



DEPARTMENT OF IRRIGATION AND DRAINAGE



**REPORT ON THE THIRTIETH MEETING
OF
MALAYSIA – THAILAND
JOINT TECHNICAL WORKING GROUP
ON
GOLOK RIVER MOUTH IMPROVEMENT PROJECT**

GENTING HIGHLANDS, MALAYSIA
5 – 6 JUNE 2012

TABLE OF CONTENT

Agenda 1	Opening Addresses	1
Agenda 2	Adoption of Proposed Agenda	1
Agenda 3	Matters for Information	
	3.1 Report of monitoring and evaluation of Golok River Mouth	1
	3.2 Proposed maintenance dredging of Golok River Mouth	2
	3.3 Cableway station across the Golok River	2
	3.4 Progress of real time monitoring system in the Golok River Basin and the joint website	3
	3.5 Rehabilitation program of Transit Point B	3
Agenda 4	Matters for Consideration	
	4.1 Joint Hydraulic Modeling Studies	4
	4.2 Matters to be referred to the JSC Meeting	4
Agenda 5	Other matters	4
Agenda 6	Adoption of Report of the Meeting	4
Appendix A:	Attendance List	
Appendix B:	Agenda	
Appendix C:	Rating Curve for Golok River at Cableway Station Rantau Panjang / X.119A	
Appendix D:	Scope of the survey works for Joint Hydraulic Modeling Studies	

**Report on the Thirtieth Meeting of
Malaysia – Thailand Joint Technical Working Group
on the Golok River Mouth Improvement Project
5 – 6 June 2012
Genting Highlands, Malaysia**

AGENDA 1: OPENING ADDRESSES

Dato' Ir. Nordin bin Hamdan, the leader of Malaysian Delegation, welcomed the Thai Delegation to the Thirtieth Meeting of Malaysia – Thailand Joint Technical Working Group (JTWG) on the Golok River Mouth Improvement Project which was held on 5–6 June 2012 in Genting Highlands, Pahang, Malaysia.

Mr. Chachawal Punyavateenun, the leader of the Thai Delegation, expressed his appreciation for the warm welcome and arrangements for the meeting.

Both sides introduced their delegates to the Meeting. The list of delegates is shown in Appendix A.

AGENDA 2: ADOPTION OF PROPOSED AGENDA

The meeting adopted the proposed agenda as shown in Appendix B.

AGENDA 3: MATTERS FOR INFORMATION

3.1 Report of Monitoring and Evaluation of Golok River Mouth

The Joint Evaluation Team (JET) reported to the meeting that the latest pre- and post-monsoon survey for the 2011/2012 monsoon season was carried out by the Thai side in October 2011 and March 2012 respectively. Based on the post-monsoon survey, it was observed that more sedimentation had occurred at the river mouth in comparison to the pre-monsoon survey.

It was also observed that the major flow of the river has been diverted towards Thai side and an offshore sand bar was formed leaving a narrow outlet (design depth -3m MSL). The JET reported that this hydraulic phenomenon is similar to hydraulic phenomenon before the implementation of river mouth project but occurs in deeper seabed.

Besides, the riverbed of Thai side near Transit Point B started to erode and this might affect the stability of the breakwater at Thai side and the structure of Transit Point B.

The Meeting agreed that:-

- (i) The depth and direction of the navigation channel should be maintained as designed.
- (ii) The stability of breakwater at Thai side shall be monitored and the effectiveness of the breakwater at Malaysia side should be reviewed if the sediment bypass persists.
- (iii) Further monitoring surveys shall be carried out by 0.2m contour interval, and the color legend used in the drawings for all the years should be consistent and should be in rainbow color (lighter color represents shallower bathymetry).
- (iv) Future survey shall be operated in the same mode as before. The coming pre-monsoon (October 2012) and post-monsoon (March 2013) shall be carried out by Malaysian side associated with the river flow hydrograph and sedimentation calculation.

3.2 Proposed Maintenance Dredging of Golok River Mouth

Due to the dynamic hydraulic phenomenon at the river mouth, the need for the maintenance dredging of Golok River Mouth shall be determined based on the monitoring survey of the pre-monsoon 2012 and post-monsoon 2013. The Meeting agreed that maintenance dredging should be proposed, if the navigation channel was found shallower than the designed depth in two continuous monsoon seasons.

3.3 Cableway Station across the Golok River

The JET reported that both sides carried out mutual calibration to obtain the same datum and flow measurement. Both sides adopted the same criteria in data gauging. The Meeting agreed that mutual calibrations with low, medium (normal) and high flow should be done yearly and both sides should follow the table below in developing a mutual rating curve:

No.	Flow Type	Nos. of readings	Divination
1.	Low Flow (< 1 meter depth)	2 readings	0.2d and 0.8d
2.	Medium (Normal) and High Flow (> 1 meter depth)	4 readings	0.2d, 0.4d, 0.6d and 0.8d

Both sides will carry out monthly mutual calibration (from May 2012 to May 2013). For each mutual calibration, there will be three plots; Malaysia, Thailand and average readings. Both sides should use the agreed rating curve for discharge.

The JET reported that the rating curve for Golok river 2011 has been developed by each side and the difference is 8-11% which is acceptable. The JET also reported that a mutual rating curve for normal flow has been developed in May 2012. (As shown in Appendix C)

Malaysian side presented the proposed schedule for the Hornet system gauging

equipment calibration and maintenance of Hornet system gauging equipment as follows:-

Description	Schedule	Expected date
Hornet System Gauging Equipment Calibration		
Hoist Cable	Yearly physical calibration	30 November 2012
Traveller Cable	Yearly physical calibration	30 November 2012
Current meter	Yearly Calibration	30 April 2012
Maintenance of Hornet System Gauging Equipment		
Greasing of hoist gear system	Yearly	30 November 2012
Greasing main cable	Yearly	30 November 2012

3.4 Progress of real time monitoring system in the Golok River Basin and the joint website

The Malaysian side reported that the joint website has been improved by both sides by including additional information such as background, development and benefit of the Golok River Mouth Improvement Project, etc.

The Meeting agreed that:-

- (i) Permanent URL for the Joint website is: <http://h2o.water.gov.my/golok/main.html>
- (ii) Host for joint website: Water Resources Management and Hydrology Division, DID Malaysia
- (iii) The Joint website should be linked to the main page of the Departments of both countries.

3.5 Rehabilitation program of Transit Point B

The JET reported that Thai side agreed that the rehabilitation works by Malaysian side is considered as a minor repair subjecting to the Memorandum of Understanding between the two countries on the Construction and Maintenance of the Lighthouse and Transit Mark. Thai authority (Hydrographic Department, Royal Navy, Thailand) will be involved throughout the implementation of the rehabilitation works.

The Malaysian side notifies that a contractor has been appointed to carry out the rehabilitation works of Transit Point B in March 2012 and the rehabilitation works are in progress.

AGENDA 4: MATTERS FOR CONSIDERATION

4.1 Joint Hydraulic Modeling Studies

The joint hydraulic modeling studies to be carried out are:-

- (a) Joint Study on Coastal Flooding at Golok River Mouth (by Malaysian side)
- (b) Joint Hydraulic Model on The Assessment of The Golok River Mouth Improvement along Coastal Areas (by Thai side)

The Meeting agreed that the proposed scope of the survey works by both sides shall be as in Appendix D. The survey works should refer to the same datum and benchmark, and the cross section of bathymetric survey (river/offshore survey) should connect with the topographic survey (inland survey) at each interval. The Meeting also agreed that the survey shall include witnesses from both sides at common areas and the survey data will be shared by both parties.

The field survey is expected to be completed by September 2012 and the results will be used in the joint hydraulic studies to analyze the river flow, sedimentation and erosion phenomenon in Golok river mouth. The problem solving will be determined based on the joint study using the field survey result to maintain the depth and direction of the navigation channel as soon as the field survey is completed. The Meeting agreed that the joint hydraulic studies should be carried out at the same time which is by November 2012, in order to:-

- (i) To exchange information and techniques by both sides;
- (ii) To confirm and obtain the acceptable results of the studies by both sides.

4.2 Matters to be referred to the JSC Meeting

Matters for Information

- (1) Report of monitoring and evaluation of Golok River Mouth
- (2) Proposed maintenance dredging of Golok River Mouth
- (3) Cableway station across the Golok River
- (4) Progress of real time monitoring system in the Golok River Basin and the joint website
- (5) Rehabilitation program of Transit Point B
- (6) Joint Hydraulic Modeling Studies:-
 - a) Joint study on Coastal Flooding at Golok River Mouth
 - b) Joint Hydraulic Model on the Assessment of the Golok River Mouth Improvement along Coastal Areas

AGENDA 5: OTHER MATTERS

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

Date: May / June 2013
Venue: Hua Hin, Thailand

AGENDA 6: ADOPTION OF REPORT OF THE MEETING

The meeting agreed to adopt the minutes of meeting of the Thirtieth Meeting of Malaysia – Thailand Joint Technical Working Group on the Golok River Mouth Improvement Project.



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



(Mr. Chachawal Punyavateenun)
Co-Chairman
Joint Technical Working Group
Deputy Director General
(Engineering)
Royal Irrigation Department
Thailand

List of Delegates
30th Meeting Of Malaysia – Thailand
Joint Technical Working Group
on the Golok River Mouth Improvement Project
5 – 6 June 2012
Genting Highlands, Pahang, Malaysia

MALAYSIAN DELEGATES

- | | | |
|-----|---|--|
| 1. | Dato' Ir. Nordin bin Hamdan | Deputy Director General (Business Sector)
Department of Irrigation and Drainage Malaysia |
| 2. | Dato' Ir. Lim Chow Hock | Director
River Basin and Coastal Zone Management
Department of Irrigation and Drainage Malaysia |
| 3. | Ir. C. Poobalan | Senior Deputy Director
River Basin and Coastal Zone Management
Department of Irrigation and Drainage Malaysia |
| 4. | Ir. Hanapi bin Mohamad Noor | Director,
Water Resources Management and Hydrology
Department of Irrigation and Drainage Malaysia |
| 5. | Mr. Baba Hasan | Under Secretary
Water Resources, Drainage and Hydrology Division
Ministry of Natural Resources and Environment |
| 6. | Mr. Mohd Sor bin Othman | Senior Engineer
River Basin and Coastal Zone Management
Department of Irrigation and Drainage Malaysia |
| 7. | Ir. Hapida binti Ghazali | Senior Engineer
Water Resources Management and Hydrology
Department of Irrigation and Drainage Malaysia |
| 8. | Mrs. Noor Hanisah binti Wok | Project Engineer
Department of Irrigation and Drainage Malaysia |
| 9. | Mr. Zulkifli bin Sidek | Senior Engineer
Department of Irrigation and Drainage Kelantan |
| 10. | Mr. Idris Bin Anuttullah | Marine Officer
Marine Department Malaysia |
| 11. | Mr. Mustaffa bin Shahim | Assistant Director
Boundary Affair Section
Survey and Mapping Department Malaysia |
| 12. | Mr. Wan Zulfadhli Syahman bin Wan Yusof | Assistant Director (Development)
Economic Planning Unit of Kelantan |

List of Delegates
30th Meeting Of Malaysia – Thailand
Joint Technical Working Group
on the Golok River Mouth Improvement Project
5 – 6 June 2012
Genting Highlands, Pahang, Malaysia

- | | | |
|-----|-----------------------------|---|
| 13. | Mr. Zainal bin Abdul Rahman | Senior Assistant Director
Technical Division,
Implementation Coordination Unit,
Prime Minister's Department Malaysia |
| 14. | Ms. Carine Wong Koh Yin | Engineer
River Basin and Coastal Zone Management
Department of Irrigation and Drainage Malaysia |
| 15. | Ms. Aisyah Sakina Ahmad | Engineer
River Basin and Coastal Zone Management
Department of Irrigation and Drainage Malaysia |

SECRETARIAT TEAM

- | | | |
|-----|----------------------------------|---|
| 16. | Mr. Ahmad Ikhwan bin Abdul Wahid | Engineer
River Basin and Coastal Zone Management
Department of Irrigation and Drainage Malaysia |
| 17. | Mr. Mohd Eizam bin Yusof | Engineer
River Basin and Coastal Zone Management
Department of Irrigation and Drainage Malaysia |

List of Delegates
30th Meeting Of Malaysia – Thailand
Joint Technical Working Group
on the Golok River Mouth Improvement Project
5 – 6 June 2012
Genting Highlands, Pahang, Malaysia

THAI DELEGATES

- | | | |
|-----|-------------------------------|---|
| 1. | Mr. Chachawal Punyavateenun | Deputy Director General
Royal Irrigation Department Thailand |
| 2. | Mr. Somkiat Prajamwong | Director
Office of Project Management
Royal Irrigation Department Thailand |
| 3. | Mr. Supachai Roongsri | Director
Office of Research and Development
Royal Irrigation Department Thailand |
| 4. | Mr. Thongplew Kongjun | Director
Office of Water Management and Hydrology
Royal Irrigation Department Thailand |
| 5. | Mr. Sawai Sathienpitak | Director
Operation and Maintenance Division
Regional Irrigation Office 17
Royal Irrigation Department Thailand |
| 6. | Ms. Thayida Siritreeratormong | Chief of Foreign Activity Coordinating Branch
Office of Project Management
Royal Irrigation Department Thailand |
| 7. | Mr. Chaiwat Chantawee | Civil Engineer, Professional Level
Office of Project Management
Royal Irrigation Department Thailand |
| 8. | Mr. Attapan Diloksopon | Civil Engineer, Professional Level
Office of Project Management
Royal Irrigation Department Thailand |
| 9. | Mr. Rojawat Inthoong | Irrigation Engineer, Professional Level
Special Affairs Division
Royal Irrigation Department Thailand |
| 10. | Capt. Sanit Gansungnoen | Deputy Director
Oceanographic Division, Royal Thai Navy |
| 11. | Lt. Banpoth Ujjin | First Secretary
Boundary Division,
Ministry of Foreign Affairs Thailand |

List of Delegates
30th Meeting Of Malaysia – Thailand
Joint Technical Working Group
on the Golok River Mouth Improvement Project
5 – 6 June 2012
Genting Highlands, Pahang, Malaysia

- | | | |
|-----|----------------------------------|--|
| 12. | Mr. Attaporn Wonglimaswat | Senior Surveyor
Marine Department Thailand |
| 13. | Col. Pasakorn Taweeta | Deputy Director
Civil Affairs Division, Royal Thai Army |
| 14. | Mrs. Sineenart Khovitoonkij | Policy and Plan Analyst, Professional Level
Ministry of Agriculture and Cooperatives Thailand |
| 15. | Ms. Chatchaya Chotthanatiradetch | Ministry of Agriculture and Cooperatives Thailand |
| 16. | Mr. Mit Bunchan | Irrigation Engineer
Regional Irrigation Office 17,
Royal Irrigation Department Thailand |

Agenda
30th Meeting Of Malaysia – Thailand
Joint Technical Working Group
on the Golok River Mouth Improvement Project
5 – 6 June 2012
Genting Highlands, Pahang, Malaysia

5 – 6 June 2012

Agenda 1 Opening Sessions

Agenda 2 Adoption of Agenda

Agenda 3 Matters for Information

- 3.1 Report of monitoring and evaluation of Golok River Mouth
- 3.2 Proposed maintenance dredging of Golok River Mouth
- 3.3 Cableway station across the Golok River
- 3.4 Progress of real time monitoring system in the Golok River Basin and the joint website
- 3.5 Rehabilitation program of Transit Point B

Agenda 4 Matters for Consideration

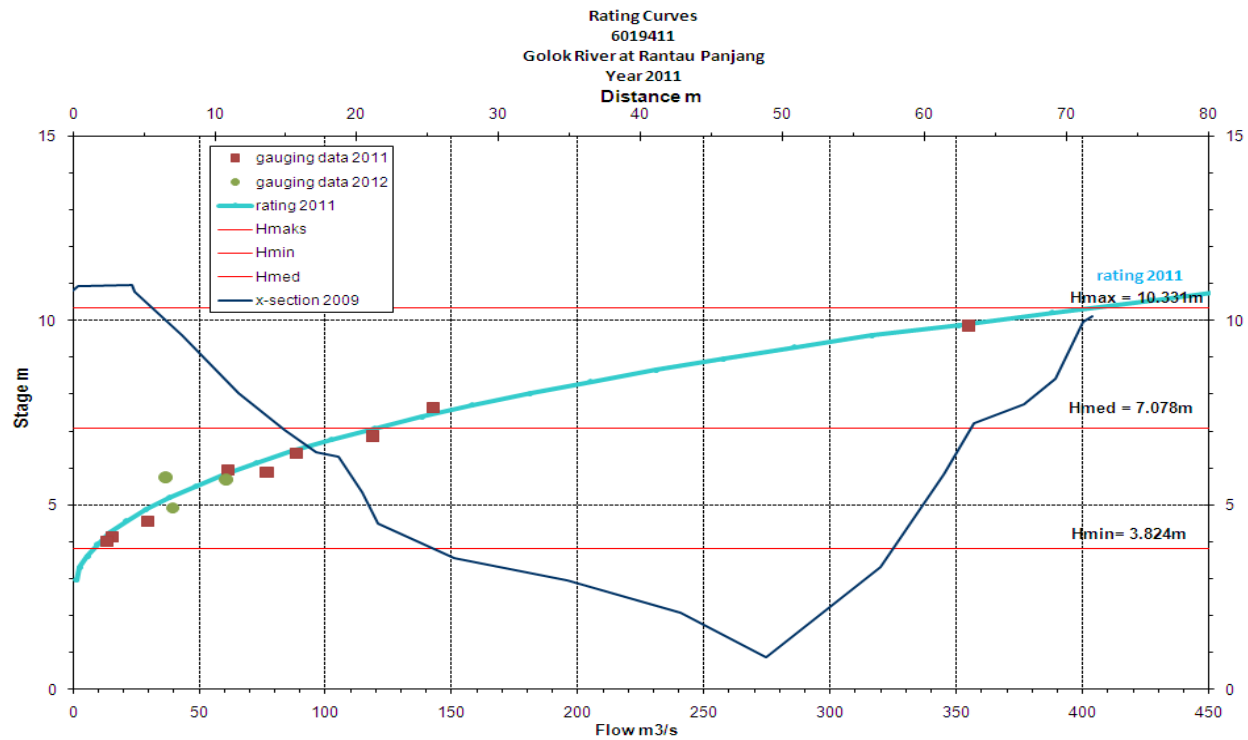
- 4.1 Joint hydraulic Modeling Studies
 - (a) Joint Study on Coastal Flooding at Golok River Mouth
 - (b) Joint Hydraulic Model on the Assessment of the Golok River Mouth Improvement along Coastal Areas
- 4.2 Matters to be referred to the JSC

Agenda 5 Other matters

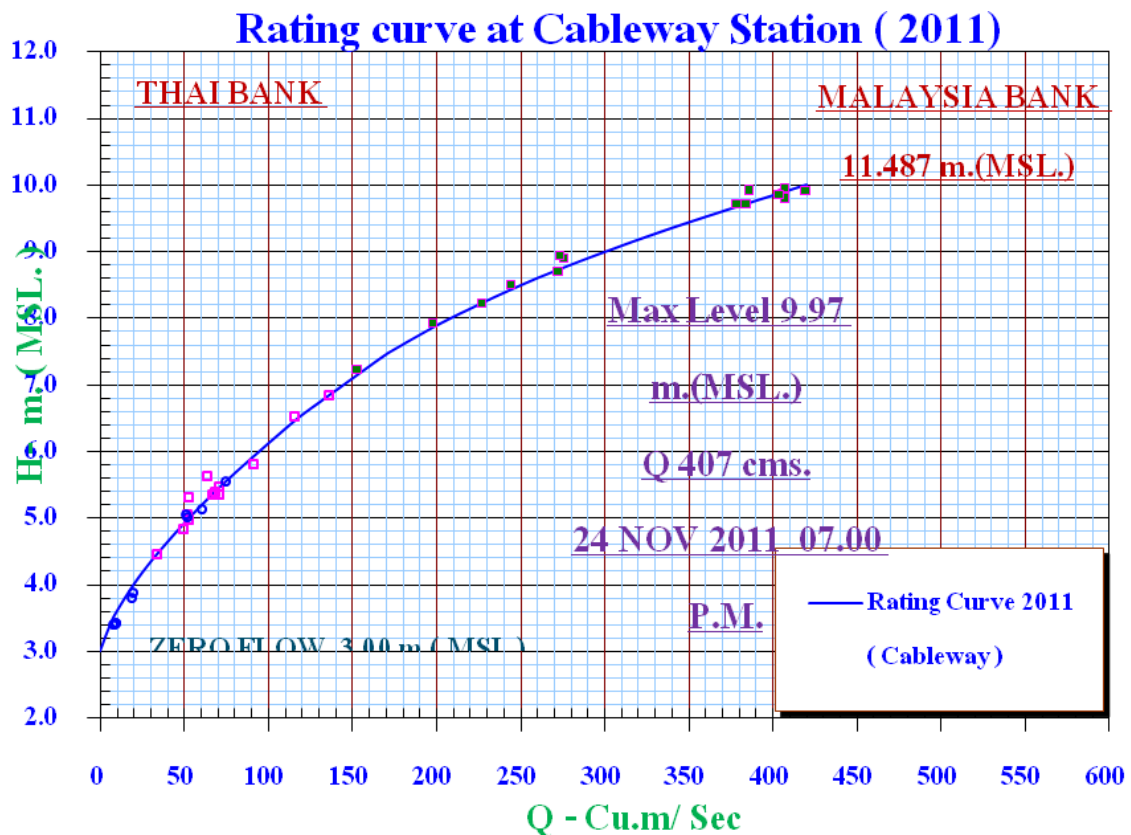
Agenda 6 Adoption of Report of the Meeting

**RATING CURVE FOR GOLOK RIVER AT
CABLEWAY STATION
RANTAU PANJANG / X.119A**

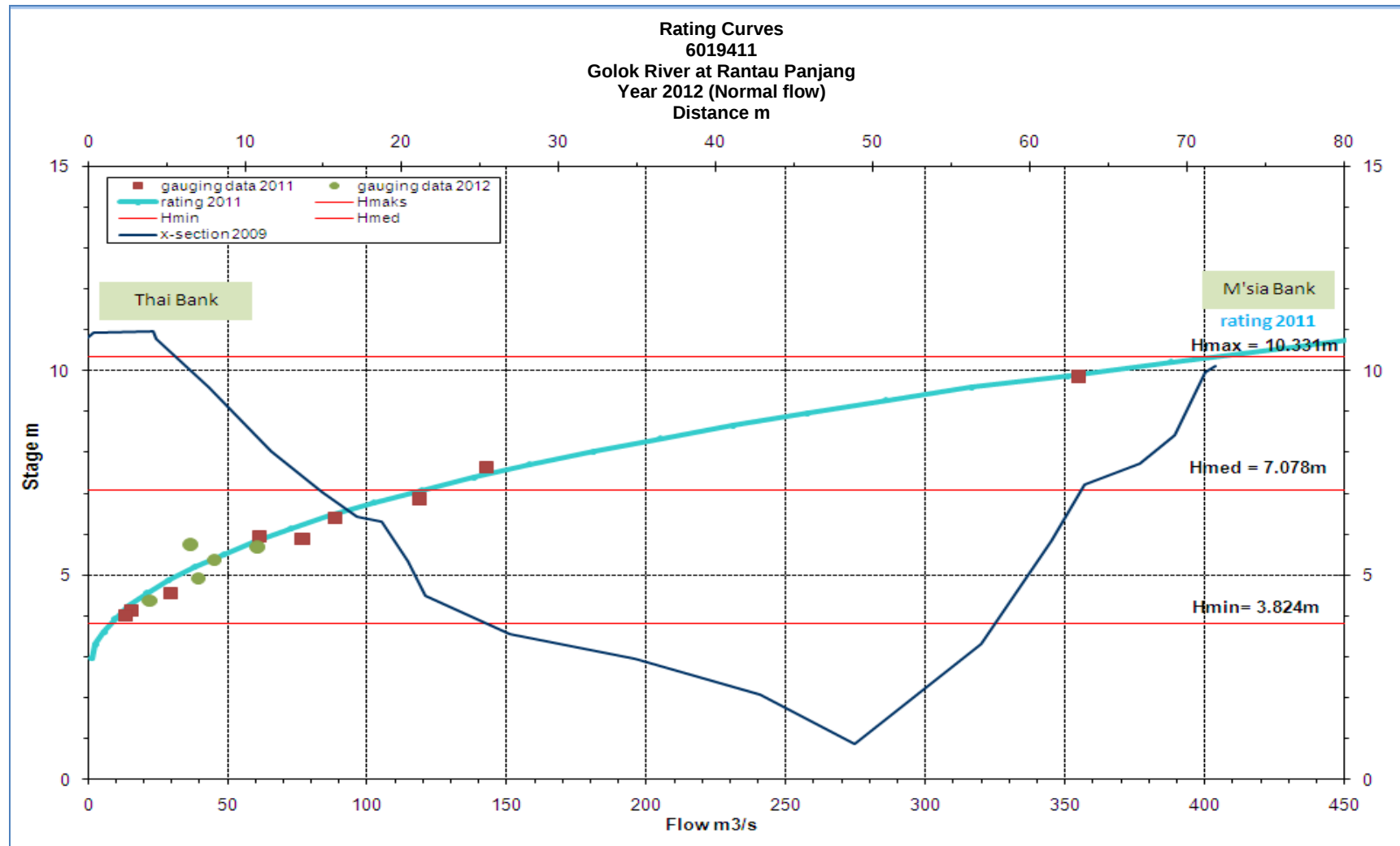
Rating Curve for Golok River at Cableway Station Rantau Panjang (2011)



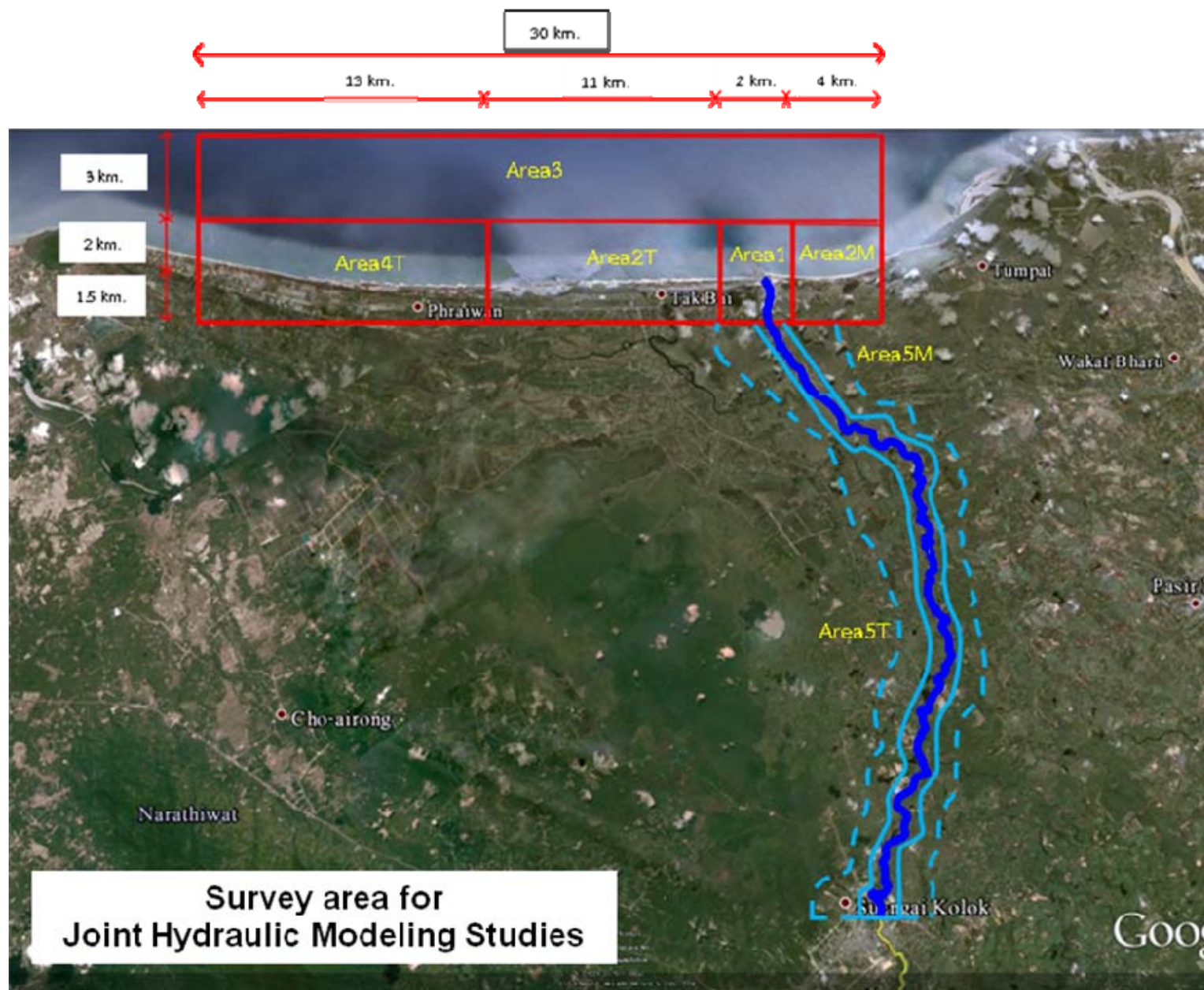
Rating Curve for Golok River at Cableway Station X.119A (2011)



Rating Curve for Golok River at Cableway Station Rantau Panjang / X.119A (2012 – Normal flow)



PROPOSED SURVEY AREA FOR JOINT HYDRAULIC MODELING STUDIES



AREA	SURVEY AREA	AGREED BY JTWG (*survey with witness of other side at common area)
AREA 1	Location: At The River Mouth. 1) Bathymetric Survey (2km width; 2km to the sea, including tak bai lagoon) with 50m interval to be carried out. 2) Topographic Survey To Be Extended At Least 1.5km Inland From Coastline. 3) Soil grab samples: 5 nos. in the sea and 4 nos. in the river to be taken along river centre line at 500m interval	(i) Bathymetric and topographic survey at Area 1 (except Tak Bai Lagoon and Thai inland) to be surveyed by M'SIAN SIDE. (ii) Bathymetric (Tak Bai Lagoon) and topographic survey at Thai side to be surveyed by THAI SIDE. (iii) Soil grab samples to be taken by M'SIAN SIDE.
AREA 2	Location: 4km width extended from the edge of Area 1 for both M'SIAN SIDE (Area 2M) and 11km width extended from the edge of Area 1 for THAI SIDE (Area 2T). 4) Bathymetric survey (4km width (Area 2M) and 11km width (Area 2T); 2km to the sea, including Tak Bai Lagoon) with 50m interval to be carried out. 5) Topographic survey to be extended at least 1.5km inland from coastline. 6) Soil grab samples: 20 nos. in the sea and 2 nos. in the Tak Bai Lagoon	(i) Bathymetric and topographic survey at Area 2M to be surveyed by M'SIAN SIDE. (ii) Bathymetric and topographic survey at Area 2T to be surveyed by THAI SIDE. (iii) 20 nos. of soil grab samples in the sea (Area 2M & 2T) to be taken by M'SIAN SIDE**. (iv) 2 nos. of soil grab samples in Tak Bai Lagoon to be taken by M'SIAN SIDE**. <u>**Note:</u> 1. The Meeting agreed that survey at each country boundary to be surveyed by each side. 2. The Meeting agreed that soil grab samples shall be carried out by Malaysian side as works carried out separately will involved higher cost (such as double costing for mobilization and demobilization).
AREA 3	Location: 3km extended to the sea from edge of Area 1 & 2 (Area 3). Secondary data of Bathymetric chart (10km width; 5km extended to the sea from edge of Area 1 & 2).	Use available bathymetry chart MAL664 (Edition of 31 Oct 2006) and MAL673 (Edition of 1 Apr 2003) by M'SIAN SIDE. Note: Use latest bathymetry chart available as Thai side's available bathymetry chart is edition of Nov 2002.
AREA 4	Location: The length of shoreline area in Thai side will cover up to 5 km from the last groyne. (Area 4T)	Bathymetric and topographic survey at Area 4T to be surveyed by THAI SIDE.

	1) Bathymetric survey (at least 13 km width; 2km to the sea, including Tak Bai Lagoon) with 50m interval to be carried out. 2) Topographic survey to be extended at least 1.5km inland from coastline with 0.5m contour line to be carried out.	
AREA 5	Location: Survey areas of the upstream boundary should cover from river mouth up to the cableway station of Rantau Panjang station or X119A station. 1) River cross section survey (up to 100m from river bank): - For first 0.7km of from the rivermouth, river cross section survey with 25m interval (spacing) shall be carried out. - For the next 3.5km, river cross section survey with 200m interval (spacing) shall be carried out. - For the remaining length, river cross section survey with 1km interval (spacing) shall be carried out. 2) Major tributaries of both sides along Golok river will be surveyed up to the length of 1 km from their confluences. 3) Soil grab samples: 4 nos. in the river to be taken along river centre line. Location: Flooded prone areas / retarding ponds of both sides along Golok river (extended from 100m of river banks as specified in Area 5) 4) Topographic survey (scale 1:10,000) with 1m contour line to be carried out extended from 100m from river banks to the flooded prone areas	(i) River cross section survey (Inland) to be surveyed by each side. (ii) River cross section survey for the first 5km to be surveyed by M'SIAN SIDE. (iii) River cross section survey for the remaining length to be surveyed by THAI SIDE. (iv) Major tributaries of both sides along Golok river will be surveyed upto the length of 1 km from their confluences by each side. (v) Soil grab samples to be taken by M'SIAN SIDE. (vi) Topographic survey at Area 5M to be surveyed by M'SIAN SIDE. (vii) Topographic survey at Area 5T to be surveyed by THAI SIDE.