

The 24th AIM International Workshop
National Institute of Environmental Studies (NIES)
November 5-6, 2018

Low carbon development scenarios for cities in Vietnam

Dr. Nguyen Tung Lam
Institute for Strategy, Policy on Natural Resources and Environment (ISPONRE)

BACKGROUND

- Paris Agreement's goal:
 - to keep global temperatures rise well below 2oC
 - to pursue efforts to limit the temperature increase to 1.5oC
- > requires all Parties to put forward their best efforts through “nationally determined contributions” – NDCs
- Vietnam NDC1: reduce 8-25% of total emissions in 2030 compared to Business as Usual (BaU)
- While development of national level plans (NDCs) have been making progress, development of city level plans for the realization of low-carbon cities are also becoming active
- > major cities in Vietnam are required to localize the initiatives of the NDC including Hai Phong and Ha Noi
- Objective of the research:
To design and support the design of Low Carbon City for cities using AIM's methodology

NDC Review and Update – *National Circumstance*

Many actions and policies on CC have been implemented/issued since the submission of NDC:

Mitigation:

Energy: (1) Renewable Energy Development Strategy to 2030 (11/2015); (2) General Plan of Rectification of Electricity Generation VII (3/2016); Mechanism to encourage the development of solar power projects (4/2017); Decision to stop nuclear power development (11/2016); Investment in renewable energy.

Agriculture: NDC in Agriculture (Decision 7208/BNN-KHCN), Climate Smart Agriculture (CSA).

LULUCF: Protection and Development of Coastal Forests in the period 2015-2020 (Decision 120/QD-TTg); Policies, plans for afforestation and reforestation ...

Waste: Environmental issues in major cities.

Industrial processes: Not yet addressed in the current NDC.

NDC2 - *New Features Compared to NDC1*

I Background

- 1.1. Overview of NDC
- 1.2. Requirement for NDC review and update
- 1.3. Components of NDC Vietnam
- 1.4. The process of reviewing and updating NDC

III. GHG mitigation

- 3.1. Objectives
- 3.2. Efforts and achievements on mitigation since submission of NDC1
- 3.3. National greenhouse gas inventories
- 3.4. Business as Usual Scenario (BAU)
- 3.5. Options for emission mitigation until 2030
- 3.6. Contribution of Viet Nam in mitigation
- 3.7. Demand for implementation mitigation
- 3.8. Measurement, Reporting and Verification (MRV)

V. Opportunity, Challenge and Solution

- 5.1. Impact of NDC implementation
- 5.2. Advantages and disadvantages in implementing NDC
- 5.3. NDC Implementation Solutions

II. CC Adaptation

- 2.1. Objectives
- 2.2. Climate change, impact and vulnerability
- 2.3. Loss and damage
- 2.4. Efforts and achievements on adaptation
- 2.5. Contribution of Viet Nam on CCA
- 2.6. The need for adaptive implementation
- 2.7. Monitoring and evaluation

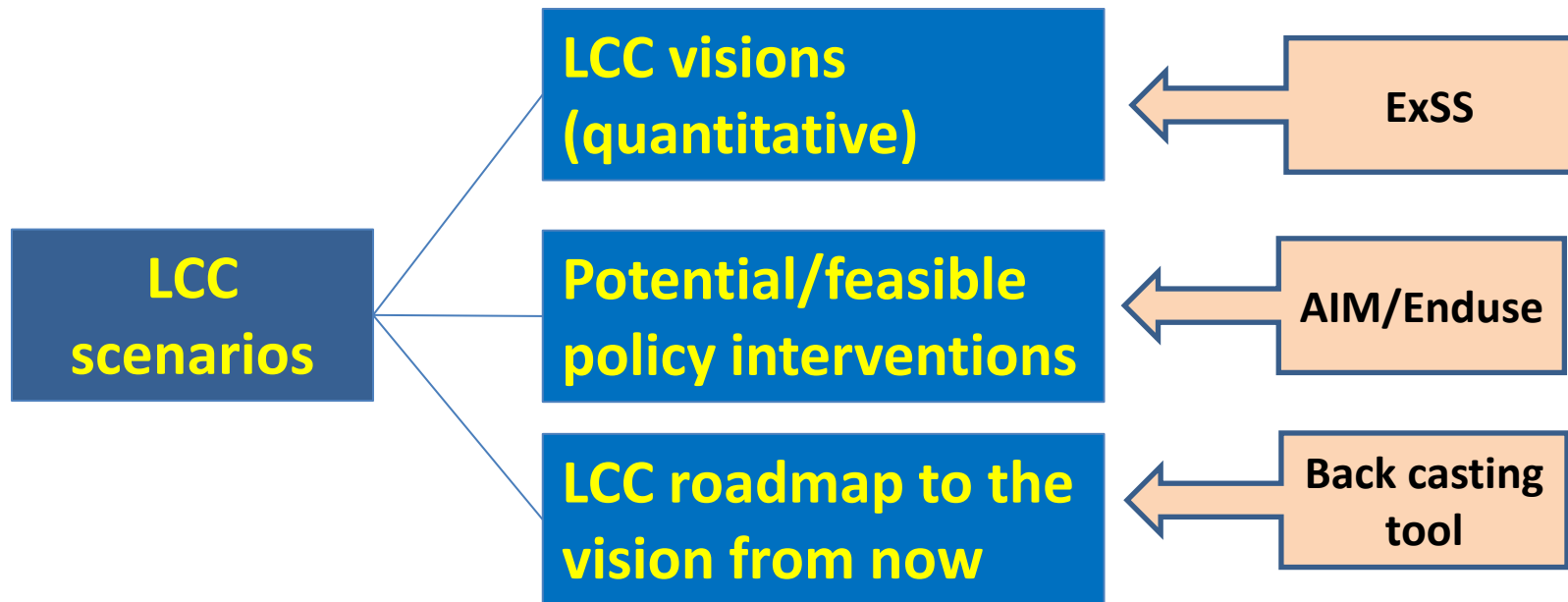
IV. Synergy and Co-benefit

- 4.1. Policies related to co-benefits
- 4.2. Framework for co-benefits assessment
- 4.3. Potential and opportunities for co-benefits

VI. Implementation

- 6.1. Assign responsibilities
- 6.2. Resources for NDC implementation
- 6.3. Monitoring and evaluation

Design a Low carbon city



2017,
2018



LCS Hanoi, 2018

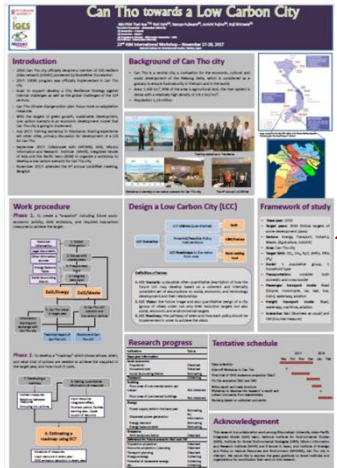
2015,
2016



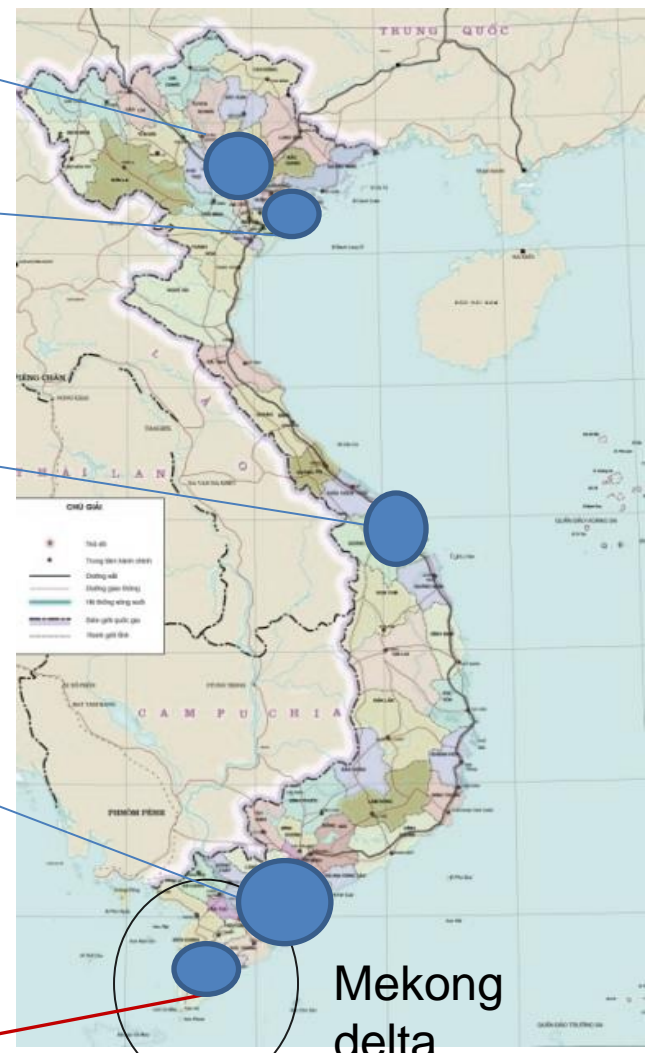
GHG emissions reduction potential of Ho Chi Minh City's Climate Change Action Plan 2020



2014
2019 update



2017



Mekong delta

LCS scenarios for cities in Vietnam

FRAME WORK OF STUDY

- Base year: 2014 (depends on data availability)
- Target years: 2030 (follow targets of some development plans)
- Sectors: Residential, Commercial, Transport, Industry,
- Area: Hai Phong and Ha Noi cities
- Target GHG: CO₂
- Scenarios:
 - 2030BAU: Business as Usual (no countermeasure is applied)
 - 2030CM: Countermeasure (countermeasures are applied)

LCS development plan

- **Data required:**
 - Input-Output Table (IOT): year 2013, 2014, 2015, 2016, 2017
 - Value added, final consumption, industrial structure of industries;
 - Energy Balance Table:
 - Supply (Total Primary Energy Supply –TPES): production, import, export, etc.
 - Demand (Total Final Consumption – TFC): total final energy consumption of sector(industries, transportation, households, services, etc.)
- **November 2018:**
 - Collect relevant data from line departments
 - Develop ExSS model for energy sector of Ha Noi, Hai Phong
- **December 2018:**
 - Discussion with city line departments on the primary model results;
 - Improve the model
- **January 2019:** Present results to Ha noi, Hai Phong DONRE and line departments

Low carbon city - *Advantage, Challenges*

1) Advantage

- Strong political will leaders, supports from Development partners
- Experiences on carbon market (CDM, JCM, PMR, NAMA) and management of GHG mitigation.

2) Challenges

- **High initial investment cost for mitigation,**
- Private sector investment is the key but still limited
- **Low-carbon technologies available but expensive**
- Awareness on climate friendly products and practices
- **MRV system need to be developed.**

Toward LCS for cities in Vietnam

- In line with NDC
- Financial sources/supports
- Capacity building
- Demonstration of low carbon technologies