

Asian Update on Low-Carbon Research & Development

Towards an Asian Low-Carbon Research Network: Malaysia Workshop by LCS-RNet Secretariat

Active LCS researchers in Asian countries came together to discuss the need for an Asian Low-carbon Network. A two-day workshop on the “First Low-carbon Asia Research Project” was held on 4-5 July 2011, with a follow-up meeting, the “Second Asian Workshop on Low-carbon Asia Research Project” and a scenario modeling workshop held on 31 October 2011 in Johor Bahru, Iskandar Malaysia.



These gatherings were jointly organised by the University of Technology Malaysia and the Iskandar Regional Development Authority (IRDA) in corporation with the International Research Network for Low-carbon Societies (LCS-RNet), Kyoto University, the National Institute of Environmental Studies (NIES) of Japan and the Japan International Cooperation Agency-Japan Science Technology Fund (JICA-JST). Findings from the workshops were that Asia is progressing in its low-carbon policies and that research and collective activities of researchers in different fields should be deepened and integrated to make policies that are well-grounded in scientific evidence and findings. Future potential Asian features of LCS include that leapfrogging can occur from two dimensions, technology development and Asia’s traditional social values in line with sustainable development, and that LCS will incorporate both technology development and traditional Asian social values of sustainable development, as is currently being realised in the planning of the new city Iskandar Malaysia.

Initiative of **Asian Research Network for Low Carbon Development (ARNLCD)** was suggested by researchers’ collaboration in responded to Asian researchers and policymakers. During the July workshop, the need for an Asian LCS Network was emphasised by a researcher from Indonesia who mentioned that coordination and collaboration at the national and sub-national levels are the keys for accelerating the speed at which Asian low-carbon societies will be developed. The potential of an LCS Asian Network was also presented by a researcher from Thailand and an official from Iskandar Regional Development Authority Malaysia. Through the course of the workshop, Asian researchers came to conclude that knowledge sharing and south-south cooperation will be key factors towards the next step in bringing about low-carbon societies. Asian low-carbon researchers should come together in order to discuss the potential for future collaboration in order to contribute to the advancement of low-carbon societies and also demonstrate the importance of having a platform to discuss low-carbon issues and send messages from Asia to stakeholders around the world.

For the details of the workshop, please see the following website;

The First Workshop: http://lcs-rnet.org/meetings/2011/07/malaysia_workshop_on_asian_low_carbon_society_research_network.html

The Second Workshop: http://lcs-rnet.org/meetings/2011/10/asian_workshop_low_carbon_asia_research_project_johor_bahru_malaysia.html

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 periodically. Currently this network is composed of 15 research institutes from seven countries.

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Scientific Research Contributing to Low-Carbon Policy-making Process

International Research Network for Low-Carbon Societies
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Leading National Low-Carbon Research for Innovative Policy



UKERC

UK Low Carbon Policy and Research Jim Skea, UK Energy Research (UKERC), United Kingdom

The UK has a legally binding target to cut greenhouse gas emissions by 80% by 2050. The UK also has a system of five year “carbon budgets”. The first carbon budget period runs from 2008-12 and, acting on the advice of the Committee on Climate Change, the Government recently adopted a 4th carbon budget for 2023-27 which requires emissions to be cut by 50% from 1990 levels. A major theme in UK policy is the decarbonisation of electricity and the increased use of electricity

in sectors such as buildings and transport. To make this happen, the UK is starting a major Electricity Market Reform to support renewables and other forms of low carbon generation, such as nuclear power. This will involve support for the carbon price and a system of “feed-in-tariffs” for all forms of low carbon generation. It will represent the biggest change to electricity markets since privatisation in 1990.

The UK Energy Research Centre’s (UKERC’s) research is highly relevant to these developments. Along with other UK researchers, we have been feeding into the policy process. Following the publication of the Earthscan book, Energy 2050: making the transition to a secure low carbon energy system, earlier this year, UKERC is refreshing the scenarios it uses to analyse pathways to the 2050 target. The new scenarios will take account of the rapidly changing policy landscape and new perceptions about the role of natural gas. We have organised a series of workshops on Electricity Market Reform, bringing together independent academics, consultants and representatives from think-tanks. The outcomes of these workshops have been communicated to ministers and senior civil servants.

Going forward, UKERC is setting out the agenda for the second half of its Phase II (2009-14) research programme. A key theme will be systematic attention to uncertainties in energy markets. We have recently commissioned a project on risk assessment approaches to energy futures and another looking at energy policy as a “real options” exercise. The uncertainties we expect to address include the degree of political commitment to climate change targets, the demonstration of key technologies such as carbon capture and storage, and public acceptance of both specific technologies and higher energy costs. UKERC feeds into policy in other ways: the Research Director is a member of the UK’s Committee on Climate Change and others have advised parliamentary committees and directly briefed policymakers.

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Institute for Sustainable Development and International Relations (IDDRI)

Transition towards a low-carbon society: Bridge the gap between research and decision-making and investigate international policy issues on sustainable development and global governance, and facilitate discussions among the various stakeholders involved in global issues related to sustainable development.

IDDRI pursues a three-pronged strategy to this end: IDDRI seeks to inform decisions, identify emerging issues, and coordinate dialogue among stakeholders whose interests are often at odds. More specifically, IDDRI uses scientific research to shed light on political issues which have an impact on sustainable development, analysing key challenges to development models provoked by natural resource degradation and climate change. Through collaborative projects and conferences that bring together researchers, scientists, companies and political decision-makers, IDDRI encourages a common understanding of concerns, while putting them in a global perspective.

<http://lcs-rnet.org/researchinstitutions/iddri.html>

Recent publication: “Strengthening the European Union Climate and Energy Package: To Build a Low-Carbon, Competitive and Energy Secure European Union”, Guérin, E. and T.Spencer, Paris: IDDRI and Climate Strategies, 2011.

ASSESSMENT: THE NECESSARY MOVE TO A 30% EMISSIONS REDUCTION TARGET

Immediate action to strengthen the European Union Climate and Energy Package (EU CEP) is needed to ensure Europe’s sustained growth, competitiveness and energy security. Indeed, the current 20% emissions reduction target is too low to reach the European long-term goal of reducing emissions by at least 80% by 2050 at acceptable costs. But the EU CEP is also inefficient to address sustainably potential competitiveness losses and carbon leakages in some carbon intensive industries, and most importantly to boost fully the competitiveness of firms producing low-carbon products and services. Moving to 30% by 2020 could induce significant long-term GDP gains and only marginal GDP short-term costs, increase the competitiveness of European firms producing innovative low-carbon technologies, and reduce both final energy consumption and EU energy dependency. But for these objectives to be met, the contents of the policies for reaching this 30% target are as important as the target itself.

RECOMMENDATIONS: STRUCTURAL AND SECTORAL POLICIES

There are three main areas in which the EU CEP needs strengthening: (1) Improvement of the energy efficiency of existing building stocks and limitation of the absolute level of energy consumption in the transport sector are needed to reach the 20% energy efficiency target. Binding targets should only be used when absolutely necessary and when helpful. (2) From economic, environmental and political perspectives, setting a stringent European Union Emission Trading System (EU ETS) 2030 cap between -45 and -50% from 2005 levels is probably the most relevant, efficient, and realistic option in the short term. It would increase the predictability of the carbon price signal, and therefore the credibility of the regulator. Banking would ensure that this stringent mid-term target translates into a short-term increase of the carbon price. (3) In some cases, direct public financial support is justified and efficient, including to overcome market failures and non-market barriers; to support innovation in low-carbon goods and services; to support infrastructure upgrades and expansion; and to ensure equity in the allocation of responsibility to poorer States. Under a 30% target, auctioning revenues are expected to be around €200 – 310 billion. These revenues accrue to Member States and, given their scale and the scale of public deficits, it is expected that they will not solely be used for climate change purposes. But they could be pivotal to support the transition towards a low-carbon Europe.

http://www.iddri.org/Publications/Collections/Analyses/STUDY0411_guerin%20spencer_EU%20CEP.pdf



World Bank Meeting: Developing and disseminating knowledge sharing and networking activities

Shuzo Nishioka
Secretary General of LCS-RNet/ IGES, Japan



Globally, there is an increase in knowledge sharing initiatives aiming to make effective use of human knowledge and wisdom within the policy-making process and achieve a low-carbon world. How can LCS-RNet contribute and respond to such initiatives?

World-leading researchers and organisations gathered in response to a call from the World Bank

On July 13, 70 policy-makers and opinion leaders from more than 30 countries and international institutions gathered at the World Bank for a high-level dialogue on low emission development policy implementation. The meeting aimed to discuss how developed countries can cooperate effectively with developing countries to mobilise low-carbon development in developing countries. The meeting was attended by people known the world over, including U.S. Secretary of Energy Steven Chu, World Bank President Robert Zoellick, Executive Secretary of the UN Framework Convention on Climate Change Christiana Figueres, Chair of United Nations Energy Kandeh Yumkella, Lord Nicholas Stern, and other distinguished leaders in energy, forests, development, finance, climate and foreign policy.

How can network activities solve the issue of increasing GHG emissions while pursuing economic development and urbanisation?

By 2100, GHG emissions in developing countries are expected to increase to three times the amount of emissions in developed countries in the reference scenario, with global emissions increasing to four times the current level. On the other hand, the current international negotiation has discussed halving emissions by 2050. Therefore, developing countries must not only move towards economic development, but also progress taking a different development pattern from developed countries. If developing countries follow the same path as developed countries, climate stabilisation cannot be expected (even if developed countries were successfully to reduce 80% of their GHG emissions). Thus, information and knowledge in developed countries should be shared with developing countries to enable them to learn from their experiences and mistakes, with knowledge and technology transferred through a network. Low-carbon policy and innovative technologies should be also urgently integrated into development plans.

Scaling up an existing network through a bottom-up approach and officialising its activities is the most effective way to achieve low-carbon.

In the meeting, barriers towards knowledge sharing activities with developing countries were discussed. These barriers included lack of internal capacity in developing countries, finance, lack of ownership, differences between countries, and issues on the legal condition of intellectual property rights, among others. After the discussion, four options for seeking future collaboration among the organisations in attendance were set forth for selection. Many participants chose the option to enhance each organisation’s activities to create a formalised expert network and engage in sustained capacity building as a bottom-up approach. The meeting concluded that the best way to promote low emission development is to develop the existing activities in consideration of the degree of urgency, the specific targets, and effectiveness and workability. At this meeting it was also announced that the World Bank is planning to disseminate a policy tool package provided by them