Report from Bologna

International Research Network for Low-Carbon Societies

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Institute for Global Environmental Strategies

International Research Network for Low Carbon Societies

Policies
Governmental
Contact point

Academics
Core/Node
Research
Institute

Activities
Annual meeting
Workshop
Newsletter
Internship

Ministry of Environment

Ministry of Environment, Land and Sea

Close Connection with Policies

Ministry of Environment

NIER *Korea*

Wuppertal Institute *Germany*

ENEA
FEEM
CMCC *Italy*

International Policy Arena

G8/G20
UNFCCC

IPCC
Scientific Societies

Stakeholders

Achieving a Low Carbon World

DECC

UKERC *UK*

Co-chairs + Secretariat (IGES)

ADEME
IDDRI
AdT *France*

Ministry of Environment

Proposed at 2008 G8 Summit

Established 2009 at Trieste

1st Annual Meeting at Bologna 2009

IIMA *India*

NIES *Japan*

ERI *China*

Ministry of Environment and Forestry

Ministry of Environment

NRDC

Candidate Countries

Research Institutes

The roadmap to achieve a LCS

by research and policy

Synthesis of findings of the 1st Researchers Meeting

1. **Long-term and mid-term targets**
2. **Economic aspects of Low Carbon Societies**
3. **The Role of Technology**
4. **Public policy and lifestyle change**
5. **Cross-cutting issues**

1 – Targets and Paths

- **Bold political targets are crucial /** currently proposed**:**
  - 50% globally, 80-95 % by developed countries (vs. 1990)
  - Rapid peaking of global GHG emissions
- **Appropriate country- and region-specific targets**
  - Offer co-benefits such as energy supply security and more sustainable development
  - Developed countries:
    Re-engineering of existing processes and the transition from material-driven life-styles to value-driven ones
  - Developing countries:
    Avoid the negative impacts of traditional growth patterns by “Leap-frogging” strategies that skip the material-driven industrial stage experienced by developed countries

1 – Targets and Paths

- **Scientific tasks:**
  - Identify concrete and feasible measures that will allow us to achieve low carbon societies
- **Research agenda:**
  - **New indices** to evaluate what low carbon societies would achieve,
    - E.g. material-use efficiency, the achievement of innovation targets,
    - People's perceptions of quality-of-life,
  - **Back-casting approach** to identify feasible and desirable pathways
    - Simulation models
    - Participatory integrated approaches (tasking into account techno sphere as well as socio sphere)
    - Politically relevant applied research aiming at the definition of comprehensive "packages of actions"
    - Motivation by visualisation of achievements and benefits of LCS

2 – LCS & Economy

- **Policy messages:**
  - LCS economy = has to be developed as a competitive, knowledge-driven economy
  - Green growth will result from a coordinated, policy-driven process:
    - Coordination between environmental goals and innovation policies
    - Sectoral and regional perspectives are to be taken into account
    - New financing paradigms for developing countries
- **Research agenda:**
  - Integration of existing theoretical and empirical approaches; relations between policy, green growth and technological change and innovation
  - Comprehensive approaches that take into account multiple stages of development & industrialisation / theories of development
  - Market instruments are key: Analysis of implications of the emerging carbon market, and the identification of further finance mechanisms for mitigation, adaptation and technology transfer

3 – LCS & Technology

- **Policy messages:**
  - Radical technological change is crucial in reaching a low-carbon society
  - Near-term R&D and long-term innovation are both needed and a substantial increase in energy R&D is needed
  - Technological changes on both demand side and supply side are required – no sector should be exempted
  - Technology measures need to be complemented by measures to transform industrial, transportation and social structures,
  - Climate policy and R&D strategies must be synchronized.
- **Research agenda:**
  - Location of technology development as it influences economic development of a region,
  - Linkage between life-style and technology
  - Hedging strategies with broad portfolios of technologies
  - Acceptability and security as well as co-benefits

4 – Public policy and lifestyle change

- **Policy messages:**
  - Public policies have an important role for facilitating lifestyle change
  - Smaller geographical units for social experiments to be scaled up to wider areas / Successful examples in local initiatives (Congestion charge, renewable energy, rapid transit systems, public sharing of bicycles…)
  - Best mix of policies and measures are needed, which are taking into account specific socio-cultural contexts
    - to be effective to decide actual behaviour patterns
  - Models to achieve a higher quality of life with less carbon emissions are required: e.g., work-life balance
- **Research agenda:**
  - Behavioural research to show quantitative and visible evidence of people's willingness and capacity to change
  - Improved interaction between policy makers and social scientists

5 – Cross-cutting issues for a LCS

- **Policy messages:**
  - A persistent signal is needed to stimulate change across all sectors
  - Planning for land use change is essential
  - Cities provide an excellent opportunity to promote a Low Carbon Society
  - Human resource development is needed as well as technology co-operation
- **Research agenda:**
  - Research is needed that would allow developing countries to set their own targets
  - Further improve science of climate change, improve predictions, reduce uncertainties, and remain alert to new scientific insights
  - New source of funding, to identify global institutional solutions, including public-private partnerships

Achieving a Low Carbon Society

- **Long and mid-term targets**
  - Co-benefits will arise from setting appropriate country- and region-specific targets.
  - World leaders aspire to bold targets for emissions reductions.
  - Backcasting approaches can identify feasible and desirable pathways towards sustainable low-carbon societies.
- **Economic aspects of low-carbon societies**
  - Co-ordination is needed between environmental goals and innovation policies.
  - Sectoral and regional perspectives need to be taken into account.
  - New financing paradigms will be required if developing countries' mitigation and adaptation needs are to be met.
- **The role of technology**
  - Radical technological change is crucial in reaching a low-carbon society.
  - More investment in energy technology is needed.
  - Technology will not deliver a low-carbon society on its own.
  - Climate policies and R&D strategies must be synchronised.
- **Public policy and lifestyle change**
  - Public policy can lead the way to lifestyle change and a low-carbon society.
  - Facilitating behaviour change is not easy, but can be accomplished.
  - The most effective measures will be tailored to individual countries and localities.
  - LCS lifestyles do not have to entail sacrifice.
- **Cross-cutting issues**
  - A persistent signal is needed to stimulate change across all sectors.
  - Planning for land use change is essential.
  - Cities provide an excellent opportunity to promote a low carbon society.
  - Research that would allow developing countries to set their own targets and pathways is essential.
  - Human resource development is needed as well as technology co-operation.
  - We need to adapt to unavoidable climate change and remain alert to new scientific insights.

The roadmap to achieve a LCS

by research and policy

Synthesis of findings of the 1st Researchers Meeting

1. Long term and mid term targets

Developed C.: less materialistic **Developing C.: leap frogging**

2. Economy

- Competitive & knowledge driven
- Green growth will result from a policy driven process

3. Technology

- Radical technological change needed
- Short term R&D & long term innovation
- Climate policy & R&D have to be synchronised

4. Society

- Public policy is important for faciltiating lifestyle change
- Models to achieve higher quality of life with less carbon

5. Cross cutting issues

LCS-RNet: Dedicated to make fast scientific and policy progress towards LCS

Active participation of research institutions to the Network is highly welcome.

Please visit http://lcs-rnet.org/

- **Next steps (in 2010):**
  - Full report of the Bologna Meeting: available here
  - Stakeholder dialogues: in early 2010
    - Sharing the findings
    - Incorporating views of other stakeholders
    - Identifying demands from policymakers
  - Report to policy makers: including 2010 April/May: G8 EMM
  - LCS Conference : September 20/21, 2010 in Berlin

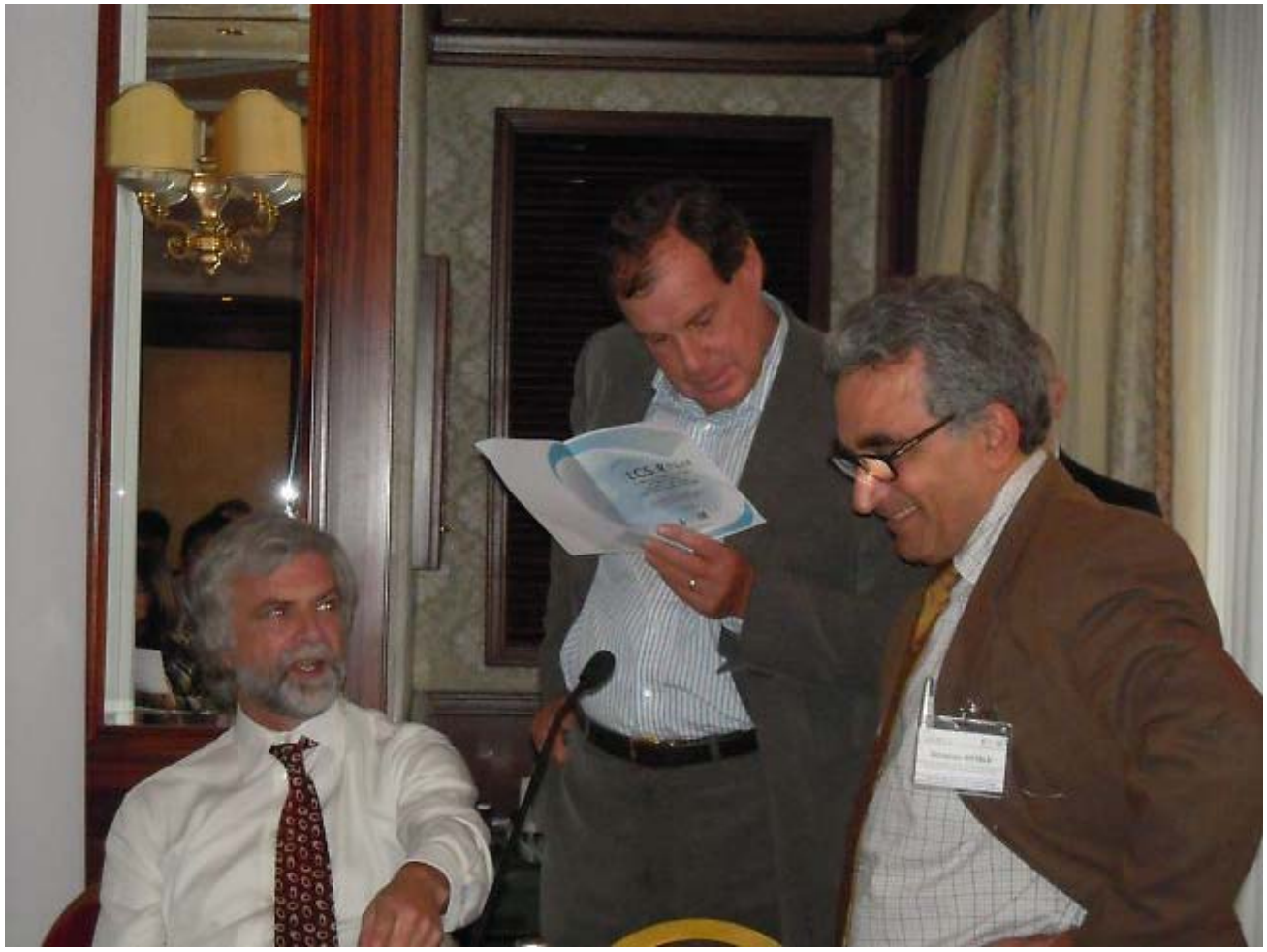
Low Carbon Society Research is crucial to shape the future

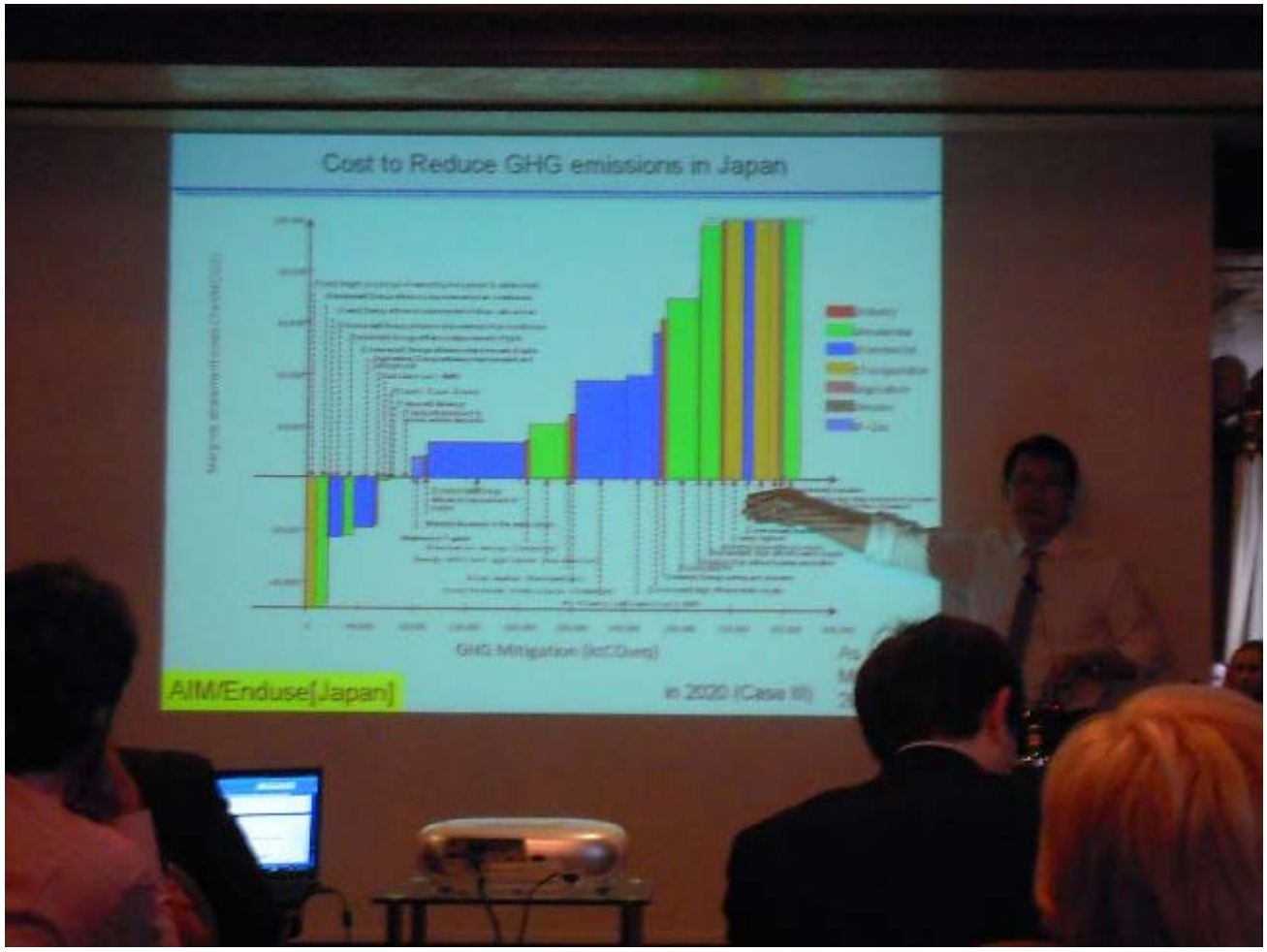
- **Background:**
  - **The urgency of significant GHG emission reductions by 2050 has been widely acknowledged.**
  - **But there is a huge need for understanding of how a Low Carbon Society would look like and how societies can be transformed towards this end.**
- **Low Carbon Society Research Network (LCS-RNet)**
  - **Initiated by the G8 Environment Ministers (Tokayo Summit & Trieste High Level Meeting).**
  - **Integration of science and technology, society, and policy**
  - **Platform to promote information exchange and research cooperation, to enhance understanding of LCS**
  - **Linkage between LCS research and policy-making processes including G8 by providing research outputs and recommendations.**

Shuzo Nishioka LCSR-Network at Institute for Global Environmental Strategies)


LCS-RNet
1ST Annual Meeting
12-13 October 2009
Bologna, Italy


Statement by Prime Minister Yukio Hatoyama at the United Nations Summit on Climate Change (New York, 22 September 2009)
1. Introduction
2. Reduction targets
3. Support for developing countries
4. Conclusion




Cost to Reduce GHG emissions in Japan
AIM/Enduse[Japan]


Achieving a Low Carbon Society
LCS·R
EU
EU
TABET
JIANG
CARRARO
KAINUMA
SHUKLA