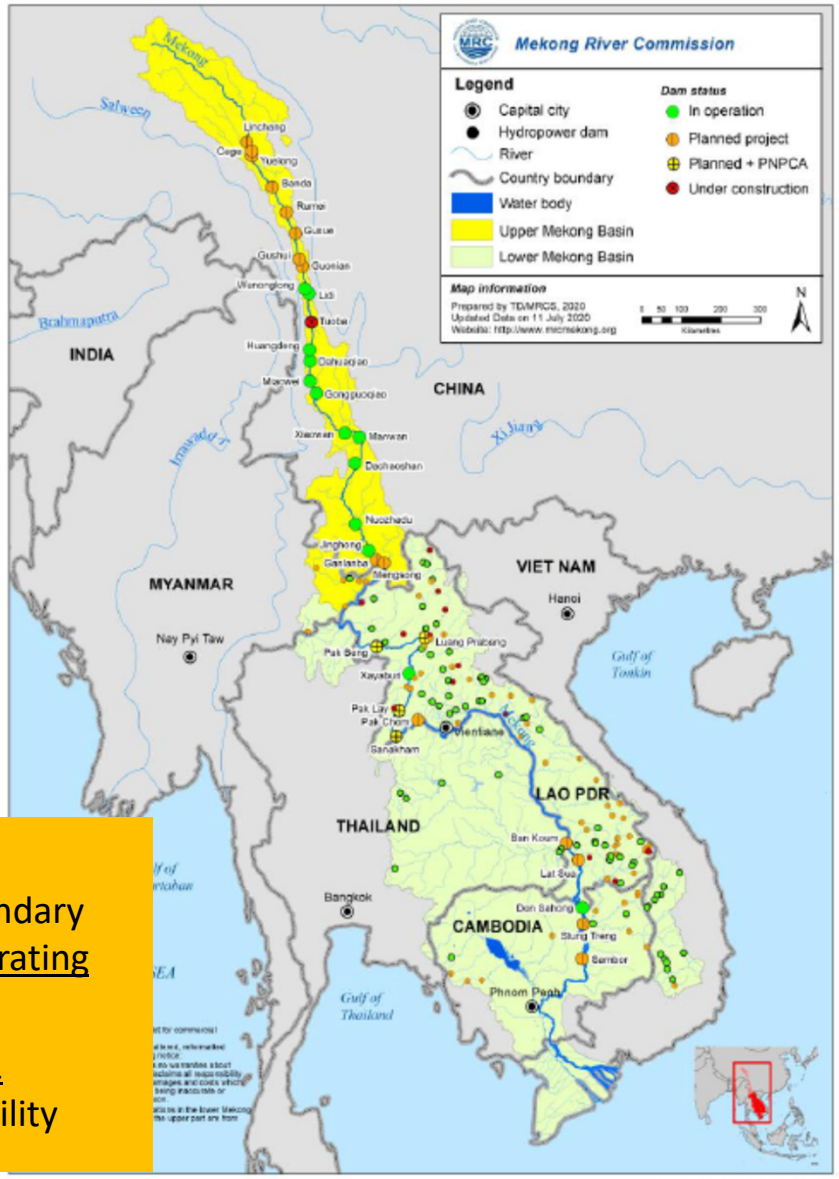
↗ Expected to improve ↔ Some improvement and some decline, or uncertain ↘ Expected to decline

Climate Change Trends and Extreme



Trends in hydropower development in the Mekong basin



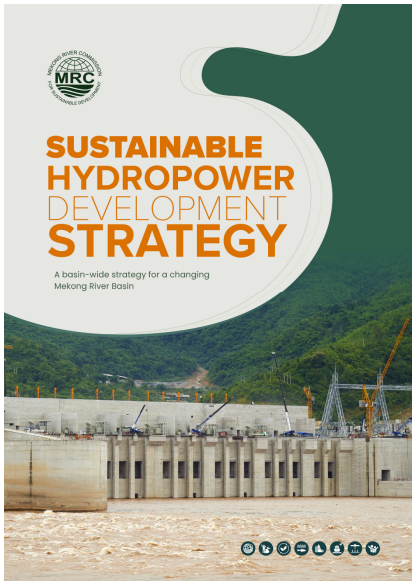


MRC Strategic Response and Challenges

- **Coordination of basin management operations:** increase positive transboundary effects & mitigate negative impacts. i.e. promoting the development of operating mechanisms for cascading dams & water infrastructure
- **More proactive regional planning:** identify new joint investment projects & national projects of basin-wide significance to reduce trade-offs & vulnerability

Coordinated Water Infrastructure Operation in the Mekong River Basin

FOR multiple benefits including gender and vulnerability sensitive disaster mitigation and management



Identify opportunities for coordinated operating rules and cooperation arrangements on dam operations **(2021)**

Develop cooperation mechanisms for data and information sharing for existing dams **(2023)**

Develop information sharing and communication mechanisms for water-related emergencies **(2023)**

Develop operating and communication protocols for existing and newly identified dams and other water infrastructure **(2024)**

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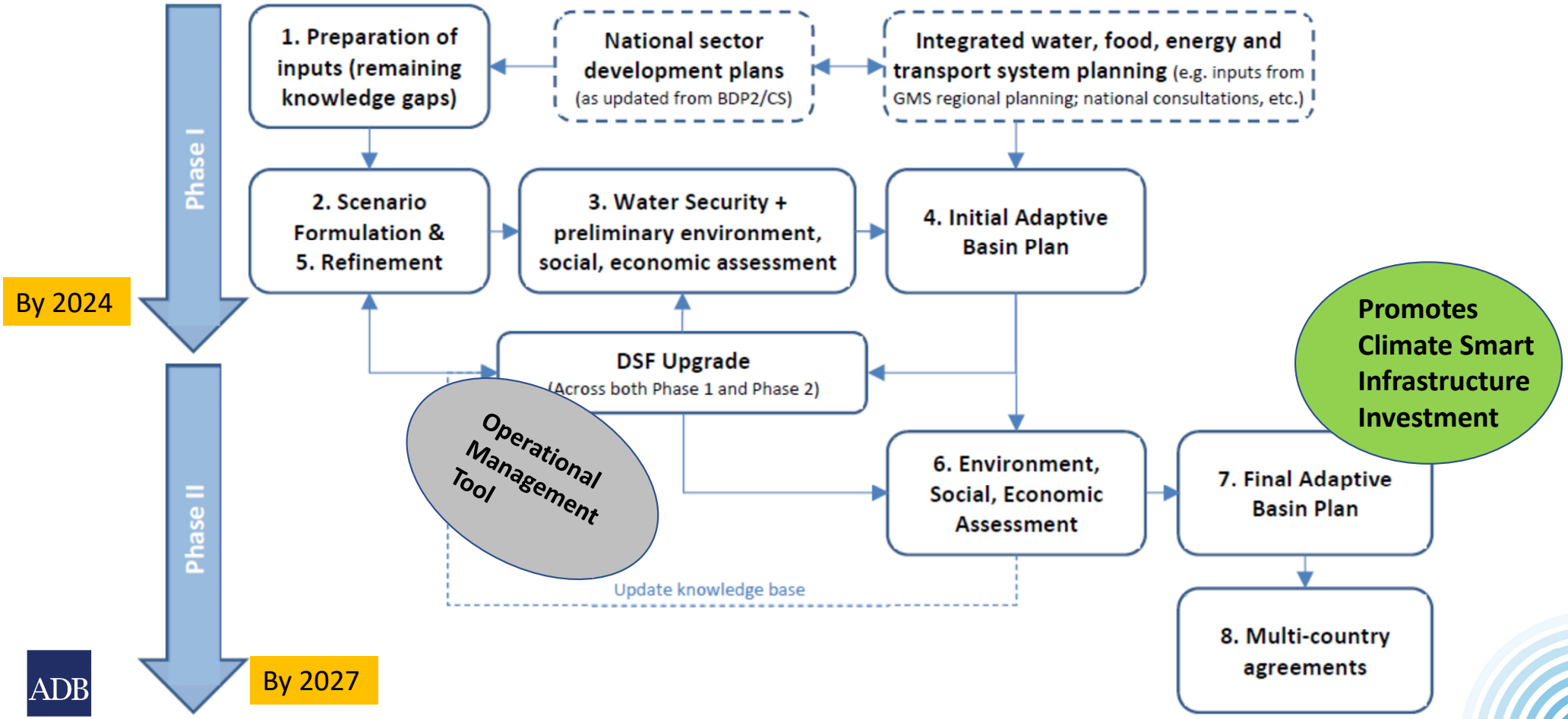
More Proactive Regional Planning

- *In response to the critical basin challenges,* ***Proactive Regional Planning is a management response*** *that will develop new knowledge and answers to the changing flow regime, limits of environment assets, storage (human and natural), sediment management, and water-energy mix. In the process, the MRC* ***Decision Support Framework (DSF) will be upgraded*** *from a planning tool into an operational management tool.*
- **Whole-of-basin planning** to address regional water security
- Brings together water, food, energy and environment needs in an **integrated assessment process**
- Identifies **new supplementary investment projects and enabling activities** that have not previously been considered by basin countries
- Adaptive basin plan by 2027 through studies, scenario assessment, and Decision Support Framework

Approach to Proactive Regional Planning



Strategic Studies to Address Knowledge Gaps by 2023

- **Proposed limits of acceptable change for key environmental wetland assets** assess potential hydrological limits or thresholds of change for priority wetland assets

- **Inventory and recommended measures to reduce sediment extraction and sediment trapping** assess the range of potential options for managing the overall sediment balance including sediment transport throughout the basin

- **Identification and assessment on alternative cost-effective energy/water system integration options** assess technical and socio-economic feasibility of regional energy/water system integration options (i.e. floating solar with hydropower, seasonal storage, pumped storage etc.) → **MRC Secretariat considers this strategic study as a potential area of collaboration with ADB/GMS.**

- **Storage identification and assessment** identifies supplementary options for increasing water security (i.e. green-grey water storage, watershed and floodplain management, coordination of basin management operations)

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→ All in all, the studies will contribute to the identification of climate smart infrastructure investment projects

Thank you