

APN's Interactive Session at LoCARNet 2nd Annual Meeting

Session Summary by Dr. Akio Takemoto and Ms. Taniya Koswatta

APN's Interactive Session at LoCARNet 2nd Annual Meeting, 25 July 2013, Yokohama, Japan

Session Moderators: *Dr. Akio Takemoto and Prof. P. R. Shukla*

Speakers: *Dr. Janya Sang-Arun, Dr. Shobhakar Dhakal, Dr. Joni Jupesta, and Prof. Damasa Macandog*

APN organised an interactive session at the second annual meeting of Low Carbon Asia Research Network (LoCARNet) to showcase APN funded activities under its Low Carbon Initiative (LCI) framework, share APN project output related to low carbon development and to strengthen the partnership between LoCARNet and the International Research Network for Low Carbon Societies (LCS-RNet). During the session it was identified that the Asia-Pacific region has diverse and interconnected areas of interest in low carbon development. Furthermore, most of the issues are linked to cities, which play a crucial role in low carbon society. Finally, it was discovered that producing policy briefs and synthesis reports are important to the delivery of research output to policy makers and decision-making bodies to drive a real transition of the society towards a green economy.

The session started with a general presentation by Dr. Akio Takemoto, Director of APN Secretariat. He introduced APN's goals to promote global change research in the Asia-Pacific region through two core programmes, ARCP and CAPaBLE, which provide funds for research and capacity development activities in the region. He announced that APN will launch a special call for expressions of interest in September 2013 under the framework on Climate Change Adaptation, Disaster Risk Reduction and Loss and Damage. Dr. Takemoto gave an overview of the LCI Framework, which includes activities contributing to LoCARNet. He thanked the Ministry of the Environment, Japan (MOEJ) for their continuous financial support towards APN activities, including those under the LCI framework. To date, APN has funded five regional research projects and two capacity building activities under this framework. Observing the thematic distribution of 44 expressions of interest received under the LCI framework, he pointed out that the Asia-Pacific region has a diverse distribution of interest for low carbon development.

Promoting Sustainable Use of Waste Biomass in Cambodia, Lao PDR and Thailand: Combining Food Security, Bio-Energy and Climate Protection Benefits

Dr. Janya Sang-Arun, Senior policy researcher/task manager, Institute for Global Environmental Strategies (IGES)

After the overview of APN, four APN project leaders were invited to present their research activities. The first presentation was made by Dr. Janya Sang-Arun, leader of a recently completed CAPaBLE project ([CBA2010-01CMY](#)), which has outstanding output related to low carbon development. She introduced the project's two-year activities on waste management in Cambodia, Lao PDR and Thailand. She mentioned that with financial support from APN, MOEJ and the Pollution Control Department of Thailand, pilot projects were implemented in selected cities in the three countries. A survey about municipal solid waste management and organic waste utilisation in Cambodia, Lao PDR and Thailand was held at the first stage of the project and national guidelines were developed in local languages for each country to promote urban organic waste utilisation for food production, energy use, and climate

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change mitigation. Adding to these activities, capacity building workshops for local governments in each country were conducted and it was observed that local governments prefer composting as the most appropriate method for their cities. Furthermore, the project managed to find possible financial donors, including MOEJ, to sustain its activities. MOEJ provides continuous financial support to implement other pilot projects in Battambang City, Cambodia and Phitsanulok Municipality, Thailand. Training programmes on greenhouse gas (GHG) calculation tools at the national level in Cambodia and Thailand are also planned, with funding by MOEJ.

Understanding and Quantifying the Water-Energy-Carbon Nexus for Low Carbon Development in Asian Cities

Dr. Shobhakar Dhakal, Associate Professor, Energy Field of Study, Asian Institute of Technology, Thailand

Dr. Shobhakar Dhakal then presented his project plan on understanding and quantifying the water-energy-carbon nexus for low carbon development in Asian cities. He highlighted the importance of integrating the three key dimensions of water, energy and carbon to understand the direct and indirect linkages between each nexus towards low carbon development in cities. Then he noted that recent research studies show that 6% of India's total GHG emissions originates from lifting water for irrigation; and in Australia, urban water management influences 8% of Australia's energy-related GHG emissions. In addition, to achieve a 2°C target, most cities and local governments are focusing and showing interest on low carbon development plans, therefore he thinks integrating project findings into policies will become more effective. Finally, he stated that a better understanding of water, energy and carbon nexus in cities will help address climate change mitigation, energy security and water security as one policy objective and it will aid in creating an effective sustainable development plan.

Low Carbon Urban Infrastructure Investment: Case of China, Indonesia and Japan

Dr. Joni Jupesta, United Nations University – Institute of Advanced Studies, Yokohama, Japan

In the third presentation, Dr. Joni Jupesta introduced his APN-funded project targeting the economy in transition in Asia. He mentioned that, with high economic development, there are many emerging global challenges such as poverty, energy needs, human health and environmental issues. In order to address these issues he stressed that it is necessary to conduct studies at the city level, because cities play a crucial role in energy consumption and GHG emissions. The project plans to study the low carbon urban infrastructure investment in three cities: Shanghai, China, Jakarta, Indonesia and Yokohama, Japan. The project has four main themes: institutional framework, life cycle assessment, risk assessment and integrated assessment. It is expected to produce policy guidelines for respective city governments based on the output. Utilising the strengths of APN, which facilitates north-south regional collaboration, the project plans to share knowledge and experience among the selected cities.

Integrated Sustainability Assessment of Bioenergy Potentials in Asia: An Application of a Hybrid Approach on Trade-Offs and Pathways (PIC-STRAP)

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Prof. Damasa B. Magcale-Macandog, Institute of Biological Sciences, University of the Philippines Los Baños, the Philippines

In the final presentation, Prof. Damasa Macandog introduced the PIC-STRAP project (integrated sustainability assessment of bioenergy potentials in Asia; an application of a hybrid approach on trade-offs and pathway). She mentioned that the project aims to develop sustainable transition criteria towards low carbon society (LCS) using hybrid analytical tools that allow systematic investigation of trade-offs and pathways in the development of 1st and 2nd generation bioenergy in China, India and the Philippines. In addition, she stressed the use of renewable energy resources and technologies that are important to achieving LCS vision in these three countries, which have highest production of bioethanol and biodiesel in Asia. To date, the project has conducted site visits, started to coordinate with local governments, received participatory rural appraisal and conducted key informant interviews. The project held the first kick-off meeting in the Philippines to identify key issues and the role of each project partner. After the primary and secondary data collection, the project will conduct several analyses and prepare model-generated knowledge including preference weights, sustainability trade-off indices, probabilities of land use conversion, and development pathways.

After the introduction of LCI-funded projects, Prof. Shukla made some comments on the presentations. First of all, he appreciated APN for its contribution to enhancing scientific capacity on low carbon development in the Asia-Pacific region, specifically referring to the CAPaBLE project on Integrated Assessment Model conducted by himself. He noted that limited financial support from APN and in-kind contribution from other institutions creates an effective architecture to conduct research projects in an efficient manner. In addition, he mentioned that the four presented projects and their thematic distribution clearly highlights the diverse need of research on low carbon development. He also emphasised the need of integrating studies to achieve green growth. Finally, Prof. Shukla pointed out that all projects presented in the session are interconnected, most of which focus on cities. Therefore, he suggested preparing a synthesis report combining all LCI project outputs as it will benefit the community and policy makers.

During the discussion session, Dr. Takemoto said that this session fulfilled one of APN aims of connecting scientists to share their knowledge. Prof. Roy commented that this session is a good platform for project leaders to interconnect and share project information. She thinks this is an effective bottom-up knowledge sharing approach. In addition, she requested that presenters define a baseline in each sector of each country, so that it will be easy to explain the difference between each baseline and how low carbon development will move forward in the future. Next, she requested that a "change agent" in each country be identified, someone who can make changes in implementing policies or who can address low carbon development directly. The agent can be a high-level policy-making body or from a local municipal council. Prof. Roy thinks this additional information will add value to the project and can help make a real transformation to a green economy. All the presenters agreed that their projects need to identify a baseline and in some cases they are already doing this. Regarding identification of a "change agent," speakers confirmed that the relationships between policy makers are essential and most APN projects

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are connected with policy-making bodies. Ms. Liana Bratasida, former APN national Focal Point for Indonesia, commented that informing project output to stakeholders is important and APN needs to consider this closely. Furthermore, she described the necessity of a policy brief and synthesis report to interact with stakeholders and policy markers. Dr. Takemoto responded that APN needs to increase publications on its activities, such as synthesis reports and policy briefs, in a timely manner.