

LCS-RNet secretariat presentations at the side event in COP 17, Durban

*On 1 December 2011, the Institute of Energy, Environment and Economy, Tsinghua University (China), and the Institute for Global Environmental Strategies (IGES, Japan) convened a side event entitled “Low-Carbon Development in Asian Countries.”*

**Avoiding lock-in / de-bundling locked-in systems: Two-way knowledge sharing**

“Lock-in” was one of the key words at the 3<sup>rd</sup> Annual Meeting and the COP17 side event of LCS-RNet. One of the discussion points at the side event among researchers from Tsinghua University, China and IGES, Japan focused on “lock-in” issues from two dimensions, specifically, those used by developing and developed countries. Tokyo is, for example, the least car-dependent city in the developed world with 80 years’ history of developing a subway system. This system, which was introduced before the automobile era of the 1950’s, had developed into an efficient and effective transportation system. This development pattern illustrates that such well-organised long-term investment plans for transportation systems are crucial for low-carbon cities. Meanwhile, the Japanese centralized electric power grid system has not accepted any energy sources not having predetermined levels of reliability, which has resulted in for a state of stagnation in terms of developing renewable energy. This is a case which illustrates the difficulties in breaking away for societies that are already locked into an entirely systematized social infrastructure. On the other hand, China has become the largest producer of renewable energy in the world, utilising the unlocked state of its power generation system. Japan is now in a position to learn from China various kinds of know-how for installation, dissemination and investment schemes for renewable energy. That means that mutual learning is necessary for both societies in the process of locking in and those already locked in to particular infrastructure.

[http://www.iges.or.jp/en/news/topic/1111\\_cop17.html](http://www.iges.or.jp/en/news/topic/1111_cop17.html)

*On 3 December 2011, the World Bank, the International Bank for Reconstruction and Development (IBRD), and the International Development Association held a side event entitled “The Road to Rio+20: An update and exchange on the latest activities regarding Low Emissions Development (LED)”*

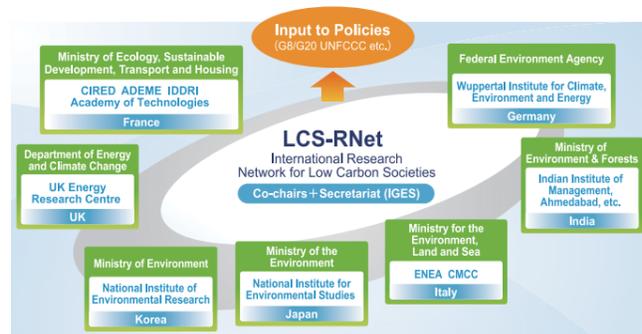
**Flourishing talks on “Low emission knowledge sharing” in the World Bank garden**

More than 20 experts and policy makers gave three-minute talks to express their views and overview their activities related to low emission development. This side event in Durban attracted over 100 persons in the audience and provided an overview of Low Emission Development (LED) that involves not only reducing the amount of emissions but also changing social systems to be consistent and coherent through political will and designing them as part of a policy sequence. Such changes to the social system are expected to include changes in inventory, abatement cost curve, and the ownership of technology transfer, as well as shifts from short-sighted investment decisions to long-term profits, to name just a few. Whatever the decisions in the negotiation arena will be, only an assembly and fusion of the best of human wisdom can ensure a stable climate.

*In a side event titled “Low-Carbon Society (LCS) in Asia: From Planning to Implementation” organized by NIES of Japan and Universiti Teknologi Malaysia, the idea to establish an Asia Research Network for Low Carbon Development (ARNLCD), which will promote knowledge sharing activities among Asian countries to enable a transition, was introduced by the Ministry of the Environment of Japan and by the Secretary General of LCS-RNet, Shuzo Nishioka.*

**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.



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International Research Network for Low-Carbon Societies  
 - Scientific Research Contributing to Low Carbon Policy-making Process -

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**COP17 Side Event, Durban**  
**Transition towards Low-Carbon Societies in a Changing World**

The International Research Network for Low Carbon Societies (LCS-RNet), in cooperation with the French Ministry of Ecology, Sustainable Development, Transport and Housing (MEDDTL) and the International Research Center on Environment and Development (CIRED), organised a side event for knowledge sharing bringing together policy-makers and researchers entitled “Transition towards low-carbon societies in a changing world” at the Seventeenth Session of the Conference of the Parties (COP17) to the United Nations Framework Convention on Climate Change (UNFCCC) in Durban, South Africa, on 29 November 2011.



More than 120 people attended the side event, including climate negotiators, policy-makers, business people, and non-governmental organisation (NGO) representatives from around Europe, Africa and Asia.

*Seven researchers and two policy-makers involved with LCS from various regions around Europe, Africa and Asia, introduced their national and regional perspectives towards low-carbon societies.*

The side event opened a fruitful dialogue between a group of scientists and policy-makers associated with LCS-RNet among the G8 members and scientists from emerging economies (India and China) and from the United Nations Economic Commission for Africa (UNECA).

In his opening remarks, Shuzo Nishioka, Secretary General of LCS-RNet, introduced activities by LCS-RNet as a pioneering knowledge sharing network. Jean-Charles Hourcade, chair of the LCS-RNet steering group, CIRED-CNRS/modeling chair for sustainable development, France, then delivered ten key findings of the Third LCS-RNet Meeting held in Paris in November 2011, highlighting the needs of a “paradigm shift” of climate policies. Priyadarshi Shukla of the Indian Institute of Management, Ahmedabad, India, presented a rationale for low or high carbon intensive development patterns from Asian perspectives. Following this, Youba Sokona of the African Climate Policy Centre (ACPC), UNECA, overviewed different African contexts for low carbon development. Lastly, Erik Haites of Margaree Consultants Inc., Canada emphasised the need for international arrangements to leverage domestic climate policies and to achieve a low-carbon society (LCS).

The round table that followed addressed the issue of how to unlock the conventional policy process to shift towards a LCS. Both a policy-maker and a researcher from the UK, Japan, France and China presented his or her own views and experiences.

*Strong messages were delivered from both researchers and policy-makers during this side event, emphasising the need for “political will”, “innovative finance” and “institutional arrangements”, all of which have the potential to shift conventional climate change issues into opportunities for national development.*

In the side event, researchers stressed the need for strong political will, innovative finance mechanisms and robust institutional arrangements that can offer substantial opportunities and ensure continued high growth and sustainable development, make a “paradigm shift” in climate policies possible, and decouple development from high carbon emissions.



## Top Researchers from around the World Gathered to Update the Recent Research Findings on Low-Carbon Societies (LCS) at COP17.



The side event started with encouraging remarks from the **Chair, Dr. Bert Metz of ECF, the Netherlands**, stating that research from various fields can lead to a better understanding of LCS and provide solutions for climate issues. A researchers' network can make a great contribution to climate change policy in responding to the needs of societies and policy-makers by sharing updated national research and foreseeing future LCS research needs.



**Jean-Charles Hourcade**

### Latest findings of LCS from world top researchers were updated in the Third LCS-RNet Annual Meeting in Paris.

Jean-Charles Hourcade introduced ten key findings from the Third Annual Meeting, convened in Paris. The meeting focused on the content of the "paradigm shift" recommended at Cancun: 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. Instead of being framed in terms of burden sharing, climate policies must be designed so as to respond to the short-term demands for poverty alleviation, jobs and protection of welfare benefits and contribute to an economic recovery driven by "green growth" with a view to securing sustainable development involving changes in consumption patterns, technologies and lifestyles. In particular, carbon finance must be

upgraded if the paradigm shift implied by the Cancun agreement demands is to occur. However, the economic crisis and the likely absence of significant and stable carbon prices limit the mobilisation of innovative climate finance mechanisms. In a global context in which risky levels of private and public debt co-exist with vast amounts of savings, the design of such a climate-friendly financial architecture could jointly enhance investors' confidence in low-carbon projects and channel large amounts of private savings. In addition, it could be a component of a broader reform of the international financial system. It could help to clarify the uncertain business environment that currently paralyzes investors interested in long-term projects and eventually trigger a wave of "green growth" recovery.



**Priyadarshi Shukla**

### Climate policies can generate co-benefits by enhancing a sustainable development approach. The transition towards a LCS requires a stronger "political will and signal," in particular innovative finance mechanisms.

The climate-centric approach has been the conventional path to a transition to LCS, in which high carbon price, climate-focused technology, and top-down and supply-side actions were key elements for solving the problems. This approach prioritises energy efficiency and the deployment of technologies such as renewable energy, nuclear and CCS technologies. However, this is not an effective approach for a transition, and thus a shift to a climate sustainable approach is required.

A sustainable approach requires the alignment of climate-focused and sustainable actions, bottom-up and demand-side actions, behavioural changes and diverse technology portfolios. The main areas of focus are transport infrastructure technologies, material substitutes, renewable energy, and process technologies, along with urban planning and behavioural changes. In accordance with development and climate change actions, areas of focus are regional cooperation and coordination, the role of sectoral policies and actions and the role of cities in mitigation and climate proofing. High energy and carbon intensity 'lock-ins' can be avoided under a sustainable scenario that promotes co-benefits such as energy security, air quality, water security and the social value of carbon. Although the current social value of carbon is lower than the market value, the social value should produce higher value by taking into account development opportunities for co-benefits in air quality and avoidance of water scarcity, as well as GDP losses associated with climate change. Under a sustainable scenario, alternate development paths are also feasible and advisable. Therefore, early action is needed in both mitigation and adaptation to avoid 'lock-ins.'



**Youba Sokona**

### The transition towards a low carbon society is not a burden. Rather, it creates opportunities for developing countries insofar as it takes into account benefits generated by integrating LCS, climate change mitigation and adaptation issues into the development context.

The fact that much of the infrastructure (including energy), policies and institutional systems in Africa are not currently 'locked in' makes it easier to work towards a low-carbon future. Low-Carbon Development (LCD) in the context of African continent and less developed countries involves the integration of climate change mitigation and adaptation strategies into the development agenda. LCD can offer African countries a range of opportunities and benefits to meet its development challenges in much more sustainable manner. Opportunities are found not only in deploying less carbon-intensive technologies into future development paths, but also in tapping into global climate funds which can provide the much-needed finances for development. Africa possesses vast renewable energy potentials to improve energy access through low-cost and less polluting technologies, to diversify the continent's energy mix and reduce dependence on expensive fossil fuels. Furthermore, it is imperative for African countries to build its own technical capacity and join the 'new development' race as a competitive player.

Capitalizing on these opportunities can produce higher GDP growth, gains in terms of preserving the ecological commons and natural capital, and establishing positive links between poverty eradication and conservation goals, while also substituting renewable and low carbon resources for imported and carbon intensive fossil fuels.



**Erik Haites**

### International arrangements can help both developed and developing countries to leverage domestic climate policies.

The absence of mitigation policies will have adverse economic impacts on trade as its absence affects emissions emitting industries and could entail emissions leakages. International arrangements could not only solve the problem, but also generate a large share of the needed financial resources such as levies or auctioned allowances for international aviation and shipping emissions, auctioned AAUs and an extended levy on credit trades, and a financial transactions tax. As a possible international arrangement, border levies on imports from countries that do not have comparable domestic policies can mitigate competitiveness and leakage concerns. International

agreements can also reduce the risk of trade wars. These levies could be transferred to developing countries while more auctioned allowances are generated in developed countries.

## Round Table

### ■ Eight universities represent views on climate change policy in the UK (Asher Minns, Tyndall Center, UK)

Eight universities have actively contributed to governmental working groups for climate policy. In the UK, public policies integrate the views of various stakeholders, including not only researchers but also NGOs and businesses.

### ■ Government expects active inputs and messages from researchers to foresee the needs of climate change activities incorporating a long-term vision (Shigemoto Kajihara, Ministry of the Environment, Japan)

Current segmented governmental functions need more inputs from various researchers to overview the most updated climate change issues. As climate change is a cross-sectoral and multi-sectoral issue, researchers can give a wide range of perspectives and help the government to implement climate policies.

### ■ Visibility is a key factor for decision-making process through participation of all stakeholders (Paul Watkinson, MEDTTL, France)

Given the necessary changes involved in a transition towards a LCS, governments need to work with various stakeholders including civil society, businesses and researchers to elaborate sustainable development pathways. The Grenelle de l'Environnement meeting held in France in 2007 is a good example of multi-party debates bringing together representatives of different stakeholders including national and local governments. Researchers also have an important role in the participation process as one of the stakeholders.

### ■ Early actions and clear political will lead to a short and strong path towards low carbon development, resulting in reduced costs for energy generation (Jiang Kejun, ERI, China)

China has promoted renewable energy by replacing coal plants. Technologies have been developed at a much faster speed, and low carbon technologies have reduced costs more than models had estimated. Wind and solar power generation have huge potential. China also recognises that the continuous use of conventional technologies will lead to diminishing international competitiveness in the long run. At the same time, it needs to create a technology roadmap for low-carbon development.