

Low Carbon Asia Research Network



Mobilising Wisdom for a Low-carbon Asia

Synthesis Report of LoCARNet First Annual Meeting

16-17 October 2012
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Bangkok

Co-organisers:

Asia-Pacific Network for Global Change Research (APN)

Asian Development Bank (ADB)

Joint Graduate School of Energy and Environment, Thailand (JGSEE)

Low Carbon Asia Research Network (LoCARNet)

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Ministry of the Environment, Japan (MOEJ)

Thailand Greenhouse Gas Management Organization (TGO)



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Please refer to the LCS-RNet website at:

http://lcs-rnet.org/meetings_locarnet/2012/10/first_annual_meeting.html

Preface

The Low Carbon Asia Research Network (LoCARNet) was launched as a knowledge-sharing network of research communities and stakeholders that facilitates the formation and implementation of science-based policies for low-carbon development in the Asian region. Reflecting an awareness of the importance of facilitating the realisation of a low-carbon and sustainable society, this network looks at the formulation of science-based policies for low-carbon development in the region while also working to facilitate implementation. The Institute for Global Environmental Strategies (IGES) has been served as the Secretariat of the International Research Network for Low Carbon Societies (LCS-RNet) since 2009. The Secretariat works in cooperation with Japan's National Institute for Environmental Studies (NIES), the Japan focal point of this network, to promote dialogue among researchers and policymakers in Indonesia, Thailand, Cambodia and Malaysia, and has held workshops to support collaboration among researchers. As a result of these activities, the need to share knowledge within the region on low-carbon issues in Asia has come to the forefront.

The first Annual Meeting of the LoCARNet was held on 16-17 October 2012, in Bangkok, Thailand, co-organised by Asia-Pacific Network for Global Change Research (APN), the Asian Development Bank (ADB), the Joint Graduate School of Energy and Environment, Thailand (JGSEE), LoCARNet/IGES, the Ministry of the Environment of Japan (MOEJ) and the Thailand Greenhouse Gas Management Organization (TGO). The meeting was held one month before the 18th session of the Conference of the Parties (COP18) to the United Nations Framework Convention on Climate Change (UNFCCC) in Doha, Qatar. Last year, at COP17, Durban, South Africa, participating nation promised to take steps to reduce greenhouse gas emissions from 2020. In the future, it is predicted that rapid economic growth in developing countries will lead to a huge increase in greenhouse gas (GHG) emissions. Therefore, it is widely expected that developed countries will require a substantial reduction in GHG emissions, such as through transformations of their social structures into societies with technology that has low dependence on energy. At the same time, developing countries should work in harmony to promote "sustainable low-carbon green growth." In particular, Asia maintains a high economic growth rate and continues to make new investments. If Asian countries are able to move down the pathway to low-carbon development in a farsighted manner, Asia will at the global level lead the way to a low-carbon world.

This Synthesis Report has been drafted by a voluntary group of Asian researchers plus colleagues from Japan and Thailand. We would like to express our sincere thanks to our Asian colleagues, namely Mrs. Prasertsuk Chamornmarn, Dr. Natarika Wayuparb, Dr. Savitri Garivait and Dr. Bundit Limmeechokchai (Thailand), Prof. Ho Chin Siong (Malaysia), Prof. Rizaldi Boer (Indonesia), Dr. Shobhakar Dhakal (Nepal) and Prof. Priyadarshi R. Shukla (India), as well as our Japanese colleagues, Dr. Junichi Fujino, Dr. Shuichi Ashina and Ms. Yumiko Asayama, and also Dr. Shuzo Nishioka, Ms. Tomoko Ishikawa and Ms. Takako Wakiyama from the LoCARNet Secretariat, as well as our colleagues at IGES, TGO and also the graduate students at JGSEE.

We would also like to express our special appreciation to TGO for their generous support for the LoCARNet First Annual Meeting. We also would like to express our appreciation to the co-organisers ADB, APN, IGES, JGSEE and MOEJ for their kind support.

Co-Chairs of the Meeting, representing the organising group of the 1st Annual Meeting of LoCARNet

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Key Findings

The following list contains major findings arising from the First Annual Meeting of the Low Carbon Asia Research Network (LoCARNet) held on 16-17 October in Bangkok, Thailand. LoCARNet was launched as a knowledge-sharing network of researchers and relevant stakeholders who are deeply involved in domestic policy-making processes, being aware of the importance of facilitating the realisation of a low-carbon and sustainable society, as well as looking at the formulation and better enabling implementation of science-based policies for low-carbon development in the region. Seeking to contribute to sound science-based low-carbon policy in the region, the annual meeting aims to exchange up-to-date scientific knowledge on common low-carbon growth research topics in this region.

Asia's potential role in climate stabilisation

Asia has succeeded in achieving rapid social and economic development. Asia can play an important role in the stabilisation of climate and will contribute to global greenhouse gas (GHG) mitigation by applying well-designed countermeasures grounded in science. In this way, Asia enjoys sufficient potential to become a global leader if Asian countries can opt for sustainable low-carbon development paths compatible with their own particular conditions. A low-carbon society in Asia should be developed by utilising “hardware” based on scientific and technological efficiency together with the “software” of social factors, traditions, cultural elements and creativity found in the rich Asian heritage and background.

Common approaches and methods but differential solutions

Asian countries need to delineate common processes and methodologies that will enable them to successfully transition from a planning phase to an implementation phase. While solutions will necessarily differ in accordance with the socio-economic and political circumstances of each country, comparative analyses and the sharing of best practices and lessons learned will be key in promoting low-carbon activities. Traditional uniquely Asian values and social patterns held widely across the Asian region could be shared as common approaches, processes and methods.

Stakeholder driven policy research

The importance of LCSR (Low-carbon Societies Research) activities in formulating and better enabling the implementation of science-based low-carbon policy is gradually gaining recognition in the Asian region. Interaction between researchers and policymakers would likely enhance evidence-based planning, implementation approaches and mutual understanding while also contributing to the formulation of a consensus among stakeholders. Researchers need to further demonstrate the feasibility of both long-term planning and Short-term actions in order to align the often dynamic nature of policy decisions with long-term policy-making by the government and short-term decision-making by the private sector.

Managing countermeasures at local and sector scales

GHG emission reductions can be managed by addressing crosscutting and practical issues at different geographical scales such as at the city or local levels as well as at a sector scale in energy, agriculture, forest and land use change, among others. Cities often serve as good demonstration sites for implementing innovative local actions while sectors play a principal role in defining technologies and approaches to be used in reducing GHG emissions.

For instance, cities can offer to implement measures addressing structural and cross-sectoral issues with high mitigation potentials while introducing key countermeasures locally. Cities can improve the quality of life of residents and offer places which make it easy for people to live, work and play. Low-carbon cities will be a main engine as well as a solution for improving liveability and sustainability within future urban development. Simultaneously, changes in the agriculture, forestry and land use sectors are expected to play an important role in GHG emission reductions in Asia at least over the next 15-20 years. These changes are also expected to comprise valuable knowledge-sharing contributions from developing countries in future years, as specific and comparative experiences.

Technology and capacity development and beyond for low-carbon initiative

Government investment and private sector leveraging in domains such as research and development (R&D) and demonstration provide key avenues for policies to promote low-carbon and also “resilient” development strategies, including low-carbon technologies. Awareness raising, market development and capacity development are also important elements for successful policy strategies. As climate change is a multi-faceted and complex issue, it cannot be sufficiently addressed through a technology-based approach alone.

Multi-stakeholders and regional cooperation to emphasise co-benefits

A comprehensive set of actions can be put into practice through multi-stakeholder and regional cooperation while emphasising common co-benefit approaches at both the national and local levels. North-south and especially south-south mutual learning and co-operation are vital in enhancing the mobilisation and dissemination of available resources, technologies and knowledge in region-specific, yet commonly-shared social, economic and environmental contexts.

Role of LoCARNet

LoCARNet is expected to promote capacity development, provide a platform to support research by enhancing research collaboration in Asia and support dialogue sessions amongst researchers, policymakers, and other like-minded relevant stakeholders. The participants in the meeting also expect that the process of sharing interdisciplinary knowledge and expanding networks in different sectors will facilitate north-south/south-south cooperation, leading to technology transfer and low-carbon infrastructure development, thereby enabling a leapfrogging in development to transitions to low-carbon societies (LCS) and low-carbon cities in Asia.

Synthesis Report

This Synthesis Report can be shared with a broad range of stakeholders, including researchers, policymakers, businesses and NGOs working to tackle climate change issues. Although some progress has been achieved in low-carbon development and in policies in many Asian countries, various urgent issues have been pointed out for researchers/the research community and policymakers by highlighting the importance of low-carbon research such as the policy making process and use of integrated assessment models; land use and forestry; GHG inventories; low-carbon cities; local level practices, local decisions, and local initiatives; the institutionalisation of low-carbon green growth; and technology. The key findings in this report stem from a consideration of those urgent issues. These findings discuss Asia's role and its potential for low-carbon development, including the role of Asia in climate stabilisation, low-carbon approaches, stakeholder driven low-carbon policy research, local and sectoral actions, technology and capacity development and beyond, regional cooperation, and the role of the research network LoCARNet.

Asia's potential role in climate stabilisation

Asia has succeeded in achieving rapid social and economic development. Asia can play an important role in the stabilisation of climate and will contribute to global GHG mitigation by applying well-designed countermeasures grounded in science. In this way, Asia enjoys sufficient potential to become a global leader if Asian countries can opt for sustainable low-carbon development paths compatible with their own particular conditions. A low-carbon society in Asia should be developed by utilising "hardware" based on scientific and technological efficiency together with the "software" of social factors, traditions, cultural elements and creativity found in the rich Asian heritage and background.

Developing countries have taken steps to formulate national policies for low-carbon development in order to mainstream climate change within their national development plans. One example of their progress is that some Asian countries have incorporated GHG

mitigation as a compulsory indicator within their socio-economic development and national development plans.

Against a background of increased awareness of climate change issues and the importance of mainstreaming climate change policies, one area of progress in developing countries has come about through discussion of Nationally Appropriate Mitigation Actions (NAMAs) under the United Nations Climate Change Conference (UNFCCC) in Bali in December 2007. As part of the Bali Roadmap agreed at the conference, the Bali Action Plan was expected to promote voluntary mitigation actions by developing country parties, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable (MRV) manner.

Since then, NAMAs have been one area of the policies and plans that are key in climate change mitigation. Various domestic mitigation initiatives are being launched simultaneously in each country. At the same time, in order to transform NAMAs into national and local low-carbon development policies, many countries realised that NAMAs need to be embedded in broader national development plans and priorities. NAMAs provide an opportunity to set countries on a pathway to low-carbon development and green growth through the strengthening of interlinkages between NAMAs and low-carbon development.

While several Asian countries have been making still greater efforts to mainstream low-carbon development within their policies, institutional congestion exists within policies and funding, including unnecessary overlapping.

Unnecessary overlapping and inefficiency are found in resource allocation, leading to "institutional congestion." Although there is awareness of the need to coordinate such institutional congestion, such coordination has proved difficult in practice. Institutional congestion emerged as the result of progress made in climate change policies during many Asian countries' efforts to tackle climate change and mitigate their GHG emissions. Climate change

involves cross-sectoral issues that cannot be solved by a single ministry. Thus, it is critical to have full involvement of key ministries at an early stage with solid coordination.

Institutional congestion problems are found in the area of donor and financial coordination. In terms of funding by international bodies, there exist many climate funds that focus on the mitigation aspects of climate change exist, yet those funds are typically earmarked for specific projects or programmes. In Indonesia, for example, there are many initiatives led by different ministries and international donors. This so-called “spaghetti” of intertwined climate finance increases in complexity as international initiatives are launched without due domestic coordination. Therefore, Asia is now at a turning point to demonstrate its leadership in setting out directions to low-carbon development pathways by allocating limited resources in ways that maximise the use of their available resources. The clear allocation of tasks and finance to governments is also required.

Common approaches and methods but differential solutions

Asian countries need to delineate common processes and methodologies that will enable them to successfully transition from a planning phase to an implementation phase. While solutions will necessarily differ in accordance with the socio-economic and political circumstances of each country, comparative analyses and the sharing of best practices and lessons learned will be key in promoting low-carbon activities. Traditional uniquely Asian values and social patterns held widely across the Asian region could be shared as common approaches, processes and methods.

The processes and methods applied to the development of low-carbon policies and actions can be used in common in order to create low-carbon visions, design roadmaps at both the national and local scale and evaluate progress. For instance, low-carbon simulation modelling and technology assessments can identify potential GHG emission mitigation in a country and prioritise actions for meeting GHG mitigation targets. Measurable indicators such as those of the International Organisation for Standardisation (ISO) and Comprehensive Assessment System for Built

Environment Efficiency (CASBEE) are applicable and effective tools to help ensure the quality of products and services through the assessment and rating of environmental performance.

Lessons can be learned from best practices and innovative pilot projects that have already emerged. As a result, remarkable numbers of GHG mitigation demonstration projects and practices have become visible at the city and sector level. “Future City” Yokohama, for instance, has its roots as a polluted fishermen’s village. But through successful implementation of policies and social programs, it has managed to overcome its polluted past and mitigate its current problems of rapid population growth and of a quickly aging population. It is seen as a model low-carbon city and uses its experience to help with the sustainable development of other countries and cities.

The progress of low-carbon policy should be measurable and evaluated through comparative analysis. Analytical tools should be commonly shared so that progress has greater transparency and visibility for both domestic and international communities and also so that measurable, reportable and verifiable (MRV) systems are potentially initiated.

When a country establishes NAMAs, MRV systems for those NAMAs should be ensured through the use of commonly shared evaluation tools in line with a globally agreed standard. Although no universally-agreed definitions of NAMAs and MRV exist, at this early stage, the current progress of NAMAs can be analysed from three dimensions in terms of policy-making aspects, namely (i) a technical dimension, (ii) a mainstreaming dimension and (iii) an institutional dimension. The technical dimension includes obtaining a good understanding of current and future emissions trends and costs. The mainstreaming dimension includes embedding in national priorities, and the institutional dimension is the cross-ministerial decision-making process.

The technical dimension is gradually being overcome in some Asian countries as various studies emerge projecting GHG emissions and identifying mitigation potentials. However, challenges remain in areas such as data collection for GHG inventories and data sharing across different ministries.

As for the mainstreaming dimension, Asian countries

appear to be making progress in developing their national policies with due attention to mitigation and climate change issues. Challenges remain in the realisation of full-fledged mainstreaming. Typically, countries differ in the agency that serves as the lead agency, with for example the development planning agency serving as the lead agency in some countries while in others the environment ministry fills this role. Full-fledged mainstreaming of low-carbon development involves overcoming several major difficulties, such as the break-even point for the production of renewables, enhancing REDD+ (currently in the pilot stage), MRV issues and regulation and institutional issues such as green buildings and eco-labelling.

As for the institutional dimension, several Asian countries have cross-ministerial decision-making processes. A discussion of institutional arrangements is required to highlight the challenges to policymakers and even to line ministries when implementing plans and policies that involve either new concepts or long time horizons and the process may involve creating opportunities for mutual learning about neighbouring countries' situations, the inertia of the existing institutions and vested interests and other such factors. Various options for overcoming such issues can be listed. Therefore, the next step is to assess how an established policy body works for the implementation of LCS policies that are appropriate within the social and economic environment of a country.

Stakeholder driven policy research

The importance of low-carbon societies research activities in formulating and better enabling the implementation of science-based low-carbon policy is gradually gaining recognition in the Asian region. Interaction between researchers and policymakers would likely enhance evidence-based planning, implementation approaches and mutual understanding while also contributing to the formulation of a consensus among stakeholders. Researchers need to further demonstrate the feasibility of both long-term planning and Short-term actions in order to align the often dynamic nature of policy decisions with long-term policy-making by the government and short-term decision-making by the private sector.

Asia faces a transition phase in its policy-making processes. The formulation of low-carbon policies requires an assessment of policy options for climate change control. The enabling policy options should be tested from various facets using scientific analysis, including both basic and advanced research. In taking policy planning as an example, research requirements include data collection, formulation of a GHG inventory, technology needs assessments and application of an integrated assessment model (IAM).

In order to increase the effectiveness of climate change policy including in terms of GHG mitigation technologies, cost effectiveness, co-benefits and impact on GDP, an assessment tool such as IAM can be used as a low-carbon simulation model, which combines scientific and socio-economic aspects of climate change. LCS studies in Nepal, Thailand, Japan and India, for instance, have provided useful IAM-derived information for policy-making. Lessons learned through LCS scenarios and roadmaps demonstrate cost-effectiveness, GHG mitigation potential, consensus building and more.

In order to implement those analyses using integrated simulation models, an inventory of GHG emissions is one of the important tools in identifying emission sources. A GHG inventory can be used as a tool to provide fundamental information for a country to simulate future projections of GHG emissions and removals. The GHG inventory can be used to identify mitigation options and for target setting, which need not be limited to the national level as identification can also be undertaken at the local level. GHG inventory estimation is useful for 1) benchmarking performance, 2) ascertaining opportunities for carbon crediting (finance), and 3) estimating climate risks. National GHG inventory management systems and LCS can be linked through NAMAs. In this way, the inventory, combined with evaluation methods and MRV options, is important in identifying and optimising interventions to facilitate co-benefits and enable the decoupling of GDP and GHG emissions. Challenges include developing a database, deciding on a default emission factor, and dealing with overlapping data from neighbouring municipalities.

Transition of policy can be visualised by using three axes: degree of implementation, time and public participation. In Indonesia, for instance, low-carbon development policy needs to integrate not only the aspect of growth but also the degree of realised equity.

In order to encourage current society to shift to low-carbon development pathways, it is important to have inclusive development that considers how to enhance community participation as well as development that also balances the conservation and rehabilitation of natural resources. The path to low-carbon development can be partially achieved through emphasising the necessity of looking at community initiatives and examining and giving overall and clear direction for the development of potential green business options, to upscale pilot projects to other communities and to enhance cooperation among different communities in line with the concept of value in these communities.

Managing countermeasures at local and sector scales

GHG emission reductions can be managed by addressing crosscutting and practical issues at different geographical scales such as at the city or local levels as well as at a sector scale in energy, agriculture, forest and land use change, among others. Cities often serve as good demonstration sites for implementing innovative local actions while sectors play a principal role in defining technologies and approaches to be used in reducing GHG emissions.

Cities are a major contributor to global climate change (responsible for 80% of total GHG emissions) and can play a significant role in mitigation. Cities are not highly affected by climate change in relative terms because of their high capacity to adapt to changes in climate, but informal settlements in urban areas and coastal settlements are especially vulnerable.

As cities are tangible and more manageable, implementation tends to be easier. Smaller settlements also need to be addressed within the LCS approach. For instance, cities can offer to implement measures addressing structural and cross-sectoral issues with high mitigation potentials while introducing key countermeasures locally. Cities can improve the quality of life of residents and offer places which make it easy for people to live, work and play. Low-carbon

cities will be a main engine as well as a solution for improving liveability and sustainability within future urban development.

Simultaneously, changes in the agriculture, forestry and land use sectors are expected to play an important role in GHG emission reductions in Asia at least over the next 15-20 years. These changes are also expected to comprise valuable knowledge-sharing contributions from developing countries in future years, as specific and comparative experiences.

Governance is an important factor in managing and maintaining city development in a low-carbon manner. The local governments of these urban areas play a leadership role in transforming these urban societies to low-carbon societies. Local government is the appropriate level of intervention to adopt the LCS concept because local government bodies are more effective in resolving socio-economic and environmental problems.

There are four means to accomplish the goal of LCS: changing peoples' lifestyles towards sustainable consumption of resources and emission reduction; utilising renewable energy and energy efficient technologies; expanding green areas as carbon sinks; and mainstreaming the notion of LCS in the overall urban developmental policy. Local governments are much better positioned to resolve socio-economic and environmental problems effectively than entities at the national level.

Governments also need to accelerate sector-wise actions including conservation actions for natural resources through re-habitation and re-forestation. Indonesia, for example, faces difficulties in evaluating natural resource conservation actions and inviting investment to back such actions. A green development process enables improvement by using available resources such as natural and forest resources under appropriate management. The government has set new criteria for natural resources, namely that a certain portion of natural resources belongs to the government. This new criteria has resulted in differentiation between rich districts and poor districts. This kind of physical balance policy also triggered cross subsidies among districts. Thus it is imperative for the national, local and sectoral levels to carefully design those policy options that impact upon the sectoral level

and examine during the planning stage the potential as well as the barriers from economic, social and environmental perspectives.

Technology and capacity development and beyond for low-carbon initiatives

Government investment and private sector leveraging in domains such as research and development (R&D) and demonstration provide key avenues for policies to promote low-carbon and also “resilient” development strategies, including low-carbon technologies. Awareness raising, market development and capacity development are also important elements for successful policy strategies. As climate change is a multi-faceted and complex issue, it cannot be sufficiently addressed through a technology-based approach alone.

A Technology Needs Assessment (TNA) is a project that identifies and determines the mitigation and adaption technology priorities of countries. The main goals are to identify technologies from different sectors for mitigation, identify barriers for technologies and attempt to remove them and develop plans for using these technologies in the future. Intellectual Property Rights are another key issue in technology transfer that must be addressed. This issue is required to bring other stakeholders into the table, especially private sector entities and industries.

While barriers to technologies are not new and unique as such, the nature is different from situation to situation in terms of the financial, institutional, regulatory and capacity aspects as well as the level of technology. Technology needs and the identification of barriers often require political endorsement to translate into action. Short-term, lower-impact, easier to adapt technologies require different approaches than long-term, higher-impact, difficult to adapt technologies. Although a needs assessment should fully reflect local conditions and local buy-in, many countries lack country-specific information and data, a situation that could hinder robust needs assessment in these countries. Thus, a clear technology road-map (or technology action plan) endorsed and issued by a proper authority through a process of stakeholder participation is helpful in devising policies to address technology needs and remove barriers.

New and innovative technologies and schemes for sustainable development and low-carbon societies at the local level could be practiced with public acceptance rooted in local practices.

Key aspects of a low-carbon society in the Asian context include taking actions for sustainable development, making equitable contributions, improving environmental conditions, demonstrating LCS technologies, and adopting LCS behaviours. Elements involved in the realisation of a low-carbon society are technologies, infrastructure, human resources, institutions, social capital and lifestyle. The actual implementation is “revitalised” through the willing decisions of local governments and communities. Participatory processes are needed for the ‘prioritisation’ of sectors and the identification of ‘key feasible and available technologies’ by using analytical tools. Consensus building throughout the community and collaboration among different stakeholders may ultimately be necessary in implementing actions on the path to low-carbon development.

Multi-stakeholders and regional cooperation to emphasise co-benefits

A comprehensive set of actions can be put into practice through multi-stakeholder and regional cooperation while emphasising common co-benefit approaches at both the national and local levels. North-south and especially south-south mutual learning and co-operation are vital in enhancing the mobilisation and dissemination of available resources, technologies and knowledge in region-specific, yet commonly-shared social, economic and environmental contexts.

Values and local practices are commonly used as the basis for sustainable local livelihoods and would be the foundation of society promoting people’s behavioural shifts towards LCS development pathways. Asian people and communities have historically had “sustainable” lives with indigenous values and practices.

The application of these values and practices to newly arising climate change issues can be used to enhance public awareness regarding and consensus towards climate-change problems. Integrated values and practices related to the community level in terms of sustainable livelihoods is one key enabling current

society to achieve a shift to low-carbon development pathways through implementation. In Japan, the 3Rs (reduce, reuse, recycle), for instance, have been practiced utilising Japan's local practices and society's traditional concept of *mottainai* (balancing extraction and production and consumption), an approach grounded in people's respect for natural resources and people working for resource management, as well as in the scientific knowledge base and the development and dissemination of innovative clean technologies.

However, recognition of values and their influence on behaviour may extend beyond the original society. That is, more so than original and traditional values, generally it is the current social values and systems embedded in a community's social, economic, cultural and natural conditions particular to local conditions that influence behaviour within the community. This notion can also be applied in other Asian countries such as Thailand and Indonesia where similar values are commonly used within their societies as their customs or norms. There are local practices which promote the fair allocation of natural resources as well as time and human resources within a community while also promoting the sustainability of community ties by strengthening networking both within and outside a community.

Interaction between policymakers and multi-stakeholders is vital so that policymakers can devise effective ways to motivate the public, such as considering co-benefits.

It is important to consider various co-benefits in addition to GHG reductions by looking at local issues and how people can benefit with regard to improvements in those areas. People are more motivated to act if they see changes in their own lives. One challenge lies in quantifying the co-benefits. Japan is committed to shifting Asian cities to LCS through the 'future city' initiative, which assists developing countries in building sustainable cities through showcasing successful cities and replicating these results into new, developing cities. Thus, mutual learning can play a key role in developing co-benefits and mainstream climate policy within the national development plan.

Role of LoCARNet

LoCARNet is expected to promote capacity development, provide a platform to support research by enhancing research collaboration in Asia and support dialogue sessions amongst researchers, policymakers, and other like-minded relevant stakeholders. The participants in the meeting also expect that the process of sharing interdisciplinary knowledge and expanding networks in different sectors will facilitate north-south/south-south cooperation, leading to technology transfer and low-carbon infrastructure development, thereby enabling a leapfrogging in development to transitions to low-carbon societies (LCS) and low-carbon cities in Asia.

LoCARNet can enhance its capacity to promote knowledge sharing, support regional research and capacity building activities through collaboration with likeminded organisations such as APN. Collaboration with research institutions can be also enhanced, including enhancing capacity in target setting and designing roadmaps using integrated assessment models, promoting knowledge sharing regarding low-carbon cities, facilitating north-south/south-south technology transfer, facilitating low-carbon infrastructure, knowledge sharing on LULUCF and REDD+ and enhancing capacity on GHG inventories. Regional cooperation in Asia is promoted through collaboration with implementing agencies, donor agencies and international organisations such as ADB, APN, GGGI, UNEP, USAID, JICA and UNESCAP, all of which participated to the LoCARNet first Annual Meeting.

As the future of LoCARNet, a platform for collaboration and knowledge and experience sharing can be undertaken while supporting consensus building for sharing a common vision and capacity development, promoting research at the project level and at a local scale towards concrete actions on the ground. In addition, sharing knowledge and practical measures can be enhanced through the activities of the Network. LoCARNet is expected to promote these elements and expand upon the theoretical aspects of sustainable development, green growth and low-carbon city and methodology of planning in Asian countries. Conclusively, regional and global bilateral and multilateral facilitation is essential through technology transfer, peer-to-peer learning, demonstrations, best practices and knowledge-hub-creation.

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Acknowledgement

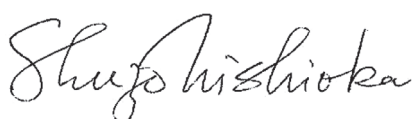
This Synthesis Report was developed with the aim of highlighting cross-cutting conclusions from panel discussions held during the First Annual Meeting of LoCARNet, held in Bangkok, Thailand on 16-17 October 2012.

The objectives of the meeting were to exchange up-to-date scientific knowledge on common LC growth research topics in the Asian region; to exchange views on research needs between policymakers and the research community through dialogues; to explore potential collaboration areas for joint research in the region; to develop plans for LoCARNet future activities; and to extract recommendations from research communities in this region, addressed to world leaders on climate change and low-carbon development.

The issues covered in this report are the following, which are expected to be of great interest to policymakers and researchers in making the transition towards sustainable low-carbon development in Asia:

- Asia's potential role in climate stabilisation
- Common approaches and methods but differential solutions
- Stakeholder driven policy research
- Managing countermeasures at local and sector scales
- Technology and capacity development and beyond for low-carbon initiatives
- Multi-stakeholders and regional cooperation to emphasise co-benefits
- Role of LoCARNet

I would like to take this opportunity to express our profound gratitude to all speakers and participants from academia, government and international organisations for their contributions to the meeting. I would also like to add our sincere appreciation to Dr. Natarika Wayuparb, TGO and the 'PRO' team of JGSEE for their support to materialise this dialogue. Special gratitude goes to Mrs. Prasertsuk Chamornmarn from TGO, Dr. Sirintornthep Towprayoon and Dr. Savitri Garivait at JGSEE for their guidance in planning this dialogue and their considerable efforts to coordinate this meeting..



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