Minutes of Meeting

The 28th Meeting of Thailand – Malaysia Joint Evaluation Team

on Golok River Mouth Improvement Project

21 – 22 Dec 2015
Khao Yai National Park,
Nakhon Ratchasrima Province, THAILAND

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AGENDA 1: OPENING ADDRESS

Mr. Somkiat Prajamwong, the leader of the Thailand delegates, welcomed the Malaysian delegates to the 28th Meeting of Thailand – Malaysia Joint Evaluation Team (JET) on Golok River Mouth Improvement Project on 21st to 22nd December 2015.

Both sides introduced their delegates and the list of delegates is as shown in APPENDIX A. The Thai side presented the proposed agenda for the Meeting. The Meeting agreed to proceed according to the proposed agenda as shown in APPENDIX B.

AGENDA 2: MATTER FOR INFORMATION

The Meeting was informed that the result of the 33rd JTWG meeting as follows:

The JTWG Meeting was informed of the 6 proposed agenda for information and 1 agenda for consideration which were:

<u>Agenda proposed for information</u>

1) Report of monitoring and evaluation of Golok river mouth
2) Maintenance dredging of Golok river mouth
3) Cableway station across Golok river
4) Real time monitoring system in the Golok river basin including joint website, flood forecasting and warning system.
5) Joint hydraulic modeling study
6) Rehabilitation program of transit point B

Agenda proposed for consideration

7) Integrated river basin management (IRBM) plan

The JTWG Meeting endorsed and recommended that the IRBM will only focus on the components of Water Resources Assessment and Water Demand Management at the time being. The JTWG will propose to the JSC on the reorganization, objective and scope of work for JET to work on the IRBM activities.

AGENDA 3: MATTERS FOR CONSIDERATION

3.1 Report on Monitoring and Evaluation of Golok River Mouth

The 2015 pre-monsoon survey was carried out by the Thai side on September 2015, as shown in APPENDIX C. It was observed that the river mouth cross section was fully open on the Malaysian side while for the post-monsoon survey (March 2015), the sedimentation between -3.0 to -2.0 m MSL was fully spread across the river mouth. These pre and post-monsoon surveys were different from normal expectation which the river mouth was supposed to be open after monsoon and closed before monsoon.

For the sedimentation at the section near Transit Point B: The shallowest bed level of the Golok river mouth was found to be -2.30 m MSL which is 0.20 m, deeper than 2015 post-monsoon measurement (-2.10 m MSL). The sedimentation area was 9,168 sq m which was 57% less than 2015 post-monsoon measurement (21,267 sq m). The total sedimentation volume was 2,686 cu m, which was 63% less than 2015 post-monsoon measurement (7,442 cu m).

The Thai side presented the analysis of Golok river discharge in relation to change of river mouth cross section pattern. The assumption derived in the meeting was probably due to:

- River mouth cross section closing in post-monsoon 2015: Golok river flow during monsoon period (Oct 2014 - Mar 2015) was significantly less than the same period of other years.
- River mouth cross section opening in pre-monsoon 2015: Golok river flow during non-monsoon period (Mar 2015 - Oct 2015) was 188.2 cms which was

significantly higher than the same period of other years (2010 to 2014 which ranged 116 to 158 cms).

The Thai side concerned that the most erosion of river mouth bed in this survey was -6.30 m MSL at the toe of Thailand breakwater tip which was the same as the deepest point from previous surveys. This may lead to instability of Thailand breakwater. This should be closely monitored further.

The Thai side also discussed about the influence from sand bypassing and proposed to monitor sand bypass in addition to river discharge and sea bed level. This could be preliminarily assessed in the assessment study of IRBM as well.

3.2 Maintenance Dredging of Golok River Mouth

The criteria for maintenance dredging from joint hydraulic study are:

(1) When the cross section area of the river mouth between Thailand and Malaysia breakwater tip is blocked up to 30%; or
(2) When the bed level of the river mouth is at -2.0 m MSL or shallower;
(3) The sediment patterns are to be monitored for at least 2 consecutive monsoon seasons in order to identify the need of maintenance dredging.

The 2015 pre-monsoon survey showed that the shallowest bed level at the Golok river mouth was -2.30 m MSL which was deeper than the dredging criteria (-2.0 m MSL); the river mouth blockage area was about 2.8%, which was less than the dredging criteria (30% of area blockage) as shown in APPENDIX D.

The Meeting agreed that from the pre-monsoon survey, the river mouth was partially open on the Malaysian side and has not yet reached the dredging criteria. Hence, there is no need for the maintenance dredging of Golok river mouth at the time being.

3.3 Protection Work of Transit Point B

The Thai side informed that Feasibility study, Environment Impact Assessment (EIA), and detailed design have been started and will be completed by December 2016. The 2 proposed shapes of the Protection Work of Transit Point B from previous joint hydraulic studies will be studied using mathematical model and physical model to get the best option. The result of study will be presented and discussed in JET when the result is available.

The optimum design for Protection Work of Transit Point B shall be confirmed by physical modeling.

3.4 Rehabilitation and Protection Works at Golok River Mouth

The Thai side informed that they have been conducting Feasibility study (FS), Environmental Impact Assessment (EIA), and detailed design from October 2015 until December 2016. The detailed design of the breakwater extension will be commenced in the second half of 2016.

The Thai side informed that the budget for physical model was not available at the same time with FS and EIA study. However the Thai side try to obtain budget for carrying out physical model study by May 2016. The EIA approval process would take at least 6 months in 2017.

Both sides agreed that in order to carry out detailed design, it is necessary to obtain results from the physical model. The Malaysian side informed that the detailed design may start 2 months before the completion of the physical model study and will take approximately 1 year to complete.

3.5 Mutual Calibration of Rating Curve at Cableway Station

In 2015, mutual hydraulic measurements were done in May, July, August, November and December. It was found that the relation of water level and river discharge conformed with the mutual rating curves of last year. The peak discharge of this year up to December 2015 was 269 cms (on 1st December 2015) which was very low compared to flows during other monsoon periods as shown in APPENDIX E.

The Meeting agreed that cross section survey carried out during annual calibration should be plotted continuously to check the significance of cross section changes and the calibration period. At present, mutual datum referring to same benchmark - T.11 (since 2014).

3.6 Real Time Monitoring System and Joint Website for Golok River Basin

<u>Existing Telemetering stations and Joint web site</u>

The Malaysian side noticed that the latest update of hydrological data by the Thai side was until end of 2014. The Thai side informed that the missing data occurred due to upgrading of server in RID headquarter. The missing data was rainfall data and the

Thai side has submitted to the Malaysian side by email. The Thai side would create the new page for the missing web page in future, which may take 3-6 months.

Proposed Telemetering stations and joint website

The Thai side reported that the 6 new telemetering stations are under calibration for one year from June 2015 until May 2016. The data will be uploaded from June 2016 for sharing.

The Malaysian side reported that hydrological data at the three new telemetering stations will be collected and calibrated for 1 year from October 2015 to September 2016. The data will be uploaded for sharing from March 2016 and calibration data will be uploaded from October 2016.

3.7 Integrated River Basin Management Plan (IRBM) for Golok River Basin

From the 33rd JTWG meeting, the IRBM was endorsed with the comment "to only focus on the component of water resources assessment and water demand management at the time being and proposed the road map for IRBM should include recommendation on action plans by Task Force which will be identified by both sides."

Responding to the 33rd JTWG Meeting comments:

The JET agreed that:

- In order to respond to JTWG recommendation, that IRBM will focus mainly on water resources assessment and water demand management while other topics which were related to the integrated approach shall be assessed using secondary data, as available from related agencies.
- Proposed Action Plan (as shown in APPENDIX F) :
    - Assessment topics could be combined for assessment; combining topic no.1-3 for water resources assessment and combining topic no.4-7 for integrated river basin assessment;
    - The time frame could be speeded up by combining assessment topics into 2 groups;
    - Total assessment study period could be shortened by providing more time from initially planned 1 day to 3 days for a workshop for assessment back to back to each JET meeting. Hence, the assessment could be speeded up from 3 years to 2 years.

This agenda will be proposed to the JSC Meeting in February or March 2016 with the following components:

1. First proposal from the 27th JET meeting
2. Endorsement and recommendation by the 33rd JTWG Meeting
3. Responses of the 28th JET Meeting to the recommendation by the 33rd JTWG Meeting

Both sides agreed that the IRBM assessment will start in next JET meeting in April or May 2016 which will be upon endorsement by JSC in February or March 2016.

AGENDA 4: OTHER MATTERS

The Meeting proposed the venue for next JET Meeting in April or May 2016 as follows:

1. Labuan Island
2. Kota Kinabalu

AGENDA 5: MATTERS TO BE REFERRED TO THE JSC/JTWG

Matters for Information

1. Report of Monitoring and Evaluation of Golok River Mouth
2. Maintenance Dredging of Golok River Mouth
3. Protection Work at Transit Point B
4. Rehabilitation and Protection Works at Golok River Mouth
5. Mutual Calibration of Rating Curve at Cableway Station
6. Real Time Monitoring System and the Joint Websites for Golok River Basin

Matters for Consideration

7. Integrated River Basin Management (IRBM) Plan for Golok River

AGENDA 6 : ADOPTION OF MINUTES OF THE MEETING

The Meeting agreed to adopt the minutes of meeting of the Twenty Eighth Meeting of Thailand-Malaysia Joint Evaluation Team on the Golok River Mouth Improvement Project.

(Kapt. (B) Ir. Hj. Anuar Bin Hj.Yahya)
Co-Chairman
Joint Evaluation Team, Malaysia

(Dr. Somkiat Prajamwong)
Co-Chairman
Joint Evaluation Team, Thailand

APPENDIX A

Attendance List
The 28th Meeting of Thailand – Malaysia Joint Evaluation Team on the Golok River Mouth Improvement Project

21 – 22 December 2015

Khao Yai National Park, Nakhon Ratchasrima Province, THAILAND

THAI DELEGATES

1.	Dr. Somkiat Prajamwong	Director Office of Project Management Royal Irrigation Department
2.	Mr. Prinya Kamolsin	Expert on Irrigation (Hydraulic Engineering) Royal Irrigation Department
3.	Mr. Waemamu Waehama	Director Golok River Basin Operation and Maintenance Project Regional Irrigation Office 17 Royal Irrigation Department
4.	Mr. Somchai Imyoo	Director Hydrology and Water Management Center for Southern Region Office of Hydrology and Water Management Royal Irrigation Department
5.	Ms. Chawee Wongprasittiporn	Director, Project Planning Group 2 Office of Project Management Royal Irrigation Department
6.	Mr. ChumlarpTejasen	Director, Project Planning Group 4 Office of Project Management Royal Irrigation Department
7.	Mr. Attaporn Wonglimaswat	Senior Surveyor Survey and Engineering Bureau Marine Department
8.	Mr. Kanchadin Srapratoom	Director, Foreign Project Management and International Affairs Division, Office of Project Management, Royal Irrigation Department

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9.	Mrs. Thayida Siritreeratomrong Van Corstanje	Foreign Relations Officer, Professional Level Office of Project Management Royal Irrigation Department
10.	Mr. Attapan Diloksopon	Civil Engineer, Professional Level Office of Project Management Royal Irrigation Department

MALAYSIAN DELEGATES

1.	Kapt. (B) Ir. Hj. Anuar Bin Hj.Yahya	Director Coastal Zone Management Division Department of Irrigation and Drainage Malaysia
2.	Ir. Hj. Shahimi Bin Sharif	Director Department of Irrigation and Drainage Kelantan
3.	Mr. Mohd Said bin Dikon	Director River Basin Management Division Department of Irrigation and Drainage Malaysia
4.	Ms. Carine Wong Koh Yin	Engineer Coastal Zone Management Division Department of Irrigation and Drainage Malaysia

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SECRETARIAT TEAM

1.	Mr. Piriya Thumyago	Foreign Relations Officer, Practitioner Level Office of Project Management Royal Irrigation Department
2.	Ms. Piyachanok Isro	Foreign Relations Officer, Practitioner Level Office of Project Management Royal Irrigation Department
3.	Mr. Nares Salae	Civil Engineer, Practitioner Level Office of Project Management Royal Irrigation Department

IN ATTENDANCE

1.	Mr.Wongsathit Boonthunyakorn	Chief, Operation and Maintenance Group 2 Nakhon Ratchasima Provincial Irrigation Office Royal Irrigation Department
2.	Mr.Somsak Kerdjadturat	Craftsman, Operation and Maintenance Group Nakhon Ratchasima Provincial Irrigation Office Royal Irrigation Department
3.	Ms. Kanya Inkliang	Senior Irrigation Engineer Office of Research and Development Royal Irrigation Department
4.	Ms. Yukol Numas	Senior Public Relations Officer Public Participations Promotion Division Royal Irrigation Department

APPENDIX B

PROPOSED AGENDA
The 28th Meeting of Thailand – Malaysia Joint Evaluation Team on the Golok River Mouth Improvement Project

21 – 22 December 2015

Khao Yai National Park, Nakhon Ratchasrima Province, THAILAND

AGENDA 1: OPENING SESSIONS

AGENDA 2: MATTERS FOR IMFORMATION

- 2.1 REPORT OF 33 RD JTWG MEETING AND MATTERS TO BE CONCERNED BY JET

AGENDA 3: MATTERS FOR CONSIDERATION

- 3.1 MONITORING AND EVALUATION OF GOLOK RIVER MOUTH
- 3.2 MAINTENANCE DREDGING OF GOLOK RIVER MOUTH
- 3.3 PROTECTION WORK AT TRANSIT POINT B
- 3.4 REHABILITATION AND PROTECTION WORKS AT GOLOK RIVER MOUTH
- 3.5 MUTUAL CALIBRATION OF RATING CURVE AT CABLEWAY STATION
- 3.6 REAL TIME MONITORING SYSTEM AND THE JOINT WEBSITES FOR GOLOK RIVER BASIN
- 3.7 INTEGRATED RIVER BASIN MANAGEMENT (IRBM) PLAN FOR GOLOK RIVER

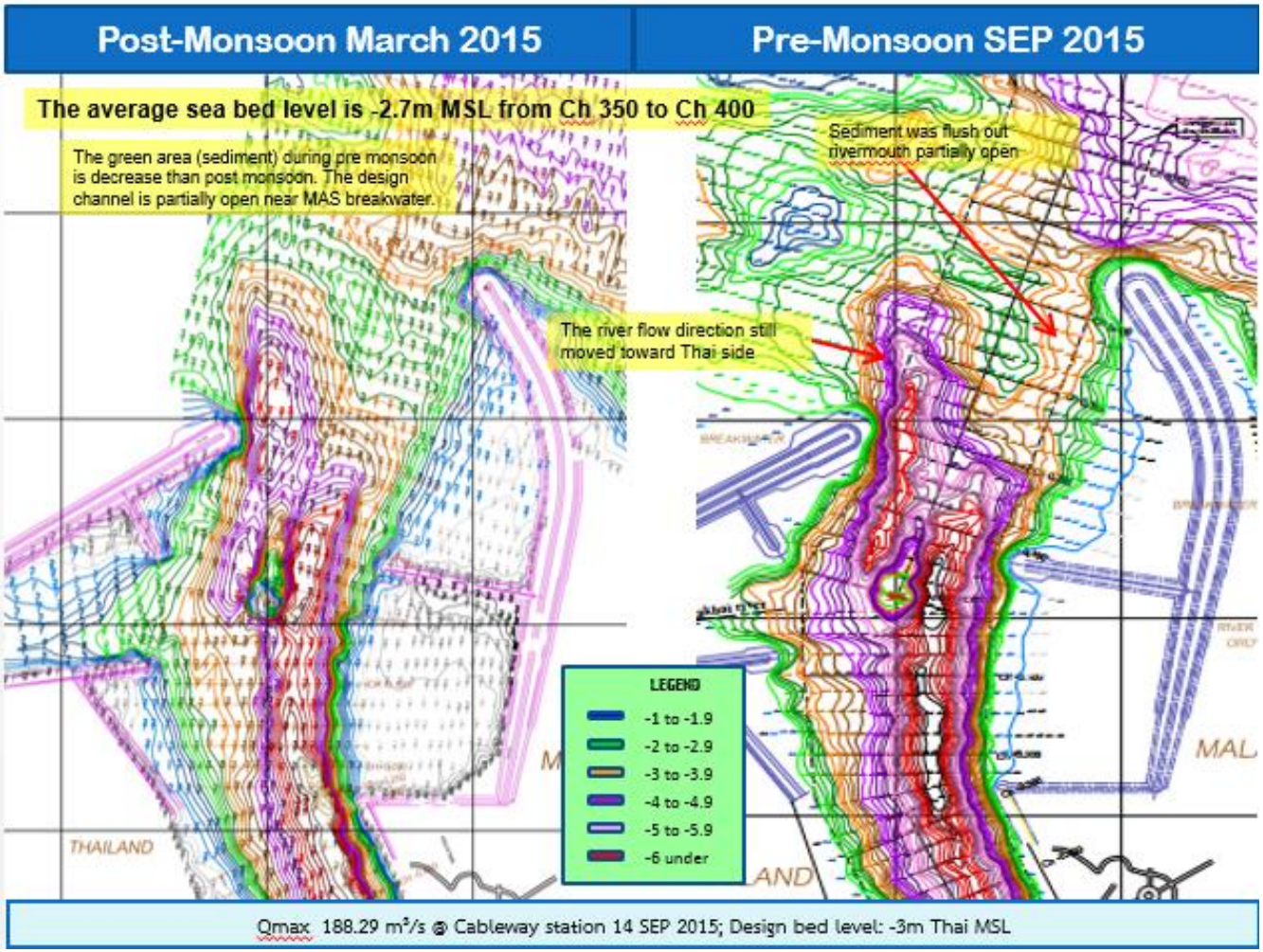
AGENDA 4: OTHER MATTERS

AGENDA 5: MATTERS TO BE REFERRED TO THE JSC/JTWG

AGENDA 6: ADOPTION OF MINUTES OF MEETING

APPENDIX C

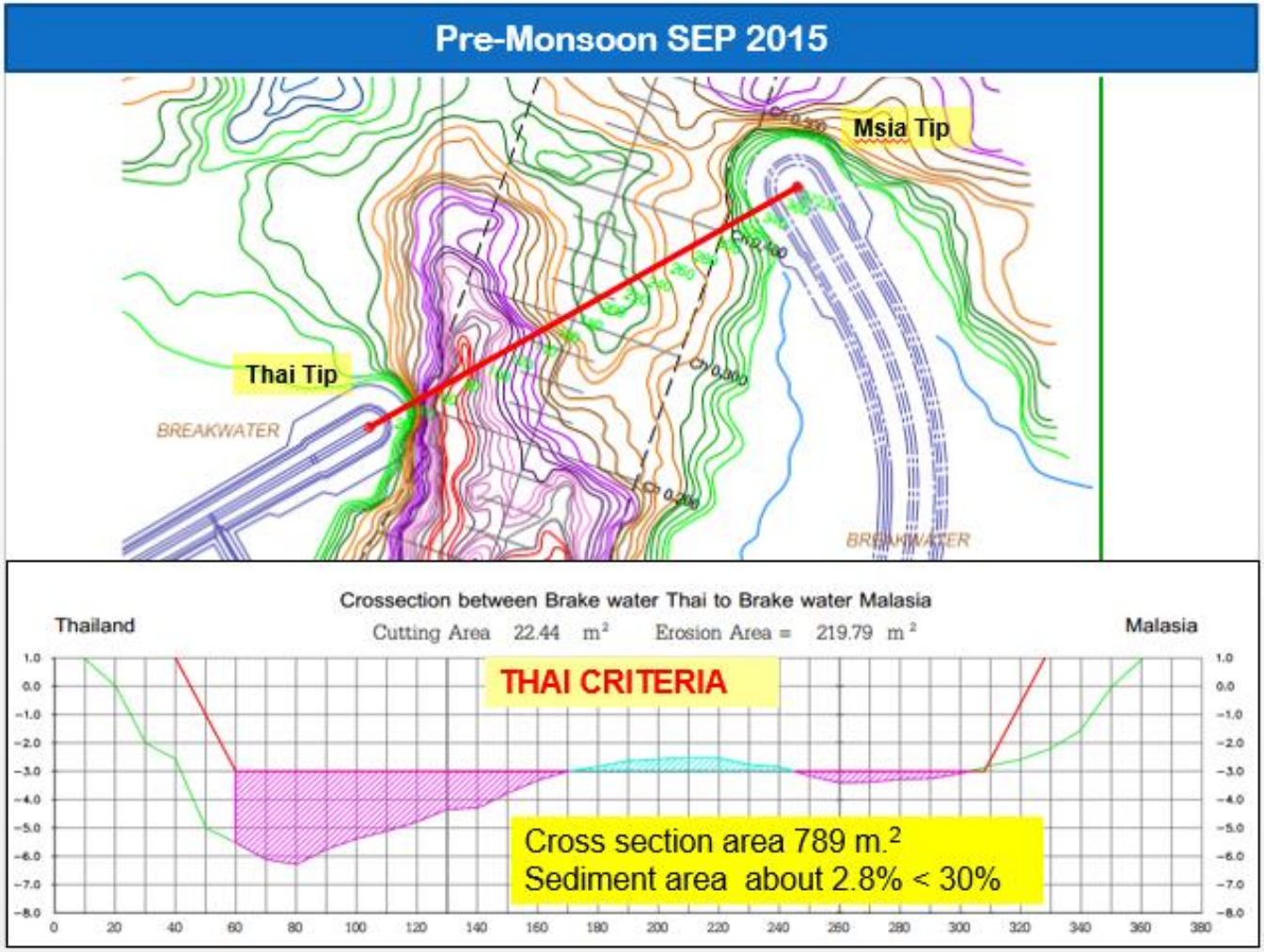
PRE-MONSOON SURVEY BY MALAYSIAN SIDE AND POST-MONSOON SURVEY BY THAI SIDE



APPENDIX D

THE BED LEVEL AND CROSS SECTION

FROM TIP OF MALAYSIAN AND THAI BREAKWATER



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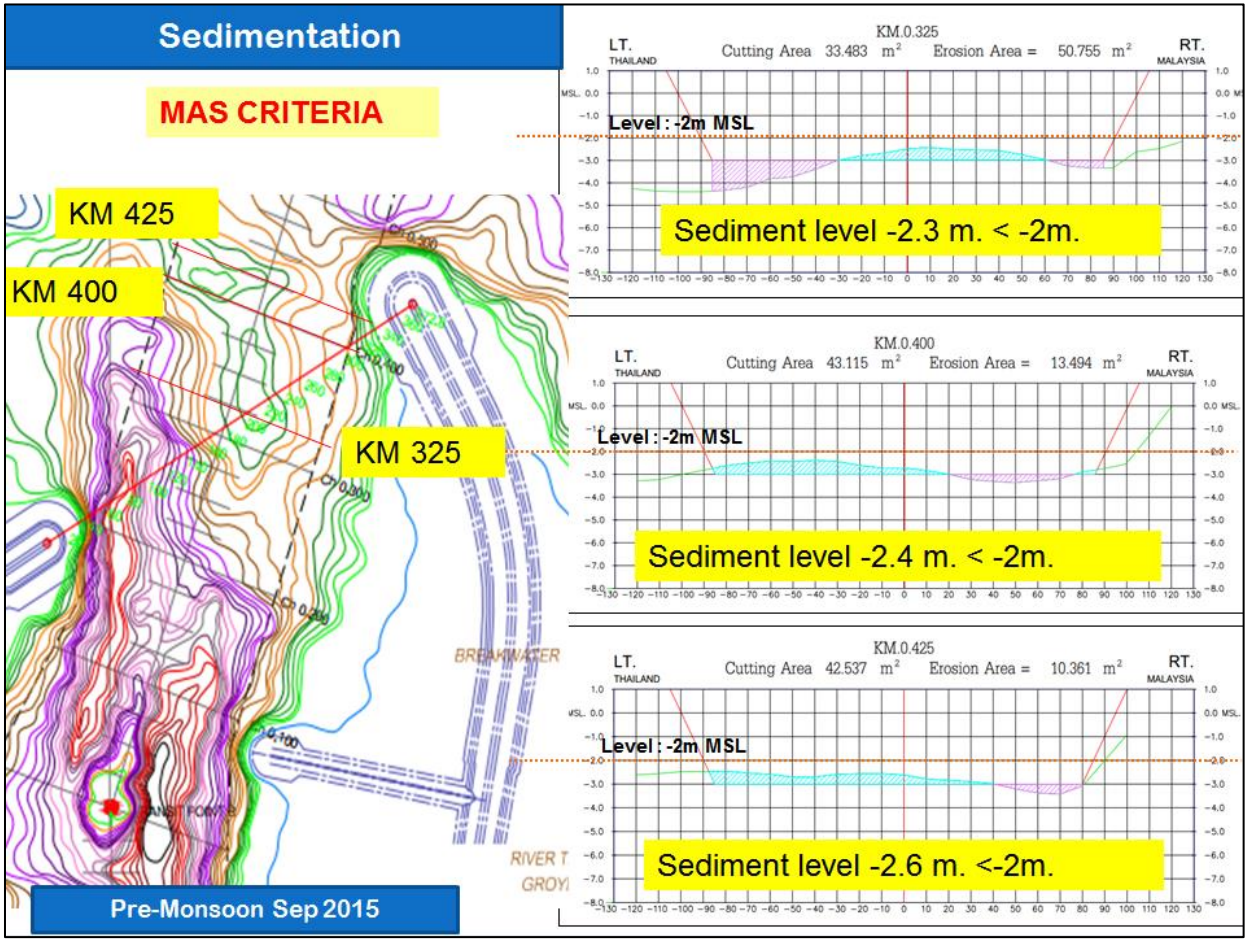
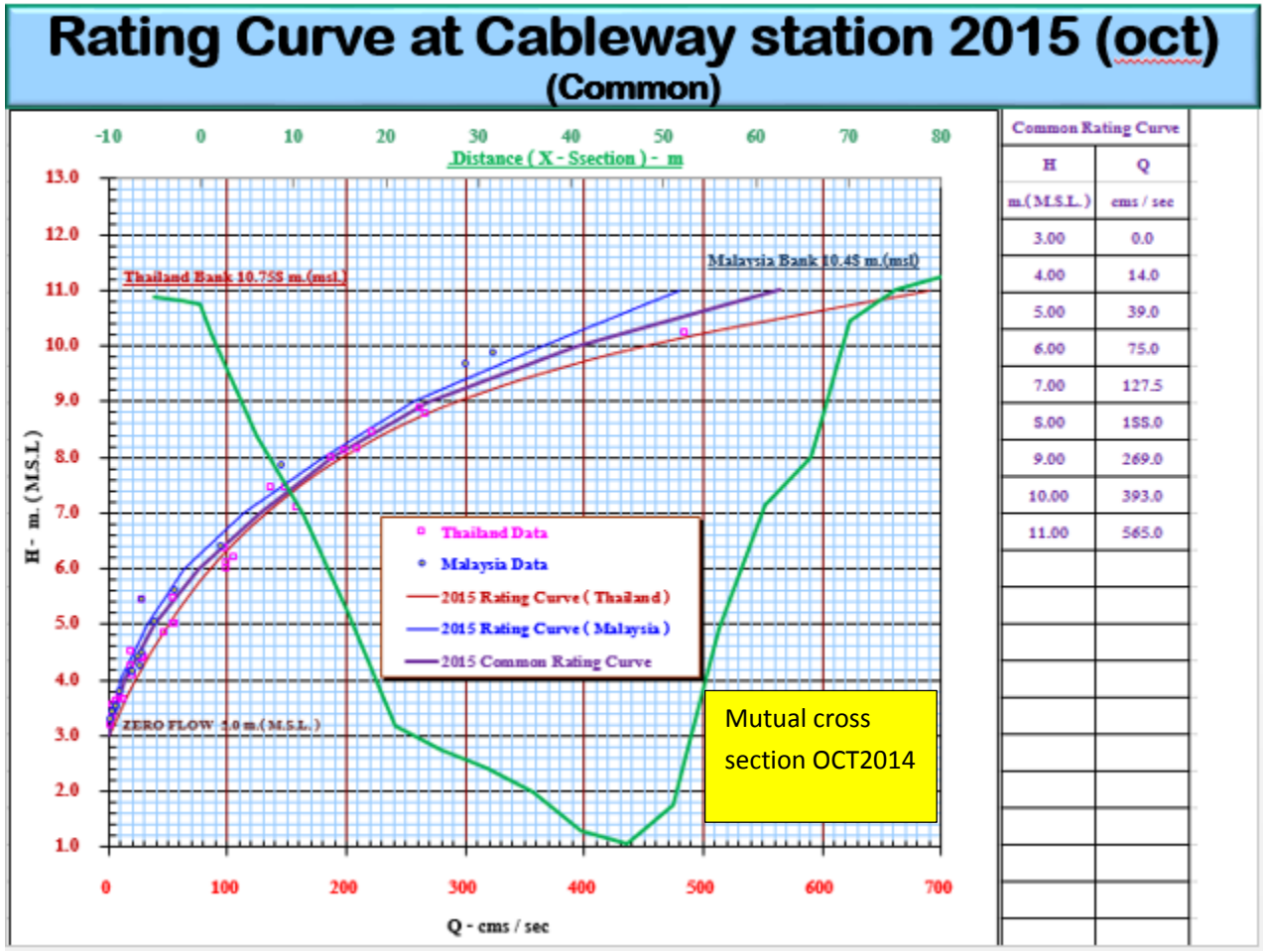
THE BED LEVEL AND CROSS SECTION

ALONG DESIGN CHANNEL



APPENDIX E

COMMON RATING CURVE AT CABLEWAY STATION OCTOBER 2015



Common Rating Curve	
H	Q
m.(M.S.L.)	cms / sec
3.00	0.0
4.00	14.0
5.00	39.0
6.00	75.0
7.00	127.5
8.00	155.0
9.00	269.0
10.00	393.0
11.00	565.0

APPENDIX F

IRBM ACTION PLAN