

*Cool Earth Promotion Programme*  
*-Japan's initiative on climate change-*

17 March 2008

Takahiro Shinyo

Ambassador

Deputy Permanent Representative  
of Japan to the United Nations

# “Cool Earth Promotion Programme”

Jan. 2008: Prime Minister Fukuda announced the  
“Cool Earth Promotion Programme”

***I. Post-Kyoto Framework***

***II. International Environment Cooperation***

***III. Innovation***

# Post-Kyoto Framework

- Mid-term and long-term strategies for GHG emissions reductions
  - Reverse the rise in global emissions within the next 10 to 20 years (midterm strategy)
  - Halve global emissions by 2050 (long-term strategy)
- Critical to create a framework in which all major emitters participate
- Japan, along with other major emitters, will set a **quantified national target** for GHG emissions reductions
  - In setting the target, the equity of reduction obligations should be ensured

# Quantified National Target

## Calculating the national target

- based on scientific and transparent measurements (e.g, energy efficiency by sector)
- potential reductions brought about by future technological innovations

Sector A

Sector B

Sector C

Sector D

.....

# International Environment Cooperation

## ● Energy efficiency

- Over the last 30 years, Japan has succeeded in doubling real GDP without increasing the overall energy consumption of industrial sector [chart 1]
- Japan will transfer high-quality environmental technology to other countries.

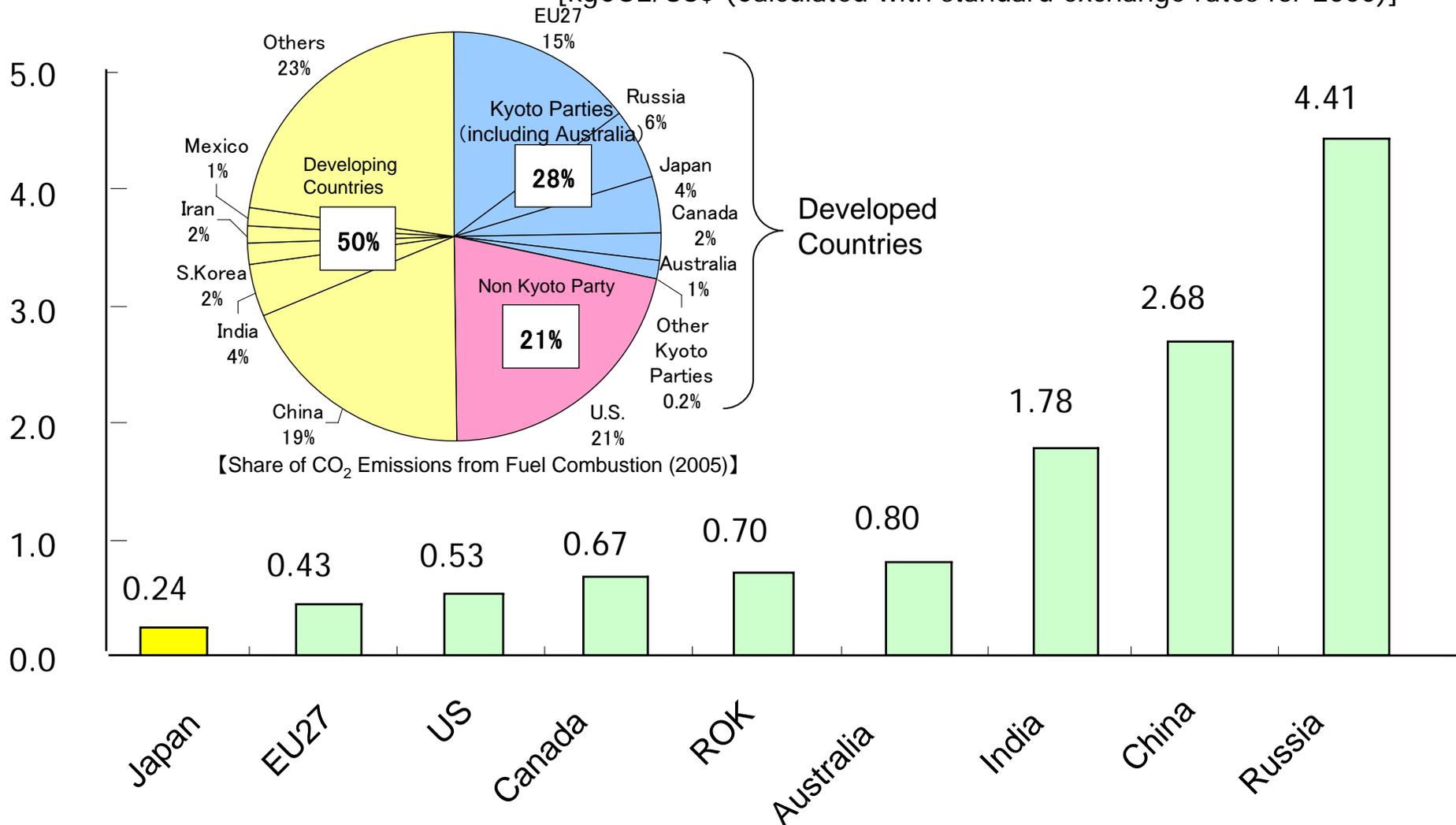
e.g. If power plants in the U.S., India and China operated at the same level of efficiency as those in Japan, the resulting reduction in CO<sub>2</sub> emissions would amount to almost 1.3 billion tons —the equivalent of Japan's total annual emissions.

- Japan will call for a 30% improvement in global energy efficiency by 2020

# Japan is a Global Leader in Low Carbon Economies

## CO2 Emissions per GDP (2005)

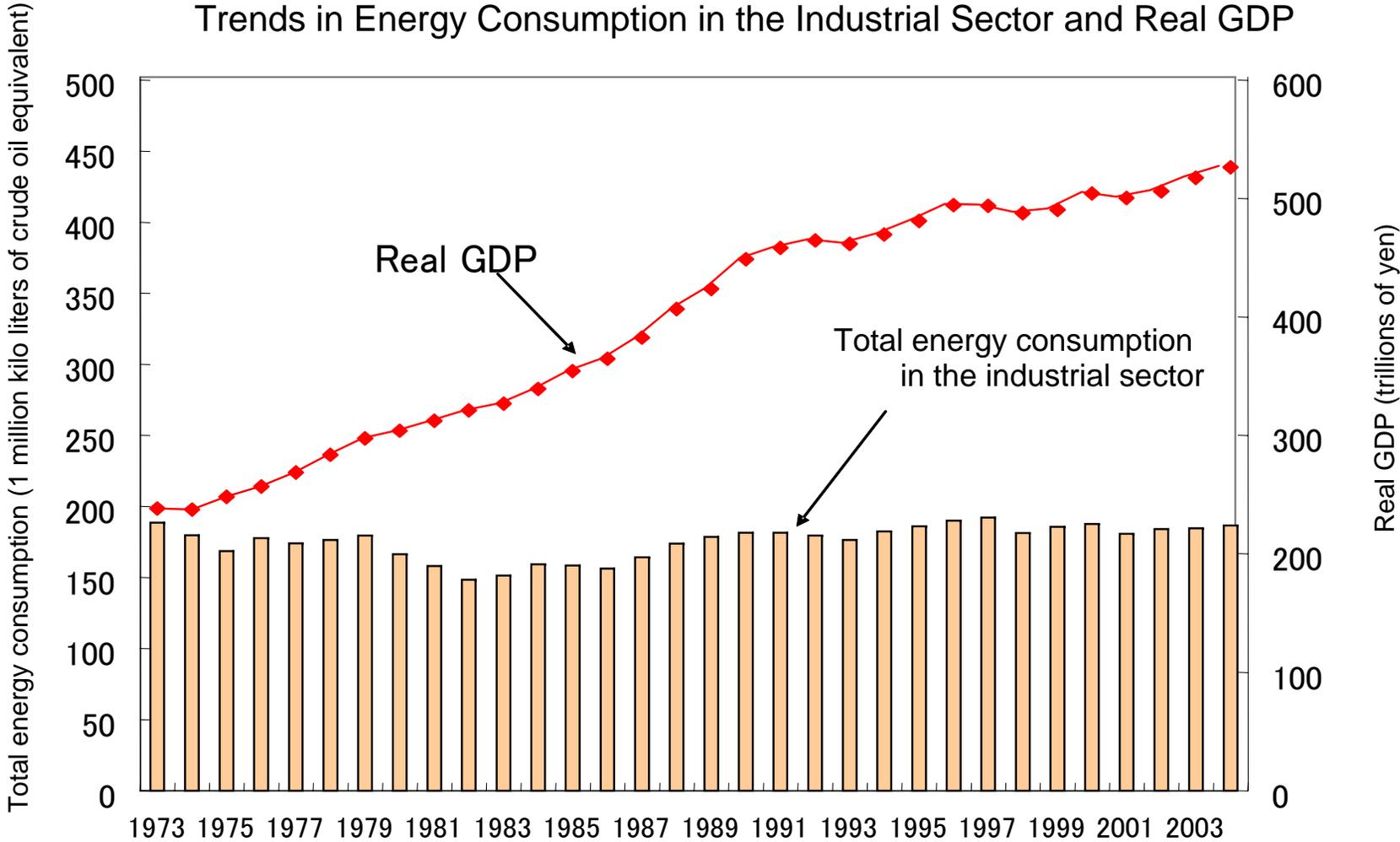
[kgCO<sub>2</sub>/US\$ (Calculated with standard exchange rates for 2000)]



Source: CO<sub>2</sub> Emissions from Fuel Combustion 1971-2005 (2007) (IEA)

# Japan's Steady Progress in Energy Conservation

Energy consumption in the industrial sector has stayed at the same level while GDP has doubled



Source: General Energy Statistics (Agency for Natural Resources and Energy of the government of Japan)

System of National Accounts (Cabinet Office of the government of Japan)

# International Environment Cooperation

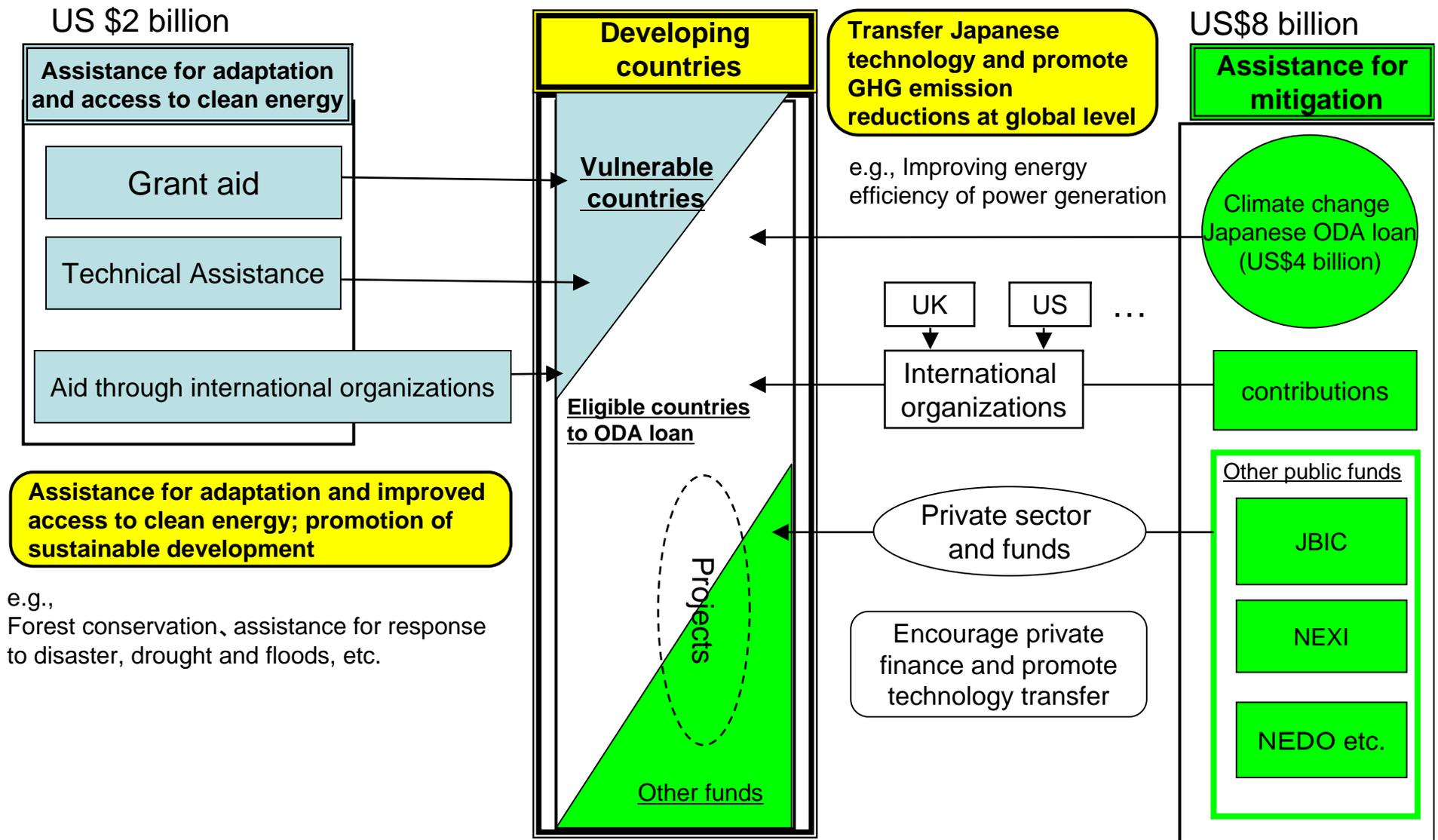
## ● **Cool Earth Partnership** [chart 2]

- From 2008, Japan will provide approximately **US\$10 billion** in aggregate over the subsequent five years as assistance for adaptation and access to clean energy (\$2 billion) and mitigation (\$8 billion)
- Assistance will be provided to developing countries that are making efforts to reduce GHG emissions and achieve economic growth in a manner compatible with environmental protection
- Special attention will be paid to SIDS and LLDCs, which are especially prone to submersion of land, desertification and other effects of climate change caused by emissions from other countries
- Japan aims to create **a new multilateral fund together with the US and the UK** and invites other donors to participate

# Financial Mechanism for “Cool Earth Partnership” (image)

[chart 2]

From 2008, Japan will provide approximately US\$10billion in aggregate over the next five years for developing countries making efforts to reduce GHG emissions and achieve economic growth in a environmentally compatible way



# Innovation

- Technical innovation is critical for halving GHG emissions by 2050
  - Accelerating the development of technologies such as:  
[chart 3]
    - ▣ Zero CO<sub>2</sub> emission coal-fired power plants
    - ▣ Low-cost, high-efficiency solar power generation
- Investing approximately US\$30 billion in R&D over the next five years
- Transforming Japan into a low-carbon society through a fundamental rethinking of all our societal systems [chart 4]

# Innovative Technology Development

[chart 3]

- Japan will formulate **“Cool Earth - Innovative Energy Technology Program”** in March -increase and focus RD&D investment and lead international cooperation

## Examples

### High-efficiency and low-cost solar power generation

- ◆ Power generation efficiency: 15-20% → **over 40%**
- ◆ Cost: 46 yen/kWh → **7 yen/kWh**

- **High-efficiency, low-cost solar cells** with new compounds/structures
- **Thin-film silicon technology** for flexible solar cells

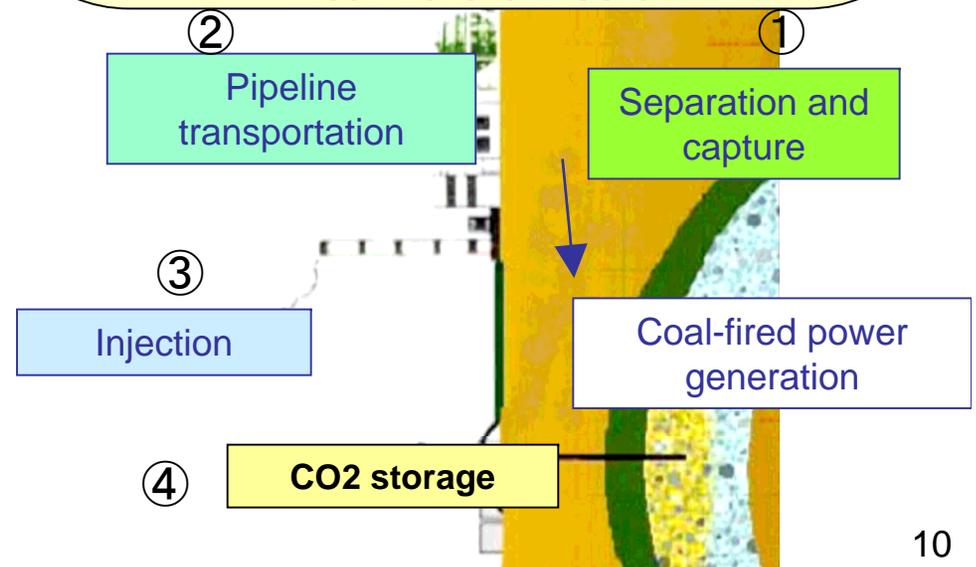


(Thin-film silicon solar cells)

### Near zero-emission coal-fired power generation

- ◆ Power generation efficiency: 43% → **around over 60% = 30% cut in CO<sub>2</sub>**  
+  
CCS (CO<sub>2</sub> capture and storage) technology

**Near zero-emission**

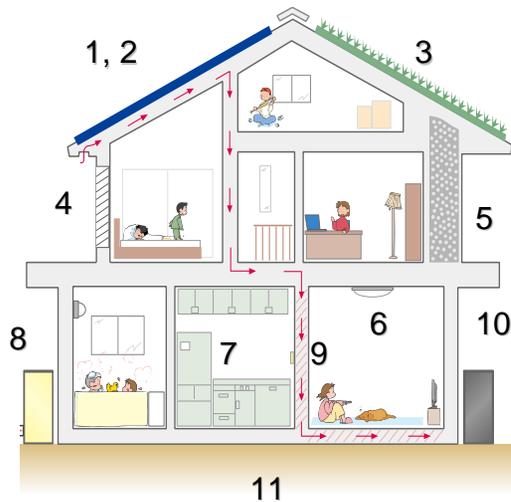


# Building a Low Carbon Society

Technological Innovation

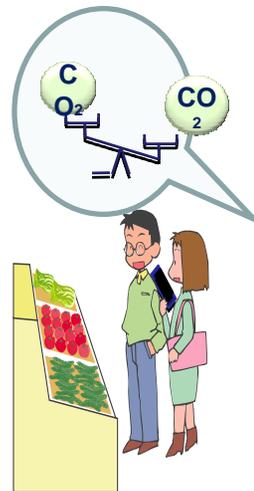
Lifestyle Innovation

Infrastructure Innovation

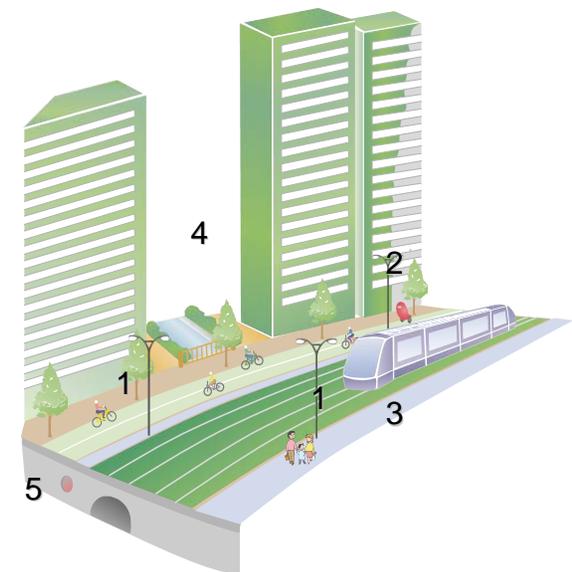


**Low Carbon Homes**

- 1) Photovoltaic panel
- 2) Solar water heater
- 3) Rooftop gardening
- 4) Light shielding
- 5) High insulation
- 6) Efficient lighting
- 7) Eco-use navigation system
- 8) Efficient heat pump
- 9) Radiant heat system
- 10) Fuel cell
- 11) 200-year durable housing



**Promoting green consumption by making GHG data ubiquitous**



**Low Carbon Urban Areas**

- 1) Walkable /cyclable cities
- 2) Smart commuting / home offices
- 3) Advanced public transportation systems
- 4) Wind passages
- 5) Exhaust heat pipes