

# Outcomes and lessons learned from the Comprehensive Review -Adaptation Sector-

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# 1. Outcome

## Progress of Implementation

### ▣ Adaptation Measures and Progress

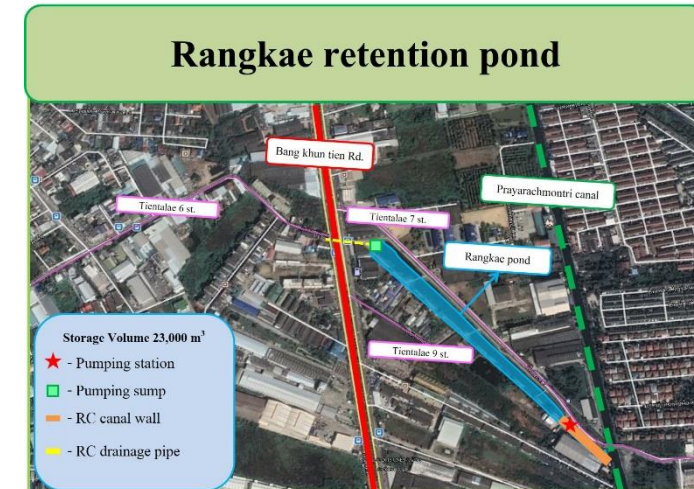
- Adaptation measures aims to increase the capability of cities and citizens to cope with impacts of climate change. For Bangkok, three major impacts were identified as flood, coastal erosion, and drought.
- Implementations of adaptation measures, therefore, are the implementation of projects such as development of flood hazard map, dredging of canals, construction of retention pond, structure for coastal erosion protection and increasing mangrove forest area.
- Progress of adaptation is not measured by MRV, instead, M&E was employed.



### ▣ Indicator of Adaptation progress

In order to monitor the implementation and results of adaptation measures, two sets of indicator were used; Baseline indicator and End indicator. Progress of implementation was monitor via indicators such as budget allocation, construction progress, and result of the project.

- ▣ Successful activities conducted during the Review period in the sector 2019 BMA complete construction of Rangkae retention pond near flood risk area on Bang khun tien Road. This retention pond could store run off for 23,000 m<sup>3</sup> and could drain water to Prayarachmontri canal 1 m<sup>3</sup>/s.



# 2. Challenges and lessons learned

## ▣ Challenges met and lessons learned

Data related to adaptation measures are complex and enormous.

For example, flood problem was resulted from many factors.

Data related to each flood varies i.e. rain intensity, rainfall area, infrastructure for drainage system, and land use change in the area.

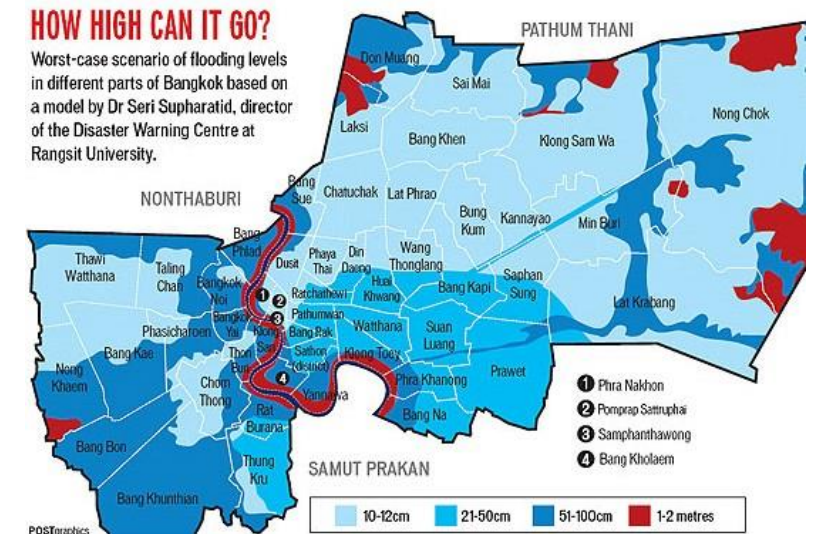
Therefore, to compare the success of the before and after implementation in adaptation measures via different data sets may be difficult.

# 3. Proposal for enhanced actions

## ▣ Adaptation actions

BMA has collected data for water management, however, there is a lack of mathematical models to effectively simulate the flow pattern of water in Bangkok based on current infrastructure and water management plan.

Such model can be used to develop flood risk hazard map that will enable BMA to prevent and prepare for flood, reduce flood time, reduce energy consumption, lessen traffic congestion and can provide early warning to citizens for proper actions.



Example year 2011