



# For Sustainable Development in Myanmar Cities

ADB TA-8456 Republic of the Union of Myanmar  
Transformation of Urban Management - Part II Flood Management -

## 1. Outline of the TA-8456

The TA-8456 aimed to promote sustainable urban development in Myanmar cities by building the institutional capacity of local authorities, leading to the prioritized needs-based provision of essential infrastructure. The TA was composed of two parts: Part I: Urban Management and Part II: Flood Management.

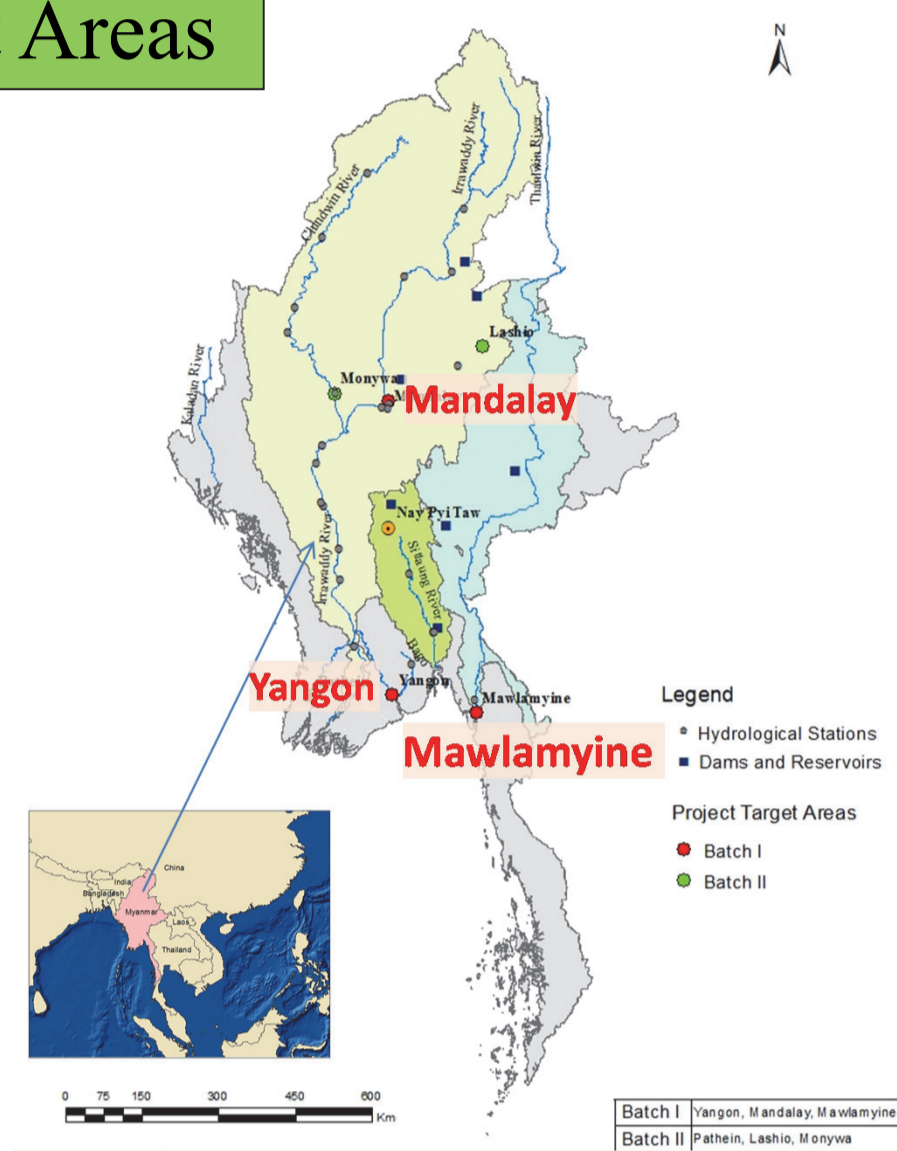
### Implementing Agency:

**Part II (Flood Management):** Department of Meteorology and Hydrology (DMH), Ministry of Transport and Communications

The Final Report of the TA-8456 (Part II) component is available at following ADB website:

<https://www.adb.org/projects/documents/mya-46496-001-tacr>

### Target Areas



### Part II: Flood Management Yangon, Mandalay, Mawlamyine

The Part II (Flood Management) component was implemented by ICHARM/PWRI jointly with CTII, CTIE and PASCO Corporation

**Implementation Period: July 2014 to November 2016**

## 2. Objectives of the TA-8456 Part II (Flood Management)

- Hydro-meteorological analysis related to flood and storm surge;
- Flood and storm surge risk assessment;
- Capacity development for the DMH;
  - ✓ Training for the DMH officers on the RRI and storm surge model
  - ✓ Business plan to strengthen institutional capacity
- Capacity development of organizations relevant to flood and storm surge risk assessment.

## 3. Activities and Outputs: Hydro-Meteorological Analysis

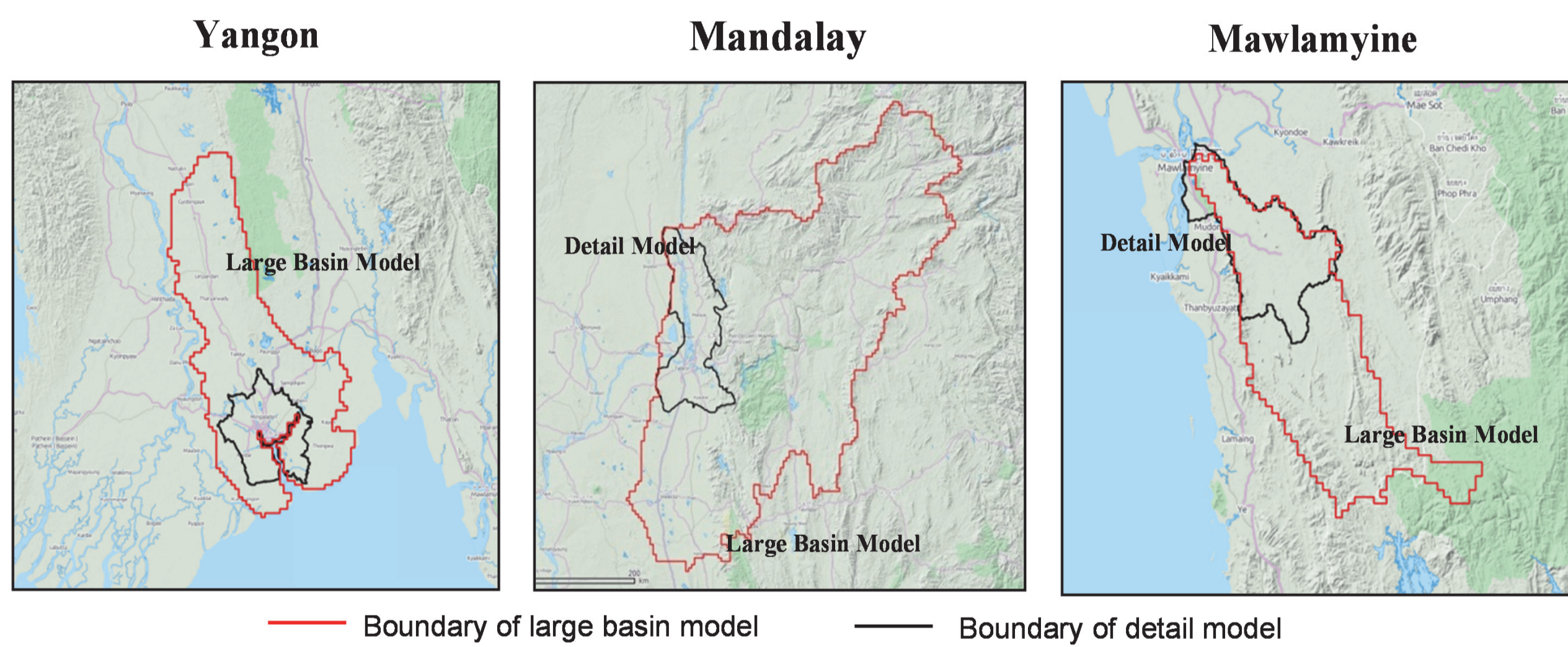
### ACTIVITIES:

- Hydro-meteorological analysis in three target cities (Yangon, Mandalay and Mawlamyine) plus other areas (Bago, Nyaung Don and Kale areas)
- Formulation of model for flood and storm surge hazard analysis

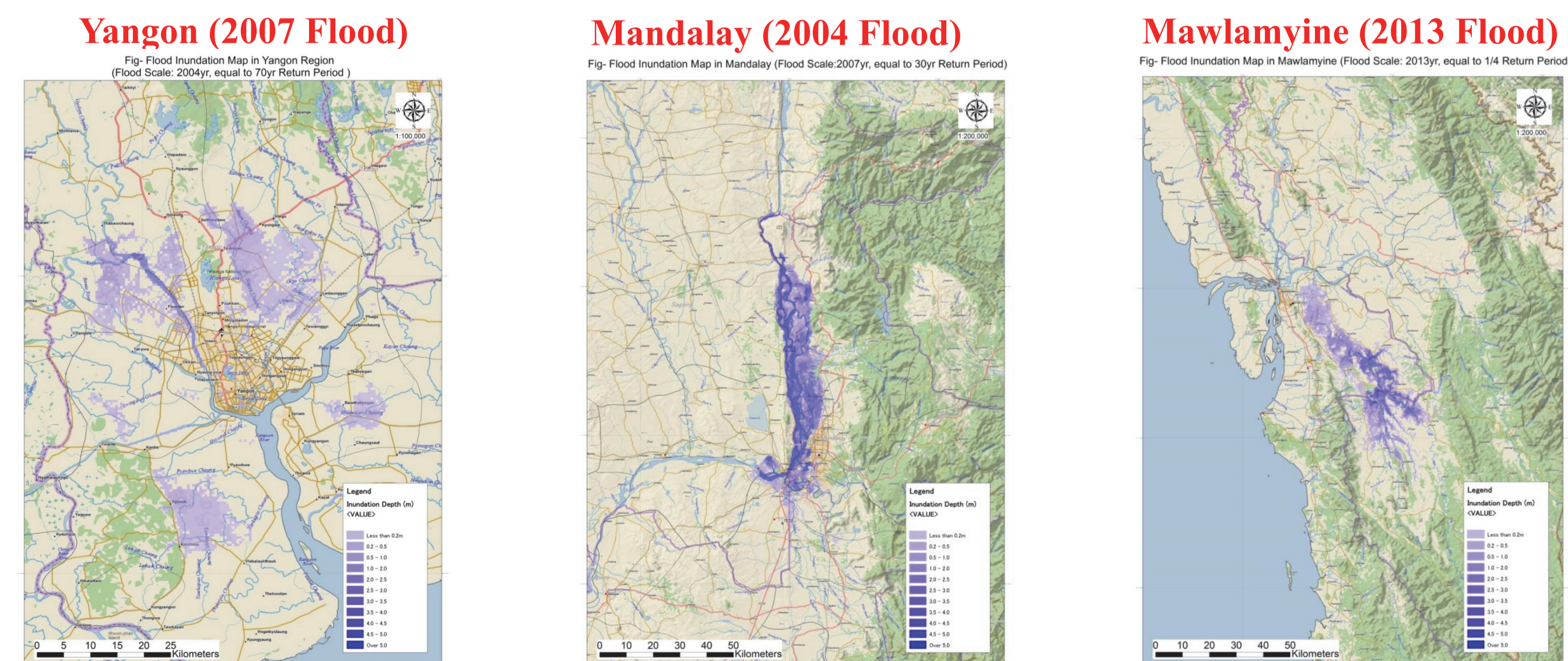
### Adopted models:

- (i) RRI model for the flood inundation analysis, and
- (ii) Storm Surge model with Myers's formula for storm surge analysis.

### Development of RRI Model for Three Target Cities



### Flood Inundation Analysis

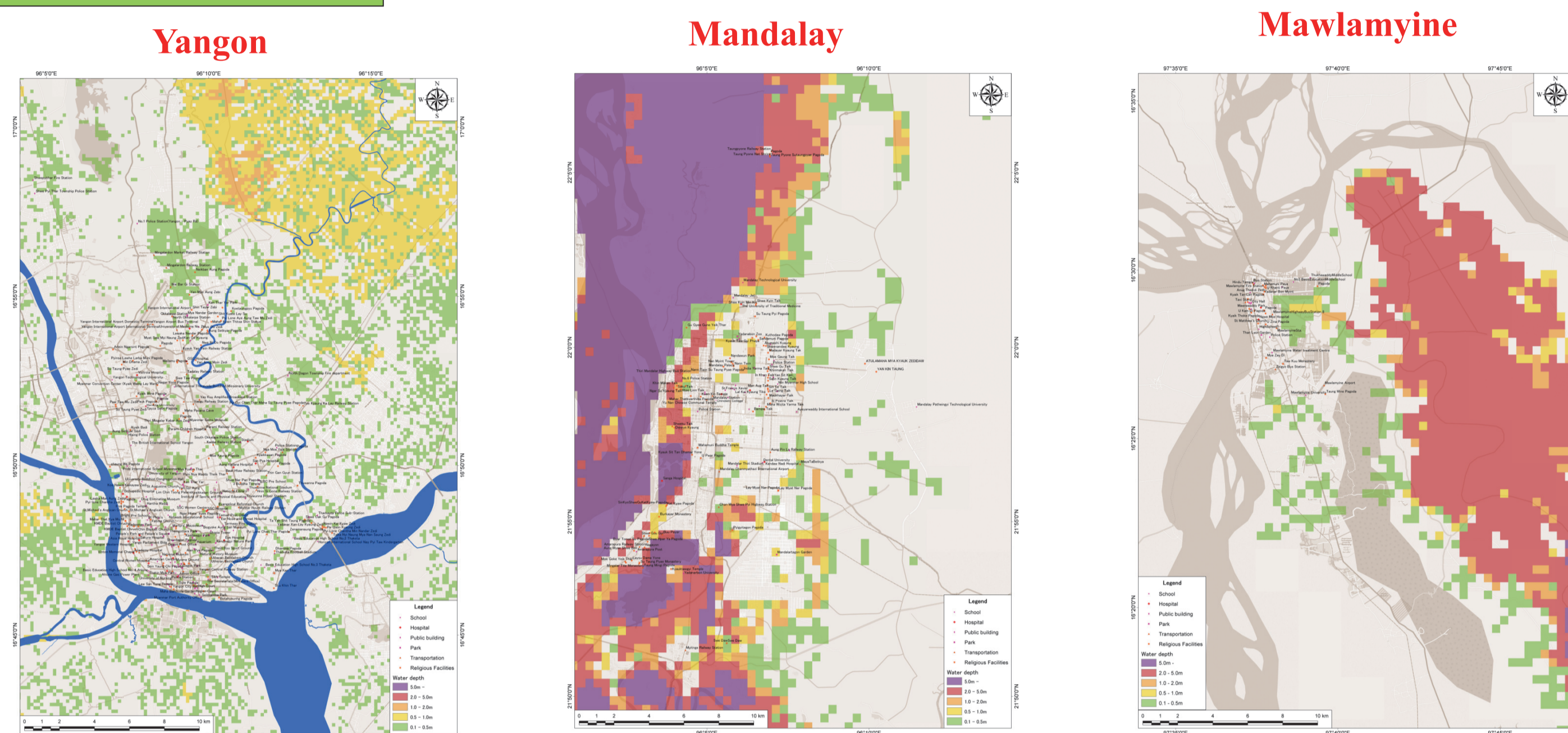


## 4. Activities and Outputs: Flood and Storm Surge and Risk Assessment

### ACTIVITIES:

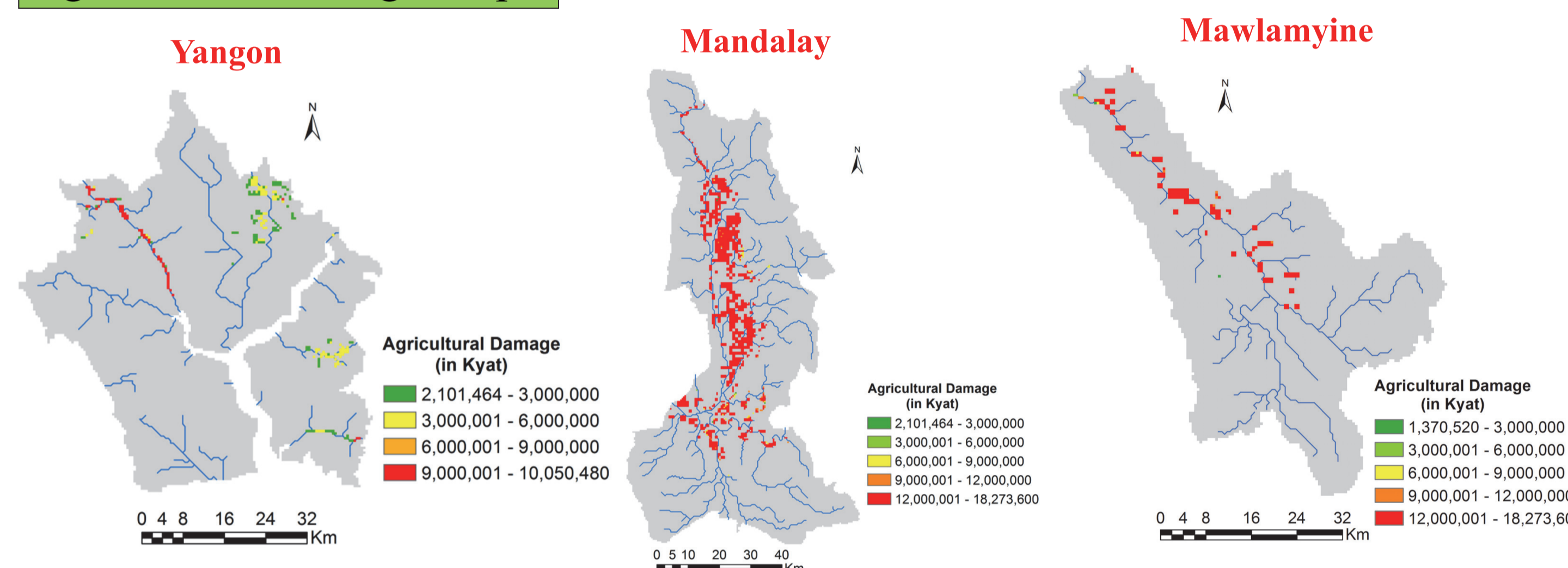
- Prepare Flood Hazard Maps
- Organize workshops at three cities (Yangon: 25 January 2016; Mandalay: 28 January 2016; Mawlamyine: 26 January 2016)
- Introduce a concept of disaster risk assessment
- Simulate agricultural damage

### Flood Hazard Maps



100-Year Flood

### Agricultural Damage Maps



100-Year Flood

## 5. Activities and Outputs: Business Plan for the DMH

### ACTIVITIES:

- Identify the issues and challenges of DMH to fulfill its role and responsibility
- Suggest and recommend methodologies to improve the capacity of DMH

Four topics were focused in a business plan for the improvement of flood management activities.

- Enhancement of meteorological and hydrological monitoring
- Utilization of satellite images
- Prevention of landslide disasters
- Adoption of timeline planning for preparedness and response

## 6. Activities and Outputs: Capacity Development

To strengthen the capacity of DMH and related organizations for flood management, series of training were organized.

### ACTIVITIES:

#### [Training on RRI Model and Storm Surge Model]

Following training programs for DMH and Irrigation Department (ID) on the hydro-meteorological analysis with RRI and storm surge models were conducted.

- Basic Training Programs: Two times (TM-1, TM-2)
- Specialized Training Programs for trainer candidates: Two times (TM-3, TM-4)
- Follow-up Training Programs: Four times

#### [Training on Flood Disaster Risk Assessment]

- Training on flood disaster risk assessment was also conducted for DMH and ID



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