

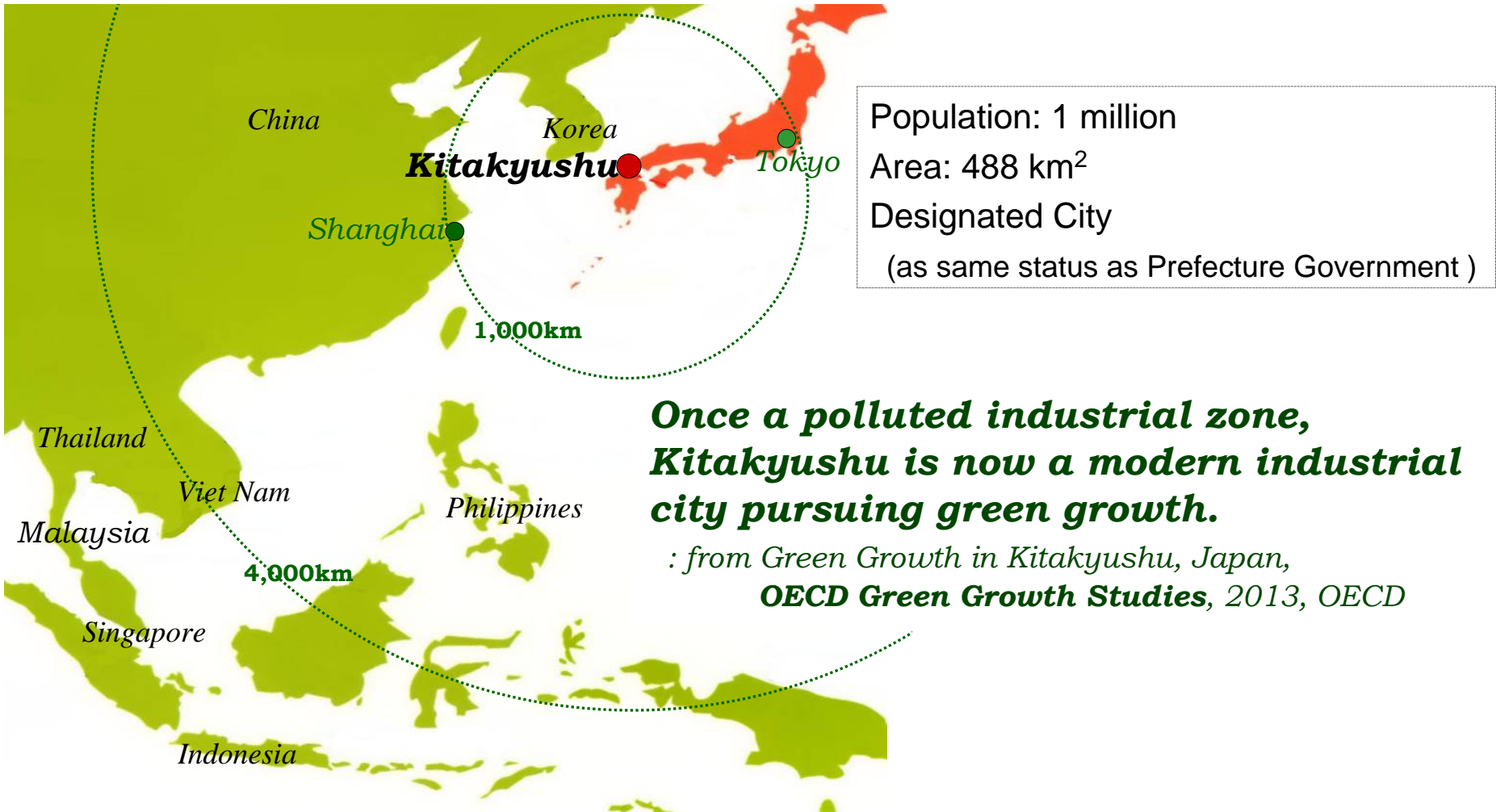
# Sustainable Urbanisation: Experience from Kitakyushu



**Seiko KUBO**  
**International Environmental Strategies Division**  
**Environment Bureau**  
**City of Kitakyushu, Japan**



# Location and Characteristics



**Industries, International Trade, Biodiversity, and Urban Development**



# From “Grey City” to “Green City” Overcoming Severe Environmental Pollution



**Severe Air Pollution**  
*In 1950s & 1960s*



➡ **Present**



Residents  
enjoying blue sky



“Dokai Bay, Sea of Death”



Recovered Blue Skies and Sea,  
people enjoying the clean environment

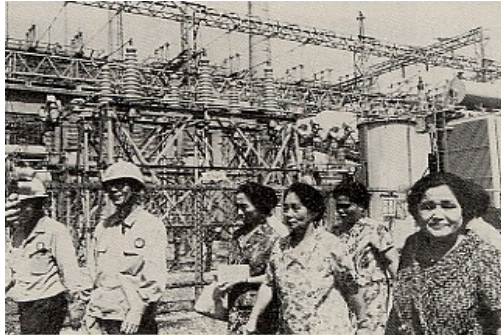


Swimming at  
Dokai Bay



# ***Driving Force of Sustainable Urbanisation: Partnerships among Local Multi-stakeholders***

## ***Residents***



**Residents' observation of  
a private company**



**Learning how to measure air pollution  
from a university professor**

## ***Partnership***



**Environmental control &  
environmental infrastructure  
*Local Government***



**Cleaner Productions &  
pollution control equipment  
*Private Enterprises***

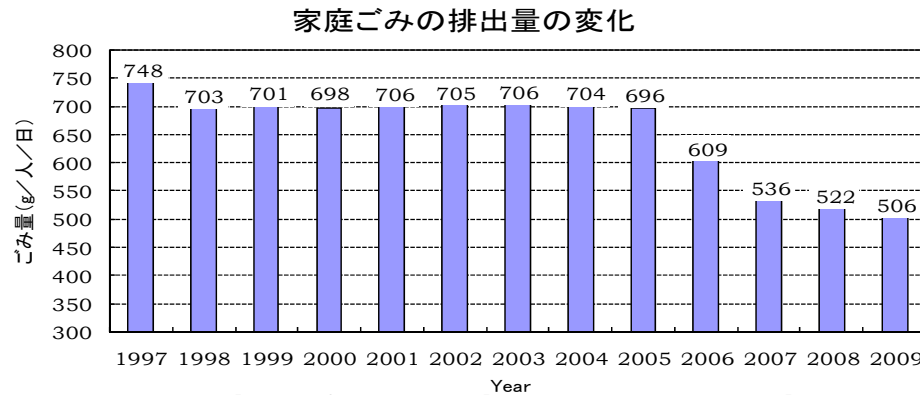
*Local Initiative & Partnership  
Environmental Technology & Environmental Investment  
Education & Participation of Residents  
Environmental Governance*

*Reference: UNESCAP "Kitakyushu Initiative for a Clean Environment"*

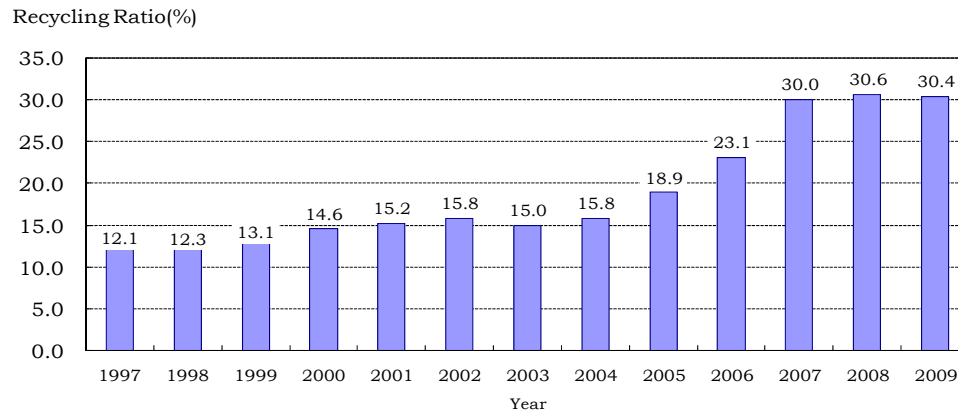
# Potentials and Resources for Sustainable Urbanisation 1: Citizen Participation and Partnerships

## Achievement of Least Solid Waste Generation among OECD Cities

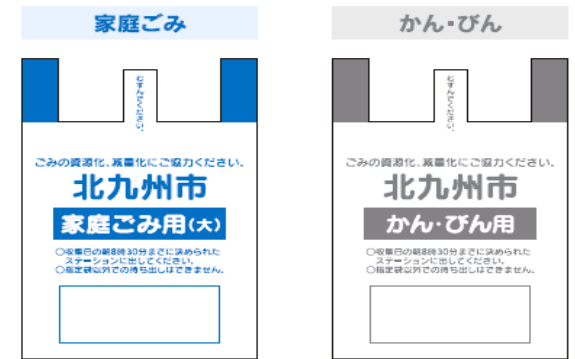
Domestic Waste Generation (g/day/capita)



Reduction of Domestic Waste Generation

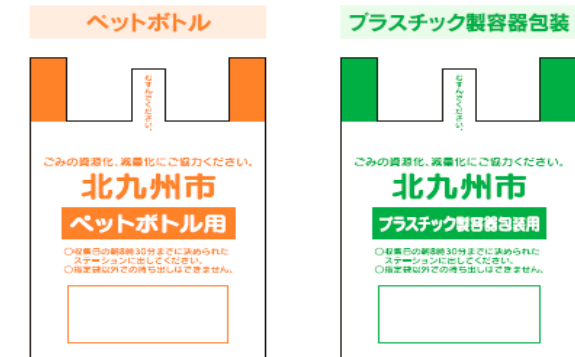


Recycling Ratio of Domestic Waste from Households



Other Domestic Waste

Can & Glass Bottle



Waste Plastic PET Bottle

Waste Plastic Packaging

Separation System of Domestic Waste for Resource-circulating started in 2006

Successful waste management : Japan has one of the lowest rates for municipal waste production among OECD countries, 1.03kg per person per day (2008), and Kitakyushu produces less than half that amount, 506g per person per day (2009).

(Reference: OECD Green Growth Studies, Green Growth in Kitakyushu, Japan, 2013)

**Potentials and Resources for Sustainable Urbanisation 2:  
Private Companies' Capabilities and Powers  
Green Products produced from High Efficient Process**



**Nippon Steel & Sumitomo Metals**  
Efficient electromagnetic plate and sheet which contributes to energy saving



**YASKAWA Electric Corporation**  
Inverter to contribute energy saving in production process



**TOTO, Ltd.**  
Water-saving automatic faucet with a self-power generation



新開発の消火剤の特徴  
<従来水滴(噴霧)>  
水は大きな分子間力により、  
表面張力が大きい  
⇒ 水滴化(消火性能=低)

<新開発の消火剤>  
表面張力が小さいため、広がり、浸透する。  
⇒ コムやプラスチック等も覆うことができ、  
消火性能が向上

**Shabondama Soap CO. & Kitakyushu City Fire and Disaster Management Bureau**  
Development of Small Amount Typed Fire Extinguishing Compositions with Less Environmental Load and New Fire Fighting Strategy

**World's Most Energy-Efficient**

High energy efficiency is a key asset for Kitakyushu's heavy industry. Japan's steel manufacturing ranks as the world's most energy-efficient steel industry. Moving the iron and steel manufacturing products from Kitakyushu or Japan to another country would be likely to create more CO<sub>2</sub> emissions for same output. Kitakyushu's iron and steel industry offers a range of products with advanced energy performance

Reference: OECD Green Cities Programme Kitakyushu Report



# Potentials and Resources for *Sustainable Urbanisation 3: Facilitating Resource Circulation and Eco-Industries*

## *Kitakyushu Eco Town*



Practical Research Area  
Practical Research Facilities : 16  
Practical Research Projects : 56



Comprehensive Eco-Industrial Complex,  
Hibiki Recycling Area  
Industrial Plants: 29

### **Outcome of Projects**

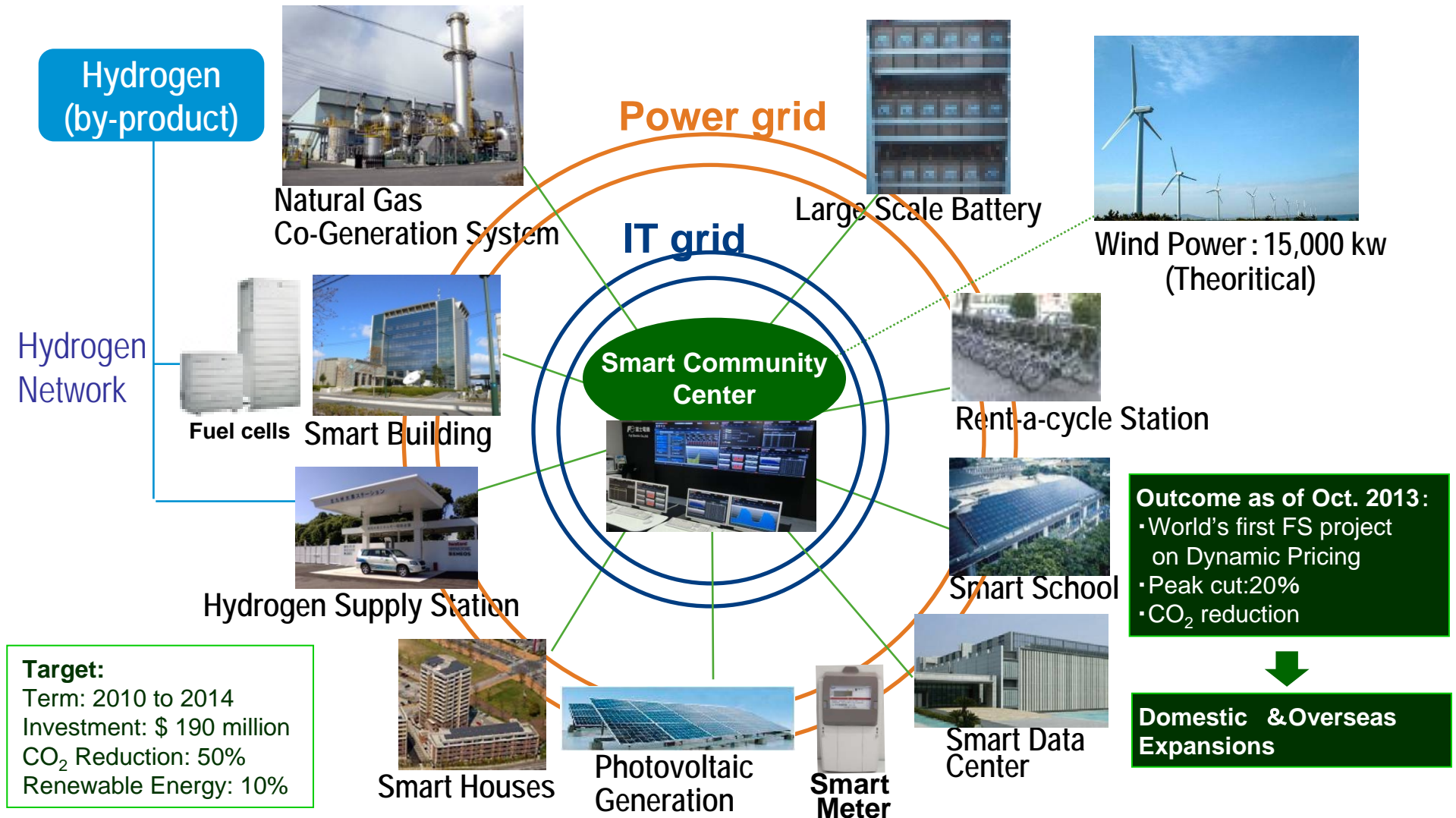
**Environment:** Reduction of environmental impact / 0.38 million ton CO<sub>2</sub>,  
Resource and energy conservation

**Economy:** Investment: 66 billion yen  
Private sector: 71.7%, national government: 18.2%,  
local government: 10.1%

Employees: 1,340 people  
Visitors: 1 million people (as of October 2011)

# Potentials and Resources for Sustainable Urbanisation 4: Infrastructure

## Kitakyushu Smart Community



*Realization of optimized energy use per region, through coordination between new and mainstay energy sources and introduction of a control system for both energy supply and demand.*





# Expansion of Sustainable Urbanisation: International Environmental Cooperation for Sustainable Development



Mr. Xi Jinping, Vice President of the People's Republic of China, visited Kitakyushu on 16 December 2009.

**People's Daily on 17 December 2009:**

*The City of Kitakyushu has rich experiences on environmental conservation and advanced technologies, and Kitakyushu would be worth the model for Chinese cities.*



**Thank you for your attention.**

**International Environmental Strategies Division  
Environment Bureau  
City of Kitakyushu**

