

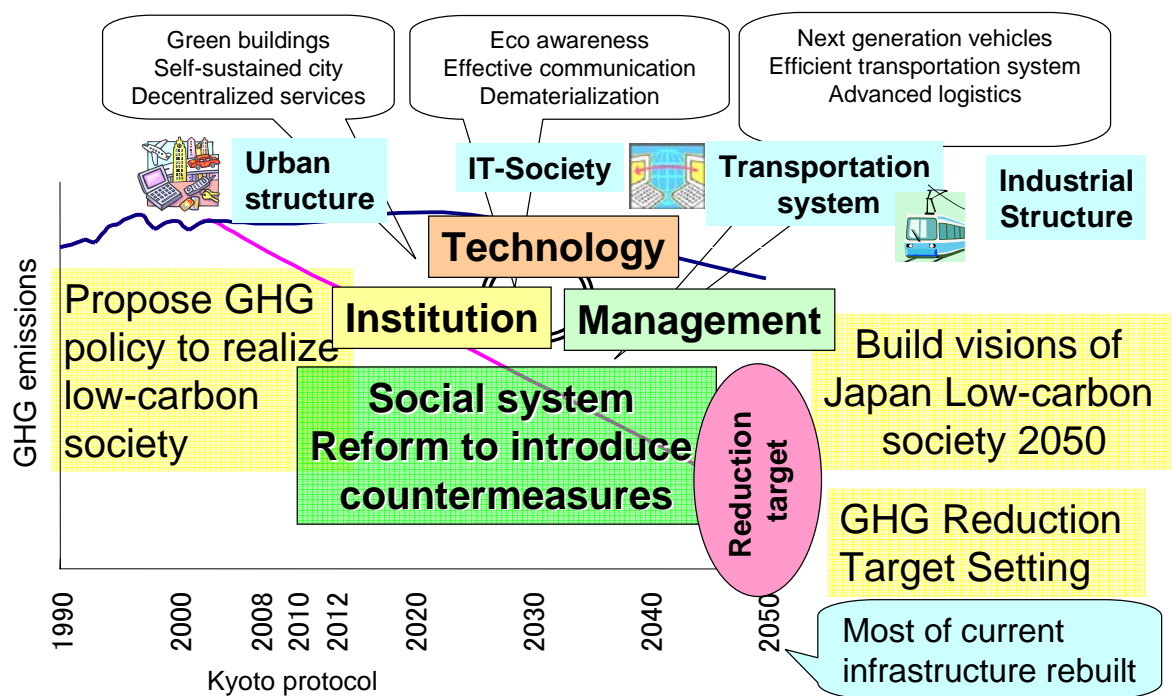
COP11 and COP/MOP1 side event

Global Challenges Toward Low-Carbon Economy -Focus on Country-Specific Scenario Analysis-

18:00-20:00, Kazan River, Montréal Convention Centre

December 3, 2005

All presentation materials are available at "http://2050.nies.go.jp/sympo/cop11_side.html"



Organized by



National Institute for Environmental Studies, Tsukuba, Japan



Organizers

National Institute for Environmental Studies (NIES)

NIES was established in 1974 at Tsukuba Science City, near Tokyo. It has been playing a major role in environmental research in Japan. NIES conducts multidisciplinary environmental studies in natural, social and human sciences. NIES, in collaboration with institutes in China, India, Korea, and Thailand, has developed a large-scale computer simulation model called AIM (Asia-Pacific Integrated Model) to assess climate policy options. AIM was selected by IPCC as one of the models for developing new long-term emission scenarios. The model has been widely used for policy studies and its results have been presented in various environmental assessments such as UNEP/GEO, ECO-Asia, Millennium Ecosystem Assessment.

Website: <http://www.nies.go.jp>

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Japan Low Carbon Society Scenarios toward 2050

“Research Project on Establishing of Methodology to Evaluate Middle to Long term Environmental Policy Options toward Low Carbon Society in Japan (Japan Low Carbon Society Scenarios toward 2050)” was started in 2004. This 5 years project is sponsored by Strategic Research Development Project, Global Environment Research Fund (Ministry of the Environment, Japan). Around 60 Japanese researchers have worked together to propose concrete policy packages including institutional change, technology development, and lifestyle change to achieve low carbon society toward 2050. We especially focus on 1) long-term scenario development study to integrate environmental options consistently using simulation models, 2) long-term GHG reduction target setting considering effectiveness and validity, and 3) Assessment of environmental options considering future socio-economic conditions in a) urban system, b) information technology society, c) transportation system and d) industrial structure.

Website: http://2050.nies.go.jp/index_eng.html

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Programme



Kazan River, Montréal Convention Centre,
18:00-20:00, December 3, 2005

- 18:00-18:10** **Welcome**
Dr. Shuzo Nishioka (NIES, Japan)
- 18:10-18:20** **Opening Remarks**
Mr. Hiroshi Ohki (Chairperson of COP3, Secretary General of GEA)
- 18:20-18:30** **US scenarios toward 2050**
Dr. Ronald Sands (Battelle, US)
- 18:30-18:40** **Canada scenarios toward 2050**
Mr. Ralph Torrie (ICF Consulting Group, Canada)
- 18:40-18:50** **UK scenarios toward 2050**
Prof. Michael Grubb (Imperial College of London, UK)
- 18:50-19:00** **France scenarios toward 2050**
Mr. Hubert Kieken (IDDRI, France)
- 19:00-19:10** **Germany scenarios toward 2050**
Mr. Martin Weiss (Federal Environmental Agency, Germany)
- 19:10-19:20** **Japan scenarios toward 2050**
Dr. Junichi Fujino (NIES, Japan)
- 19:20-19:30** **China scenarios toward 2050**
Prof. Xiulian Hu (Energy Research Institute, China)
- 19:30-19:40** **India scenarios toward 2050**
Prof. P.R. Shukla (Indian Institute of Management, India)
- 19:40-20:00** **Panel discussion**
Coordinator: Dr. Shuzo Nishioka (NIES, Japan)

Refreshments will be set up and served just outside the Kazan River.

About Side-event:

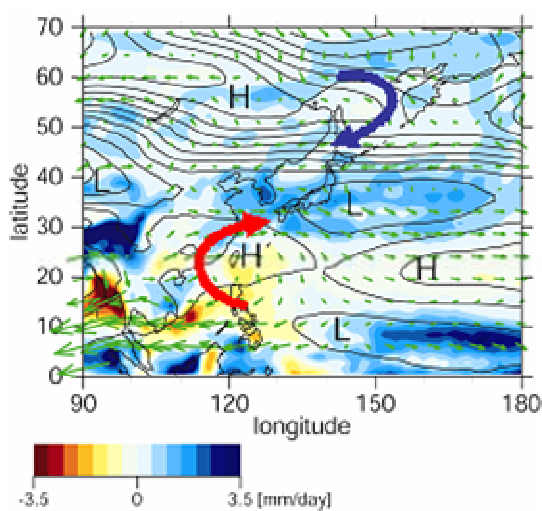
The main objective is exploring strategies to pursue a transition toward low-carbon economy focusing on policy packages integrating technology development and social structure change. The event would feature presentations and a panel discussion on scenario analysis with experts from Canada, China, France, Germany, India, UK, US and Japan.

Key messages:

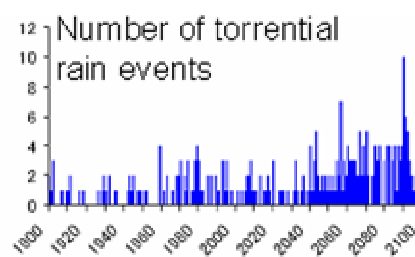
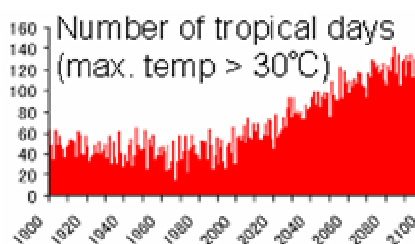
- 1) Low carbon economy (LCE) is necessary to stabilize climate change.
- 2) There is no single bullet. The way to achieve LCE is different for each country. International cooperation is necessary.
- 3) LCE is possible. Aligning sustainable development & climate change actions can reduce the burden and facilitate transition to stabilization.

Key message 1: “Low carbon economy (LCE) is necessary to stabilize climate change.”

The first great step to prevent global warming was taken by Kyoto Protocol which came into effect on Feb.16, 2005. But it is necessary to reduce GHG (Greenhouse gases) emissions drastically to stabilize climate change. According to recent research studies, global GHG reduction target in 2050 is likely to be 50% of 1990 level so as not to exceed 2 degree global mean temperature increase from pre-industrial level. It means that reduction rate for developed countries will be more than 50%, such as 60-80%.

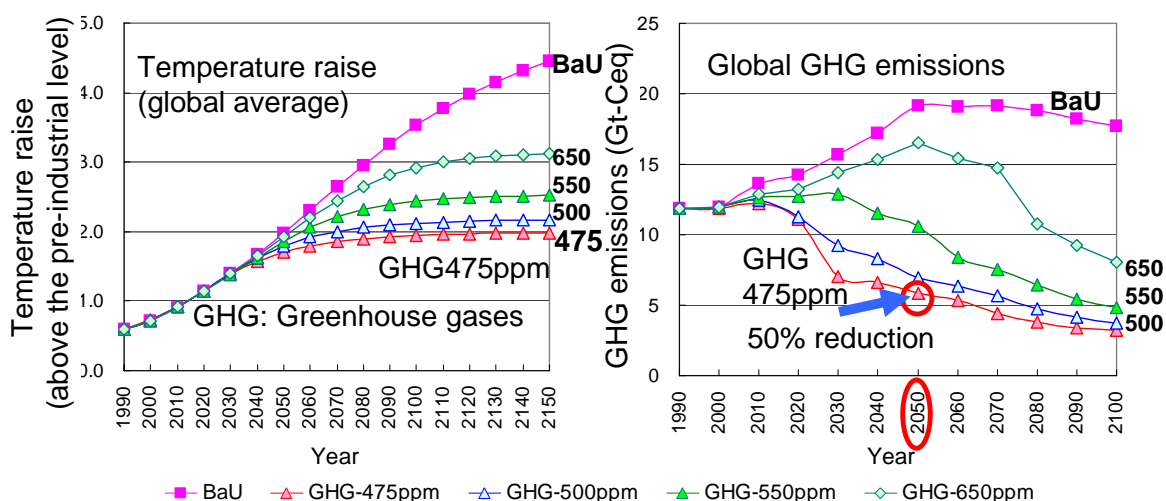


Prolonged and enhanced monsoon rain due to pressure pattern change



Dramatically increased tropical days and torrential rain

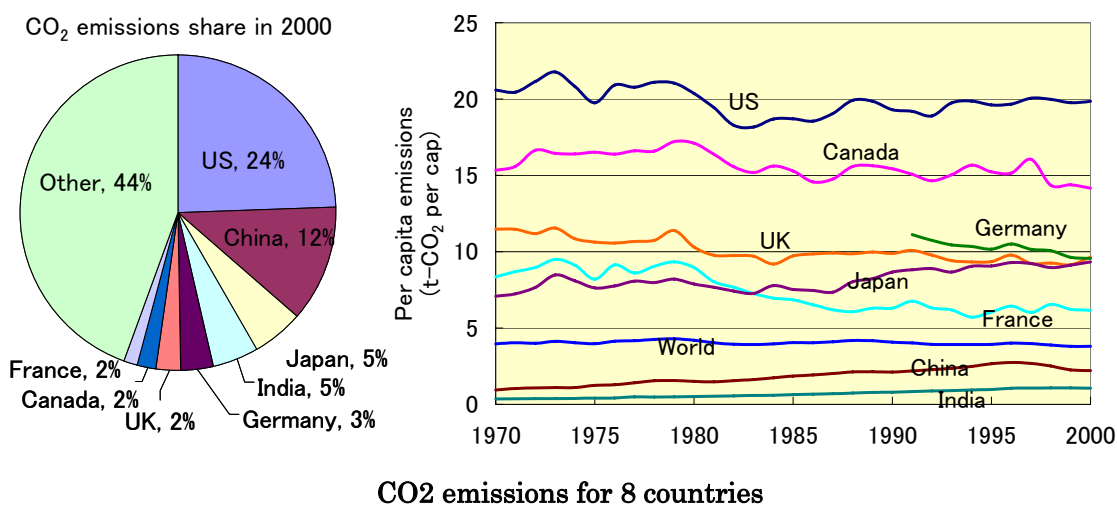
Projected Climate Change over Japan in Summer (CCSR/NIES Model results)



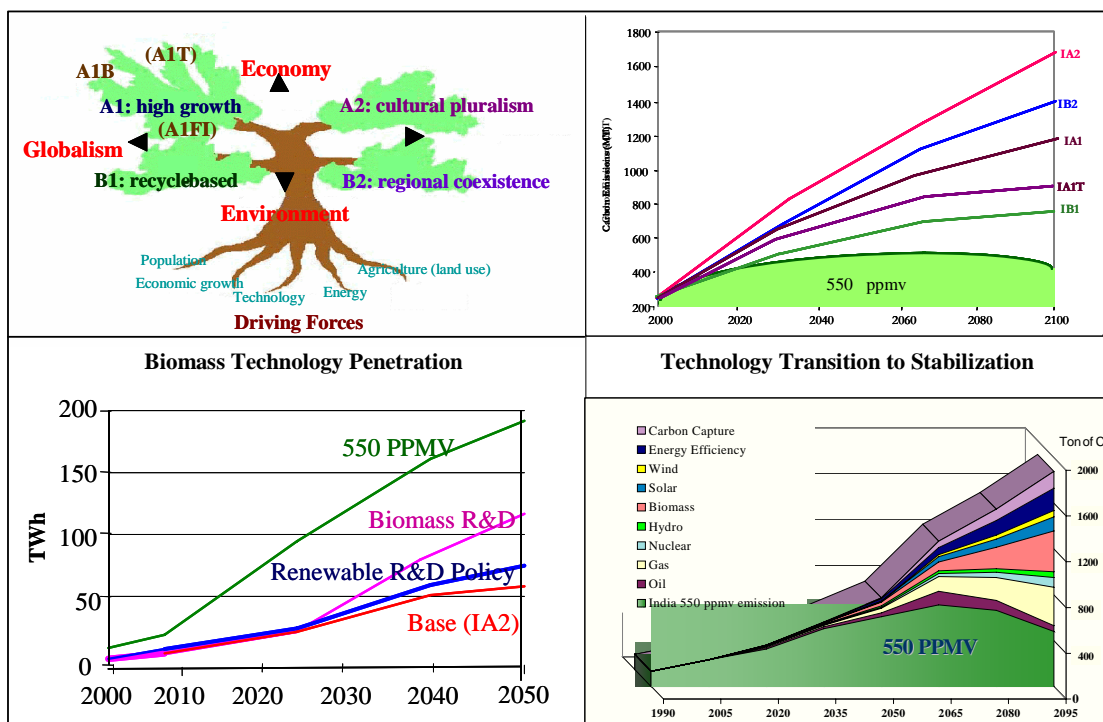
Relationship between temperature raise, GHG concentration level, and GHG emissions (Calculated by AIM/Impact[policy] Model)

Key message 2: “There is no single bullet. The way to achieve LCE is different for each country. International cooperation is necessary to realize global LCE.”

There is no single option to solve climate change. Portfolio of countermeasures for climate change policy is different for each country, such as renewable energy, hydrogen, energy-saving, demand side management, and so on. There is also a time lag in technology development and diffusion between developed countries and developing countries. International cooperation (technology transfer and capacity building) is key to success for global LCE.



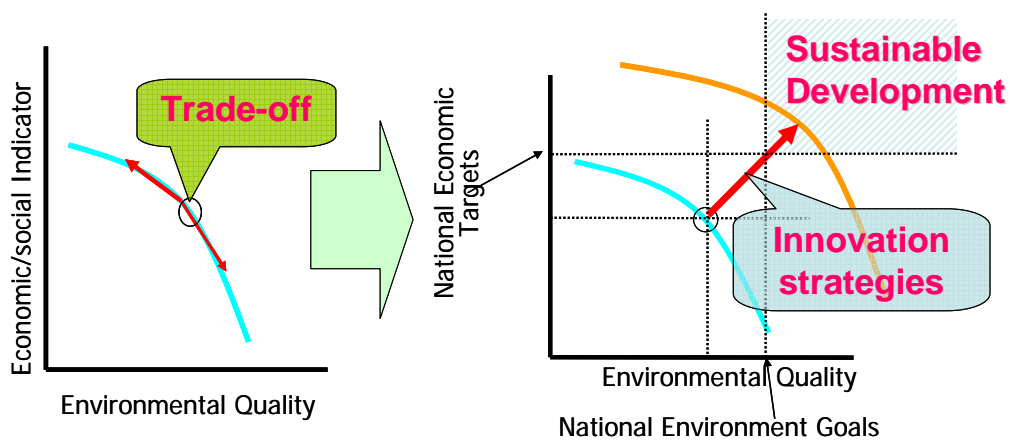
CO₂ emissions for 8 countries



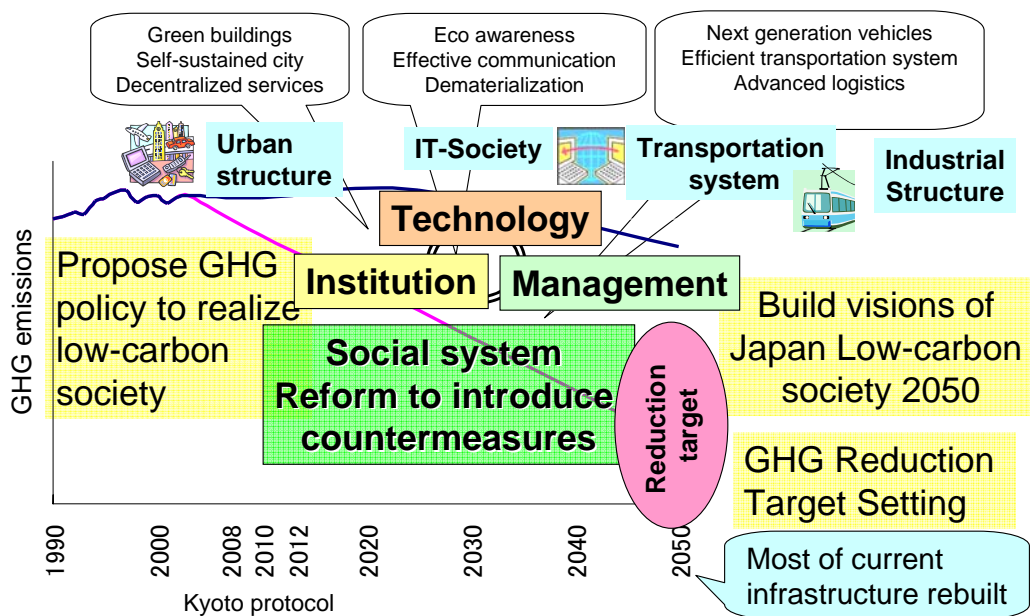
Role of technology for climate change in the case of India

Key message 3: “Aligning sustainable development & climate change actions can reduce the burden and facilitate transition to stabilization. LCE is technologically and economically feasible.”

There is trade-off between economic development and environment conservation. LCE itself may be costly, but it creates innovations to break trade-offs and shift the frontier line toward sustainable development. LCE has ancillary benefits such as energy security, land conservation, self-sustained city, and environmentally sustainable transportation. Early action avoids lock-ins from current technologies and makes it possible to achieve national and global LCE technologically and economically.



Circumventing economy–environment trade-off with innovative strategies



Scenario development to achieve low carbon economy