Low-carbon Ho Chi Minh City Development with Joint-Crediting Mechanism

Ho Chi Minh City Department of Natural Resources and Environment

Johor Bahru, Malaysia, February 2015

Agenda

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1. Capacity Building Program
2. Expanding Household solid waste separation-at-source programme in District 1 of Ho Chi Minh City
3. Developing the Climate Change Action Plan for Ho Chi Minh City in the period 2016-2020

II. Greenhouse Gas Inventory in Ho Chi Minh City

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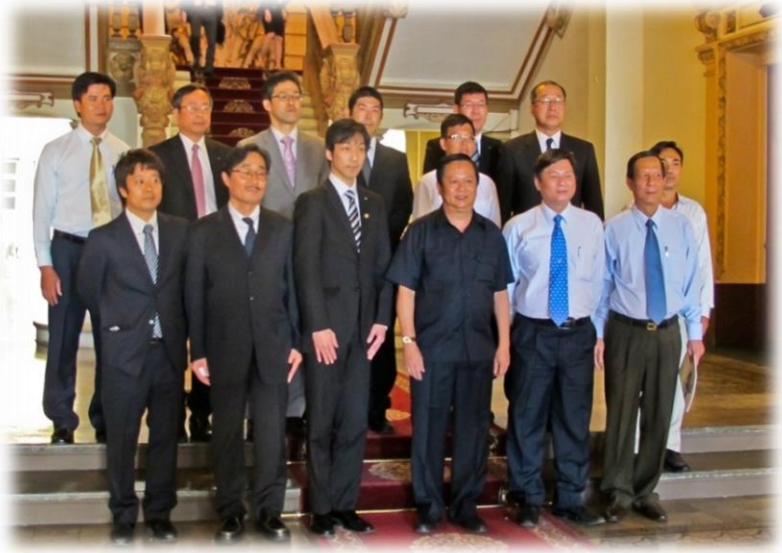
I. Background



- **In 2011:** signed an MOU with Osaka City of Japan on the cooperation in Municipal Solid Waste integrated management
- **In 2013:** signed an MOU on Low carbon city development programme

→ Continuing the Capacity Building Program

→ Expanding Household solid waste separation-at-source programme in District 1

→ Developing the Climate Change Action Plan for HCMC in the period 2016-2020 (HCCAP 2016-2020)

I. Background

1. Capacity Building Program

Training courses in Osaka and Ho Chi Minh City
Supported by Osaka City Government,
HCMC Government, GEC, Hitachi Zosen

I. Background

2. Programme on Expanding Household solid waste separation-at-source in District 1

Solid waste separation at source
Pilot programme

Public awareness raising

I. Background

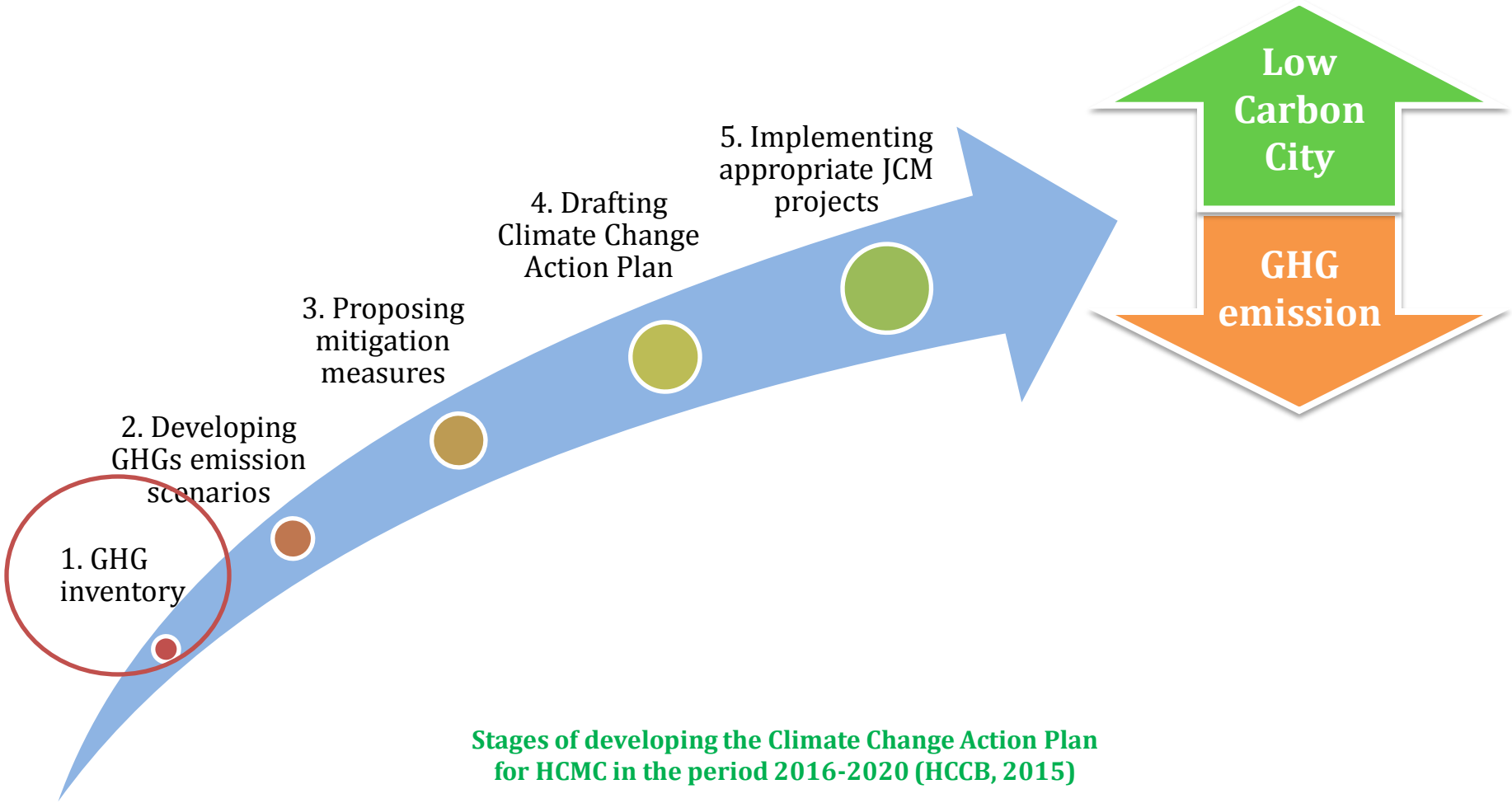
2. Programme on Expanding Household solid waste separation-at-source in District 1

Solid waste separation at source
Pilot programme

Waste composition analysis

I. Background

3. Developing the Climate Change Action Plan for Ho Chi Minh City in the period 2016-2020 (HCCAP 2016-2020)



Stages of developing the Climate Change Action Plan for HCMC in the period 2016-2020 (HCCB, 2015)

II. Greenhouse Gas inventory in HCMC

1. Necessities

- Supporting project implementation under the framework of the **MOU on Developing Low Carbon City** between Osaka City and Ho Chi Minh City;
- Meeting the demands of legal systems on climate change responding from international, national and local scales;
- Building scenarios for developing low carbon city;
- Promoting energy efficiency improvement measures;
- Improving the effectiveness of natural exploitation and conservation;
- Contributing to developing **a sustainable and low-carbon city**.

II. Greenhouse Gas inventory in HCMC

2. Objectives

Identifying the total amount of GHG emission in HCMC.

Identifying main sources/sectors of GHG emission.

Proposing measures and calculate GHG emission reduction for each sectors.

II. Greenhouse Gas inventory in HCMC

3. Scopes

- **Geography:** city-wide, focusing on main areas and objective groups in each sector.
- **Time:** 2014-2015.
- **Sectors:**
  - **FY2014:** Energy; Solid waste; Waste water; Agriculture; Water supply.
  - **FY2015:** Collect more detailed data for the above sectors; Expand data collection for other sectors (Industry, Construction, Healthcare and Tourism).

II. Greenhouse Gas inventory in HCMC

4. Methods and progress

Developed and conducted by HCCB with technical supports of **IGES Kitakyushu**

- **Check-listing and classification**
- **Data collection**
- **GHG emission calculation**
- **Reporting and Verification**

Power consumption amount by sectors (MWh)

No	Sectors	2010	2011	2012	2013
1	Agriculture, Forestry and Aquaculture	22,209	13,140,616	42,232,110	40,132,234
2	Industry Construction	6,305,172	5,453,013,412	6,502,299,112	7,191,318,412
3	Commerce, Hotels	1,731,172	1,991,134,175	2,196,213,104	2,234,115,180
4	Management, Exercise of consumption	1,971,206	1,940,173,106	4,015,218,871	7,073,412,110
5	Others	823,787	953,200,220	1,277,214,822	1,100,101,110
	Total	14,854,147	15,351,761,617	16,750,878,812	17,639,198,237

Total amount of import and export petroleum and oil in HCMC during 2006-2011.

Source: Department of Industry and Trading

Year	2006	2007	2008	2009	2010	2011
Import (1000 tons)	11,472	12,721	12,566	12,719	9,953	11,472
Export (1000 tons)	1,097	1,221	1,198	1,524	1,346	2,189

II. Greenhouse Gas inventory in HCMC

GHG emissions in HCMC (2013) [Preliminary results]

Sector In accordance with IPCC GLs & HCMC's report	GHG emissions [Gg CO_2 eq.]	Note
Energy	16,716.47	21% of Vietnam's total 2005
Fuel	5,191.83	
Electricity	11,524,65	
Water management	116.18	Mainly electricity use
Industrial Processes	NE	
Agriculture	630.79	0.8% of Vietnam's total 2005
Land-use & Forestry	NE	
Waste	822.91	10% of Vietnam's total 2005
Solid waste disposal on site	772.91	
Wastewater	NE	Domestic, Industrial, Medical
Other	50.00	Incineration, Compost
Total GHG emissions	**18,170.17**	Sum of "Energy", "Agriculture" & "Waste" 8.9% of Vietnam's total 2005

Note: Estimated by IGES by utilizing the data collected by HCMC DONRE CCB. IPCC 2006 Guidelines were referred to.
The results may be revised upon provision of additional data, correction of errors, etc.
"Industrial processes" and "Land-use & Forestry" sectors are not estimated ("NE").

II. Greenhouse Gas inventory in HCMC

5. Limitations

- Limits in finance and personnel for detailed objective groups surveying → The first phase only focused on pilot surveys.

- Large but unsynchronic data resource → Difficult to synthesise information and calculate in details. For example in industry and fuel sectors.

→ **Need a systematic data update mechanism.**

III. Future plan

- **Continuing the GHG Inventory in other sectors to develop the Climate Change Action Plan for Ho Chi Minh City in the period of 2016-2020.**
- **Capacity building for officers and staff at different management levels.**

III. Future plan

➢ **Feasibility studies for mitigation measures, concrete supports for mitigation infrastructure projects with JCM**

•Binh Dien Market project (SATRA, Hitachi Zosen Corp., KK Satisfactory…)→ **Progressing**

•Energy-from-waste, biogas generation system (Hitachi Zosen Corp., KK Satisfactory, Kobelco-Eco Solutions…) → **Promoting**

•Energy efficiency improvement at buildings (Shimizu Co.)

•Park & Bus ride (Nikken Sekkei Research Institute)

•Project on rainwater recovery and use

•Project on reuse of wastewater

•Project on using solar energy in schools

Thank you for your attention