東京大学未来ビジョン研究センター
Institute for Future Initiatives
The University of Tokyo

GLOBAL CARBON project

APN ASIA-PACIFIC NETWORK FOR GLOBAL CHANGE RESEARCH

Quantifying urban GHG emissions and understanding their drivers has gradually become a priority for many local governments across the globe. Many different bottom-up and top-down approaches have been mobilized to estimate GHG emissions at the sub-city scale. These techniques use different types of data and achieve different levels of resolution ranging from the building, to the neighborhood and the ward level. Such disaggregated information can provide a wealth of insights that can inform the development of better- informed policies and practices to assist efforts to meet the Paris Agreement or more ambitious decarbonization pathways. This symposium will highlight different approaches for quantifying GHG emissions at the sub-city scale and for different sectors. It will draw from case studies in major cities such as Beijing, New York, Taipei and Tokyo to outline the different methods, tools and datasets that can be mobilized to estimate emissions at the sub-city level from the top down and the bottom up.

TRACKING GHG EMISSIONS AT THE SUB-CITY LEVEL: METHODS AND IMPLICATIONS FOR MEETING THE PARIS AGREEMENT AND CATALYZING DECARBONIZATION

The themes outlined across the different presentations will be discussed by a panel of practitioners, policy-makers and academics working at the interface of cities and GHG emissions. This event will be jointly organized by the Institute for Future Initiatives, University of Tokyo and the Global Carbon Project (GCP). It will bring together the international partners of a project funded by the Asia Pacific Network for Global Change Research and the work conducted at the National Institute for Environmental Studies (NIES), Japan.

20th November 2019   *Sanjo Confrence Hall,* University of Tokyo

Agenda

Date:	20 November 2019
Time:	9:15am – 3:30pm
Venue:	Sanjo Confreence Hall, University of Tokyo
9.15 – 9.30	Registration
9.30 – 9.40	Opening remarks **Peter Marcotullio**, City University of New York
9.40 – 11.10	**Session 1**
	Peter Marcotullio, City University of New York Residential energy use projections for New York: Policy implications **Zhihui Li**, Chinese Academy of Sciences Industrial transformation and the promotion of low carbon urbanization in Beijing-Tianjin–Hebei region of China **Poju Huang**, National Taipei University CO2 emissions of different building types in Taipei: An emergy approach **Subina Shrestha**, Asian Institute of Technology Historic emissions and driving factors for Bangkok Metropolitan Region Q&A for entire session
11.10 – 11.30	Tea & Coffee break
11.30 – 12:45	**Session 2**
	Peraphan Jittrapirom, Global Carbon Project Future Earth/GCP Activities in Urban Decarbonization **Yoshiki Yamagata**, Global Carbon Project Carbon Mapping for Tokyo and Systems Design for Urban Decarbonization **Takuro Kobayahi** , Global Carbon Project Energy Integration Opportunities for Urban Decarbonization **Takahiro Yoshida**, Global Carbon Project GeoDesign as a tool to support Urban Decarbonization Q&A for entire session
12:45 – 13:45	Lunch (not provided)
13:45 – 15:00	Panel with practitioners and academics
	Panelists **Noriko Kono**, PADECO Co. Ltd. **Peter Marcotullio**, City University of New York **Yuko Nishida**, Renewable Energy Institute **Giles B. Sioen**, Future Earth's Japan Global Hub **Yoshiki Yamagata**, Global Carbon Project *More panelists to be confirmed* Moderator: **Peraphan Jittrapirom**
15:00- 15:10	Closing remarks **Yoshiki Yamagata**, Global Carbon Project
15:10- onwards	Tea & Coffee Break Young researcher poster session (Organised by Vinamra Mathur) Networking

Tracking GHG emissions at the sub-city level: methods and implications for meeting the Paris Agreement and catalyzing decarbonization

Speaker Profiles

PoJu Huang is a PhD candidate at the Graduate Institute of Urban Planning, National Taipei University. His main research interests are on how urban spatial and temporal development forges the relationships between urban form, energy use, and CO2 emission, focusing on the sub-city scale at Taipei City

Peraphan Jittrapirom is the Director of the International Project Office of the Global Carbon Project, at the National Institute for Environmental Studies (NIES). He conducts research in the field of sustainable transport planning and is particularly interested in how smart mobility can contribute positively to social and environmental conditions. He worked as transport consultants prior to completing his PhD at Vienna University of Technology. He has since worked in several research projects, such as Climate Adaption project (CCAR) and Mobility-as-a-Service at Radboud University.

Takuro Kobashi is a Research Associate at the National Institute for Environmental Studies (NIES) and a Visiting Associate Professor at the Research Institute for Humanity and Nature (RIHN). He received his Ph.D. at the Scripps Institution of Oceanography, University of California, San Diego and served as a Marie Curie Fellow (2014-2016). He has been working on climate change and urban decarbonization.

Noriko Kono is a Senior Consultant at PADECO Co. Ltd. Her main activities relate to urban planning, environmental policies, and climate change in Japan and emerging countries in Asia, Africa and Eastern Europe. Prior to joining PADECO she had 13 years research experiences in think tanks and universities on sustainable urban and regional planning in the Asia-Pacific region, and environmental policy-makings in developing countries. Dr. Kono is also a committee member of Green Building Japan, an NPO that promotes environmentally friendly real estate.

Zhihui Li is Assistant Professor at the Center for Chinese Agricultural Policy (CCAP), Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences (CAS). She obtained her PhD in Geographic Information Systems (GIS) from the Chinese Academy of Sciences. Her main research interests include, Environmental and Natural Resource Economics, Ecological Economics, Land Use Modeling, and Land Use Change.

Peter J. Marcotullio is Professor of Geography at Hunter College, City University of New York (CUNY), and Director of the Institute for Sustainable Cities at Hunter College. He teaches and researches the geography of urbanization as it relates to environmental change covering multiple scales. Recent work focuses on energy use and energy policy, climate mitigation and exposure to future heat waves. He is also the co-Editor-in-Chief of *Urban Climate* (Elsevier).

Yuko Nishida is a Senior Manager (Climate Change) at the Renewable Energy Institute. She is an urban renewal planner specializing in policy-making for sustainable development in cities, sustainable architecture and urban planning. Before joining the Renewable Energy Institute, she worked for the Tokyo Metropolitan Government on climate policies and international environmental cooperation projects.

Subina Shrestha is a Research Associate at the Asian Institute of Technology. In her role she has worked on a UNESCAP project on evidence- based policy making for sustainable use of resources in the Asia- Pacific, and has developed future scenarios for renewable energy development using LEAP.

Giles B. Sioen is a Science Officer based in Future Earth's Japan Global Hub and JSPS Postdoctoral Fellow at UNU-IAS. He is coordinating the Future Earth Urban and Health Knowledge-Action Networks. His research focuses on the development of a system-based guideline to facilitate transdisciplinary research with diverse stakeholders. Before joining Future Earth, he worked as a project researcher at the Graduate School of Frontier Sciences of the University of Tokyo, where he applied sustainability science concepts using a systems approach in the fields of urban planning and public health. He holds a Ph.D. in Sustainability Science from the University of Tokyo.

Yoshiki Yamagata is a Principal Researcher at the Center of Global Environmental Research and Head of Global Carbon Project International Office at the National Institute for Environmental Studies (NIES). He studies about Climate Change Risk Management and has been a contributor to the IPCC and IPBES. He also has positions at IIASA (Vienna), ISM (Tokyo) and many Universities (Tokyo, Hokkaido, Tsukuba, Keio, Sophia). His current research interests are in urban form modeling, land use scenarios, transport simulations and big-data analysis for energy and environmental applications. He has published almost 200 papers and his most recent book is "Urban Resilience: A Transformative Approach" (Springer, 2016).

Takahiro Yoshida （吉田 崇紘） is a Research Associate of Center for Global Environmental Research, National Institute for Environmental Studies, Japan. He received his Ph.D. degree in Policy and Planning Sciences from University of Tsukuba, 2018. His research interests include: geographical information sciences, remote sensing, spatial econometrics, spatial statistics, compositional data analysis, and urban analysis.