Many near-term development choices are vital for low-carbon transition. In a conventional approach, emissions grow along a secular path which is altered through exogenous carbon market policies. In case of developing countries, back-casting from multiple future goals is more appropriate approach. It realises their "late-comer advantages" by altering policies and actions that align stakeholder choices that deliver multiple co-benefits, while avoiding lock-ins witnessed elsewhere. City planning is an example: Modeling research for Ahmedabad shows that GHG emissions in 2035 would reduce by two-thirds, over the conventional baseline, following sustainable development goals already delineated by city planners. Analysis for India demonstrates that actions that follow sustainability goals significantly lower economic losses from mitigation caused by stringent stabilisation.

The meeting in the International Research Network for Low Carbon Societies (LCS-RNet) was held in Bologna, Italy from 12-14 October 2009 on Dec. 16th 13:00-15:00.

There were 22 presenters who exhibited their research findings, ideas, views, analysis and strategies toward low-carbon Societies over five scientific sessions: LCS and the Policy Context, Green Growth and LCS, LCS National Pathways and the Research Environment, LCS and Technology Innovation, LCS and Behavioural Change.

After the meeting, LCS-RNet produced its output in the form of a synthesis report. This newsletter illustrates the report. The Synthesis Report addresses the findings that were brought to the fore during the discussions. These include issues that require further considerations by researchers and by policy-makers to fill the gaps in designing future low-carbon societies that confirm sustainable development with no decarization between developed and developing countries. Session summaries and summaries of presentations during the sessions are contained as the electronic format, distributed in CD-ROMs. Please visit the LCS-RNet or http://lcs-rnet.org.

**What is LCS-Rnet?**

Platform of LCS research

The basic nature of LCS-RNet is a platform to support and encourage information-sharing and voluntary cooperation among research institutions, specifically in the field of LCS research. LCS-RNet also facilitates the interaction between researchers and various stakeholders, and delivers their findings to policy-makers to assist science-based policy-making in transitioning to low-carbon societies.

**Objectives of LCS-RNet**

- Promotion of information exchange and research cooperation that cover various issues relating to low-carbon societies.
- Promotion of understanding about LCS through dialogues between researchers and various stakeholders including policy-makers, businesses, citizens and others to share national and sub-national visions on low-carbon societies, and
- Contribution to international policy-making processes on climate change including G8 process by providing research outcomes and recommendations.

**FIRST MILESTONE OF LCS RESEARCH INPUT INTO POLICY**

Antonio NAVARRA, ITALY
President, Euro-Mediterranean Center for Climate Change (CMCC)

After six months of preparation, the first annual meeting in Bologna of Low Carbon Society Network took place in Bologna, Italy, hosted by the CMCC and the Italian Ministry of Environment, Territory and Sea (MATT). The meeting was a great success. It was the first opportunity to meet and discuss after the launch of the initiative on April 1-2, 2009, in Trieste, Italy, under the auspices of the MATT, especially with Italy being the G8 presidency.

The meeting in Bologna was an exciting opportunity for researchers from all over the world to present innovative LCS research, exchange opinions, strengthen professional and personal relations and interact with policy-makers. The synthesis report has been produced as an output of this meeting and we are looking forward to the next chance to continue this important dialogue.
Five Key issues for achieving Low Carbon Societies

1. Long and mid-term targets
   - World leaders aspire to bold targets for emissions reductions.
   - Co-benefits will arise from setting appropriate country- and region-specific targets.
   - Backcasting approaches can identify feasible and desirable pathways towards, sustainable low-carbon societies.

2. 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.

3. 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.
   - "Back-casting" can be used to identify the measures necessary to achieve shared visions of a LCS. A package of measures could include indices such as these would underpin the setting of country- and region-specific targets for low carbon societies reflecting local conditions.

4. 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.

5. 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.

For a detail of each bullet point of five key issues as well as session summaries in the Bologna meeting, please read the synthesis report which can be obtained through LCS-RNet Secretariat (http://lcs-rnet.org)

PROPOSING SOCIAL VISIONS FROM SCIENCE
Mikiko KAINUMA, JAPAN
Chief of Climate Policy Assessment Research Section, National Institute for Environmental Studies (NIES)

NIES, together with other institutes, has developed low-carbon society visions and roadmaps for several cities in Asia. With scientific reasoning it has demonstrated possibilities for drastic GHG emissions reductions, while simultaneously maintaining a high quality of life. The role of science is to analyse and provide information on costs and effectiveness of mitigation and adaptation policies. These include policies related to technology innovation, city planning and eco-infrastructure. On the other hand, it is also important for people to realise there is a way to avoid a carbon-intensive future and to take timely actions. Taking action against climate change is a major opportunity to transform the conventional technological society into a sustainable society which is less dependent on resources and energy.

GLOBAL ROUNDTABLE FOR LOW CARBON SOCIETY
David McLAUGHLIN, CANADA
President and CEO, National Round Table on the Environment and Economy (NARTEE)

Moving to a low-carbon society will involve not just changes in how we produce energy, but also changes in how we consume energy. These changes will take time and will need the participation of consumers and citizens for them to work. At present, technologies for developing new low-carbon policies, they need to consider how they will bring benefits to society and co-operate to undertake actions that will find much broader and deeper acceptance than they have so far. The National Round Table on the Environment and Economy from Canada is an independent public policy advisory agency that brings environmental and economic interests together to find sustainable solutions that work for Canadians. We are experimenting at Copenhagen and beyond is a form of ‘global roundtable’ to consider how we can get ourselves on a collective path to a low-carbon future that is sustainable in both environmental and economic terms. The LCS-RNets brings together researchers and experts in this field from 6-8 countries to offer insightful policy thinking relevant for decision-makers. NARTEE research has contributed to this understanding.

EVIDENCE ON GREEN GROWTH
Jim SKEA, UNITED KINGDOM
Research Director, UK Energy Research (UKERC)

Achieving a Low Carbon Society will require large and measurable levels of investment in energy supply technologies running into trillions of dollars annually by 2050. The LCS will also require diffuse and perhaps unquantifiable investments in low-carbon buildings and transport. To achieve our climate ambitions and create opportunities for business, we need coordinated environmental and innovation policies that stimulate R&D and establish new markets for clean technologies. Clear and credible policies are needed that give confidence that the policy direction will be maintained. As long as we build consensus, our long and mid-term goals need not be unattainable.