

**DEPARTMENT OF IRRIGATION
AND DRAINAGE MALAYSIA**

Minutes of Meeting

The 37th Meeting of Thailand – Malaysia Joint Technical Working Group on Golok River Mouth Improvement Project

**4 – 5 March 2020
Chiang Mai, Thailand**

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AGENDA 1: OPENING ADDRESS

Mr. Chayan Muangsong, Executive Advisor on Civil Engineering (Control and Construction) for Deputy Director General for Engineering, Royal Irrigation Department of Thailand, the leader of the THAI delegates welcomed the Malaysian delegates to the 37th Meeting of Thailand – Malaysia Joint Technical Working Group (JTWG) on the Golok River Mouth Improvement Project. He also congratulated Dato' Ir. Hj. Nor Hisham bin Mohd. Ghazali upon his appointment as Director General, Department of Irrigation and Drainage Malaysia.

Dato' Ir. Hj. Nor Hisham bin Mohd. Ghazali, Director General, Department of Irrigation and Drainage Malaysia, the leader of the Malaysian delegates expressed his appreciation for the warm welcome and arrangements for the Meeting.

Both teams introduced their delegates and the list of delegates as shown in **APPENDIX A**. The Meeting adopted the agenda as shown in **APPENDIX B**.

AGENDA 2: MATTERS FOR INFORMATION

2.1 Report on Monitoring and Evaluation of Golok River Mouth

Reported by JET

The THAI team carried out the pre monsoon survey in October 2019 and the result showed that the sea bed level has increased from -3.1m MSL (Post Monsoon in April 2018) to -3.0m MSL. The sea bed level at the tips of THAI Breakwater also increased from -5.2m to -4.4m MSL. Meanwhile, the sea bed level at Transit Point B deepened from -6.1m to -6.3m MSL, as shown in **APPENDIX C**.

The THAI team reviewed the 2019 pre-monsoon survey and conclude that no sedimentation has occurred at the river mouth. The road-map for bathymetry survey plan for year 2020 until 2021 was then presented and accepted by both sides.

Referring to JSC 16th meeting, both teams have agreed that JET forms a task force to determine the method of measurement for river discharge and to finalise all hydrological matters regarding the Golok River and its tributaries. The team is led by a hydrologist from both teams and the team members are shown in **APPENDIX D**.

The meeting was informed that 1st task force meeting was conducted on 16th September 2019 in Langkawi, Malaysia. The task force team has proposed the objective, scope of study and timeline in order to determine the method of measurement for river discharge at the river mouth.

Discussion by JTWG

The Meeting acknowledged that based on the pre monsoon 2019 survey shows that the river mouth is already stable from October 2016 until October 2019

The meeting was also informed that the tolerance of survey work is about $\pm 0.10\text{m}$.

The Meeting acknowledge the task force team has been formed. The objective, scope of work and timeline is shown in **APPENDIX E**.

2.2 Maintenance Dredging of Golok River Mouth

Criteria for Maintenance Dredging

As agreed in the JET 25, JTWG 32 and JSC 14, the maintenance dredging is required based on the following criteria:

- i. When the cross section area of the river mouth between Thailand and Malaysia breakwater tip is blocked up to 30% (based on THAI study); or
- ii. When the bed level of the river mouth is at -2.0 m MSL or shallower (based on Malaysian study);

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

Reported by JET

The pre-monsoon survey (Oct 2019) as shown in **APPENDIX F** showed that:

- (a) The cross section of the river mouth is fully open.
- (b) The shallowest sea bed level at the navigation channel is at -3.0 m MSL, which is deeper than the dredging criteria (-2.0 m MSL).
- (c) Erosion has occurred at THAI breakwater where the bed level is now about -4.4m MSL. The eroded level is now at -4.4 compared to the design level of -3.0m MSL.

Discussion by JTWG

The Meeting agreed that Maintenance dredging is not required based on the pre-monsoon survey (October 2019)

2.3 Rehabilitation and Protection Works at Golok River Mouth

Reported by JET

The THAI team informed that the EIA approval is in progress and expected to be obtained in the middle of 2020.

The THAI team presented the revised implementation schedule as shown in **APPENDIX G**.

The Malaysian team informed that the detailed design of additional dyke was completed in October 2018, the EIA approval obtained in March 2019 and the budget has been approved by government. To maintain the hydraulic stability, both constructions should begin at the same time.

Discussion by JTWG

The meeting acknowledges the progress of EIA approval for THAI side and the revised implement schedule.

The Malaysian team will write officially regarding the schedule of the construction work and both sides should start in 2nd quarter of 2021.

2.4 Mutual Calibration of Rating Curve at Cableway Station

Reported by JET

The eighteen (18) gauging have been done from January until December 2019, except on September and October was done only by the THAI team. Meanwhile, in December both teams conducted gauging separately due to the flood problem in Malaysia. The maximum discharge recorded was 457.918 m³/s on 19 December 2019.

The 2018 rating curve, have been done by both teams, the Malaysian team developed the rating curve by using two (2) years mutual gauging data (2017 and 2018). And the THAI team developed the rating curve using one (1) year gauging data (2018). The rating curve was similar. For flood mitigation purpose, the meeting agreed to adopt Malaysian rating curve since the value is slightly higher.

The JET meeting agreed for the next rating curve, both teams should use one (1) engineering cross section and one (1) year mutual gauging data for one (1) rating curve. Any deviation from this agreed method shall be discussed and approved by committee.

Discussion by JTWG

The Meeting acknowledged that:

- i. The need to continue mutual gauging measurements at Golok Cableway Station;
- ii. Future rating curves, should be based on one (1) engineering cross section and one (1) year mutual gauging data.

2.5 Real Time Monitoring System and the Joint Websites for Golok River Basin

Reported by JET

The meeting was informed that the six (6) new telemetry stations on Thailand side and three (3) new telemetry stations on Malaysia side were completed and all data has been shared on the joint website since March 2019.

Discussion by JTWG

The meeting acknowledged the nine (9) new telemetry station was completed and data has been share since March 2019

The meeting acknowledged that the fifteen (15) telemetry hydrological data has been shared on the Golok Joint Website (<http://h2o.water.gov.my>)

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

Reported by JET

The Meeting was informed that JSC meeting acknowledged:

- i. The new Memorandum of Understanding (MOU) between the Government of Malaysia and the Government of the Kingdom of Thailand in the field of Integrated River Basin Management between two countries has been drafted by Malaysian team;
- ii. The draft MOU has been submitted to THAI team during the 16th Joint Steering Committee Meeting for review and further action.
- iii. The JET Meeting acknowledges that the draft MoU has been received by the THAI team for review and further action.

Discussion by JTWG

The Meeting was informed that:

- i. MOAC will add the additional member from Office of the National Water Resources (ONWR) into the JSC committee.
- ii. The Malaysian team has proposed to have a separate bilateral meeting to discuss further on IRBM matters.

AGENDA 3: MATTERS FOR CONSIDERATION

3.1 Protection Work at Transit Point B

Refer to JSC 16th Meeting that:

- i. The Meeting was informed that the Malaysian team has received the report of the design of protection work at Transit Point B from THAI team. The report is currently being reviewed by Malaysian team.
- ii. The Malaysian team observed that the proposed protection works involve new specifications and components which need to be further deliberated since it is not in line with the provisions in the 1997 Agreement. Hence, Malaysia proposed that a new agreement to be drafted and negotiated between both team.

- iii. The THAI team has their opinion that the 1997 Agreement includes the proposed protection works which is stated as protection works to transit point B under ANNEX 1 Paragraph 3.0 (b) of the 1997 Agreement.
- iv. The THAI team proposed that the Supplementary Agreement be prepared in line with Article 9 of 1997 Agreement.
- v. The Meeting agreed that JET and JTWG will discuss further on the matters and report in the next JSC.

Refer to Minutes of JET-35th (SEP 2019)

The Malaysian team proposes to classify the works to be done as an upgrading of the existing facility of Transit Point B. This matter will be discussed further with the Malaysian legal adviser, and will be reported in the next JTWG meeting

Discussion by JTWG

The meeting was informed that the proposed protection works at Transit Point B has been designed by the THAI team.

The Malaysian team agree on the proposed protection works and request THAI team to consider adding a landing point or jetty for maintenance works for Transit Point B. The THAI team agree to consider the matters and will be present in the next JET meeting.

Details of the supplementary agreement will be discussed further at the next JTWG meeting.

AGENDA 4: OTHER MATTERS

4.1 Flooding Problem in Golok River Basin

The Malaysian team has been informed that Tumpat district in Kelantan suffered severe flooding on 2nd December 2019 which lasted for 2 weeks as shown in **APPENDIX H**. THAI team also informed that they also experienced severe flooding on Sungai Kolok and Tak Bai district.

Malaysian team informed that they have initiated a flood bund project and this project is now at the design stage.

Malaysian team request for data sharing regarding flood bund level by both side. THAI team informed that Narathiwat province will call for a meeting with relevant agencies and the outcome will be discussed further at the next JTWG meeting.

4.2 Date and venue for the next JTWG Meeting

The meeting agreed to convene the 38th JTWG Meeting is as follows:

Host	: Malaysia
Date	: Sept/Oct 2020
Proposed Venue	: Malacca

AGENDA 5: MATTERS TO BE REFERRED TO JSC

Matters for Information:

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

Matters for Consideration:

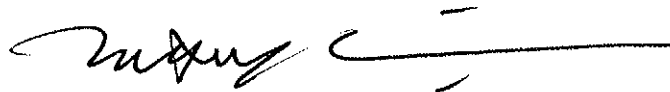
1. Protection Work at Transit Point B
2. Integrated River Basin Management (IRBM) Plan for Golok River Basin

AGENDA 6: ADOPTION OF MINUTES OF MEETING

The meeting agreed to adopt the report of the meeting of the Thirty-seventh Meeting of Thailand Malaysia Joint Technical Working Group (JTWG) on the Golok River Mouth Improvement Project.



(Mr. Chayan Muangsong)
Co-Chairman
Joint Technical Working Group, Thailand
Executive Advisor on Civil Engineering
(Control and Construction) for
Deputy Director General
for Engineering
Royal Irrigation Department
Thailand



(Dato' Ir. Hj. Nor Hisham bin Mohd. Ghazali)
Co-Chairman
Joint Technical Working Group, Malaysia
Director General
Department of Irrigation and Drainage
Malaysia

**THE 37th MEETING OF THAILAND – MALAYSIA JOINT TECHNICAL WORKING GROUP
(JTWG) ON GOLOK RIVER MOUTH IMPROVEMENT PROJECT
4 – 5 MARCH 2020 CHIANG MAI, THAILAND**

LIST OF THAI DELEGATES

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LIST OF THAI DELEGATES

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4 – 5 MARCH 2020 CHIANG MAI, THAILAND**

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4 – 5 MARCH 2020 CHIANG MAI, THAILAND**

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LIST OF MALAYSIAN DELEGATES

7		<p>NAME MRS. NORASIMAH BINTI MAT NOR</p> <p>DESIGNATION SENIOR ASSISTANT DIRECTOR</p> <p>DEPARTMENT DEPARTMENT OF IRRIGATION AND DRAINAGE KELANTAN</p> <p>CONTACT NO. +019-982 2066</p> <p>EMAIL NORASIMAH@WATER.GOV.MY</p>
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**THE 37th MEETING OF THAILAND-MALAYSIA
JOINT TECHNICAL WORKING GROUP (JTWG)
ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT**

AGENDA

Agenda 1: Opening Session

Agenda 2: Adoption of Agenda

Agenda 3: Matters for Information

- 3.1 Monitoring and Evaluation of Golok River Mouth
- 3.2 Maintenance Dredging of Golok River Mouth
- 3.3 Rehabilitation and Protection Works at Golok River Mouth
- 3.4 Mutual Calibration of Rating Curve at Cableway Station
- 3.5 Real Time Monitoring System and the Joint Websites for Golok River Basin
- 3.6 Integrated River Basin Management (IRBM) Plan for Golok River

Agenda 4: Matters for consideration

- 4.1 Protection Work at Transit Point B

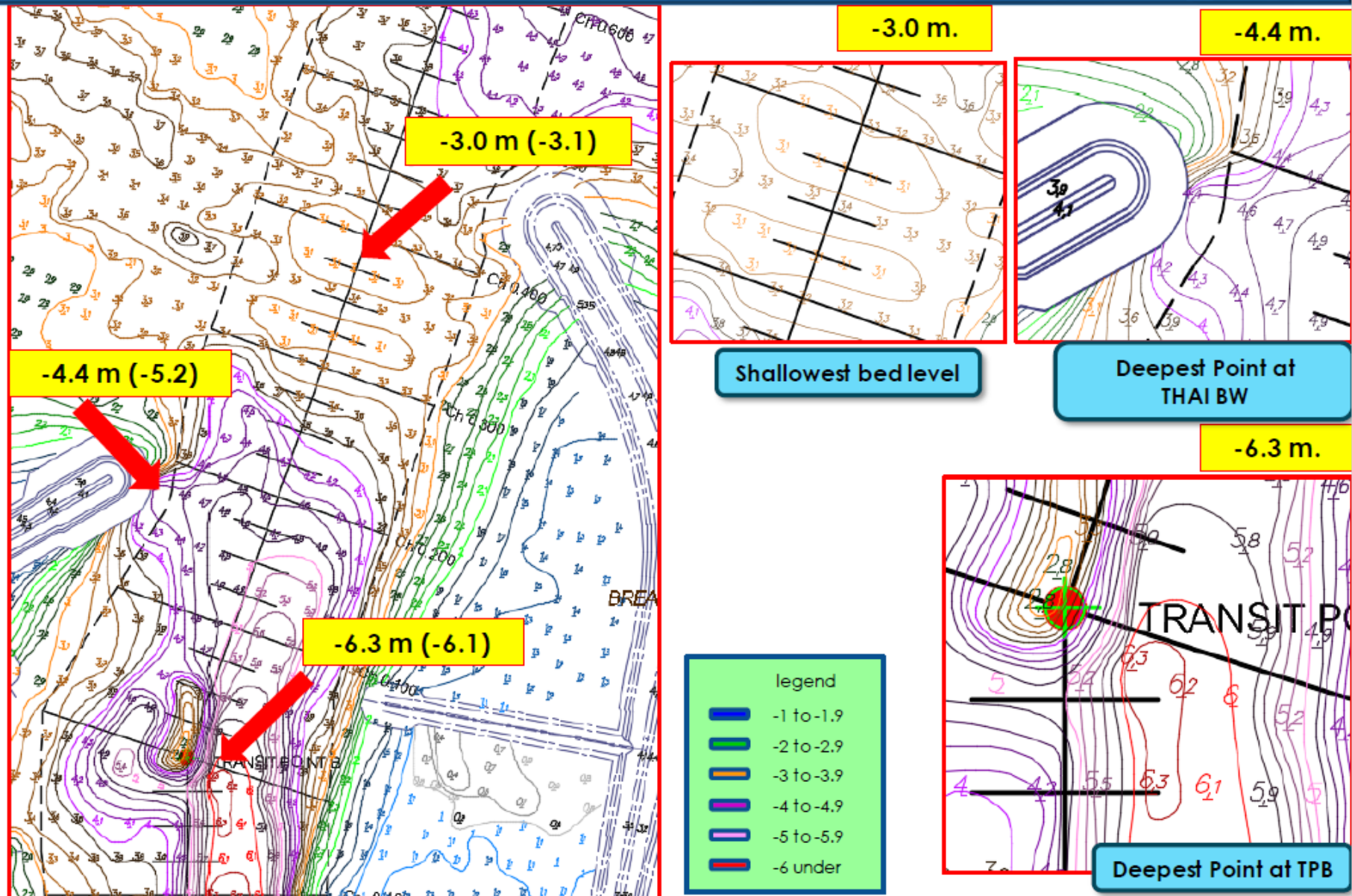
Agenda 5: Date and venue for the next Meeting

Agenda 6: Matters to be referred to JSC


Agenda 7: Adoption of the Report of the Meeting

Agenda 8: Signing of Minutes and Closing Session

Pre-Monsoon (Oct 2019 THA)



Qmax **457.92** m³/s @ Cableway station 19 DEC 2019; Design bed level: -3m Thai MSL

THAILAND TEAM		MALAYSIA TEAM	
	Miss Kanokporn Boochabun Director, Hydrology Irrigation Center (Southern Region), Royal Irrigation Department		Deputy Director Water Resources Management and Hydrology Division, Department of Irrigation and Drainage Malaysia
	Mr. Abdultoleb Hemhoh Senior Irrigation Engineer, Golok River Basin Operation and Maintenance Project Regional Irrigation Office 17, Royal Irrigation Department		Deputy Director Department of Irrigation and Drainage Kelantan
	Mr. Tawat Seenual Civil Engineer Survey and Engineering Bureau, Marine Department		Engineer Coastal Zone Management Division, Department of Irrigation and Drainage Malaysia
	Mr. Attapan Diloksopon Civil Engineer, Professional Level Bureau of Project Management, Royal Irrigation Department		Engineer Division of Water Resources Management and Hydrology, Department of Irrigation and Drainage Malaysia (Secretariat)

Report by 1st Task Force Team

Objective of The Task Force Team

1. To study the existing hydrological station network in Golok River Catchment. If necessary, the task force will decide on new measuring station location and parameter.
2. To determine the suitable measuring instrument for river discharge and other related hydrological parameters if necessary.
3. To apply existing hydrological and hydrodynamic models if available from previous study to determine discharge at the rivermouth or to develop simple hydrological and hydraulic model if existing model unavailable.

Scope of Study

The scope of this study includes:

1. Review of available studies and report related to Golok River Catchment.
2. Collect and collate available data information related to Golok River Catchment.
3. To decide on suitable measuring instrument for river discharge/tide level near rivermouth if necessary.
4. Perform analysis and/or modelling for accurate discharge estimation at rivermouth.
5. Preparation of Task Force Team Report.

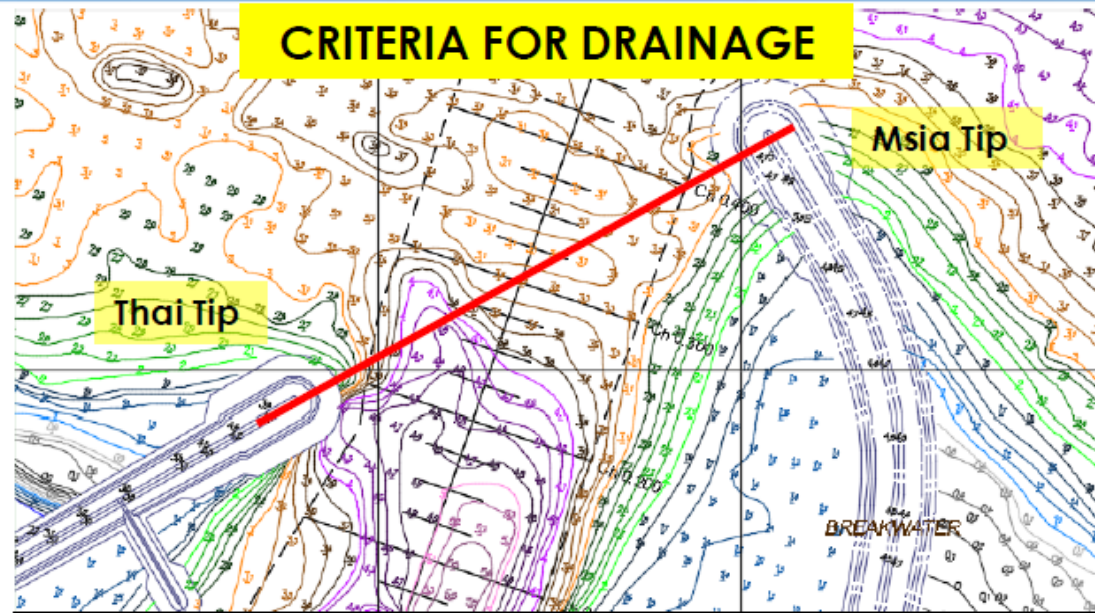
TASK FORCE TEAM TIMELINE-GANTT CHART

ACTIVITIES	2019				2020				2021			
	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
Inception Activities												
Perform Analysis and Modeling												
Report Preparation												

Note:

 Task Force Team Progress

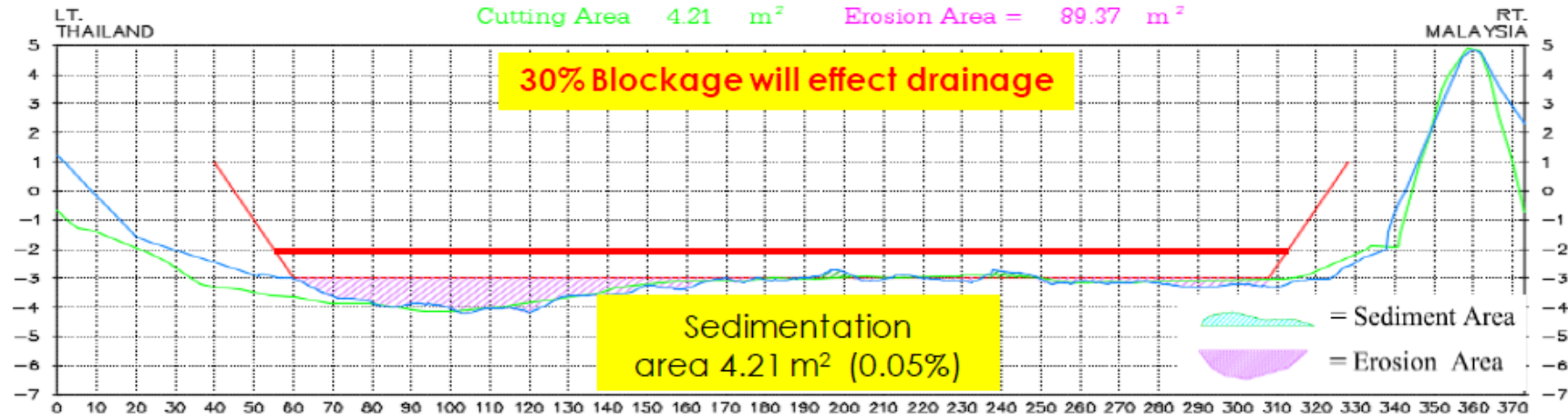
Maintenance Dredging of Golok River Mouth



Pre MONSOON OCT 2019
Sediment Not effected to Drainage Proposed

Design Section
 area 7,890 m²

Crosssection between Brake water Thai to Brake water Malasia
 Cutting Area 4.21 m² Erosion Area = 89.37 m²

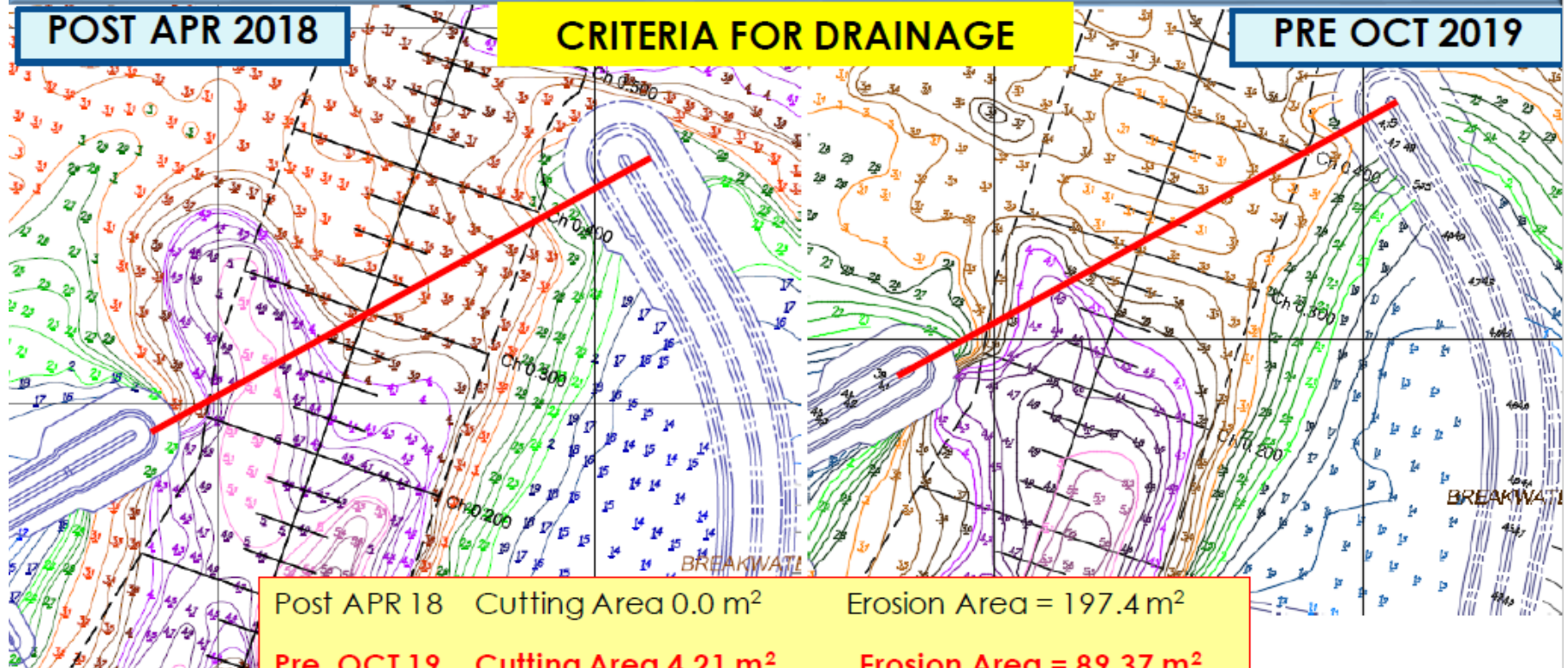


Maintenance Dredging of Golok River Mouth

POST APR 2018

CRITERIA FOR DRAINAGE

PRE OCT 2019



Post APR 18 Cutting Area 0.0 m²

Erosion Area = 197.4 m²

Pre OCT 19 Cutting Area 4.21 m²

Erosion Area = 89.37 m²

LT. THAILAND

Design Section
area 7,890 m²

RT. MALAYSIA

Pre (OCT 2019)

Sedimentation Area ⇒ Increased
Erosion area ⇒ Decreased

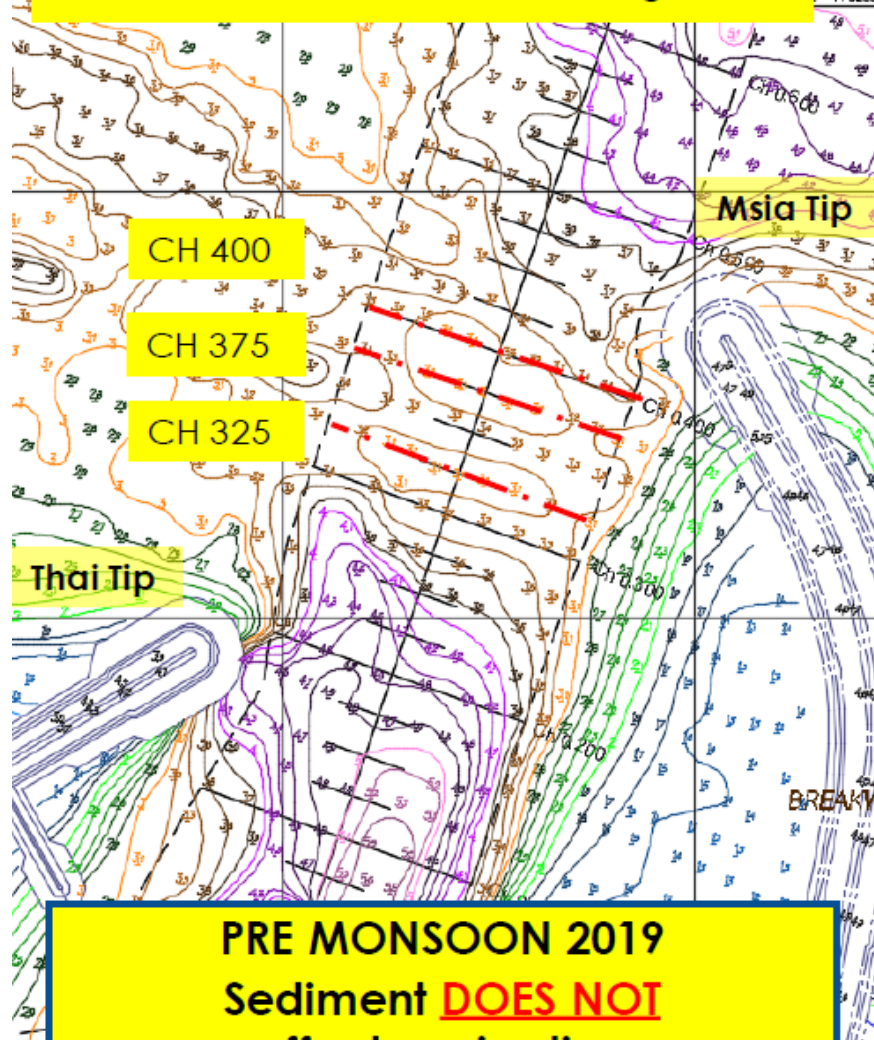
Post (APR 2018)

70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310

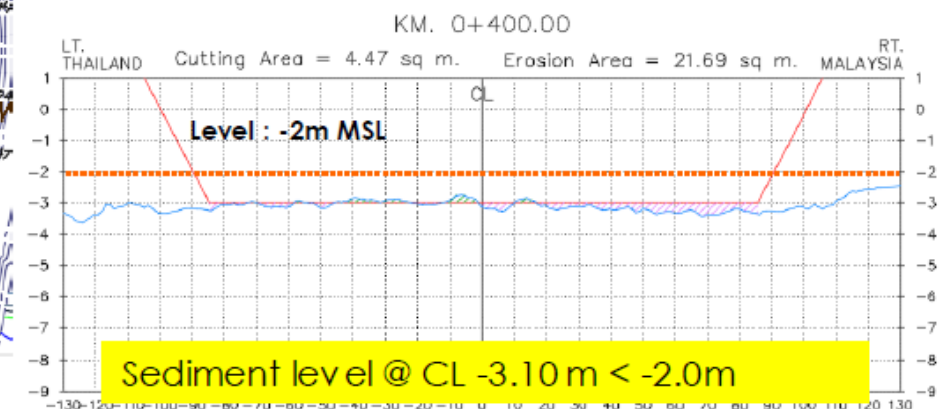
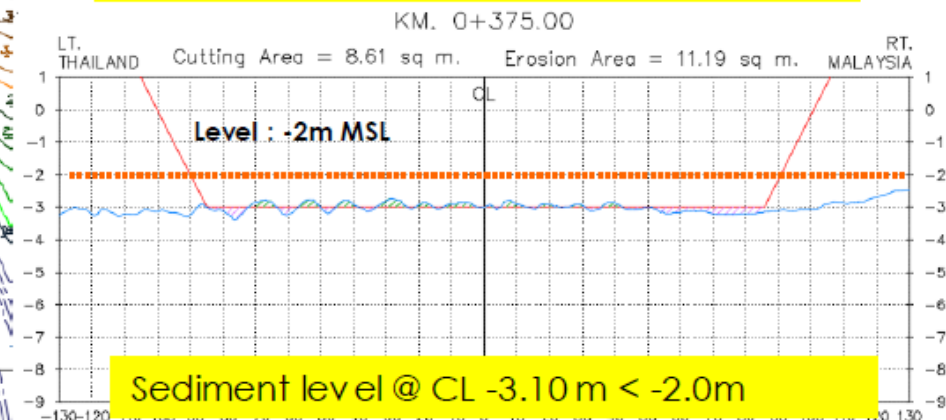
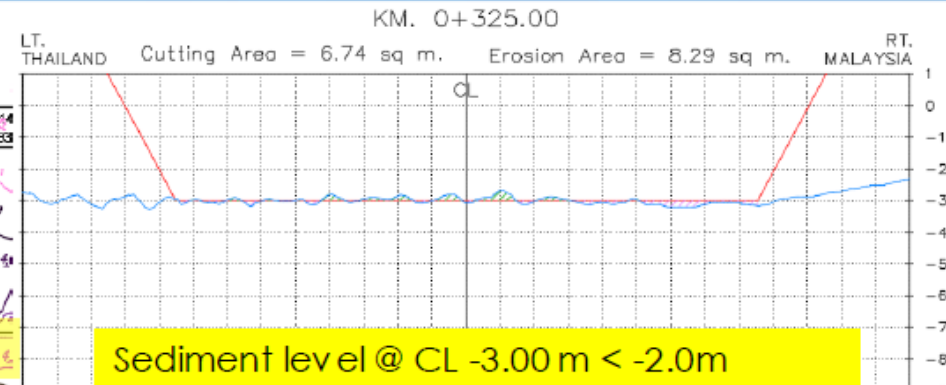
Maintenance Dredging of Golok River Mouth

CRITERIA FOR NAVIGATION (MSIA)

Bed level $> -2.0\text{m MSL}$ will effect Navigation



PRE MONSOON 2019
Sediment **DOES NOT**
effect navigation



EIA road map (THAI)

DETAILS	2017	2018				2019-2020				2021				2022-2023
	1-12	1-3	4-6	7-9	10-12	1-3	4-6	7-9	10-12	1-3	4-6	7-9	10-12	
Feasibility and EIA study	Complete APR 2017													
Physical Model (3D)														
Detailed Design	Complete APR 2017													
Submit for EIA approval														
Construction														

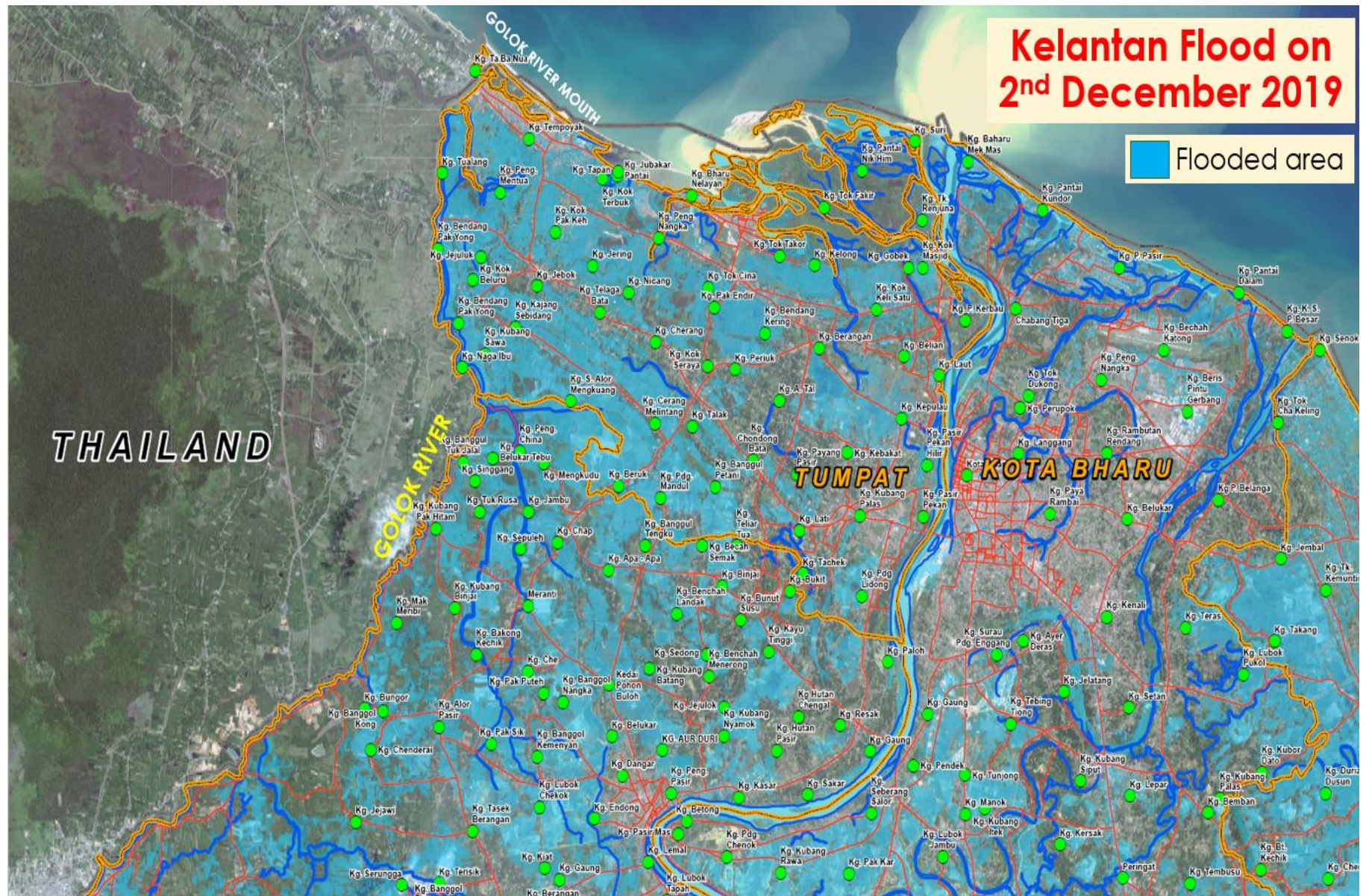
12 months

12 months

24 months (2020-2022)

Detailed design & EIA road map (MAS)

DETAILS	2017	2018				2019				2020				2021-2022
	1-12	1-3	4-6	7-9	10-12	1-3	4-6	7-9	10-12	1-3	4-6	7-9	10-12	
Detailed Design		~12 months												
EIA approval			6 months		3 months									
Construction											24 months (2020-2022)			





DECEMBER 2019 FLOOD



DECEMBER 2019 FLOOD

