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For sustainable development



Council Study

Formulation of Development Scenarios
Progress Updates
*Flood Protection & Floodplain
Infrastructure* Thematic Team

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

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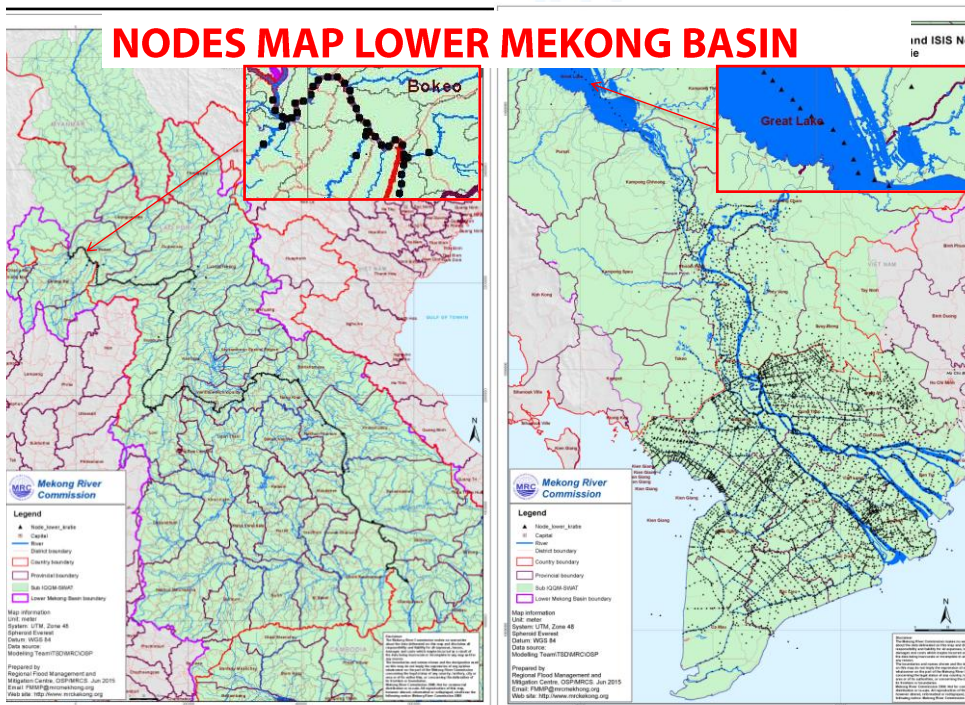
Lower Mekong Basin

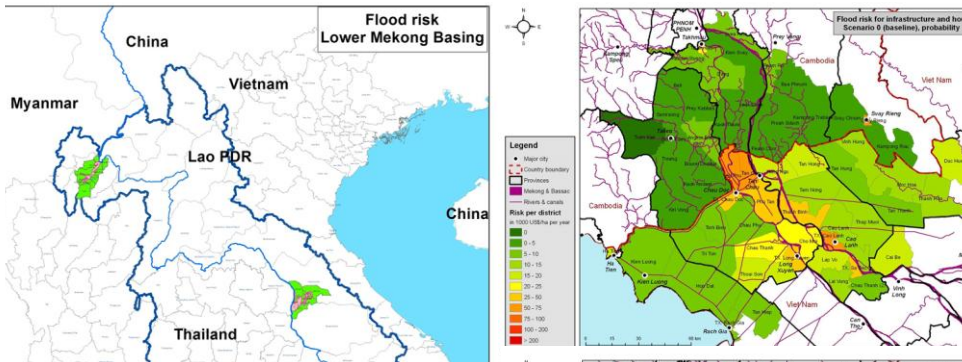


Impact of flooding at **provincial** level

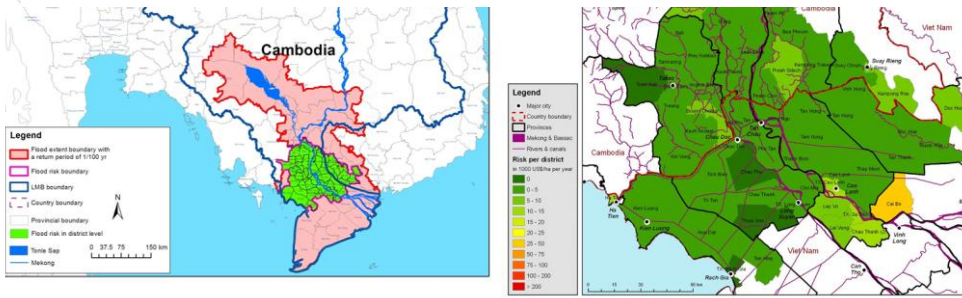
- upstream of Kratie:
 - riverbed with adjacent area
- downstream of Kratie:
 - floodplains Cambodia / Vietnam delta

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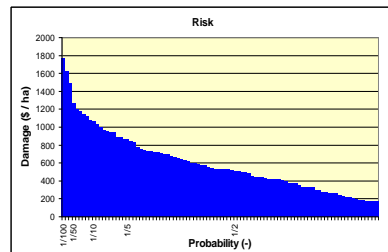
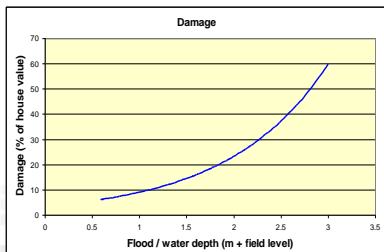
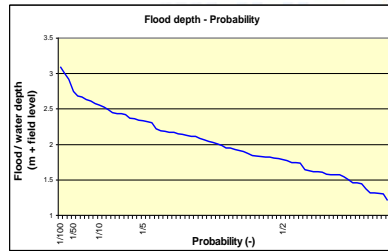
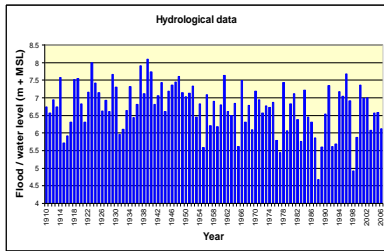




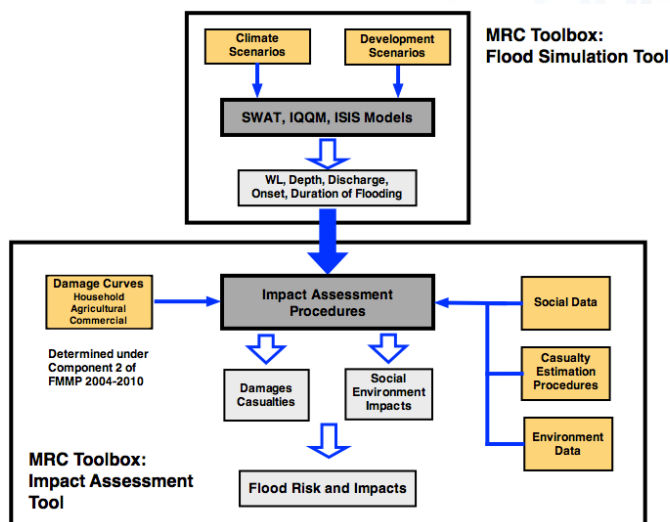
INITIAL STUDIES FLOODPLAINS AND DISTRICT FLOOD DAMAGE RISK



APPROACH



The Flood Simulation and Impact Assessment System



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Overall Thematic Scope of the Council Study Flood Protection & Floodplain Infrastructure Team



Stage 1 (July 2015 – October 2015) - Formulation of Development Scenarios

- Collect / assemble “flood protection” works and “floodplain infrastructure” associated with the RTWG-approved three main development scenarios

Stage 2 (November 2015 – June 2016) – Scenario Assessment

- Assess the impact on flooding behavior, flood damage and flood damage risk of future developments in the other thematic areas for 2020 and 2040
- Assess the impact on flooding behavior, flood damage and flood damage risk of future developments for 2040 in the other thematic areas for two or three sub-scenarios (still to be selected but with the largest expected impacts)

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Three Main Development Scenarios and Thematic Sub-Scenarios



- Early Development Scenario (2007)
- Definite Future Scenario (2020)
- Planned Future Scenario (2040)

Note:

Sub-scenarios for assessment by the FP&FPI team will be selected from other thematic teams in Stage 2

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Stage 1 Activities: Formulation of Development Scenarios



- Data & information collection for FMMP from MCs for 2020 and 2040 (situation 2007 already in model)
 - Formulation of development scenarios 2020 and 2040
 - After review data & information to IKMP (IKMP runs the models; FMMP interprets the results)
 - Definition of 'impact assessment locations' (IALs)
 - Definition of flood characteristics
 - Scoping study to collect flood damage data in 4 provinces in each MC
 - Methodology to assess future provincial flood damages and flood risks
- Time period for Stage 1 is July – October 2015

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Data collection for 2020 and 2040



"Must have":

- New levees, dikes, embankments (height > 0.5 m) --- MCs !
- New (auto/rail-)roads (length > 5 km; height > 0.5 m) --- MCs !
- Urban areas with year-round flood control (ring roads) --- MCs !

"Nice to have":

- Agricultural (irrigation / drainage) areas with year-round flood control --- AIP
- Landfilling of low lying areas or lakes (area > 50 ha) --- MCs
(conveyance hindering / less storage area)

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Stage 2 Activities: Assessment of Development Scenarios and Formulation and Analysis of Thematic Sub-Scenarios



- FMMP will review proposed 2040 basin developments from other thematic areas to assess whether "*flood risk reduction measures*" are needed.
- FMMP will assess and report on the flood impacts of the 2020 and 2040 scenarios on flood behaviour at the IALs.
- FMMP will finalize the number of provinces to be included in the analysis of changes to annual flood damage and flood damage risk.
- FMMP will assess and report on the impacts of the 2020 and 2040 scenarios on future flood damage risk.
- FMMP will assess and report on the impacts of two to three sub-scenarios (still to be selected) for 2040 on future flood risk for other thematic areas.

Time period for Stage 2 is November 2015 – June 2016

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Progress to date



- Consensus reached about role FMMP in the *flood protection and floodplain infrastructure* thematic area
- Draft Work Plan completed (details presented here)
- Preparation data & information collection existing flood damage data in combination with Initial Studies
- Data & information collection for “flood protection” works and “floodplain infrastructure” ongoing through:
 - Initial Studies (sector review teams) in each MC including information on planned flood protection works and any major (auto-/rail-)road infrastructure in the floodplains (for 2040)
 - direct request to flood expert in MC (for 2020)

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Time Schedule for Stage 1



Task	Dates
Draft Work Plan for the Formulation of Development Scenarios	Completed
Progress Update – 5 th RTWG Meeting	13-14 August 2015
Data & information collection”: Definition IALs, flood characteristics: Scoping study, methodology flood risk:	July – August 2015 August 2015 September 2015
National Consultations (combined with all other Thematic Teams)	September – October 2015 (Tentative)
Draft Final Report for the Development Scenarios, Data and Methodology	October – November 2015 (Tentative)
Approval of Scenarios, Data and Methodology at 6 th RTWG Meeting	October – November 2015 (Tentative)

Staff mobilization Initial Studies / Council Study



International Consultants

Position	Tasks IS	Status	Name
International Project Manager	All	Recruited	Johan Mathijssen
International Riparian Flood Hydrologist	1,3,4,6 & 7	Recruitment in process	Tes Sopharith
International Hydrological / Open Channel Modelling Expert	1 & 4	Recruited	Anthony Green
Senior International Flood Damage / Risk Assessment Expert	2,5 & 6	Recruitment in process	Don Carrol
Senior International Integrated Flood Damage Risk Management Expert	7	Recruitment planned end 2015	Johan Mathijssen (if capacity insufficient, consider recruitment)

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Staff mobilization (cont'd)



National Consultants

Position	Status	Name
Flood Modeller	National Modellers (NMs) from Cambodia and Thailand to be contracted	Chanthaphone (AM-Lao PDR), Somsay (NM-Lao PDR), An (NM-Viet Nam), Dr. Chalermchai (NM-Thailand)
Land use Planning Expert	Recruitment by MCs in process	Ek Menrith (Cambodia), Oulaphone Ongkeo (Lao PDR), Somsack Chaengphian (Thailand), Dr. Do Minh Phuong (Vietnam)
Socio-Economic Planning Expert	Recruitment by MCs in process	They Kheam (Cambodia), Dr. Phouphet Kyophilavong (Lao PDR), Somjai Amornratchayawichan (Thailand), Dr. Nguyen Hong Tin (Vietnam)
Agricultural Planning Expert	Recruitment by MCs in process	Dr. Pheng Sophea (Cambodia), Boundeth Southavilay (Lao PDR), Sutara Yindeerod (Thailand), Dr. Bui Van Hung (Vietnam)
Transport Planning Expert	Recruitment by MCs in process	Khy An (Cambodia), Souphasay Komany (Lao PDR), Thitawat Rommayachairot (Thailand), n.a (Vietnam)
Flood Damage Assessment Expert	Recruitment by MCs in process	To be indicated by MCs

Summary



- After period of extensive preparation, Stage 1 is on schedule
- Scenarios will be approved in 6th RTWG in October / November 2015
- Assessment of development scenarios by *flood protection & floodplain infrastructure* team after 6th RTWG meeting

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The RTWG is kindly requested to:



- Take note of presentation on *Flood Protection and Floodplain Infrastructure* thematic area
- Advise on next steps

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Thank You



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BUDGET ESTIMATE INT. CONSULTANTS FOR STAGE 1 AND STAGE 2



International Consultants requirements Stage 1 Council Study	total (USD)
Sen. Int. Project Manager Expert (SIPME)/ Sen. Int. IFRM Expert (SIFRME)	98,500
International Flood Damage/Risk Assessment Expert (IFDRAE)	56,400
	154,900
International Consultants requirements Stage 2 Council Study	total (USD)
Senior International Project Manager Expert (SIPME)	142,200
International Flood Damage/Risk Assessment Expert (IFDRAE)	111,400
International Riparian Flood Hydrologist (IRFH)	81,400
Senior International Hydrological/Open Channel Flow Modelling Expert (SIHME)	51,800
Senior International Flood Risk Management Expert (SIIFRME)	pm
	386,800