

# Becoming net-zero emissions city

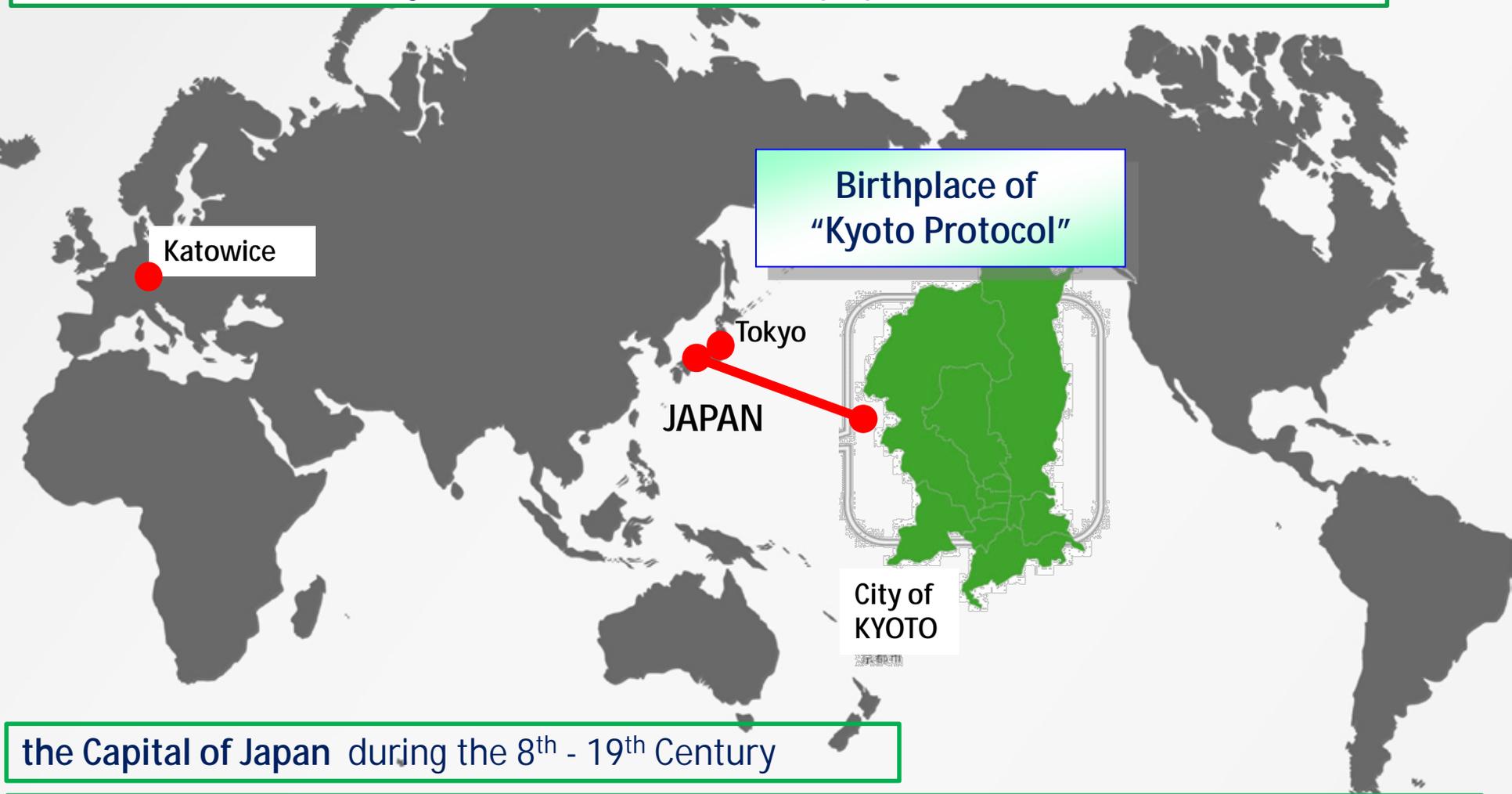


**Takeshi SHIMOTSUMA**  
 Supervising Director of  
 Global Environment and Energy  
 Environment Policy Bureau  
 Kyoto City Government



# Characteristics of Kyoto City

Co-existence, Harmony with Rich nature with population of 1,470,000



the Capital of Japan during the 8<sup>th</sup> - 19<sup>th</sup> Century

17 World's Cultural Heritage Sites within Kyoto City and Neighboring Areas

City of Higher Education with 39 Universities and Colleges and 150,000 Students



# United Nations Framework Convention on Climate Change

## Third Session, Conference of the Parties

Kyoto, 1 - 10 December 1997

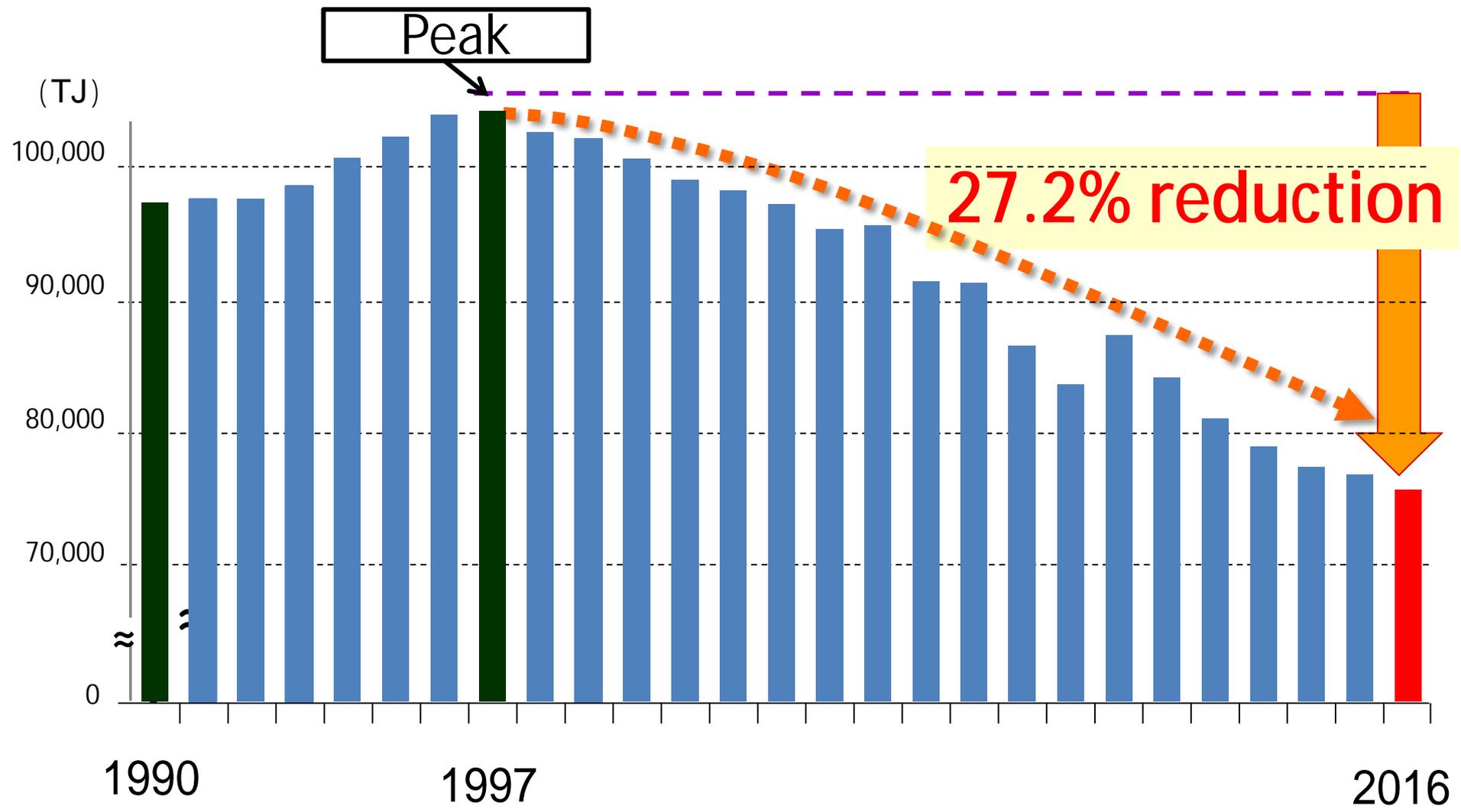




**Where are we?**

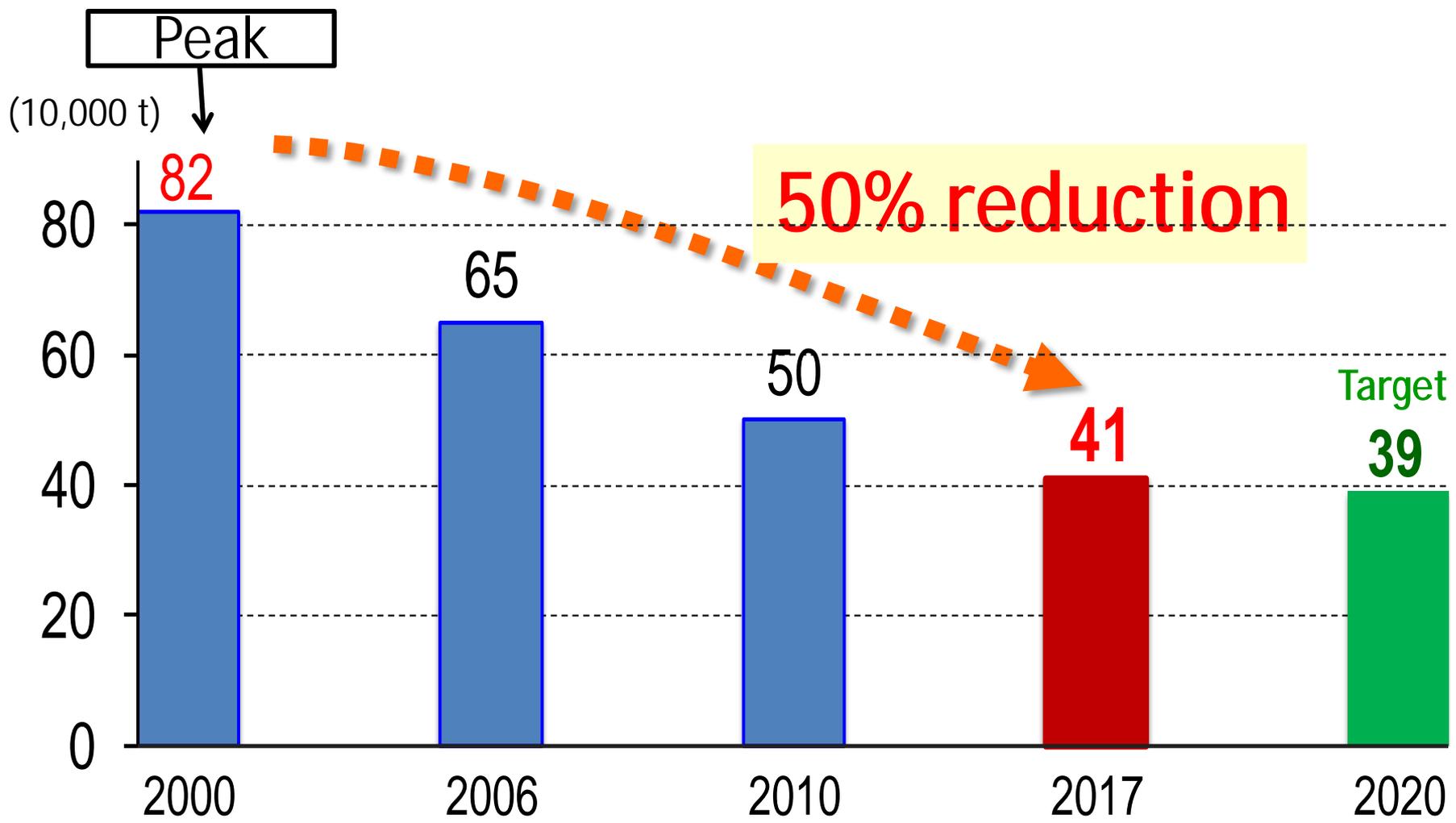


# Energy Consumption

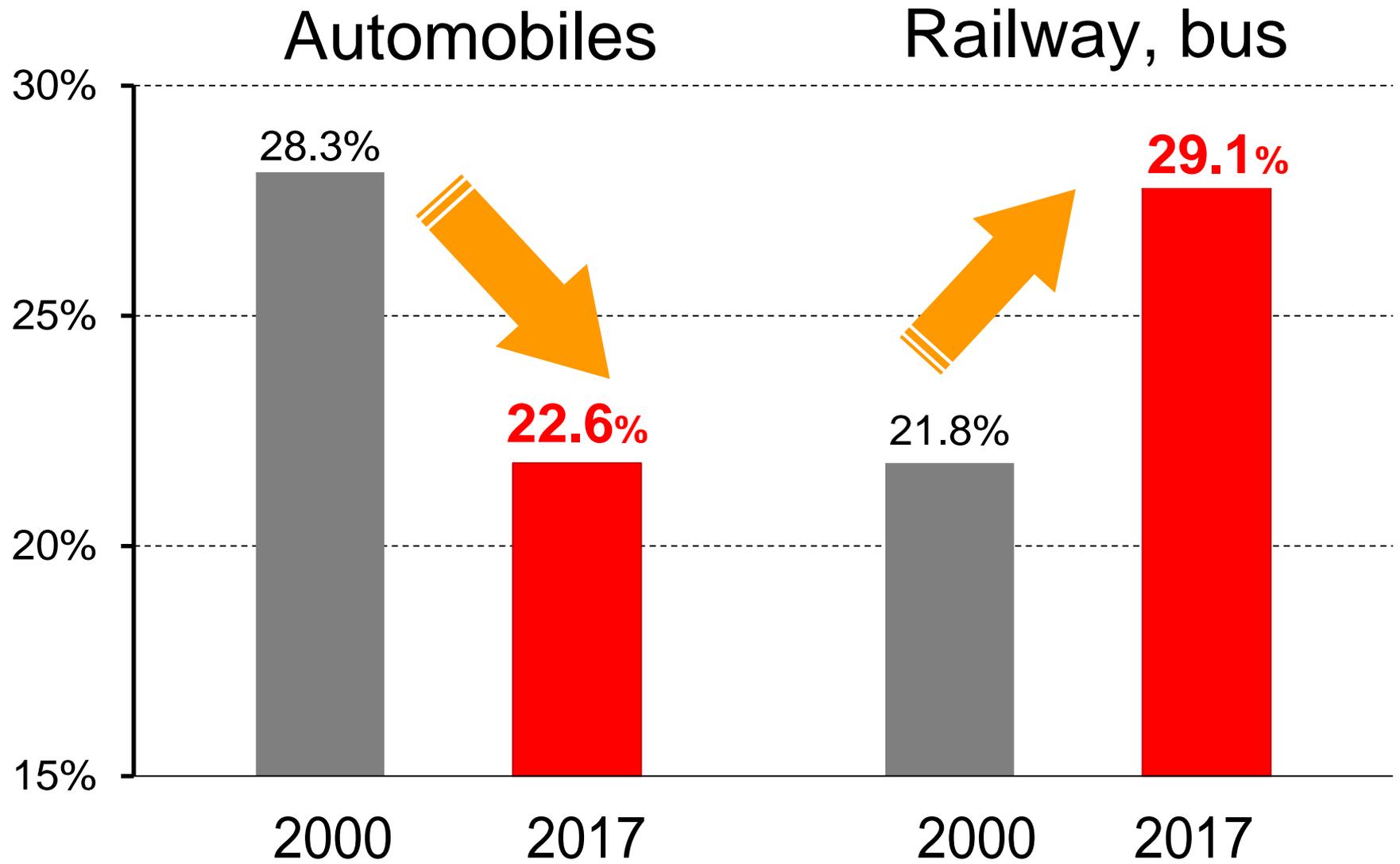




# Volume of Garbage



# Share ratio of transportation



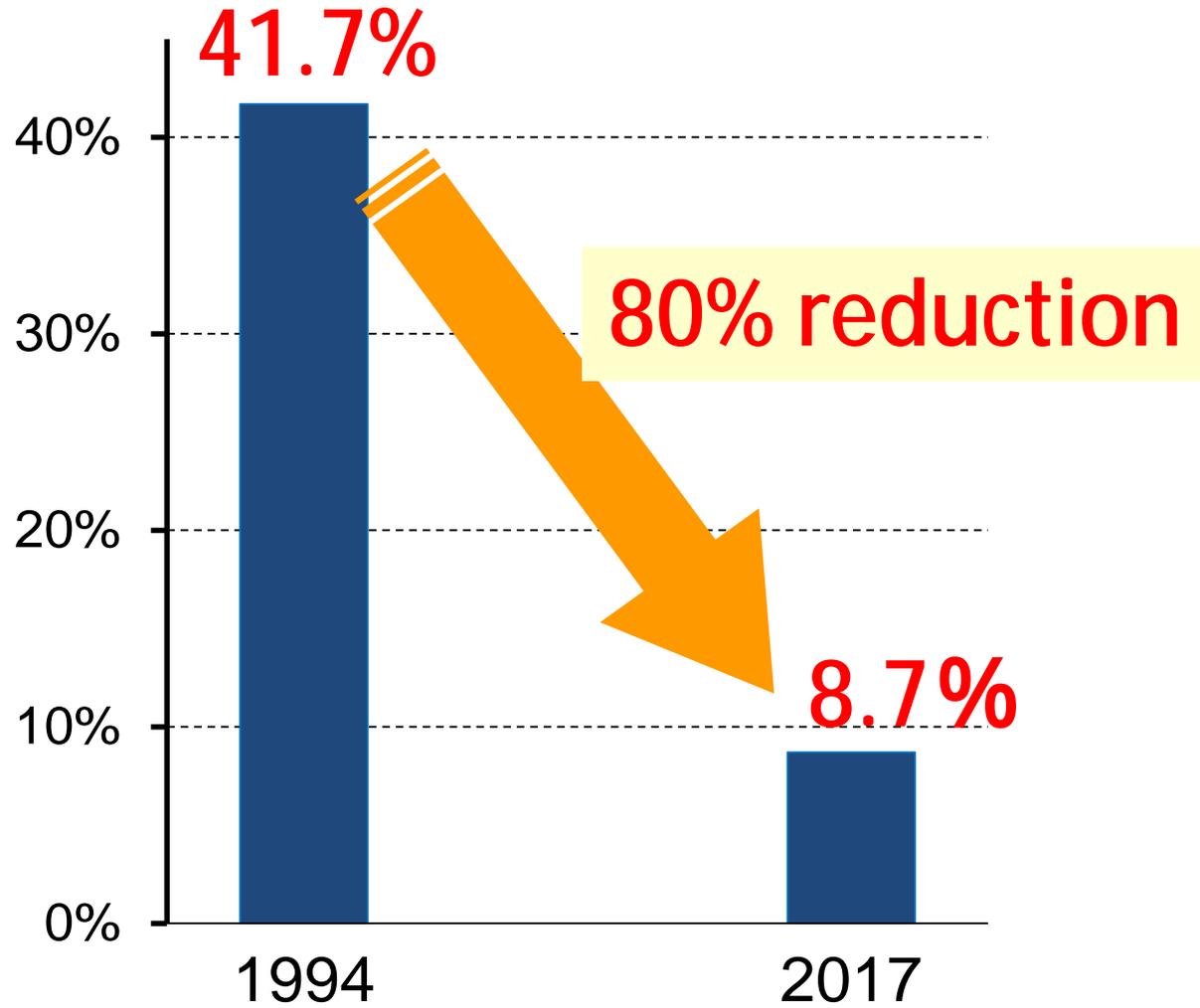


**For example**

# Pedestrian first



# Percentage of people visiting Kyoto by car





**Where do we want to go?**

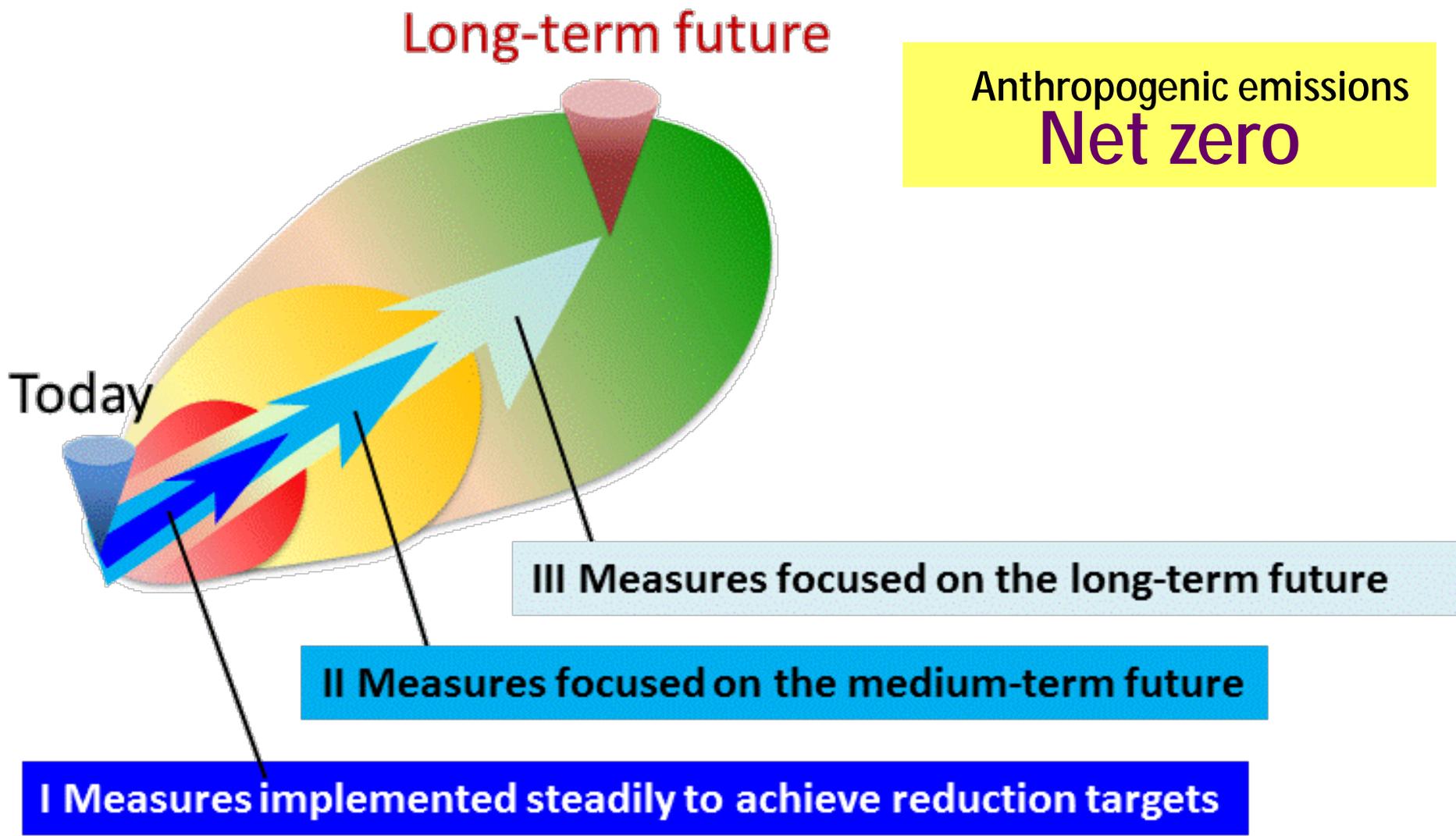
# Lifestyle, work-style and urban infrastructure





**How do we get there?**

# Road to Zero Project



# Kyoto declaration



We think about "Kyoto Declaration for Cultivating a Culture of Sustainable Cities".

# Summary of Talanoa dialog

## Becoming a net-zero emissions city through transformative changes in lifestyle, work-style and urban infrastructure

Having given its name to the Kyoto Protocol, Kyoto City proudly and responsibly promotes advanced climate actions collaborating with local citizens and businesses. Such actions resulted in about 30% reduction of citywide energy consumption, about 50% reduction of municipal waste and increased use of public transportation by tourists. 'Pedestrian first' initiative has drastically decreased by 80% the number of people visiting Kyoto by car. Kyoto will become a net zero-emission city in the latter half of the century through promoting transformative changes in lifestyle, work-style, and urban infrastructure, as well as through exchanging knowledge and experience by city-to-city collaboration. Two key documents have recently been adopted:

namely (i) 'Road to Zero Project', a revised local climate action plan, which made Kyoto the first local authority to declare net-zero GHG emissions in Japan; and (ii) 'Kyoto Declaration for Cultivating a Culture of Sustainable Cities', which stipulated the responsibility of cities and regions around the world as major GHG emission sources and shared visions on 'how do we get there?'



Thank you for your kind attention.



**Welcome!**

**49th Session of the IPCC**

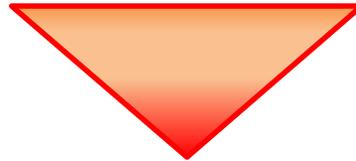
**May 2019, Kyoto**



Pride and responsibility as the birthplace of the Kyoto Protocol

Significant potential for global warming countermeasures through intercity collaboration around the world

- Cities are major sources of greenhouse gas emissions (75% of the world's carbon emissions).
- Cities can interact and collaborate with other cities beyond national interest.



“International cooperation” is clearly specified in the Kyoto City Ordinance on Global Warming Countermeasures as an important measure to control greenhouse gas emissions.

In Kyoto City, the "Children's Eco-Life Challenge", an environmental learning program, has been implemented in all municipal elementary schools since fiscal 2010, with the aim to establishing an eco-lifestyle with family members that will lead to the prevention of global warming by allowing children who will lead the next generation to think about and experience for themselves the issue of global warming and review lifestyles from their own perspective.  
Support for the development of a "Malaysia Children's Eco-Life Challenge" in all elementary schools in the Iskandar Development Region (from 2015), based on this program in Kyoto City.

September 2012 to Today

Creation of JICA Partnership Program on "Development of People and Communities to Achieve a Low-Carbon Society in the Iskandar Development Region of Malaysia"

Contents of support

- Ø Implementation of phased low-carbon education aimed at the creation of a sustainable low-carbon society
- Ø Launch of activities to create a low-carbon society in local communities
- Ø Training of human resources to promote and lead these activities

### Malaysia Iskandar Development Region





Opened by the Chinese government in December 2015  
 Modeled on the Miyako Ecology Center (COP3 Memorial Hall), an environmental learning base facility in Kyoto City  
 Support by the Kyoto Environmental Activities Association for human resources development and effective exhibitions  
 Continuous visits to both facilities after the opening to share knowledge on environmental education





Pilot programs to separate collection of recyclable waste



Environmental education in local elementary schools

**【Project period】** from November 2015 to March 2018

**【Leading initiatives】**

- Ø Implementation of pilot programs to separate collection of recyclable waste in four model villages in the city.
- Ø Implementation of surveys on waste samples in model areas to understand recyclable waste emissions.
- Ø Making educational materials and implementation of environmental education on waste separation in local elementary schools.



materials for environmental education

Creation of partner city with Varanasi, a sacred site for Hindus  
Signed the intent of cooperation as partner cities in the presence of Prime Ministers Modi and Abe (August 30, 2014)

[Environmental education exchange program](#) between schools in Kyoto and Varanasi

Promote improvement of environmental awareness in Varanasi and spread of environmentally-friendly lifestyles through environmental education exchange activities in both cities



Implementation of cooperation project to improve air quality in Xi'an City as part of friendship exchange activities after receipt of a request for cooperation from Xi'an City on improvement of the ambient environment

- FY 2008 – 2010: Overall improvement of air quality
- FY 2012 – 2014: Countermeasures for suspended particulate matter



Xi'an City



Interviews and meeting to exchange ideas with the Xi'an City government (Environmental Management division)

## Through ICLEI – Local Governments for Sustainability Dissemination of efforts on global warming countermeasures in the city

Member since 1996. Kyoto Mayor has served as the Chair of the East Asia Regional Executive Committee since 2012.

\* Organization (Membership of about 1,500 local governments from 124 countries/regions)



## Active information dissemination and cooperation for training and observation groups to Kyoto City

Information exchange and exchange of ideas/opinions on environmental policies, including global warming countermeasures in Kyoto City for observation groups from countries and regions around the world that visit Kyoto City to learn about environmental issues.

Visiting countries, other 【2017 ~ present】

Tajikistan, Turkmenistan, Azerbaijan, Georgia, Armenia, Ukraine, Angola, Mozambique, Brazil, USA (California State), Malaysia (Taiping City), Laos (Vientiane City), India (Varanasi City), Secretariat of the Association of Caribbean States, other

**Joined the Japan Climate Initiative (JCI) in July 2018.**

**We will sign the Global Covenant of Mayors for Climate and Energy in January 2019.**

**Welcome the Intergovernmental Panel on Climate Change (IPCC) as our host city in May 2019.**

# Role of Cities and Importance of Intercity Cooperation

Accelerated concentration of the population in cities

(today: 50% 2050: 70%)

Cities account for 60% to 80% of energy consumption and three-quarters of carbon emissions.

→ Environmental impacts in urban areas are also growing and urban action is becoming more important.

It is necessary for cities that are directly involved in the lives of their residents and are managed through the autonomous participation of its citizens to not only rely on the national government and market principles, but to also demonstrate leadership after securing authority and financial resources.

It is necessary to create mechanisms that can solve various problems by strengthening intercity cooperation, sharing goals, and disseminating policies, success stories, and know-how.

# Kyoto Declaration

## 【 Present conditions in cities 】

Holding **50% of global population** (to be increased to 70% in 2050 )

Accounting for **60%-80% of the world energy consumption** and **75% of world carbon emissions**

## 【 Potentialities of cities 】

Initiatives conducted by cities as a large source of greenhouse gas emissions, that directly influence residents and businesses have potentials to realize decarbonization

Possible to interact and collaborate with other cities beyond national interest

In Dec. 2017, Kyoto City invited cities\* from the world which had launched advanced countermeasures against global warming and held **Kyoto Conference on the Global Environment 2017** to commemorate the 20<sup>th</sup> anniversary of the Kyoto Protocol.

\*Invited cities; Paris (France), Freiburg (Germany), Pittsburg (U.S.A), **Iskandar(Malaysia)** , etc.

Towards decarbonization,

**“Kyoto Declaration for Cultivating a Culture of Sustainable Cities ”**

was adopted.





## Kyoto Declaration for Cultivating a Culture of Sustainable Cities

### 1. The significance of the Kyoto Protocol and the Paris Agreement

The Kyoto Protocol is a momentous accord in the history of humankind, established for the purpose of passing on a healthy and productive global environment to future generations. Adopted in December 1997, it represents the cornerstone of a post-Cold War, new world order full of hope, that addresses global security and peaceful prosperity through multilateral cooperation. Citizens played a significant role in fostering momentum toward this international agreement, and Kyoto's unique urban environment and local culture that have coexisted with nature for more than 1,000 years contributed to the consensus building.

In December 2015, the Kyoto Protocol made a significant leap forward to the Paris Agreement, making climate change a matter for people all over the world and committing nations to achieve carbon neutrality in the second half of this century.

To encourage the adoption of the Paris Agreement, leaders of cities and regions around the globe gathered at Paris City Hall and pledged to strengthen their climate actions alongside with nations, which led to the unanimous endorsement of the Paris City Hall Declaration.

# Kyoto Declaration

## 2. The state of cities around the world

Cities today account for only 2% of the planet's land area, but are home to about half the world's population. They account for 60-80% of global energy consumption and three quarters of carbon emissions. With further urbanization, projections indicate that people living in urban areas will account for two thirds of the world's population by 2050.

As can be seen in the ever-growing megacities in Asia, for instance, where environmental pollution, traffic problems, poverty and disparity are often considered more urgent issues than global warming, cities face different policy issues depending on characteristics such as their size and stage of economic development. Therefore, priorities given to global warming can vary from city to city. However, urban activity is a major cause of global warming, and cities are suffering enormously from its consequences, such as sea level rise and frequent disasters caused by extreme weather.

Furthermore, in today's world where signs of national particularism can be observed and can pose challenges in cooperation among states, collaboration between cities is becoming ever more important.

## 3. Our commitment towards a culture of sustainable cities

Taking into account the Paris Agreement and the Paris City Hall Declaration, we believe that cities play an important role in cultivating a culture of sustainable cities that is in balance with the environment to achieve carbon neutrality in the second half of this century. To achieve this, we recognize that cities need to realize the **"Vision for cities of the world in 2050"** by strengthening cooperation with one another and performing their fullest potential. We believe that in today's world, it is our duty to make this commitment.

To this end, we believe that rather than merely leaving it to nations and market principles, cities, which are directly involved in the lives of its citizens and governed by their proactive participation, have the vital role of leading the way by appropriately delivering authority and financial resources.

We recognize that it is essential that cities strengthen city-to-city collaboration and also build mechanisms capable of resolving various problems, through the sharing of goals and the dissemination of policies, best practice and know-how.

# Kyoto Declaration

## Vision for cities of the world in 2050

- Coexistence with nature is realized, acknowledging its function as a source of life and carbon sink.
- Change in people's values and lifestyle is advanced, by revisiting the culture of daily life that admires the mindful and wise use of goods based on the spirit of "*mottainai*" (regretting wastefulness) and "*shimatsu*" (being frugal; making full use of things).
- Leaders for building a sustainable society are nurtured through promotion of environmental education and learning. The leaders are able to perceive various problems as their own and act proactively.
- Strategies for adapting to the impacts of climate change are in place, in parallel with technological innovation for decarbonization.
- Resource-efficient and circular economy is realized, for example by utilizing urban mines, recovering useful metals and other resources contained in waste.
- Energy autonomy of cities is realized, through the promotion of energy savings and the use of renewable energy.
- Urban mobility with low environmental impact is achieved through advancement of urban transport systems.
- Peaceful resolution of social problems, such as poverty and disparity, is well advanced, through efforts to shift to a sustainable society.

We declare that we will implement efforts according to our respective positions and encourage cities around the world to join us in cultivating a culture of sustainable cities that is in balance with the local and global environment.

December 10, 2017

City of Kyoto

Research Institute for Humanity and Nature (RIHN)

ICLEI – Local Governments for Sustainability, Japan Office

Kyoto Environmental Activities Association (KEAA)



# Thank you for your kind attention.



**Welcome!**

**49th Session of the IPCC**

**May 2019, Kyoto**

