



DEPARTMENT OF IRRIGATION
AND DRAINAGE MALAYSIA



Minutes of Meeting

The 38th Meeting of Malaysia - Thailand Joint Technical Working Group on the Golok River Mouth Improvement Project

29 August 2022
Online Conference

TABLE OF CONTENT

Agenda 1: Opening address

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 Mutual Calibration of Rating Curve at Cableway Station
- 3.4 Monitoring System and the Joint Website for Golok River Basin

Agenda 4: Matters for Consideration

- 4.1 Rehabilitation and Protection Works at Golok River Mouth
- 4.2 Protection Work at Transit Point B
- 4.3 Flood Problem in Golok River Basin
- 4.4 Integrated River Basin Management (IRBM) Plan for Golok River Basin

Agenda 5: Other matters

- 5.1 Date and venue for next JTWG meeting

Agenda 6: Matters to be referred to JSC

Agenda 7: Adoption of Minutes of Meeting

Agenda 8: Closing Session

LIST OF APPENDICES

Appendix A	List of delegates
Appendix B	Agenda
Appendix C	List of Task Force Team Revised Member
Appendix D	Task Force Team Revised Timeline
Appendix E	Post-Monsoon Survey (June 2019) & Post-Monsoon Survey (April 2022)
Appendix F	Criteria of Drainage at Mas-Thai Breakwater
Appendix G	Criteria of Navigation at Golok River Mouth
Appendix H	Mutual Gauging Data at Golok River at Rantau Panjang Cableway Station
Appendix I	The Mutual Rating Curve (2021)
Appendix J	The bed level and section across the tip of the Thai breakwater and Malaysian breakwater
Appendix K	The Mutual Rating Curve (2022)
Appendix L	Revised schedule for Rehabilitation and Protection Works at Golok River Mouth
Appendix M	Layout Concept for Malaysia Flood Bund Project

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On The Golok River Mouth Improvement Project
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AGENDA 1: OPENING ADDRESS

Dato' Ir. Sabri bin Abdul Mulok, Deputy Director General (Business Sector) Department of Irrigation and Drainage Malaysia, Co-Chairman of Malaysia for the Joint Technical Working Group (JTWG), and the leader of the Malaysia delegates welcomed

Mr. Chalearmkiat Kongvichienwat, Co-Chairman of Thailand for Joint Technical Working Group, and the Thailand delegates to the 38th Meeting of Malaysia - Thailand Joint Technical Working Group (JTWG) on the Golok River Mouth Improvement Project.

Mr. Chalearmkiat Kongvichienwat, the leader of the Thailand delegates expressed his appreciation for the warm welcome and arrangements for the Meeting. Both sides introduced their delegates and the list of delegates is shown in **APPENDIX A.**

AGENDA 2: ADOPTION OF AGENDA

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 3: MATTERS FOR INFORMATION

3.1 Monitoring and Evaluation of Golok River Mouth

Report by JET-37

- (1) Referring to the JSC 16th meeting, both teams have agreed for JET to form a task force. Subsequently, the task force revised its members and had its first technical meeting on February 2020. While the first coordination meeting was held on 3 September 2021. Further details are shown in **APPENDIX C** and **APPENDIX D**.
- (2) Malaysian side also informs that the next planned date for the task force meeting will be between 24 August 2022 to 25 August 2022 at Narathiwat, Thailand, and the date has been agreed with Thai side.
- (3) The 2022 post-monsoon survey was carried out by the Thai side in April 2022, as shown in **APPENDIX E**. It was observed that the sedimentation area on the Malaysian side has increased whilst the erosion area on the Thai side and Transit Point B has increased compared to the post-monsoon survey in June 2019.
- (4) The survey shows that the seabed level at Malaysia's breakwater tip is increased from -2.8m MSL (Post Monsoon June 2019) to -2.7m MSL (Post Monsoon April 2022).
- (5) Erosion has occurred at Thailand's breakwater tip from -4.5m MSL (Post Monsoon June 2019) to -5.9m MSL (Post Monsoon April 2022) while the deepest riverbed level at Transit Point B, the erosion is getting worse where the level bed from -6.1m MSL (Post Monsoon June 2019) has decreased to -7.3m MSL (Post Monsoon April 2022).

Discussion by JTWG

The Meeting agreed that:

- (i) The monitoring survey is to be continued and for JET to continue analyzing the dynamic phenomenon at the river mouth, sedimentation issue, and the erosion at the tip of the Thai breakwater.

3.2 Maintenance Dredging of Golok River Mouth

Criteria For Maintenance Dredging

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

- (1) When the cross-section area of the river mouth between Thailand and Malaysia's breakwater tip is blocked by sediment up to 30% (based on Thai's study); or
- (2) When the bed level of the river mouth is at -2.0 m MSL or shallower (based on Malaysia's study);

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

Report by JET-37

- (1) The Thai side reported that based on the results of the post-monsoon (April 2022) surveys as shown in **APPENDIX F** and **APPENDIX G** that no maintenance dredging is required for the time being at Golok River Mouth.
- (2) The Malaysian side suggested to decreased (deepening) the design channel level to -4.0m instead of -3.0m on the Malaysian side, to allow larger ships to pass through while maintaining the stability of river banks and their engineering protection works, for the purpose of larger ship and low tide navigation which needs to be further deliberated on effects including engineering, drainage, and navigation to be consistent with the 1997 Agreement.
- (3) The Thai side has proposed to have more information on dredging including the report on dredging area, feasibility, slope stability, and calculation report to be discussed further at the next JTWG meeting.

Discussion by JTWG

The Meeting agreed that:

- (i) The Malaysian side will need time to get all the information needed and will present it in the next meeting.
- (ii) The Thai side proposes a coordination meeting if the information and report are already complete.
- (iii) The implementation of protection work will be endorsed and agreed upon by JSC before implementation.

3.3 Mutual Calibration of Golok River Mouth

Report by JET-37

- (1) The Malaysian side reported that 24 mutual gaugings have been done in 2021. The results of 2021 mutual gauging data as shown in **APPENDIX H**. The maximum discharge that was recorded was **433.342 m³/s** at the **10.10 m** stage on 6th Jan 2021. The Malaysian side presented the 2021 mutual rating curve. The rating curve has been developed by the Thai side using water year mutual gauging data as shown in **APPENDIX I**. Thailand's rating curve was selected because of the highest maximum flow rate of **560 m³/s** at the stage of **10.60 m** for flood prediction purposes.
- (2) The Malaysian side presented the comparison of the 2021 and 2022 engineering cross-section survey at the cableway station that was done by the Thai side. The result showed that the river bank on the Thai side is slightly higher (0.698m MSL) compared to the Malaysia river bank as shown in **APPENDIX J**.
- (3) The Malaysian side also informed that the cross-section at the cableway station shows that there is no significant change by comparing 2021 and 2022.
- (4) The Malaysian side presented the 2022 mutual gauging data. The results of 2022 mutual gauging data as shown in **APPENDIX K**. The Malaysian side also reported that the maximum discharge is recorded at **476.323 m³/s** at the stage of **10.14 m. MSL**. on 26th February 2022.
- (5) The meeting agreed to adopt Thailand's 2021 rating curve as the mutual rating curve for the 2021 and 2022 engineering cross-section done by the Thai side.

Discussion by JTWG

The Meeting agreed that:

- (i) To use Thailand 2021 rating curve as the mutual rating curve for 2021.
- (ii) To accept the 2022 engineering cross-section done by the Thai side with the river geomorphology pattern.

3.4 Real-Time Monitoring System and Joint Website for Golok River Basin

Report by JET-37

- (1) The meeting acknowledged the fifteen (15) telemetry hydrological data that has been shared on the Golok Joint website (<http://h2o.water.gov.my>).
- (2) The meeting acknowledged that (2) two hydrological stations on the Malaysian side are online and can be accessed on the Joint Website. The Thai side reported that six (6) telemetry stations may take a longer time due to remote location and a network problem. The Thai side would solve it as soon as possible.

Discussion by JTWG

- (i) Thai side informed that the rainfall telemetry station X.274 has been installed and operated.
- (ii) The meeting acknowledged this matter.

AGENDA 4: MATTERS FOR CONSIDERATION

4.1 Rehabilitation and Protection Works at Golok River Mouth

Report by JET-37

- (1) The Thai side informed that the EIA was approved in August 2021. The project is now in the budget request process, and the construction process is expected to begin in the first quarter of the year 2024. The revised implementation schedule is shown in **APPENDIX L**.
- (2) The Malaysian side informed that they would like to start the construction in the Malaysian part first because the budget was already allocated for the works this year.

- (3) The Thai side requested the Malaysian side to show the method of statement for the construction of dyke and mitigation measures for environment and navigation effects if they plan to proceed early with the construction of dykes.
- (4) The Thai side inform that they don't have any obstruction on the construction of the dykes but suggested that if the Malaysian side wants to proceed with the construction works this year, this matter needed to be reported to JTWG and JSC meeting for endorsement beforehand.
- (5) The meeting agreed to report to JTWG and JSC for endorsement of construction works of dyke.

Discussion by JTWG

The Meeting agreed that:

- (i) The Malaysian side is to furnish the information needed first by the Thai side which is the method of statement for construction of dyke and mitigation measures for environment and navigation effect if they plan to proceed early for the constructions of dyke.
- (ii) To expedite the endorsement, once the information is complete, the meeting proposes to have a coordination meeting for presentation and discussion before reporting to the JSC meeting.

4.2 Protection Works at Transit Point B

Refer to Minutes of JSC-16 (Apr 2019)

- (1) The Meeting was informed that the Malaysian side has received the report of the design of protection work at Transit Point B from the Thai side. The report is currently being reviewed by the Malaysian side.
- (2) The Malaysian side 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 sides.
- (3) The Thai side has their opinion that the 1997 Agreement includes the proposed protection works which are stated as protection works to transit point B under ANNEX 1 Paragraph 3.0 (b) of the 1997 Agreement.

- (4) The Thai side proposed that the Supplementary Agreement be prepared in line with Article 9 of the 1997 Agreement.
- (5) The Meeting agreed that JET and JTWG will discuss further on this matter and report in the next JSC.

Refer to Minutes of JTWG-37 (MAR 2020)

- (1) The meeting was informed that the proposed protection works at Transit Point B have been designed by the Thai team.
- (2) The Malaysian team agreed to the proposed protection works and request the 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 present the result at the next JET meeting.
- (3) **Details of the supplementary agreement will be discussed further at the next JTWG meeting.**

Report by JET-37

- (1) The Thai side has proposed the Malaysian side to check the stability of the Transit Point B structure as the latest survey shows that erosion occurred at the Transit Point B at -7.3m Thai MSL. The Malaysian side will take note of this matter.
- (2) The Thai side informed that in JET Thai Committee has no delegate from the Ministry of Foreign Affairs (MOFA) for considering the agreement.
- (3) The JET Meeting has agreed the matter to be further discussed in the next JTWG meeting.

Discussion by JTWG

The Meeting acknowledged that:

- (i) The Malaysian side needed more time to study and prepared for the proposed supplementary agreement and will report back at the next JTWG meeting.

4.3 Flood Problem In Golok River Basin

Report by JET-37

- (1) The Malaysian side presented the layout concept of the flood bund project as shown in **APPENDIX M** and the project is in the final stage of construction. The Malaysian side requested data sharing regarding flood bund level and flood mitigation plan by the Thai side.
- (2) The Thai side acknowledge and would send necessary information belonging Joint Hydraulic model study (2012) to the Malaysian side. Meanwhile information belonging to Narathiwat Province must be inquired to the concerned department

Discussion by JTWG

The Meeting acknowledged that:

- (i) The Thai side informed that the information from Narathiwat Province has been obtained. The Thai side needs the Malaysian side to share the flood bund level.
- (ii) To hold a coordination meeting for sharing the data on both sides.

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

Report by JET-37

- (1) The Thai side informed that the Office of the National Water Resources (ONWR) is the new member of the JSC Thai committee as the new JSC Thai Committee assignment was signed in 2020.
- (2) The Thai side informed the progress of reviewing the new MOU. The Royal Irrigation Department (RID) has submitted comments and proposals to the Ministry of Agriculture and Cooperatives (MOAC).
- (3) Due to the JET Thai committee having no delegates from MOFA, MOAC, and ONWR, the matter needs to be discussed in the next JTWG.
- (4) The meeting acknowledged the matter needs to be discussed in the next JTWG

Discussion by JTWG

The Meeting acknowledged that:

- (i) To review the new MOU, the Thai side requested the Malaysian side to provide the name of the contact person for IRBM from DID Malaysia as the officer from ONWR will be in direct contact with the contact person.
- (ii) The Malaysia side will give the name of the contact person officially by letter.

AGENDA 5: OTHER MATTERS

5.1 Date and venue for the next JTWG meeting

The Meeting agreed to convene the 39th JTWG Meeting as follows:

Host:	Thailand
Proposed date:	June 2023
Proposed venue:	1) Hua Hin 2) Pattaya 3) Phuket

5.2 Date and venue for the next JSC meeting

The Meeting proposed to convene the 17th JSC Meeting as follows:

Host:	Thailand
Proposed date:	November 2022
Proposed venue:	1) Pattaya 2) Bangkok 3) Hua Hin

AGENDA 6: MATTERS TO BE REFERRED TO THE JSC

Matters for information

1. Maintenance Dredging of Golok River Mouth
2. Monitoring and Evaluation of Golok River Mouth
3. Mutual Calibration of Rating Curve at Cableway Station
4. Real-Time Monitoring System and the Joint Websites for Golok River Basin
5. Flood Problem in Golok River Basin
6. Integrated River Basin Management (IRBM) Plan for Golok River

Matters for Consideration

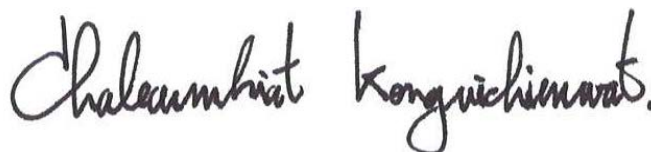
1. Rehabilitation and Protection Works at Golok River Mouth
2. Protection Work at Transit Point B

AGENDA 7: ADOPTION OF MINUTES OF THE MEETING

The Meeting agreed to adopt the report of the 38th Meeting of Malaysia – Thailand Joint Technical Working Group (JTWG) on the Golok River Mouth Improvement Project.



(Dato' Ir. Sabri bin Abdul Mulok)
Co-Chairman
Joint Technical Working Group, Malaysia
Deputy Director General
(Business Sector)
Department of Irrigation and Drainage
Malaysia



(Mr. Chalearmkiat Kongvichienwat)
Co-Chairman
Joint Technical Working Group, Thailand
Deputy Director General
for Engineering
Royal Irrigation Department
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APPENDIX A

THE 38TH MEETING OF MALAYSIA - THAILAND JOINT TECHNICAL WORKING GROUP (JTWG) ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT

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APPENDIX A

THE 38TH MEETING OF MALAYSIA - THAILAND JOINT TECHNICAL WORKING GROUP (JTWG) ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT

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APPENDIX A

THE 38TH MEETING OF MALAYSIA - THAILAND JOINT TECHNICAL WORKING GROUP (JTWG) ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT







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APPENDIX A

THE 38TH MEETING OF MALAYSIA - THAILAND JOINT TECHNICAL WORKING GROUP (JTWG) ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT




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APPENDIX A

THE 38TH MEETING OF MALAYSIA - THAILAND JOINT TECHNICAL WORKING GROUP (JTWG) ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT







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APPENDIX A

THE 38TH MEETING OF THAILAND - MALAYSIA JOINT TECHNICAL WORKING GROUP (JTWG) ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT







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APPENDIX A

THE 38TH MEETING OF THAILAND - MALAYSIA JOINT TECHNICAL WORKING GROUP (JTWG) ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT







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APPENDIX A

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APPENDIX A

THE 38TH MEETING OF THAILAND - MALAYSIA JOINT TECHNICAL WORKING GROUP (JTWG) ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT

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**THE 38TH MEETING OF THAILAND - MALAYSIA
JOINT TECHNICAL WORKING GROUP (JTWG)
ON THE GOLOK RIVER MOUTH IMPROVEMENT PROJECT**

AGENDA

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Task Force Team			
THAILAND TEAM		MALAYSIA TEAM	
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	Mr. Chinnawat Prommanop Director, Golok River Basin Operation and Maintenance Project Regional Irrigation Office 17		Mr. Zaidi bin Deraman Engineer Department of Irrigation and Drainage Kelantan
	Mr. Soratorn Panluan Survey Engineer Professional Level Survey and Engineering Bureau, Marine Department		Mrs. Kalsom binti Mean Senior Engineer Coastal Zone Management Division, Department of Irrigation and Drainage Malaysia
	Mr. Attapan Diloksoyon Civil Engineer, Professional Level Royal Irrigation Department (Secretariat)		Mr. Mohd Eizam bin Yusof Engineer Division of Water Resources Management and Hydrology, Department of Irrigation and Drainage Malaysia (Secretariat)

Task Force Team Revised Timeline

TASK FORCE TEAM STUDY TIME LINE																									
ACTIVITIES	2018				2020				2021				2022				2023				2024				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
COVID-19 LOCKDOWN																									
INCEPTION ACTIVITIES																									
HYDROLOGICAL DATA COLLECTION																									
(REVISED) HYDROLOGICAL DATA COLLECTION																									
PERFORM ANALYSIS AND MODELING																									
(REVISED) PERFORM ANALYSIS AND MODELING																									
REPORT SUBMISSION AND PRESENTATION																									
REVISED REPORT SUBMISSION AND PRESENTATION																									
TASK FORCE MEETING, SITE VISIT & DISCUSSION & WORKSHOP																									
(REVISED) MEETING, SITE VISIT & DISCUSSION & WORKSHOP																									

LEGEND

ACTUAL PLANNING SCHEDULE

REVISE PLANNING SCHEDULE

ACTUAL PLANNING TECHNICAL MEETING

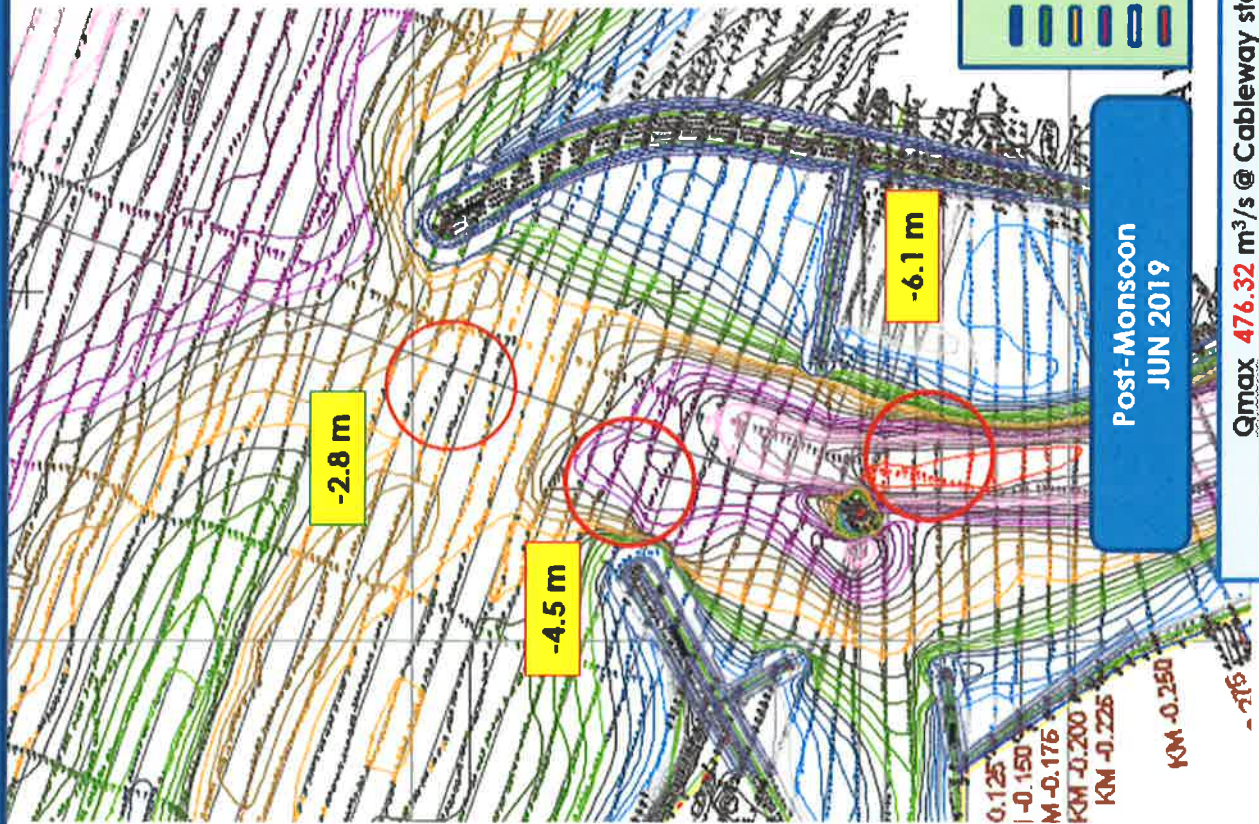
ADD FINAL TECHNICAL MEETING

REVISE SCHEDULE OF TECHNICAL MEETING

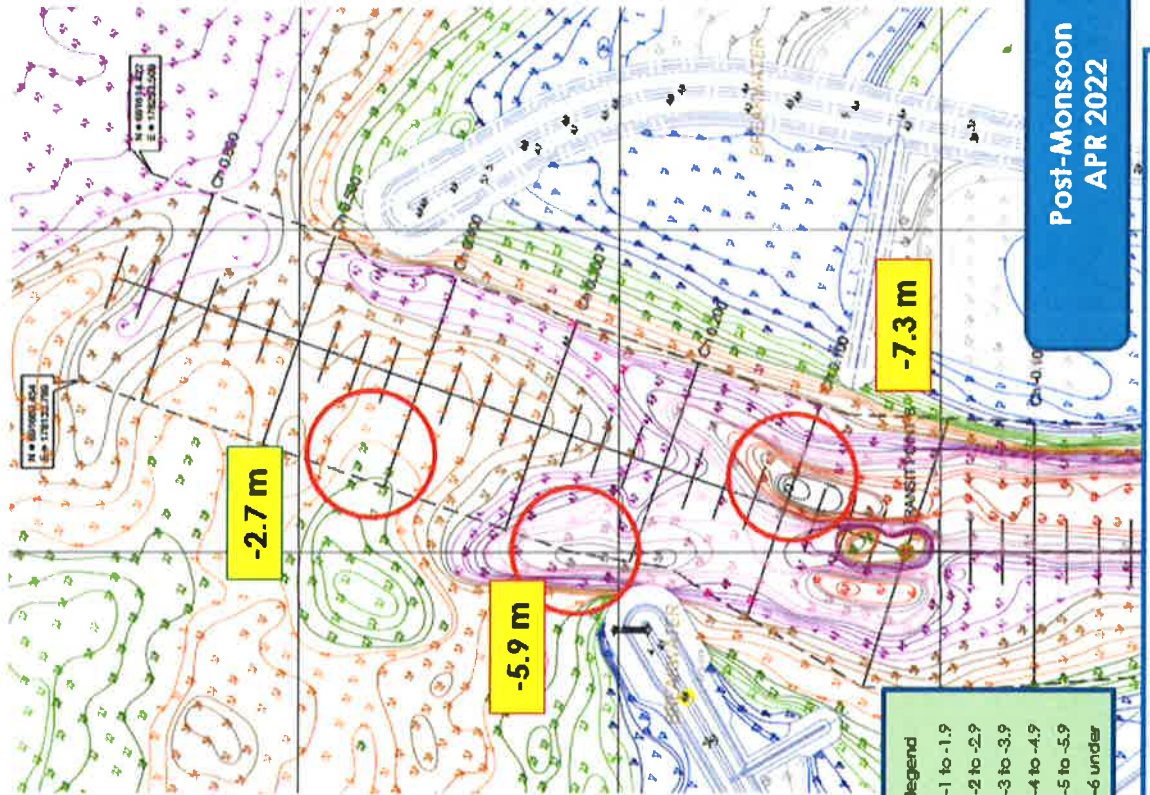
COVID-19 LOCKDOWN

APPENDIX E

Monitoring and Evaluation of Golok River Mouth

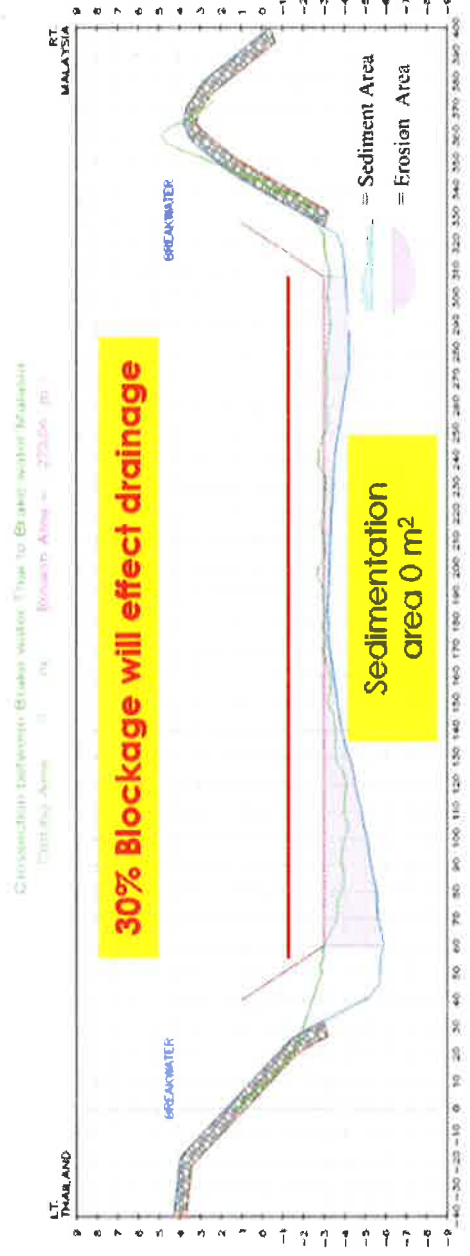
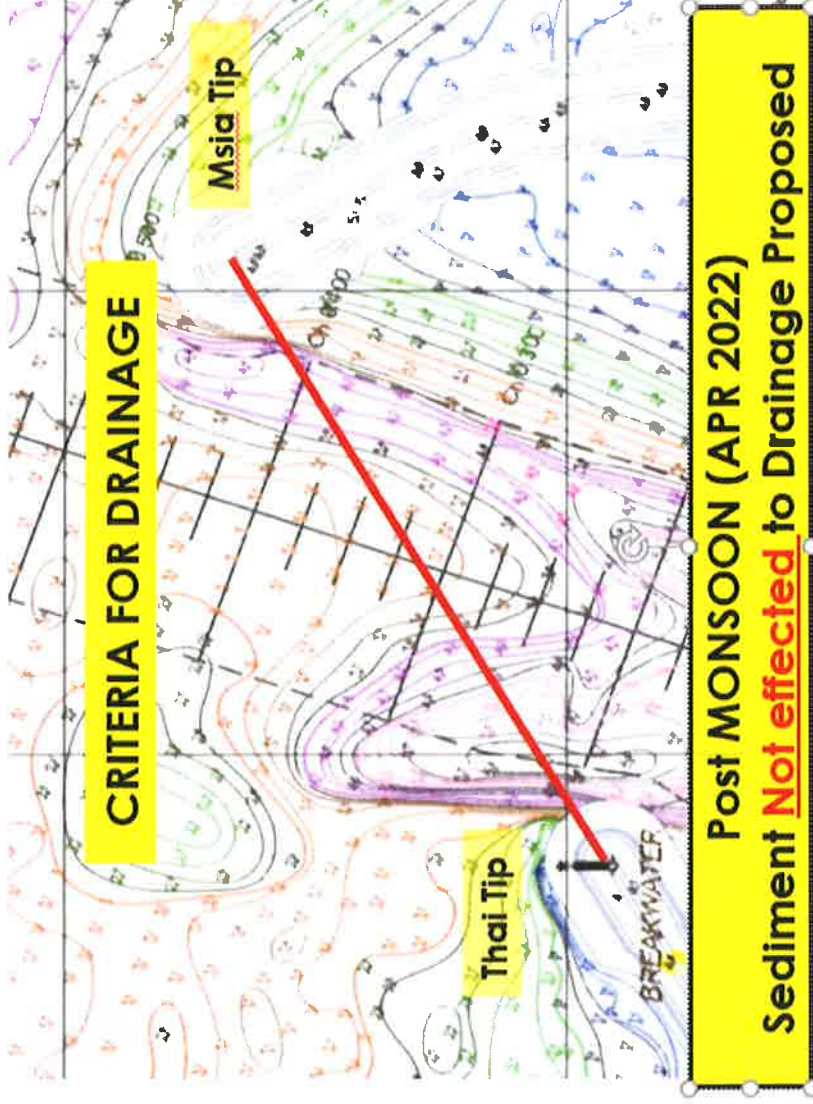


Post-Monsoon
JUN 2019

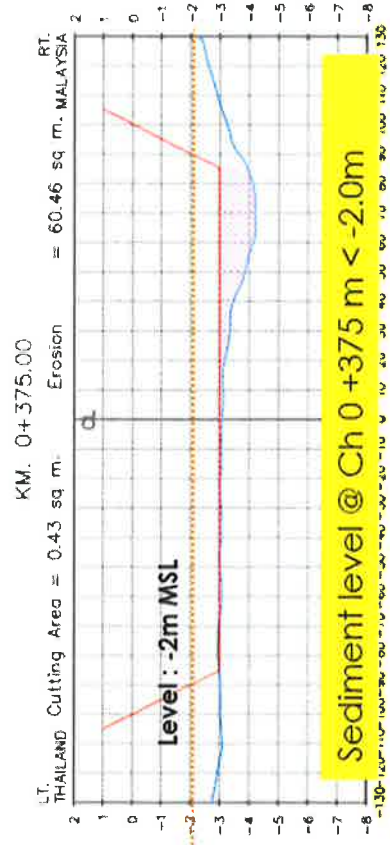
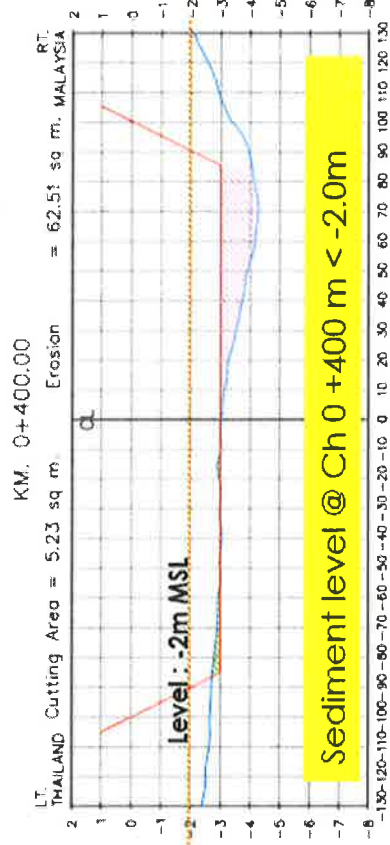
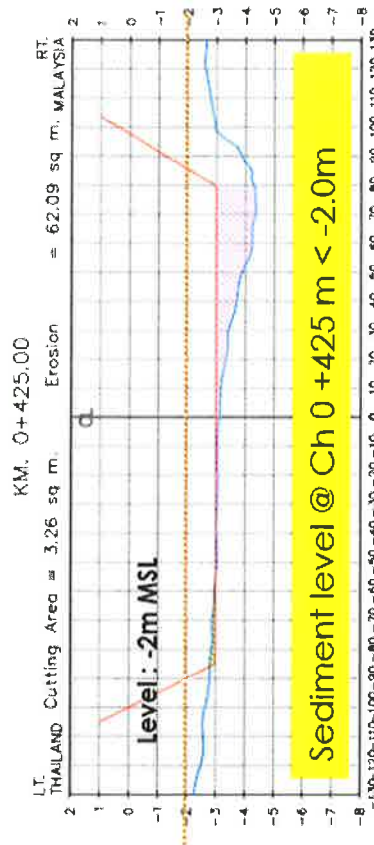
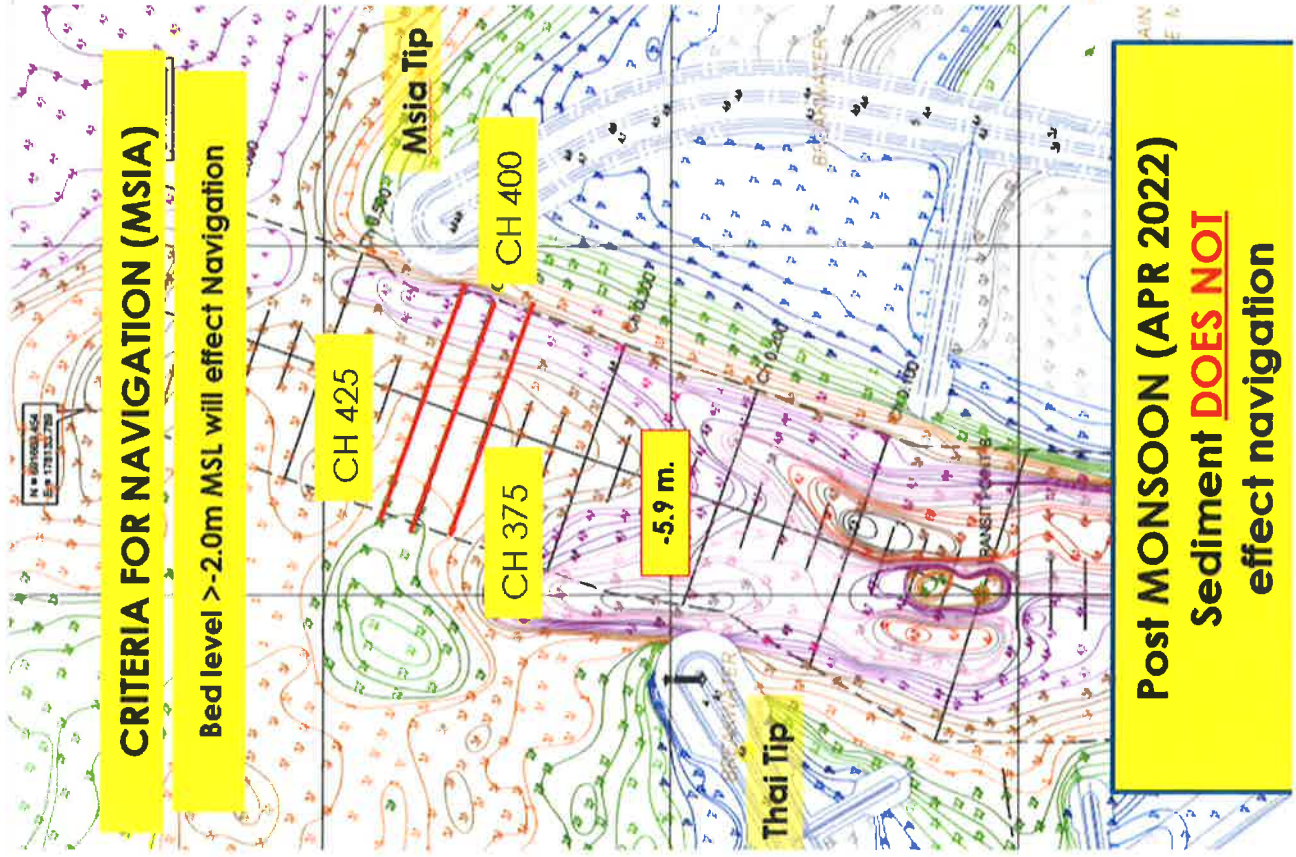


Post-Monsoon
APR 2022

Qmax 476.32 m³/s @ Cableway station 26 FEB 2022; Design bed level: -3m Thai MSL



APPENDIX G

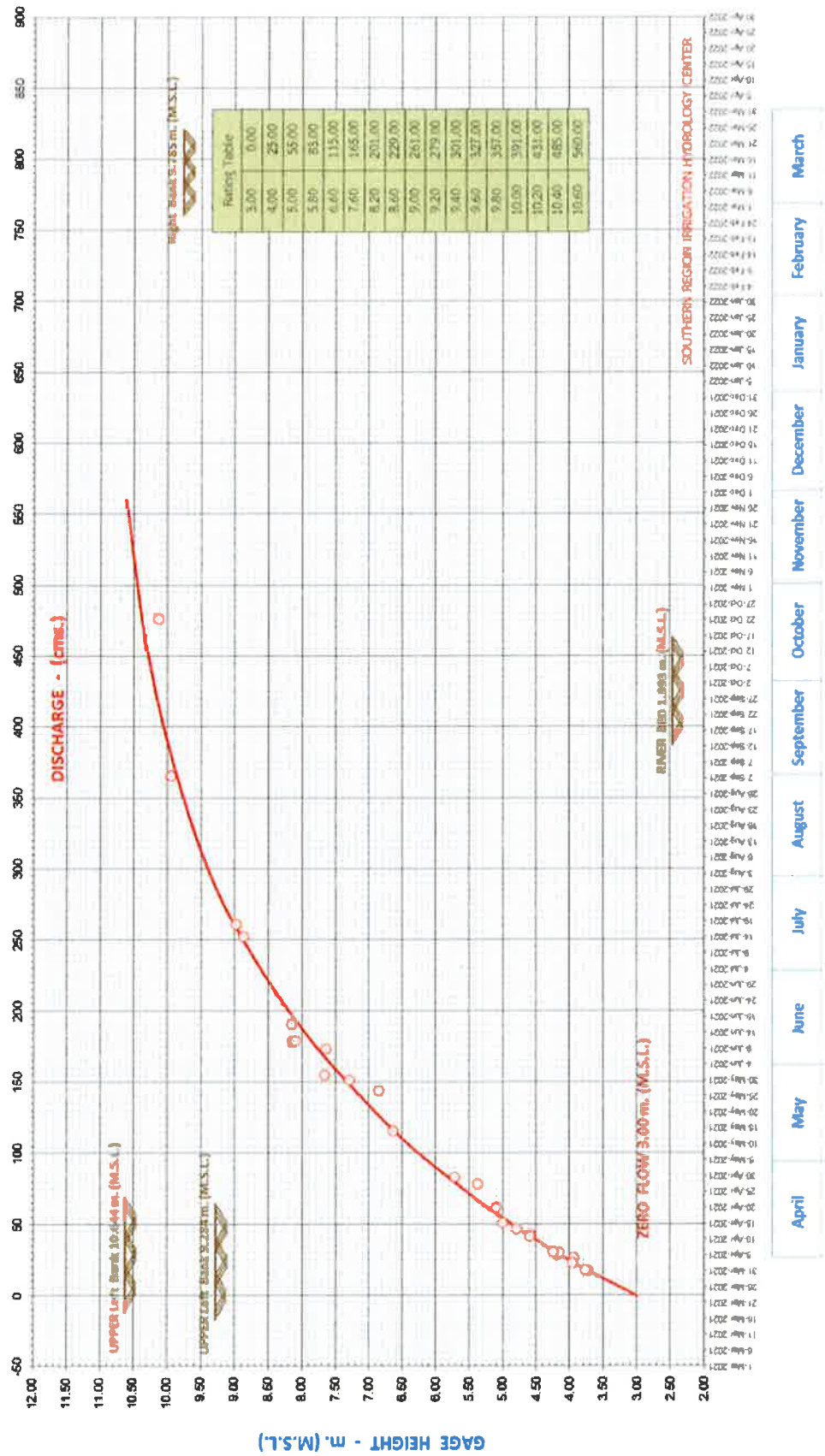


Mutual Gauging Data at Golok River at Rantau Panjang Cableway Station

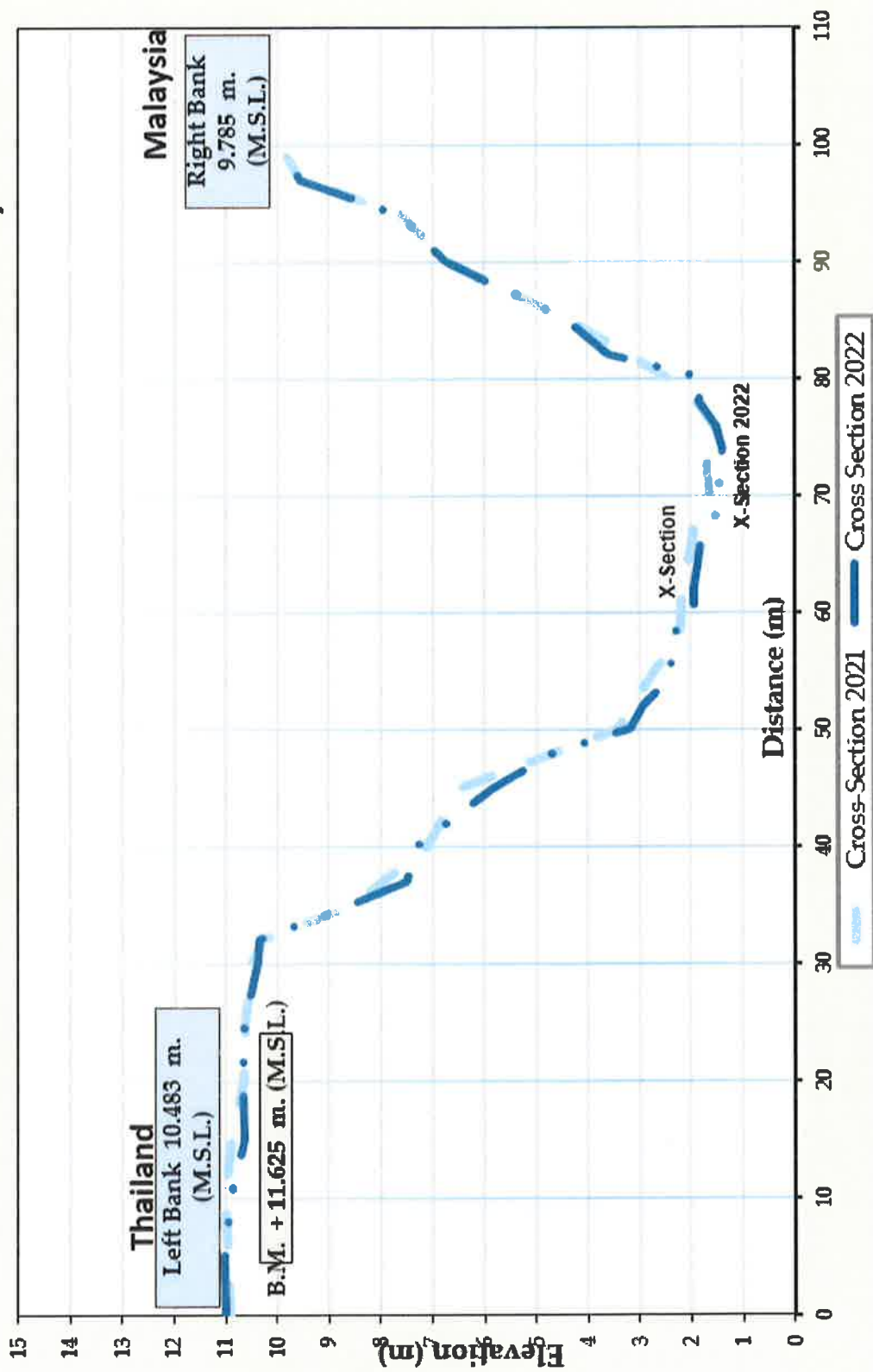
Mutual Gauging 2021					
No.	Date	Stage (m)	Discharge (m ³ /s)	Area, A (m ²)	Velocity (m/s)
1	6 Jan 2021	10.100	433.342	363.300	1.193
2	12 Jan 2021	8.280	205.999	252.711	0.815
3	18 Feb 2021	3.630	13.343	58.042	0.23
4	10 Mar 2021	3.320	8.053	48.800	0.165
5	9 Apr 2021	4.190	28.747	72.248	0.398
6	22 Apr 2021	3.940	26.597	69.724	0.381
7	20 May 2021	5.370	78.226	111.700	0.7
8	23 May 2021	5.720	83.211	124.095	0.61
9	25 May 2021	4.790	46.634	91.056	0.512
10	24 June 2021	5.000	51.128	89.900	0.569
11	30 July 2021	3.730	17.534	42.200	0.415
12	26 Aug 2021	4.590	43.167	75.600	0.571
13	30 Aug 2021	6.10	49.615	89.347	0.556
14	23 Sep 2021	3.960	22.626	51.100	0.433
15	28 Oct 2021	4.160	30.509	62.060	0.492
16	17 Nov 2021	7.660	155.199	195.381	0.794
17	18 Nov 2021	8.140	178.486	216.455	0.825
18	3 Dec 2021	8.100	178.946	232.040	0.772
19	3 Dec 2021	8.150	190.823	223.307	0.855
20	17 Dec 2021	7.300	151.439	186.367	0.813
21	18 Dec 2021	8.880	252.129	272.463	0.925
22	18 Dec 2021	8.980	260.807	275.885	0.945
23	19 Dec 2021	9.950	365.831	339.186	1.079
24	31 Dec 2021	7.640	173.423	215.140	0.806

APPENDIX I

DAILY MEAN GAGE HEIGHT AND RATING CURVE WATER YEAR 2021 STATION X.119A KOLOK RIVER AT LAN TU BRIDGE, SU-NGAI KOLOK, NARATHIWAT



2021 & 2022 Cross section Survey



Agenda 3.3: Mutual Calibration of Rating Curve at Cableway Station

TABLE 3.5.2: Mutual Gauging 2022

No	Date	Stage (m)	Discharge (m ³ /s)	Area, A (m ²)	Velocity (m/s)
1	19 Jan 2022	4.250	30.793	72.675	0.424
2	25 Jan 2022	4.18	18.271	58.763	0.311
3	28 Jan 2022	3.770	18.065	54.873	0.329
4	10 Feb 2022	6.640	115.712	166.650	0.694
5	10 Feb 2022	7.05	117.967	164.927	0.715
6	24 Feb 2022	5.100	61.722	107.424	0.575
7	25 Feb 2022	6.850	144.310	175.842	0.821
8	26 Feb 2022	10.140	476.323	412.507	1.157
9	31 Mar 2022	4.600	41.863	88.564	0.473
10	21 April 2022	5.31	67.143	114.592	0.586
11	22 May 2022	4.570	40.636	92.037	0.442
12	13 Jun 2022	4.80	38.916	87.376	0.445
13	22 Jun 2022	5.16	51.871	97.787	1.142
14	22 July 2022	4.88	36.970	81.822	0.452
15	24 August 2022	4.26	38.624	84.993	0.455

Construction road map (THAI)																
DETAILS	2017	2018	2019	2020	2021			2022			2023			2024		
					1	2	3	4	1	2	3	4	1	2	3	4
Feasibility and EIA study	Complete APR 2017															
Physical Model (3D)		Complete MAR 2018														
Detailed Design	Complete APR 2017															
EIA approval							Approved AUG2021									
Construction									Prepared Doc	Budget Request	Tender Process	Monsoon Season Oct-Mar			24 months (2024-2025)	
									←	←	←	←	←	←	←	↔

[illegible]

APPENDIX M

