

Specific Topics at the LCS-RNet Third Annual Meeting in Paris, France

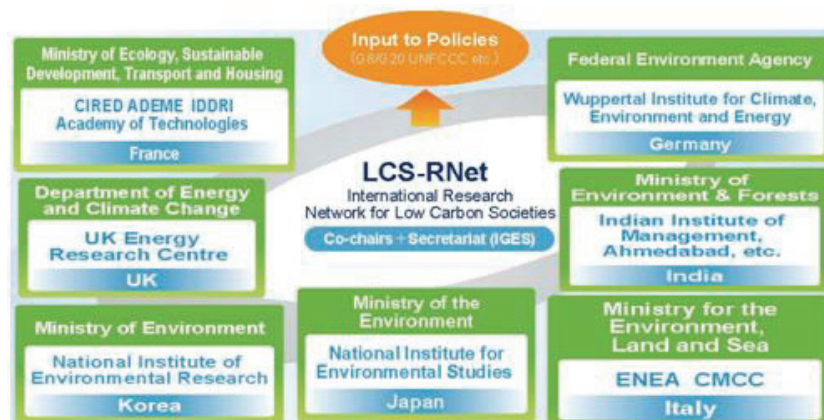
In the Cancun Agreement, the need for a “paradigm shift “ was discussed. In this vein, the means for this paradigm shift for the transition towards low carbon and green growth development with innovative technology and climate finance was one of the key issues during the Third LCS-RNet Annual Meeting.

In the session on Low Carbon Development Patterns and Lifestyles, Dr. Stefan LECHTENBÖHMER (WI, Germany) presented “*Energy Efficiency and Beyond: Reducing energy intensity as a low carbon strategy.*” Transitioning to a LCS requires rethinking infrastructures and development in order to reduce energy intensity or to increase energy efficiency by implementing a combination of reduced energy service demand growth and increased efficiency. In conclusion, energy efficiency can contribute to economic development while also providing a hedge against future price risks in energy resources.

In the session on Conditions for a Major Shift in Innovation Patterns and Technical Systems, Dr. Massimo TAVONI (FEEM, Italy) presented his argument that even under fairly optimistic assumptions about the funding available for, and *the returns from, R&D, innovation policies alone cannot stabilize global greenhouse gas concentration or temperature.* Although a combination of innovation and carbon pricing policies can provide economic efficiency gains, such gains are reduced when more plausible (sub-optimal) global innovation policy arrangements are considered by accounting for not just energy, but also human capital and other factors.

Dr. Tomonori SUDO (African Development Bank/JICA, Tunisia) expressed his argument that insofar as infrastructure in developing countries is still limited, further infrastructure development will be necessary to achieve economic growth and poverty alleviation. *Since infrastructure is characterized by a long preparation period and a very long operational life, a long-term vision is a “must” for infrastructure development.* Economic growth and green development can be carried out by private sector development, encouraged by low carbon infrastructure development, and supported by public finance. It is critical to ensure that climate change policies based on a long-term vision are developed in line with development objectives.

Prof. John REILLY (MIT, USA), in the Session on Sharing Experiences in the Promotion of Energy Efficiency and of the ‘Dematerialization’ of Economies, stated that *in order to foster success in a climate policy, it is necessary to reduce risks, achieve progress in negotiating short-term targets and long-term goals, and achieve goals in a cost-effective manner.* Even as tougher targets are negotiated, global emissions growth has accelerated for the most part. We need to estimate how much of this is due to policy efforts and how much should be attributed to the recession.



History of LCS-RNet

At their meeting in Kobe in May 2008, G8 Environment Ministers recognised the need for countries to develop their own visions towards low-carbon societies, and supported the establishment of the International Research Network for Low Carbon Societies (LCS-RNet). In the G8 Environment Ministers Meeting (G8EMM) held in April 2009 in Siracusa, Italy, high expectations

were placed on LCS-RNet, and the network was asked to report back its outcomes periodically. Currently this network is composed of 15 research institutes from seven countries.

LCS-RNet Secretariat

C/o Institute for Global Environmental Strategies (IGES)
2108-11, Kamiyamaguchi, Hayama,
Kanagawa, Japan, 240-0115
URL: <http://lcs-rnet.org/>
Fax: (81-46) 855-3809
LCS-RNet@iges.or.jp

Scientific Research Contributing to Low Carbon Policy-making Process

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LCS-RNet Third Annual Meeting in Paris, France

Transition towards Low Carbon Societies in a Changing World
-Science and Policy for Low Carbon Society Development Pathways-



Jean-Charles Hourcade
Chair of LCS-RNet, Director, International Research Center on Environment and Development (CIRED), France



“Paradigm shift” is a lever to tackle sustainable development issues in the here and now

The third workshop of LCS-RNet was held in difficult times. After Durban, only one year remains to find a successor to the Kyoto Protocol, and the period looks very untimely. The financial crisis is not yet resolved and continues to undermine the will of developed countries to undertake domestic reforms to curb their GHGs emissions and to make substantial financial efforts to encourage developing countries to participate in a global agreement. The tragic Fukushima nuclear accident has raised concerns about nuclear energy and has led some countries to ban one of the large-scale carbon-free options for producing electricity.

The workshop focused on the content of the “paradigm shift” recommended at Cancun, specifically not to consider climate policies as a new burden on populations confronted with urgent challenges but as a lever to tackle sustainable development issues in the here and now. It explored various facets of the transition towards a low carbon society, notably:

- international arrangements to leverage domestic climate policies and reconcile climate and development goals, given the lessons learnt and new prospects about climate finance and the tensions and opportunities of economic globalization
- conditions for a major shift in innovation patterns and technical systems: infrastructure dynamics (transport, housing, energy); policy tools to overcome barriers to carbon-saving technical changes, including investment risks; institutions to manage controversies about the sustainability of technological options
- the role of lifestyles in emerging low carbon development patterns, including low energy intensive structural change, urban dynamics, mobility, the ‘dematerialization’ of the economies and overall behavioral changes

In light of these, LCS-RNet delivered 10 key messages as to how climate and development policies can reconcile the objective of not losing control of the climate mechanism and today’s concerns about economic growth and employment in developed countries, and poverty alleviation in developing countries.



Third Annual Meeting of LCS-RNet in Paris

The third annual meeting was hosted by the French Ministry of Ecology, Sustainable Development, Transport and Housing (MEDDTL) & the International Research Center on Environment and Development (CIRED) in Cooperation with the French Environment and Energy Management Agency (ADEME), in Paris, France in October 2011.

The following issues were discussed: opportunities and challenges to launch a long run transition towards a low carbon society; climate finance; and innovation patterns of technical systems, development and lifestyles.

http://lcs-rnet.org/meetings/2011/10/3rd_annual_meeting_of_the_lcs-rnet_in_paris_france_1.html

LCS-RNet Third Annual Meeting in Paris, France

Ten Key Messages From the Synthesis Report



The LCS-RNet workshop addressed the many facets of the *“paradigm shift” in climate policies* demanded by the Cancun agreement. In spite of the *untimely context* in which international negotiations are taking place, the “paradigm shift” offers substantial opportunities to *reconcile long-term challenges with the concerns of the current generation*. *The temptation to postpone decisions should be avoided* and needed to tackle a very long term problem.

1. Nature of the desirable paradigm shift

Instead of being framed in terms of burden sharing, the climate policies necessary to launch a long run transition towards a low-carbon society must be designed so as to respond the short term demands for poverty alleviation, jobs and protection of welfare benefits. They can contribute to an economic recovery driven by “green growth” with a view to securing sustainable development involving changes in consumption patterns, technological and lifestyles

2. The risks of lock-in

Without active climate policies, humanity will be *locked-in to carbon intensive development paths*; industrialised countries will *slow down the turnover of their capital stock while emerging economies will build the bulk of infrastructures in ways that will be hard to re-shift at a later date*. *As well as accelerating climate change, this could exacerbate future pressures on energy resources*.

3. Supply-side responses: decision-making against a background of controversy

Feasible transition pathways compatible with desirable climate objectives, environmental concerns and social requirements are available. Controversies about the performance, economic viability and environmental soundness of major technical options need to be managed through public debate so that the application of a precautionary approach leads to better targeted innovation rather than a freeze on low-carbon development.

4. Demand-side response: energy efficiency and beyond

Technological change will not be sufficient by itself for the low-carbon transition. In addition to *energy efficiency, key parameters include the dematerialisation of productive processes through, for example, recycling or product obsolescence, and changes in lifestyle, behavior and household consumption patterns*.

5. Energy policies and beyond

Energy policies need to be placed in a broader context *encompassing urban policies, transportation policies and agricultural policies. Urban dynamics affect mobility needs and gasoline consumption*. There is a need for *low-carbon mass transportation systems, energy efficiency projects for public buildings and integrated waste management. Land-use policies have to make the provision of biomass energy compatible with food production*.

6. Innovation and beyond

Technical change will not come as *manna from heaven and depends on the development of knowledge and human capital along the chain from fundamental research, R&D and pilot projects through to industrial diffusion*. Well-designed policy packages comprising a *wide range of policy instruments* (carbon taxes, carbon markets, standards, R&D, reforms of electricity markets, urban and land-use policies) are needed both to *trigger long-term transformation, mobilise the best available technologies and mitigate short term transition difficulties such as underemployment, debt and distributional issues*.

7. “Green growth” and sustainable development in different contexts

Transforming *“green growth” from a slogan to an operational concept means using the low carbon objective to define the frontier for technical and structural changes in view of more sustainable development patterns and lifestyles*. In the *developed countries the challenge is to trigger the transformation of existing infrastructures. In developing countries, the main issue is the form of new energy, transportation and building infrastructure under development. Pricing environmental goods and services is essential, but is not a “magic bullet”. Pricing has to be embedded in broader reforms of fiscal systems, institutions and capital markets*.



8. Tailoring low-carbon policy packages for sectors and countries

National level packages that set the framework for the low-carbon transition are essential. However, these must be reinforced by policy packages which are country and sector specific. Many programs may be most effectively - and innovatively - delivered at the municipal level. Together with the emergence of a carbon price there is a need for a differentiated set of financial instruments that lower risk for industry and local authorities (e.g. renewable energy finance or energy efficiency finance).

9. The need for international arrangements

Policies will not be fully effective without *international arrangements that complement and leverage domestic climate and development initiatives. These are needed to provide the necessary financial, technological and capacity building support to developing countries and to mitigate concerns about distortions in international competition. Such international arrangements can be reached on a regional scale. However, these do not obviate the need for a comprehensive global architecture*.

10. Upgrading climate finance in the context of the financial crisis

Carbon finance must be upgraded if the paradigm shift implied by the Cancun agreement demands is to occur. The emergence of a recognised carbon value is needed to ground this upgrading. Innovative financial products are needed to mobilise global capital market players such as institutional investors. In addition to triggering a wave of climate friendly infrastructure investments climate finance could make a positive contribution to discussions on the evolution of the international financial system.

For the details of the meeting, please see the LCS-RNet website:

http://lcs-rnet.org/meetings/2011/10/3rd_annual_meeting_of_the_lcs-rnet_in_paris_france_1.html