



SCIENCE-POLICY DIALOGUE

SOUTH/SOUTHEAST ASIA CLIMATE CHANGE: LOW CARBON & ADAPTATION INITIATIVES IN ASIA

BACKGROUND

On 6-8 February 2017, the Asia-Pacific Network for Global Change Research (APN), the Low Carbon Asia Research Network (LoCARNet), the Regional Resource Centre for Asia and the Pacific, Asian Institute of Technology (AIT/RRC.AP) and the Climate Change Asia (CCA) Initiative co-organized a Capacity Building Workshop and Science-Policy Dialogue at the AIT campus in Pathum Thani, Thailand. The activities were driven by the common aim to strengthen the global response to climate change and to celebrate four years of support for low carbon development by both APN and LoCARNet. The three-day activities shared and discussed results from LoCARNet projects and activities, APN's funded projects under its Low Carbon Initiatives (LCI) Framework and Climate Adaptation Framework (CAF), and the latest outcomes from partner organizations that support the implementation of the Paris Agreement. The activities engaged countries in South and Southeast Asia.

The Science-Policy Dialogue included talks on the role of green investment in cities, low carbon and energy-efficient technology, a better water-energy-carbon nexus, among others. In addition, the 42 participants joined “café kiosks” to discuss effective strategies for engaging science and policy, and narrowing existing gaps, sharing best practices on knowledge management, and undertaking communication and networking activities at local, national and sub-regional levels to realize a low-carbon and resilient Asia. Resilience decision-making games also formed part of the activities and engaged participants in making decisions that are, or could possibly become, high-risk decisions in a changing climate. These games created an informal, friendly and relaxed atmosphere conducive to discussions among participants and was a key icebreaker for the event.

EXECUTIVE SUMMARY

From a policy perspective, cities’ water-energy-carbon nexus is a key area to investigate both from direct and indirect perspectives. There is an opportunity to link these together at the municipal level. There is a growing need for cities’ transition into a cleaner, healthier, sustainable and economically secured future. There are a number of approaches that cities must adopt in water-energy systems, including investments in renewable technologies, improving efficiency of water and energy systems, and reforming the necessary regulations and policies. Cities play a significant role in determining the future of water and energy resources and combating climate change. Further, policy needs to weigh the impacts of bioenergy development on sustainability, which are interlinked in an energy-food-ecosystem nexus.

“Cities play a significant role in determining the future of water and energy resources, and combating climate change.”

Green production in the construction industry are low in embodied energy, low in resource materials, and have cleaner production processes. Upscaling low carbon technologies in the building sector requires research and new knowledge on the materials and models developed, capacity development on existing knowledge and sharing of such knowledge with more information relayed to ensure consumer engagement.

In the Bangkok Master Plan, there are five key areas of environmentally sustainable transport, energy efficiency and alternative energy, efficient solid waste management and wastewater treatment, green urban planning and adaptation planning. Some of these initiatives can be transferred to other cities.



Participants engaged in the climate resilience game.



Active participation during the Café Kiosks.

ICLEI South Asia has been producing robust technical and resource documents and toolkits, which cities and its stakeholders can use for their own planning purposes, and offers a complete comprehensive package for low carbon and climate-resilient cities.

Moving towards low carbon development in the region is challenging. There is a need for interdisciplinary procedures moving from quantification to implementation, and undertaking cost-benefit analyses to inform policy-making. Engaging all stakeholders, particularly local governments and the private sector, is crucial to meet national targets. For NDCs, changing governments may be problematic due to potentially new mandates. Maintaining gains could be challenging, particularly during a government transition, yet it is crucial to move forward and ensure sustainable, low-carbon and climate

resilience in South and Southeast Asia.

There is a need to realize the rising costs of in-action. This needs to be communicated and included when developing scenarios and plans. We cannot afford to avoid the immediate need for action on adaptation or mitigation.

Concerning issues of gender equity, recommendations include gender mainstreaming in planning and policymaking, knowledge generation and capacity development. In this context, capacity and knowledge development needs to enhance the roles and status of women as participants and agents of change, build on their strengths and experiences, knowledge and coping capacity, and ensure women’s access to information.

“There is a need to realize the rising costs of in-action.”



Communication and networking Café Kiosk.

“Scientists can help policymakers by providing evidence that transitioning to a green economy can benefit the economy, society and the environment”

For sustainable development, the importance of green growth, green economy and resource efficiency is key. This will lead to better management of natural resources and have a positive impact on economic growth, job creation, resilience, poverty reduction and human well-being in general. Scientists can help policymakers by providing evidence that transitioning to a green economy can benefit the economy, society and the environment.

Universities are powerhouses. Supporting their initiatives and enabling them to engage with other institutions internally, regionally and internationally is important. South-south interactions and south-north interactions are needed. Open access to resources can enable institutions that have the knowledge to disseminate through various channels. Knowledge management is a process by which we can save on costs.

To meet the goals of the Paris Agreement, there is a need to go from ad hoc adaptation to integrated adaptation, and from standalone projects to adaptation portfolios that have synergies with other efforts, such as the sustainable development goals (SDGs). Transformative change is needed. University and technical education is crucial for capacity building for mainstreaming resilience and climate change adaptation as well as gender considerations.

STRUCTURE OF THE DIALOGUE

Session I: Case studies from APN Low Carbon Development Initiatives framework

- ❖ Keynote speech: Toward a better water-energy-carbon nexus in Asian cities
Dr. Shobhakar Dhakal, Asian Institute of Technology, Thailand
- ❖ Rapid talk: Scaling up low carbon technology on construction and infrastructure sector
Ms. Pratibha Ruth Caleb, Development Alternatives, India
- ❖ Rapid talk: Low carbon infrastructure investment—the case of Indonesia
Professor Rizaldi Boer, Bogor Agricultural University, Indonesia
- ❖ Policy talk: Integrating scientific knowledge into policy in Asian Cities—the case of Bangkok
Dr. Monthip Sriratana Tabucanon, NRCT, Thailand
- ❖ Policy Talk: Low carbon development in cities for a sustainable and resilient South Asia
Mr. Keshav Kumar Jha, ICLEI South Asia, India

Games: Planning and decision-making for climate resilience

Café Kiosk 1

Science-policy interface	Knowledge management	Communication and networking
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Session II: Case studies from APN related to low carbon development and climate change

- ❖ Rapid Talk: Role of bioenergy in enhancing energy, food and ecosystem sustainability
Dr. Lilibeth Acosta Michlik, UPLB, Philippines
- ❖ Rapid Talk: Strengthening community responses in REDD+ policy
Mr. Tai Keo, Non-Timber Forest Products Exchange Programme, Cambodia
- ❖ Rapid Talk: Identification of best agricultural practices with better GHG benefits in salinity-affected areas in South Asia
Dr. Erandathie Lokupitiya, University of Colombo, Sri Lanka
- ❖ Policy Talk: Designing, developing and managing climate change information and knowledge management systems in Cambodia
Ms. Vichet Ratha Khlok, Department of Climate Change, Cambodia
- ❖ Policy Talk: Importance of gender equity in low carbon development for a sustainable Asia
Mr. Marvin Lagoner, ICLEI Southeast Asia, Philippines

Café Kiosk 2

Science-policy interface	Knowledge management	Communication and networking
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Session III: Adaptation and mitigation under the Paris Agreement

- ❖ Rapid talk: Integrated, resilience-based planning for mitigation and adaptation in Asia
Dr. Ayyoob Sharifi, NIES, Japan
- ❖ Rapid talk: Climate smart agriculture: Using best practices for mitigation and adaptation in Asia
Ms. Nuzba Shaheen GCISC, Pakistan
- ❖ Capacity building under the Paris Agreement: ADAPT Asia’s future activities
Dr. Keith Bettinger, ADAPT Asia
- ❖ Climate change technology transfer and capacity building for adaptation and mitigation under the Paris Agreement
Dr. Sudhir Sharma, UNEP-ROAP, Thailand
- ❖ Climate change technology transfer and capacity building for adaptation and mitigation under the Paris Agreement: Experience from India
Dr. Ajay Raghava, Ministry of Environment, Forests and Climate Change, Government of India, India

Café Kiosk 3

Science-policy interface	Knowledge management	Communication and networking
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TAKE-HOME MESSAGES: THE SCIENCE-POLICY INTERFACE

The role of science in informing policy

- ❖ Science can provide evidence- and objective-based results as inputs for informed policymaking.
- ❖ Scenario-based research (such as simulation models) can help policymakers better understand the consequences of alternative interventions, and thus help make the optimal choice.
- ❖ Science can help develop and apply bottom-up participatory approaches and techniques to ensure that the local context is reflected in policy formulation.
- ❖ Policymaking on highly technical issues (such as water balance management and measurement of water footprints) requires in-depth knowledge input by researchers who specialize in relevant subject matters.
- ❖ Scientists can help policymakers by providing evidence that transitioning to a green economy can benefit the economy, society and the environment.
- ❖ Interdisciplinary science plays a key role in informing policies that would allow for increased economic growth, and ensure food, water and energy security in a sustainable manner.



Panel discussion on case studies from APN Low Carbon Initiatives Framework.

Gaps to address for an effective science-policy interface

- ❖ Barriers for the uptake of science-based evidence by the decision-making process include:
 - ❖ Insufficient ability to effectively share knowledge
 - ❖ Lack of data, gaps in data requirements
 - ❖ The presence of uncertainty factors
- ❖ Other gaps identified are:
 - ❖ Lack of funding and technology
 - ❖ Differing policy priorities
 - ❖ Social-cultural gaps across sub-national and national boundaries
 - ❖ Lack of common communication strategies or platforms
 - ❖ Reluctance of involving the press

Recommendations for a stronger science-policy-society interface

- ❖ Include scientists in the policymaking process related to activities that contribute to targets set by individual countries' Nationally Determined Contributions (NDCs) under the Paris Agreement.
- ❖ Strengthen international cooperation for achieving conditional targets under countries' NDCs, and sharing experiences and best practices among policymakers and scientists.
- ❖ Recognize the importance of negotiators in the science-policy interface at the global level.
- ❖ Ensure an equitable role for women in the climate arena, including in decision-making processes at all levels.
- ❖ Involve the public and other stakeholders at the local level to promote understanding of the consequences of inaction or late action.
- ❖ Ensure long-term capacity building for both scientists and policymakers to understand their respective roles in dealing with climate change.
- ❖ Provide capacity building on technology transfer, including its uptake, innovation and renovation, by taking into account the different stages of development in Asian countries.

“Countries need to ensure an equitable role for women in the climate arena, including in decision-making processes at all levels.”

TAKE-HOME MESSAGES: KNOWLEDGE MANAGEMENT

Recommendations for effective knowledge management

Bioenergy

- ❖ Understand the various stakeholders involved and their respective roles.
- ❖ Understand the potential domestic demand for bioenergy.
- ❖ Understand the market potential for bioenergy.

REDD+

- ❖ Clarify issues of land tenure and access.
- ❖ Identify institutions engaged and ensure diplomatic conflict resolution.
- ❖ Understand the different situations in individual countries, and avoid one-size-fits-all approaches.
- ❖ Develop a free prior informed consent mechanism and a sufficient grievance mechanism to ensure community support.



Policy-makers in the Dialogue

Climate-Smart Agriculture

- ❖ Collect knowledge from pilot projects and experiments, and effectively share this with communities.
- ❖ Involve agriculture extension services to link projects and raise awareness among stakeholders.
- ❖ Think holistically from a watershed perspective using socioeconomic and interdisciplinary methods.
- ❖ Include information on agriculture crop insurance and risk management practices in knowledge management systems.

Others

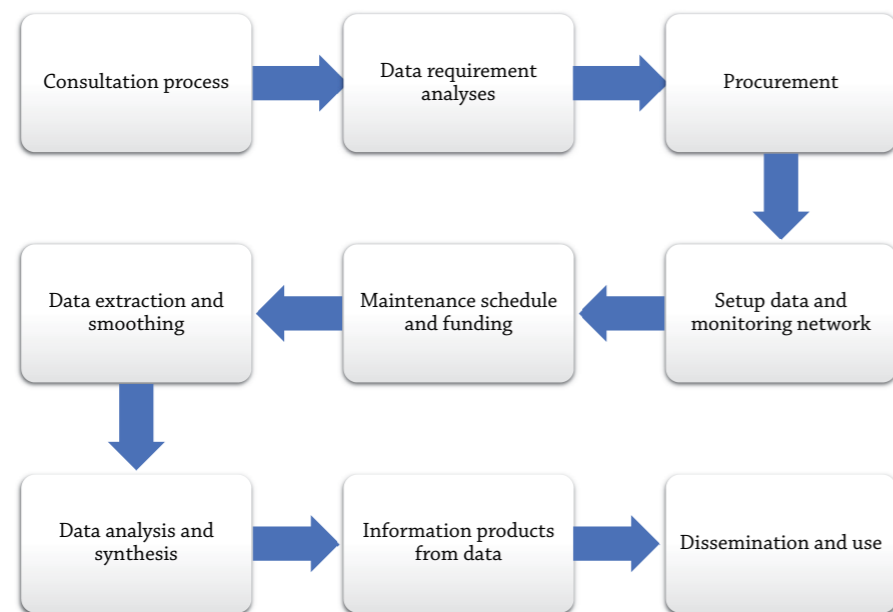
- ❖ Replicate information across sectors and themes to allow for greater exchange of knowledge and ideas.
- ❖ Stakeholder mapping is crucial to enabling a catalytic responses to climate events that extend support to vulnerable people and systems. Stakeholders need to be categorized by either a system-wise or sector-wise approach to ensure the planning process leads to expected results.
- ❖ Develop harmonized standards to allow sharing of data across disciplines.

“Stakeholder mapping is crucial to enabling catalytic responses to climate events that extend support to vulnerable people and systems.”

TAKE-HOME MESSAGES: COMMUNICATION AND NETWORKING

Effectively communicating uncertainties by developing scenarios

- ❖ Providing scenarios are crucial to the planning and assessment process.
- ❖ Standardized protocols for developing scenarios should be in place, so that indicators can be developed and reported systematically.
- ❖ The methodologies of scenario development, as well as capabilities and constraints or limitations of models should be communicated transparently to all stakeholders. This creates an atmosphere of trust and confidence among all stakeholders.
- ❖ When developing scenarios, it is crucial to:
 - ❖ Provide evidence-based, real-life scenarios for decision-makers and policy planners;
 - ❖ Ensure a participatory approach that involves all stakeholders;
 - ❖ Consider more robust, no-regret scenarios in planning processes;
 - ❖ Consider and communicate the co-benefits when developing scenarios for planning; and
 - ❖ Emphasize the rising costs of in-action, something we can no longer afford to avoid.



Box: A toolkit for setting up an information system for urban resilience and sustainability

Recommendations for effective communication

- ❖ Ensure clear, reliable and bias-free information developed in a language appropriate to the target audience, avoiding jargon.
- ❖ Transparency in communication and advocacy helps overcome resistance at the community level.
- ❖ Communication and networking should go hand in hand to increase the effectiveness and uptake of recommendations developed through a co-generation process.
- ❖ Communication at the local level should take innovative forms, including cultural events.
- ❖ Scientists need to acquire the skillset needed to communicate effectively to policymakers and relevant stakeholders.

“Communication and networking should go hand in hand to increase the effectiveness and uptake of recommendations developed through a co-generation process.”

Key dimensions of communication strategies

Stakeholders in knowledge generation	<ul style="list-style-type: none"> ❖ Involve stakeholders from the beginning of knowledge generation ❖ Work with decision-makers beyond the outputs of research ❖ Involve networking organizations to facilitate implementation
Audience	<ul style="list-style-type: none"> ❖ Policymakers ❖ Journalists, the press ❖ Private sector ❖ Communities, non-professionals, end-users
Communication tools	<ul style="list-style-type: none"> ❖ Publications <ul style="list-style-type: none"> ❖ White papers ❖ Policy briefs ❖ Infographics ❖ Mass media ❖ Press releases ❖ Social media
Context of communication	<ul style="list-style-type: none"> ❖ Bottom-up ❖ Top-down ❖ Science-science ❖ Science-policy ❖ Policy-science ❖ Science-community ❖ Policy-community ❖ Globally: <ul style="list-style-type: none"> ❖ South-South, ❖ North-South, and ❖ South-North

FUTURE NEEDS FOR RESEARCH AND CAPACITY BUILDING

Research related to low carbon development and adaptation

- ❖ Upscaling low carbon technologies—generating new knowledge through models and materials investigation
- ❖ Investigating different policies in Asia according to national-level conditions as related to:
 - ❖ Water-energy-carbon nexus in Asia
 - ❖ Food-energy-ecosystems nexus in Asia
- ❖ Role of cities in determining the future of water and energy resources and combating climate change
- ❖ The water-energy nexus in resilience-based planning for mitigation and adaptation in Asia: Gaps and challenges
- ❖ Scientific investigation on the impacts of bioenergy on biodiversity and ecosystem services, and how these impacts translate into decline in economic growth
- ❖ Identifying local technologies appropriate for production of biofuels at the farm level or for farmers’ cooperatives

Capacity building related to low carbon development and adaptation

- ❖ Operationalizing a nexus for capacity building between governments and academia
- ❖ Promoting and transferring best practices in water-energy nexus in cities across Asia
- ❖ Developing gender knowledge products and tools to improve awareness on gender equity in climate change
- ❖ Gender mainstreaming in planning and policymaking through knowledge generation and capacity development

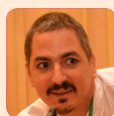


Knowledge management Café Kiosk.

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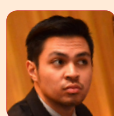
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The Asia-Pacific Network for Global Change Research (APN) is a network of 22 member country governments that promotes global change research in the region, increases developing country involvement in that research, and strengthens interactions between the science community and policy makers.

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