



## Minutes of Meeting

# **The 29<sup>th</sup> Meeting of Malaysia – Thailand Joint Evaluation Team on Golok River Mouth Improvement Project**

**27 – 28 July 2016  
Genting Highlands, Pahang, Malaysia**

**Minutes of Meeting**  
**The 29<sup>th</sup> Meeting of Malaysia – Thailand Joint Evaluation Team**  
**On The Golok River Mouth Improvement Project**  
**27 – 28 July 2016**  
**Genting Highlands, Pahang, Malaysia**

**AGENDA 1: OPENING ADDRESS**

Kapt. (B) Ir. Hj. Anuar Bin Hj. Yahya, the leader of the Malaysian delegates, welcomed the Thai delegates to the 29<sup>th</sup> Meeting of Malaysia – Thailand Joint Evaluation Team (JET) on Golok River Mouth Improvement Project on 27 – 28 July 2016.

Both sides introduced their delegates and the list of delegates is as shown in APPENDIX A. The Malaysian 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: MATTERS FOR CONSIDERATION**

**2.1 Report on Monitoring and Evaluation of Golok River Mouth**

The 2016 post-monsoon survey was carried out by the Thai side in April 2016, as shown in APPENDIX C. It was observed that sedimentation area on the Malaysian side has increased and erosion area on the Thai side has decreased compared to the pre-monsoon survey (September 2015). This is an unexpected phenomenon in which the river mouth is supposed to be open after monsoon and closed before monsoon.

The sedimentation area (where bed level is shallower than -3m MSL) was observed to have increased by 169% which increased from 9,168m<sup>2</sup> (September 2015) to 24,644m<sup>2</sup>

(April 2016). The total sedimentation volume was observed to have increased by 390% which increased from 2,686m<sup>3</sup> (September 2015) to 13,173m<sup>3</sup> (April 2016).

The deepest bed level at the river mouth was observed to be -2.6m MSL, located at the navigation channel; the observed bed level was deeper than previous survey which was observed to be -2.3m MSL (September 2015) and -2.1m MSL (March 2015).

The Thai side presented the analysis of the change of river mouth cross section pattern in relation to Golok River discharge. The unexpected phenomenon was probably due to:

- (i) Golok river flow during non-monsoon period (March 2015 – September 2015, maximum discharge was 188 m<sup>3</sup>/s) and significantly higher than the same period of previous years; hence the river mouth was fully opened in the Malaysian side as reported in JET 28<sup>th</sup>;
- (ii) Golok river flow during monsoon period (October 2015 – February 2016, maximum discharge was 306 m<sup>3</sup>/s) significantly lower than the same period of previous years; hence insufficient flushing capacity to flush off sedimentation at river mouth area.

The deepest bed level around tip of Thai breakwater is observed to be -6.2m MSL which may lead to instability of Thai breakwater; the level is shallower compared to the previous survey. Besides, the river mouth is observed to be shallower over the years. Hence, the Meeting agreed that this phenomenon should be monitored closely in future.

The Thai side proposed that it is necessary to conduct mutual measurement for river flow discharge at the river mouth. This input data will improve the result of the physical model as mentioned in Agenda 2.3 and 2.4. Besides, the input data will enhance the analysis of the change of river mouth cross section pattern in relation to river discharge. Hence, the Meeting agreed that both sides work out the details and proposals for discussion in next JET meeting.

## **2.2 Maintenance Dredging of Golok River Mouth**

As agreed in JET 25<sup>th</sup>, JTWG 32<sup>nd</sup> and JSC 14<sup>th</sup>, the maintenance dredging is required based on the following criteria:

- (1) When the cross section area of the river mouth between Thailand and Malaysia breakwater tip is blocked up to 30% (for drainage purpose); or
- (2) When the bed level of the river mouth is at -2.0 m MSL or shallower (for navigation purpose);

The sediment patterns are to be monitored for at least 2 consecutive monsoon seasons in order to identify the need of maintenance dredging.

### **Section across Thai breakwater and Malaysian breakwater**

The post-monsoon survey (April 2016) as shown in APPENDIX D showed that:

- (a) The sedimentation area was approximately 11.2%, which is less than the dredging criteria (30% of area blockage).
- (b) It is observed that part of the river mouth is shallower than -2m MSL on the Malaysian side. However, the average sea bed level at the river mouth is at -2.6m MSL, which is deeper than the dredging criteria (-2.0m MSL).
- (c) Maintenance dredging is not required based on the post-monsoon survey.

The Meeting agreed that based on the results of pre-monsoon (September 2015) and post-monsoon (April 2016) surveys, the river mouth was partially open on the Malaysian side and did not meet the dredging criteria. Hence, there is no need for the maintenance dredging of Golok river mouth at the time being.

## **2.3 Protection Work of Transit Point B**

The Thai side informed that Feasibility Study, Environment Impact Assessment (EIA), and detailed design have been started since October 2015 and is expected to complete by December 2016.

Referring to the Joint Hydraulic Model Study (2013), Thai side has proposed two options of Transit Point B protection work in oval shape and hexagonal shape. The optimum design for protection work of Transit Point B will be finalized by physical model.

The Meeting is informed that the physical model works will start from mid-August 2016 and the Malaysian team is invited for joint inspection and calibration of the physical model. The progress/result of the study will be presented and discussed in next JET meeting.

## **2.4 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 since October 2015 and is expected to complete by December 2016. The detailed design for the breakwater extension will be commenced in the second half of 2016.

The Thai side informed that they have obtained budget to perform the physical model for rehabilitation and protection works at Golok River Mouth including protection work for Transit Point B. Besides, the Thai side informed that the EIA approval process would take at least 6 months in 2017.

Both sides agreed that the detailed design for rehabilitation works at Golok River Mouth (breakwater extension, training wall and groyne) should be based on the results of the physical model. Hence, the Malaysian side informed that the detailed design (for groyne) may start 2 months before the completion of the physical model study and will take approximately 1 year to complete. Both sides will commence construction in 2018 with approximate duration of 24 months.

The revised schedule of work for both sides is as shown in APPENDIX E.

## **2.5 Mutual Calibration of Rating Curve at Cableway Station**

In 2016, seven mutual gauging measurements were done monthly except in January 2016 measurements were done on two occasion. The mutual rating curves of 2015 as shown in APPENDIX F will be used until a new mutual rating curves is developed by end of 2016.

The Malaysian side reported that there is differences in the discharge readings i.e. on 28 April 2016, the discharge measured by the Malaysian side is reported to be  $1.097\text{m}^3/\text{s}$  where the Thai side is reported to be  $0\text{m}^3/\text{s}$ .

The Meeting agreed that the officer in charge from both sides shall discuss and clarify further on the matter. The officer in charge from both sides are as follows:

### Malaysian side

Madam Norizan Binti Abdul Aziz ([norizan\\_aziz@water.gov.my](mailto:norizan_aziz@water.gov.my))

Madam Hazalizah Binti Hamzah ([hazalizah@water.gov.my](mailto:hazalizah@water.gov.my))

Madam Carine Wong Koh Yin ([carine@water.gov.my](mailto:carine@water.gov.my))

### Thai side

Mr. Chaiwut Wattanakarn ([chaiwutrid2514@gmail.com](mailto:chaiwutrid2514@gmail.com))

Mr. Attapan Diloksopon ([atpdlk@gmail.com](mailto:atpdlk@gmail.com))

## **2.6 Real Time Monitoring System and Joint Website for Golok River Basin**

### Existing Telemetering stations and joint web site

The Thai side informed that a new link for the Joint web site is created (<http://hydro-8.com/Golok>) and it is ready for data viewing and data assessing.

The Malaysian side observed that the online data and the backup data on Thai Joint web site does not tally. Hence, the Meeting agreed that the Thai officer in charge as proposed in Agenda 3.5 shall check and rectify the shared data on the Thai Joint web site.

The Malaysian side observed that there is approximately 1m differences of daily water level readings at Rantau Bridge, Sg Golok station (X.119A) – Rantau Panjang station (6019411). The Meeting agreed that the officer in charge from both sides shall discuss and clarify further on this matter.

#### New Telemetry stations and joint website

The Meeting is informed that the setup for 6 new telemetry stations in Thailand and 3 new telemetry stations in Malaysia is completed. The revised schedule for new telemetry stations is as shown in APPENDIX G.

### **AGENDA 3: OTHER MATTERS**

#### **3.1 Integrated River Basin Management Plan (IRBM) for Golok River Basin**

##### Amendment to the Agreement on The Golok River Mouth Improvement Project

Pertaining to the 15<sup>th</sup> JSC Meeting held in March 2016 at Bangkok, both sides has seek consultation with relevant agencies and the feedback from each side is as follows:

(i) Input from Thai side

The Thai side informed that referring to the Agreement signed on 8 March 1997, the scope of work for JSC and JTWG are limited to Golok River Mouth Improvement Works. Hence, JSC (Thai) does not have the authority to expand the scope of work for JTWG and JET to work on IRBM. Additionally, JSC (Thai) does not have the authority to appoint a new working group to work on IRBM

plan according to the same above reason. The IRBM plan can be launched by only two (2) options that (a) both sides agree to conclude a new agreement, or (b) both sides agree to make amendment / supplementary to the Agreement signed 8 March 1997, to expand the scope of work of JTWG and JET to cover the development of Golok River Basin.

(ii) Input from Malaysian side

The Malaysian side informed that JSC (Malaysia) agreed to make amendment to the Agreement signed on 8 March 1997 and Malaysian side has formed a sub-committee to work on the amendment. Hence, Malaysia seeks to propose that the draft provisions reflecting the expanded scope of work be prepared accordingly. The draft provisions could be in the form of an amendment to the 'Agreement between the Government of the Kingdom of Thailand and the Government of Malaysia on the Golok River Mouth Improvement Project' which was signed on 8 March 1997 or in the form of a new and specific agreement by itself. Malaysia offers to provide the first draft of the said amendment or new agreement for consideration and further discussion in the upcoming JET and JTWG meetings.

Based on the inputs from both sides, the Meeting agreed to present the inputs from both sides to the JTWG Meeting for further consideration.

Summary of joint assessment

In order to initiate a short term assessment for IRBM focusing on flood mitigation, therefore a hydrodynamic modelling need to be carried out. Thus, the data collection assessment shall comprise as follows:-

- 1) Hydrological Data
- 2) Hydraulic Data
- 3) Geographical Information System (GIS)



Data required for Hydrodynamic Modelling is as follows:

- Hydrological Data (rainfall, water level, discharge)
- Existing and future schematic diagram for flood mitigation
- Historical Flood map
- Existing and future land use map
- Existing Hydraulic structures (Bridges, weirs, pump, culvert, ponds, etc.)
- Survey data (river cross sections)
- Ground model (Lidar, Ifsar, GIS)
- Tidal Data
- Soil Properties and etc.

### **3.2 Date and venue for the next JET meeting**

The Meeting agreed to convene the 30<sup>th</sup> JET Meeting as follows:

Host: Thailand

Proposed date: 21 – 24 November 2016

Proposed venue: Phuket, Thailand

## **AGENDA 4: MATTERS TO BE REFERRED TO THE 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

### **Other Matters**

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

## AGENDA 6: ADOPTION OF MINUTES OF THE MEETING

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



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



(Mr. Thanar Suwattana)  
Co-Chairman  
Joint Evaluation Team, Thailand

## APPENDIX A

### THE 29<sup>TH</sup> MEETING OF MALAYSIA – THAILAND JOINT EVALUATION TEAM (JET) ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT

#### LIST OF MALAYSIAN DELEGATES

1.		Name Designation Department  Contact no. Email	Kapt. (B) Ir. Hj. Anuar Bin Hj. Yahya Director Division of Coastal Zone Management Department of Irrigation and Drainage Malaysia +6019 5741574 <a href="mailto:iranuar@water.gov.my">iranuar@water.gov.my</a>
2.		Name Designation Department  Contact no. Email	Ir. Mohd Said bin Dikon Director Division of River Basin Management Department of Irrigation and Drainage Malaysia +6019 2333671 <a href="mailto:mohdsaid.water@1govuc.gov.my">mohdsaid.water@1govuc.gov.my</a>
3.		Name Designation Department  Contact no. Email	Mr. Idris bin Yussof Director Division of Flood Management Department of Irrigation and Drainage Malaysia +6019 2333670 <a href="mailto:idris.water@1govuc.gov.my">idris.water@1govuc.gov.my</a>
4.		Name Designation Department Contact no. Email	Ir. Hj. Shahimi Bin Sharif Director Department of Irrigation and Drainage Kelantan +6019 2616823 <a href="mailto:shahimis@water.gov.my">shahimis@water.gov.my</a>
5.		Name Designation Department  Contact no. Email	Mrs. Norizan binti Abdul Aziz Deputy Director Division of Water Resources Management and Hydrology Department of Irrigation and Drainage Malaysia +6019 2333712 <a href="mailto:norizan_aziz@water.gov.my">norizan_aziz@water.gov.my</a>

## APPENDIX A

### THE 29<sup>TH</sup> MEETING OF MALAYSIA – THAILAND JOINT EVALUATION TEAM (JET) ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT






#### LIST OF MALAYSIAN DELEGATES

6.		Name Designation Department  Contact no. Email	Mr. Abd Khadir bin Abd Aziz Senior Engineer Division of Coastal Zone Management Department of Irrigation and Drainage Malaysia +6012 5121134 <a href="mailto:abdkhadir@water.gov.my">abdkhadir@water.gov.my</a>
7.		Name Designation Department  Contact no. Email	Madam Hazalizah binti Hj.Hamzah Engineer Division of Water Resources Management and Hydrology Department of Irrigation and Drainage Malaysia +6019 7879001 <a href="mailto:hazalizah@water.gov.my">hazalizah@water.gov.my</a>
8.		Name Designation Department  Contact no. Email	Ms. Carine Wong Koh Yin Engineer Division of Coastal Zone Management Department of Irrigation and Drainage Malaysia +6012 2198032 <a href="mailto:carine@water.gov.my">carine@water.gov.my</a>
9.		Name Designation Department  Contact no. Email	Mr. Ahmad Ikhwan bin Abdul Wahid Engineer Division of Coastal Zone Management Department of Irrigation and Drainage Malaysia +6013 6093085 <a href="mailto:ahmadikhwan@water.gov.my">ahmadikhwan@water.gov.my</a>
10.		Name Designation Department  Contact no. Email	Madam Siti Azura binti Mat Daud Engineer Division of Water Resources Management and Hydrology Department of Irrigation and Drainage Malaysia <a href="mailto:sitiazura@water.gov.my">sitiazura@water.gov.my</a>

## APPENDIX A

### THE 29<sup>TH</sup> MEETING OF MALAYSIA – THAILAND JOINT EVALUATION TEAM (JET) ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT

#### SECRETARIAT

1.		Name Designation Department  Contact no. Email	Mrs. A'isah Binti Abdul Malek Engineer Division of Coastal Zone Management Department of Irrigation and Drainage Malaysia +6019 9831407 <a href="mailto:aisah@water.gov.my">aisah@water.gov.my</a>
2.		Name Designation Department  Contact no. Email	Ms. Intirani A/P Suppramaniam Engineer Division of Coastal Zone Management Department of Irrigation and Drainage Malaysia +6012 6141200 <a href="mailto:intirani@water.gov.my">intirani@water.gov.my</a>
3.		Name Designation Department  Contact no. Email	Mr. Mohd. Khairil Annuar bin Mohd. Isa Assistant Engineer Division of Coastal Zone Management Department of Irrigation and Drainage Malaysia +6017 7577746 <a href="mailto:khairil@water.gov.my">khairil@water.gov.my</a>
4.		Name Designation Department  Contact no. Email	Mrs. Noorisah binti Mohd. Isa Assistant Engineer Division of Coastal Zone Management Department of Irrigation and Drainage Malaysia +6019 8208137 <a href="mailto:noorisah@water.gov.my">noorisah@water.gov.my</a>
5.		Name Designation Department  Contact no. Email	Mr. Mohammed Hairey bin Md Salih Assistant Engineer Division of Coastal Zone Management Department of Irrigation and Drainage Malaysia +6019 7026646 <a href="mailto:hairey@water.gov.my">hairey@water.gov.my</a>

## APPENDIX A

### THE 29<sup>TH</sup> MEETING OF MALAYSIA – THAILAND JOINT EVALUATION TEAM (JET) ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT

#### LIST OF THAI DELEGATES

1.		Name Designation Department  Contact no. Email	Mr. Thanar Suwattana Director Bureau of Project Management Royal Irrigation Department Thailand +66 81802 0647 <a href="mailto:suwattana2810@gmail.com">suwattana2810@gmail.com</a>
2.		Name Designation Department  Contact no. Email	Mr. Prinya Kamolsin Expert on Irrigation (Hydraulic Engineering) Bureau of Research and Development Royal Irrigation Department Thailand +66 847005339 <a href="mailto:prinyakamolsin@yahoo.com">prinyakamolsin@yahoo.com</a>
3.		Name Designation Department  Contact no. Email	Mr. Waemamu Waehama Director Golok River Basin Operation and Maintenance Project Regional Irrigation Office 17 Royal Irrigation Department Thailand +667353-8040-1
4.		Name Designation Department  Contact no. Email	Mr. Chalermchai Treenarin Director Narathiwat Provincial Irrigation Project Royal Irrigation Department Thailand +667351-1485 <a href="mailto:clc_treenarin@yahoo.com">clc_treenarin@yahoo.com</a>
5.		Name Designation Department  Contact no. Email	Mr. Chumlarp Tejasen Director Project Planning Division 4 Bureau of Project Management Royal Irrigation Department Thailand +662 241-2680

## APPENDIX A

### THE 29<sup>TH</sup> MEETING OF MALAYSIA – THAILAND JOINT EVALUATION TEAM (JET) ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT

#### LIST OF THAI DELEGATES

6.		Name Designation Department  Contact no. Email	Mr. Kanchadin Srpratoom Director Foreign Project Management and International Affairs Division, Bureau of Project Management Royal Irrigation Department Thailand +662 241 2688
7.		Name Designation Department  Contact no. Email	Mr. Attaporn Wonglimaswat Senior Surveyor Survey and Engineering Bureau Marine Department +66 89896 1921 <a href="mailto:atta6940410@yahoo.com">atta6940410@yahoo.com</a>
8.		Name Designation Department  Contact no. Email	Mr. Attapan Diloksopon Civil Engineer, Professional Level Bureau of Project Management Royal Irrigation Department Thailand +6680 270 9997 <a href="mailto:atdplk@gmail.com">atdplk@gmail.com</a>
9.		Name Designation Department  Contact no. Email	Mr. Piriya Thumyago Foreign Relations Officer Bureau of Project Management Royal Irrigation Department Thailand +6690 527 5545 <a href="mailto:piriya_rid@yahoo.com">piriya_rid@yahoo.com</a>

**THE 29<sup>TH</sup> MEETING OF MALAYSIA – THAILAND  
JOINT EVALUATION TEAM (JET)  
ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT**

**PROPOSED AGENDA**

---

**AGENDA 1: OPENING SESSION**

**AGENDA 2: MATTERS FOR CONSIDERATION**

- 2.1 MONITORING AND EVALUATION OF GOLOK RIVER MOUTH
- 2.2 MAINTENANCE DREDGING OF GOLOK RIVER MOUTH
- 2.3 PROTECTION WORK AT TRANSIT POINT B
- 2.4 REHABILITATION AND PROTECTION WORKS AT GOLOK RIVER MOUTH
- 2.5 MUTUAL CALIBRATION OF RATING CURVE AT CABLEWAY STATION
- 2.6 REAL TIME MONITORING SYSTEM AND THE JOINT WEBSITE FOR GOLOK RIVER BASIN

**AGENDA 3: OTHER MATTERS**

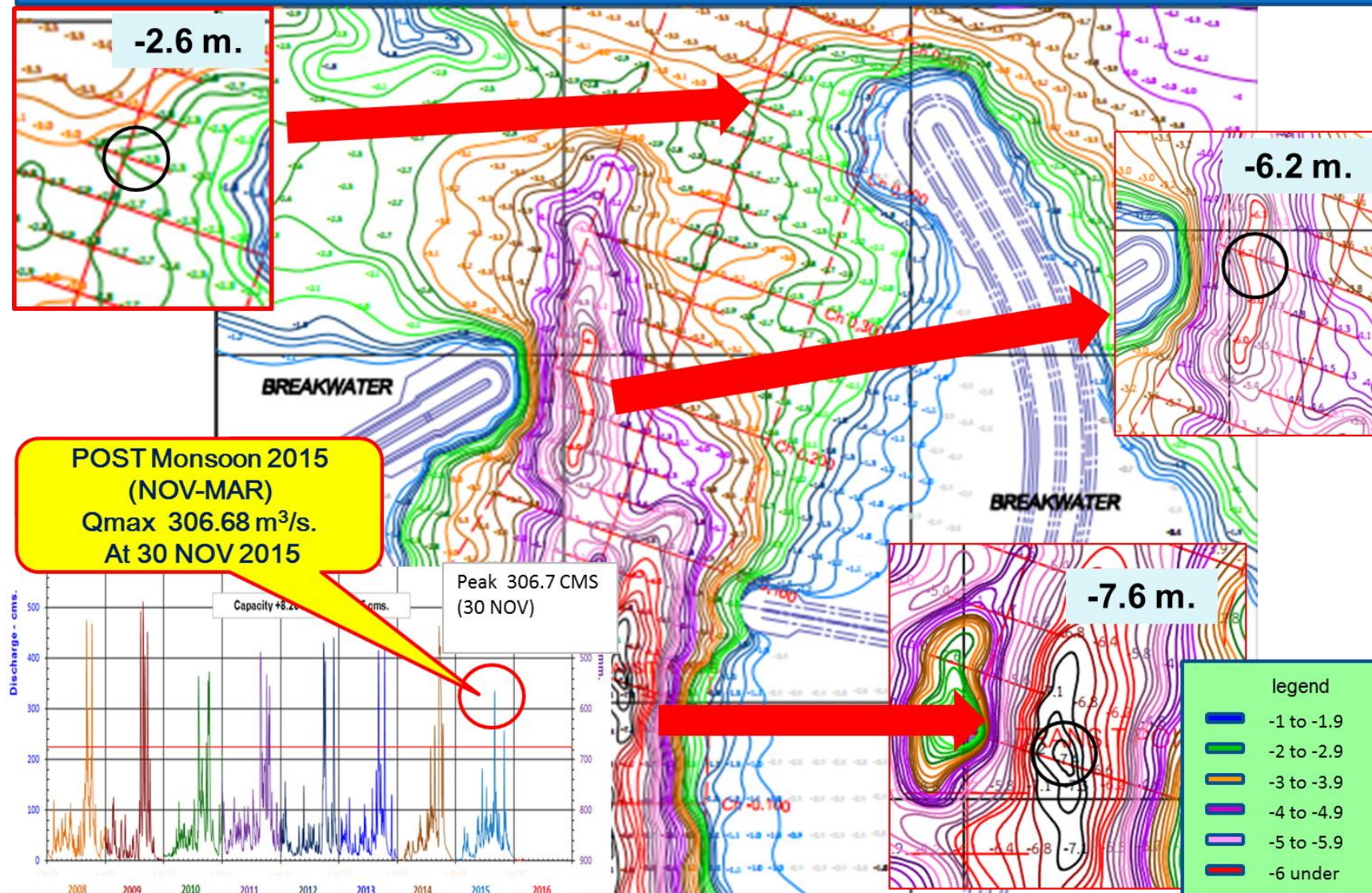
- 3.1 INTEGRATED RIVER BASIN MANAGEMENT (IRBM) PLAN FOR GOLOK RIVER
- 3.2 DATE AND VENUE FOR NEXT MEETING

**AGENDA 4: MATTERS TO BE REFERRED TO JTWG**

**AGENDA 5: ADOPTION OF MINUTES OF MEETING**



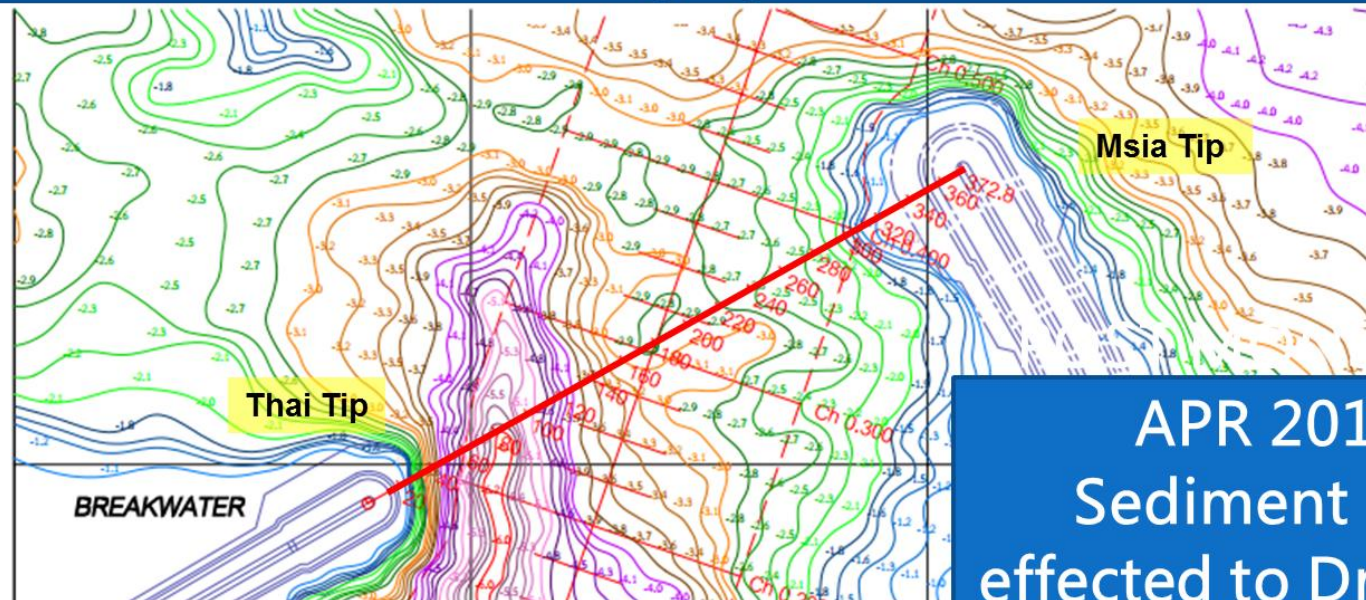
# Post-Monsoon (20-27 APR 2016 THAI)



$Q_{max}$  306.68  $m^3/s$  @ Cableway station 30 NOV 2015; Design bed level: -3m Thai MSL



# Maintenance Dredging of Golok River Mouth

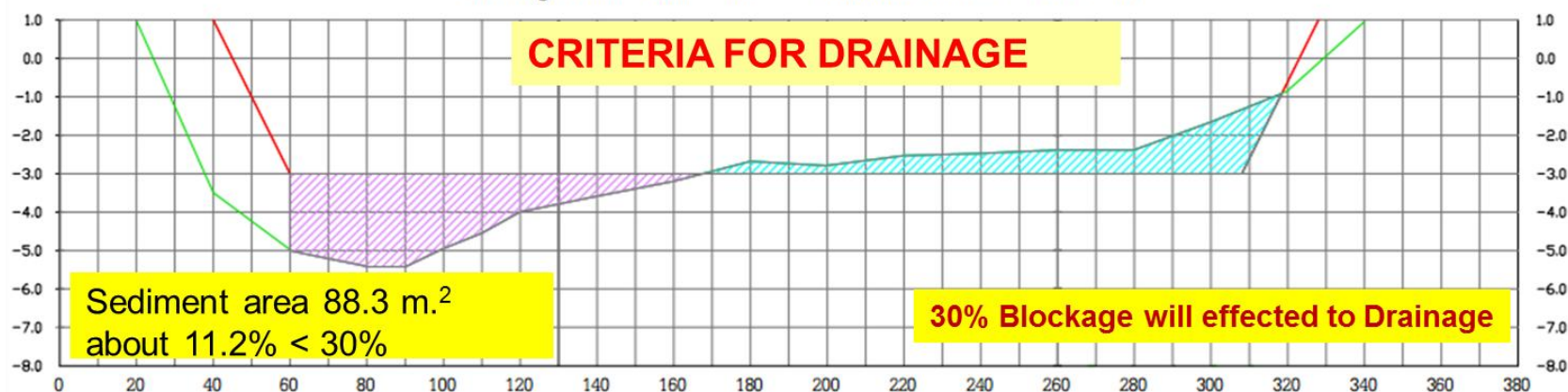


Crosssection between Thai Brake water to Malaysia Brake wa er

Thailand

Cutting Area 88.32 m<sup>2</sup> Erosion Area = 114.9 m<sup>2</sup>

Malaysia



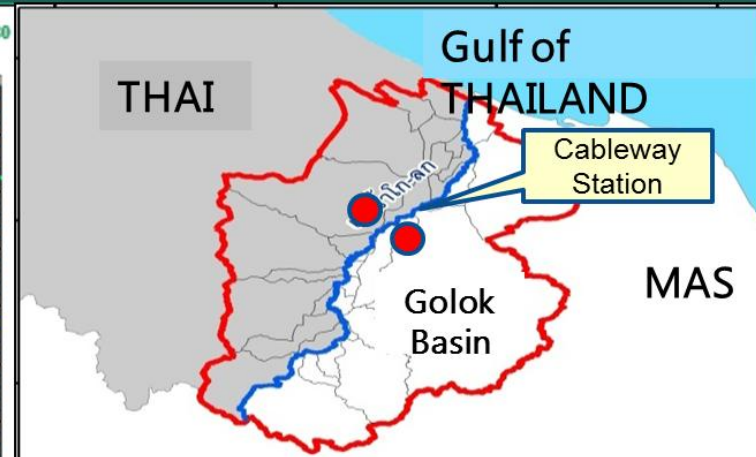
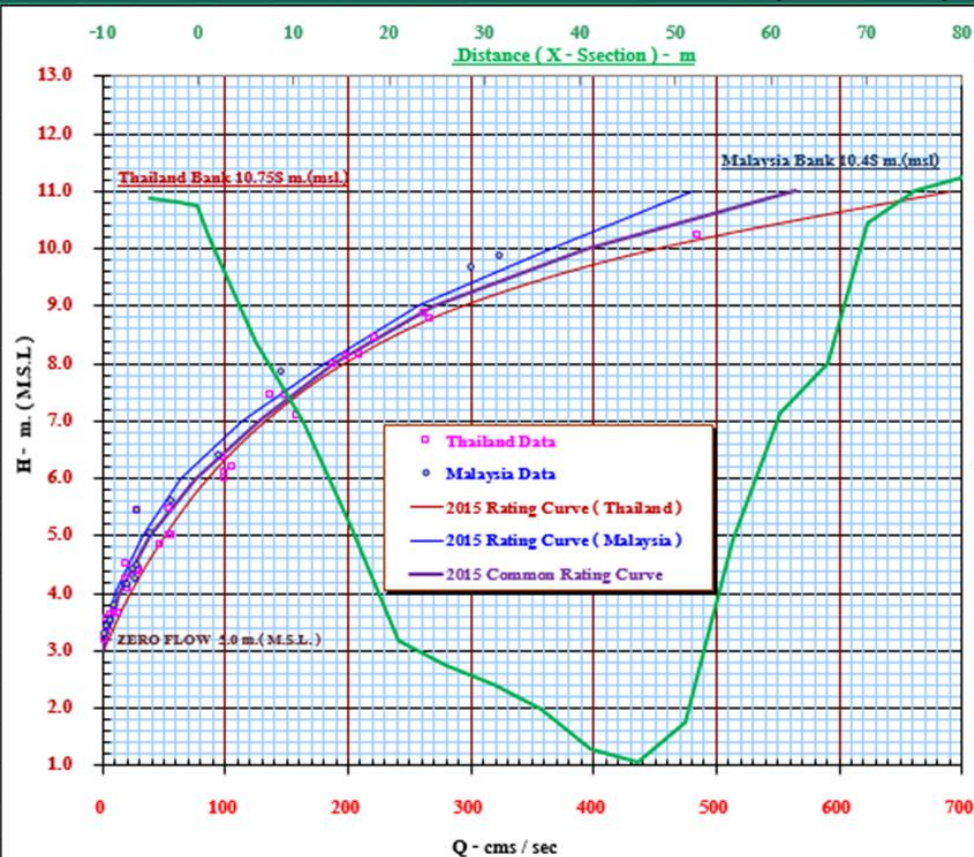
- Input for detailed design

## Detailed design road map (MALAYSIAN side)

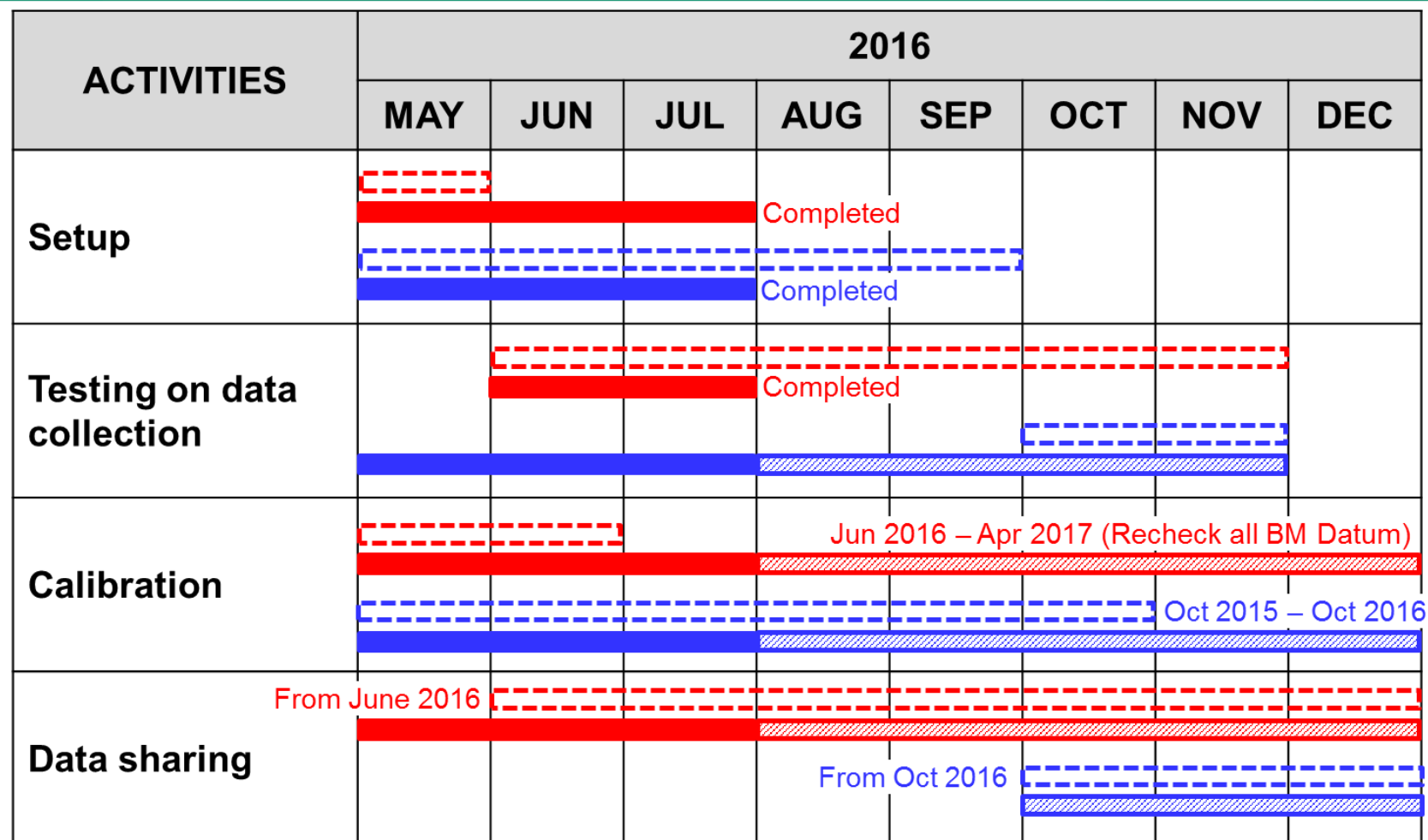
[illegible]






# Rating Curve at Cableway station 2015 (Mutual)






# Progress of new telemetering station



Note:

-  Proposed road map (presented in JSC15, March 2016)
-  Progress (Thailand)
-  Planning (Thailand)

Note:

-  Proposed road map (presented in JSC15, March 2016)
-  Progress (Malaysia)
-  Planning (Malaysia)