Low Carbon Development Research Activities in Vietnam and expectations for LoCARNet CoE Coalition Concept

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Center for Information, Consultancy and Training

ISPONRE

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Green growth and low carbon development

International trends in cooperation

- Green economy: UNEP, OECD, UNESCAP, Korea, Green Technology;
- Low emission development: USAID-LEAD, Asia LEDs partnership, ADB;
- Low carbon development: Japan, LCS Net, LowCARNet;
- Carbon credit market: CDM, NAMA, JCM

Vietnam responded policy

- Green growth strategy
- National target program on climate change
- National Strategy on climate change
- Science and technology development strategy
- Market-oriented supporting mechanisms: Clean Development Mechanism (CDM), Joint credit mechanism (JCM)

Requirements to meet the trends

- Legal framework
- Science-based policy making process
- Awareness of society, industries and communities
- Capacity building
- Information sharing
- Triple cooperation: planning, research and industries

Role of COE

- Policy advisory/consultancy/advocacy
- Connecting policy makers, researchers and enterprises/community;
- Enhancing capacity, education
- Catalyst to promote climate technology

Introduction of CENICT

- **Position**:
  - ISPONRE – Institute of Strategy, Policy on Natural Resources and Environment
  - CENICT - Center for Information, Consultancy and Training
- **Functions**:
  - Information
  - Consultancy
  - Training
- **Vision**:
  - Leading in policy advocacy
  - Information sharring on low carbon development (policy and practices)
  - Consulting on science-based policy making process; climate technology;
  - Training center for industries and communities capacity building

COEs coalition

- Strengthening of research and educational capacity at each CoE;
- CoE serve as knowledge platform focusing on domestic low-carbon development;
- To create joint education and joint research systems;
- To promote a regional, cross-sectoral academic society related to low-carbon development;

We have LCS research collaboration since 2010

2010

5th Oct 2010, ISPONRE, Hanoi

2011

18th April 2011, Hanoi, Vietnam

2012

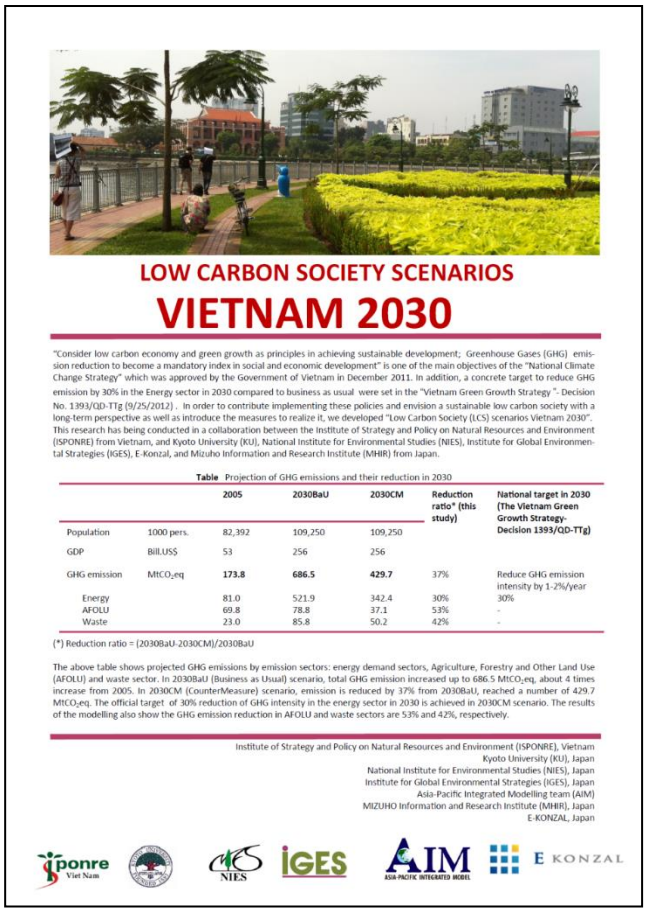
31st May 2012, Hanoi, Vietnam

2013

25th April 2013, Vinh Phuc, Vietnam

LOW CARBON SOCIETY SCENARIOS
VIETNAM 2030

- **Institute of Strategy and Policy on Natural Resources and Environment, Vietnam (ISPONRE):** Nguyen Hoang Minh, Nguyen Tung Lam, Nguyen Van Tai
- **Kyoto University, Japan (KU):** Nguyen Thai Hoa, Yuzuru Matsuoka
- **E-KONZAL:** Tomoki Ehara, Yuki Ochi
- **National Institute for Environmental Studies, Japan (NIES):** Kei Gomi, Junichi Fujino, Toshihiko Masui
- **Institute for Global Environmental Strategies, Japan (IGES):** Shuzo Nishioka, Tomoko Ishikawa
- **MIZUHO Information and Research Institute, Japan (MHIR):** Go Hibino, Kazuya Fujiwara



LOW CARBON SOCIETY SCENARIOS

VIETNAM 2030

"Consider low carbon economy and green growth as principles in achieving sustainable development; Greenhouse Gases (GHG) emission reduction to become a mandatory index in social and economic development" is one of the main objectives of the "National Climate Change Strategy" which was approved by the Government of Vietnam in December 2011. In addition, a concrete target to reduce GHG emission by 30% in the Energy sector in 2030 compared to business as usual were set in the "Vietnam Green Growth Strategy ". Decision No. 1393/QD-TTg (9/25/2012) . In order to contribute implementing these policies and envision a sustainable low carbon society with a long-term perspective as well as introduce the measures to realize it, we developed "Low Carbon Society (LCS) scenarios Vietnam 2030". This research has being conducted in a collaboration between the Institute of Strategy and Policy on Natural Resources and Environment (ISPONRE) from Vietnam, and Kyoto University (KU), National Institute for Environmental Studies (NIES), Institute for Global Environmental Strategies (IGES), E-Konzal, and Mizuho Information and Research Institute (MHIR) from Japan.

Table Projection of GHG emissions and their reduction in 2030

		2005	2030BaU	2030CM	Reduction ratio* (this study)	National target in 2030 (The Vietnam Green Growth Strategy- Decision 1393/QD-TTg)
Population	1000 pers.	82,392	109,250	109,250		
GDP	BillUS$	53	256	256		
GHG emission	$MtCO_2eq$	**173.8**	**686.5**	**429.7**	37%	Reduce GHG emission intensity by 1-2%/year
Energy		81.0	521.9	342.4	30%	30%
AFOLU		69.8	78.8	37.1	53%	-
Waste		23.0	85.8	50.2	42%	-

(*) Reduction ratio = (2030BaU-2030CM)/2030BaU

The above table shows projected GHG emissions by emission sectors: energy demand sectors, Agriculture, Forestry and Other Land Use (AFOLU) and waste sector. In 2030BaU (Business as Usual) scenario, total GHG emission increased up to 686.5 $MtCO_2eq$, about 4 times increase from 2005. In 2030CM (CounterMeasure) scenario, emission is reduced by 37% from 2030BaU, reached a number of 429.7 $MtCO_2eq$. The official target of 30% reduction of GHG intensity in the energy sector in 2030 is achieved in 2030CM scenario. The results of the modelling also show the GHG emission reduction in AFOLU and waste sectors are 53% and 42%, respectively.

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Kyoto University (KU), Japan
National Institute for Environmental Studies (NIES), Japan
Institute for Global Environmental Strategies (IGES), Japan
Asia-Pacific Integrated Modelling team (AIM)
MIZUHO Information and Research Institute (MHIR), Japan
E-KONZAL, Japan

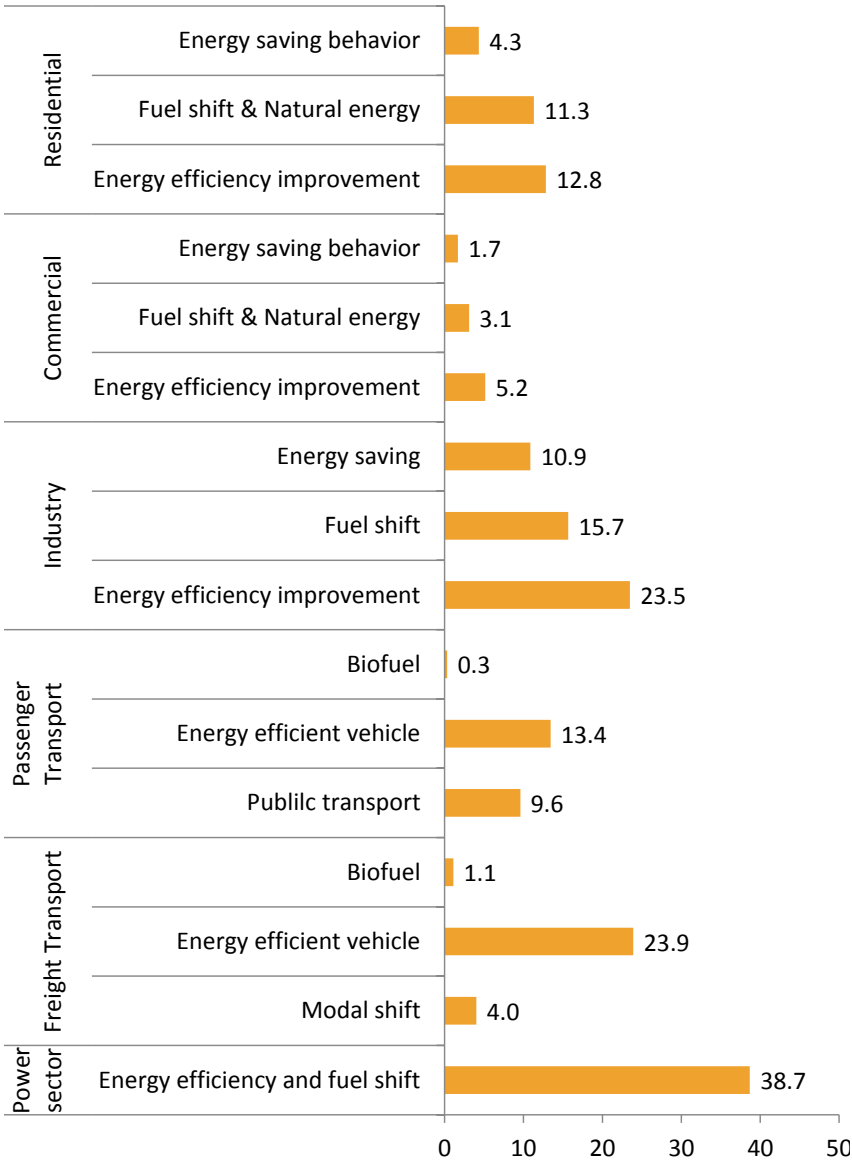
Energy Scenario

- Energy consumption of industrial and transport sectors should be highlighted in Vietnam's energy sector in future, because of continued trends of industrialization and increasing travel demand per person.
- GHG emission in 2030BaU will be 521.9 $MtCO_2eq$ (6.4 times compared to 2005), and in 2030CM, will be 343.4 $MtCO_2eq$ (30% reduction)
- Energy efficiency improvement and fuel shift in the power sectors shares largest proportion of reductions, 38.7 $MtCO_2$

GHG emission in energy sector

$MtCO_2eq$

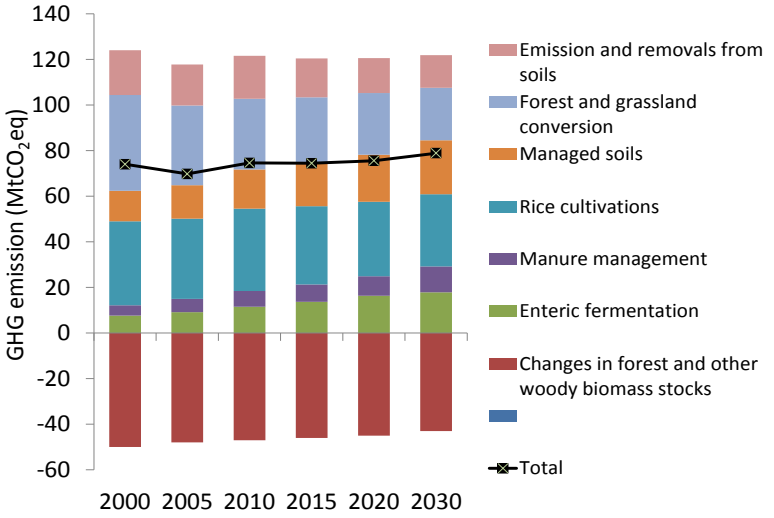
Sector	2005	2030BaU	2030CM	2030BaU /2005	2030CM /2005	2030CM/ 2030BaU
Residential	14.8	110.2	68.2	7.4	4.6	0.6
Commercial	6.2	41.3	27.9	6.7	4.5	0.7
Industry	38.8	256.5	185.4	6.6	4.8	0.7
Passenger transport	10.0	46.5	23.1	4.7	2.3	0.5
Freight transport	11.3	67.3	37.8	6.0	3.4	0.6
Total	81.0	521.9	342.4	6.4	4.2	0.7



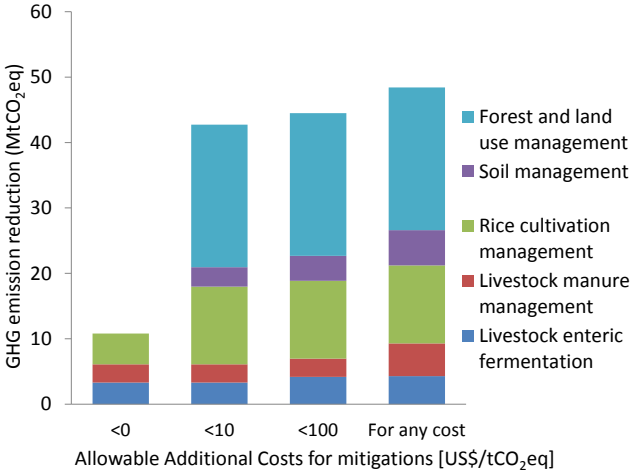
Contribution of low carbon measures in energy sector

Agriculture, Forestry and Other Land Use (AFOLU) Scenario

- Based on the information from National Statistical Yearbook, MARD, 2nd National communication, the draft report of Vietnam Inventory in 2005, and also FAO, etc.
- GHG emissions in AFOLU in 2030 will be 78.8 $MtCO_2eq$ (agriculture: 84.5 $MtCO_2eq$, LULUCF: -5.7 $MtCO_2eq$)
- A package of mitigation countermeasures less than the cost of 10 US$/$tCO_2eq$ have high mitigation potential as well as some economic efficiencies in AFOLU sectors (42.7 $MtCO_2eq$).
- Rice cultivation management has largest contribution in the agricultural sector



GHG emissions in AFOLU sector in 2030



GHG mitigation potential

Further Collaboration

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Table

Population	1000 pers.	
GDP	Bill.US$	
GHG emission	$MtCO_2eq$	
Energy		
AFOLU		
Waste		

(*) Reduction ratio = (2030BaU-2030CM)/2

The above table shows projected GHG emi
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$MtCO_2eq$. The official target of 30% reduct
of the modelling also show the GHG emissio

Low Carbon Scenarios for Ho Chi Minh City, Vietnam 2030

Currently, Vietnamese Government responds to climate change through a number of decisions such as "National Target Program to respond to Climate Change" (Decision 158/QD-TTg, 2008), "National Climate Change Strategy" (Decision 2139/QD-TTg, 2011), "National Green Growth Strategy" (Decision 1393/QD-TTg, 2012), and "Plan to

and vision beyond 2020" (Decision 568/QD-TTg, 2013), two scenarios are developed for the socio-economic vision of HCMC by 2030 with the projection of energy consumption and CO_2 emission in energy sectors such as Power generation, Transportation, Residential, Commercial and Industry. In which, in Business-as-Usual scenario (BaU) we do not con-

- Support NAMA
- Technological analysis of JCM
- Capacity building of "In-House" model development

Thank you for your attention!

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