Low – carbon City Development in Hai Phong and Projects in collaboration with Kitakyushu City

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Haiphong, Vietnam

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CONTENT

• Sister city relationship
• Low carbon city situation
• Green Growth Promotion Plan
• Pilot project of EV Bus in Cat Ba islands
• Pilot project of Compost manufacturing
• Proposals
Exchange with Kitakyushu City

Friendship and cooperation agreement (May 2009)

1. Increase potential for participation in infrastructure business
   - Conclude MOU for technical cooperation in water and sewage services
   - Water quality improvement project (CLAIR)
   - Program to improve water purification treatment processes (JICA)

2. Support business activities for local companies
   - Training for supporting industries in Haiphong (JICA)
   - Business matching services for small- and mid-sized companies (JETRO)

3. Promotion of cultural exchange
   - Classical music concert by Kitakyushu musicians in Haiphong
   - Traditional cultural performances by Kitakyushu art groups in Haiphong

4. Training of human resources to act as a bridge between both cities
   - Dispatch 6 staff members from the Haiphong government to Kitakyushu as trainees (CLAIR)

Sister City Agreement concluded (April 2014)
Haiphong – Kitakyushu
“Sister city relationship”

- Organizing 03 Workshops on Green Growth Promotion Plan of Haiphong City (in 2014, 2015);
- Seminar on Water Supply technology and Management (09th Oct 2015);
- 03 Workshops on pilot projects in the framework of Green Growth Promotion Plan of Haiphong City (04th Aug and 17th Nov 2015; 12th Jan 2016);
- 03 Meetings on solutions for pilot projects in the framework of Green Growth Promotion Plan of Haiphong City (April and August 2016; Jan 2017);
- etc.
Green Growth Promotion Plan of the City of Hai Phong

Hai Phong is aiming to create a Green Port City through self-implementing actions.

The Chairman of Hai Phong City received this plan from the Mayor of Kitakyushu in May 2015.

Kitakyushu Model (Experience, Know-how)
“Green Growth in Kitakyushu, Japan ” issued by OECD in 2013

“Green Growth in Haiphong, Vietnam ” issued by OECD in 2017

Thanks to the support of Kitakyushu, the OECD report is being made on ground that Haiphong City is positioned as the Green Gross City in Asia
Challenges for Low Carbon City in Haiphong
## 5 Actions for Low Carbon City in Haiphong

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
<th>Example Projects</th>
<th>Emission reduction (ktCO₂eq)</th>
</tr>
</thead>
</table>
| 1   | Green Industry          | • Energy savings factory  
• Installation high energy efficiency facilities (such as compressors and motors)  
• Regional energy supply system                                                                                                                 | 1,477                      |
| 2   | Green Urban             | • Installation of insulated glasses to commercial buildings  
• Installation of insulated glasses to households  
• Introduction of incentive to low energy buildings                                                                                             | 228                        |
| 3   | Energy Efficiency       | • Energy savings in commercial facilities  
• Conversion of street lights to LED lightning  
• High efficiency lighting in commercial building                                                                                              | 363                        |
| 4   | Clean Transport         | • Promotion of eco-driving with digital tachographs  
• Wide-range traffic control  
• Expansion of frequencies and route of bus transportation                                                                                   | 2,541                      |
| 5   | Green Energy            | • Introduction of photovoltaic power generation to commercial buildings  
• Introduction of photovoltaic power generation to households  
• Introduction of small-scale hydropower generation (at water distribution station)                                                              | 34                         |
|     | TOTAL                   |                                                                                                                                   | 4,643                      |
## Pilot Projects in “Green Growth Promotion Plan”

| Waste                      | ① Separation and composting of household waste  
|                           | ② Waste Heat Recovery Power Generation & Utilization of Industrial Waste  
|                           | ③ Recycling of E-Waste  
| Energy                    | ④ Energy savings and introduction decentralized energy systems in factories & buildings  
| Transportation            | ⑤ Introduction of low-emission buses  
|                           | ⑥ Promotion use of public transportation  
| Cat Ba Island             | ⑦ Development of comprehensive resource recycling system  
|                           | ⑧ Energy saving and introduction of renewable energy & EV buses in Cat Ba Island  
| Water & Sewage, Rainwater Drainage | ⑨ U-BCF expansion project  
|                           | ⑩ Handicraft village wastewater measures  
|                           | ⑪ Introduction of sewerage registry system  
| Environmental Protection  | ⑫ Restoration of Tay Nam canal  
|                           | ⑬ Development of air and noise monitoring systems  
| Green Production          | ⑭ Installation of high-efficiency furnaces in foundries  
|                           | ⑮ Promotion of green agriculture  

### JCM Projects proposed by Kitakyushu to Haiphong (1/2)

<table>
<thead>
<tr>
<th>Project name</th>
<th>Field</th>
<th>Project Description</th>
<th>Research-Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Carbonization the whole city of Haiphong</td>
<td>① Saving Energy Project  ② Exhaust Heat Recovery Generation and Waste Fuel at Cement Factory  ③ Saving Energy Equipment, Renewable Energy and Electric Bus  ④ Follow-up project of Green Growth Promotion Plan</td>
<td>Aims to:  - Formulate JCM projects which have high GHG emissions reduction potential in the four sectors of energy, waste management, Cat Ba Islands, and low-carbon city development;  - Scaling up JCM projects by assisting in formulating supportive policies.</td>
<td>City of Kitakyushu NTT Data Institute of Management Consulting, Inc. AMITA Corporation Nikken Sekkei Civil Engineering Ltd</td>
</tr>
<tr>
<td>Waste-to-energy project of mixed combustion of sewage sludge solid fuel and municipal solid waste</td>
<td>⑤ Waste-to-energy project</td>
<td>Aims to:  - Develop waste-to-energy project of mixed combustion of sewage sludge solid fuel and municipal solid waste;  - Ensure significant GHG emission reductions by attempting to implement a Project for Promoting Low-Carbon City Development in wider area.</td>
<td>City of Kitakyushu NIPPON STEEL &amp; SUMIKIN ENGINEERING CO, LTD. NTT Data Institute of Management Consulting, Inc.</td>
</tr>
</tbody>
</table>
## JCM Projects proposed by Kitakyushu to Haiphong (2/2)

<table>
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<tr>
<td>Hai Phong City Low Carbon Promotion Project (Energy field) (City of Kitakyushu - City of Hai Phong Collaboration Project)</td>
<td>⑥ESCO, renewable energy, transportation infrastructure, promoting of low-carbon city, being aware of the needs of partner country</td>
<td>Aims to: Conduct the feasibility study of realization of &quot;Low Carbonation Promotion Project of Factories and Others&quot; and &quot;Building new financing mechanism for introducing low-carbon type vehicles in isolated islands&quot;, to realize the &quot;Green Growth Promotion Plan of the City of Hai Phong&quot; that Kitakyushu City supported to formulate, based on the framework of sister city between Kitakyushu City and Hai Phong City.</td>
<td>City of Kitakyushu NTT Data Institute of Management Consulting, Inc.</td>
</tr>
</tbody>
</table>
Challenges to implement JCM projects in Hai Phong

- Policies/action plans, local regulations
- Management mechanism of Hai Phong
- Difference with Kitakyushu (Japan)
- Shortage of resources:
  - Experience, high quality human resource,
  - Model technology, finance, etc.
Challenges to implement JCM projects in Hai Phong

• Incompetent companies/professional associations:
  - Lack of knowledge of JCM projects,
  - No long-term strategies,
  - Weak cooperation,
  - Weak ability (management, investment, facilities, manufacturing, etc.)

• Weak supports/contribution of community to LCC:
  - Shortage of awareness;
  - Wrong customs/habits, etc.

• Others
1. **Aim**
   - To create an environmentally-friendly public transportation system in Cat Ba

2. **Recent activities**
   - First EV bus project in Vietnam
     - Quoc Hung Trade Company, Ltd.
     - Testing operation
     - Time: Nov 2015 ~ March 2020
   - A Conference on 10 Feb 2017

3. **Future plans**
   - Collecting, analyzing, confirming data;
   - A research of banning diesel buses to and on the island;
   - Application of entrance fee to Cat Ba.
1. Current situation

◆ Testing compost manufacture:
- URENCO (Trang Cat waste treatment complex)
- Takakura technical
- Fresh waste from markets
- From November 2015.

◆ Results of analysis of compost production
- May 2016
- Standards for organic fertilizers under the regulations of the Ministry of Agriculture and Rural Development of Vietnam.
2. Future plans

- Amount: 50 tons/day
- Location: Do, Cau Rao, and Ben Binh markets; restaurants, and hotels.
- Original Seed Compost
Proposals to the City of Kitakyushu

1. Public Private Partnership (PPP)

2. Training in waste treatment, environmental techniques:
   - Learning on jobs/projects
   - Short term courses
   - Officials, employees

3. Disseminating and transferring know-how

4. New kinds of projects for associations
Thanks for your attention!
Welcome to Haiphong City!