

Draft Meeting Notes
Council Study 6th RTWG Meeting
Landscape Hotel, Phnom Penh, 17-18 December 2015
Prepared on 6 January 2016

I. Protocol matters

Opening speech by co-chairs

1. In his opening remark, H.E Dr. Hatda, Deputy Secretary General of CNMC, on behalf of CNMC and in his capacity of co-chair of the meeting, extended his warm welcome to the delegates from NMCs, the DP s and MRCS. He outlines the importance of the Council Study by referring to the decision of the leaders of the 4 MRC Member Countries made at the Mekong-Japan summit held in Bali, Indonesia, in November 2013 to conduct a Study on the impact of mainstream development projects on the Mekong River. During the 22nd MRC council meeting on 13-14 January 2016 in Phnom Penh, Cambodia, the leaders of the MRC Member Countries will reiterate the importance of the study for the sake and development of the Mekong River

2. For his part, Mr So Sophort, Director of Operation Division of the MRCS, as representative from MRCS and co-chair of the 6th RTWG meeting, also extended his warm welcome to the participants and highlighted the importance of the Council Study as one of priorities for the MRC to support the planning and decision making on critical issues related to the development of the Mekong River. He noted that since the 5th RTWG meeting, steady progress has been recorded and will be reported to this meeting. The Council Study team looks forward to receiving wise guidance from the RTWG for the successful implementation of the CS. On behalf of the MRCS, Director Sophort thanked the RTWG, the MCs and CS team and DPs for their hard work and contribution and thanked the CNMC for hosting this meeting.

On the agenda of the meeting:

3. Viet Nam informed the meeting that Viet Nam would present the result of the Delta Study to the Governments of Cambodia and Lao PDR and then to the MRCS. Therefore, Viet Nam does not see the necessity to present the Delta Study at this RTWG and requested to remove from the agenda the invited special presentation on the Delta Study

4. Thailand is doubtful about the successful implementation of the Council Study and wishes to hear more about the status, progress of the Council Study and possible adjustment of the work plan. TNMC can then prepare recommendations for the JC Prep meeting in January 2016 and will base on the advice and guidance from TNMC Senior Management to consider further supporting the Study or making modification to the Study, if needed

II. Presentations and discussions

Day 1: 17 December 2015

1. Overall progress on the Council Study since the 5th RTWG meeting

5. Mr Henry Manguerra, Council Study Coordinator, presented the progress made in the implementation of the Council Study since the 5th RTWG meeting.

a. Comments from participants

6. Cambodia sought for clarifications from the CS Coordinator on the causes of delayed activities and the difference of reference periods

7. Thailand shared its concern about Activity1 that the work of Flood protection thematic team is lagging behind and the delay reflects the difficulty getting the responses from the team

8. With respect to DRIFT DSS tools, the Member Countries need to be better informed of this tool. To date, the team has not been able to provide technical support to assist the MCs to get acquainted with the tool. The Secretariat to find ways and means to engage more the MCs in the process. To date, only Cambodia has been able to conduct its activities.

9. On Activity 3, Thailand indicated that a consensus on reference periods amongst the Member Countries has not been reached as Thailand does not agree with the proposal from lao PDR on specific requirement for extending the reference period. In addition, socio economic data is not available for this exercise.

10. On Activity 4, TNMC reminded the meeting of the duties and obligations of the NMCs that are committed to informing the general public and CSOs on the concrete results of the Council Study based on sound scientific methodologies and records and not on personal views. In this respect, Thailand reiterated the request that had been made at the 5th RTWG meeting for the MRC Secretariat needs to quicker address the comments from the MCs on how to move forward with the Study to enable the MCs to engage themselves with the Secretariat's activities and to produce concrete outputs for the NGOs and CSOs.

11. On management and coordination matters, Thailand has different opinions on on-going activities and the progress related to the work on WUP-FIN and E-Source as training and information dissemination on these tools have not been organized for the technical teams of the MCs yet.

12. With respect to the issues on the delays, the Chair informed the meeting that the responses will be given through the presentations that would be made throughout this 2-day meeting

13. Lao PDR raised the question about the definition of “Significant Tributary” which needs to be given in order to be used as reference when making decision to notify any tributary projects. Lao PDR also questioned how the DRIFT test can be conducted if it is not applicable in the countries

14. The CS Coordinator indicated that many factors explain the delays of the formulation scenarios: the budget, tight schedule and scope, unavailability of data for calibration for which additional data processing was required.

15. In terms of reference period, CS Coordinator clarified that it is in fact equivalent to the baseline period. It was decided at the 5th RTWG to change the term from baseline period to reference period to signify a different understanding of what the Council Study tries to reach : assessing the impacts not only of developments in the future but also from the past.

16. The Flood Team recognizes the difficulty collecting data and will propose during this RTWG meeting some readjustments.

17. On DRIFT DSS, the CS Coordinator reminded the RTWG that this tool has been developed for the LMB using data, studies and experts opinions about the LMB: The proposed testing of the DRIFT DSS developed for LMB to date early next year will provide an opportunity to evaluate the applicability of the DRIFT Tool.

18. For DRIFT DSS, the CS Coordinator recognizes the need for the Member Countries to better understand the processes and methodologies being used to develop the DRIFT for the LMB and efforts have been exerted by CS team to disseminate this tools though two technical reports that were submitted to the Member Countries in September 2015 and to organize a follow-up technical forum with the Member Countries. However, the technical forum could not take place as agreement could not be reached on the date for the technical forum. He further added that DRIFT DSS provides another tool to fill the knowledge gap on ecosystem impacts and in the long term, the Member Countries can continue to improve the DRIFT DSS with new data and information as they become available and use it to help them make informed planning and decision-making for the sustainable development and management of the Mekong Basin.

19. On Activity 3, the CS Coordinator clarified that a consensus reached at the small TWG meeting on the proposal to extend the hydrological period from 1985-2008 to also include 1960-1984, as an additional analysis that Lao PDR is requesting for only a specific purpose of Lao PDR. There is though a concern about the availability of those needed data to model the 1960-1984 period. In this respect, the consensus at that meeting

was to pursue this particular analysis and come up with and present to the Member Countries a feasibility and soundness of conducting this analysis in the future

20. On WUP-FIN and E-source related work, the modeling team will present the progress in their presentations. The CS team recognizes the importance of information dissemination and the dissemination tasks are completed only when technologies have been successfully transferred to the Member Countries.

21. With respect to the question about significant tributary, the CS Coordinator stated that it is beyond the capacity of the CS team to resolve the issue.

2. Irrigation development scenario

22. Dr Prasong Jantakad, PC of AIP, presented the formulation of development scenario by Irrigation thematic team.

a. Comments from the participants

23. Thailand questioned the quality and accuracy of the data gap analysis and dataset as one Lao PDR Province appears in the database of Thailand

24. Thailand is not in a position to approve the data gap analyses as there was no information about the proposed data gap analysis strategy in the briefing notes. The methodologies should have been discussed with the national teams or the information should have been sent to TNMC in advance and it is appropriate to ask for an approval on a technical matters without providing the information in advance.

25. With respect to the submission of the Irrigation interim report in December 2015: Thailand advised the team to address the data gap first and questioned the team why previous methods for hydrological data collection for WUP and BDP were not used for data collections for data gap in irrigation

26. Thailand advised AIP to enhance internal coordination with other MRC programmes on the use of successful methods that have been used for other studies

27. Lao PDR questioned the scope of data collection whether it should be the Mekong corridor and basin wide. The question about the scope is important to support data at national level before the formulation of early development

28. Lao PDR pointed out that data need to be reviewed and the guideline and questionnaire need to be improved

29. Lao PDR shared similar view from Thailand on the data gap analysis

30. Viet Nam agreed with the methodologies but pointed out that difference in data between BDP2 and CS come from differences in data from the provinces (i.e., include irrigated areas in highlands). All irrigated areas in the provinces were collected for the CS but not for BDP2. In the Delta, there is no big difference in the data set. Viet Nam has no problem with the data and methodology presented.

31. Cambodia took note of the progress and agreed with data gap strategy

32. Cambodia recommended the MRCS to coordinate with national teams and MRCS programmes including IKMP to finalize the data collection.

33. Thailand was unclear in the assumptions used for the data gap analysis and recognized that the data gap cannot be resolved soon. Thailand suggested to use the BDP2 approach.

34. The CS Coordinator recognizes that the proposed data gap strategy should have been discussed during the national consultation meetings but could not take place because of the delays.

35. The CS Coordinator further informed that meeting that in addition to the interim thematic assessment reports, technical notes that provide additional details on development scenarios will be made available soon and this will help the consultation with Thailand on the issues related to the inconsistency of data.

36. With respect to the question raised by Lao PDR about the geographical scope. This question is beyond the capacity of the team and the question of data collection in the Mekong Corridor or other areas should be discussed at a higher level.

37. On the geographical scope, the CS Coordinator reminded the meeting that the CS is a basin wide study on impacts of water resources development in the Basin and therefore, it is imperative to collect data for the entire Basin.

The Irrigation thematic team will review BDP approach to see what it had done in the past and check whether it can be applied in the CS.

b. Conclusion of the Chair

38. The Chair concluded that Cambodia, Lao PDR and Viet Nam have no objection to the data gap strategy

39. The Chair advised AIP to work closely with Thailand to work on the inconsistency of data. Thailand to provide comments in writing within one week. The Member countries can provide additional comments within one week

3. Agricultural land use development scenario

40. Dr Prasong Jantakad made the presentation which have similar objectives, content, methodologies used as the irrigation development scenarios

Comments from the participants

41. Cambodia took note of the progress report and agreed with the data gap strategy and the revised data and recommended the Secretariat to further work with National Teams to finalize this activity

42. Thailand cannot agree with the strategy and the revised dataset and raised the point about the methodology used and inconsistency of data collected and requested he Secretariat to provide more information about the result of the data collection

43. Thailand asked the team to clarify the land use versus land cover

44. Viet Nam took note of the progress report and no objection with the approach and revised dataset

45. Lao PDR took note of the progress report but questioned about the land use changes when comparing the land use 2003 and land cover 2010. Lao PDR requested the Secretariat whether a comparison was made by the Secretariat between land cover and irrigation areas. This difference between land cover and irrigation areas may affect the result of SWAT modeling for sedimentation.

46. IKMP has compared these two dataset and found out that there is no significant difference although the classifications are different. The modeling team has been using the land use 2003.

47. The Agriculture team proposes to use the land cover map 2010 in the data gap strategy where the team has to extract the information about three main areas: agricultural rain fed areas, surface mining and forestry.

48. With respect to Land Use 2003 and Land Cover 2010, the CS Coordinator stated that they both provide the same information. The land use classification in a land use map provides more detailed classifications than land cover map. This land cover map 2010 which provide recent data is being used as basis for filling gaps and to extrapolate what could be the land use changes in the future.

49. The CS Coordinator clarified that the relevant land cover category is agriculture. It does not reflect exactly how much is the irrigated agriculture versus non-irrigated agriculture, the team cannot compare the irrigation areas collected by the team from the Member Countries against the information in the land cover simply because the land cover does not contain the details.

c. Conclusion of the Chair

50. The Chair advised the Secretariat to take the same actions as for Irrigation development scenarios

4. Hydropower Development scenario

51. On behalf of hydropower thematic team, Mr Voradeth Phonekeo RTA for ISH, made the presentation including the early development 2007, hydropower development by 2015, definite future scenarios 2010, hydropower scenarios for 2020-2014, hydropower sub-scenarios 1 (HPS1), preliminary considerations for sub-scenarios HPS2 and HPS3 in relations to ISH 0306 options and observations on modelling of rules curves for operations

a. Comments from the participants

52. Viet Nam questioned the hydropower thematic team whether the team has separate scenarios for mainstream and tributary dams or considers only one scenario for all dams

53. Viet Nam made an observation on the rule curve for operation for both Xayabuly and Don Sahong dams that there is a big difference in the water level and that the water level in Nam Theun 2 in late December should have the same value as early January

54. Lao PDR indicated that some data are not correct and Lao PDR will update and submit the corrected data to the Member countries

55. Lao PDR sought for more clarification on joint operations and non-joint operations and ISH 0306

56. Cambodia took note of the progress report and agreed on the proposed mainstream dams in subscenario 1 in the cascade upstream dams of Vientiane and Don Sahong.

57. For the proposed scenarios 1, Cambodia stated that Stung Treng and Sambor dams are planned to be constructed in 2020 – 2024 and not after 2040

58. To avoid confusion from NGOs and CSOs, Cambodia requested the Secretariat to rectify the information about Don Sahong dam project that for the purpose of formulating the development scenarios, the team uses the assumption that the Member Countries agreed in principle to allow mainstream dams including Don Sahong dam to be developed according to the MRC plan which, in any case, does not mean that the agreement on proposed Don Sahong has been already reached.

59. The ISH RTA reminded the participants that during the 5th RTWG meeting in August 2015, the hydropower team already presented to the Member Countries that for the development scenarios, the team combined the mainstream dams with tributary dams with the goal of getting benefits from the operations, minimizing the flood impacts and maximizing the navigation.

60. The rule curve is obtained from the simulations made by the modelling team. This simulation is applied to all dams.

61. ISH RTA clarified that ISH 0306 examines in depth the risk mitigation of mainstream dams and tributaries. The team is working on scenarios simulation and The ISH 0306 can also provide valuable information to the CS. In this respect, a number of national consultation meetings and one regional meeting on ISH0306 have been organized for the Member Countries where the international consultant had interactions with the Member Countries and guidance was provided on how to use the result of ISH0306.

62. With respect to the comment from Lao PDR on the coordination in the sub-scenarios. For sub-scenario 1 (HPS1), there is no coordination in the operation of the mainstream dams but to maximize the outputs. In sub-scenario 2 and sub-scenario 3, there will be coordination but the question is which dams to include : all the mainstream dams or 5 cascade dams in the northern part of Lao PDR.

63. CS Coordinator provided further clarification on Sung Treng and Sambor dams, that in the base planned development scenario 2040, they are already included as per the Member Countries plans. For the sake of thematic assessment, sensitivity analysis around the base planned development scenarios 2040 will be conducted by formulating and assessing the sub-scenarios. The main essence of the sub-scenarios is to arbitrarily select what mainstream dams will be included in sensitivity analysis in order to compare the impacts of the full cascade (base planned development scenario 2040) against an alternative sub-scenario (i.e., cascade of dams in the northern part of Lao PDR. The team is doing this for the purpose of formulating the scenarios and is not for the purposes of recommending what projects should not be constructed before or after 2040. The analysis that the consultant conducted to determine the likelihood of dams being constructed by

the planned dates is solely based on the intention for the team to come up with an alternative configuration of the mainstream dams that the team can assess and compare with the full cascade dams for sensitivity analysis

b. Conclusion of the Chair

64. The MCs agreed in principle with the proposed scenarios with the need to rectify some incorrect and incomplete information and figures (as per comment of Lao PDR) and provide more clarification on the joint operations and non-joint-operations or ISH 0306

5. Domestic/industrial water use

65. Mr Dararath Yem of EP, presented the development scenario for domestic and industrial water use

a. Comments from the participants

66. Thailand took note of the information provided by the Secretariat and shared an issue related to domestic/industrial water use that has been already raised and discussed on various occasions whether to include domestic/industrial water use as part of the impacts analysis or not as the domestic/industrial water use has been put in the 1995 Mekong Agreement and the Water use procedure does not require to address domestic water use. Through previous studies, all MCs recognize that the impact of domestic water use is very insignificant when compared to the overall water use like in irrigation and agricultural water use. All MCs are entitled to use this portion of water use for their domestic use purpose without submitting notification and prior consultation to other Member Countries and domestic water use meets to first priority of water use and therefore, there is no need to develop any rules or procedures or any requirement to regulate and control this portion of water use. In this respect, Thailand views that the MRC may not need to spend resources to conduct impact assessment of domestic water use as a number of studies have shown that the impacts are very low

67. The second issue is related to industrial water use particularly the question about how the team will define what kind of industries are using water directly and indirectly. The amount of water use differs from one country to another depending on the territory of the countries the water flows through.

68. The third issue is related to sand mining extraction. Thailand does not agree with making reference to WWF report which was not agreed by TNMC because of the methodology and the result is inconclusive. Similar comment from Thailand was shared at the 10th TACT meeting in Hanoi., Thailand advised the team to use another reference.

69. The Representative from SDC informed the meeting that the Lao Government had recently released the result of Population and Housing Census 2015, today the Lao

population stands at 6.5M (2015). The Secretariat was requested to update these figures accordingly. He also requested the team to check the figures of industrial activities. According to the economic survey of Lao PDR in 2013, the number of employers in Laos stands at 500,000 workers including those in the SMEs which is 5 times more than what the team has presented. The Secretariat was requested to double check these figures to ensure that workforce in SMEs is included.

70. Cambodia took note of the progress. On sand mining extraction, Cambodia requested the team to highlight the year of WWF survey and the reference

71. Cambodia also requested the Secretariat to specify and distinguish between sediment extraction and sand extraction

a. Conclusion of the Chair

72. The Secretariat provide more information on the difference between sediment and sand extraction not to devote much resources to assessing the impact of domestic water use as it is expected to be not significant.

6. Navigation

73. Captain Lieven , ITA for NAP, made the presentation on Development scenarios under the Navigation Thematic area highlighting the scope of the Master Plan for Regional Waterborne Transportation in the Mekong Basin and navigation development scenarios.

a. Comments from the participants

74. With respect to the Master Plan for Regional Waterborne Transportation, Thailand informed the meeting that the report has not been approved yet by TNMC Senior management. In this connection, Thailand and may not be ready to approve the report at the upcoming JC meeting in January as at the technical level, the discussions are still being held on environmental impacts caused by improvement of navigation channel that implied the enlargement of river sides from Chiang Sean which has not been addressed in the Master Plan

75. Thailand recognizes that the CS team needs some information for the development scenarios but the navigation related issues still require the decision from the decisions makers. To help with the reflection, Thailand sought views from other Member Countries on the development scenarios as the this issues are more related to Lao PDR, Cambodia and Viet Nam with the involvement of a series of cascade in the lower part.

76. Lao PDR shared view that any planning is for the future and it is the duties of the current generation to plan for the future even though it cannot be realized

77. Viet Nam had no comments

78. Cambodia took note of the Master Plan and development scenarios and further shared the information that all Member Countries reached a consensus and endorsed on the Master Plan for the Regional Inland Waterways Transportation at the regional inland workshop in Bangkok on 17-19 November 2015 and the final documents will be submitted to the JC meeting in January 2016 for consideration and approval.

79. Cambodia requested the Secretariat to share the final document of the Master Plan with CNMC before the end of 2015 for new year budget plan

80. Cambodia expects that the development scenarios could be used as a plan for the navigation thematic area as well as for future consideration by the Countries.

81. With respect to environmental impacts, the Secretariat indicated that it is part of the Lancang-Mekong plan and this plan will be accepted until the Thailand-Laos border is demarked. The MRC can make offer to conduct the impact assessment so that Laos and Thailand to be more confident in approving the Lancang Mekong plan.

82. CS Coordinator further added that for the purpose of the CS, RTWG is requested to adopt the same development scenarios under the master plan so we can use those scenarios to assess not only the environment impacts but also the socio economic impacts. Again this backdrop, the team is of the view that decision can be made on the development scenario at this RTWG meeting without considering other issue like the final endorsement of the Master Plan at the policy level.

b. Conclusion of the Chair

83. While pending the approval of the Master Plan by the JC, the MRCS CS team can refer to the content of the scenarios formulated by the navigation team for their further work. Additional impact assessment can be provided at a later stage.

7. Flood protection

84. Mr Oudomsack Philavong, the PC for FMMP, made the presentation on development scenarios for Flood Protection and Floodplains Infrastructure and requested the countries to defer the formulation of development scenarios for Flood Protection and Floodplains Infrastructure for 2020 -2040 until the assessment of flood impacts due to developments under the other thematic areas is completed

a. *Comments from the participants*

85. The chair shared view that the difficulty and constraint facing the thematic team in getting the data is not because the data are not available but it is because those data do not exist.

86. Thailand questioned the Secretariat about the plan for data collection as ToR for national consultant has not been prepared

87. With respect to data gap, Thailand requested the Secretariat to rectify the conclusion by the Secretariat that the Plan from the Member Countries are not yet available. Thailand further indicated that this is due to the fact that the member Countries cannot proceed with data collection without agreed ToR which should be jointly prepared by the Thematic team and the Member Countries. Thailand emphasized the late implementation which leads to delaying the activities to next year.

88. Thailand requested the Chair to convey the message to the Director in charge of FMMP to look this issue more seriously

89. Thailand pointed out that the Secretariat failed to list the major main on-going joint activities with IKMP and issues dealing with hydropower which are important for modelling. The other team cannot do the assessment without any modeling activities.

90. Thailand requested the Secretariat to be more specific when asking for data.

91. Thailand recognizes that FMMP has been better defined through the support of CCAI. The task 2 of the Initial Study has been almost completed but integration of that piece of work and FMMP work has not started yet and needs to be expedited because the Initial Study was conducted only in a small pilot areas. Now, there is a need to expand and, for Thailand, the work will be carried out only along the 15 km corridor but not east of Thailand as Thailand is interested in knowing only the impacts of mainstream on those areas.

92. Viet Nam has no objection

93. Cambodia questioned the Secretariat why the hydrodynamic model of the Mekong upstream of Kratie is not suitable for flood impact assessment

94. Thailand clarified the point raised by Cambodia about the hydrodynamic model that the model in the past was not developed to address the issue mainstream. There have been attempts to apply the model in the upper part and today it is only in its developing

stage. The hydrodynamic model is therefore not fully applicable to the upper part upstream of Kratie for impact assessment.

95. Thailand expressed its concern over the slow implementation and that is why Thailand has developed the ISIS tool on its own for Thailand's internal studies

96. Lao PDR took note of the progress

97. The CS coordinator provided justifications on the proposed deferment of the formulation of development scenarios stating that it would make more sense to determine the impact of flood risks from the development scenarios under the other sectors in 2040 before the formulation of flood protection development scenarios that would mitigate those impacts. This concept is similar to ISH0306 study in which the ISH0306 modeling will identify and assess risk mitigation scenarios only after the impacts due to developments from the other thematic areas are determined through the CS modelling.

98. While the data are not available, there is a need to move on and it may take more time and budget to collect the data and the MRCS will have to wait for another 6 months but it will finally benefit as the MRC as it will be able to formulate development scenarios specifically targeted to mitigate the impacts on flood risk as a result of the development of other thematic sectors. This deferment should be seen as an adaptation to the difficulty facing the Secretariat

99. With regard to the comment from Thailand on specific data, the CS Coordinator shared similar view that the request for data should be specific: there are two types of data: data for the formulation of development scenarios and data to support the modeling. The Secretariat will continue to collect flood damage data and data needed for the modeling. The development scenarios are about flood protection measures that the team would like to simulate to mitigate the impacts of other developments.

a. Conclusion of the Chair

100. The Member Countries have no objection to the proposed next step and requested the Secretariat to expedite the work of the Flood Team

8. Model Setup and calibration result

101. Ms Sopheap made the presentation on model setup and initial calibration results

a. Comments from the participants

102. Lao PDR sought for clarification on the assessment in 4 zones as outlined in the Concept Note versus the 5 zones as outlined in Secretariat's presentation. and whether this difference will affect the accuracy in the results

103. Lao PDR made the point that the calibration should start with hydrological then water quantity and sediment

104. Lao PDR suggested improving ISIS model for upper Kratie, for the mainstreams and tributaries (floodplains) and also to link to flood protection assessment along the Mekong River and tributaries for example in Sebang Fay

105. Lao PDR questioned the team what kind of land use the team uses to analyze the sediment and nutrient knowing that the team should know the boundaries of irrigation and agricultural areas

106. Thailand is pleased to learn that at the 10th and 11th TACT meeting in Bangkok, the modeling team from the Secretariat and the Member Countries have agreed on the modelling approach and modeling set up

107. Thailand acknowledges with appreciation the strong support from Finland on WUP-Fin tool and DFAT on EWater Source and technical information about both tools are being received by the Member Countries. For both tools, in the management of the activities, the Member Countries implementing agencies should be given the opportunities to understand the process and the analytical part of the modelling. In this respect, Thailand viewed that improvement in capacity building and information dissemination is needed.

108. When the team starts receiving data thematic teams to run the model, the team may need to recalibrate the flow after finishing the sediment calibration as these two parts do not always match each other. This can provide the opportunity for the Member Countries to learn the process of the development and calibration.

109. Viet Nam questioned the team how to link primary production to fish productivity.

110. Cambodia shared the same views from Thailand on more involvement of national teams in the process. Cambodia commented on the input data to be properly included in the model such as boundary conditions (to include other dams than Chinese ones), baseline conditions (what year), boundary schematization between Cambodia and Viet Nam, which need to be double checked and verified.

111. The specific impacts on the Great Lake and Mekong Delta also need to be highlighted

112. The Modeling Team PO clarified why 4 zones are referred to in the Concept Note and 5 zones in Secretariat presentation. For the CS, the modelling framework clearly demarcates the 5 zones. The presentation did not show water quality because of time constraint for this 6th RTWG meeting that allow to present only water quantity from ISIS model and WUP Fin tool. If the Member Countries wish to get information\ about water quality, the Modeling Team will be pleased to present this information separately.

113. The reason why the ISIS model is applied only on the mainstream not in the tributaries is because of time constraint to support the Council Study and the limited data availability.

114. With respect to the land use, the team clarified that the land use has different categories of land use by zone: for irrigation, rice crops, forestry, etc., and the data on irrigated agricultural area is merged into the model.

115. CS Coordinator added that. Irrigation and agriculture data are considered in the SWAT and IQQM model. The land use data is used in the SWAT model to provide the coverage of agriculture and not irrigation area and to primarily determine the amount of the run-off that contributes to the river and also to the accompanying erosion processes and nutrient transportation processes from the landscape to the river. However, when it comes to the river, the IQQM model is used to take out water as per the requirement for irrigation and calculate the water use for irrigation based on data about irrigation area collected from the Member Countries. In other words, agriculture data which includes irrigation areas are used in the SWAT model and separating the irrigated areas from the non-irrigated agricultural areas is not necessary to reasonably to estimate the run-off contribution of the combined agricultural area to the river.

116. The Modeling Team consultant added that since not data are available for the Tonle sap, the team uses results from the Amazon River to determine how the relationship between primary production and fish productivity.

117. With respect to the calibration, the team has been working closely with Fisheries Statistic expert from Fisheries Programme.

b. Conclusion of the Chair

118. The Member Countries took note of the progress of the modelling team with the need to build the capacity of the Member Countries in the use of WUP Fin tool and EWater Source

Day 2: 18 December 2015

119. The meeting started the second day of the RTWG with the recap of Day 1 by the CS Coordinator. The recap included the following major decisions, action items, and guidance.

120. Recap: Thailand proposed adjustments in CS work plan and budget should be submitted to the JC and discuss during JC Preparatory Meeting in the Upcoming Council Meeting in January 2016. Secretariat stated that this will be addressed by presenting the revised implementation schedule, arrangement, and financial status

121. Recap: Thailand reiterated importance and urgency of disseminating interim results of the Council Study and technology transfer/training, in particular the BioRA, WUP-FIN and eWater Source results

122. Recap. Thailand clarified that they have concern and did not totally agree on extending the reference period to include 1960-1984. Secretariat clarified that the 1960-1984 period will be only used for simulating 1960 development scenario only for the purposes of Lao PDR. Moreover, the agreement is to proceed in determining first the feasibility of this analysis based on available data. Lao PDR requested that the result of determining feasibility and the recommendation whether to conduct analysis or not should be via official letter.

123. Recap. Lao PDR requested Secretariat to clarify whether data should be provided basin-wide or only in corridor. Secretariat replied that this issue which is related to the definition of “significant tributary” is beyond Council Study and should be resolved at the higher level. Secretariat also stated this issue is only relevant to irrigation thematic area and to some extent agriculture. The other thematic areas like are not affected by this issue

124. Recap. For Irrigation development scenarios, all MCs (except Thailand) has no objection in principle with the data gap filling approach. MCs will review and provide edits to data. Secretariat to meet with TNMC within the week to address Thailand concern. CS Team to review BDP2 approach

125. Recap. For Agriculture and Land Use Change development scenarios, Cambodia and Viet Nam agreed with data gap filling strategy and dataset. Lao PDR requested to clarify between 2003 Land Use and 2010 Land Cover. Thailand cannot agree with the strategy and dataset. Secretariat to meet with TNMC within the week to address Thailand concern (in combination with the irrigation thematic team.

126. Recap. For hydropower development scenarios, in principle, all MCs agreed conceptually with proposed development scenarios. Lao PDR will submit data to correct some of the incorrect data presented. Secretariat to clarify further the linkage between

CS and ISH0306. Secretariat noted that the main 2040 Planned Development Scenario includes Stung Treng and Sambor which according to Cambodia are scheduled to be completed by 2024

127. Recap. For domestic and industrial water use, Thailand pointed out that impact assessment of domestic/industrial water use is not needed and not a good use of limited resources and is not required in PNPCA, impacts are relatively insignificant. All MCs except for Lao PDR agreed that impact assessment should be limited along mainstream corridor and hotspots. Secretariat to follow-up with Lao PDR to address concern with this approach.

128. Recap. For domestic and industrial water use development scenarios, Thailand points out that they do not recognize the WWF Methodology and suggest to find another data source from sand extraction, Thailand does not recognize the WWF methodology used to estimate sediment budget in LMB. However, it was clarified that the WWF data on locations and extent of sand mining in LMB can be used. As stated in the 5th RTWG meeting in Siem Reap, sand mining data will primarily rely on WWF data instead of trying to get data from other sources which will take significant amount of time and effort without certainty in the quality of the data .

129. Recap. For navigation development scenarios, CS can use development scenarios from the Master Plan pending approval by JC

130. Recap. For flood protection development scenarios, MCs agreed on the shift in the approach but Flood Team is instructed to expedite activities. Formulation of 2020 and 2040 development scenarios are deferred and will be conducted after the assessment of flood impacts of developments from the other thematic areas.

131. Recap. On the topic of modelling, Thailand and Cambodia reiterated importance of providing more opportunities for MCs (not only the national modellers) to understand modelling process and analysis – capacity building.

132. With respect to the request to extend the analysis to cover the hydrologic period to include 1960-1984, Thailand noted that there is lack of data in particular socio-economic data based on their experience with WUP FIN and BDP.

133. LNMC requested the Secretariat to send official letter to LNMC to inform them officially whether data is available or not to support the 1960-1984 analysis.

134. With respect to the significant tributaries, Lao PDR requested to consider data from all thematic areas and not only irrigation. Lao PDR pointed out the hydropower should be considered in order to measure the significance of the impacts from any hydropower dam and to decide to notify or not. This is also related to hydropower to

define the extent of the significance of the impacts of hydropower project and whether notification is needed or not

135. To better understand the term of significance, Thailand recommended to refer to the document on WUP on the definition of significance and how to address it

136. For data gap strategy, Thailand advised to add IBFM approach in addition to BDP2 approach

137. For domestic/industrial water use assessment, Thailand advise to conduct a preliminary assessment only in the corridor and hot spots for future development scenarios.

9. Biora DRIFT DSS

138. Dr So Nam, PC for Fisheries Programme, presented this topic

a. Comments from the participants

139. Dr Phan, PC for CCAI, requested the Biora team to add to the list of objectives of the discipline team should also include climate change which should be a thematic team and the objective of the Biora is to estimate the ecological responses to hydrological, sediment, and water quality changes caused by water resources development and climate change. She further advised to add one box in the link to Biora development scenario and climate change scenarios which will be fitted back into the modelling time series from the DSF. The Secretariat has the climate change scenarios to supply the DSF

140. Viet Nam sought for further information about the progress of the development of response curves for FAs 4,6 and 8. Viet Nam requested the team to add the FA 8 and to select only some FAs for the training for biora testing in February

141. Viet Nam questioned the team how the model will handle the hydrodynamic nature of the Delta.

142. Lao PDR shared comments that the Biora team had not discussed the site selection indicator and criteria with the Member Countries in particular with Lao PDR and questioned the team what criteria and methods they used to come up with 8 focused areas without the agreement from the member Countries.

143. Lao PDR referred to the presentation from the team and questioned the team whether the reason for not selecting the focused areas 4, 6 and 8 was due to the lack of data.

144. With respect to DRIFT database, Lao PDR suggested the team to have a peer review before using existing data and putting them in the DRIFT model.

145. Lao PDR requested to test DRIFT tool beforehand in order to assess its performance and make decision to apply it to the Council Study and prepare the interim report

146. Thailand took note of the progress but did not share total agreement with the statement by the Biora team that the all MCs are involved in the process. Thailand share similar view of Lao PDR that the DRIFT methodologies require expert's opinions and readjustment and the decision on some response curves comes from the expert and the Member Countries, as non-experts, can only observe the process how the experts come to the conclusion.

147. Thailand suggested that for the next workshop in February 2016, the modalities for MCs involvement must be changed to have the member Countries more involved in the process

148. With respect to the Focused Areas 1, 2 and 3, Thailand shares similar view of Lao PDR and would like to focus on Focused Area 2 as it is the first area that will experience real overall impacts and responses with the on-going mainstream development. For other Focused areas, there will be accumulated impacts and the team has to differentiate and identify whether those impacts come from the hydropower development. In this connection, Thailand advised the team to look back this issue and prepare new approach to get more involvement of the MCs in the discussions on the Focused Areas

149. Thailand has a specific request regarding the Focused Area 1 and has concern over the upstream development from China in terms of erosion and flow fluctuation which had strong impacts of people livelihood along this section of the River.

150. The Biora team to discuss with TNMC a number of responses to the TNMC questions about the BioRa progress technical reports 1 and 2. The Team can take the opportunity of attending the workshop in February to have special session to address certain issues that Thailand raised in response to the BioRA reports. Before incorporating the comments from Thailand in the report the team needs to make sure that those comments are also accepted by other Member Countries.

151. The Biora team was requested to provide proper response to Thailand from the Biora team on the training on DRIFT and Biora.

152. Cambodia highly appreciated the efforts made by the CS team especially the Fisheries team. Cambodia requested for more involvement of the MCs in the process to understand and promote the skills and build capacity for using DRIFT tool.

153. Cambodia requested to improve the data used for the Council Study by using the land cover data 2010.

154. The Secretariat explained that the reason for using the land use 2003 is because those date have been agreed and published while the land cover data are not officially published and was in the process of being improved

155. CS Coordinator added that the Biora team is not directly using the land use data 2003 but these data are being used for modelling as per past decision. The modeling outputs based on the simulations using the land use 2003 is what is being used in DRIFT DSS.

156. With respect to the data that are being used for the response curves, there are three types of data: the available data from the MRC and other data sources about the Lower Mekong Basin; second, previous related studies from literature review; and third, expert's opinions. One benefit of having the DRFIT_DSS is it will provide the Member Countries additional basis on what data to be collected in the future to further improve the response curves.

157. The CS Coordinator provided further information about the 6-day workshop in February that it has three objectives: firstly, the dissemination of resources and technical knowledge about the DRIFT DSS, second DRIFT testing to address the comments for the Member Countries and thirdly to provide and training and to begin the process of transferring the knowledge to the Member Countries. The Coordinator proposed to have the training in February first before conducting their national consultations so that the Member Countries can be better equipped with knowledge about DRIFT DSS when they discussed it with the broader stakeholders in their respective countries.

158. In this respect, Thailand suggested to discuss this matter separately as the line agencies in Thailand have been waiting for this consultation for some time now

10. Socio economic assessment

159. Dr Paradis Someth of BDP, presented this topic

a. *Comments from the participants*

160. Dr. So Nam, FP Coordinator, commented that the indicators are broad and also suggested that fish production is not a good indicator since it does not change historically.

161. Thailand stated that there is no clear methodologies presented on benefit-cost sharing across borders. More information should be presented on transboundary tradeoff

162. Viet Nam Suggested that the lack of important indicators may affect the result of the assessments. The Secretariat should organize small technical meetings to verify the methodologies and the indicators for the assessment

163. Cambodia took note of progress and agreed with the comments of the FP Coordinator and Viet Nam. Cambodia asked how the conceptual scope as presented will be put in real practice.

164. Lao PDR requested for more involvement from Member Countries in the process and to have the technical meeting to identify and discuss the indicators

1. Presentations of Interim reports

a. Introduction

165. The CS Coordinator presented the interim reports in preparation, the schedule and the process for disseminating, reviewing and finalizing the interim reports.

b. Irrigation

166. Dr Prasong Jantakad, PC of AIP, presented the progress of the Interim report on irrigation thematic area

167. The Member Countries took note of the report.

c. Agriculture Land use

168. Dr Prasong Jantakad, PC of AIP, presented the progress of the Interim report on agriculture land use

169. The Member Countries took note of the report

170. Thailand expressed its wish to see the exact status of the work progress, and advised the team to work closely with national consultants and TNMC to discuss the inaccuracy and inconsistency of the information in the report

d. Flood

171. Mr Oudomsack Philavong, Programme Coordinator for FMMP, made the presentation on the interim report on Flood Protection and Flood plain infrastructure

172. The Member Countries took note of the report

e. Navigation

173. Captain Lieven made the presentation on navigation interim report

174. The Member Countries took note of the report

175. The CTA for NAP indicated that the request for hiring a transport economist was made at the 5th RTWG meeting but was not addressed due to budget constraint. Need to discuss internally as the MC cannot take position on this request

f. Hydropower

176. The Member Countries took note of the report

g. Climate Change scenario

177. The Member Countries took note of the report

h. Modelling

178. The Member Countries took note of the report

179. Thailand suggested putting the Modeling approach, MRC DSF and reference period in annexes?

i. Biora

180. The Member Countries took note of the report

j. Socio-economic

181. The Member Countries took note of the report

2. 2016 Overall schedule and next steps

182. The CS Coordinator presented the 2016 overall schedule and next steps for the Council Study including the schedule for the completions of phase 1, the arrangement for the transition period, the revised implementations arrangement for Phase 2, and the financial report

183. The Chair questioned the team whether the Member Countries had approved in the Annual Work Plan the budget needed for the Council Study

184. Viet Nam shared the view that the RTWG has the mandate to discuss only technical issues and not financial ones and advised the Team to be careful with staffing plan with the departure of existing staff of the modelling team

185. Cambodia took note of the information provided by the CS Coordinator and requested the Secretariat to speed up the process with a smaller team but with clear responsibilities. A request was also made to the Secretariat to disseminate the product of the Council Study in a simplified way and can be used by the general public

186. Lao PDR took note of the information from the CS Coordinator and noted that the involvement of many teams causes the delay, inefficiency, and waste of resources. They alerted the Secretariat on payment issues for national consultants for their work for the CS and to resolve before end of Phase 1. With respect to 2nd phase, LNMC is not in a position to provide advice as the Countries need to have a work plan and budget plan. Therefore LNMC advise to resume the discussion once the budget is secured for phase 2.

187. Thailand took note of the information provided by the CS Coordinator and share similar views from Viet Nam that it is difficult for the Technical group to decide on financial and governance issues. Thailand noted that the Member Countries will have the chance to discuss the financial issues at the first Budget Committee meeting scheduled for 29 December 2015 at OSV before seeking for further advice from the JC at the JC prep meeting in January 2016

188. Thailand noted that during the AWP Meeting, the MCs did not have the proper information on the Council Study. It would have been useful if the current situation of the Council Study has been presented first before the AWP meeting.

189. In this connection, the Chair further added that since the Secretariat had already submitted the AWP version 2 to the Development Partners, it would be a bit difficult to add any items. However, the chair viewed that the Member Countries should share a common stand and voice and receive the approval from the DPs to be able to use the basket fund

190. Thailand requested the Chair to convey the message to the OIC of MRCS to have a short discussion before the budget committee meeting with a view to getting agreement amongst the MCs.

191. The CS Coordinator provided a recap for Day 2. The recap included the following major decisions, action items, and guidance.

192. Recap. On the BioRA topic, MCs agreed with the proposed workshop for result dissemination of the BioRA, and testing and training on DRIFT-DSS. MCs reiterated need to improve approach for dissemination of results, participation in technical workshops, and training and technology Transfer

193. Recap: On the socio-economic assessment topic, Cambodia, Lao PDR and Viet Nam agreed on small TWG to discuss the reports further. The following points were identified as important. Cost-benefit sharing across borders; and indicators selection because it defines the scope of the assessment and its applicability

194. Recap. On the topic of interim reports, MCs agreed in the proposed process for reviewing the reports: MCs to receive draft reports beginning 31 December 2015; MCs will have 30 calendar days to review the report; Small TWGs will conducted to discuss further the reports and MCs comments; Final drafts produced by 31 March 2016

195. Recap. On the topic of 2016 implementation schedule and arrangement, Lao PDR suggested to discuss with RTWG the implementation plan for Phase 2 and budget; and Thailand suggested a preparatory discussion on the budget of the CS before the 29 December budget meeting with the DPs

III. Concluding remarks by the chair

196. H.E Dr. Hatda, Deputy Secretary General of CNMC and co-chair of the 6th RTWG meeting thanked all participants for their valuable contribution and guidance to the CS team. He also expressed his gratitude towards to the members of the RTWG and CS team who have contributed to making the Council Study happen. The Chair's words of thank went to MRCS staff for their meeting arrangement and to CNMC for hosting this event.

197. The 6th RTWG meeting ended at 3.00 pm

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