

DEPARTMENT OF IRRIGATION  
AND DRAINAGE MALAYSIA

## Minutes of Meeting

# **The 32<sup>nd</sup> Meeting of Thailand – Malaysia Joint Evaluation Team on Golok River Mouth Improvement Project**

**16 – 17 January 2018  
Chiang Rai, Thailand**

**Minutes of Meeting**  
**The 32<sup>nd</sup> Meeting of Thailand - Malaysia Joint Evaluation Team**  
**on The Golok River Mouth Improvement Project**  
**16 – 17 January 2018**  
**Chiang Rai, Thailand**

**AGENDA 1: OPENING ADDRESS**

Mr. Pradab Kladkempetch, the leader of Thai delegates, welcomed the Malaysian delegates to the 32<sup>nd</sup> Meeting of Thailand – Malaysia Joint Evaluation Team (JET) on Golok River Mouth Improvement Project on 16<sup>th</sup> to 17<sup>th</sup> January 2018.

Capt. (R) Dato' Ir. Haji Anuar Bin Haji Yahya, the leader of the Malaysian delegates, expressed his appreciation for the warm welcome and arrangements for the Meeting.

The leader of Thai delegates congratulated the award of Dato' to the leader of Malaysian delegates.

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.

**AGENDA 2: ADOPTION OF AGENDA**

The Meeting agreed to proceed according to the proposed agenda as shown in APPENDIX B.

**AGENDA 3: MATTERS FOR CONSIDERATION**

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

The 2018 pre-monsoon survey was carried out by the Thai side in October 2017, as shown in APPENDIX C. It was observed that no sedimentation area in the navigation channel same as post-monsoon survey, whilst erosion area on the Thai side has increased compared to the post-monsoon survey (March 2017).

The sedimentation volume (where bed level is shallower than -3.0m MSL within the navigation channel) have decreased compared to the condition in during post-monsoon (March 2017) whereby no sedimentation was observed inside the navigation channel.

The maximum bed level at the river mouth was observed to be -3.1m MSL, located at the navigation channel; the observed bed level was deeper than previous survey which was -3.0m MSL (March 2017).

The deepest bed level around tip of Thai breakwater is observed to be -5.6 m MSL which may lead to instability of Thai breakwater. This level is deeper compared to previous survey in March 2017.

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

As agreed in the JET 25, JTWG 32 and JSC 14, 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 pre-monsoon survey (October 2017) as shown in APPENDIX D showed that:

- (a) The cross section of the river mouth is fully open (0% blockage).
- (b) The shallowest sea bed level at the navigation channel is at -3.1m MSL, which is deeper than the dredging criteria (-2.0m MSL).
- (c) Maintenance dredging is not required based on the pre-monsoon survey (March 2017)

The Meeting agreed that based on the results of the post-monsoon (March 2017) and pre-monsoon (October 2017) surveys, the river mouth was not affected by

sedimentation since it did not meet the dredging criteria. Hence, there is no need for the maintenance dredging of Golok River Mouth at the time being.

The meeting agreed to form a committee to discuss regarding method of measurement for river discharge at Golok River Mouth. Both sides agreed to share the discharge value for river tributaries of Golok River in order to predict the river discharge at the river mouth.

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

The Thai side presented the Detail Design of Transit Point B protection work hexagonal shape as shown in APPENDIX E.

The Malaysian side commented that there is difference on the scouring protection level of gabion mattress between the detailed design (+0.00 m MSL) and 2D Physical Model (-3.00 m MSL).

The Thai side agreed to re-design the scouring protection level of transit point B at -3.00 m MSL and the Thai side will present the new design on the next JET meeting.

### **3.4 Rehabilitation and Protection Works at Golok River Mouth**

The Thai side presented the 3D physical model result based on the comments during the Joint Technical Meeting for Golok River Mouth Physical Modelling Work No.3 held on 6 July 2017 as shown in APPENDIX F.

The Malaysian side commented that the wave condition readings need to be calibrated and verified with previous study results. Both sides agreed that the calibration and verification results to be discussed separately by end of March 2018. The final result of the 3D physical modelling works to be presented in the next JET meeting.

The Thai side reported that the approval of the Environmental Impact Assessment (EIA) study is expected to be obtained by January 2019.

The Malaysian side informed that a consultant for detailed design of additional dyke has been appointed in September 2017 and the detailed design period will take ten (10) months.

The rehabilitation works for Golok River Mouth shall start in April 2019.

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

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

In 2017, ten (10) mutual gauging measurements were done monthly except in May and October. The mutual gauging measurements are as shown in APPENDIX H.

However, gauging measurements were also done using current meter by Malaysian side except for the month of June, July, November and December.

The Meeting agreed to present the 2017 rating curve in the next JET meeting.

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

#### New Telemetry stations and joint website

The Thai side informed that the data sharing of six (6) new telemetry stations are under progress. The new expected completion date is December 2018. The meeting agreed that data will be shared when both sides are ready. The revised schedule for new telemetering stations is as shown in APPENDIX J.

## **AGENDA 4: OTHER MATTERS**

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

The Malaysian side reported that:-

- (a) Malaysian side working committee is still working on the amendments to the principal Agreement. The first draft on the amendments to the principal Agreement is not ready to be discussed in this JET meeting.

- (b) The Meeting agreed that the first draft on the amendments to the principal Agreement will be presented in the 33<sup>rd</sup> JET meeting.

#### **4.2 Date and venue for next JET meeting**

The meeting proposed the date and venue for the next JET meeting is as follows:

Date: April / May 2018  
Venue: Langkawi, Malaysia.

### **AGENDA 5: MATTERS TO BE REFERRED TO THE JTWG**

#### **Matters for Consideration**

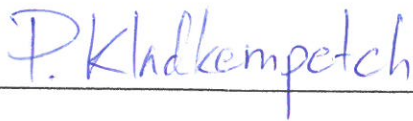
1. Report of Monitoring and Evaluation of Golok River Mouth
2. Maintenance Dredging of Golok River Mouth
3. Protection Work at Transit Point B
4. Rehabilitation and Protection Works at Golok River Mouth
5. Mutual Calibration of Rating Curve at Cableway Station
6. Real Time Monitoring System and the Joint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

#### **Other Matters**

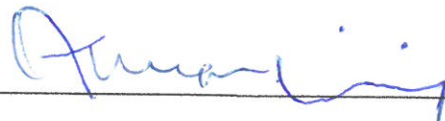
1. Integrated River Basin Management (IRBM) Plan for Golok River

## **AGENDA 6: ADOPTION OF MINUTES OF THE MEETING**

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



(Mr. Pradab Kladkempetch)  
Co-Chairman  
Joint Evaluation Team, Thailand



(Capt. (R) Dato' Ir. Haji Anuar Bin Haji Yahya)  
Co-Chairman  
Joint Evaluation Team, Malaysia

## APPENDIX A

### THE 32<sup>ND</sup> MEETING OF THAILAND - MALAYSIA JOINT EVALUATION TEAM (JET) ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT

#### LIST OF THAI DELEGATES

1.		Name Designation Department  Contact no. Email	Mr. Pradab Kladkempetch Director Bureau of Project Management Royal Irrigation Department Thailand +668 4700 0541 <a href="mailto:pradab_kla@hotmail.com">pradab_kla@hotmail.com</a>
2.		Name Designation Department Contact no. Email	Mr. Prinya Kamolsin Expert on Irrigation (Hydraulic Engineering) Royal Irrigation Department +668 4700 5339 <a href="mailto:prinyakamolsin@yahoo.com">prinyakamolsin@yahoo.com</a>
3.		Name Designation Department  Contact no. Email	Mr. Det Lekwichai Director Narathiwat Provincial Irrigation Project Royal Irrigation Department Phone : 667351-1485 Email : kundet40@hotmail.com
4.		Name Designation Department  Contact no. Email	Mr. Chaiwut Wattanakarn Director Hydrology Irrigation Center (Southern Region), Royal Irrigation Department +667 461 1679 <a href="mailto:chaiwutrid@gmail.com">chaiwutrid@gmail.com</a>
5.		Name Designation Department  Contact no.	Mr. Arthon Suttigarn Director Project Planning Division 4 Bureau of Project Management Royal Irrigation Department Thailand +662 241 2680



## APPENDIX A

### THE 32<sup>ND</sup> MEETING OF THAILAND - MALAYSIA JOINT EVALUATION TEAM (JET) ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT

#### LIST OF THAI DELEGATES

6.		Name Designation Department  Contact no.	Mr. Kanchadin Srpratoon Director, Foreign Project Management and International Affairs Division, Bureau of Project Management Royal Irrigation Department +662 241 2688
7.		Name Designation Department  Contact no.	Mr. Abdultoleb Hemhoh Chief Operation and Maintenance Branch 3, Golok River Basin Operation and Maintenance Project Regional Irrigation Office 17 Royal Irrigation Department +667 353 8040-1
6.		Name Designation Department  Contact no.	Mr. Tawat Seenual Survey Engineer Survey and Chart Division Marine Department +668 1597 5487
9.		Name Designation Department  Contact no. Email	Mr. Attapan Diloksopon Civil Engineer, Professional Level Bureau of Project Management Royal Irrigation Department +668 0270 9997 <a href="mailto:atdplk@gmail.com">atdplk@gmail.com</a>
10.		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>

## APPENDIX A

### THE 32<sup>ND</sup> MEETING OF THAILAND - MALAYSIA JOINT EVALUATION TEAM (JET) ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT

#### LIST OF THAI DELEGATES

11.		Name Designation Department  Contact no. Email	Mrs. Araya Malai Foreign Relation Officer, Practitioner Level Bureau of Project Management Royal Irrigation Department Phone: +662 241 2363 Email: taraya2513@gmail.com
12.		Name Designation Department  Contact no. Email	Ms. Piyachanok Isro Foreign Relation Officer, Practitioner Level Bureau of Project Management Royal Irrigation Department Phone: +662 241 2363 Email: prettymink@gmail.com
13.		Name Designation Department  Contact no. Email	Ms. Latan Chaipreukkul Foreign Relation Officer, Practitioner Level Bureau of Project Management Royal Irrigation Department Phone: +662 241 2363 Email: latan.c.c@gmail.com

## APPENDIX A

### THE 32<sup>ND</sup> MEETING OF THAILAND - MALAYSIA JOINT EVALUATION TEAM (JET) ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT

#### LIST OF MALAYSIAN DELEGATES

1.		Name Designation Department  Contact no. Email	Capt. (R) Ir. Haji Anuar Bin Haji Yahya Director Division of Coastal Zone Management Department of Irrigation and Drainage Malaysia +6019 5514343 <a href="mailto:iranuar@water.gov.my">iranuar@water.gov.my</a>
2.		Name Designation Department  Contact no. Email	Ir. Roslina binti Yusop Senior Engineer Division of Water Resources Management and Hydrology Department of Irrigation and Drainage Malaysia +6019 3555149 <a href="mailto:lina@water.gov.my">lina@water.gov.my</a>
3.		Name Designation Department Contact no. Email	Mrs. Marziah binti Mohamad Senior Engineer Department of Irrigation and Drainage Kelantan +6019 9150366 <a href="mailto:marziah@water.gov.my">marziah@water.gov.my</a>
4.		Name Designation Department Contact no. Email	Mr. Abdullah bin Awang Engineer Department of Irrigation and Drainage Kelantan +6012 9539506 <a href="mailto:abdullah_a@water.gov.my">abdullah_a@water.gov.my</a>
5.		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>

## **APPENDIX B**

# **THE 32<sup>ND</sup> MEETING OF THAILAND - MALAYSIA JOINT EVALUATION TEAM (JET) ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT PROPOSED AGENDA**

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### **AGENDA 1: OPENING SESSION**

### **AGENDA 2: ADOPTION OF AGENDA**

### **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 WEBSITE FOR GOLOK RIVER BASIN

### **AGENDA 4: OTHER MATTERS**

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

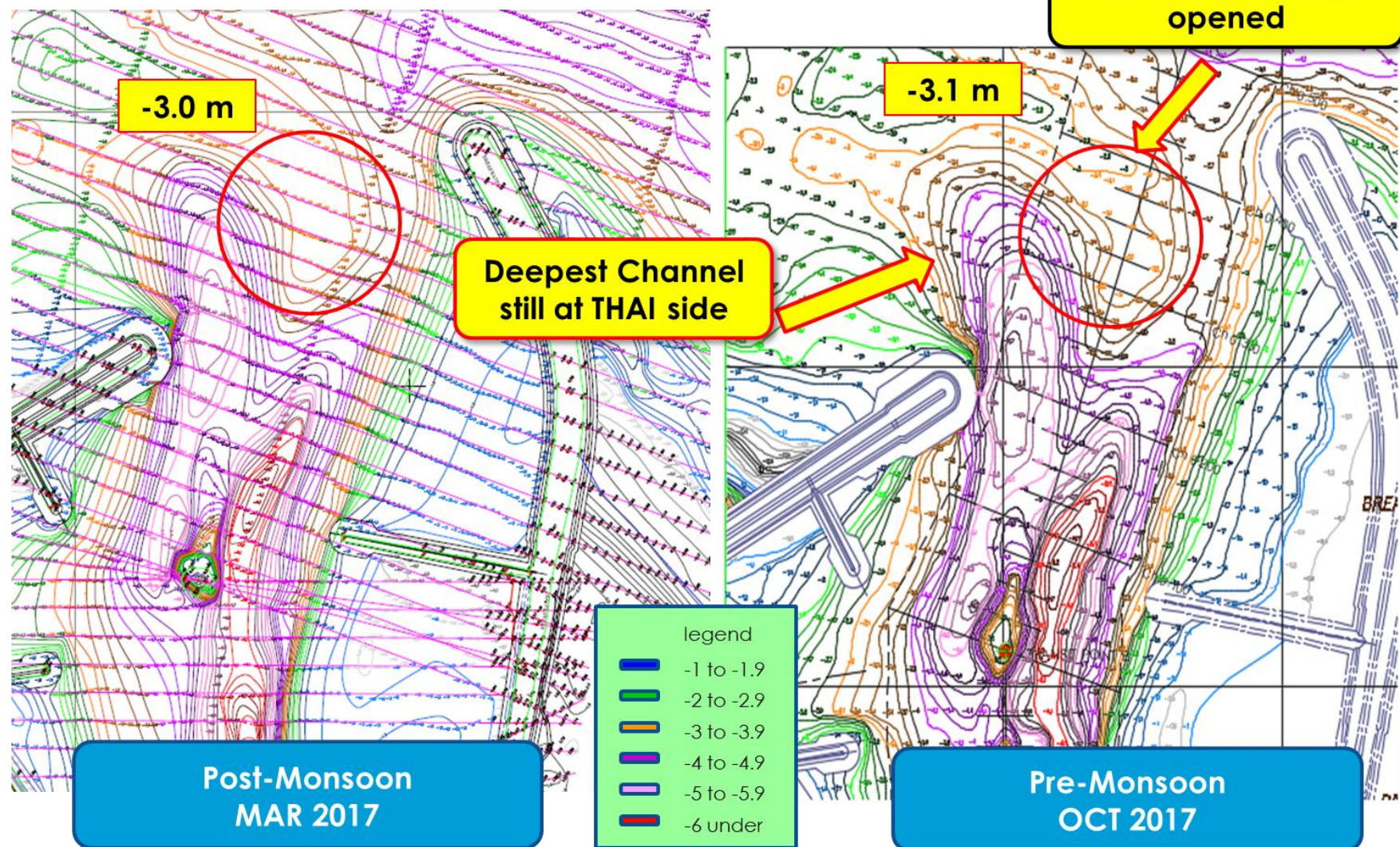
### **AGENDA 5: MATTERS TO BE REFERRED TO JTWG**

### **AGENDA 6: ADOPTION OF MINUTES OF MEETING**



# Monitoring and Evaluation of Golok River Mouth

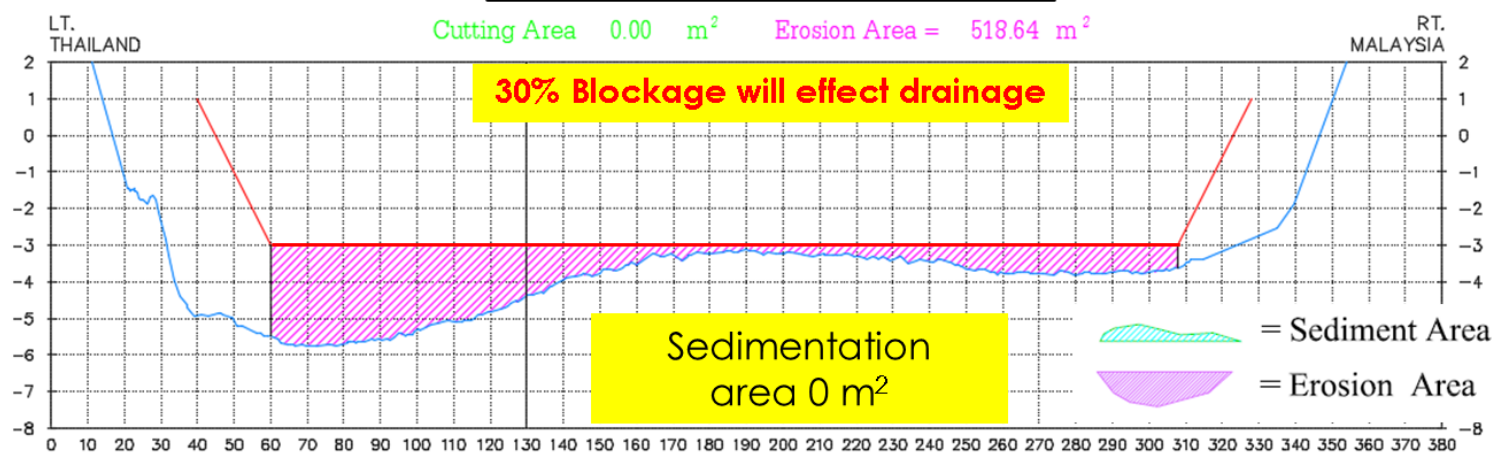
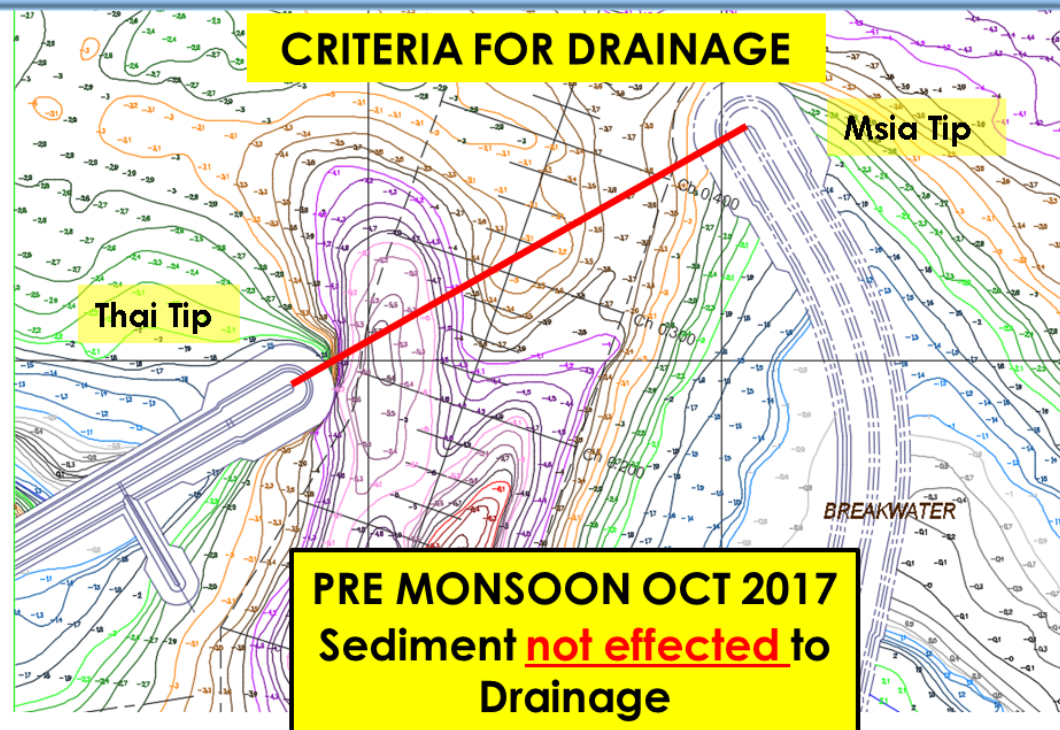
The sea bed level is decreased from -3.0 m MSL to -3.1 m MSL



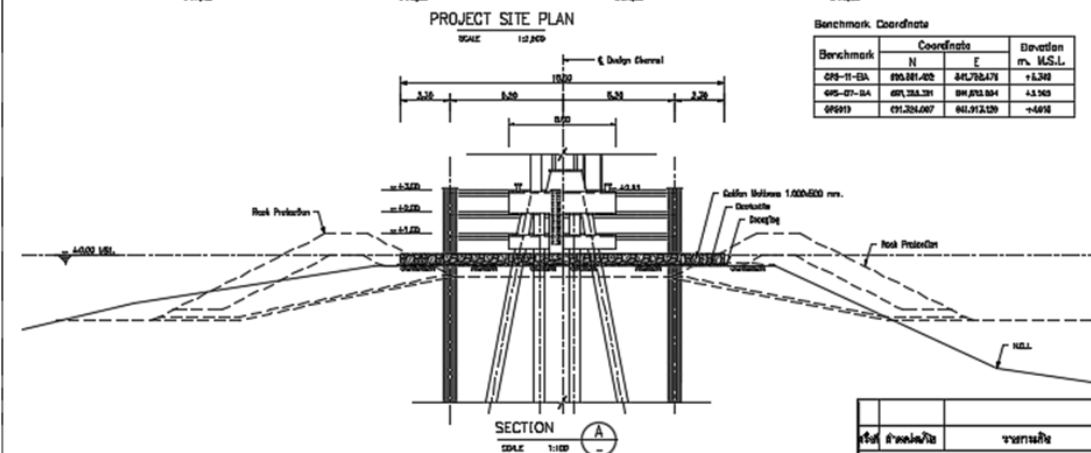
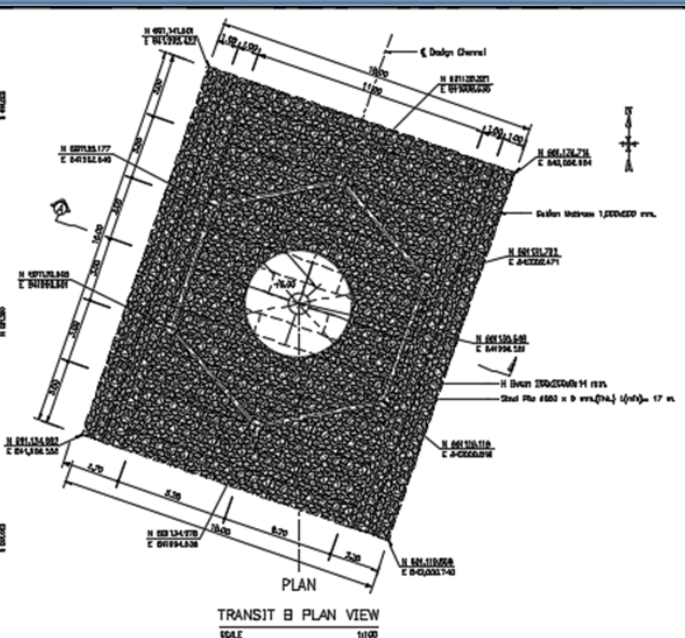
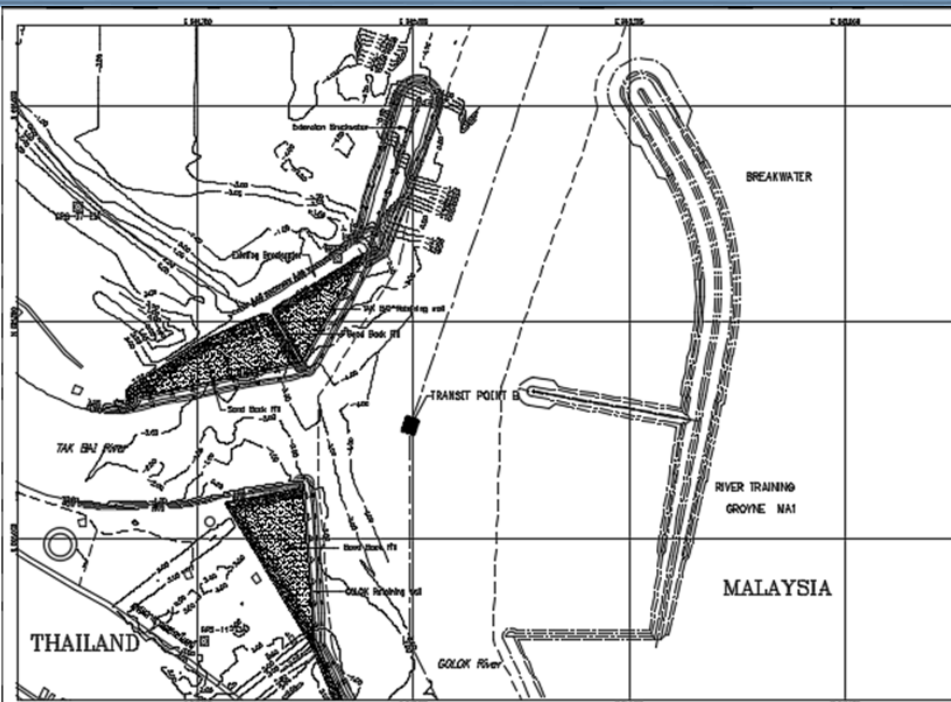
Qmax 152 m<sup>3</sup>/s @ Cableway station 25 MAY 2017; Design bed level: -3m Thai MSL



# Maintenance Dredging of Golok River Mouth



## Detailed Design for Protection Work at Transit Point B



Benchmark Coordinate

Benchmark	N	E	Deviation m. M.S.L.
010-11-01A	100,881.402	84,732.476	+1.340
010-07-01A	80,333.301	80,833.804	+1.563
010113	101,201.067	84,912.120	+1.618

### หมายเหตุ

1. ปรึกษากรมการโยธาธิการและผังเมือง
2. ปรึกษากรมการโยธาธิการ
3. ปรึกษากรมการโยธาธิการและผังเมือง
4. ปรึกษากรมการโยธาธิการและผังเมือง
5. ปรึกษากรมการโยธาธิการและผังเมือง
6. ปรึกษากรมการโยธาธิการและผังเมือง
7. ปรึกษากรมการโยธาธิการและผังเมือง
8. ปรึกษากรมการโยธาธิการและผังเมือง

0 2 4 6 8 10 m  
GRAPHIC SCALE AT 1:250  
0 20 40 60 80 100 m  
GRAPHIC SCALE AT 1:500

กรมโยธาธิการ  
โครงการปรับปรุงปากแม่น้ำโก-ลก  
จังหวัดนราธิวาส  
รายละเอียด TRANSIT B  
แบบ มาตรฐาน

ผู้จัดทำ : วิศวกรโยธา ตรี จ.กิตติ  
ผู้ตรวจสอบ : วิศวกรโยธา ตรี จ.กิตติ

ตำแหน่ง	ชื่อ	ตำแหน่ง	ชื่อ
ผู้จัดทำ	วิศวกรโยธา ตรี จ.กิตติ	ผู้ตรวจสอบ	วิศวกรโยธา ตรี จ.กิตติ
ผู้ควบคุม	วิศวกรโยธา ตรี จ.กิตติ	ผู้ตรวจสอบ	วิศวกรโยธา ตรี จ.กิตติ
ผู้ควบคุม	วิศวกรโยธา ตรี จ.กิตติ	ผู้ตรวจสอบ	วิศวกรโยธา ตรี จ.กิตติ

วันที่	ชื่อคนเขียน	รายการแก้ไข	วันที่	ชื่อคนเขียน	รายการแก้ไข
10/01/2558	10/01/2558	10/01/2558	10/01/2558	10/01/2558	10/01/2558

**Test 1: Wave Transformation from deepwater zone to coastal zone and river mouth****Sea water level 0.0m MSL**

Stroke of Wave Generator (cm)	Prototype Wave Height (m)			
	Deepwater (sea bed -32.0m MSL)	Point 1 (sea bed -5.1m MSL)	Point 2 (sea bed -4.0m MSL)	Point 1 (river mouth)
16	2.80	3.28	2.96	2.88
18	2.96	2.96	2.96	2.96
20	3.60	3.60	3.60	4.48
22	4.24	3.52	3.52	3.84

Note: 100yr return period, deepwater wave height 3.82m

100yr + 10% return period, deepwater wave height 4.20m

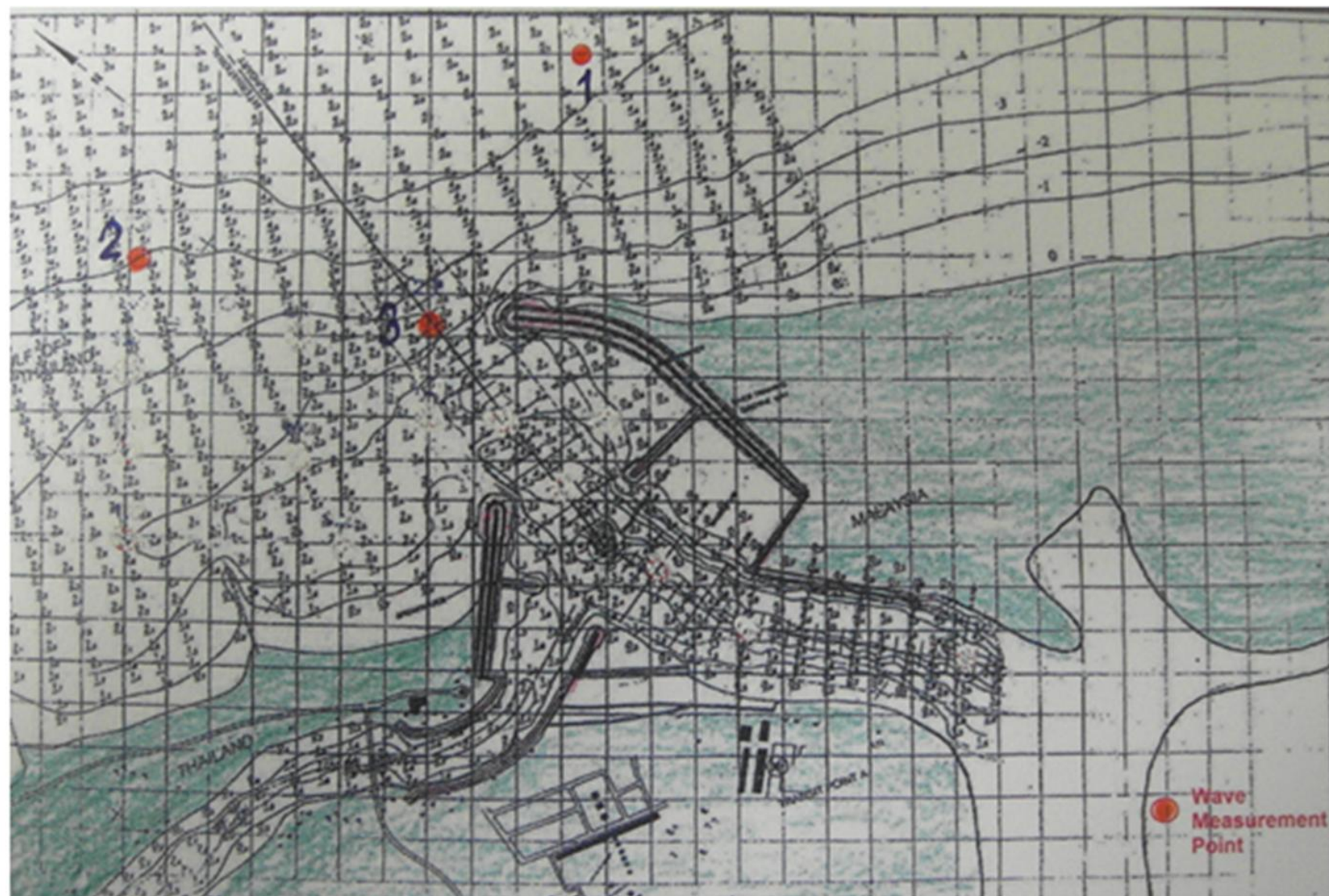
**Test 2: Wave Transformation from deepwater zone to coastal zone and river mouth****Sea water level +1.0m MSL**

Stroke of Wave Generator (cm)	Prototype Wave Height (m)			
	Deepwater (sea bed -32.0m MSL)	Point 1 (sea bed -5.1m MSL)	Point 2 (sea bed -4.0m MSL)	Point 1 (river mouth)
14	2.72	2.48	2.08	2.32
16	3.68	4.40	4.00	3.68
18	3.68	4.40	4.00	4.32
20	4.32	4.48	4.08	4.24
22	4.72	4.32	5.28	5.44

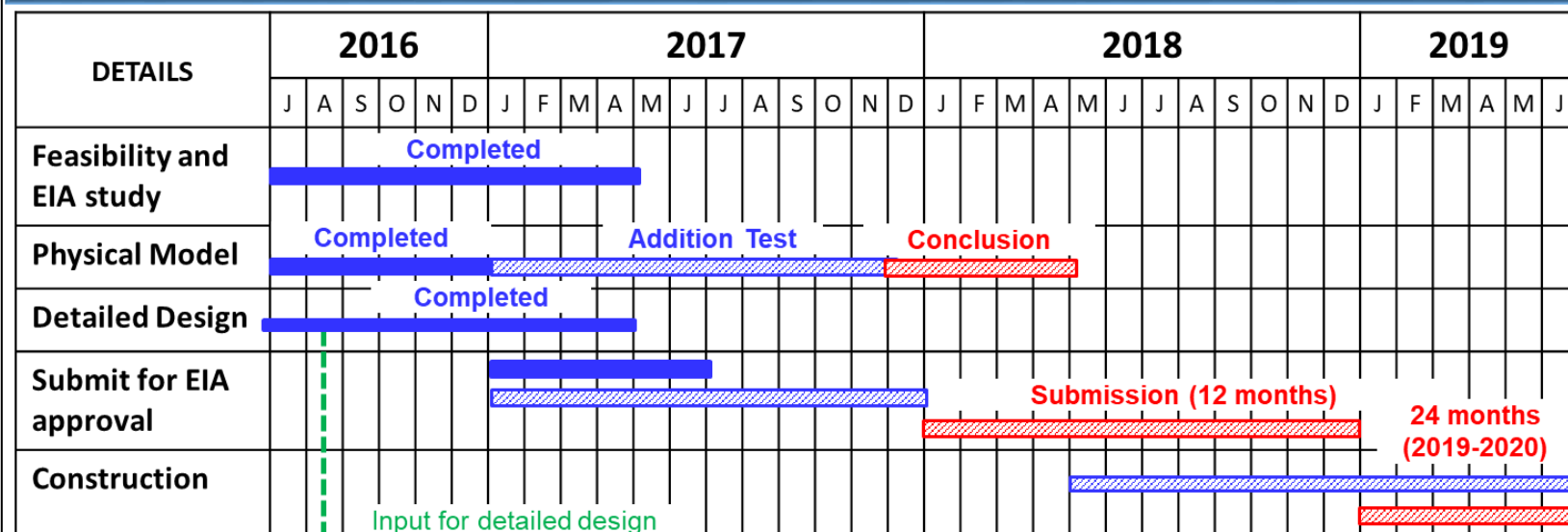
Note: 100yr return period, deepwater wave height 3.82m

100yr + 10% return period, deepwater wave height 4.20m

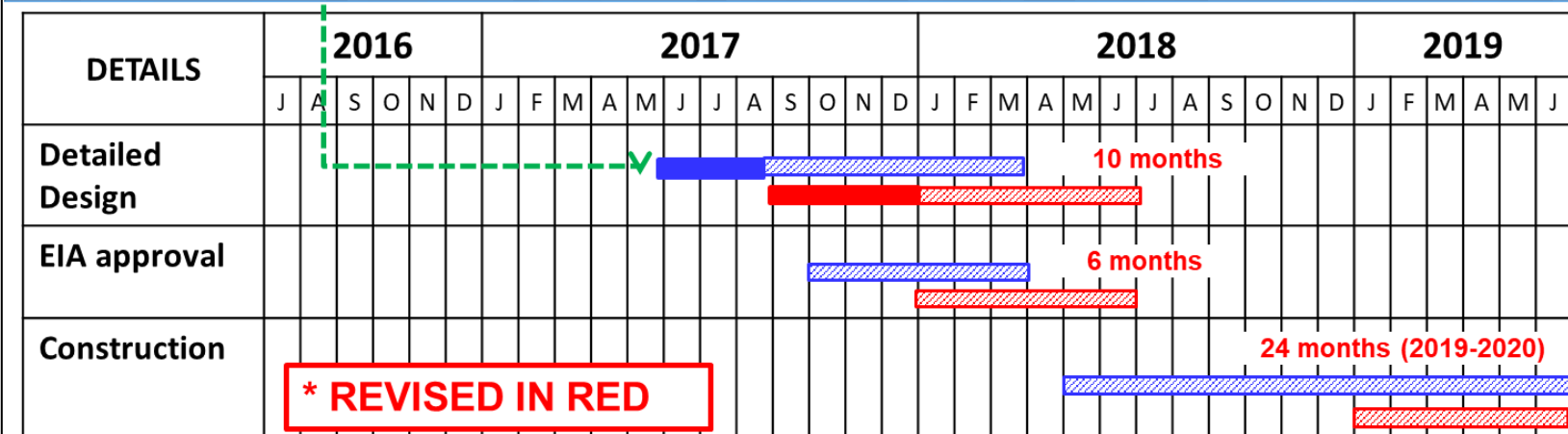




## EIA road map (THAI)



## Detailed design road map (MALAYSIAN side)











## Agenda 3.5:


### Mutual Calibration of Rating Curve at Cableway Station

Mutual Gauging 2017						
Date	Level (m)	Width (m)	Area, A (m <sup>2</sup> )	Velocity, V (m/s)	Discharge, Q (m <sup>3</sup> /s)	Remarks
25 January 2017	8.990	64.60	288.012	0.945	272.210	M 9
21 February 2017	4.700	39.78	98.931	0.453	44.817	M 9
30 March 2017	4.190	34.74	73.497	0.385	28.305	M 9
20 April 2017	4.460	36.18	84.017	0.477	40.079	M 9
21 June 2017	4.190	37.84	73.690	0.384	28.266	M 9
20 July 2017	4.630	37.77	90.944	0.428	38.896	M 9
24 August 2017	4.930	38.39	104.912	0.503	52.725	M 9
18 September 2017	5.810	40.63	140.038	0.645	90.300	M 9
30 November 2017	10.100	65.09	360.100	1.165	419.608	M 9
27 December 2017	4.680	37.84	96.013	0.444	42.608	M 9


# Progress of New Telemetry Station

ACTIVITIES	2016				2017				2018				2019			
	Q3	Q4			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	SEP	OCT	NOV	DEC	J - M	A - J	J - S	O - D	J - M	A - J	J - S	O - D	J - M	A - J	J - S	O - D
Setup	Completed  Completed 															
Testing on data collection	Completed 		Completed 													
Calibration			Completed 													
				Completed 												
Data sharing									 							

Note:

 Progress (Thailand)  
 Planning (Thailand)

Note:

 Progress (Malaysia)  
 Planning (Malaysia)