



Research Profile from LCS-RNet Member

Sergio La Motta, Italian National agency for new technologies, Energy and sustainable economic development (ENEA), Italy



The current Italian LCS energy policies are based on two main pillars: energy efficiency improvement and renewable energies diffusion. These policies involve several important sectors: residential and service, industry, transport and electricity production. Energy efficiency improvement has been tackled involving both the big electricity and gas distribution system operators, by means of the so-called white certificate system, and the common citizens allowing a reimbursement of 55% of the expenses for energy efficiency actions in the civil and industrial sector. Furthermore, efficiency standards for new buildings have been introduced in residential sector. Renewable energy sources have been supported mainly through the green certificate system and, for the small and photovoltaic power plants, through a feed in tariff mechanism. These policies are providing good results and are contributing to the achievement of the Kyoto and the 2020 European targets. The reasons for the success of these policies can be found in their abilities to merge the attitude towards energy savings, traditionally widespread in Italy – a big energy importing country, and the capability of the Italian productive system to generate innovation in the field of energy efficiency and renewable energy technologies.

A discussion has started in order to define how transition to LCS can happen in Italy; this discussion is still ongoing, and ENEA, who has traditionally involved in energy technologies RD&D, is providing its contribution.

I expect and hope, as a professional of impact evaluation of climate mitigation policies and measures, that the exchange of experiences happening in LCS-RNet can help Italy find its best way towards a LCS transition.

Meeting Information from LCS-RNet Secretariat

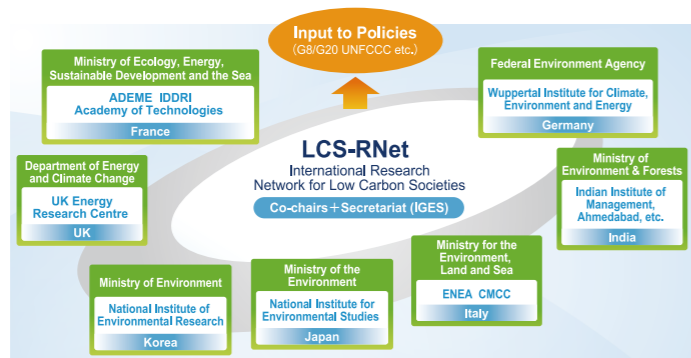
Malaysia Workshop on Asian Low-Carbon Society Research Network was held on 4th-5th July 2011 in Johore Bahru, Malaysia

This workshop was organised by Iskandar Malaysia Regional Authority (IRDA), Universiti Teknologi Malaysia (UTM)-Centre for Innovative Planning and Development, LCS-RNet Secretariat/IGES, Kyoto University, Okayama University and the National Institute for Environmental Studies (NIES), with support from Universiti Teknologi Malaysia (UTM), Iskandar Malaysia Regional Authority (IRDA), Ministry of the Environment Government of Japan (MOEJ), Japan International Cooperation Agency (JICA) and Japan Science and Technology Agency (JST).

LCS researchers in Asian came to meet in Malaysia on 4th and 5th July. With a view to creating a framework of LCS, they can actively engaged in supporting national and regional low-carbon development policies in an autonomous and collaborating manner. The main objectives of the workshop was the followings: 1) sharing common research agendas on low-carbon research in Asian region and sharing necessary research agendas through dialogues between policymakers and researchers; 2) providing opportunities for knowledge sharing through an independent LCS research network; 3) to make national and regional low-carbon development policies more efficient by accumulating scientific knowledge, promoting research exchanges on LCS (which are at similar development stages and geographical conditions) and calling upon the great amount of expertise in this region; 4) towards the construction of a LCS Asia League: developing a self-independent research network in Asia by promoting a south-south cooperation scheme, as well as holding a rotating annual meeting in Asia. Creating horizontal ties within Asia, in a way similar to the LCS-RNet annual meetings held in Europe (please see the meeting report from the website; <http://lcs-rnet.org>); and appealing the LCS-RNet activities of strong contribution to research communities in policy process, and at the same time, developing a plan for potential opportunities in a future, through the Asia/ASEAN Environmental Ministers' Meeting, LCS-RNet Annual Meeting in Paris, UNFCCC/COP17, and so on.

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



Printed on 70% recycled paper and 30% eco-pulp



Headline: New Research Focal Point - CIRED (France)

Contents

P1. **Headline:**
 New Research Focal Point – CIRED (France)

P1. **Announcement:**
 Third Annual Meeting of LCS-RNet, France

P2. **Discussion:**
 “Should Japanese Low-Carbon Policy be Revised after Fukushima?”

P3. **Topics:** Low-Carbon Living in Japan

P3. **LCS-RNet Secretariat:** Low-Carbon Development in Asia - Dialogue between Policymakers and Researcher

P4. **Research Profile:** LCS-RNet Member

P4. **Meeting Information:** from LCS-RNet Secretariat



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



I have the honour of chairing LCS-RNet in a specific context. 2011 is the year of the Durban conference of the Parties to the UNFCCC after which only one year will remain to find a successor to the Kyoto Protocol, where the only one treaty signed by a large majority of countries to tackle climate change. But 2011 looks like a very untimely period for climate change negotiations. The financial crisis which hit in 2008 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 set developing countries on the path to a global agreement. The tragic Fukushima nuclear accident will inevitably continue to raise concerns about nuclear energy and incite countries, following the recent German decision, to ban one of the potential large-scale carbon-free options to produce electricity.

These times of crisis indeed are conducive to exacerbate misperceptions of climate policies. Why indeed to go ahead in the name of long term risks when populations are confronted with urgent challenges? In such periods there is also a tendency to withdraw into selfish interests which are hardly conducive to progress in diplomatic processes. I am convinced that in such adverse conditions, LCS-RNet, as a networking group of researchers from the G8 countries, can demonstrate its value added. Indeed, our task as scientists is to delineate the sources of misunderstandings and pave the way to compromises for the post 2012 period.

This is why we decided to focus our next conference in Paris on the conditions for a transition towards a low carbon society (*please see below for details of the conference*). Transition is the key word; nothing like a low-carbon world will emerge unless we reconcile the long term objectives of not losing control of climate mechanism, today’s concerns about the financial crisis, economic growth and employment in developed countries, and poverty alleviation in developing countries.

This is the “paradigm shift” recommended at Cancun: not to see climate policies as a new burden but as provider of leverage with which to tackle sustainable development issues in the present times. This is no longer an internal G8 problem; this is a problem of what offer the G8 could make developing countries to set them on the path to developing ambitious climate policies. That we invited many scientists from developing economies (Brazil, Korea, China, India, Nepal, Mali) might thus be a prefiguration of the future role of the LCS-RNet.

**Announcement:
 Third Annual Meeting of LCS-RNet held on 13-14 October in Paris, France**

Twenty years since the Rio process, the urgency need for a «paradigm shift» in climate policy has once again been emphasized by the Cancun declaration. The primary objective of the LCS-RNet 3rd Annual Meeting is to examine how, instead of being framed in terms of burden sharing, these policies should be designed to “offer substantial opportunities and ensure continued high growth and sustainable development”.

The meeting will allow for an open exchange of views about the many facets of these opportunities and how to launch a long run transition towards a low carbon society by a) responding to short term demands for poverty alleviation (primarily in developing countries), for job creation and for maintenance of income and welfare benefits, and b) alleviating geopolitical tensions arising from the rebalancing of the world economic equilibrium. The main purpose of the meeting is firstly to link perspectives on the decarbonation of energy systems to security issues (energy and food security, climate migrations) and to issues relating to the evolution of globalisation in world markets and the international financial system. Secondly it will consider the low carbon objective as a frontier for technological innovation and leverage for the emergence of more sustainable development patterns and lifestyles.

To fulfill these objectives, room will be made for a significant participation from the BRICS. Doing so, it will contribute to a transition towards low-carbon society and Green Growth in the world.

Please refer to the LCS-RNet website; <http://lcs-rnet.org/index.html>



Discussion “Should Japanese Low-Carbon Policy be Revised after Fukushima?” by Jusen Asuka (Right) and Shuzo Nishioka (Left):



The LCS-RNet Secretariat General, Shuzo Nishioka, interviewed Professor Jusen Asuka, Director of the Climate Change Group at the Institute for Global Environmental Strategies (IGES), regarding the issue of, “Japanese energy policy, and the impact of the earthquake and tsunami and the explosion at Fukushima nuclear plant”.

IGES, as a leading research institute on climate change policy, is currently making a proposal for Japanese energy plan and low-carbon policy. The modelling team is building up Japanese energy scenarios examining how Japan can achieve their 25% GHG emission reduction target by 2020 after the disaster.

Nishioka: *On March 11, a huge earthquake of magnitude 9.0, triggering catastrophic Tsunami waves, hit the northeastern part of Japan, the Tohoku region. It also caused explosions and radioactive gas leaks in three reactors at the Fukushima Nuclear Power Station. Dr. Asuka is a professor at Tohoku University, and is actively working towards the development of recovery plan for the area. Could you tell us about the current situation regarding the earthquake and nuclear crisis in Tohoku Region?*

Asuka: As of April 29, the reported death toll amounted to 14,575, with 11,324 still missing. Some areas are still designated as “restricted”. In some of the devastated areas, infrastructures (including electricity, gas and water supply facilities) was recovered within a few days or a week after the earthquake, but the effects of radiation released by the explosion of nuclear plants, and the social and economical damage caused by the disaster, have not still been recognised.

Nishioka: *After the crisis, there were talks of reviewing the nation's plan to reduce GHG emissions by 25 % from 1990 levels by 2020 and 80% by 2050. Do you think Japan can maintain its targets for emission reduction and the achievement of low-carbon society?*

Asuka: The issue of whether Japan will revise its pledge will be decided through consultation amongst Japanese government and the Japanese people, after observing the efficacy of attempts to reduce energy consumption over the coming summer. The government expects households and businesses to reduce their usage of electricity by 15% during the summer, in accordance with the Electricity Business Act by the Ministry of Economy, Trade and Industry, while examining the measure's effects on Japanese industries (i.e. corporate competitiveness). On the other hand, Japan cannot ignore the global movements towards promoting renewable energy supplies and energy saving efforts. Emerging economies like China have also increased their energy supply targets by installing more renewable energy sources as a part of low-carbon development initiative. Under such circumstances, Japan cannot, and should not, move backwards by promoting conventional thermal electric power generation as an alternative energy supply system to nuclear power. Japan needs to introduce a policy package which includes energy saving programs to meet the requirements of energy security and the GHG emissions reduction target in Japan.

Nishioka: *Do you think the crisis will change the Japanese energy plan and policy and affect low-carbon policy?*

Asuka: The nuclear crisis has pushed the government to review their energy and low-carbon policies. In fact, the Japanese government requested Chubu Electric Power Co. to suspend operations of the Hamaoka Nuclear power plant for safety reasons, due to concern that a powerful earthquake in the region could cause another nuclear crisis. Furthermore, the government announced the necessity to revise their Basic Energy Plan (part of the Basic Act on Energy Policy), which includes a plan to build at least 14 new reactors by 2030. These movements can also be an opportunity for Japan to review its conventional energy supply systems. Until the disaster, Japan had not actively promoted renewable energy and energy saving policy. Since the beginning of the postwar era, the Japanese electric power industry has focused on energy security to support the development and recovery of the Japanese economy through regional electric supply systems. The energy supply system has created an oligopolistic system of regional electricity companies, which has in turn reduced the competitiveness of such companies. Such a giant centralised energy supply system has not given any incentive for households and businesses to reduce their energy consumptions and to install distributed generation systems and smart grids, which would require changing the oligopolistic system.

The government also had, in the past, promoted nuclear power generation as one of the main pillars of Japanese low-carbon policy by maintaining the structure of the existing energy supply system. However, after the crisis, the structure of the energy supply system has come under pressure. Even though the government may not intend to shut down any other nuclear plants, if Japan does not build new reactors and replace the old ones, a limited number of nuclear plants will remain in 2050. This may result in additional CO2 emissions as well as lack of energy security. Therefore, the Japanese government urgently needs to construct emergency alternative energy saving schemes. Lessons can be learnt from the California energy crisis of 2000 and 2001, during which California implemented a policy package of energy efficiency and conservation programs. As a result, a number of energy efficiency standards and programs were adopted and putting effect. One example is a 20-20 rebate program in which households and businesses that reduced energy consumption by 20 per cent (compared with their usage in the previous summer), would receive a rebate of 20 per cent on their electric bills.

Nishioka: *What affect, do you think, does Japan have to have after the energy crisis by replacing nuclear power supply system?*

Asuka: The global trend towards reviewing and re-evaluating nuclear power generation and related construction plans had been called the “Nuclear Renaissance” by some people. However, in reality, the total amount of nuclear power generated has decreased over years as it has been replaced by renewable energy sources worldwide. After all, nuclear power generation was just one of many climate change policy options. The myths that nuclear is a key policy measure in the fight against climate change and that nuclear power is a cheap, safe and advanced technology, were collapsed by the earthquake and the accidents at the nuclear power plants which inflicted harm on millions of people. In addition, the accident also reveals the fact the generation of nuclear power may cost more than other forms of power generation when all costs are calculated, such as cost of fuel, the cost of power plant construction, the decommissioning cost, the cost of replacing nuclear reactors that reach the end of their actual operating lives, the electric power development tax collected from energy consumers via their electricity bills. The cost could reach an infinitely high level if damage repair costs and harmful rumours facing the affected region are considered.

Nishioka: *What are the expectations for Japan to recover from the disaster?*

Asuka: Japan is now entering a transitional stage, in which this nuclear and energy crisis can be changed into an opportunity to build up new energy systems. I hope that Japan can make the necessary moves towards constructing an innovative low-carbon society by introducing new institutional arrangements, policies and regulations, and by using better mechanisms that allow businesses and households to reduce their energy consumptions and install renewable energy sources.



Low-Carbon Living in Japan Mikiko Kainuma, National Institute for Environmental Studies



At the midnight of 11th March 2011, Ai-chan left home with her family. She was living self-sufficiently in a village 20 km away from Fukushima-Daiichi where there is neither electricity supply nor access to telephone. She built her house by herself and was cultivating using natural methods. Although the earthquake was very strong, her house received no damage. She cooked supper with wood stove and well water, used bathwater warmed by firewood, and read a picture book for her children as usual. Her family could have continued their self-sufficient life if there were no nuclear accident.

Not all Japanese can live like Ai-chan. However, after the nuclear accident, many Japanese have begun to think more seriously about saving energy. They use more energy saving devices such as LED lightings, energy-saving air conditioners and photovoltaic generation systems. An IT software company plan to provide energy saving software and industries have announced plans to reduce energy consumption drastically. In Kanto area, we need to cut electricity consumption by at least 15% in this summer.

The electric companies plan to use old-style thermal power plants and private sector organizations prepare to have captive power generation and storage batteries to face the challenge of energy shortage. It is reported that fuel cost in 2011 is about 9 billion US\$ more than in 2009 because of the shift from nuclear to thermal generation. However if one accounts for the costs of waste management and risk associated with nuclear power plants, the result could be different. The important lesson is to reduce energy consumption itself.

We need to simultaneously prepare for both the current and near future problem due to the nuclear accident and the 100-year problem of the climate change. At this juncture we are facing a big challenge of energy saving. It is very important to share information widely and accelerate our efforts to meet the challenge of reducing energy consumption.

LCS-RNet Secretariat: Dialogue between Policymakers and Researcher on Low-Carbon Development in Asia

Thailand Meeting: Transition towards Low Carbon Societies in Thailand and Asia – Dialogue between policy-makers and researchers and cross-sectoral approach, held on 17-18 November 2010. The workshop was co-hosted by TGO and JGSEE and supported by IGES/ LCS-RNet Secretariat.



The objective of the meeting was to create momentum for a transition towards low-carbon societies (LCSs) in national and local policies and actions, in Thailand and other Asian countries by enhancing the LCS policy and research relations. The first day was a dialogue between policymakers and researchers to identify roles of research on sustainable low-carbon development. The second day focused on the policies and actions in different sectors (e.g. energy, industry, waste, agriculture and forestry, urban infrastructure and building) and the cross-cutting issues.

Please refer to the LCS-RNet homepage; http://lcs-rnet.org/meetings/2010/11/17-18_november_2010_meeting_transition_towards_low_carbon_societies_in_thailand_and_asia.html

Cambodia Meeting: Scientific Approaches towards Low Carbon Development in Cambodia: Concept, Methodology and Tools for Planning Low Carbon Development, held on 10 January 2011, Cambodia, Phnom Penh. The workshop was hosted by Ministry of Environment Cambodia and Supported by LCS-RNet Secretariat/ IGES



The objectives of the meeting was to seek the possibility of collaboration between Cambodia and Japanese researchers and policymakers in drawing Low-Carbon Development (LCD) plan of Cambodia by summarizing what have already done in Cambodia for LCD strategies; (for policymakers) sharing up-to-date information and realizing the need of Low-Carbon Society (LCS) research in Cambodia; (for Cambodian researchers) identifying the LCS research demands by policymakers in Cambodia and scoping their LCS research (e.g. using appropriate LCS scenario/modeling methodology); (for Japanese researchers) seeking possibilities for collaborative research on Low-Carbon Development scenario in Cambodia; and (for LCS-RNet Secretariat) contributing to LCS capacity-building/networking in Asia.

Please refer to the LCS-RNet homepage; http://lcs-rnet.org/meetings/2011/01/cambodia_meeting_low_carbon_development_plan_scoping_meeting.html