The projects development
through city-to-city collaboration
Identifying priority issues

Support for the formulation of a Master Plan

- Cebu
- Da Nang
- Bangkok
- Batam

Identification of priority issues
Master Plans which the City of Yokohama has worked together with Four Cities
Case of Batam

- Bangkok Master Plan on Climate Change
  - JICA Report
    "Technical cooperation project on the Bangkok master plan on climate change 2013-2023 in the Kingdom of Thailand" (1) [http://libopac.jica.go.jp/images/report/P1000025878.html](http://libopac.jica.go.jp/images/report/P1000025878.html)
    (2) [http://libopac.jica.go.jp/images/report/P1000025879.html](http://libopac.jica.go.jp/images/report/P1000025879.html)

- Da Nang City, Vietnam
  - Da Nang Urban Development Forum (Making Urban Development Action Plan)
    - JICA Report

- Batam City, Indonesia
  - Project Mapping (planned) based on Batam Green Cities Program

- Cebu City, Philippines
  - Mega Cebu Roadmap 2050
    - JICA Report
City to City collaboration with Batam City and BIFZA

**Toward Batam Green Island**

- **Green Planning**
- **Green Building**
- **Green Industry**
- **Green Waste**
- **Green Water**
- **Green Transportation**

**Main activities in last few years**

- **JCM FS by MOEJ (2015-2018)**
- **Sustainability Evaluation (Waste Management) by METI In 2017**
- **Water Management FS by METI in 2017**
<table>
<thead>
<tr>
<th>Scope</th>
<th>FY</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>BATAMINDO Industrial Park</td>
<td></td>
<td></td>
<td>JCM Model Project</td>
<td>JCM Model Project</td>
<td>JCM Model Project</td>
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<tr>
<td>(One of largest core industrial parks)</td>
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<td></td>
<td>Smart LED+PV(1MW)</td>
<td>Maximization of PV power generation</td>
<td>Regional optimization of energy utilization in Batam</td>
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<td>Control of thermal power generation</td>
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<td>Demand Response</td>
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<tr>
<td>KABIL/PAMBIL Industrial Park</td>
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<td>(Core industrial parks)</td>
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<td>Other industrial parks + Large-scale facilities</td>
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<tr>
<td>Green Building (Energy saving in buildings)</td>
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<td></td>
<td>JCM Model Project</td>
<td>JCM/BtoB</td>
<td>JCM/BtoB</td>
</tr>
</tbody>
</table>

**Support of Yokohama City**
- Development of green building (GB) regulation
- Issuance of GB regulation (Perwal)
- 1) Promotion of GB regulation
- 2) Capacity building for GB assessors
- Development of GHG emissions reduction plan
## JCM Feasibility study in FY2018

<table>
<thead>
<tr>
<th>Items</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Title</td>
<td>Feasibility Study on Maximization of PV Power Generation by Energy Management and Demand Response in Industrial Parks</td>
</tr>
<tr>
<td>Leading low-carbon technologies</td>
<td>Installing technologies/system regarding “Energy management” and “Demand response”.</td>
</tr>
<tr>
<td>Potential emission reduction</td>
<td>Approx. 3,200 tCO2/year</td>
</tr>
</tbody>
</table>

**Target Industrial Park (Bathamindo)**

PV module with sun-tracking system

Image of Energy Management System
Development of Green Building Regulation

**Purpose:** By developing practical Green Building (GB) Regulation, disseminating green building concept and realizing ‘Smart and Green Island, Batam’

**FY2017**
1. Drafted Evaluation Items based on exiting GB regulations in Indonesia
2. Decided 3 priority items (Water, Energy & Waste management) in consideration of characteristics as a small island
3. Held a Workshop for raising awareness on the concept of GB

**FY2018**
1. Formulating Discussion Group and holding Regular Meetings (ongoing)
2. Visit to DKI Jakarta to share information & experiences of GB regulation development (Plan)
3. GB Seminar in Batam (Plan)

**Workshop (25/Jan/2018)**
Director for Building and Environment Coordination, Building Instruction Department, made a presentation about benefits of CASBEE Yokohama and participated in panel discussion.

**1st meeting among Discussion Group (21/Sep/2018)**

**Support from Yokohama City:**
Joining the discussion and sharing experiences of development and operation of the green building regulation in Yokohama, especially from the perspective of Practicality including Incentives and Capacity Building of Assessors. etc.
City to City collaboration with Bangkok Metropolitan Authority (BMA)

Making Master Plans and Action Plan

Bangkok Master Plan on Climate Change 2013-2023

Capacity buildings through working together for city’s plans

Implementation with Private Sector

Project Implementation for Sustainable Urban Development

(JCM Finance)

BMA

Yokohama
**Introduction of 2.0MW Rooftop Solar Power System for Power Supply in Factory**

**1.0MW** (each of two factories)  
PP (Japan): Finetech Co., Ltd.  
PP (Thailand): Siam Brothers Corp., Ltd. (Fish Net Manufacturer)  
Thai Merry Co., Ltd. (Cigarette Lighter Manufacturer)

**Outline of GHG Mitigation Activity**

The objective of this project is to replace a part of EGAT-provided grid electricity with PV solar power generation and reduce greenhouse gas emissions at the major plastic net manufacturing factory as well as the major cigarette lighter manufacturing factory in Thailand by introducing 1.0MW Roof Top Solar System in each factory. The generated electricity from the solar power generation system is going to be self-consumed in the each of factory facilities.

**Expected GHG Emission Reductions**

781.7 tCO₂/y (Siam Brothers Corp., Ltd.)  
751.4 tCO₂/y (Thai Merry Co., Ltd.)  
< Total 1,533.1 tCO₂/yea >

= Project Electricity Generation(EG)  
  x Emission Factor (EF)  
= Power Generation Capacity[kW]  
  x Annual Operating Rate[%]  
  x 24hours x 365days x EF

**Site of JCM Model Project**

Siam Brothers Corp., Ltd.  
Thai Merry Co., Ltd.
JCM feasibility Study in 2017 and 2018 Based on the MOU with PAT

Study Organization Structure

**City of Yokohama**
- Port and Harbor Bureau

**YPC**
- Overall management of the project
- Supporting PAT
- Reporting to MOEJ and GEC

**Green Pacific**
- Developing JCM methodologies and monitoring system

**International Consortium (Tentative)**

**PAT**
- Port Authority of Thailand
- Representative Participant
- Partner Participant
- Project Implementation & Reporting
- Supply and Construction

**GEC**
- Ministry of the Environment, Government of Japan (MOEJ)
- Support for PAT
- Reporting to MOEJ and GEC

**Suppliers**
- (Electric Forklift, RTG, LED, PV)

*To be selected by tender*
Developing JCM Model Projects as a one of Schemes to achieve “the Green Port” in the Bangkok Port and Laem Chabang Port

• PAT will introduce 4 facilities such as (1) Electric Forklift (2) Hybrid RTG (3) LED Yard Lightings (4) PV system as 1 package in Bangkok port by utilizing JCM subsidy.
• Realize “Smart Port” to form low carbon, low cost, and stable energy system in whole Bangkok port.
Please visit our web site:

Development Cooperation Division,
International Affairs Bureau
City of Yokohama, Japan
Email : ki-yport@city.yokohama.jp

7TH Asia Smart City Conference
Nov. 13-15th 2018 in Yokohama

【Inquiry】The 7th ASCC Management Office
Email : ki-ascc@city.yokohama.jp

【Co-located Event】Yokohama Info-Market!
Nov.14 10:00-16:00 / Nov.15 9:30-14:00
To provide opportunities for networking between
Japanese businesses and overseas participants
seeking solutions for urban issues