

The MRC Regional Stakeholder Forum

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MRC Council Study - Macro-Economic Impact Assessment

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Outlines of Presentation

- 1. Sector-specific cost-benefit assessment**
- 2. GDP impacts**
- 3. Future growth potential**



1. Sector-specific cost-benefit analysis

1. 16-fold increase in economic benefits of in hydropower (2040 scenario)
2. Hydropower benefits partly lost in fisheries (2020 scenario: 26% , 2040 sc.:15%)

Differences to M1						SUM
		Hydropower B\$	Fisheries B\$	Agriculture B\$	Navigation B\$	
M2	Cambodia	+6.6	-4.7	+65.3	+1.3	68.4
	Lao PDR	+20.1	-3.7	+3.2	+0.1	19.7
	Thailand	+29.5	-6.4	+2.2	+0.4	25.8
	Vietnam	+9.2	-1.7	+21.0	+8.2	36.6
M3	Cambodia	+11.3	-6.3	+67.3	+8.5	80.8
	Lao PDR	+35.0	-5.0	+5.8	+1.9	37.7
	Thailand	+82.0	-8.2	+4.1	+2.9	80.8
	Vietnam	+24.9	-3.2	+26.3	+55.5	103.6

3. Agricultural expansion could provide large sector benefits

4. Navigation expansion very promising

2. Gross Domestic Product

Method

1. Calculate (disaggregate) GDP for LMB → combine with income data from household survey (mostly rural) → labour allocation to primary sector → income for secondary and tertiary sector scaled up → overall GDP range

Results

2. Early development scenario (2007) mostly highest GDP
3. Planned development scenario (2040) mostly lowest GDP
 - Agriculture demands too much workforce
 - Hydropower trade-offs (e.g. fisheries)

2. Gross Domestic Product (cont.)

GDP in billion US\$ (deflated to 2017 dollar)		M1 (2007)	M2 (2020)	M3 (2040)	M3CC (2040)	A1 (2007)	A2 (2020)	C2 (Wet)	C3 (Dry)	H1a (noHPP)	H1b (noMain)	H3 (HPP)
Cambodia	Upper bound	\$50.3	\$45.6	\$46.6	\$47.7	\$50.6	\$46.8	\$46.4	\$46.3	\$48.5	\$47.6	\$47.5
	Average	\$48.3	\$41.8	\$39.6	\$38.5	\$48.0	\$40.8	\$40.7	\$40.8	\$40.2	\$39.6	\$39.5
	Lower bound	\$46.2	\$38.0	\$32.6	\$29.3	\$45.5	\$34.9	\$35.0	\$35.4	\$31.8	\$31.5	\$31.5
Lao PDR	Upper bound	\$42.0	\$40.4	\$40.0	\$39.7	\$39.1	\$40.0	\$39.7	\$39.9	\$43.4	\$41.6	\$39.8
	Average	\$39.2	\$35.1	\$30.2	\$30.3	\$36.3	\$30.2	\$30.6	\$30.7	\$32.5	\$30.9	\$30.4
	Lower bound	\$36.3	\$29.8	\$20.5	\$21.0	\$33.5	\$20.5	\$21.6	\$21.6	\$21.6	\$20.3	\$21.0
Thailand	Upper bound	\$98.0	\$101.5	\$98.3	\$98.1	\$97.8	\$98.4	\$98.1	\$98.3	\$103.9	\$102.6	\$97.9
	Average	\$79.8	\$73.7	\$68.9	\$70.4	\$78.2	\$69.0	\$71.2	\$70.9	\$73.2	\$72.1	\$70.3
	Lower bound	\$61.5	\$45.9	\$39.5	\$42.7	\$58.6	\$39.7	\$44.3	\$43.6	\$42.5	\$41.5	\$42.8
Vietnam	Upper bound	\$92.3	\$93.6	\$92.9	\$92.9	\$93.3	\$92.8	\$92.4	\$92.5	\$94.3	\$93.6	\$93.0
	Average	\$82.3	\$82.7	\$82.5	\$81.3	\$84.4	\$84.1	\$83.8	\$83.9	\$83.9	\$84.0	\$82.1
	Lower bound	\$72.2	\$71.7	\$72.0	\$69.7	\$75.6	\$75.4	\$75.1	\$75.3	\$73.5	\$74.4	\$71.3
LMB	Upper bound	\$282.6	\$281.1	\$277.8	\$278.4	\$280.8	\$277.9	\$276.5	\$276.9	\$290.2	\$285.5	\$278.1
	Average	\$249.5	\$233.2	\$221.2	\$220.6	\$247.0	\$224.2	\$226.3	\$226.4	\$229.8	\$226.6	\$222.3
	Lower bound	\$216.3	\$185.3	\$164.6	\$162.8	\$213.1	\$170.4	\$176.0	\$175.8	\$169.4	\$167.7	\$166.6

3. Natural Capital or Future Growth Potential

M2 – M1 in B\$	MIN	Mean	MAX
Cambodia	-\$12	-\$24	-\$37
Lao PDR	-\$2	-\$1	\$0
Thailand	-\$10	-\$6	-\$4
Vietnam	-\$7	-\$5	-\$4

M3 – M1 in B\$	MIN	Mean	MAX
Cambodia	-\$12	-\$24	-\$37
Lao PDR	-\$9	-\$8	-\$7
Thailand	-\$20	-\$15	-\$12
Vietnam	-\$11	-\$10	-\$9

Current reforestation plans for 2040 in Cambodia: +\$520 billion in Net Present Value

Thank you

