

## **Bangkok Master Plan on Climate Change 2013-2023**

### Summary

Bangkok, a rapidly expanding metropolis with more than 10 million people, high utilization rate and the largest amount of greenhouse gas emissions in the country, is very much aware of the challenges of climate change, including increasing risks of natural disasters, as indicated by the flood crisis of 2011, and wishes to make a contribution to the international community's efforts to reduce carbon emission and conserve our planet, as well as increasing its resilience.

### What it is and its achievements

The origin of the Master Plan was based on the Bangkok Action Plan on Global Warming Mitigation 2007-2012 was established to reduce GHG emission by at least 15 % of the total GHG emission anticipated in the year 2012 under business as usual projection. It includes 5 initiatives, namely expand the mass transit rail system within Bangkok Metropolitan area, promote the use renewable energy, improve building electricity consumption efficiency, improve solid waste management and wastewater treatment efficiency and expand park area. In order to achieve these goals, full support from the people of Bangkok as well as every sector is acquired for the successful implementation of the activities under the Bangkok Metropolitan Administration's action plan. The opinions and suggestions were put together and refined by number of interdisciplinary experts including 36 organizations such as the Ministry of Natural Resources and Environment, the Ministry of Energy, the Federation of Thai Industries, Thailand Environment Institute etc., and other organizations from both the private and public sectors. However, challenges still remained, while the implementation of the Action Plan was successful in initiating works to address climate change issues at local government level in a systematic manner with a satisfactory result of 14 percent reduction of GHG emissions. As a result, BMA also decided to design a Bangkok Master Plan on Climate Change during the period of 2013-2023, aiming to set climate change mitigation and adaptation measures by working on (1) environmental sustainable transport; (2) energy efficiency and alternative energy; (3) efficient solid waste management and wastewater treatment; (4) green urban planning; and (5) adaptation planning. To support this, BMA and Japan International Cooperation Agency (JICA) agreed on the Technical Cooperation Project for Bangkok Master Plan on Climate Change 2013-2023, and jointly worked during the initial period of the Master Plan, during 2013-2015, with strong support by the Thai Government ministries and agencies of knowledge sharing by the City of Yokohama, Japan. This Master Plan, with its drafting process finished in September 2015 and later approved by the BMA Governor, provides a framework for Bangkok to establish a low carbon and climate change resilient city. It will benefit the people of Bangkok directly and indirectly. It is expected that the Master Plan, if implemented properly, would yield total net GHG emissions in the year 2020 of 46.44 million tons CO<sub>2</sub>equivalent, approximately 13.57% against the business-as-usual scenario.

### How it works

Bangkok Metropolitan Administration (BMA) supported by Japan International Cooperation Agency's (JICA) Technical Cooperation, is currently implementing the Project for Strengthening Institutional Capacity for the Implementation of Bangkok Master Plan on Climate Change 2013-2023, for which a 5-year capacity building agreement was signed on 30<sup>th</sup> March 2017 to ensure effective implementation and sustainability of the Bangkok Master Plan on Climate Change 2013-2023. The items listed below are the expected outputs for achievements within its 5 years of implementation.

### Expected outputs of the Project

The Project is requested by BMA in order to

1. To support institutional arrangements for smooth implementation
2. To strengthen capacity for planning and implementation of prioritized mitigation and adaptation activities
3. To Develop capacity for monitoring and evaluation to assess the progress of the BMA Master Plan

### Activities under the Technical Cooperation Project include:

1. Exchange of knowledge on organizational management of climate change policy including planning and implementation of mitigation and adaptation activities. (Knowledge sharing includes all 5 sectors under the Master Plan: Transportation, Energy, Waste and Wastewater, Green Urban Planning and Adaptation) through training and seminars.
2. Plan and implement activities that have been prioritized under the Master Plan.
3. Provide opportunities for sharing lessons learned communications from key activities under the Master Plan.
4. Provide the training curriculum for measurement, reporting, and verification (MRV) for the relevant sector. The course consists of assessing the competency of the trainees including responses from trainees in the form of course evaluations.
5. Share the knowledge of monitoring and evaluation of climate change policies through training and seminars.
6. Study methodologies for monitoring and evaluation. Including measurement reporting, verification of greenhouse gas emissions for activities of the Master Plan and development and guidelines for Bangkok as a local government.

BMA established the Steering Committee, as the overseeing supervisory body of the Master Plan, which is jointly organized with the Joint Coordination Committee (JCC) of the Technical Cooperation Project. The Steering Committee's function is to plan, supervise, advise and monitor the progress of the implementation of the Master Plan. To enhance the capacity building activities, the Steering Committee established a Working Group to set up the project's work plan and appoint five specific technical bodies (Task Forces) to drive technical activities in each area. JICA has sent 2 Long Term Experts who are stationed at the Department of Environment, Bangkok City Hall 2, as well as 8 Japanese experts in the Short-term Expert Team, who support BMA in overall policies and sectoral activities, in cooperation with national specialists and staffs locally mobilized under the Technical Cooperation Project.

The 1<sup>st</sup> Session of the JCC/the 5<sup>th</sup> Session of the SC(JCC1/SC5) held in January 2018 recognized the importance of the alignment of proposed mitigation and adaptation activities under the Master Plan with BMA's annual and budgetary process, with a view to mainstreaming climate change into BMA's routinized operation. In this regard, with support by the Technical Cooperation Project, BMA initiated to select priority projects for the submission to the budget request window.

Following the above, the 2<sup>nd</sup> Session of the JCC/the 6<sup>th</sup> Session of the SC (JCC2/SC6) selected initial priority projects for the submission to the forth coming budget amendment request, which included the total of 41 projects, namely 5 projects from sustainable transport, 20 projects from energy efficiency and alternative energy options, 6 projects from waste and wastewater management, 6 projects from green urban planning and 4 projects from climate change adaptation. Most of the selected projects are budgeted from Bangkok and some are no budget projects.

Also, to ensure the fruition and implementation of such mitigation and adaptation projects, a training in Japan was organized in May, in close cooperation with the City of Yokohama. BMA officials learned how to maximize impacts and effectiveness of such projects, in terms of GHG emission reduction amount and strength of resilience, as well how to mobilize resources and stakeholders for scaling up actions.

#### Next Steps

For a mid-term review of the period 2013-2023, the Technical Cooperation Project envisages a Comprehensive Review of the progress of implementation of the Master Plan. For this, BMA will take quantitative and qualitative review of the GHG emission reduction as well as adaptation for a macro and sector level of the Master Plan. At the same time, the review at project level will be conducted.

For this, training of relevant personnel to monitor and evaluate (M&E) projects under the Master Plan is the next step to ensure the implementation of the plan by compiling a report showing the basic indicators and indicators on project/measures completion for all 5 sectors and to monitor each sector of the greenhouse gas reduction measures (In a wider sense, the “M&E” includes quantitative assessment of GHG emission reduction of mitigation projects).

All of these are expected to provide useful feedbacks and lessons learned for more substantial improvement mitigation and adaptation actions in short and long-term period, including addition of sectors, strengthening of the institutional arrangement and mobilization of extreme resources etc.