





### **International Symposium**

Nagoya University Initiative for Integrating Climate Change Mitigation in Urban Development Global Carbon Project Initiative on Urban and Regional Carbon Management

# "Realizing Low Carbon Cities: Bridging science and policy"

February 16th, 2009, Nagoya, Japan

And

## **International Workshop**

Nagoya University Initiative for Integrating Climate Change Mitigation in Urban Development Global Carbon Project Initiative on Urban and Regional Carbon Management

## **Towards Low Carbon Cities:**

# Understanding and analyzing urban energy and carbon

February 17th-18th, 2009, Nagoya, Japan

### **Organizers**

Graduate School of Environmental Studies, Nagoya University

Global Carbon Project

Center for Global Environmental Research, National Institute for Environmental Studies

## **Co-sponsors**

Ministry of Environment, Japan Aichi Prefecture Nagoya City

Institute for Global Environmental Strategies

#### Aims

- To strengthen and develop networks in the areas linking urban energy use, urban development and carbon management in a climate change mitigation context
- To share research results and modeling and analyses challenges and approaches, and to discuss ways to overcoming them
- To explore ideas for developing joint activities such as syntheses, harmonized cross-comparative studies, and policy analyses
- To link scholarly endeavors to policy relevance and bridge research and policies

Logo, MOE		Logo, Aichi		Logo, Nagoya		Logo, IGES
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## **Tentative Schedule**

	Date		Venue	
International Symposium	Feb. 16 <sup>th</sup>	10:00 - 17:30	Hotel Mielparque Nagoya	
Reception		18:00 – 20:00		
International Workshop	Feb. 17 <sup>th</sup>	10:00 – 17:00	Noyori Conference Hall, Nagoya University	
Side-event: Advisory board meeting of Low Carbon Cities Research		17:00 – 18:00	Meeting Room 1A, Noyori Conference Hall, Nagoya University	
International Workshop	Feb. 18 <sup>th</sup>	10:00 – 17:00	Noyori Conference Hall, Nagoya University	

• Guest accommodation: Hotel Mielparque Nagoya

# **Speakers List (Tentative)**

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	Prof. Shinichi Hirano	President of Nagoya University		
	Dr. Arnulf Grubler	International Institute for Applied Systems Analysis		
	Mr. Takemoto / Mr. Moriya	Ministry of Environment, Japan		
	Mr. Takashi Inagaki	Vice-governor of Aichi Prefecture		
		Environmental Bureau of Nagoya City		
	Prof. Hidefumi Imura	Graduate School of Environment Studies, Nagoya University		
Day.1 Symposium	Prof. Steve Hammer	Columbia University		
	Mr. Paul Dowling / Dr. Nigel	International Energy Agency		
Symposium	Jolland			
	Prof. Ye Qi	Institute of Public Policy, Tsinghua University		
	Dr. Anand Patwardhan	Indian Institute of Technology – Mumbai		
	Dr. Shobhakar Dhakal	Global Carbon Project		
	Prof. Keisuke Hanaki	Dept. of Urban Engineering, The University of Tokyo		
	Dr. Hidetoshi Nakagami	Jukankyo Research Institute		
	Dr. Yasuhiro Sasano	National Institute for Environmental Studies		
	Prof. Yoshitsugu Hayashi	Dean of Graduate School of Environment Studies, Nagoya		
	Tior. Toshitsugu Hayasiii	University		
	Dr. Shobhakar Dhakal	Global Carbon Project		
	Dr. James Keirstead	Imperial College London		
	Prof. Ram M. Shrestha	Asian Institute of Technology		
	Dr. Richard Dawson	Tyndall Centre for Climate Change Research		
	Prof. JohnHandley	CURE, School of Environment and Development, the		
		University of Manchester		
	Dr. Ranjan K. Bose	The Energy and Resources Institute		
	Prof. M. Okumiya,			
	Prof. H. Shimizu			
Day.2	Prof. T. Takeuchi			
Workshop	Dr. A. Murayama			
	Dr. H. Kato	NY YY		
	Dr. T. Kato	Nagoya University		
	Dr. N. Sugiyama			
	Dr. A. Onishi			
	Dr. Y. Hirano			
	Dr. X. Cao			
	Dr. O. Higashi Prof. Toshiaki Ichinose	National Institute for Environmental Studies  Walsayama University		
	Dr. Yukiko Yoshida			
	Dr. Yukiko Yoshida Dr. Hiroki Tanikawa			
		Wakayama University		
Day 2	Dr. Shinji Kaneko	Hiroshima University		
Day.3 Workshop	Dr. Niels Schulz	Imperial College London		
workshop	Mr. Paul Dowling / Dr. Nigel	International Energy Agency		

Jolland			
Prof. Christopher Kennedy	Toronto University		
Prof. Chen Jin	Beijing Normal University		
Dr. Yoshiaki Yamagata	National Institute for Environmental Studies		
Dr. Yasuyo Makido	Global Carbon Project		
Prof. Marilyn A. Brown	School of Public Policy, Georgia Institute of Technology		
Prof. Frank Southworth	Oak Ridge National Laboratory		
Dr. Julia Steinberger	Institute of Social Ecology Vienna		
Prof. Miranda. A. Schreurs	Environmental Policy Research Centre, Freie Universität Berlin		
Dr. Paty Romero Lankao	National Center for Atmospheric Research, USA		
Dr. R. A. Sebastian Carney	CURE, SED, the University of Manchester		
Dr. Tae Yong Jung	Asian Development Bank		
Prof. Yingxin Zhu	Tsinghua University, China		
	The World Bank		
	Organization for Economic Development and Cooperation		

## **Nagoya University Initiative for**

## **Integrating Climate Change Mitigation in Urban Development**

(For details, contact Prof. Hidefumi Imura)

#### How we recognize the issues

- Cities in both industrialized and developing countries are more and more responsible for promoting sustainable buildings, environmentally sustainable transportation, energy efficiency, etc.
- Integrating climate change mitigation measures in urban development is needed, especially in rapidly growing cities in China, India, and Southeast Asian countries.
- Universities and research institutions in Asia must cooperate more closely to provide opportunities for education and research activities, especially for students and young researchers.

#### We have launched an initiative

 Nagoya University has launched an initiative to promote research and education programs related to climate change mitigation in cities, especially in rapidly developing Asian cities, in cooperation with universities, research institutions, industries, governments, NGOs, and citizens.

#### What we do

- Build an international network (Consortium, or Platform of the Joint Research Initiatives) of universities, research institutions, international organizations, NGOs and others
- Explore a research and education program related to climate change mitigation and adaptation policies/measures in cities
- Exchange information
- Form an international research team
- Organize international meetings to share research and education processes and outcomes

#### How we contribute to cities (our goals)

- Design and build "low-carbon" cities, halving GHG emissions by 2050
- Achieve drastic improvement in the energy efficiency of cities
- Seek for "macro-efficiency" (or "social system efficiency") rather than "micro-efficiency"
- Propose a transition path to a "low-carbon" society, or "low-carbon city" through integrating environmental measures in urban development
- Incorporate technological and socio-economic options
- Establish a platform of research and education for young researchers, especially those who will lead initiatives in developing countries
- Conduct field studies on developing Asian cities
- Propose feasible measures enforceable in developing Asian cities



# Global Carbon Project Initiative on Urban and Regional Carbon Management, URCM (www.gcp-urcm.org)

(For details, contact Dr. Shobhakar Dhakal, shobhakar.dhakal@nies.go.jp)

The Global Carbon Project (GCP)- www.globalcarbonproject.org was established in 2001 in recognition of the enormous scientific challenge and fundamentally critical nature of the carbon cycle for Earth sustainability under the auspice of Earth System Science Partnership (ESSPwww.essp.org) of four major international scientific programs on global environmental change research. The scientific goal of the project is to develop a complete picture of the global carbon cycle, including both its biophysical and human dimensions together with the interactions and feedbacks between them. The Global Carbon Project launched the Urban and Regional Carbon Management (URCM) Initiative in 2005 recognizing the importance of the area. URCM is a policy-relevant scientific initiative aimed at supporting urban carbon management and sustainable urban development.

URCM addresses some of the most fundamental scientific issues related to carbon management:

- How do urbanization and the global carbon cycle interact globally through population, affluence, energy and other biophysical and socioeconomic mechanisms?
- How can we quantify current and past carbon emissions/sinks in cities and regions? What are the future scenarios of de-carbonized urban and regional development?
- What configurations of underlying and proximate drivers (geography, socioeconomic factors, historical legacies/trajectories etc.) explain the differences in carbon trajectories of cities?
- What management strategies can influence carbon mitigation in cities?
  - What are the trade-offs and synergies of streamlining carbon management in local areas?
  - What are the roles of the institutions and carbon governance structures in sound urban and regional carbon management?
- What we do
  - Scientific networking, development of forums
  - Research agenda setting
  - Coordination of national, regional and international research programs
  - 0 Research syntheses
  - Science-policy interfacing



#### 2006

- International Conference on Managing Carbon at Urban and Fregional Levels: Connecting Detelopment Decisions with the Global Issues, 4-8 September 2006, Mexico City
- UNFCCC COP 12 side events on CDM and Urban Air Quality (with ECN Policy Studies Netherlands) on 35% November 2006 in Maimbi
- International Workshop on Anstitutional Dimensions of Urban and Regional Carbon Maragement (with IHD P) on Sh December 2006 in Bali
- International Workshop on Urbanization, Development Pathwars and Carbon Implications (with NASA Austria) on 20-30th March 2007 in Taukuba
- International (Morkshop on Howto Model Low-Carbon Society Juith Asia Energy-Environment Moceling Forum) on 30-31 May 2007 in Beijing
- UNPCCC CCP-18 side event on Carbon Management in Cities. Gaps in Policy Discussions and Scientific Understanding, (with Asian Institute of Technology) on 6th December 2007 in

#### 2008

- International Symposium on Urban Energy and Carbon Management Challenges for Science and Policy, 4 February 2008, AFTC entre, Pathunthani, Thailand
- International Vuorkshop on Urban Energy and Carbon Modeling, February 5-6, 2008, AIT



## Urban and Regional Carbon Management

- Products to date
  - Them atic and integrative international science network
  - Urban Energy and Clinate Modeling Forum
  - UR OM science framework and research agenda
  - Scientific publications (9 scientific articles in journals and books in 2006/8)
  - UR OM Web-page, www.go.p-uronwig
  - Web-based URCM Resource Center

#### rsearchable database).

 Research nodes, research initiatives, sidentific resources, city action plans









