June 21, 2012
Rio+20 Official Side Event

The “FutureCity” Initiative

- Message from Japan regarding a resolution for globally common issues -

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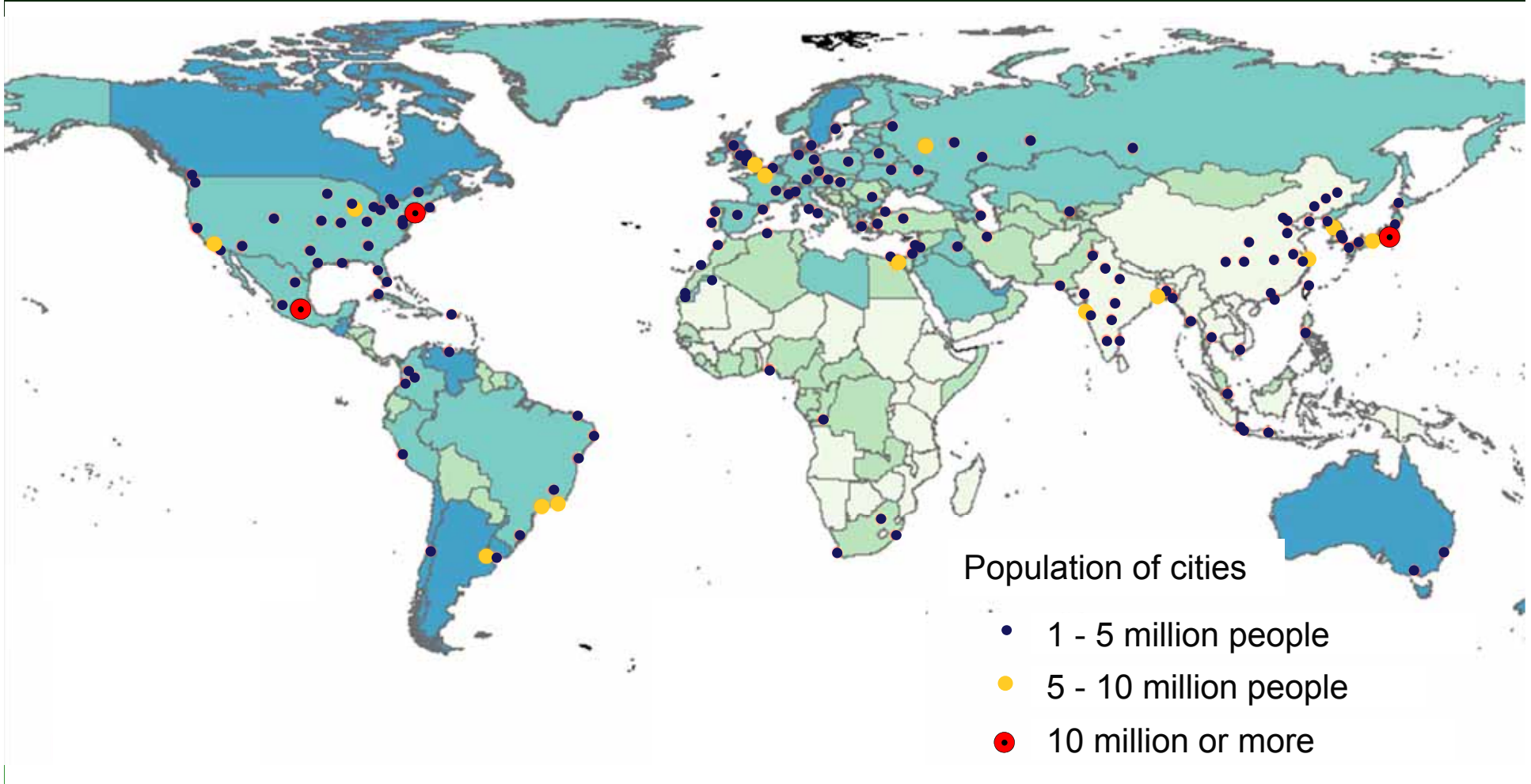
Topics

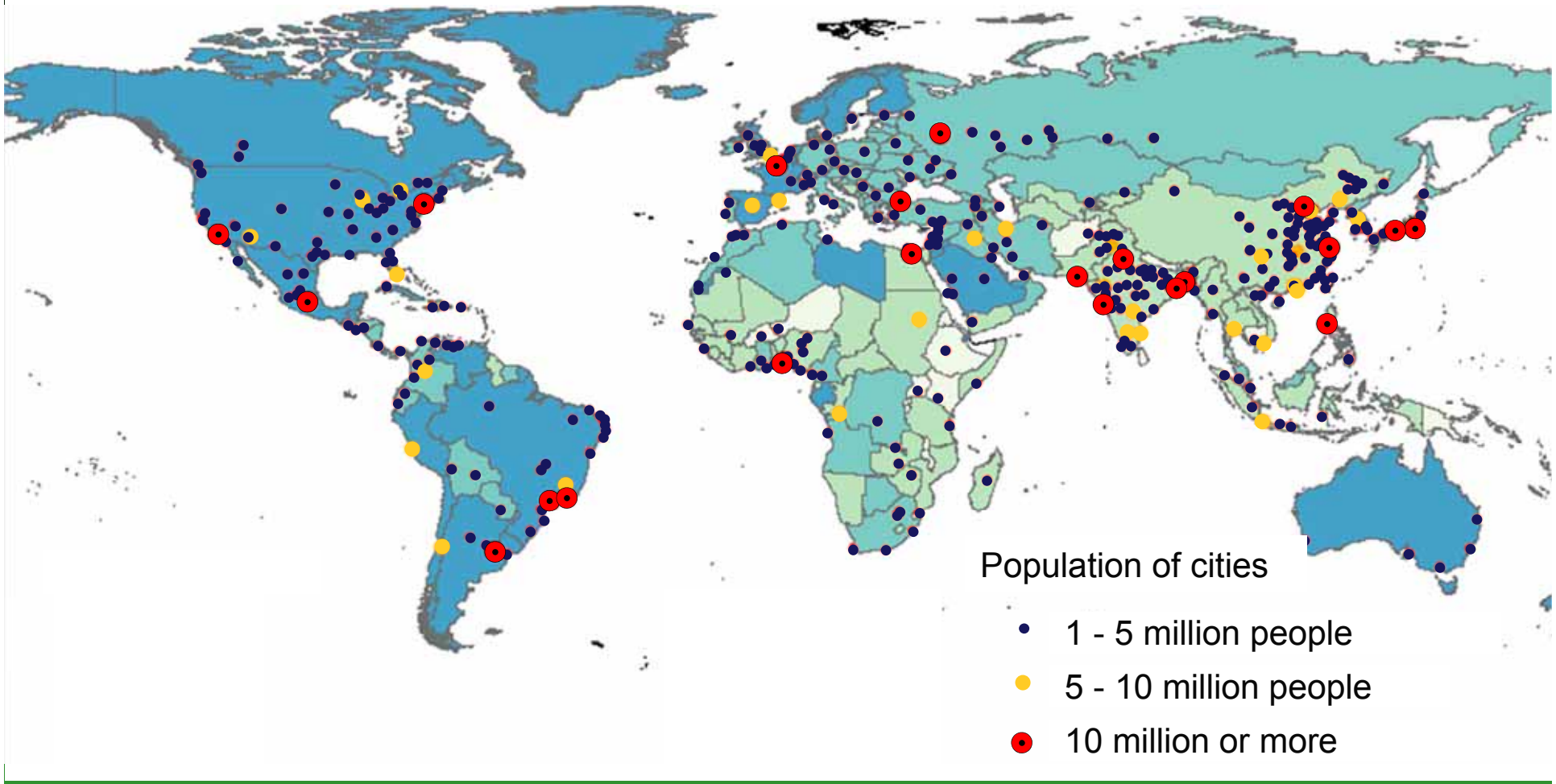
- Era of the cities
- Problems to be solved in cities
- Japan as a pioneer at the frontline of many challenges
- “FutureCity” Initiative

1. The 21st century is the era of cities



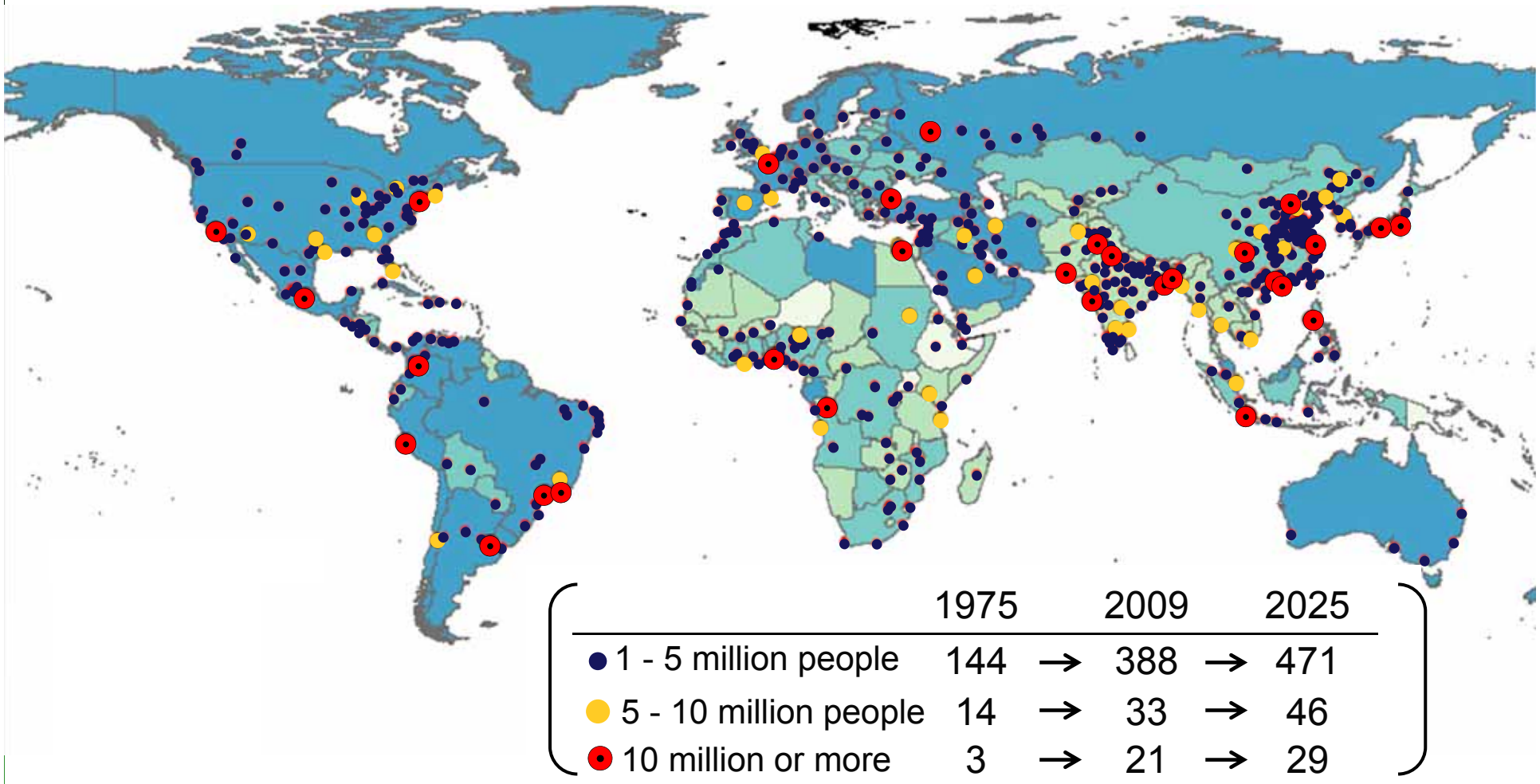
In 1975

(Source: United Nations, World Urbanization Prospects, The 2009 Revision, 2010)



In 2009

(Source: United Nations, World Urbanization Prospects, The 2009 Revision, 2010)

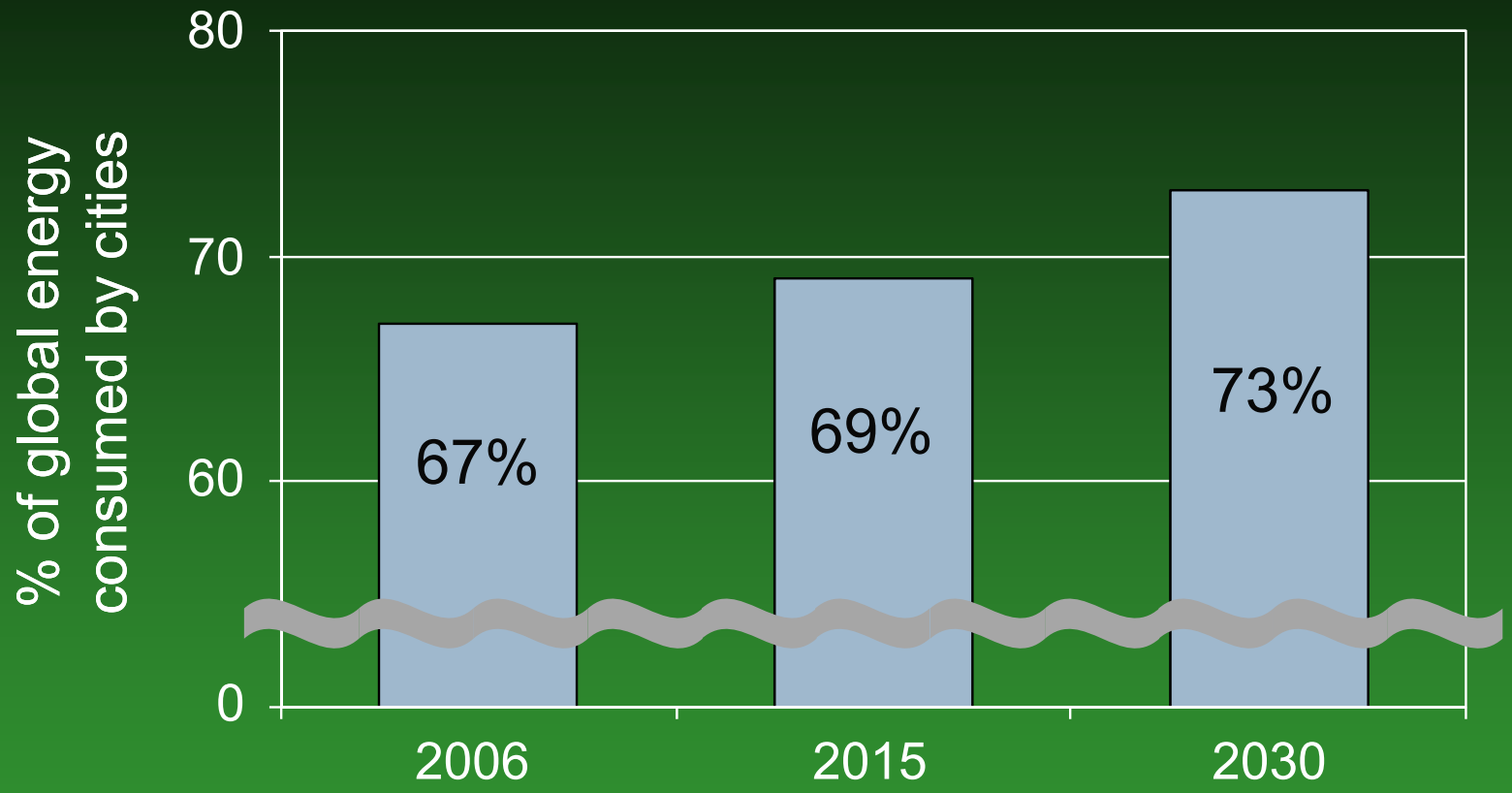


	1975		2009		2025
● 1 - 5 million people	144	→	388	→	471
● 5 - 10 million people	14	→	33	→	46
● 10 million or more	3	→	21	→	29

Projected for 2025

⇨ Drastic increase in number of mega cities

2. Percentage of global energy consumed by cities



⇨ Concern for urban environmental-deterioration as a result of population- and energy-consumption growth

⇨ Urban-environment issue is a common challenge for all mankind

※Forecast based on reference scenario
(Source: IEA, World Energy Outlook 2008)

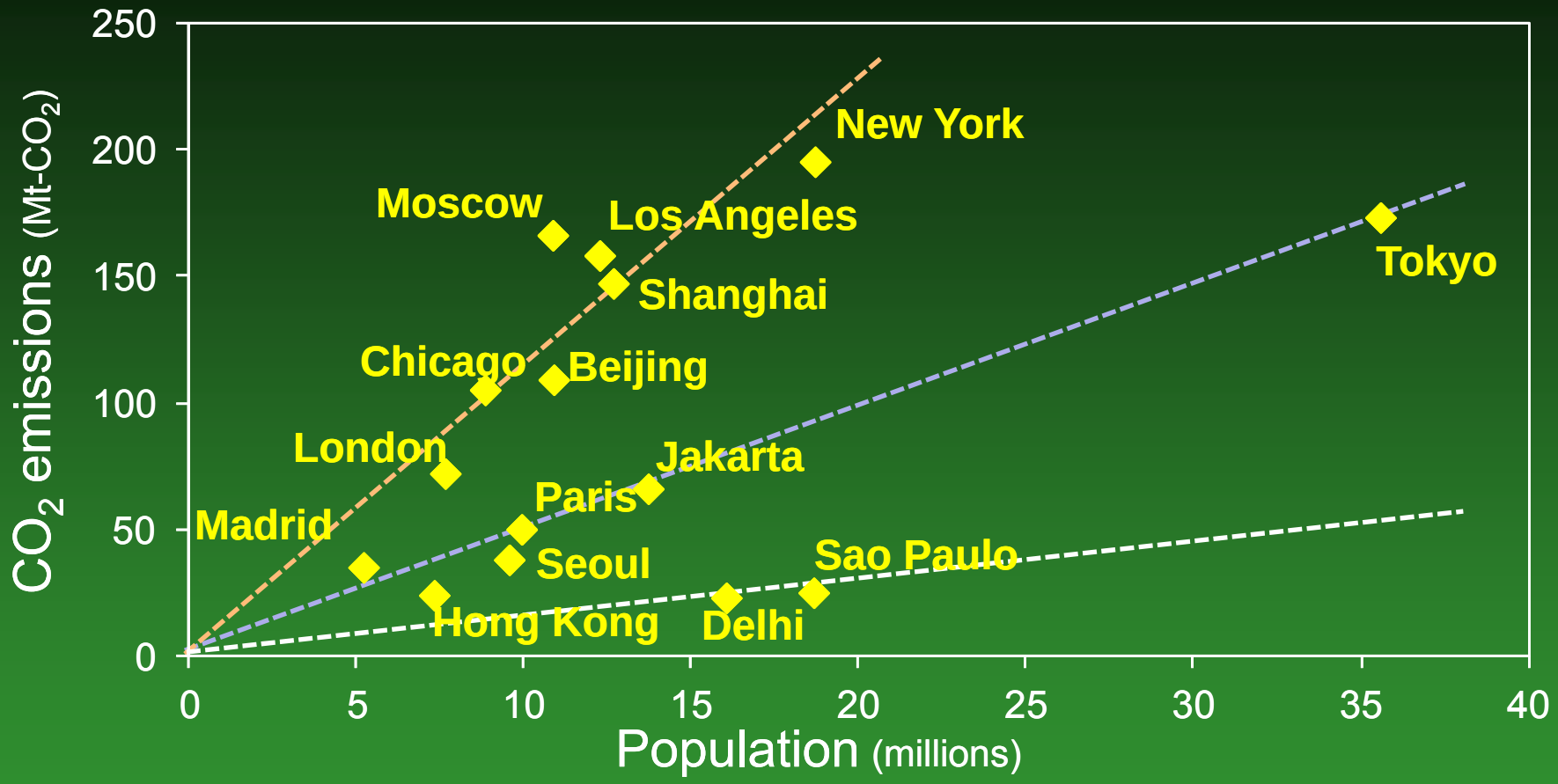
3. Global examples of urban projects for realization of low-carbon cities

1. Aalborg Charter (1994-) (Major cities within Europe)	Policy statement adopted for development of sustainable cities: Aalborg, Denmark in 1994
2. Urban Audit (2003-) (EU DG REGIO, Eurostat)	Joint effort by European Commission's Directorate-General for Regional Policy and European Statistical Office, in order to create a European standard for measuring quality of urban life
3. Global City Indicators (2007-) (World Bank, UN-Habitat, etc.)	Indicators to measure city-performance developed by international organizations such, as the World Bank and UN-Habitat
4. Climate Change Action Plan (2007-) (C40 Cities)	Targets and action plans to reduce greenhouse gas emissions by participating cities of the C40 Cities Climate Leadership Group
5. Eco Model-City (2008-) (Japanese government)	Future visions for low-carbon societies and targets to be shared nationally and globally
6. Carbon-n Project (2010-) (ICLEI, UNEP)	Project by ICLEI and UNEP to make public the volume (and reduction targets) of greenhouse gas emissions by individual cities on a global basis

⇨ Major global organizations as well as cities have begun to take various initiatives to realize low-carbon cities

ICLEI: International Council for Local Environmental Initiatives

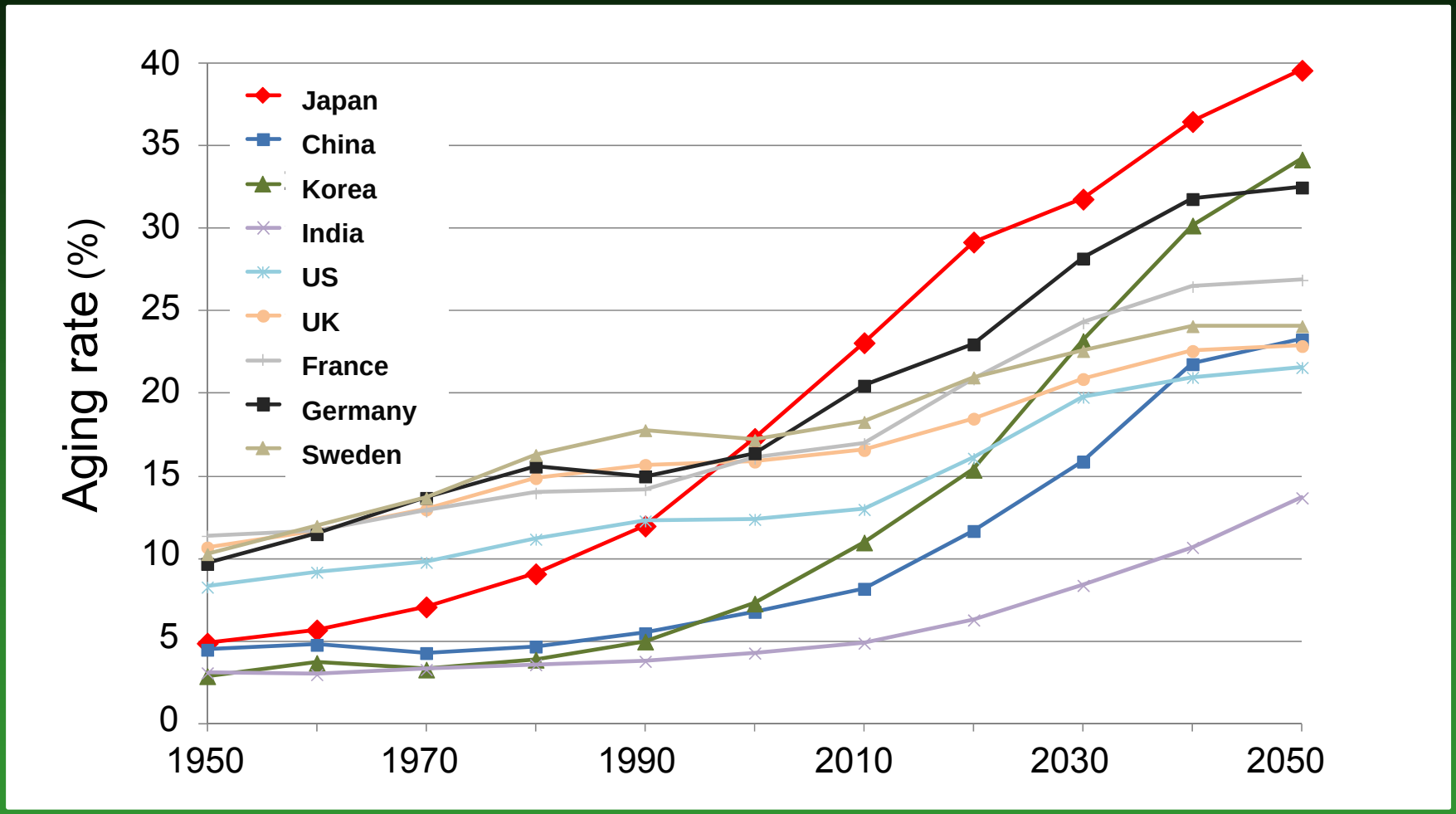
4. CO_2 emissions of major cities worldwide



⇨ Low-carbonization efficiency of Tokyo is high, considering respective levels of GDP.

(Source: Dan Hoornweg, RESILIENT CITIES Global Dialogues on Climate Change, 2011)

5. Aging in many countries around the world



(Aging rate：% of population aged 65 and over)

⇨ Aging in Japan is remarkable

(Source) UN, World Population Prospects The 2008 Revision

6. Responsibilities of Japan as a pioneer at the frontline of challenges

Problems to be solved

- Reconstruction after the Great East-Japan Earthquake
- Increase in number of serious environmental problems, such as the nuclear accident
- Approaching super-aging society and decrease in population
- Fatigue of political, social and economic systems, etc.

Expected contributions to the world

⇨ Japan is facing many challenges – more so than other countries

⇨ Address the challenges that countries worldwide will face in the near future

⇨ Japan is expected to, and should take the initiative in resolving the challenges ahead of other countries

7. Implementing the “FutureCity” Initiative to overcome challenges

- Innovation for social- and economic systems to cope with issues such as environmental deterioration and super-aging society, etc.

  ⇨ Proposing “Attractiveness of the City” through innovation, which will lead to creation of new values

- Reconstruction of areas affected by the Great East-Japan Earthquake

- Disseminate and share with the world a universal model that will facilitate environmental improvement and the revitalization of cities around the world

8. Policy framework for the “FutureCity” Initiative

New growth strategy and 7 strategic areas (Jun 2010)

I. Strategy to become a leading nation in environment and energy through green innovation

II. Strategy to become a leading nation in healthcare

III. Asian economic strategy

IV. Strategy to promote tourism and local revitalization

‘ ‘ ‘ ‘

21 national strategic-projects (June 2010)

1. Introducing feed-in tariff system, etc.

2. The “FutureCity” Initiative

‘ ‘ ‘ ‘

11. Introducing a “Comprehensive Special- zone System”, etc.

‘ ‘ ‘ ‘

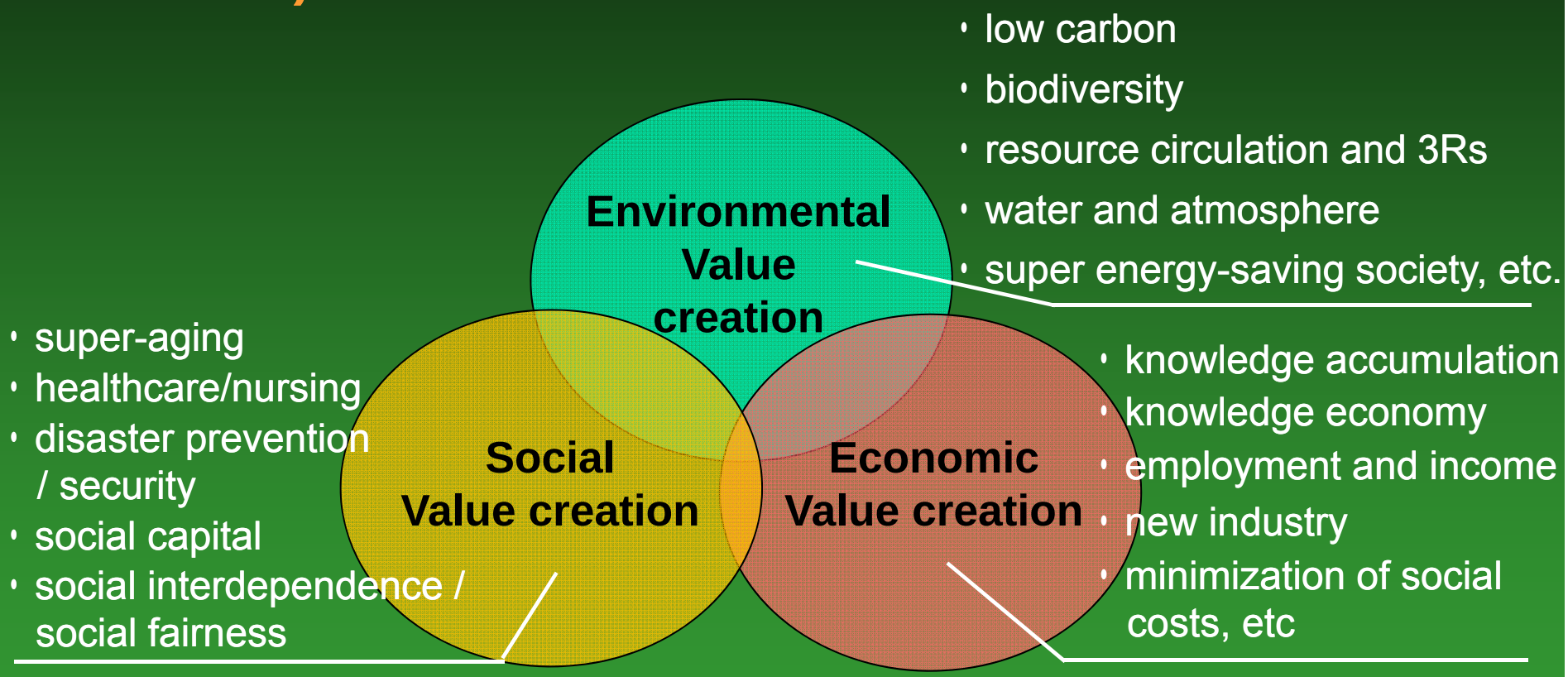
The “FutureCity” Initiative

⇨ Cities functioning as drivers for new growth and revitalization through green innovation

⇨ Support reconstruction of areas affected by the Great East-Japan Earthquake

9. Creation of three values in the “FutureCity” Initiative

⇨ 1) Environmental values, 2) Social values and 3) Economic values



⇨ Environment and Super-aging as key words

10. How can a mechanism for triggering the creation of new values be incorporated ?

1) Concentration of investment of human resources, goods, money, and introduction of regulatory reforms

⇨ information, services and business opportunities will accumulate and will merge, thus creating new values

2) Once new values are created, more people, goods and money will accumulate domestically as well as from abroad

⇨ Self-sustaining virtuous cycle

⇨ Will help trigger innovations in social and economic systems

⇨ Will create cities with vitality where everyone wants to live

⇨ Will present new “city prototypes” as drivers for national development

11. Selected FutureCities (disaster areas)

Kamaishi
- Local energy-production and consumption, and creation of industries
- Building urban communities that give meaning to the lives of their residents

Rikuzen-takata, Ofunato, Sumita
- The world's first mega-solar project to incorporate a regional decentralized-power storage system
- Multi-regional development

Higashi-Matsushima
- Capacity for sustainable growth and a city where people can live securely and safely
- Promotion of healthy houses

Iwanuma
- Harmony with the natural environment by making use of earthquake rubble for new construction
- Smart-grid centered in a mega-solar project

Shinchi machi
- Develope a power generation business
- Build an information infrastructure utilizing information and communication technology
- Establish a public transport system

Minami-soma
- Energy circulation
- Communities with diversity of generations
- Local industries with recycling capabilities

12. Selected FutureCities (non-disaster areas)

Shimo-kawa
- Creation of a self-supporting forestry industry
- Complete energy-self-sufficiency, centered on forest biomass

Toyama
- A compact city with public transportation system based on LRT
- Construction of a natural-medicine production system

Kashiwa
- Conversion to a smart city through the use of cutting edge technology
- Municipal management through public-private collaboration

Kita-kyushu
- Asian expansion and public-private collaboration
- Improving healthcare through the initiative of residents and local collaboration

Yokohama
- Initiatives revolving around accumulated expertise
- Mutual support, using the power of local citizenry to cope with aging society

⇨ Disseminate unique best practices from each of these cities to the world

13. Selected FutureCities (disaster areas)

(1) Kamaishi City (Iwate Prefecture)

- Local energy-production and consumption, and creation of new industries
- Building urban communities that give meaning to the lives of their residents

(2) Ofunato City, Rikuzentakata City, Sumita Town (Iwate Prefecture)

- The world's first mega-solar project, incorporating a regional decentralized-power storage system
- Multi-regional development

(3) Higashi-matsushima City (Miyagi Prefecture)

- City that will withstand disasters
- City where people can feel secure and live happily on their faces
- City that generates industries and creates jobs

(4) Iwanuma City (Miyagi Prefecture)

- Harmony with the natural environment, such as by making use of earthquake rubble for new construction
- Smart-grid based on in a mega-solar project

Memorial park & “The Hill of Millennium Hope”

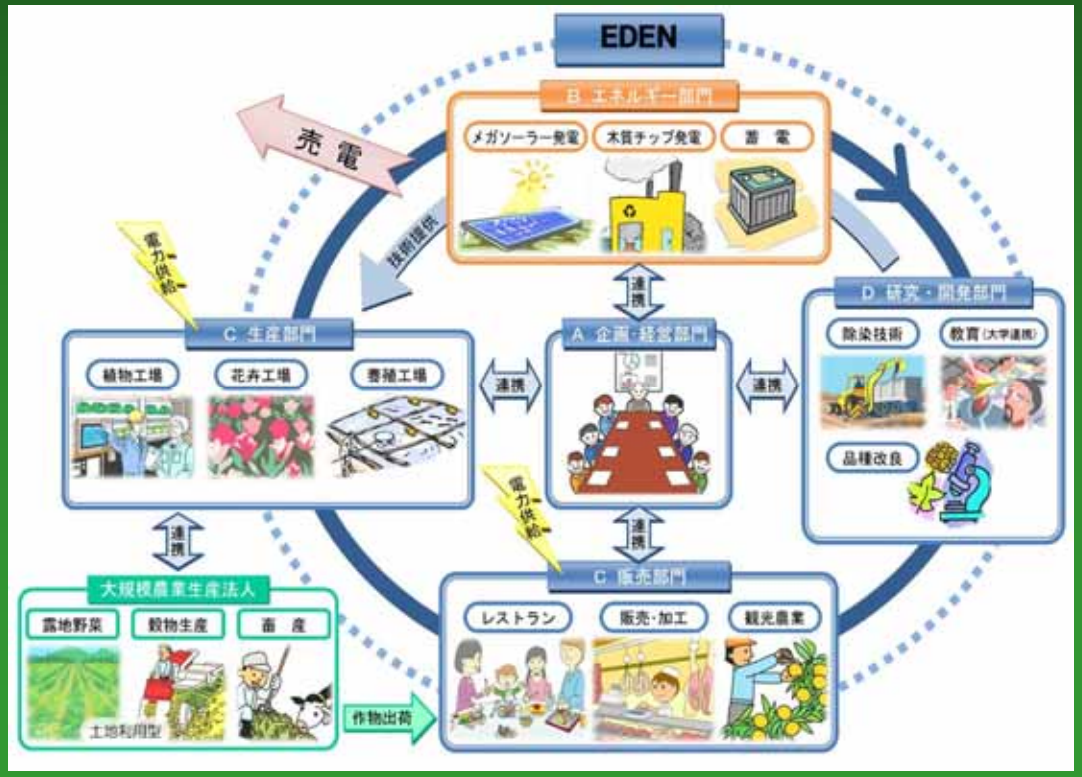
(5) Shinchi Town (Fukushima Prefecture)

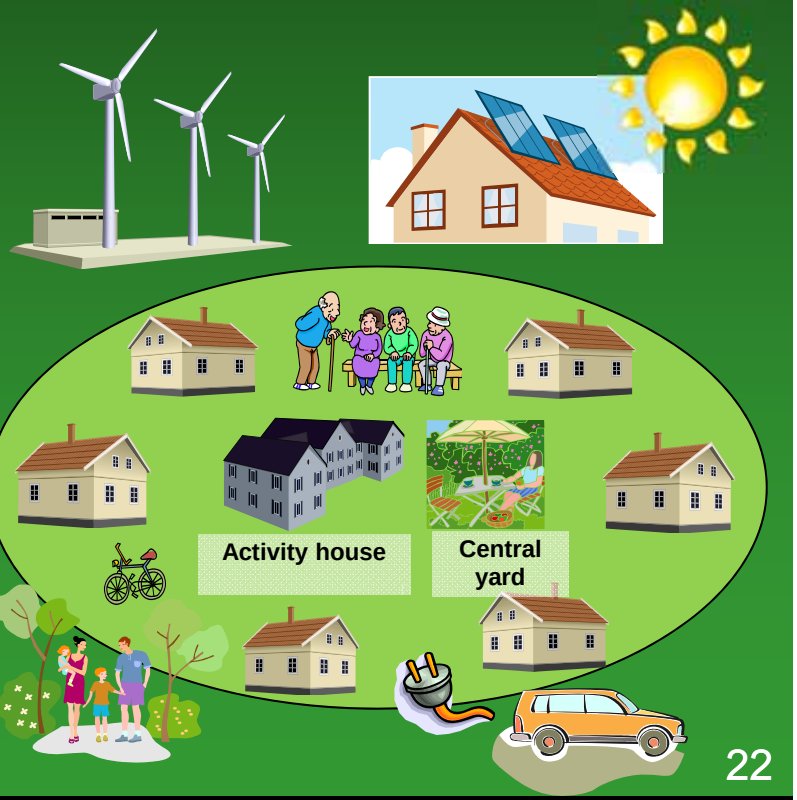
- Developing a power generation business
- Building an information infrastructure by utilizing information and communication technology
- Establishing a public transport system

(6) Minami-soma City (Fukushima Prefecture)

「Recycling City connecting to the next generation」

- Energy circulation
- Communities with young, middle and elderly generations
- Local industries with recycling capabilities





14. Selected FutureCities (non-disaster areas)

(1) Shimokawa Town (Hokkaido)

「Shimokawa: Forest Future City where people thrive」

- Self-sufficient energy supply and low carbonization
- Comprehensive forestry industry
- Measures for super-aging society

(2) Toyama City (Toyama Prefecture)

Construction of “Toyama style” urban management with compact-city strategy

– Towards sustainable- and value-creating city with abundant social capital –

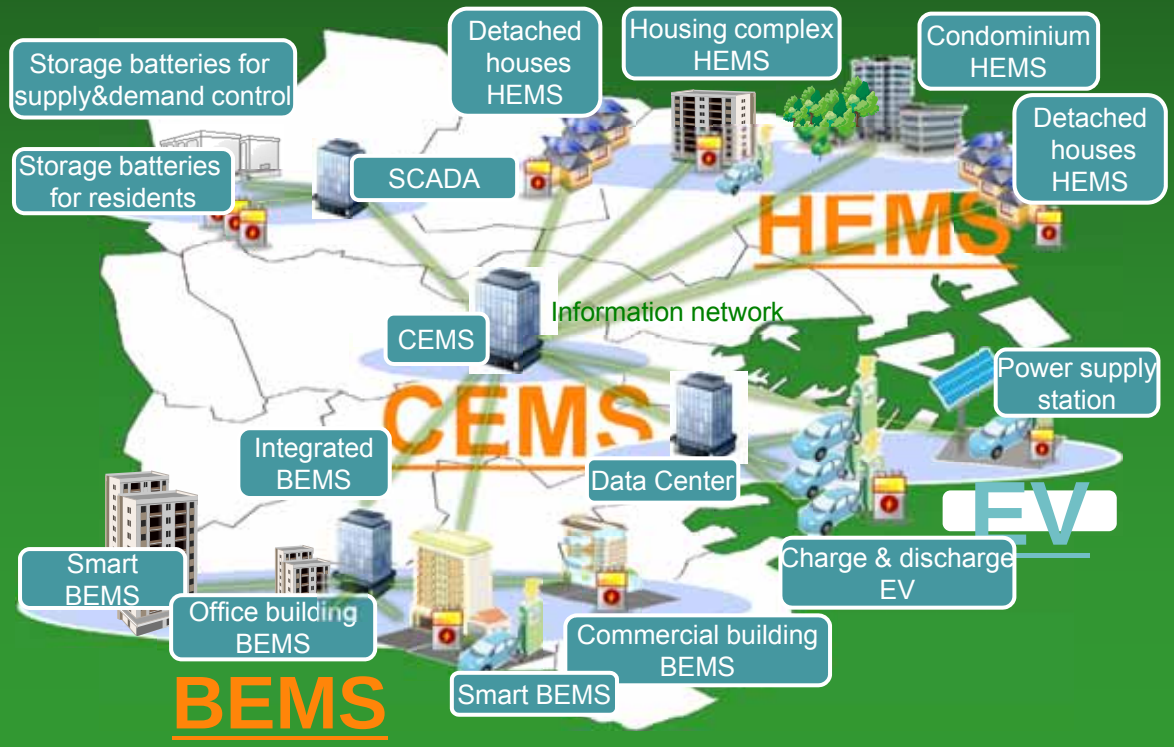
(3) Kashiwa City (Chiba Prefecture)

「Autonomous Urban Management with Partnership among the Public, Business Sector and Academia」

- Smart City
- Healthy City that facilitates longevity
- New Industrial City

(4) Yokohama City (Kanagawa Prefecture)

OPEN YOKOHAMA
－Creative Port City where People, Things and Events Connect and Develop－



Global transfer of infrastructural technology for advancement of cities

Case: Collaboration with JICA to create framework for development of human resources and practical training for water-supply business in 17 cities in central parts of Vietnam

(5) Kitakyushu City (Fukuoka Prefecture)

A bustling, safe and vigorous city where people will thrive.

－Utilizing experience from dealing with industrial pollution and achieving the innovation for sustainable creation－

Forest-in-town Project (Tree-planting by citizens)

Smart community creation business

School-helper business in cooperation with the elderly

15. Current status of recovery：

The situation of Higashi-matsushima (Miyagi Pref.)

Right after the earthquake

Present

Right after the earthquake

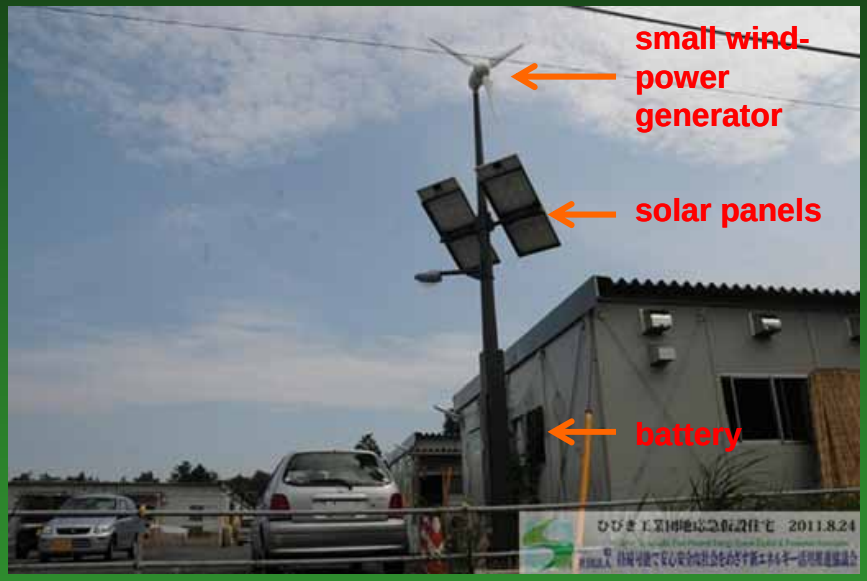
Present

Photo provided by Higashi-matsushima city

16. Installation of smart-devices in temporary housing
(The situation of Higashi-matsushima)

Smart-device: An independent power supply system combining solar panels, small-scale wind-power generator and storage batteries to provide electricity for lighting, telecommunications and measurement instruments

Temporary housing

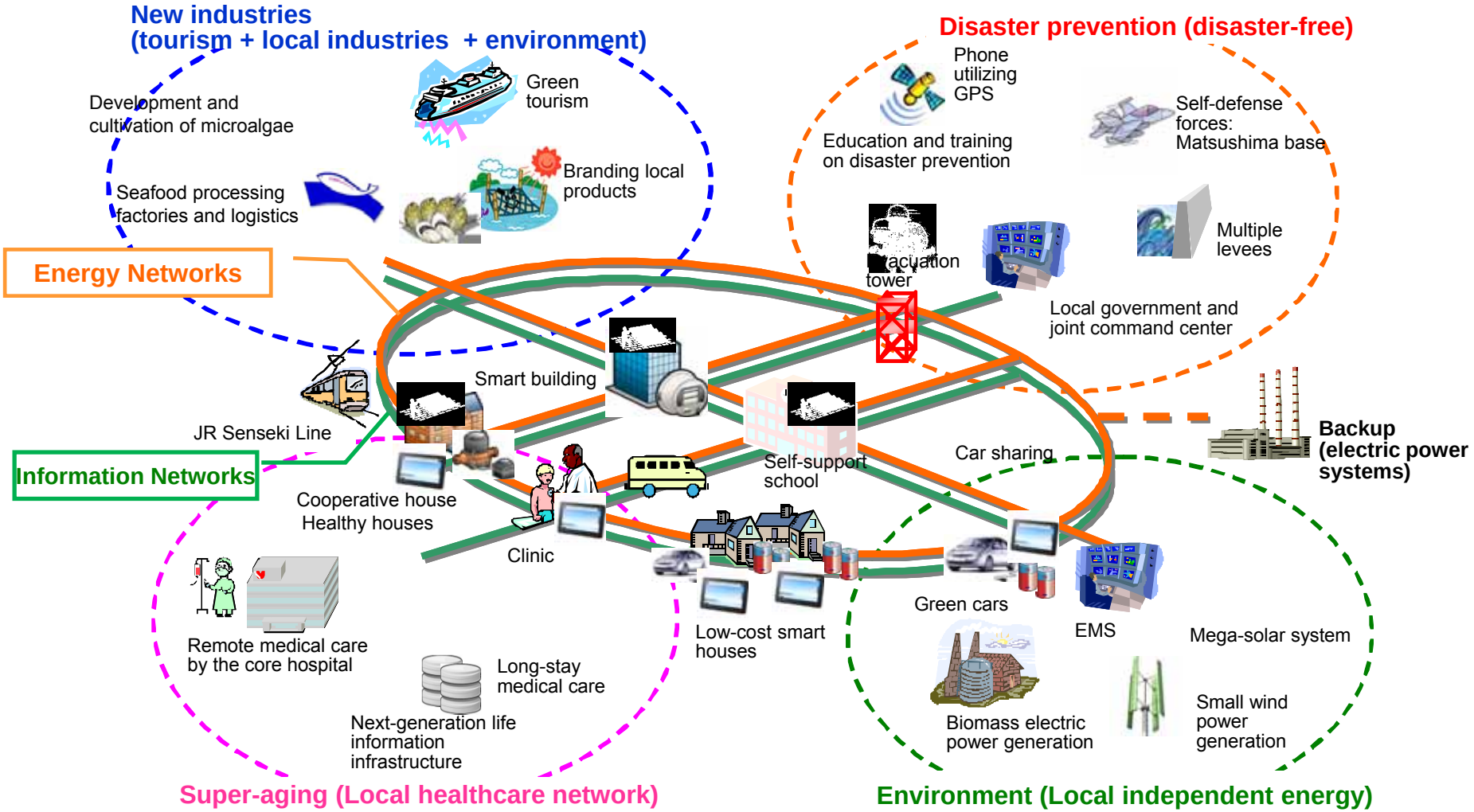


Smart-device installed near temporary housing

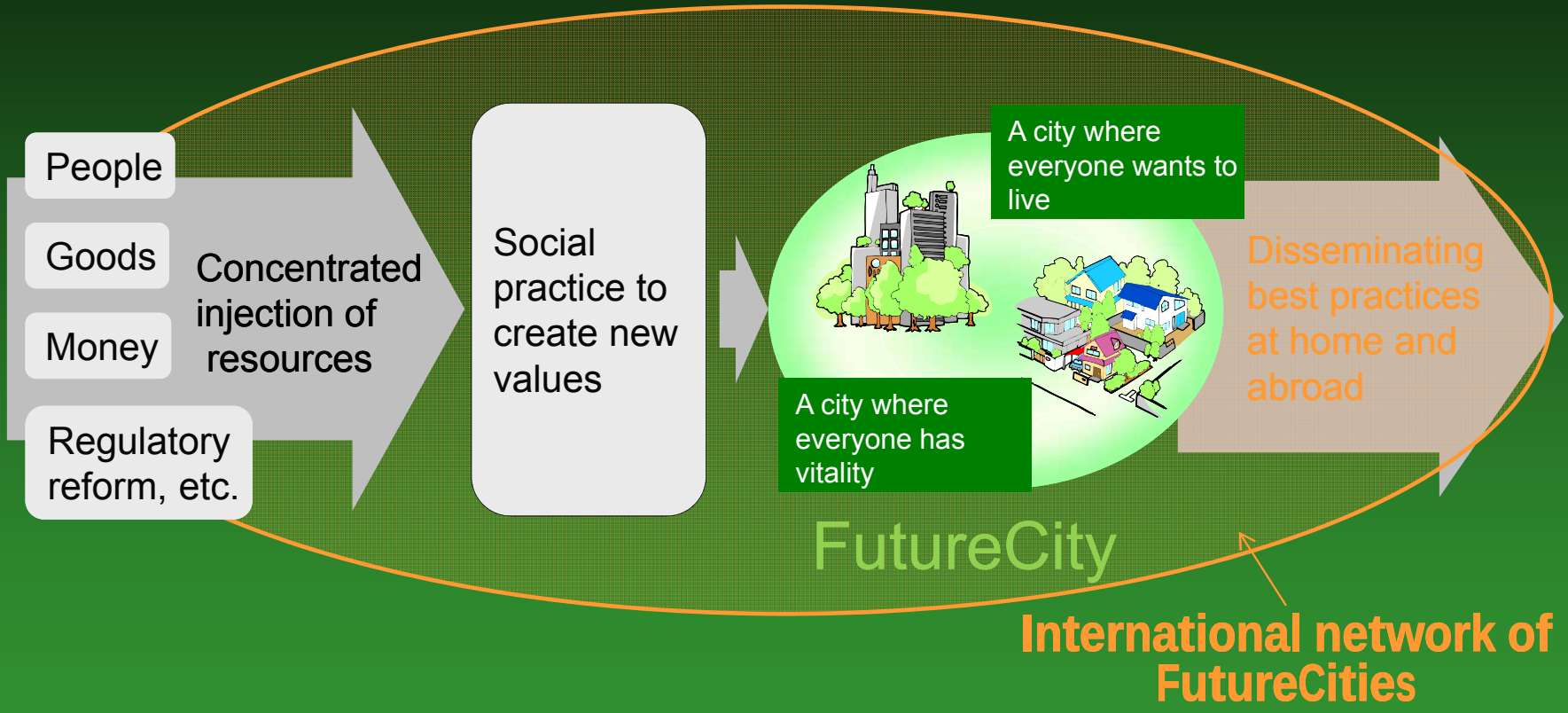
⇨ **Toward creating disaster-resilient city with high environmental performance, efforts to build independent local energy system have been started**

Photo provided by JASFA

17. Future vision for Smart Community (Higashi-matsushima City, Miyagi Pref)



20. Establishment of framework for future promotion and network of FutureCities



Strong governance for promotion of projects through collaboration between national and local governments

⇨ Advisory board consisting of experts (Jan 2012, Chair: Shuzo Murakami)

“FutureCity” Initiative & Dissemination to the World

Japan is facing many challenges, more so than other countries

These are challenges that countries around the world will be facing in the near future

Japan is expected to be the forerunner in creation of model solutions

"FutureCity" Initiative as a tool to overcome such challenges

Disseminate and share model solutions with the world

Thank you very much for your attention

Shuzo Murakami, Institute for Building Environment and Energy Conservation