

## **How Science Helps Implement Effective Policies?**

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### **Summary of APN Side Event at the Regional Forum on Climate Change**

During the APN side event at Regional Forum on Climate Change (RFCC) which was held at the Asian Institute of Technology (AIT) Conference Center in Thailand on 2 July 2015, six APN project leaders provided evidences on how science has contributed to better understand climate change issues and assist policy planning, implementation and evaluation.



Prof. Shobhakar Dhakal shared the outcome of his analysis conducted with the aim to compare Bangkok, New Delhi and Tokyo to understand the nexus between water, energy and carbon (WEC). By comparing the energy footprint of three cities, he concluded that total energy carbon foot print depends on the nature of water sources, distances of distribution, nature/extent of infrastructure, choice of technologies, losses and management practices. Therefore, better understanding of drivers and quantification of energy/carbon footprint will assist policy makers to implement effective policies to address energy and water security issues.

Dr. Prabir Patra elaborated sources and sinks of carbon dioxide and methane due to anthropogenic and natural biosphere activities in the Southeast Asia region. The project result shows that methane emission due to anthropogenic activities has increased in the region at the rate of 7 Tg-CH<sub>4</sub>/yr during the period of 1990-2012 and it has larger warming potential compare to carbon dioxide. Therefore, methane emission needed to be factored in when implementing emission mitigation policies. However to provide more solid evidence on future implication of GHG emission, there is a need for precise measurements of GHG emission at the local level. Networking of atmospheric and land surface researchers is required to exchange information on emission inventories as well as best model setups for a better understanding of regional scenarios.

Dr. Wijitbusaba Marome shared the outcome of case studies that were conducted in Manila and Bangkok which aimed to identify adaptation measures carried out by public and private stakeholders to address heavy precipitation. The outcome of the case studies show that adaptation measures, driven by both public and private stakeholders, run in a short- to medium-term and are recurrent in nature. Thus, bearing high cost compare to long-term adaptation measures. To overcome this issue, the study suggests that Manila and Bangkok need cost-effective and long-term adaptation measures as well as close coordination among civic entities engaged in the adaptation.

Experiences on community-based site specific climate adaptation strategies in upland communities in Southeast Asia were shared by Ms. Leila Landicho. She emphasised that establishment of on-site demonstration farms offer potentials and opportunities for the promotion of appropriate climate change adaptation strategies. Enhancing collaboration between farmers, local government units, and the state colleges and universities at local area helps to identify the local level issues and address the issues promptly and effectively.



Dr. Pedro Fidelman shared outcomes of comparative analysis of existing rules and norms in Cambodia (Peam Krasaop Wildlife Sanctuary) and Viet Nam (Tam Giang Lagoon) to facilitate adaptive capacity in coastal resources management. By comparing variety, autonomy, and governance structures of two sites, he concluded that decentralised approaches help to promote adaptive capacities. Path dependence, power struggles, complexity of existing rules and norms and the lack of involvement from all responsible actors have reduced adaptive capacities of coastal communities.

Providing short intervention to the APN side event, Dr. Fredolin Tangang pointed the importance of having high resolution climate data to simulate regional climate. Furthermore, he noted that strong regional collaboration among 13 countries provided advantages to his project through enabling to consider multiple models simultaneously in a cost-effective manner.

At the discussion session, project leaders agreed that there is a large number of scientific studies that aim at understanding global change issues. However, more local and regional level scientific studies are needed to be conducted to address unique issues at both local and regional levels.

### **Capacity Development Session**

APN presented outcomes of the APN CAPaBLE programme at the LoCARNet side event on “Capacity development to strengthen/reinforce knowledge base towards realising low-carbon societies in Asia” at the RFCC. The evaluation results of 60 CAPaBLE projects of APN emphasised the need of more awareness raising programmes on global change issues at the community level. Furthermore, evaluation results show that capacity development initiatives designed and implemented by local actors are effective. Therefore, to achieve low carbon society, local actors need to play an active role in establishing unique capacity development approaches to address local level issues.

All presenters agreed that there are adequate numbers of initiatives to address the capacity development need in South East Asia region. These initiatives are organised by various organisations and some of the organisations share common interests. Therefore, collaboration among those institutions may help build more effective capacity development approaches.