

Articulating the Promises and Impossibilities – Vision of the MRC Basin Development Planning and its draft IWRM Strategy

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Topics/Issues to be addressed

1. Revisit those issues raised during the 1st BDP Regional Stakeholder Forum, March 2008
2. Dynamics: Drivers for changes in the LMB & Perspective on MRC BDP/IWRM Strategy
 - Some Interesting Facts & Figures from MRC

Critical Issues in Sustainable Mekong Basin Development

- Regionalization of development: “national interests” vs. “transboundary interests”
- Stronger private economic actors & market forces
- Weaker social actors/stakeholders
- MRC/BDP for whom? Legitimacy crisis?
- MRC/BDP for sustainability of the Mekong Basin? (capability/capacity/knowledge, awareness, willingness & commitment of NMCs)

(Source: Surichai Wun'Gaeo, “Challenges and Opportunities for the MRC and Civil Society Partnership”, MRC Regional Consultation on BDP, 2008)

Critical Issues in Sustainable Mekong River Basin Development

- Market-driven globalization & new need for multi-level & multi-layered governance
- Necessity to have/create an atmosphere of partnership
- “Real-world” problems of development, e.g. trade-off betw. resources utilization & conservation
- Perception gaps & unfavorable climate of opinions
- Complexity of actors/stakeholders & actions
- No actors/stakeholders can do it alone

(Source: Surichai Wun’Gaeo, “Challenges and Opportunities for the MRC and Civil Society Partnership”, MRC Regional Consultation on BDP, 2008)

3 keywords from yesterday presentations

- Changes
- Variabilities
- Uncertainties



Changes Affecting Water Resources

Demands

Consumptive Uses

Agriculture
Culture fisheries
Water supply
Environmental

In-stream Uses

Fish
Salinity control
Energy
Navigation

Climate

Sea level rise
Increased dry season demands
Higher drought risk
Increased flood flows & frequencies

Infrastructure

Dams
Irrigation & Drainage
Flood mitigation
Salinity control
Dredging & River works
Water supply & Sanitation

Management Practices

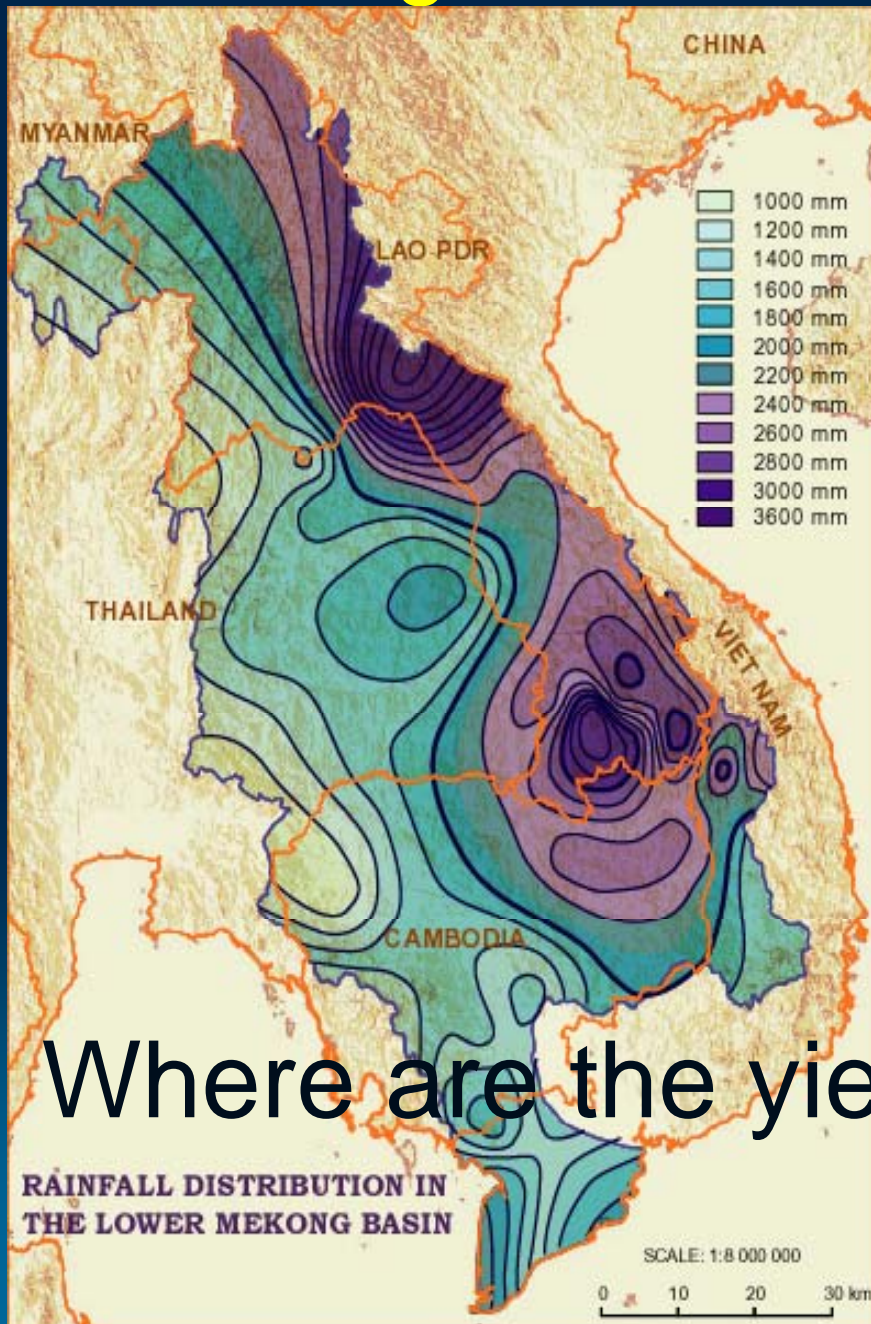
Catchment management
Energy production
Irrigation & Animal husbandry
Fishery management
Pollution control

What are the impacts from these changes on BDP?

Hydrological Regime of the LMB

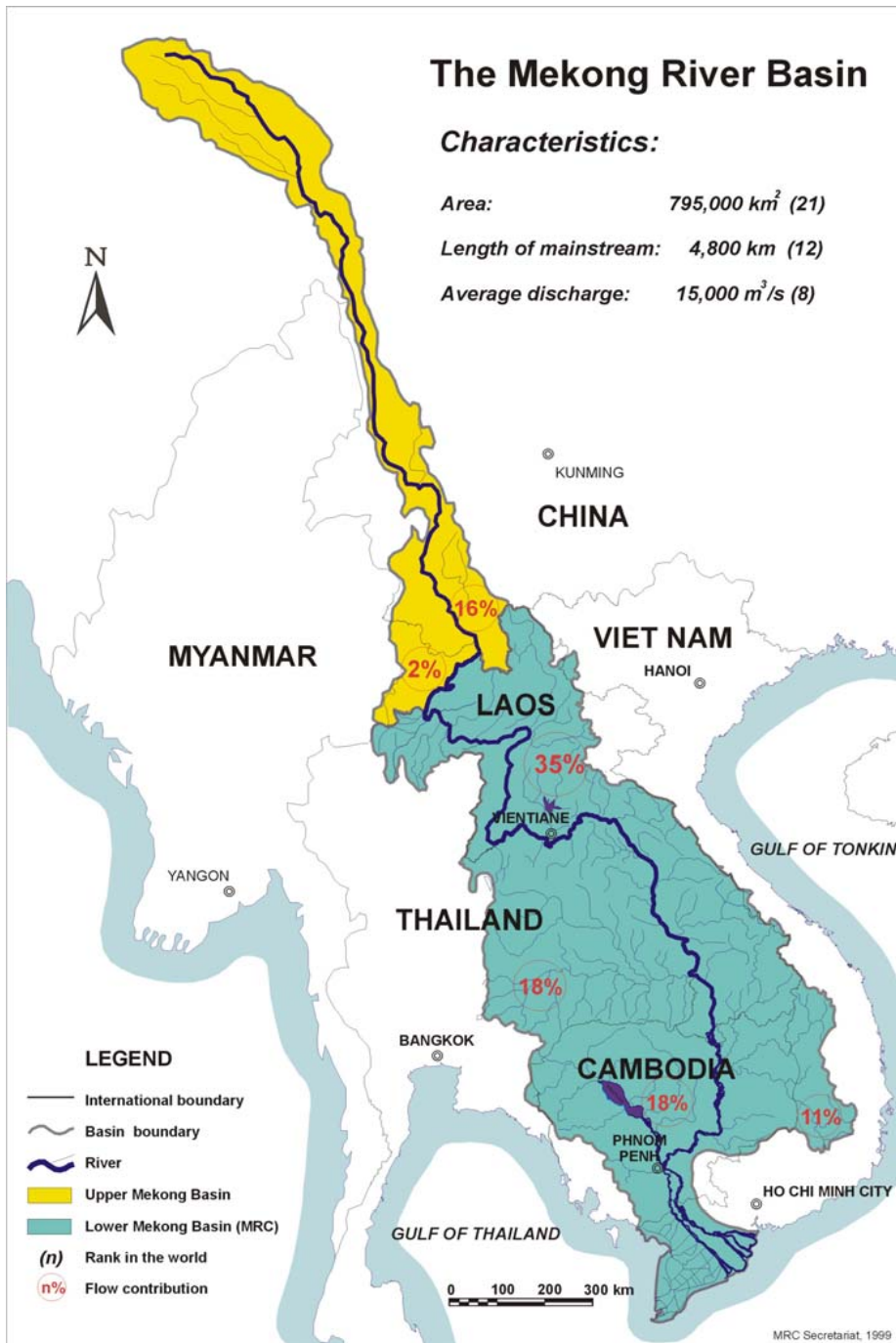
- Primarily depends on climatic conditions of wet & dry seasons
- Wet/ High flow period: Sep – Nov
- Dry/ Low flow period: Feb – Apr
- Flood season in mainstream & tributaries: Jun/Jul – Nov/Dec accounts for 85-90% of total annual water volume
- Peak month of September accounts for 20 -30% of annual flow

Average Annual Rainfall in the LMB



Where are the yielding zones?

Source: Overview of Mekong Hydrology, November 2004



Average Long-term Flow Contributions:

Upper Mekong (18%) (17)

- China/Yunnan – 16% (17)
- Myanmar – 2% (<1)

Lower Mekong (82%) (83)

- Lao – 35% (41)
- Thailand – 18% (15)
- Cambodia – 18% (19)
- Viet Nam – 11% (8)

Source1: MRCS 1999

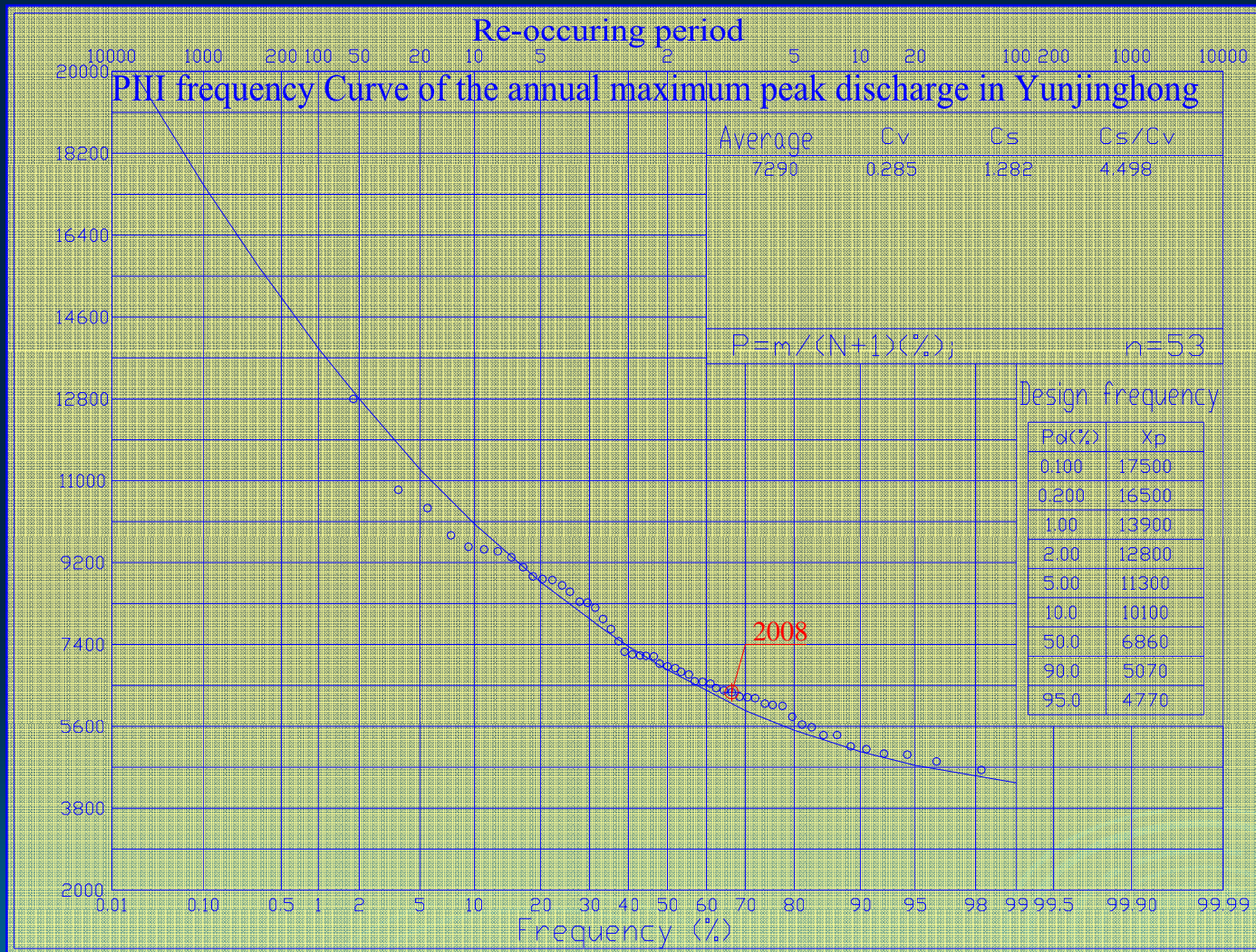
Source2: MRC. “Synopsis of the Mekong River System,” September 2007

Did the U/S dams cause major flooding in the D/S areas during August 2008?



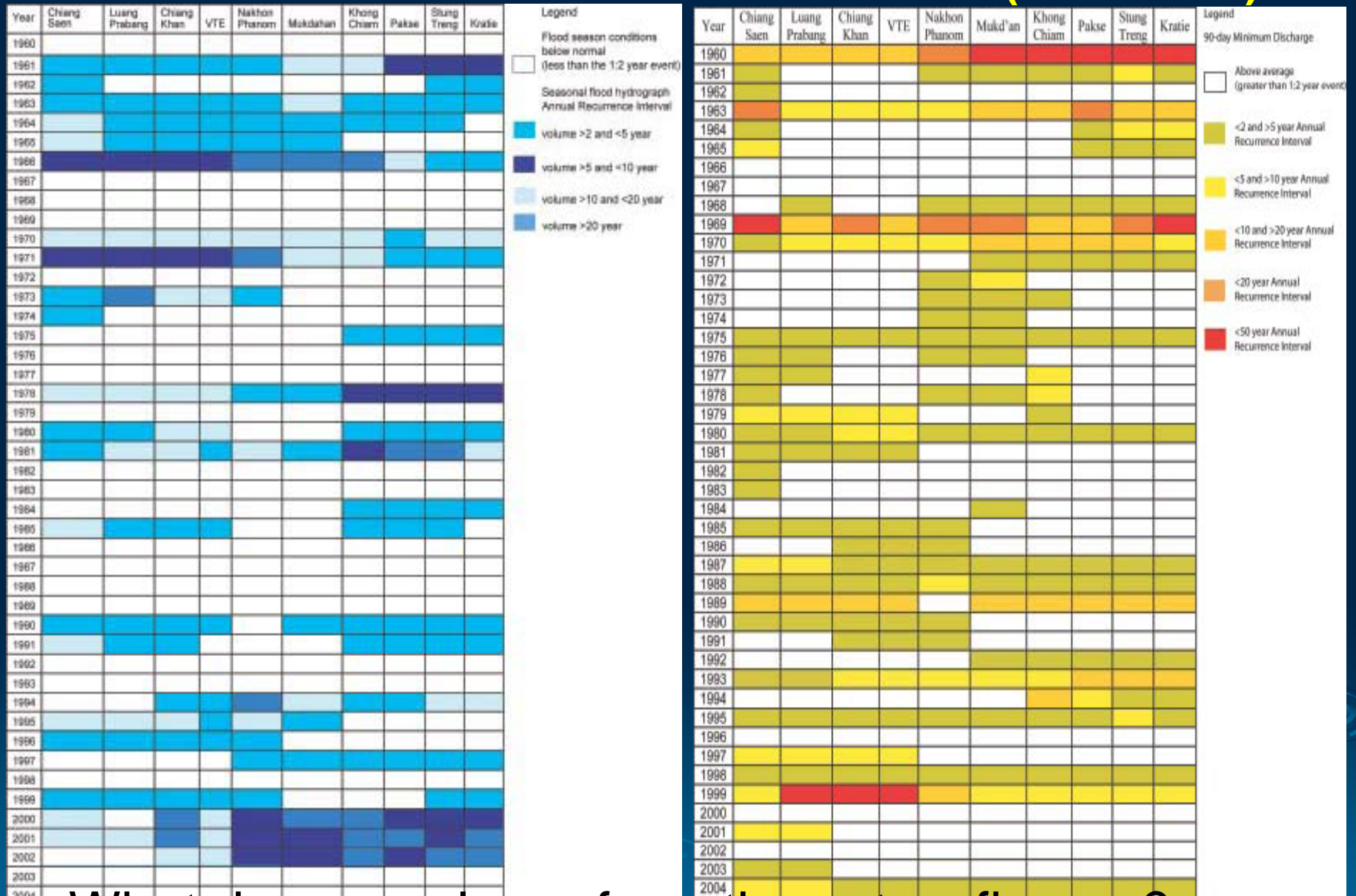
Source: MRC 2008 Annual Flood Report, 7th MRC Flood Forum, May 2009

The 2008 Flood Review of the Mekong: Flood Frequency Curve at Jinghong Station



Source: Zhong, Yong. 7th Mekong Flood Forum, Ministry of Water Resources, PR China, May 2009.

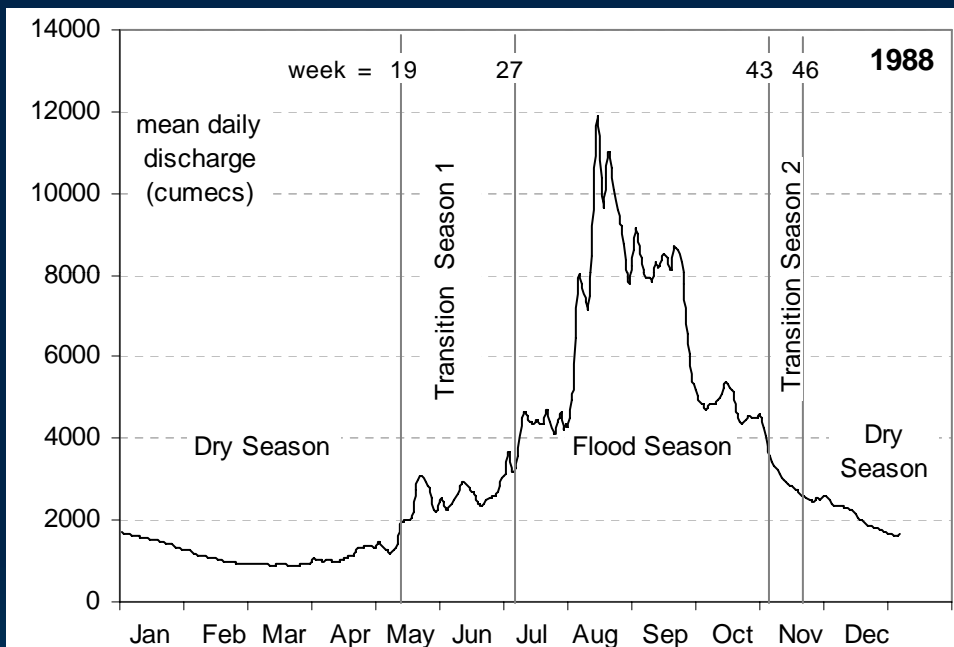
Distribution of Floods & Low Flows in LMB (1960-2004)



What does one learn from these two figures?

Source: Overview of Mekong Hydrology, November 2004

Flow Distribution/Transitions in the LMB



Dry season (carried over from 1987) ends in week 19. Mean seasonal discharge is 1340 cumecs, with a minimum of 900 cumecs in week 10.

Transition season 1 begins in week 19 and ends in week 27, during which time there are 4 significant freshettes.

Flood season begins in week 27 and closes in week 43. Peak discharge is 11 900 cumecs and volume is 118 km³. The hydrograph is therefore classified as low peak, high volume.

Transition season 2 begins in week 43, during which the mean rate of flow recession is 72 cumecs / day. The 1988 / 9 dry season starts in week 46.

Four Hydro-biological Seasons :

- 1) Transition I
- 2) Wet/Flood
- 3) Transition II
- 4) Dry/Drought

What do these transitions tell us?

Water Uses: Irrigated Area in LMB

Table : Irrigated Area in the Mekong River Basin

Country	Season		Total	D/S	W/S	Total
	Dry	Wet				
	(ha)	(ha)	(ha)	(%)	(%)	(%)
Yunnan,PR	N/A	N/A	N/A	N/A	N/A	N/A
Myanmar	N/A	N/A	N/A	N/A	N/A	N/A
Laos	127,800	204,200	332,000	6	4	4
Thailand	156,300	1,266,000	1,422,300	7	24	19
Cambodia	253,100	1,114,700	1,367,800	12	21	18
Vietnam	1,558,700	2,753,000	4,311,700	74	52	58
TOTAL	2,095,900	5,337,900	7,433,800	100	100	100

Source: IBFM No. 2, MRCS (June 2004)

What does one learn from these numbers?

Example of issues that are currently addressed by MRC

- Flow regime changes in the Mekong from developments? Or climate change?
- Downstream impacts from Upper Mekong development
 - Increased dry season flows
 - Decreased flood peaks
 - Delayed inundation of floodplains
 - Bed level changes/Increased bank erosion
 - loss of secondary channels
 - reduced floodplain/delta areas (particularly in Cambodia & Vietnam)
- What do these mean for wetland/fisheries/biodiversity/agricultural production?

Basin Development Plan: Planning Cycle/Development Scenarios

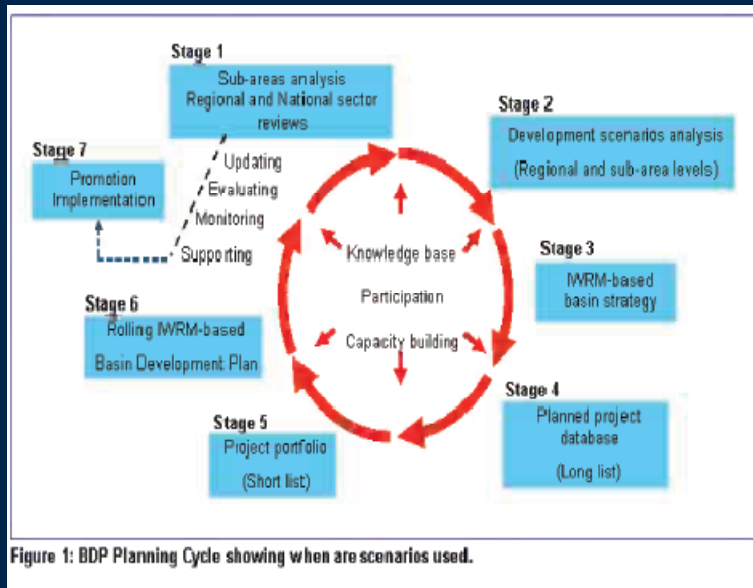


Table 1: Types of scenarios

Scenario	Purpose
Baseline scenario	A reference for comparison with other scenarios
0-year development scenario (most realistic case)	Illustrates the impacts of significant development projects (national and regional) in the next 20 years
Alternative development scenarios (options)	To identify appropriate development alternatives by maximising regional benefit and minimising harmful effects on society and the environment
Potential development scenarios (opportunities)	To determine development opportunities within basin limitations
Climate Change scenario	To analyse the impact of climate change on basin development plans

Are these sensible development scenarios? Are these enough?

- Status
- Impacts
- Responses/Adaptation

Do we enough knowledge on these?

Can BDP/MRC help us?



Thank You for Your Attention

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