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Council Study

Overall Approach and Schedule: Formulation of Development Scenarios

5th RTWG Meeting
Siem Reap, Cambodia
13-14 August 2015

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Contents

- Main Development Scenarios and Thematic Sub-Scenarios
- Overall Approach and Schedule



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MAIN DEVELOPMENT SCENARIOS AND THEMATIC SUB-SCENARIOS

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Main Development Scenarios



- Three Main Development Scenarios
 - 2007 Early Development Scenario
 - 2020 Definite Future Scenario
 - 2040 Planned Development Scenario
- Approved during 4th RTWG Meeting on 10 March 2015

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Thematic Sub-Scenarios



- Represent thematic-specific deviations from the 2040 Planned Development Scenario
- Concept formulated during internal kick-off meeting on 13 May 2015
- As per Inception Report, up to a maximum of three sub-scenarios per thematic area

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Thematic Sub-Scenarios



- Allow sensitivity analysis of impacts to plausible thematic-specific deviations from the 2040 Plan
 - Improve understanding of impacts of specific development stressors
 - Increase capability to explore options and alternative measures to enhance positive impacts and mitigate/reduce negative impacts
 - Added Value: In-depth analysis of the plans and plausible deviations in the plans in the future

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Example Irrigation Thematic Sub-Scenarios



- Plausible deviations from the 2040 Planned Scenario
 - Sub-scenario 1: Low – Implementation below planned level
 - Sub-scenario 2: Medium - Implementation near the planned level
 - Sub-scenario 3: High – Implementation above the planned level

Name	Level of Development					
	ALU	DIW	FPF	HPP	IRR	NAV
IRR Thematic Sub-scenario 1	2040	2040	2040	2040	Low	2040
IRR Thematic Sub-scenario 2	2040	2040	2040	2040	Medium	2040
IRR Thematic Sub-scenario 3	2040	2040	2040	2040	High	2040

- Plausible deviations are identified by analyzing external factors
- **Level of development for the other sectors are held at the 2040 Planned Level**

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Irrigation Thematic Sub-Scenarios – Some Practical Questions Answered



- Can we sustain a higher level of irrigation development to take advantage of the increase dry season flow from hydropower development given other water uses?
- What are the economic implications of failing to implement irrigation investments as planned?
- How does the uncertainty in the implementation level of irrigation compare with the uncertainty in climate change?

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Approved Three Main Development Scenarios

Scen #	Name	Level of Development*					
		ALU	DIW	FPF	HPP	IRR	NAV
1	Early Development Scenario 2007	2007	2007	2007	2007	2007	2007
2	Definite Future Scenario 2020	2020	2020	2020	2020	2020	2020
3	Planned Development Scenario 2040	2040	2040	2040	2040	2040	2040

Note:
*Levels of developments for the various thematic areas: ALU = Agric/Landuse Change; DIW = Domestic and Industrial Water Use; FPF = flood protection/floodplain infrastructure; HPP = hydropower; IRR = irrigation; and NAV = Navigation

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Climate Change Scenarios

Scen #	Name	Level of Development						Climate Change
		ALU	DIW	FPF	HPP	IRR	NAV	
4	Planned Development 2040 Under Low Climate Change	2040	2040	2040	2040	2040	2040	Yes – Low
5	Planned Development 2040 Under Medium Climate Change	2040	2040	2040	2040	2040	2040	Yes – Medium
6	Planned Development 2040 Under High Climate Change	2040	2040	2040	2040	2040	2040	Yes – High

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Thematic Sub-Scenarios

Scen #	Name	Level of Development						Climate Change
		ALU	DIW	FPF	HPP	IRR	NAV	
7	ALU Thematic Sub-scenario 1: Low Level of implementation of 2040 Planned Development	Low	2040	2040	2040	2040	2040	No
8	ALU Thematic Sub-scenario 2: Medium Level of implementation of 2040 Planned Development	Medium	2040	2040	2040	2040	2040	No
9	ALU Thematic Sub-scenario 3: High Level of implementation of 2040 Planned Development	High	2040	2040	2040	2040	2040	No
10	DIW Thematic Sub-scenario 1	2040	Low	2040	2040	2040	2040	No
11	DIW Thematic Sub-scenario 2	2040	Medium	2040	2040	2040	2040	No
12	DIW Thematic Sub-scenario 3	2040	High	2040	2040	2040	2040	No
13	FPF Thematic Sub-Scenario 1	2040	2040	TBD*	2040	2040	2040	No
14	FPF Thematic Sub-Scenario 2	2040	2040	TBD*	2040	2040	2040	No
15	FPF Thematic Sub-Scenario 3	2040	2040	TBD*	2040	2040	2040	No

Note:
*Formulation will be deferred later after the assessment of impacts of the planned developments in the other thematic areas
TBD – To be determined

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Thematic Sub-Scenarios

Scen #	Name	Level of Development						Climate Change
		ALU	DIW	FPF	HPP	IRR	NAV	
16	HPP Thematic Sub-scenario 1	2040	2040	2040	Subset of Planned mainstream HPs	2040	2040	No
17	HPP Thematic Sub-scenario 2	2040	2040	2040	Reservoir Operation Alternative 1	2040	2040	No
18	HPP Thematic Sub-scenario 3	2040	2040	2040	Reservoir Operation Alternative 2	2040	2040	No
19	IRR Thematic Sub-scenario 1	2040	2040	2040	2040	Low	2040	No
20	IRR Thematic Sub-scenario 2	2040	2040	2040	2040	Medium	2040	No
21	IRR Thematic Sub-scenario 3	2040	2040	2040	2040	High	2040	No
22	NAV Thematic Sub-scenario 1	2040	2040	2040	2040	2040	TBD	No
23	NAV Thematic Sub-scenario 1	2040	2040	2040	2040	2040	TBD	No
24	NAV Thematic Sub-scenario 1	2040	2040	2040	2040	2040	TBD	No

Note:
*Formulation will be deferred later after the assessment of impacts of the planned developments in the other thematic areas
TBD – To be determined

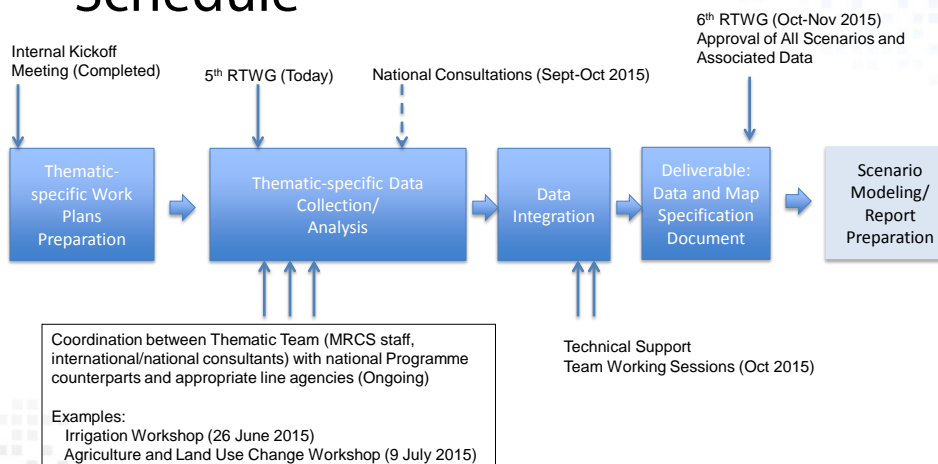
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OVERALL APPROACH AND SCHEDULE

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Overall Approach and Schedule



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Draft Thematic Work Plans



- Approved main development scenarios and proposed thematic sub-scenarios
- Schedule of data collection and analysis including coordination with Member Countries
- Data needs including status, source agencies, and known issues
- Approach (methodology and assumptions) for filling data gaps
- Personnel role and responsibilities

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In Summary



- Up to 24 development scenarios
 - 3 main development scenarios
 - 3 climate change scenarios
 - Up to 18 thematic sub-scenarios
- Draft Thematic Work Plans completed and being implemented
 - Progress will be presented individually by thematic teams
- National Consultations (all themes combined) – Review in detail data assembled, and receive additional comments and initial agreement
- 6th RTWG Meeting – Approval of all scenarios and data

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The RTWG is specifically requested to:



- Provide feedback on the concept of thematic sub-scenarios
- Provide guidance on the proposed overall approach and schedule for the formulation of development scenarios including:
 - National consultations (Sep - Oct 2015)
 - 6th RTWG to get approval of all scenarios and associated data (Oct – Nov 2015)

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Thank You



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