

**Summary of the Symposium**  
**on**  
**Cities and Climate Change (Draft 4)**  
**(June 28, 2024)**

The Overseas Environment Cooperation Center (OECC) organized its Symposium on Cities and Climate Change on June 28, 2024. This Symposium was designed to contribute to the preparatory process of the IPCC “Special Report on Climate Change and Cities.” (See the attached program.)

**I. Proceedings**

**(Part 1)**

**(1) Special Report**

**Mr. Yutaka Matsuzawa, Vice-Minister for Global Environmental Affairs** (Ministry of the Environment) delivered his special report on “Updates on international debates on global environment issues” and updated on (a) Climate Change, (b) G7 Summit and G7 Ministerial Meeting on Climate, Energy and Environment, (c) Biodiversity and (d) Other international initiatives made by Government of Japan.

**(2) Keynote Lecture I**

**Prof. Winston Chow, Co-chair of IPCC WGII** (Singapore Management University) made his lecture on “IPCC Special Report on Climate Change, The roadmap ahead” to outline the background of the IPCC Special Report on Cities, to update of its preparation status after its Scoping Meeting (April 2024) and to share its roadmap toward completing its Special Report in early 2027, as shown below.

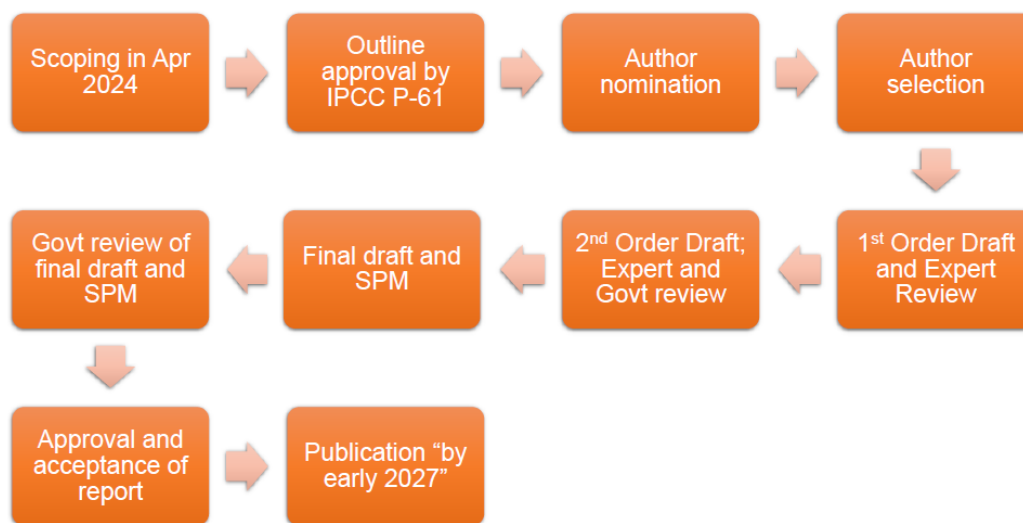


Figure 1. Roadmap towards the completion of IPCC Special Report on Climate Change & Cities (Source: Prof. Winston Chow, IPCC Special Report on Climate Change & Cities, The roadmap ahead, #3, 6<sup>th</sup> Hashimoto Symposium on Cities and Climate Change, 2024)

### (3) Keynote Lecture II

**Mr. Toru Hashimoto, President of Y-Bridge and former Director General on Development Cooperations (City of Yokohama)** mad his lecture on “Significance of City-to-City Collaboration for Further Green Transformation (GX)” to introduce Yokohama’s experience in City-to-City Collaboration Program on climate change and to share his own thoughts over the role of global networking and cities in Japan.

### (Part 2)

A Panel was organized to discuss what and how initiatives and experiences by Japan would contribute to the international community in addressing climate change. The Panel consisted of Five (5) national experts as its panelists and one (1) professional as a discussant as follows:

#### (Panelists)

- Prof. Nobuo Mimura, Professor, Ibaraki University
- Ms. Yatsuka Kataoka, Program Director, City Taskforce, IGES
- Mr. Makoto Kato, Member, Board of Director, OECC
- Mr. Togo Uchida, Executive Director, ICLEI Japan

#### (Discussant)

- Dr. Muneki Adachi, Associate Professor, Keio University

(Moderator)

Dr. Kazu Takemoto, President, OECC

Each Panelist has been asked to respond to the following questions:

- (1) What initiatives/activities have cities and local governments implemented to address climate change? What actions will be taken to disseminate these efforts in an effective manner?
- (2) Among Japan's initiatives, what experience will be useful for the IPCC's Special Report on Cities?
- (3) What are the best ways for these experiences to contribute to the preparatory process for the IPCC Special Report?

## II. Outcome of Symposium

### 1. Cities and Climate Change

Some 56% of the world's population live in cities<sup>1</sup> and is projected to reach nearly 70% by 2050. With its population and the coupled by the associated urban activities, cities are a key contributor to climate change. It is estimated that urban areas are responsible for 70 percent of global CO<sub>2</sub> emissions, with transport and buildings being among the largest contributors (IPCC<sup>2</sup>, 2022). Carbon neutrality by 2050 cannot be achieved without substantial GHG emission reduction in cities.

We have seen encouraging trend in this regard. First, cities are drivers for economic growth, with huge investment opportunities for climate change. Secondly, many cities are part of the solutions, taking actions to limit GHG emissions by promoting renewable energy, circular economy, zero emission houses/buildings and many others. Cities are benefiting from climate change solutions that contribute to addressing the challenges cities are facing such as air pollution, waste management and other development

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<sup>1</sup><https://www.worldbank.org/en/topic/urbandevelopment/overview#:~:text=Today%2C%20some%2056%25%20of%20the,people%20will%20live%20in%20cities.>

<sup>2</sup> IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA. doi: 10.1017/9781009157926

problems, while achieving sharp reduction of GHG emission.

Cities play an increasingly important role in tackling climate change impacts, too, because of their exposure to increasing climate-related disaster risks. Climate change also costly impacts on cities' wide range of development gains for basic services, infrastructure, housing, livelihoods and health.

With growing concern over the interlinkage between climate change and cities, climate change and cities became an emerging agenda increasingly highlighted at international forum. The G7 Ministerial Communiqué on Climate, Energy and Environment in April 2023 called attention to the role of cities<sup>3</sup>. The same policy direction was also emphasized in the decision at the COP28 in Dubai of last December<sup>4</sup>.

## 2. Experiences in Japan

In Japan, cities play an essential role in achieving its carbon neutrality by 2050. Decarbonization measures as well as adaptation measures in cities have been promoted in many ways with special attention to their synergies with local development strategies as well as with solutions for local challenges.

### (1) Climate Change Mitigation Act

Following the adoption of the Kyoto Protocol in 1998, the Climate Change Mitigation Act was enacted as a framework for the national government, local governments, businesses, and citizens to addressing climate change mitigation together. Under the framework, the local governments have played a key role from the outset. All the local governments are encouraged to formulate their Action Plans to address climate change mitigation by setting out GHG emission reduction target by adopting mitigation measures. Local governments including cities such as Tokyo or Yokohama has sometimes introduced innovative measures ahead of national government as was seen in the case in emission trading scheme by Tokyo.

The recent amendment of the Act in 2021 legally underpinned the commitment for carbon neutral by 2050, which thereafter navigate the climate change measures to be aligned with the above national commitment. The amendment also introduced a new framework to further promote local

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<sup>3</sup> <https://www.env.go.jp/content/000127828.pdf>

<sup>4</sup> [https://unfccc.int/sites/default/files/resource/cma2023\\_L17E.pdf](https://unfccc.int/sites/default/files/resource/cma2023_L17E.pdf)

decarbonization actions by promoting synergies with local development and reducing negative impacts on (or trade-off with) local challenges. The local renewable energy projects are accelerated through fast track with one-stop issuance of permits and licenses that would otherwise go through lengthy process, when the projects contribute to environmental conservation and local social and economic development. This framework allows local governments to align with their decisions or priorities.

In addition, open access to corporate GHG emissions has been significantly improved, which allows local governments to advance their own decarbonization policies and measures in a speedy and transparent way.

## (2) Climate Change Adaptation Act and A-PLAT

Climate Change Adaptation Act was enforced in 2018 in response to the “Report on Assessment of Impacts of Climate Change in Japan and Future Challenges,” which called for comprehensive and science-based adaptation measures in Japan. The Act has legally underpinned the adaptation measures and enabled the cross-sectoral measures to be taken by national government, local governments, private sectors, and citizens under the respective responsibilities.

Local governments including cities play a fundamental role in planning and implementation for their climate change adaptation policies and measures. Under the Act, most cities are encouraged to formulate “Local Climate Change Adaptation Plan” that assesses possible climate impacts in cities and accordingly tailors local adaptation measures in the economic and social context. Cities are also encouraged to establish Local Climate Change Adaptation Center to promote their adaptation plans and disseminate information related to impacts and adaptation

Given that the lack of knowledge and supporting data has been a major challenge for local governments, Climate Change Adaptation Information Platform (A-PLAT) was set up to function as a center of excellence to enable local governments as well as private sector or citizens to take the latest scientific knowledge into local adaptation measures through PDCA cycle.

The lessons learned and good practices as well as local impacts have been accumulated and broadly disseminated to international societies through A-PLAT as well as information platform named Asia-Pacific Climate Change Adaptation Information Platform (AP-PLAT), too.

### (3) Decarbonization Leading Areas (DLAs)

Japan made local decarbonization the central pillar of its policy package to achieve its carbon neutrality commitment by 2050. In 2021, the Government of Japan formulated the Regional Decarbonization Roadmap (RDR), which laid out local growth strategy and decarbonization projects that take full advantage of local resources (e.g. renewable energy).

The RDR underpinned the principles that Japan would pursue climate change policies while addressing other social challenges such as an aging population and declining birthrate or rural depopulation. It has reframed decarbonization measures as solutions to promote local development and tackle other social challenges.

The purpose of RDR is to contribute to local development that solves local environmental problems and improves the attractiveness and quality of local communities through designating 100 (at a minimum)<sup>5</sup> DLAs under the strong leadership by local government, local businesses as well as local financial institutions through intensive mobilization of policies, technology, information and finance.

The DLAs, being with relatively large capacities in many cases, has demonstrated that the quality of residents' life can be improved by solving local problems. The local knowledge accumulated in the preceding DLAs will be then rolled out as good models to other smaller local governments which may learn and tailor their own decarbonization actions. This sequential decarbonization triggered by RDAs is called "Decarbonization Domino," because advanced decarbonization models will be disseminated nationwide and lead to the carbon neutral by 2050 as a whole.

### (4) City-to-City Collaboration Program (C3P)

City-to-City Collaboration Program (C3P) was launched in 2013 by the Ministry of the Environment, Japan (MOEJ) to promote decarbonization in cities by sharing knowledge and lessons between cities in Japan and those abroad. Since then, the participating cities on board have increased to 20 cities in Japan and 49 cities across 13 countries in its partner countries by the end of March 2024.

C3P has been unique in its multilayered cooperation between Japan and partner countries with participation by local governments, private companies, universities, and national governments. The multilevel partnership enabled the packaged cooperation, which is another key feature in the program's success. In C3P, support for decarbonization

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<sup>5</sup> 74 DLAs are designated by the MOEJ as of April 2024.

project development has been packaged by relevant policymaking, institutional building, technology transfer and capacity-building.

In some cities where the need for introducing mitigation technologies is identified, the program has further led to infrastructure projects making full use of the financial schemes under the “Joint Crediting Mechanism” (JCM).

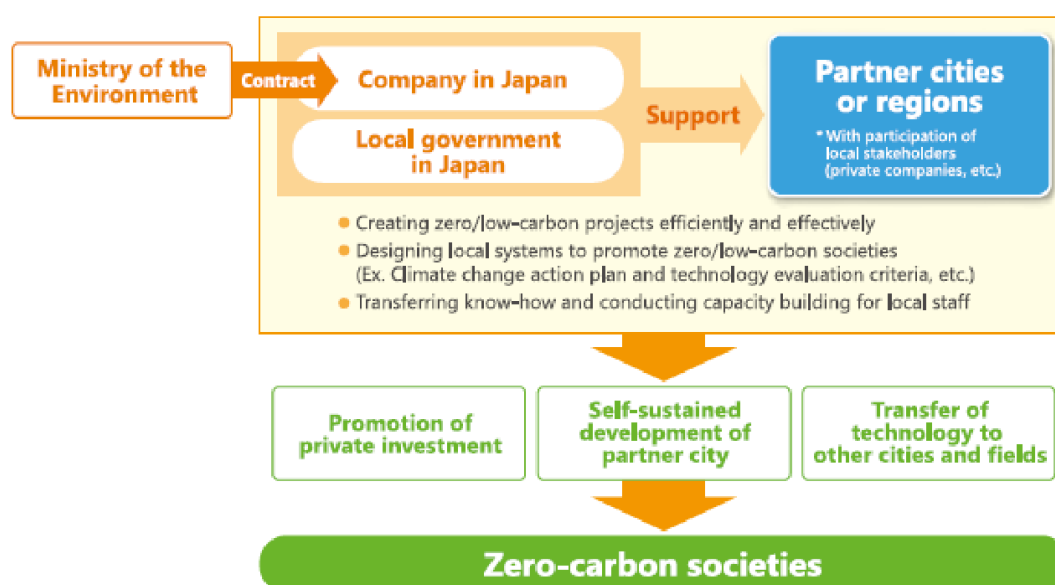


Figure 2. Conceptual diagram of City-to-City Collaboration Program (C3P) (Source: Ministry of the Environment Japan, 2023, <https://www.env.go.jp/earth/coop/lowcarbon-asia/english/project/>)

An example of a successful case of C3P is the collaboration between the Tokyo Metropolitan Government (TMG) and Kuala Lumpur City, Malaysia. Kuala Lumpur established a data-driven system for promoting energy savings in public facilities by adjusting to its local conditions with reference to the TMG’s green building system. The collaboration also contributed to raising the ambition of Kuala Lumpur City, which declared its 2050 Zero Carbon Declaration in 2023. In 2022, Saitama City joined the collaboration, responding to the needs of Kuala Lumpur to extend the scope of carbon-neutral activities to city blocks and districts.

As another good practice, Yokohama City has worked with Da Nang City in Vietnam. The cooperation between the two cities led to the introduction of high-efficiency pumps at the Da Nang Waterworks Corporation. This experience in introducing high-efficiency pumps has been extended to other cities in Vietnam as a horizontal extension of the technology. Likewise, the projects under the C3P contribute to the realizing decarbonized cities around the world by spreading the decarbonization measures from Japanese cities to overseas cities, which is called “Decarbonization Domino”.

### 3. Findings

- (1) Cities have enormous emission reduction potential as they are among the largest source of GHG emission. Cities are forefront of increasing risks of climate change, too. Required responses are different depending on characteristics of cities such as coastal cities, mountainous cities, cities in developing countries and others. With that in mind, it would be essential to sort out relevant measures by typologies of cities.

It is also important to pursue climate change measures that are integrated with urban development strategies or policies, supported by initiatives to promote these measures.

#### A Multidimensional Approach to "Climate Change and Cities "

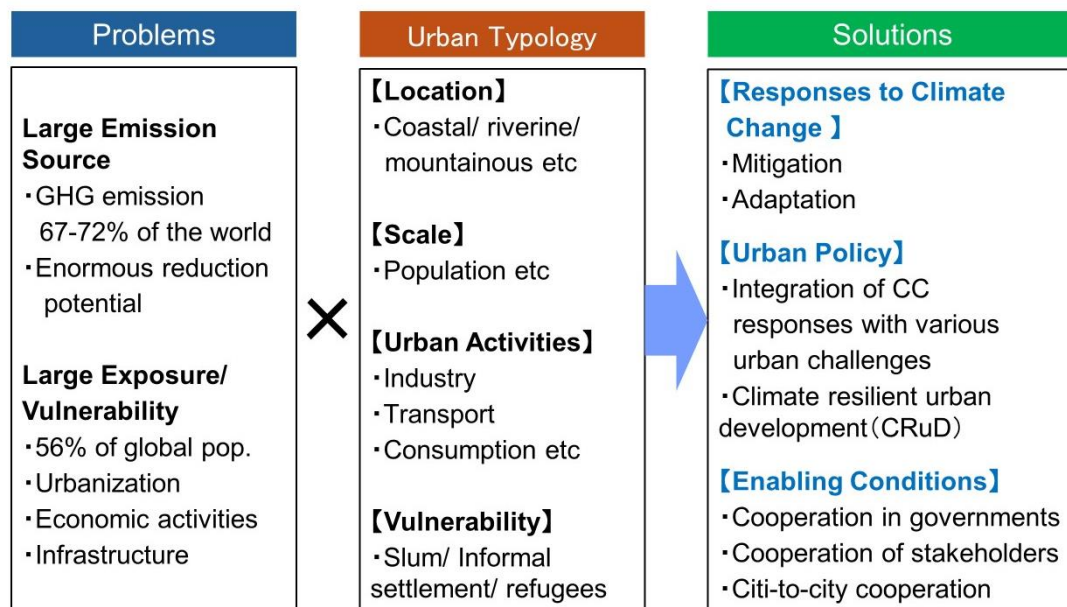


Figure 3. Multidimensional Approach to "Climate Change and Cities" (Source: Prof. Nobuo Mimura, #1, 6<sup>th</sup> Hashimoto Symposium on Cities and Climate Change, 2024)

- (2) Challenges faced by policymakers at city level are not well recognized at national level in most cases. For instance, local policymakers lag behind in financial knowledge, which is not well shared in the process for the IPCC Special Report.
- (3) In terms of successful climate solutions or climate actions, what can work in a city would go beyond the city border, being effective in other cities.



International networks of cities have played a significant role in enabling IPCC to enhance cooperation with practitioners, as was the case for IPCC having worked together with GCoM, C40 and other important urban networks. City-to-city collaboration program that has unfolded by city of Yokohama in Bangkok or Da Nang is an outstanding achievement, which is expected to be horizontally deployed in other cities or other countries.

In this context, it is worthwhile compiling successful approaches and generalized experiences which are extracted by analyzing individual cases through City-to-City Cooperation programs and international development cooperation projects.

- (4) In the reviewing process of the IPCC Special Report, it is recommended to include a wide range of stakeholders as much as possible, by inviting not only policymakers and legislators but those who will be vulnerable to climate change risks to be increased by city growth, such as citizens in cities, multilateral companies, small and medium-sized enterprises (SMEs). To further mobilize communication with a wide range of practitioners, it is useful to organize platforms such as virtual workshops and webinars.
- (5) Cities have produced enormous amount of knowledge every year. This is not limited to scientific knowledge but all the practical knowledge that like an urban policy, urban development or how to implement the policies and changes in the way of the behavior of people. It is important to incorporate the practical knowledge and experiences into the IPCC Special Report by exploring innovative ways to facilitate communication between the IPCC and city practitioners.
- (6) It is important to interlink urban policies at local level with climate change policies at international and global level. The extreme weather events including flooding and heat wave have taken place in a more frequent and intensified manner as the consequence of climate change. In addressing these extreme phenomena, it is noted that urban policies and climate adaptation policies have been well coordinated at local level.
- (7) Climate change measures in cities are more relevant to demand side measures including decarbonization through behavioral changes. IPCC 6th synthesis report shows that the demand side climate change measures will potentially reduce up to 70% GHG emission by 2050.

- (8) While level of ambition for global GHG emission reduction is to be raised through periodical revisit of Nationally Determined Contributions (NDCs), local government can spearhead national governments by ratchetting up the ambition of the 2035 or 2040 target at local level in advance of the scheduled revisit of NDCs by national governments.

In this regard, multilateral and global initiatives of cities including ICLEI and C40 are well positioned to play an essential role, given that it is often difficult to raise global ambition by Parties only, due to its top-down nature of UNFCCC as well as to the inevitable interfaces of national emission reduction targets with other policies such as of energy or economic security.

[Box: local initiatives in setting ambitious targets]

The table shows the GHG emission reduction target by 2030 of ICLEI Japan members. The member cities or local governments have very ambitious targets that include 50% or 60% reduction by 2030, whereas the emission reduction target by government of Japan is 46%. They are expected to advance the collaboration with national government by sharing the local knowledge obtained in the measures to achieve the ambitious goal, which will then be followed by further input to IPCC and other global forum.

Municipality	2030 Goal	2050 Goal	Municipality	2030 Goal	2050 Goal
Aichi Prefecture	46% (2013)	Net-Zero	Sumida City	50% (2000)	Net-Zero
Iida City	51% (2013)	Net-Zero	Tokyo Metropolitan Government	50% (2000)	Net-Zero
Itabashi City	51% (2013)	Net-Zero	Tokorozawa City	46% (2013)	Net-Zero
Okayama City	≥46% (2013)	Net-Zero	Tottori Prefecture	60% (2013)	Net-Zero
Katsushika City	50% (2013)	Net-Zero	Toyama City	53% (2013)	Net-Zero
Kawasaki City	50% (2013)	Net-Zero	Toyota City	50% (2013)	Net-Zero
Kitakyushu City	≥47% (2013)	Net-Zero	Nagano Prefecture	60% (2010)	Net-Zero
Kyoto City	46% (2013)	Net-Zero	Nagoya City	52% (2013)	Realization of Zero Carbon Society
Kobe City	Approx.60% (2013)	Net-Zero	Hamamatsu City	52% (2013)	Net-Zero
Saitama City	51% (2013)	Net-Zero	Hiroshima City	50% (2013)	Net-Zero
Sapporo City	60% (2016)	Net-Zero	Matsuyama City	50% (2013)	Net-Zero
Sado City	-	Net-Zero	Musashino City	53% (2013)	Net-Zero
Shimokawa Town	48% (2019)	Carbon Negative	Yokohama City	50% (2013)	Net-Zero

- (9) Following ideas are suggested for further consideration as to how we can translate the knowledge produced by practitioners on the ground to internationally academic community in similar manner as academic literatures:

- 1) It is highly valuable to document the experiences of cities in academic papers as much as possible. These papers will likely be widely cited in the academic community, including in the IPCC Special Report. To achieve this, it is important to provide information to researchers at universities and research institutions, and to conduct joint research. Collaboration between researchers and practitioners in writing these papers is highly desirable.
  - 2) Japanese cities and relevant institutions should report their experiences on the climate change responses and urban policies in English. They will serve as valuable sources of information for the IPCC Special Report as so-called grey literature. For example, the knowledge accumulated through the ten-year city-to-city collaboration program by IGES is an example of what should be compiled into such reports.
  - 3) Another approach is to disseminate information in collaboration with international networks. For example, when ICLEI compiles the experiences of cities around the world, providing Japan's experiences and cooperating with them can position Japan's experiences in the international context. Collaborating with networks that have extensive experience in information dissemination will enhance the impact of the reports.
- (10) We call on global stakeholders, including IPCC, to actively organize forums for exchange, such as international symposiums, where researchers and practitioners from various countries can gather and discuss. These platforms for exchanging ideas are extremely important to explore solutions to climate change and urban issues and to identify solutions for diverse cities with varied geographic and socio-economic backgrounds.
- These international forums will serve as a driver for exchanging information, identifying key issue and deepening shared understanding toward developing the common goal of sustainable development of cities.

## Attachment: Program

### Opening Remarks

*Dr. Kazu Takemoto (President, OECC)*

### [PART 1]

#### Special Report

##### **“Updates on international debates on global environment issues”**

*Mr. Yutaka Matsuzawa (Vice-Minister for Global Environmental Affairs, Ministry of the Environment, Japan)*

#### Keynote Lecture I (online)

##### **“IPCC Special Report on Climate Change & Cities, the roadmap ahead”**

*Prof. Winston Chow (Co-chair of IPCC WGII/Professor, Singapore Management University)*

#### Keynote Lecture II

##### **“Significance of City-to-City Collaboration for Further Green Transformation (GX)”**

*Mr. Toru Hashimoto, (President of Y-Bridge, former Director General on Development Cooperations at the City of Yokohama)*

#### Q&A/Discussions (I)

### [PART 2]

#### Panel Discussion

*Moderated by Dr. Kazu Takemoto (President, OECC)*

##### Panelist:

- *Prof. Nobuo Mimura (Chairman of OECC/Professor and Former President of Ibaraki University)*
- *Ms. Yatsuka Kataoka (Program Director of City Taskforce, IGES)*
- *Mr. Makoto Kato (Member of Board of Directors, OECC)*
- *Mr. Togo Uchida (Executive Director, ICLEI Japan)*

##### Discussant:

- *Dr. Muneki Adachi, Associate Professor, Keio University*

##### Key Questions:

- a) What initiatives/activities have cities and local governments implemented to address climate change? What actions will be taken to disseminate these efforts in an effective manner?
- b) Among Japan's initiatives, what experience will be useful for the IPCC's Special Report on Cities?
- c) What are the best ways for these experiences to contribute to the preparatory process for the IPCC Special Report?

#### Q&A/Discussion (II)

#### Wrap-up by Moderator