Minutes of Meeting

# The 20th Meeting of Thailand - Malaysia Joint Evaluation Team on Golok River Mouth Improvement Project

16 – 17 January 2012
Mae Hong Son, Thailand

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## AGENDA 1: OPENING ADDRESSES

Mr. Somkiat Prajamwong, the leader of Thai Delegation welcomed the Malaysian Delegation to the Twentieth Meeting of the Joint Evaluation Team (JET) on the Golok River Mouth Improvement Project on 16 – 17 January 2012 in Mae Hong Son, Thailand. Dato' Ir. Lim Chow Hock, the leader of the Malaysian 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. The Meeting agreed to rearrange the order of the agenda according to discussion order. The adopted agenda is shown in Appendix B.

## AGENDA 2: MATTERS FOR CONSIDERATION

### 2.1 Report of Monitoring and Evaluation of Golok River Mouth

The pre-monsoon survey for the 2011/2012 monsoon season was carried out by the Thailand side in October 2011 and the survey plan is as shown in Appendix C. In this survey, Thai side, according the agreement in previous JET Meeting, had extended the survey area covering the some groynes in the Thai side and extended contour interval from 1 meter interval to 0.20 meter interval.

Based on this pre-monsoon survey, the Thailand side reported that there was less sedimentation and the river mouth was observed partially opened in comparison to the post-monsoon survey in June 2011 of which river mouth was fully blocked.

The meeting discussed that during pre-monsoon period, normally it was at low flow condition and the river mouth should be with more sediment.

The significant result of post monsoon 2010 (June 2011) and pre monsoon 2011 (October 2011) will be discussed in detail in next agenda.

For the full river mouth blockage in last post monsoon survey in June 2011, it was

noticed that the last post-monsoon survey had been carried out in June 2011 which is about 2-3 months later whereas the actual post monsoon period should be in March. Therefore it might be sedimentation accumulated in those 2-3 months later.

The Meeting agreed that further pre- and post-monsoon surveys should be carried out by 0.20 meter contour interval, present drawing in same colors of contour lines for consistency and the survey period of pre- and post-monsoon should be conformed in October and March respectively.

### 2.2 Proposed Maintenance Dredging of Golok River Mouth

From the result of pre-monsoon Survey in October 2011, the river mouth was partially opened, therefore the maintenance dredging is not necessary at present but there is a need to focus on the monitoring surveys of cross section, river discharges and rainfall of Golok basin to understand this relationship. It could also be good basic reference for joint studies in future.

As river mouth is flushed over during non-monsoon period, probably, there is significant rainfall and river flow in Golok river that could flush over the river mouth blockage during non-monsoon season. Therefore, Thai side has investigated in rainfall data during non monsoon period. It was found that from accumulated monthly rainfall, averaged from 7 stations in Thai sub-basins (March to October 2011, which is non-monsoon period) showed the highest values compared to all recording years in the past. (Detail as shown in Appendix D). This highest rainfall and the resultant flow could contribute to opening of river mouth in non-monsoon period.

From long term data it was found that some significant high river discharges could open the river mouth during monsoon season. This phenomena should be investigated in more details. Rainfall stations in Malaysia sub-basin should be investigated for mutual discussion for next meeting.

The meeting discussed that all rainfall stations measured in Golok basin of both sides and their Theissen polygons related to catchment areas of each water level / discharge measurement station in Golok river should be brought for further investigation in detail. For next meeting, the hydrological information for the whole basin could be further shared in the Joint website.

### 2.3 Cableway Stations across Golok River

Since the cableway stations of both sides were officially opened in February 2011, there

have been some activities as follows:-

Thai side carried out new rating curve in November 2011. The new rating curve provides slightly more discharge for the same river depth. Mutual calibration of measuring devices was carried out on 28 December 2011 by both sides with the presence of technical support of consultant. It was found that the spinning rates of devices of both sides were quite the same rates and both were in good condition. The reading of flow areas and velocities were read by Hornet devices of both sides and then be compared to readings by Rivercad equipment of Thai side. The results showed that river discharge rates were about 1-8% difference. Velocities readings were quite similar even by different methods (2 readings / section in Malaysia side and 4 readings / section by Thai side) while area readings were quite different.

The meeting discussed that both stations should have the same rating curves and discharge readings. Therefore, it was proposed that there should be mutual calibrations of rating curves 3 times a year during low, normal and high flow conditions. Two readings from both sides should be adjusted and agreed to establish one rating curve. For the difference in area reading, flow areas are calculated manually by Thai side and automatically from the device by Malaysia side which will include adjusting factors for depth reading according depth deviation sag by gravity of cable line. The meeting also agreed that both sides should adopt the same criteria, that two velocity readings are required for low flow (less than 1 meter depth) and four readings for normal and high flows. The software for the same criteria in velocity readings, depth deviation sag adjusting and discharge calculation should be revised and installed for both sides' Hornet devices.

Next mutual calibration should be carried out during February 2012 for high flow condition and periods for next two other mutual calibrations should be planned and carried out by hydrological authorities of both sides. Both sides should share the joint website to the public by linking this joint website to their department's websites. Web masters from both sides may join the next JET meeting to make enhancement of the website.

### 2.4 Progress on Real Time Monitoring System in the Golok River Basin and the Joint Website

The Thai side has improved the Thai website by giving new and direct URL and all is translated into English and is ready to be linked to the Joint website.

The Meeting agreed that the websites of each side should move to permanent URL to the linkage in the Joint website. The Joint website should be linked to main page of the Departments of both countries.

At present, the Joint website includes the background, development and benefit of the Golok River Mouth Improvement Project (information from Booklet in the opening ceremony of Cableway stations). The dynamic data includes water level / discharge of Golok river by 3 stations of Thailand and 2 stations of Malaysia. For detail information, the Joint Website will provide linkage to each side's website.

For future, additional data such as rainfall stations and other water level / discharge stations of the whole Golok river basin will be provided in the Joint website.

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**2.5 Rehabilitation of Transit Point B**

The Thai side reported that Malaysia side sent tender drawings and specification of rehabilitation of Transit Point B to Thai side on January 2012. Thai side is preparing letter to inform related agencies on this program.

The meeting discussed that more information on tentative rehabilitation period should be informed as well. The Malaysia side informed that rehabilitation shall start in early March and rehabilitation period is about 20 weeks. Apart from tender drawings, Thai side asked the Malaysia side to give summary of rehabilitation activities. The Malaysia side informed that this summary and detail work plan maybe available in detail by the end of January 2012 and will be submitted to Thai side not later than mid of February 2012 in order to inform to related agencies of Thai side. In addition, to keep same procedure as pre and post monsoon surveys, this rehabilitation by Malaysia should include Thai authorities as witness.

**2.6 Joint Hydraulic Modelling Studies**

As objectives and scope of work are already agreed. The Meeting discussed in principle of scope of survey area. For the shoreline survey which will be used for both studies will be carried out by both sides. Each side will survey the shore line Area 2 of each country and the common shore line area (Area 1) at of river mouth will be carried out by Malaysia side with the witness of Thai side during survey. The length of shoreline area in Thai side will cover up to 2 km from the last groyne and 5 km in Malaysia side from the Malaysia Breakwater with the width of survey area 2 km from shoreline with 50 m interval and further area of 3 km with 500 m interval will be surveyed if necessary in

case there is no secondary data. For the inland areas upstream of shoreline should be surveyed by each side.

For the survey areas of the Golok river, the Meeting agreed that the upstream boundary should cover from river mouth up to the cableway station of Rantau Panjang station or X119A station. For the width of survey area, it should cover some distant extended from river banks, in 1 km interval by Thai side with the witness of Malaysian side during the survey. Malaysia side will carry out additional surveys if necessary.

For survey by each side, there are the areas as follows:

- Major tributaries of both sides along Golok river will be surveyed upto the length of 1 km from their confluences by each side.
- Flooded prone areas / retarding ponds of both sides along Golok river will be surveyed by each side.

The Meeting agreed that these survey data will all be shared by both sides. More detail will be discussed in next JET meeting and proposed to the next JTWG meeting for endorsement. The Meeting also agreed that the surveys of both sides should be carried out not later than October 2012 to provide data for both Joint Studies that shall be carried out after October 2012.

The Meeting agreed to the proposed mutual cooperation on flood forecasting and warning system. Therefore, the Meeting agreed to propose the new agenda.

### 2.7 Matters to be referred to the JTWG Meeting

Matters for Information

(a) Report of monitoring and evaluation of Golok River Mouth
(b) Proposed maintenance dredging of Golok River Mouth
(c) Cableway station across the Golok River
(d) Progress of real time monitoring system in the Golok River Basin and the joint website
(e) Rehabilitation program of Transit Point B

Matters for Consideration

(a) Joint Hydraulic Modeling Studies
    (i) Joint study on Coastal Flooding at Golok River Mouth
    (ii) Joint Hydraulic Model on the Assessment of the Golok River Mouth Improvement along Coastal Areas.
(b) Proposed flood forecasting and warning system of the Golok River Basin

**AGENDA 3: OTHER MATTERS**

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

Date: May / June 2012

Venue: Kota Kinabalu, Sabah, Malaysia

**AGENDA 4: ADOPTION OF MINUTES OF THE MEETING**

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

(Mr. Somkiat Prajamwong)
Co-chairman
Joint Evaluation Team, Thailand

(Dato' Ir. Lim Chow Hock)
Co-Chairman
Joint Evaluation Team, Malaysia

# Attendance List
# 20th Meeting of Thailand – Malaysia Joint Evaluation Team on the Golok River Mouth Improvement Project

16 – 17 January 2012
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**MALAYSIAN DELEGATES**

| | | |
|---|---|---|
| 1. | Dato' Ir. Lim Chow Hock | Director<br>River Basin and Coastal Zone Management<br>Department of Irrigation and Drainage Malaysia |
| 2. | Tn. Hj. Azmi bin Md. Jafri | Deputy Director<br>Water Resources Management and Hydrology<br>Department of Irrigation and Drainage Malaysia |
| 3. | Mr. Mat Rahim bin Ismail | Director<br>Department of Irrigation and Drainage Kelantan |
| 4. | Pn. Noor Hanisah binti Wok | Project Engineer<br>Department of Irrigation and Drainage Malaysia |
| 5. | Ms. Carine Wong Koh Yin | Engineer<br>River Basin and Coastal Zone Management<br>Department of Irrigation and Drainage Malaysia |
| 6. | Ms. Aisyah Sakina Ahmad | Engineer<br>River Basin and Coastal Zone Management<br>Department of Irrigation and Drainage Malaysia |

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**THAI DELEGATES**

| | | |
|---|---|---|
| 1. | Mr. Somkiat Prajamwong | Director<br>Office of Project Management<br>Royal Irrigation Department |
| 2. | Mr. Prinya Kamolsin | Expert on Irrigation<br>(Hydraulic Engineering)<br>Royal Irrigation Department |
| 3. | Mr. Chalermchai Treenarin | Director<br>Golok River Basin Operation and Maintenance Project<br>Regional Irrigation Office 17<br>Royal Irrigation Department |
| 4. | Mr. Somchai Imyoo | Director<br>Hydrology and Water Management Center for Southern Region<br>Office of Hydrology and Water Management<br>Royal Irrigation Department |
| 5. | Mr. Attaporn Wonglimaswat | Senior Surveyor<br>Survey and Engineering Bureau<br>Marine Department |
| 6. | Ms. Chawee Wongprasittiporn | Civil Engineer, Professional Level<br>Office of Project Management<br>Royal Irrigation Department |
| 7. | Mr. Attapan Diloksopon | Civil Engineer, Professional Level<br>Office of Project Management<br>Royal Irrigation Department |
| 8. | Mrs. Jittra Boonrod | Foreign Relations Officer, Profession Level<br>Office of Project Management<br>Royal Irrigation Department |

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**SECRETARAIT TEAM**

| | | |
|---|---|---|
| 1. | Ms. Thayida Siritreeratomrong | Chief of Foreign Activity Coordinating Branch<br>Office of Project Management<br>Royal Irrigation Department |
| 2. | Mr. Piriya Thumyago | Foreign Relations Officer, Practitioner Level<br>Office of Project Management<br>Royal Irrigation Department |

**IN ATTENDANCE**

| | | |
|---|---|---|
| 1. | Ms. Kanya Inkliang | Civil Engineer, Senior Level<br>Office of Research and Development<br>Royal Irrigation Department |
| 2. | Ms. Yukol Numas | Public Relations Officer, Professional Level<br>Public Relations and Information Group<br>Royal Irrigation Department |
| 3 | Mr. Jirat Laksanalamai | Civil Engineer<br>Marine Department |

**APPENDIX B**

**THE PROPOSED AGENDA**

AGENDA 1 OPENING SESSIONS

AGENDA 2 MATTERS ARISING

2.1 REPORT OF MONITORING AND EVALUATION OF GOLOK RIVER MOUTH

2.2 REHABILITATION PROGRAM OF TRANSIT POINT B

2.3 PROGRESS OF REAL TIME MONITORING SYSTEM IN THE GOLOK RIVER BASIN AND THE JOINT WEBSITE

2.4 CABLEWAY STATION ACROSS GOLOK RIVER

2.5 JOINT HYDRAULIC MODELING STUDIES :-

(I) JOINT STUDY ON COASTAL FLOODING AT GOLOK RIVER MOUTH

(II) JOINT HYDRAULIC MODEL ON THE ASSESSMENT OF THE GOLOK RIVER MOUTH IMPROVEMENT ALONG COASTAL AREAS

2.6 PROPOSED MAINTENANCE DREDGING OF GOLOK RIVER MOUTH

2.7 MATTERS TO BE REFERRED TO THE JTWG

AGENDA 3 OTHER MATTERS

AGENDA 4 ADOPTION OF MINUTES OF THE MEETING

**THE ADOPTED AGENDA**

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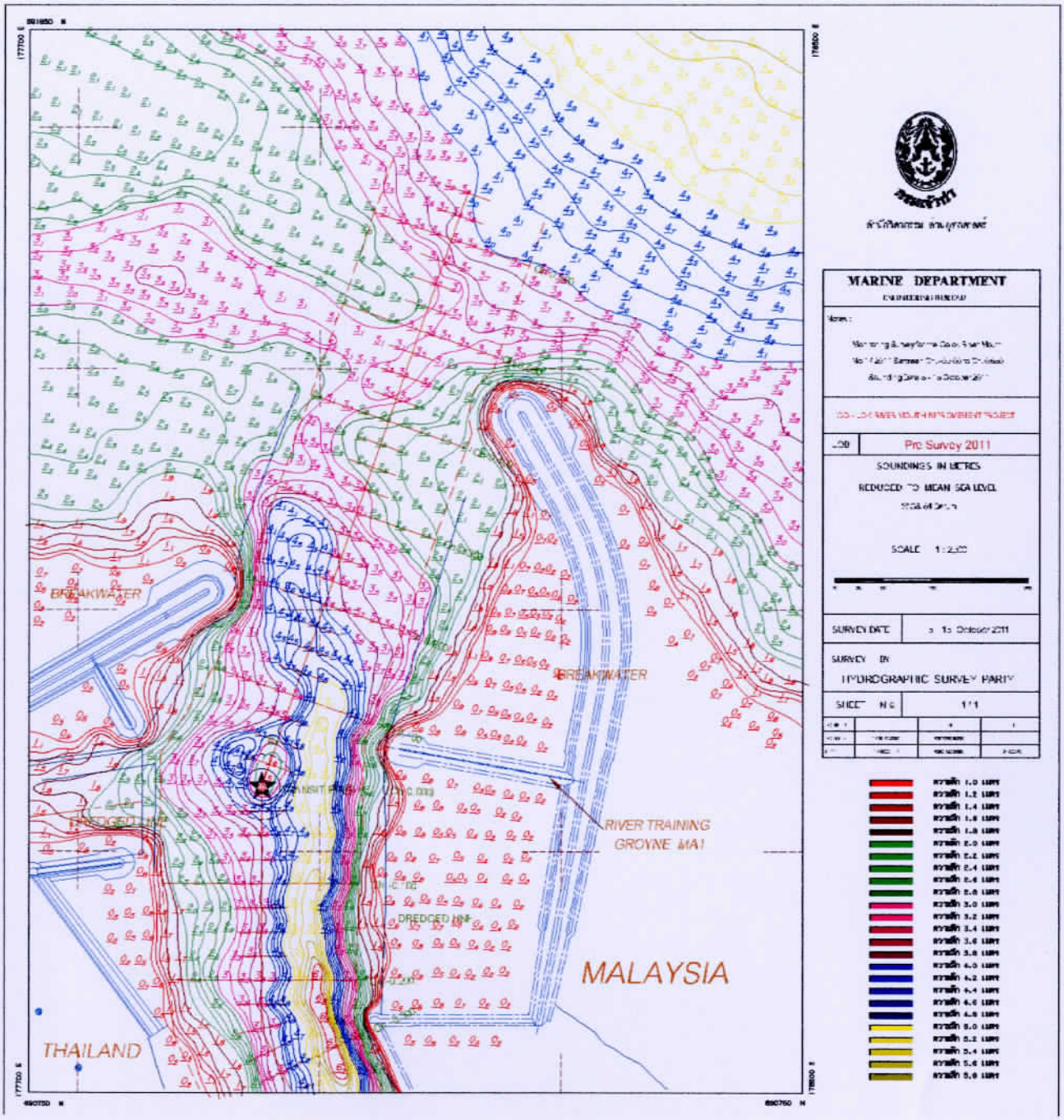
# PRE-MONSOON SURVEY (OCTOBER 2011)




MARINE DEPARTMENT

Pre Survey 2011

SOUNDINGS IN METRES

REDUCED TO MEAN SEA LEVEL

SCALE 1:2,500

SURVEY DATE : 1st October 2011

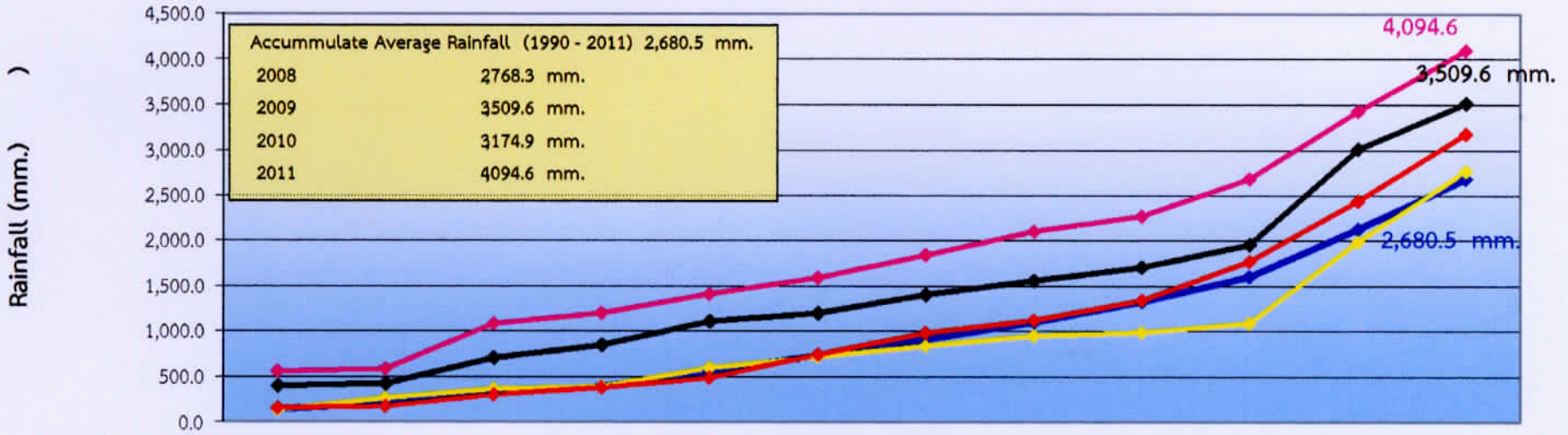
SURVEY BY

HYDROGRAPHIC SURVEY PARTY

SHEET NO. 1 / 1

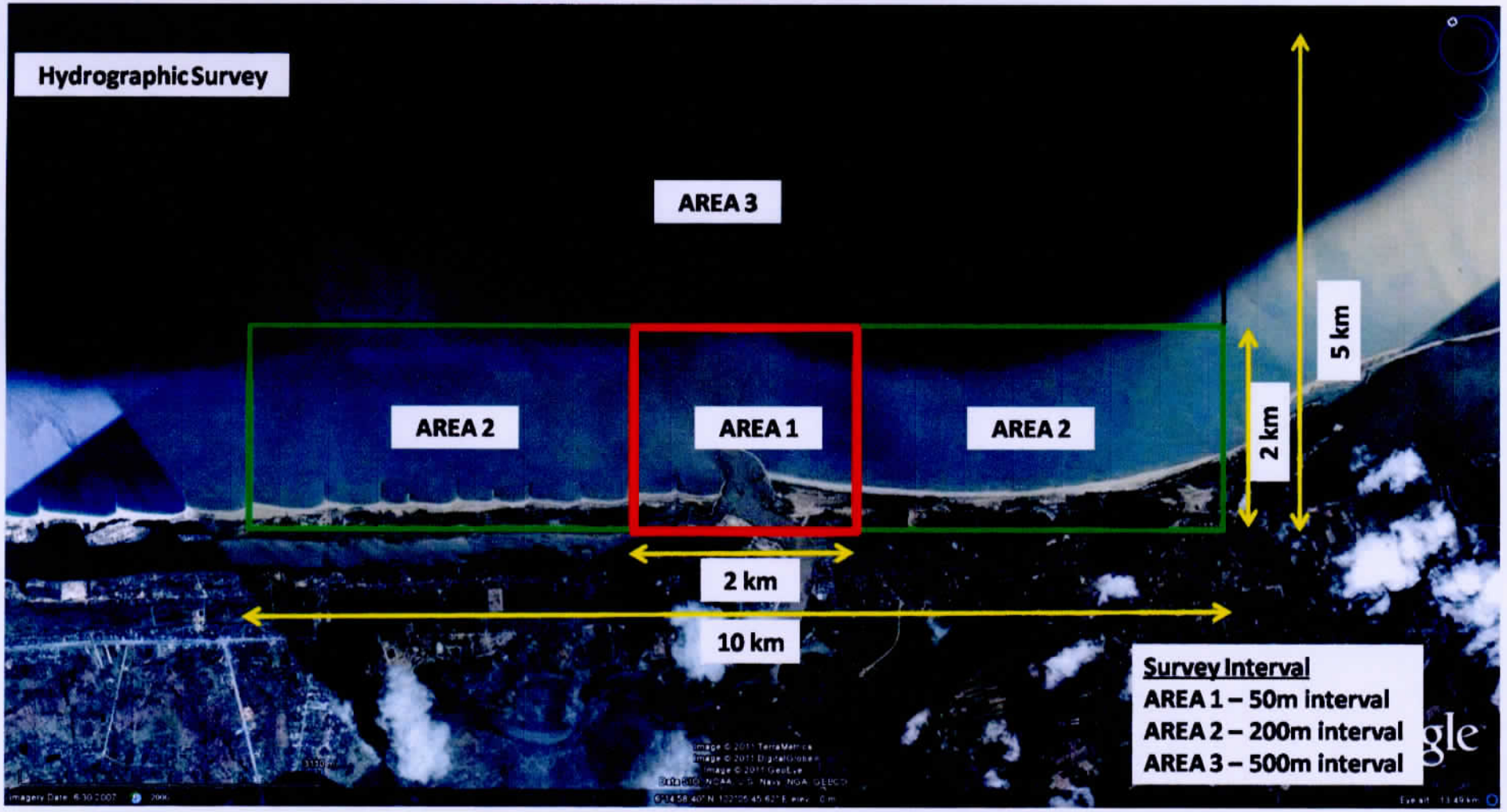
# GOLOK RIVER BASIN ACCUMULATE AVERAGE RAINFALL DATA

## Golok River Basin Accumulate Average Rainfall data




| Rainfall Data (7 Station) | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Avg. Railfall (21 Yr.) | 140.8 | 208.0 | 317.1 | 393.9 | 566.7 | 732.3 | 910.4 | 1,101.9 | 1,327.3 | 1,602.7 | 2,129.8 | 2,680.5 |
| Rain 2008 | 136.2 | 265.1 | 367.7 | 393.6 | 596.6 | 718.1 | 841.0 | 949.0 | 986.5 | 1,088.7 | 1,987.0 | 2,768.3 |
| Rain 2009 | 400.5 | 425.4 | 705.3 | 845.1 | 1,108.1 | 1,203.0 | 1,407.6 | 1,558.9 | 1,708.4 | 1,960.9 | 3,009.8 | 3,509.6 |
| Rain 2010 | 151.4 | 172.5 | 302.5 | 378.7 | 490.6 | 746.8 | 979.0 | 1,125.4 | 1,339.7 | 1,772.1 | 2,440.4 | 3,174.9 |
| Rain 2011 | 559.5 | 583.5 | 1,083.0 | 1,203.0 | 1,410.2 | 1,590.3 | 1,841.0 | 2,104.9 | 2,269.8 | 2,684.9 | 3,428.8 | 4,094.6 |

# PROPOSED SURVEY AT COASTAL AREA


Hydrographic Survey
AREA 3
AREA 2
AREA 1
AREA 2
5 km
2 km
2 km
10 km
Survey Interval
AREA 1 – 50m interval
AREA 2 – 200m interval
AREA 3 – 500m interval