

## CTCN assistance in Thailand

### Strengthening Bangkok's Early Warning System to respond to climate induced flooding



Deliverable 1 (Activity 1.1.) Inception workshop, Bangkok 6-7 October 2016 at BMA

Draft final 20<sup>th</sup> of November 2016

This report has been prepared under the DHI Business Management System certified by Bureau Veritas to comply with ISO 9001 (Quality Management)

ISO 9001  
Management System Certification

BUREAU VERITAS  
Certification Denmark A/S



Approved by

26-09-2017

**X** 

Approved by

Signed by: Henrik Garsdal



Content:

Agenda for Inception workshop

Detailed walk-through all activities

List of participants

## 1. AGENDA 6<sup>TH</sup> + 7<sup>TH</sup> 2016 OCT BMA

Welcome, presentation of participants

1. Overall timeline
2. Activity-by-activity
  - Input from BMA, DHI and potentially others
  - Resources
  - Deliverables
  - Time allocation and time plan
3. Project risks
4. Project management and communication

Activity	Month											
Month #	1	2	3	4	5	6	7	8	9	10	11	12
Month calendar	10/16	11/16	12/16	01/17	02/17	03/17	04/17	05/17	06/17	07/17	08/17	09/17
2 Technology												
2.1 Documentation of existing system												
2.2 Updated model												
2.3 Core data management system												
2.4 Web System												
2.5 M&E short report												

## 2. 2 Activity-by-activity

### TECHNOLOGY

#### 2.1 Existing system – sensors, data, SCADA, radar, responsibilities, workflow, alarms

Interview and documentation (BMA and DHI). Definition of IT architecture for warning system. Collection of historical data for model performance testing, rainfall, level and flood observations. Data also to be used for offline testing of web-system. Joint BMA and DHI activity, Report on status and conclusion on IT overall design. Oct-Dec 2016. Workshop Dec or Jan.

#### 2.2 Updated model

Latest model retrieved from AIT. Review of model (BMA, DHI), update and enhancement of model (BMA?, DHI), documentation (DHI), Dec 2016-March 2017

#### 2.3 Data management system

Configuration of data bases and data flow (BMA, DHI). Scheduled for Feb-May 2017, but could preferably be initiated sooner to get a stable installation.

#### 2.4 Web system

Layout and design (BMA, DHI), configuration (DHI), Feb-Aug 2017

Activity	Month											
Month #	1	2	3	4	5	6	7	8	9	10	11	12
Month calendar	10/16	11/16	12/16	01/17	02/17	03/17	04/17	05/17	06/17	07/17	08/17	09/17
3 Capacity Building												
3.1 On-the-job training												
3.2 Advanced training course												
3.3 M&E short report												

## CAPACITY BUILDING

### 3.1 On-the-job training

Ambition and resources allocated from BMA. Extends over the full length of the project.

### 3.2 Advanced training course

One week hands-on training with MIKE FLOOD. Scheduled for Feb 2017, but agreed it would be more appropriate to conduct in December 2016-

Activity	Month											
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4 Dissemination												
4.1 Dissemination workshop												
4.2 M&E Short report												

## DISSEMINATION

### 4.1 Dissemination workshop

Present and share project results and recommendations (BMA and DHI). Aug-Sept 2017



Activity	Month											
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5 Future												
5.1 Meeting and recommendations												
5.2 M&E short report												

## FUTURE

### 5.1 Meetings and recommendations

Interviews with authorities and management. Vision for BKK flood protection and management. Possible financial support instruments. BMA and DHI and other relevant agencies and authorities. July-Aug 2017

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1 Inception Workshop												
2 Technology												
3 Capacity Building												
4 Dissemination												
5 Future												

MILESTONE MEETINGS (Red lines, preliminary dates)

6-7 Oct – Inception workshop

Dec-Jan – Model status, IT and data flow, Preparation of Web

Mar-Apr - Final model, Web design, Preparation of Dissemination and Future activities

Jun-July – Demonstration of prototype, refinements

Aug-Sep – Dissemination and project completion

TRAINING COURSE (Green line)

### 3. Risks

- Identification of possible risks
- Mitigation

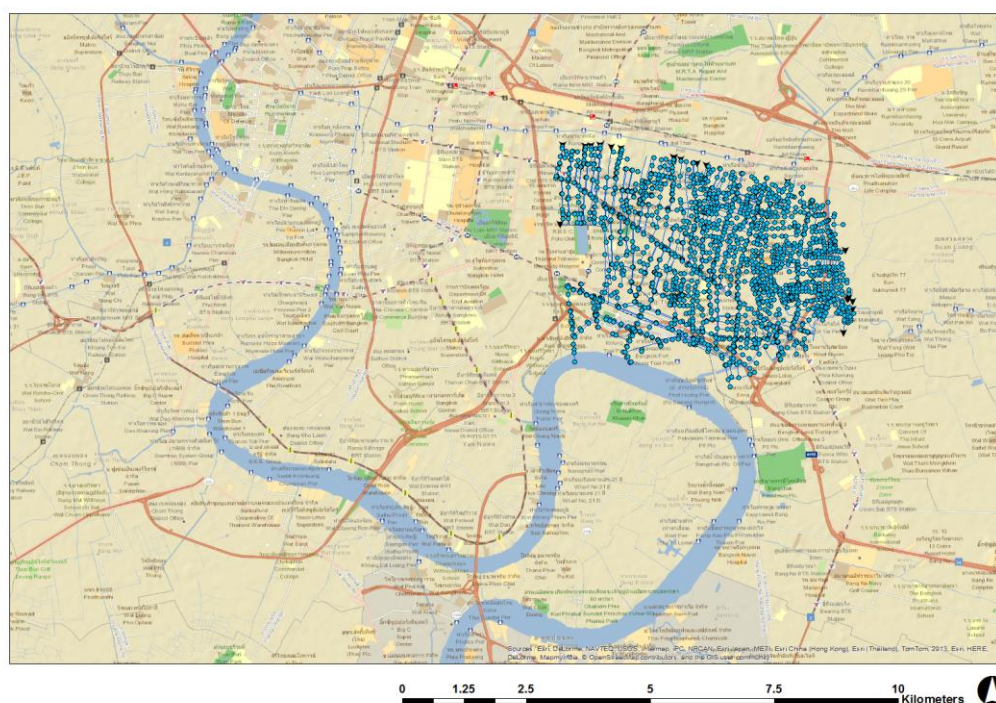
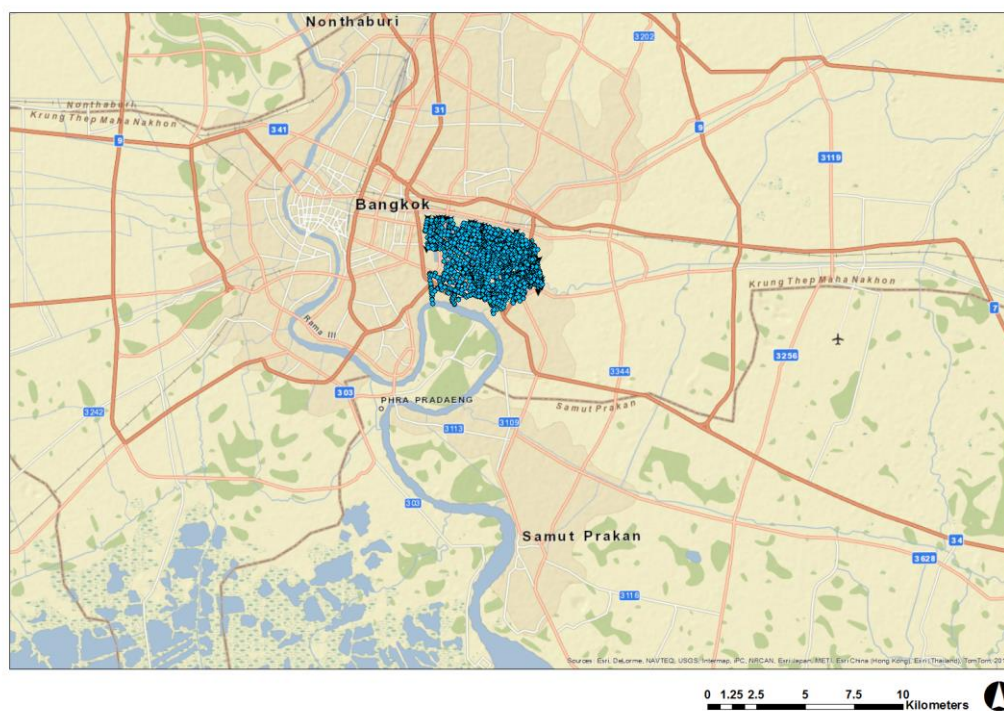
Risks:

- Model quality and performance
  - Advance the process and start earlier than planned
- Data quality and reliability
  - If possible make redundant systems
  - Initiate contact with HAI about radar data use
- System stability
- Acceptance within BMA, commitment and long-term sustainability
  - Early dialogue with top management
  - Demonstrate value for BMA

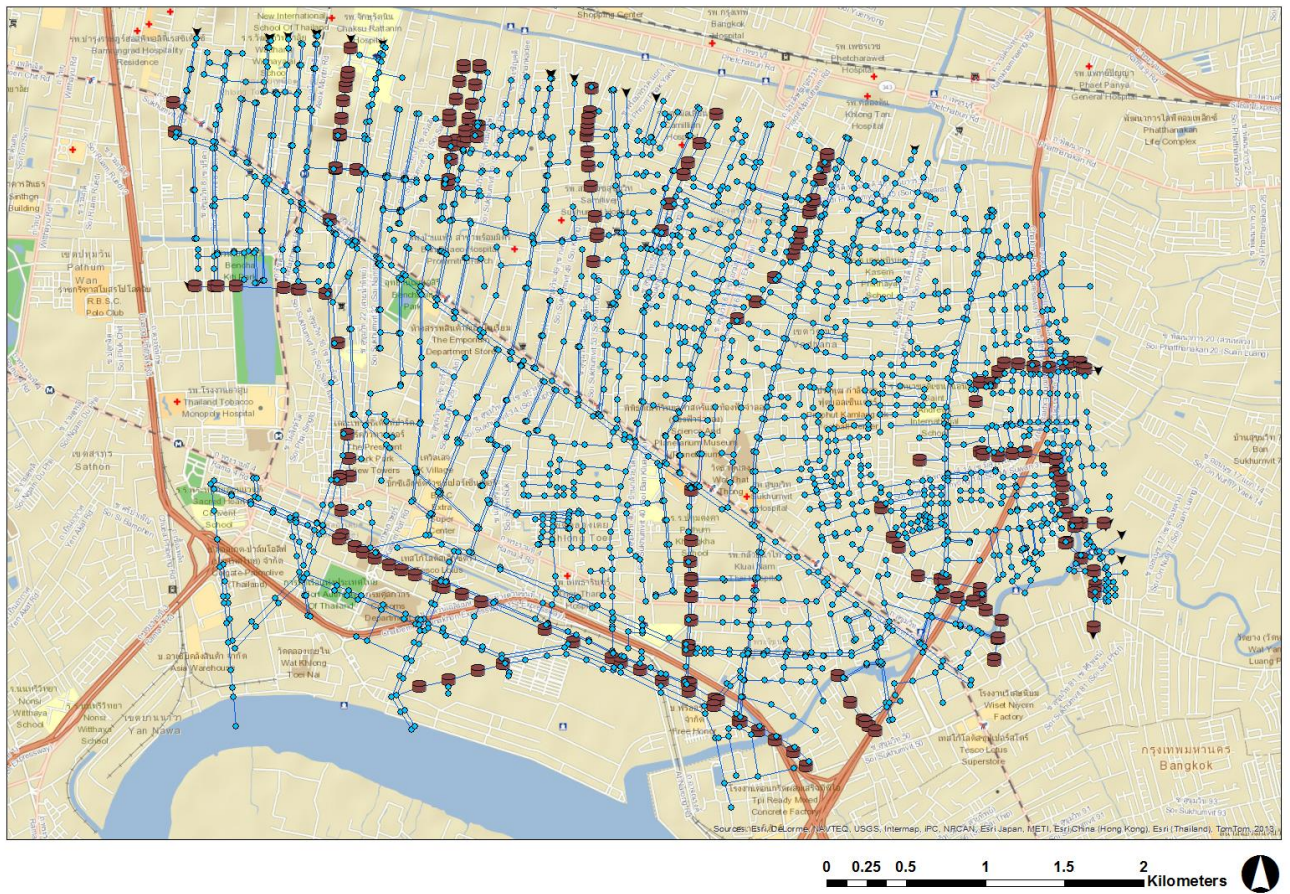
### 4. Project management and communication

- Role of NDE/CTCN
- BMA project manager
- BMA project resource persons
- DHI resource persons  
Lars Yde, Ms Nina Donna St Domingo, additional resource persons TBD
- DHI project manager  
Sten Lindberg

Pilot area – at various zoom levels







Overall activity schedule – from contract

Activity	Month											
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5 Future												
5.1 Meeting and recommendations												
5.2 M&E short report												
M&E teleconference with country and international partners												

## List of BMA, DDS participants, Inception Workshop at BMA, 3<sup>rd</sup> floor, DDS meeting room



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6. Ms. Chutima Mas-ngammuang	Computer Technical Officer,	
7. Mr. Nuttawat Peerakornworakit	Civil Works Technician, Professional level	
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