

# Capacity building workshop on low carbon development policies for Cambodia, Lao PDR, and Myanmar

Cambodian Low-Carbon Policy and Research Workshop

Synthesis Report  
-Key findings from the dialogue-



**25-26 February 2014**  
**Phnom Penh, Cambodia**



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## Preface

Cambodia is one of the Asia and Pacific countries experiencing rapid economic growth. Cambodia, like the rest of the global community, is becoming increasingly aware that climate change is caused by intensive human industrial activities and unsustainable economic development. It impacts not only the present generation but also future generations who will need to adapt to and mitigate the effects of volatile changes in the climate.

Having understood the consequences of such impacts, “Capacity building workshop on low carbon development policies for Cambodia, Lao PDR, and Myanmar” was held on 25-26 February 2014 in Phnom Penh, Cambodia, co-organised by the Cambodia’s Ministry of Environment and the Institute for Global Environmental Strategies (IGES) in its capacity as the secretariat of the Low Carbon Asia Research Network (LoCARNet), in cooperation with the National Institute for Environmental Studies (NIES), Japan, and the Kyoto University (KU), and supported by Ministry of the Environment, Japan. The objectives of this workshop were to initiate and facilitate discussion between policy-makers and research communities in Cambodia with broad disciplinary knowledge, tools and methods for integration into practical policy process towards a sustainable future; to strengthen research capacity not only in Cambodia, but also in other Asian countries so they can continue to make steady progress in developing low-carbon plans and strategies based on a green economy through knowledge-sharing networks for exchanging wisdom; and to encourage Cambodia and neighbouring countries to take part in the network in order to promote further collaboration towards low-carbon growth.

This synthesis report summarises key findings from the dialogue, which covered such diverse issues as an interdisciplinary approach to low-carbon development and collaboration between the policy and research communities. The key messages in this report identify the important issues on which to focus and are designed to assist scientists in developing a future research agenda and help policymakers to formulate policies based on scientific evidence where possible. The issues covered in this report are expected to be of great interest to policymakers and researchers in making the transition toward sustainable low-carbon development.

We would like to take this opportunity to convey our sincere gratitude to H.E. Say Samal, Minister of Environment of the Royal Kingdom of Cambodia, for his ongoing committed leadership and policy guidance to ensure prosperous national growth integrating environmental sustainability into the national development agenda in order to conserve the environment, reduce poverty and increase green job opportunities, and for his holistic envisagement of the environment and support for sustainable low-carbon development in Cambodia. We would also like to express our gratitude to the responsible senior management and Climate Change Department officers of the Cambodia’s Ministry of Environment, other key stakeholders not only from Cambodia but also from neighbouring countries in Asia, and the staff of IGES/NIES/KU for their considerable efforts, facilitation and contributions in planning and preparing the workshop. We would also like to express our appreciation to the workshop’s speakers and participants for their active participation and discussion. We will further continue our joint efforts to create a significant forum for collaboration toward sustainable low-carbon development among Cambodia, Japan and other Asian countries.

**Shuzo Nishioka**  
Secretary General  
LCS-RNet Secretariat  
Institute for Global Environmental Strategies  
Japan

**H.E. Say Samal**  
Minister of Environment  
Cambodia

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## Acknowledgement

This Synthesis Report draws together findings from the Cambodian Low-carbon Policy and Research Workshop. The workshop took place as a meeting, entitled Capacity building workshop on low-carbon development policies for Cambodia, Lao PDR and Myanmar, on 25-26 February 2014, co-organised by Ministry of the Environment and the Institute for Global Environmental Strategies (IGES) in cooperation with Kyoto University (KU) and the National Institute for Environmental Studies (NIES), and supported by Ministry of the Environment, Japan. The capacity building workshop took place at the Himawari Hotel, Phnom Penh, Cambodia and was opened by H.E. Sin Khandy, Under Secretary of State, the Ministry of Environment of Cambodia with participants from line ministries, academia, non-governmental organisations (NGOs), the Japanese International Cooperation Agency (JICA), research institutes and other stakeholders. The objective of the workshop was to explore the possibility of collaboration between Cambodian and Japanese research institutes in drawing up a low-carbon development plan for Cambodia.

The objectives of the workshop were;

- to initiate and facilitate discussion between policy-makers and research communities in Cambodia with broad disciplinary knowledge, tools and methods for integration into practical policy process towards a sustainable future;
- to strengthen research capacity in not only Cambodia, but also other Asian countries so they can continue to make steady progress in developing low-carbon plans and strategies based on a green economy through knowledge sharing networks for exchanging wisdom; and
- to encourage Cambodia, and neighbouring countries to take part in the network in order to promote further collaboration towards low-carbon growth.

Seventy one researchers and policymakers participated in the workshop to discuss these issues.

Taking this opportunity, I would like to express my profound gratitude to all speakers and participants from Cambodia, other ASEAN countries, academia and research institutes for their contributions to the meeting. I would also like to add my sincere appreciation to Dr. Tin Ponlok, Deputy Director General, the Ministry of Environment, for his guidance and support in the organisation of this workshop. Special gratitude goes to Mr. Sum Thy, Director, Climate Change Department, and Mr. Hak Mao, Chief of Vulnerability and Adaptation Office, Climate Change Department, the Ministry of Environment for their considerable efforts to coordinate this meeting.

Shuzo Nishioka



Secretary General, LoCARNet Secretariat  
Institute for Global Environmental Strategies

## Key Findings

Countries in Asia continue to make steady progress in developing low-carbon plans and strategies based on a green economy. The Low Carbon Asia Research Network, LoCARNet, has supported the development planning and strategy building by researchers and research institutes in various Asian countries. This workshop indicated that Asian countries have been proactively involved in climate change policy and measures towards stabilisation of the climate. The four objectives of the workshop were declared in the opening session. These were 1) to share information about climate change related policy achievement and activities among Cambodia and other Asian countries; 2) to coordinate and formulate low-carbon development policy by giving clear information on research results and scientific evidence to decision-makers; 3) to recognise the importance of tackling climate change issues at the early stage by using multi-modeling tools such as ExSS snap shot and the Agriculture, Forestry and Other Land Use (AFOLU) activity model to calculate quantitatively mitigation potentials and show the policy options to promote and encourage low-carbon development including energy and non-energy sectors; and 4) to identify diverse opinions and perspectives, and come to an agreement based on these diverse opinions.

Participants at this workshop included Climate Change Department officers from the Ministry of Environment Cambodia, officers from other Ministries, representatives from research institutions related to Ministries (such as the Ministry of Agriculture, Forestry and Fisheries), from universities and from private research institutions. Heated discussions took place among this broad range of participants, and stakeholders used the opportunity to take the next step on the path to further development of scientific and participatory decision-making.

### ○ **Enhancement of participation process for climate change policy planning**

Cambodia has mainstreamed climate change into its national strategic development plan, identifying priority areas and activities needed to develop a system and society that shows reliance against climate risks in the long term. The Cambodia Climate Change Strategic Plan (CCCSP) was approved and as the next step, a full-scale national climate change programme, action plan, financing arrangement and coordination mechanism need to be prepared.

### ○ **Participation from various stakeholders is one of the key elements to endorse climate change policy**

Cambodia has made progress in setting up the CCCSP by organising an inception workshop, dialogues and consultation through formulating the participation process of various stakeholders at various levels such as line ministries, NGOs, academia and research institutions, and the private sector. Additional universities and research institutions have been involved in climate change projects to accumulate knowledge and develop expertise which can contribute to the national policy-making process.

## ○ **Role of quantitative analysis for policymaking process**

Quantitative analysis is a tool to identify mitigation options and to promote discussions amongst stakeholders for decision-making, which helps a country make further advanced steps in policymaking and its implementation. One of the most important elements when making concrete policy measures and building consensus is to conduct quantitative analysis and describe estimated figures. Since sustainable development includes economy, environment, cultural and social aspects, integrated analysis is needed to choose cost-effective and appropriate mitigation policy options. In the policymaking process, every action is divided into measures and then developed into specific projects. Quantitative analysis also helps to enhance the consultation process and focal group discussions. Key elements for success in policymaking and quantitative analysis are comprehensive, consistent, flexible and detailed.

## ○ **Information-sharing and discussion can enhance the capacity to achieve low-carbon development**

Knowledge-sharing and networking can promote four particular issues such as sharing information about policy achievement and activities related to Cambodia and Myanmar, coordinating low-carbon development policy by informing decision-makers, and promoting and encouraging low-carbon development policy to recognise the importance of using multi-models to calculate quantity potential and show policy options, by identifying a diversity of opinions. There also needs to be identification and agreement on a diverse range of opinions and perspectives.

## ○ **An emerging Asia is key to stabilising the global climate**

Asia can lead the way, by blazing a new trail in low-carbon development, to form a new global socio-economic order as the world faces ever more severe climate and nature pressures in the 21st century. As indicated in the IPCC Fifth Assessment report, it is becoming an increasingly urgent task to stabilise our climate. It is therefore vital that both mitigation of GHG emissions and adaptation to on-going climate change impacts should be mainstreamed in the socio-economic development policies of every country.

## ○ **Policies and knowledge towards realising low-carbon development**

To facilitate science-based policymaking, it is necessary not only to deepen knowledge related to low-carbon development policies, but also to sort out and distribute such knowledge widely. Additionally, the most important thing is for knowledge to be turned into policies in an appropriate manner by promoting close collaboration with policymakers, and then to translate it into actions.

## ○ **Regional actions and cooperation**

One issue facing this region is that there have been insufficient efforts to nurture a community of researchers who support the drafting of policies on low-carbon development in the Asian region. The participants at the workshop all recognised that, in view of the importance of this region in the reduction of greenhouse gas emissions, it is important to nurture and strengthen the research community, in keeping with special regional characteristics here, as well as considering the commons and differences in each country. LoCARNet supports science-based policymaking and capacity development in this region. It will be essential for LoCARNet to focus on fostering regional research capacity in collaboration with research communities and policymakers in each country in Asia.



## Synthesis of sessions

### SESSION 1: Updating climate change related policies and activities in Cambodia

[Chair] Dr. Shuzo Nishioka, Institute for Global Environmental Strategies (IGES), Japan

#### Speakers:

Mr. Ma Chan Sethea, Deputy Director, Ministry of Environment, Cambodia

Ms. Khlok Vichetratha, Chief of Office, Ministry of Environment, Cambodia

### What makes up the progress and uniqueness of Cambodian climate change policymaking?

Cambodia developed the Cambodia Climate Change Strategic Plan (CCCSP) as part of the process to mainstream climate change into its national development plan from 2009 to 2013. Looking towards 2020, Cambodia is planning to incorporate climate change into its national strategic development plan for 2014-2018. The National Strategic Development Plan 2009-2013 was updated in 2010, and it emphasises that ‘to effectively deal with the implications of climate change, the capacity of RGC (Royal Government of Cambodia) institutions needs to be strengthened to identify and develop a strategy to deal with the anticipated impact of the climate change, and strengthening disaster management capabilities. Furthermore, in the Second National Communication of Cambodia (draft), the long-term approach referred to ‘efforts (that) should be directed to increase the resilience of the system to future climate risks through the revitalization of long term policies, and planning and redesigning long-life infrastructure to be more resilient, taking into account climate change’.

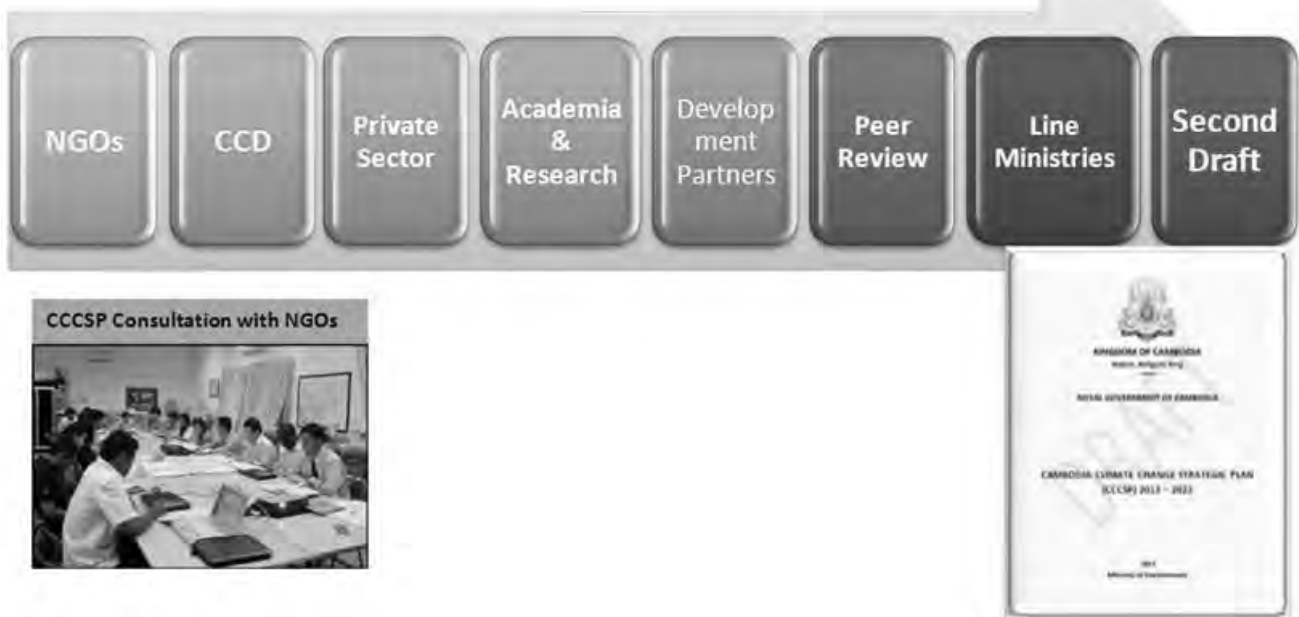
As such, climate policy in Cambodia is in the very early stages. Cambodia launched its first-ever climate strategic blueprint, the Cambodia Climate Change Strategic Plan (CCCSP 2014-2023), in November 2013 aimed at building the country’s resilience to deal with climate-induced natural disasters and promoting low-carbon development in the future.

Notable progress of the CCCSP is that it was made through an exchange of opinions to promote climate change policy planning amongst various stakeholders such as governments, NGOs, research institutions and international partners. As part of its policymaking process, Cambodia initiated a participatory approach in the process of development of CCCSP. Through the participation process, priority areas were identified in each ministry. The scope of each priority area was defined, and technical focus was then determined. Line ministries and development partners were involved in the inception of the workshops. In this way, Cambodia formulated a process to set up workshops to endorse the climate policy.

Promoting a serious discussion between research institutions and government is important in the future, making it more necessary to construct a system to promote research. This can lead to “the realisation of Unity in Diversity”. The Cambodian path to low-carbon development can be further developed and be clarified to indicate how to take the next steps on that path with inputs from the research community.

# CCCSP Development Process

## 3. Consultation & Review



Source: Presentation by Mr. Ma Chan Sethea, Deputy Director of Climate Change Department, Ministry of Environment, Cambodia



## SESSION 2: International cooperation and engagement on LCS

[Chair] Dr. Junichi Fujino, National Institute for Environmental Studies (NIES), Japan

### Speakers:

Dr. Khin Lay Swe, Rtd. Pro-Rector, EC, Ecosystem Conservation and Community Development Initiatives (ECCDI), Myanmar

Dr. Jakkaniit Kananurak, Director of Capacity Building and Outreach Office, Thailand Greenhouse Gas Management Organization (TGO), Thailand

### How can least developed countries achieve low-carbon development?

In countries like Cambodia and Myanmar, the situation is different from that in other Asian countries such as Thailand and Malaysia due to differing development stages. Thus it is necessary for each country to build its own unique low-carbon development path suitable for its own situation. On the current development path, Myanmar is socially, economically and politically in a rapid transition stage. The National Economy Development relies highly on exploitation of natural resources such as mining, oil and gas, and forest resources. The situation is similar in Cambodia.

Thus, early action is needed to mainstream environmental conservation into Development Planning to achieve ecologically sustainable development and increase investment from natural resource based economy to an industrial based one. The development path does not necessarily rely on energy. The uniqueness of the countries lies in their rich natural resources, with renewable energy already having been used as an independent energy system in rural areas. In fact, energy use in Myanmar is dependent on renewable energy. Energy sources from biomass make up the largest part accounting for 63.86% of energy sources, with potential energy sources being wind, solar, geothermal, bio-energy gasification such as biogas and ethanol. Currently the sources of electricity generation are from Hydro (56%), gas (36%) and coal diesel.

In addition, for the future development of the country, schemes such as REDD+ would play an important role by giving economic value to natural resources. In order to enforce these mechanisms and turn them into actions, knowledge-sharing in Asia is also necessary as it can provide inputs to research, as well as into policy implementation.

South-south cooperation and regional and international cooperation can enhance knowledge-sharing among Asian countries. In addition, because countries in the region are at the same economic stage and are close in geographic location, researchers in each country can gather their research results, carry out “knowledge-sharing” and actively promote a system of mutual learning so as to facilitate south-south cooperation.

Establishment of a knowledge-sharing platform and training centre has targeted policymakers and researchers who engage in climate change related policies in Asia. In Thailand, the Thailand Climate Change International Technical and Training Center (CICT) has been established not only as a place for training on climate policy in the ASEAN region but also a place to exchange knowledge so that climate policy can be advanced by bringing in new knowledge collected by researchers. It allows systematic and seamless sharing of knowledge among research institutions, governments and NGOs. The boundaries between policy and research have thus become seamless.

## Sustainable Development of Energy Use

The Ministry of Electric Power is making cooperation with Thailand and India on BIMSTEC Trans Power Exchange and Development: Myanmar has been distributing natural gas to Thailand through Tanintharyi Offshore since 1998 and Motama Offshore 2000.

### Auk Pyun Wa Village, Ngapudaw Tsp, Ayeyarwaddy Division

**Solar Lighting system** - 85 Wp Suntech Solar Panel (20 Nos.); -  
Eco Lamp LED Lantern (160 Nos.)- 60 Wp  
**Suntech Solar Panel** - 135 HH

### Solar Power in Myanmar

#### Solar Power Station



#### Solar Water Pumping Station

Source: Presentation by Khin Lay Swe, National GHG Inventory Team, Ecosystem Conservation and Community Development Initiative, Myanmar

### SESSION 3: Establishment of LCS-RNet (researchers' community on LCD) in Cambodia

[Chair] Dr. Tin Ponlok, Ministry of Environment, Cambodia

#### Speakers:

Mr. Kok Sothea, Royal University of Phnom Penh (RUPP), Cambodia

Mr. Lonn Pichdara, Cambodia Development Resource Institute (CDRI), Cambodia

Mr. Hak Mao, Kyoto University, Japan

### What are the capacities and progresses of climate change related research in Cambodia?

Cambodia realised that LCS will serve as a principle and strategy to turn the challenges of today into opportunities, so that Cambodia can make headway towards sustainable economic growth and environmental sustainability. Low-carbon development refers to the development of an economy which has minimal output of GHG emissions into the atmosphere. A low-carbon research network is a tool to promote and encourage dialogue and close cooperation among policymakers, researchers and the private sector. Government agencies and academia, research institutes, NGOs and other stakeholders can also work closely together. In Cambodia and Myanmar, there is a need for research and integration of policy and research towards low-carbon societies.

On the other hand, in order to maintain this momentum, research capacity development of these countries is also crucial. Along with educational development in academic areas in Cambodia, progressive achievements in the curriculum have been made in the past few years. For instance, Royal University of Phnom Penh has initiated two new departments: the Faculty of Engineering and Technology and the Faculty of Development Studies. Currently there is also a discussion in Cambodia on including climate change issues in higher education.

There is an increasing trend of research activities in the area of energy use and energy conservation funded by international organisations. Programmes to enhance the capacity of universities have also been initiated with international financial support in the area of climate change and energy development. In addition, programmes have been created on development of awareness-raising materials, energy labelling and demonstration activities.

Furthermore, Cambodia Development Resource Institute (CDRI), a private research institution, has made policy recommendations on environmental issues including the introduction of environment regulations and incentives, introduction of energy efficiency audits and the promotion of access to finance for energy efficiency measures through publicising analytical result of economic benefits.

It is essential to establish and enhance a research network in Cambodia and carry out capacity building at training centres such as CICT and regional/international research networks such as Low Carbon Asia Research Network (LoCARNet). This can result in mobilization of resources and low-carbon research. Promotion of LCS and sustainable development can also help capacity building in Cambodia.

**Table 1: Parent ministries and numbers of higher education**

No	Parent Ministries	Number of higher education institutions	
		Public	Private
1	Ministry of Education, Youth and Sport	9	52
2	Ministry of Labour and Vocational Training	9	10
3	Ministry of National Defence	5	0
4	Ministry of Agriculture, Forestry and Fisheries	3	0
5	Ministry of Religious Affairs	2	0
6	Ministry of Health	2	0
7	Ministry of Interior	2	0
8	Ministry of Culture and Fine Arts	1	0
9	Ministry of Economy and Finance	1	0
10	Ministry of Public Works and Transportation	1	0
11	Ministry of Social Affairs, Veterans and Youth Rehabilitation	1	0
12	Ministry of Industry, Mines and Energy	1	0
13	National Bank of Cambodia	1	0
14	Office of the Council of Ministers	1	0
	<b>Total</b>	<b>39</b>	<b>62</b>

Source: MOEYS 2012 & Sen and Ros. 2013, Hang 2014

Source: Presentation by Lonn Pichdara, Karen Ellis, Jodie Keane and Alberto Lemma

## SESSION 4: Overview of Low-carbon development and the application of ExSS model in Cambodia

[Chair] Prof. Ho Chin Siong, Universiti Teknologi Malaysia (UTM), Malaysia

### Speakers:

Prof. Ho Chin Siong, Universiti Teknologi Malaysia (UTM), Malaysia

Dr. Junichi Fujino, National Institute for Environmental Studies (NIES), Japan

Mr. Hak Mao, Kyoto University, Japan

### What are the roles of quantitative analysis in the policymaking process?

As the creation of long-term vision, the quantitative analysis of carbon development path has started in Cambodia. By showing how it is quantitatively reducing GHG, a country can set up opportunities whereby researchers and policymakers can engage in discussion and make effective policy-making for feasible low-carbon development.

ExSS modelling exercise is the first step in this process, and we now stand on the starting line of the path to scientific quantification of low-carbon. In the future, it is expected that researchers will cooperate in the development of the modelling analysis and will set up a path to low-carbon development with scientific inputs in Cambodia.

Creating a scenario towards 2020 or 2050 requires a target and activities. It is also necessary to identify potential mitigation options. As an analytical tool for policymaking, simulation analysis is used for target setting. Once the target and action plans are set, they can be connected to the national development plan. Simulation analysis can measure how much money is needed to implement or install a certain technology. The process of scenario-making needs to take into account issues such as social problems, as well as economic issues of jobs and employment, and energy issues such as recovering energy demand and CO2 emissions.

The next question is how those plans and strategies can be expressed quantitatively. An important step is how to turn the identified mitigation options into actions, and thus generate co-benefits. Green-focused agenda covers LCS, and then other necessary components need to be set. At the same time, the involvement of various stakeholders is important to promote behavioural change. In this way, Cambodia has implemented good coordination and comprehensive climate change strategies making process.

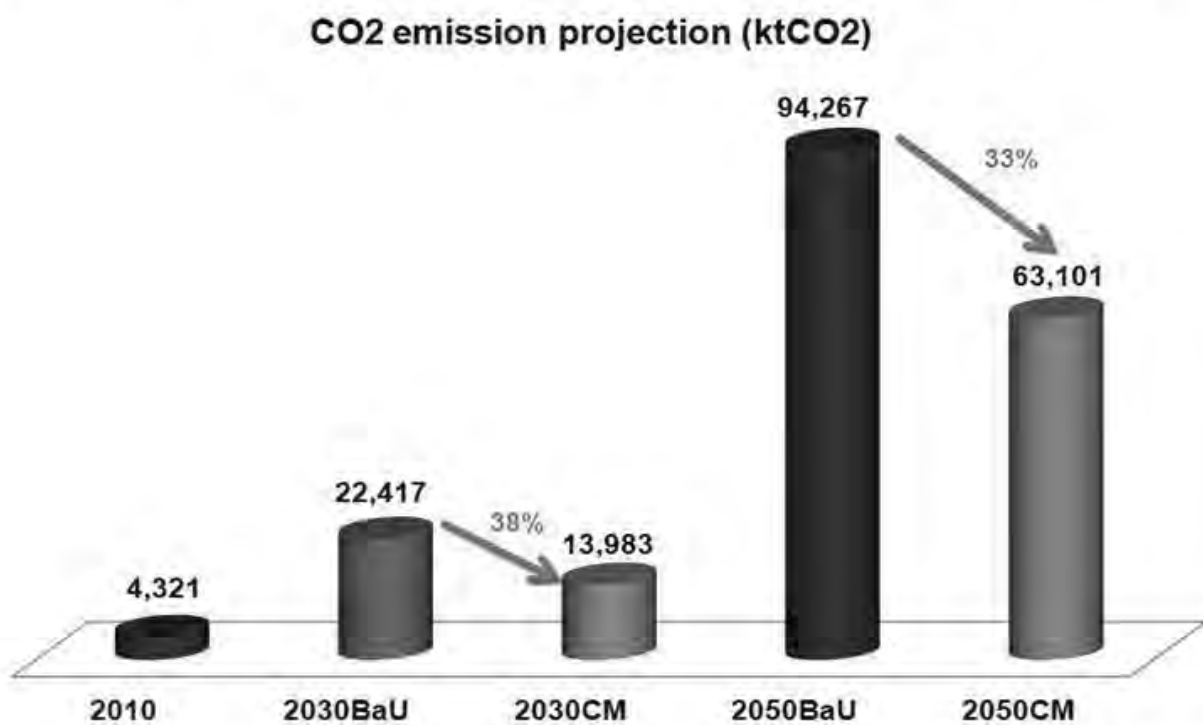
In further development of scenario analysis in a country, once national target and actions are set and the potentials are identified, analysis should be narrowed down to the city level. Implementation of sustainable development is a broad issue, so this must also be narrowed down to low-carbon initiatives at the city level. In this sense, to reduce CO2 emissions, cities are key. Many activities can be done at the city level. Cities can easily implement CO2 reductions and they can also formulate economy and protect ecology. As shown in the case study of Iskandar, Malaysia, the use of ExSS and other tools to create low-carbon plans should be work carried out by the country. The work should reflect the environment, policy and the position of the country.

Progress in policy and research activity in Cambodia should avoid pervasive economic development with unwanted impacts, and to this end, one researcher in Cambodia developed a Low Carbon Development Plan towards 2050 in 2013 by proposing four policies and 12 strategies. To calculate how much each strategy can reduce GHG emissions, a study on a systematic and quantitative design was made using the Extended Snap Shot (ExSS) tool. The first phase of this study focused on CO2 emissions from the energy and transport sector. Low-carbon actions were identified. The result of the first attempt at quantitative analysis of preliminary estimation of CO2 emissions from energy and transport sector showed that economic development will reach upper middle income countries by 2030 and developed countries by 2050. For the analysis, it used existing policies and policy targets such as 100% of villages electrified by 2020 using national grid, 70% of households electrified by 2030 using national grid, and coal consumption increased from 3% in 2010 to 30.8% by 2050.



By sharing the result and the analysis process with various stakeholders, the following issues can be discussed: what industries Cambodia prioritises and develops; what value added services can be generated and developed as unique and strong points of Cambodia; whether Cambodia moves from agriculture to other industries; and how land use change occurs in forestry and agriculture areas.

## 2. CO<sub>2</sub> emission estimation and reduction (ktCO<sub>2</sub>)



Source: Presentation by Mr. Hak Mao, Kyoto University, Japan



## SESSION 5: Introduction to AIM and its application

[Chair] Dr. Junichi Fujino, National Institute for Environmental Studies (NIES), Japan

### Speakers:

Dr. Tomoko Hasegawa, National Institute for Environmental Studies (NIES), Japan

Dr. Kei Gomi, Kyoto University, Japan

## What are the key elements to develop quantitative analysis and enhance Cambodia's policy planning capacity?

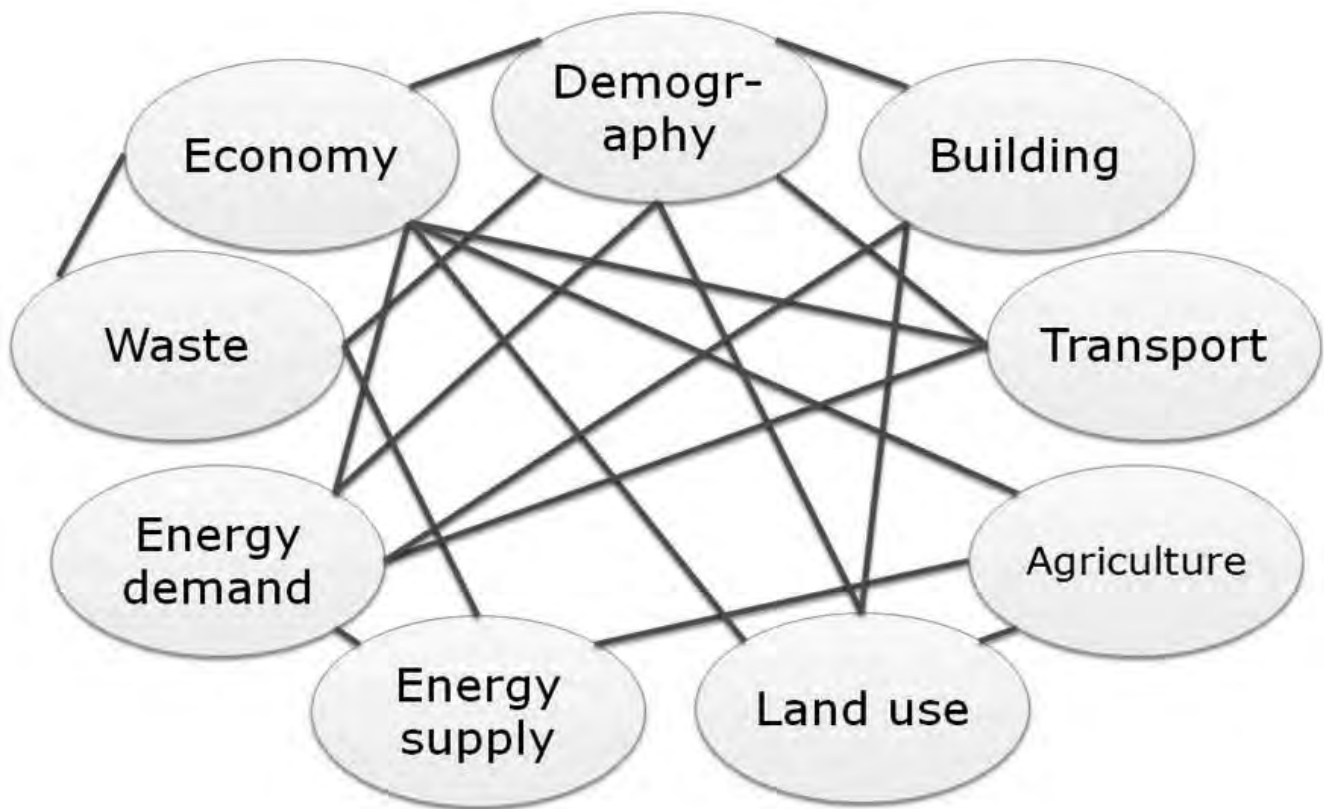
Low-carbon policy in Cambodia has made significant progress in the past few years, as the country looks towards a new framework in 2020. The country has developed a roadmap towards a low carbon society by setting up CCCSP. In order to quantify the CCCSP, various work need to be done such as creating low-carbon scenarios and action planning. In order to make progress with these activities, the gap that exists between scientists and policymakers should be closed by way of mutual understanding and information-sharing. As the start of this long-term vision towards 2050 for Cambodia, ExSS is a starting point for researchers, policymakers and other stakeholders to hold discussions about long-term challenges in Cambodia. ExSS is a tool for long-term policy development.

In the modelling analysis, various issues need to be considered such as driving forces of demand change, energy service demand and utility of energy, then final energy demand in the demand side while shares of energy supply and capacity of energy supply in supply side. Thus, four elements are required for LCS scenario modelling (Comprehensive, Consistent, Flexible and Detailed) and three points for LCS policymaking using models (Interaction, Involvement, Timely submission).

For instance, with the Agriculture, Forestry and Land Use (AFOLU) model, we can evaluate the reduction targets in 2020 for AFOLU sectors, estimate mitigation costs and identify economically effective countermeasures to meet the reduction target. In addition, the modelling exercise brings up challenges indicating that there is not much time to transfer knowledge and technologies and to develop skills for farmers by 2020. Thus, governmental support is needed to motivate people to accelerate GHG reduction activities, promote technology transfer and introduce market mechanisms.

The final issue that was shared in the workshop is that research and technology can allow Cambodia to leapfrog. Research that provides inputs for policy development needs to be taken into account as part of the policymaking process in the country, while recognising the challenges that come with a lack of data. Sharing research results with policymakers can enhance the policymaking process. Co-benefits of LCS can be identified as improvements to health conditions, public transport and traffic conditions. It is also important to have collaboration with private companies that are the driving force of new technologies. Knowledge-sharing through networks is vital, as this can assist in capacity development as well as aid discovery of new technologies that are feasible for the country. In addition, a strong commitment by policymakers to collaborate with scientists and local universities are all key components for low-carbon development. There is no time to lose; we need to take action now.

# Consistent



Source: Presentation by Gomi Kei, Kyoto University, Japan

## Participant List

### Cambodia

H.E.Sin, Khandy Ministry of Environment, Under Secretary of State	Leng, Kimhorn Council for the Development of Cambodia (CDC)	Phen, Bong Ministry of Environment
Chhim, Sokun Ministry of Land Management Urban Planning & Construction	Loem, Seng huon Ministry of Foreign Affair and International Cooperation	Philipps, Sebashian ADB Gers EOC
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Hak, Mao Kyoto University	Moy, Vathana Ministry of Environment	Seng, Samang Ministry of Mine and Energy
Ho, Dalina Ministry of Planning	Neou, Reaksmeay Cambodia Climate Change Alliance (CCCA)	Sim, Touch Chief of Office Climate Change, Department Ministry of Environment
Khlok, Vichet Ratha Ministry of Environment	Neth, Baroda Vice Chief of Office, Climate Change Department, Ministry of Environment	So, Puthea Ministry of Environment
Kim, Makara Department of Education, Ministry of Environment	Ngoun, Seb Prek Leap National College of Agriculture (PNCA)	Sok, Raksa Royal University of Phnom Penh (RUPP)
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		Tan, Chantara Ministry of Agriculture Forestry and Fisheries

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Kyoto University, Japan

Hasegawa, Tomoko  
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Iemoto, Satoshi  
Japan International Cooperation Agency  
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Management Organization (TGO)

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Organization (TGO), Thailand

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Development Initiative (ECCDI),  
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Kim, Menglim  
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## Table of Presentations

<b>Day 1</b>
<b>OPENING SESSION</b>
Welcome remarks Dr. Shuzo Nishioka, Secretary General of LoCARNet/LCS-RNet, Institute for Global Environmental Strategies, Japan
Opening remarks H.E Sin Khandy, Under Secretary of State, Ministry of Environment, Cambodia
<b>SESSION 1: Updating climate change related policies and activities in Cambodia</b> <b>Dr. Shuzo Nishioka, Secretary General of LoCARNet/LCS-RNet, Institute for Global Environmental Strategies, Japan</b>
Progress of Cambodia Climate Change Strategic Plan Mr. Ma Chan Sethea, Deputy Director, Ministry of Environment, Cambodia
Progress of implementation of NAMA, CDM, and other climate change related activities in Cambodia Ms. Khlok Vichetratha, Chief of Office, Ministry of Environment, Cambodia
<b>SESSION 2: International cooperation and engagement on LCS</b> <b>Dr. Junichi Fujino, Senior Researcher, National Institute for Environmental Studies (NIES), Japan</b>
Research activities related to low carbon development in Myanmar Dr. Khin Lay Swe, Rtd. Pro-Rector, EC, Ecosystem Conservation and Community Development Initiatives (ECCDI), Myanmar
The important role of capacity building on low carbon society: Introduction to CITC Dr. Jakkani Kananurak, Director of Capacity Building and Outreach Office, Thailand Greenhouse Gas Management Organization (Public Organization), Thailand
<b>SESSION 3: Establishment of LCS-RNet (researchers' community on LCD) in Cambodia</b> <b>Dr. Tin Ponlok, Ministry of Environment, Cambodia</b>
Research activities related to low carbon development in Cambodia Mr. Kok Sothea, Royal University of Phnom Penh (RUPP), Cambodia
Research activities related to low carbon development in Cambodia Mr. Lon Pichdara, Cambodia Development Resource Institute (CDRI), Cambodia
Low carbon research network collaboration and establishment in Cambodia Mr. Hak Mao, Kyoto University, Japan
<b>SESSION 4: Overview of Low carbon development and the application of ExSS model in Cambodia</b> <b>Prof. Ho Chin Siong, Universiti Teknologi Malaysia (UTM), Malaysia</b>
Low carbon development scenario development and its implementation Prof. Ho Chin Siong, Universiti Teknologi Malaysia (UTM), Malaysia
Low carbon development plan in Japan Dr. Junichi Fujino, Senior Researcher, National Institute for Environmental Studies (NIES), Japan
Preliminary estimation of CO <sub>2</sub> emission from energy and transport sector using ExSS model Mr. Hak Mao, Kyoto University, Japan
<b>Day 2</b>
<b>SESSION 5: Introduction to AIM and its application</b> <b>Dr. Junichi Fujino, Senior Researcher, National Institute for Environmental Studies (NIES), Japan</b>
Introduction to AFOLU Dr. Tomoko Hasegawa, National Institute for Environmental Studies (NIES), Japan
ExSS model and its application Dr. Kei Gomi, Kyoto University, Japan
<b>Panel discussion on how to enhance and extend the LCS_RNet in the future</b>
Dr. Shuzo Nishioka
Dr. Tin Ponlok
Prof. Ho Chin Siong
Dr. Khin Lay Swe
<b>Workshop summary and closing</b>

Published by the Institute for Global Environmental Strategies (IGES) on behalf of the Low Carbon Asia Research Network (LoCARNet)

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**Referencing this report:**

Capacity building workshop on low carbon development policies for Cambodia, Lao PDR, and Myanmar

Prepared by the LoCARNet Secretariat (ed). Publisher: IGES, Japan

Editors: LoCARNet secretariat and Hak Mao

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Printed in Japan



**សិក្ខាសាលាភាសាខ្មែរសម័យក្រោយស្តីពីគោលនយោបាយអភិវឌ្ឍន៍  
កាបបញ្ចេញកាបូនតិចសម្រាប់ប្រទេសកម្ពុជា ឡាវ និងភូមា**

សិក្ខាសាលាគោលនយោបាយនិងការស្រាវជ្រាវកាបបញ្ចេញកាបូនតិចនៅកម្ពុជា

**របាយការណ៍សំយោគ**

-បេកគំហើញសំខាន់ពីអង្គសិក្ខាសាលា -

ថ្ងៃទី ២៥-២៦ ខែកុម្ភៈ ឆ្នាំ២០១៤

រាជធានីភ្នំពេញ ព្រះរាជាណាចក្រកម្ពុជា

រៀបចំដោយក្រសួងបរិស្ថាន នៃព្រះរាជាណាចក្រកម្ពុជា  
ឧបត្ថម្ភដោយវិទ្យាស្ថានយុទ្ធសាស្ត្របរិស្ថានសកល (IGES)



**សេចក្តីផ្តើម**

កម្ពុជាគឺជាប្រទេសមួយនៅក្នុងតំបន់អាស៊ី និងប៉ាស៊ីហ្វិកដែលមានកំណើនសេដ្ឋកិច្ចឆាប់រហ័ស។ ដូចសហគមន៍ពិភពលោកដែរ កម្ពុជាបានដឹងកាន់តែច្រើនថា ការប្រែប្រួលអាកាសធាតុបានបង្កដោយសកម្មភាពរបស់មនុស្សក្នុងវិស័យឧស្សាហកម្ម និងការអភិវឌ្ឍសេដ្ឋកិច្ចដែលគ្មាននិរន្តរភាព។ ការប្រែប្រួលអាកាសធាតុបង្កការប៉ះពាល់មិនត្រឹមតែមកលើមនុស្សជំនាន់នេះប៉ុណ្ណោះទេ ប៉ុន្តែក៏មកលើមនុស្សជំនាន់ក្រោយៗផងដែរ ដែលនឹងត្រូវតែបន្តរំពឹងទុកពីផលនៃការប្រែប្រួលមិនទៀងទាត់នៃអាកាសធាតុ។

ដោយបានយល់ដឹងអំពីផលវិបាកនៃផលប៉ះពាល់បែបនេះ “សិក្ខាសាលាកសាងសមត្ថភាពស្តីពីគោលនយោបាយអភិវឌ្ឍន៍ការបញ្ចេញកាបូនតិចសម្រាប់ប្រទេសកម្ពុជា ឡាវ និងភូមា” ត្រូវបានរៀបចំឡើង ដោយក្រសួងបរិស្ថានកម្ពុជានៅថ្ងៃទី ២៥-២៦ ខែកុម្ភៈ ឆ្នាំ២០១៤ នៅភ្នំពេញ ព្រះរាជាណាចក្រកម្ពុជា ដោយមានការគាំទ្រពីវិទ្យាស្ថានយុទ្ធសាស្ត្របរិស្ថានសកលប្រទេសជប៉ុន (IGES) ក្នុងនាមជាលេខាធិការដ្ឋាននៃបណ្តាញស្រាវជ្រាវការអភិវឌ្ឍបញ្ចេញកាបូនតិចនៅអាស៊ី (LoCARNet) ក្រោមកិច្ចសហការជាមួយវិទ្យាស្ថានជាតិសិក្សាបរិស្ថាន (NIES) នៃប្រទេសជប៉ុន និងសកលវិទ្យាល័យកូគូ (KU)។ គោលបំណងនៃសិក្ខាសាលានេះគឺ៖ ១) ផ្តួចផ្តើម និងសម្រួលឲ្យមានការពិភាក្សារវាងអ្នកកសាងគោលនយោបាយ និងសហគមន៍អ្នកស្រាវជ្រាវនៅកម្ពុជា ជាមួយចំណេះដឹងពហុឯកទេសទូលំទូលាយ ឧបករណ៍ និងវិធីនានាសម្រាប់រួមបញ្ចូលទៅក្នុងដំណើរការគោលនយោបាយជាក់ស្តែង ឆ្ពោះទៅអនាគតមួយដែលមាននិរន្តរភាព ២) ពង្រឹងសមត្ថភាពស្រាវជ្រាវមិនត្រឹមតែនៅកម្ពុជាប៉ុណ្ណោះទេ ប៉ុន្តែក្នុងប្រទេសដទៃទៀតនៅអាស៊ីផងដែរ ដើម្បីបន្តធ្វើឲ្យមានវឌ្ឍនភាពជាប់ជានិច្ច ក្នុងកសាងផែនការកាបូនទាប និងយុទ្ធសាស្ត្រនានាដែលផ្អែកលើសេដ្ឋកិច្ចបែបតង តាមរយៈបណ្តាញចែករំលែកចំណេះដឹង សម្រាប់ផ្តោះប្តូរឧត្តមគតិ និង ៣) ជម្រុញកម្ពុជា និងប្រទេសជិតខាងដើម្បីអាចចូលរួមនៅក្នុងបណ្តាញនេះ ក្នុងគោលដៅលើកកម្ពស់កិច្ចសហការទៅអនាគត ឆ្ពោះទៅកំណើនដែលបំបាយកាបូនតិច។

របាយការណ៍សំយោគនេះ សង្ខេបអំពីរបកគំហើញសំខាន់ៗពីការសន្ទនា ដែលគ្របដណ្តប់បញ្ហានានាបែបនេះ ជាវិធានអន្តរជំនាញសម្រាប់ការអភិវឌ្ឍបញ្ចេញកាបូនតិច និងកិច្ចសហការរវាងអ្នកធ្វើគោលនយោបាយ និងសហគមន៍អ្នកស្រាវជ្រាវ។ សារគន្លឹះនានានៅក្នុងរបាយការណ៍នេះកំណត់អត្តសញ្ញាណបញ្ហាសំខាន់ៗដែលជាមូលដ្ឋាននៃការយកចិត្តទុកដាក់ និងត្រូវបានបង្កើតឡើងដើម្បីជួយអ្នកវិទ្យាសាស្ត្រនៅក្នុងការបង្កើតរបៀបវារៈស្រាវជ្រាវ និងអ្នកកសាងគោលនយោបាយទៅអនាគត នៅក្នុងការកសាងគោលនយោបាយដោយផ្អែកលើភស្តុតាងនៅក្នុងករណីដែលអាចធ្វើបាន។ បញ្ហានានា ដែលមានចែងក្នុងរបាយការណ៍នេះត្រូវបានរំពឹងថាជាចំណាប់អារម្មណ៍របស់អ្នកកសាងគោលនយោបាយ និងអ្នកស្រាវជ្រាវ នៅក្នុងដំណើរឆ្លងកាត់អន្តរកាលឆ្ពោះទៅការអភិវឌ្ឍដោយចីរភាពដែលបញ្ចេញកាបូនតិច។

យើងសូមផ្ញើតឱកាសនេះដើម្បីថ្លែងអំណរគុណចំពោះឯកឧត្តម **សាយ សំអេល់** រដ្ឋមន្ត្រីក្រសួងបរិស្ថាននៃព្រះរាជាណាចក្រកម្ពុជា ដែលផ្តល់នូវការដឹកនាំប្រកបដោយការប្តេជ្ញាជាប់ជាប្រចាំ និងការរំណនាំខាងគោលនយោបាយដើម្បីធានាវិបុលភាពជាតិ ដោយរួមបញ្ចូលនិរន្តរភាពបរិស្ថានទៅក្នុងរបៀបវារៈអភិវឌ្ឍន៍ជាតិ ដើម្បីអភិរក្សបរិស្ថាន កាត់បន្ថយភាពក្រីក្រ និងបង្កើនឱកាសការងារបែបតង និងចក្ខុវិស័យគ្រប់ជ្រុងជ្រោយរបស់ឯកឧត្តមអំពីបរិស្ថាន និងការគាំទ្រឲ្យមានការអភិវឌ្ឍដោយចីរភាពដែលបញ្ចេញកាបូនតិចនៅកម្ពុជា។ ខ្ញុំសូមសំដែងការកោតសរសើរដល់ថ្នាក់ដឹកនាំជាន់ខ្ពស់ និងមន្ត្រីនាយកដ្ឋានប្រែប្រួលអាកាសធាតុនៃក្រសួងបរិស្ថានកម្ពុជា អ្នកពាក់ព័ន្ធសំខាន់ៗដទៃទៀត មិនត្រឹមតែពីកម្ពុជាប៉ុណ្ណោះទេ ប៉ុន្តែពីប្រទេសជិតខាងនៅអាស៊ីផងដែរ និងបុគ្គលិកមកពី IGES/NIES/KU ដែលបានផ្តល់កិច្ចប្រឹងប្រែងជាច្រើន ការសម្របសម្រួល និងវិភាគទាននានានៅក្នុងការកសាងផែនការ និងការរៀបចំសិក្ខាសាលានេះ។ យើងនឹងបន្តកិច្ចប្រឹងប្រែងរួមគ្នារបស់យើង ដើម្បីបង្កើតវេទិកាដ៏សំខាន់មួយនៃកិច្ចសហការឆ្ពោះទៅអភិវឌ្ឍន៍ដោយចីរភាពដែលបញ្ចេញកាបូនទាបក្នុងចំណោមប្រទេសកម្ពុជា ជប៉ុន និងប្រទេសនានាដទៃទៀតនៅអាស៊ី។

**Shuzo Nishioka**

អគ្គលេខាធិការ

លេខាធិការដ្ឋាន LCS-RNet

វិទ្យាស្ថានយុទ្ធសាស្ត្របរិស្ថានសកល ប្រទេសជប៉ុន

ឯកឧត្តម សាយ សំអាល់

រដ្ឋមន្ត្រីក្រសួងបរិស្ថាន

ព្រះរាជាណាចក្រកម្ពុជា

## បេកគំហើញសំខាន់ៗ

បណ្តាប្រទេសនៅតំបន់អាស៊ីបន្តអនុវត្តន៍ជាប្រចាំក្នុងការបង្កើតផែនការនិងយុទ្ធសាស្ត្រអភិវឌ្ឍន៍បញ្ចេញកាបូន តិចដោយផ្អែកលើសេដ្ឋកិច្ចបែបតង់។ បណ្តាញស្រាវជ្រាវអភិវឌ្ឍន៍បញ្ចេញកាបូនតិចនៅតំបន់អាស៊ី (LoCARNet) បានគាំ ទ្រផែនការនិងយុទ្ធសាស្ត្រអភិវឌ្ឍន៍ដោយផ្អែកលើអ្នកស្រាវជ្រាវនិងវិទ្យាស្ថានស្រាវជ្រាវនៃបណ្តាប្រទេសនៅតំបន់អាស៊ី។ សិក្ខាសាលានេះបានបង្ហាញថាប្រទេសនៅតំបន់អាស៊ីបានពាក់ព័ន្ធនឹងការរៀបចំគោលនយោបាយនិងវិធានការនានាដើម្បី ធានានិរន្តរភាពបរិយាកាស។ គោលបំណងចំនួនបួនត្រូវបានលើកឡើងនៅក្នុងអង្គសិក្ខាសាលារួមមាន៖ (១) ចែករំលែក នូវព័ត៌មានពីសមិទ្ធិផលផ្នែកគោលនយោបាយ និងសកម្មភាពនានាទាក់ទងនឹងការប្រែប្រួលអាកាសធាតុនៅកម្ពុជា ឡាវ និងកូម៉ា (២) សម្របសម្រួលស្ថាប័នសិក្សាស្រាវជ្រាវក្នុងការរៀបចំសហគមន៍អ្នកស្រាវជ្រាវលើការរៀបចំគោលនយោបាយ អភិវឌ្ឍន៍បញ្ចេញកាបូនតិច ដោយផ្អែកលើវិទ្យាសាស្ត្រ តាមរយៈការផ្តល់យោបល់ជូនអ្នកធ្វើសេចក្តីសម្រេចចិត្ត (៣) ជំរុញ និងលើកទឹកចិត្តឱ្យប្រទេសដែលមិនទាន់បានបង្កើតផែនការអភិវឌ្ឍន៍បញ្ចេញកាបូនតិចទទួលស្គាល់ពីសារៈសំខាន់ នៃការប្រើប្រាស់គំរូចម្រុះសម្រាប់តំបន់អាស៊ី និងប៉ាស៊ីហ្វិកដើម្បីកាត់បន្ថយការបញ្ចេញ GHG តាមរយៈការប្រើប្រាស់គំរូ ExSS and AFOLU ដើម្បីគណនាបរិមាណនៃការបញ្ចេញឧស្ម័នផ្ទះកញ្ចក់ពីវិស័យថាមពលនិងមិនមែនថាមពល និង (៤) រកអោយឃើញនូវការឯកភាពគ្នានៃគំនិតផ្សេងៗគ្នានៃលទ្ធផលការសិក្សា។ អង្គសិក្ខាសាលានេះមានការចូលរួមយ៉ាង សកម្មពីមន្ត្រីនៃនាយកដ្ឋានប្រែប្រួលអាកាសធាតុនិងនាយកដ្ឋានពាក់ព័ន្ធនៃក្រសួងបរិស្ថាន ក្រសួងពាក់ព័ន្ធ ស្ថាប័ន ស្រាវជ្រាវដែលធ្វើការទាក់ទងជាមួយក្រសួងមួយចំនួនដូចជាក្រសួងកសិកម្មជាដើម សាកលវិទ្យាល័យនិងស្ថាប័នស្រាវជ្រាវ ឯកជន។ល។ សិក្ខាសាលានេះដោយមានការចូលរួមពីភាគីពាក់ព័ន្ធជាច្រើនផងនោះ ធ្វើអោយមានការបោះជំហានទៅមុខ មួយទៀតក្នុងការធ្វើសេចក្តីសម្រេចចិត្តតាមបែបចូលរួមនិងតាមបែបវិទ្យាសាស្ត្រ។

- **ពង្រឹងដំណើរការនៃការចូលរួមសម្រាប់កសាងផែនការគោលនយោបាយប្រែប្រួលអាកាសធាតុ**

កម្ពុជាបានបញ្ជូនការប្រែប្រួលអាកាសធាតុទៅក្នុងផែនការយុទ្ធសាស្ត្រអភិវឌ្ឍន៍ជាតិ ដោយកំណត់វិស័យនិង សកម្មភាពអាទិភាព ដែលចាំបាច់សម្រាប់កសាងប្រព័ន្ធ និងសង្គមដែលជាបង្អែកមួយ ទប់ទល់នឹងហានិភ័យអាកាសធាតុ នៅក្នុងរយៈពេលវែង។ ផែនការយុទ្ធសាស្ត្រប្រែប្រួលអាកាសធាតុកម្ពុជា (CCCS) ត្រូវបានអនុម័ត ទន្ទឹមនឹងភាពចាំបាច់ ត្រូវរៀបចំជំហានបន្ទាប់ពេញលេញនៃកម្មវិធីជាតិប្រែប្រួលអាកាសធាតុ ផែនការសកម្មភាព ការចាត់ចែងហិរញ្ញប្បទាន និង យន្តការសម្របសម្រួល។

- **ការចូលរួមពីអ្នកធ្វើសេចក្តីសម្រេចចិត្តគឺជាធាតុគន្លឹះមួយដើម្បីគាំទ្រដល់គោលនយោបាយប្រែប្រួលអាកាសធាតុ**

កម្ពុជាបានធ្វើឲ្យមានវឌ្ឍនភាពក្នុងការរៀបចំផែនការយុទ្ធសាស្ត្រ CCCS ដោយចាត់ចែងឲ្យមានសិក្ខាសាលា ចាប់ផ្តើម ការសន្ទនា និងការពិគ្រោះយោបល់ តាមរយៈការបង្កើតឲ្យមានដំណើរការនៃការចូលរួមនៃអ្នកពាក់ព័ន្ធខុសៗគ្នា នៅលំដាប់ថ្នាក់ខុសៗគ្នា ដូចជា ក្រសួង អង្គការមិនមែនរដ្ឋាភិបាល គ្រឹះស្ថានសិក្សា វិទ្យាស្ថានស្រាវជ្រាវ និងវិស័យឯកជន។ សាកលវិទ្យាល័យ និងគ្រឹះស្ថានស្រាវជ្រាវជាច្រើនថែមទៀតបានពាក់ព័ន្ធនៅក្នុងគម្រោងប្រែប្រួលអាកាសធាតុ ដើម្បីប្រមូល ផ្តុំចំណេះដឹង និងបង្កើតជំនាញដែលត្រូវរួមចំណែកទៅក្នុងដំណើរការកសាងគោលនយោបាយជាតិ។

- **តួនាទីនៃការវិភាគបែបបរិមាណសម្រាប់ដំណើរការកសាងគោលនយោបាយ**

ការវិភាគបែបបរិមាណគឺជាឧបករណ៍មួយដើម្បីកំណត់អត្តសញ្ញាណជម្រើសកាត់បន្ថយ និងដើម្បីលើកកម្ពស់ការ ពិភាក្សាក្នុងចំណោមអ្នកពាក់ព័ន្ធនានាសម្រាប់ការធ្វើសេចក្តីសម្រេច ដែលជួយប្រទេសមួយបោះជំហានទៅមុខបន្ថែមទៀត

នៅក្នុងការកសាង និងការអនុវត្តគោលនយោបាយ។ ធាតុផ្សំដ៏សំខាន់មួយដើម្បីបង្កើតវិធានការនយោបាយជាក់លាក់ និងការបង្កើតមានការឯកភាពមតិ គឺត្រូវធ្វើការវិភាគបរិមាណ និងអធិប្បាយអំពីតួលេខប៉ាន់ស្មាន។ ដោយសារការអភិវឌ្ឍដោយចីរភាពរួមបញ្ចូលទិដ្ឋភាពសេដ្ឋកិច្ច បរិស្ថាន វប្បធម៌ និងសង្គម ការវិភាគចម្រុះគឺជាចំណុចចាំបាច់ដើម្បីជ្រើសរើសយកជម្រើសគោលនយោបាយកាត់បន្ថយដែលមានប្រសិទ្ធភាពនិងសមស្រប។ នៅក្នុងដំណើរការកសាងគោលនយោបាយរាល់សកម្មភាពត្រូវចែកចេញជាវិធានការ និងបន្ទាប់មកបង្កើតទៅជាគម្រោងជាក់លាក់។ ការវិភាគបរិមាណ ក៏ជួយពង្រឹងដំណើរការពិគ្រោះយោបល់ និងការពិភាក្សាក្នុងក្រុមគោលដៅផងដែរ។ សមាសភាពសំខាន់ៗដើម្បីទទួលបានជោគជ័យក្នុងការធ្វើសេចក្តីសំរេចចិត្តនិងការវិភាគបែបបរិមាណរួមមាន **ទូលំទូលាយ ស្របគ្នា បត់បែន និងលំអិត**។

- **ការចែករំលែកព័ត៌មាន និងការពិភាក្សាអាចពង្រឹងសមត្ថភាពដើម្បីសម្រេចបានការអភិវឌ្ឍបញ្ចេញកាបូនតិច**

ការចែករំលែកចំណេះដឹង និងបណ្តាញការងារអាចជម្រុញបញ្ហាជាក់លាក់ចំនួនបួន ដូចជា ការចែករំលែកព័ត៌មានអំពីសមិទ្ធផលនៃគោលនយោបាយ និងសកម្មភាពនានាដែលទាក់ទងនឹងប្រទេសកម្ពុជានិងភូមា ការសម្របសម្រួលដើម្បីបង្កើតគោលនយោបាយអភិវឌ្ឍន៍ដែលបញ្ចេញកាបូនតិច ដោយជូនដំណឹងដល់អ្នកធ្វើសេចក្តីសម្រេច និងការលើកកម្ពស់និងលើកទឹកចិត្តមានការអភិវឌ្ឍដែលបញ្ចេញកាបូនតិច ដើម្បីទទួលស្គាល់អំពីសារៈសំខាន់នៃការប្រើប្រាស់ពហុម៉ូដែលសម្រាប់គណនាសក្តានុពលនៃបរិមាណ និងបង្ហាញពីជម្រើសគោលនយោបាយ ការកំណត់អត្តសញ្ញាណភាពសំបូររបស់នៃជម្រើស។ ត្រូវកំណត់ឲ្យឃើញនូវការឯកភាពក្នុងចំណោមទស្សនៈខុសៗគ្នា។ ត្រូវឯកភាពលើទស្សនៈនិងចក្ខុវិស័យខុសៗគ្នា។

- **ការលូតលាស់នៃតំបន់អាស៊ីក្នុងសម័យថ្មីនេះគឺជាគន្លឹះដើម្បីធ្វើឲ្យមានតុល្យភាពនៃអាកាសធាតុសកល**

អាស៊ីអាចនាំមុខ ដោយបង្កើតលំនាំផ្លូវនៃការអភិវឌ្ឍដែលបញ្ចេញកាបូនតិច ដើម្បីបង្កើតសេដ្ឋកិច្ចសង្គមថ្មីមួយនៅលើពិភពលោក ក្នុងពេលដែលពិភពលោកប្រឈមនឹងសម្ពាធនៃអាកាសធាតុ និងធម្មជាតិកាន់តែធ្ងន់ធ្ងរជាងមុននៅក្នុងសតវត្សរ៍ទី ២១នេះ។ ដូចដែលបង្ហាញនៅក្នុងរបាយការណ៍វាយតម្លៃលើកទីប្រាំរបស់ក្រុមការងារអន្តររដ្ឋាភិបាលស្តីពីការប្រែប្រួលអាកាសធាតុ ការធ្វើឲ្យអាកាសធាតុរបស់យើងមានស្ថិរភាពគឺជាកិច្ចការដែលត្រូវបានមើលឃើញថាមានភាពបន្ទាន់កាន់តែខ្លាំងឡើង។ ដូច្នេះ ប្រការសំខាន់ជាអាយុជីវិត ដែលរួមទាំងការកាត់បន្ថយការបញ្ចេញឧស្ម័នផ្ទះកញ្ចក់ និងការបន្ស៊ាំទៅនឹងផលប៉ះពាល់នៃការប្រែប្រួលអាកាសធាតុត្រូវតែបញ្ឈប់ទៅក្នុងគោលនយោបាយអភិវឌ្ឍន៍សេដ្ឋកិច្ចសង្គមរបស់ប្រទេសនីមួយៗ។

- **គោលនយោបាយនិងចំណេះដឹងឆ្ពោះទៅរកការទទួលស្គាល់ការអភិវឌ្ឍបញ្ចេញកាបូនតិច**

ដើម្បីសម្រួលឲ្យមានការកសាងគោលនយោបាយដែលផ្អែកលើវិទ្យាសាស្ត្រ ប្រការចាំបាច់គឺមិនត្រូវពង្រឹងតែចំណេះដឹងដែលទាក់ទងនឹងគោលនយោបាយអភិវឌ្ឍន៍កាបូនទាបប៉ុណ្ណោះទេ ប៉ុន្តែក៏ត្រូវជ្រើសរើស និងចែកចាយចំណេះដឹងបែបនេះឲ្យបានទូលំទូលាយផងដែរ។ លើសពីនេះ ប្រការសំខាន់បំផុតគឺការបង្កើនចំណេះដឹងឲ្យទៅជាគោលនយោបាយឲ្យបានសមស្រប ដោយលើកកម្ពស់កិច្ចសហការជិតស្និទ្ធជាមួយអ្នកកសាងគោលនយោបាយ បន្ទាប់មកបង្កើនគោលនយោបាយទាំងនោះឲ្យក្លាយជាសកម្មភាពអនុវត្ត។

- **សកម្មភាពនិងកិច្ចសហប្រតិបត្តិការថ្នាក់តំបន់**

បញ្ហាមួយដែលប្រឈមសម្រាប់តំបន់នេះគឺថា មានកិច្ចប្រឹងប្រែងជាច្រើនដែលបានធ្វើឡើង ដើម្បីពង្រឹងសហគមន៍អ្នកស្រាវជ្រាវ ដែលគាំទ្រដល់ការរៀបចំសេចក្តីព្រាងគោលនយោបាយអភិវឌ្ឍន៍កាបូនទាបនៅតំបន់អាស៊ី។ សិក្ខាកាមបានចែករំលែកការទទួលស្គាល់ថា ដោយយោងទៅសារៈសំខាន់នៃតំបន់នេះក្នុងការកាត់បន្ថយការបំបាត់ឧស្ម័នផ្ទះកញ្ចក់

ប្រការសំខាន់គឺត្រូវបណ្តុះ និងពង្រឹងសហគមន៍អ្នកស្រាវជ្រាវ ឲ្យស្របតាមសំណុំលក្ខណៈពិសេស ដែលមាននៅក្នុងតំបន់នេះ ក៏ដូចជា លក្ខណៈរួម និងខុសគ្នានៅក្នុងប្រទេសនីមួយៗទាំងនេះផងដែរ។ ពួកគេក៏បានឯកភាពគ្នាផងដែរថា ដោយសារតែប្រការនេះ ប្រការសំខាន់គឺ LoCARNet ផ្តោតលើការពង្រឹងសមត្ថភាពស្រាវជ្រាវនៅថ្នាក់តំបន់។ LoCARNet ចាំបាច់ត្រូវផ្តោតលើការពង្រឹងសមត្ថភាពស្រាវជ្រាវថ្នាក់តំបន់ដោយមានកិច្ចសហការជាមួយសហគមន៍ស្រាវជ្រាវនិងអ្នកធ្វើសេចក្តីសម្រេចចិត្តនៃបណ្តាប្រទេសនៅតំបន់អាស៊ី។



## សេចក្តីថ្លែងអំណរគុណ

របាយការណ៍សំយោគនេះសង្ខេបបកគំហើញពីសិក្ខាសាលាគោលនយោបាយកាបូនទាប និងការស្រាវជ្រាវនៅកម្ពុជា។ សិក្ខាសាលានេះបានរៀបចំឡើងជាកិច្ចប្រជុំមួយក្រោមចំណងជើងថា *សិក្ខាសាលាកសាងសមត្ថភាពស្តីពីគោលនយោបាយអភិវឌ្ឍន៍ការបញ្ចេញកាបូនតិចសម្រាប់កម្ពុជា ឡាវ និងភូមា* កាលពីថ្ងៃទី ២៥-២៦ ខែកុម្ភៈ ឆ្នាំ ២០១៤ ដោយក្រសួងបរិស្ថាន ជាមួយការគាំទ្ររួមគ្នាពីវិទ្យាស្ថានយុទ្ធសាស្ត្របរិស្ថានសកល (IGES), សាកលវិទ្យាល័យកូតូ (KU), និងវិទ្យាស្ថានជាតិសិក្សាបរិស្ថាន (NIES) ប្រទេសជប៉ុន។ សិក្ខាសាលាកសាងសមត្ថភាពនេះបានធ្វើឡើងនៅសណ្ឋាគារហ៊ីម៉ា វ៉ារី រាជធានីភ្នំពេញ ព្រះរាជាណាចក្រកម្ពុជា និងបានប្រកាសបើកដោយឯកឧត្តម **ស៊ិន ខ័ណ្ឌឌី** អនុរដ្ឋលេខាធិការនៃក្រសួងបរិស្ថាននៃព្រះរាជាណាចក្រកម្ពុជា ដោយមានសិក្ខាកាមចូលរួមមកពីក្រសួងពាក់ព័ន្ធ គ្រឹះស្ថានសិក្សា អង្គការមិនមែនរដ្ឋាភិបាល ទីភ្នាក់ងារសហប្រតិបត្តិការអន្តរជាតិជប៉ុន (JICA), វិទ្យាស្ថានស្រាវជ្រាវ និងអ្នកពាក់ព័ន្ធដទៃទៀត។ សិក្ខាសាលានេះមានគោលបំណងស្វែងយល់ពីលទ្ធភាពនៃកិច្ចសហការរវាងកម្ពុជា និងវិទ្យាស្ថានស្រាវជ្រាវជប៉ុន ក្នុងការបង្កើតផែនការអភិវឌ្ឍន៍ការបញ្ចេញកាបូនតិចសម្រាប់កម្ពុជា។

### គោលបំណងនៃសិក្ខាសាលានេះគឺ៖

- ផ្តួចផ្តើម និងសម្រួលឲ្យមានការពិភាក្សារវាងអ្នកកសាងគោលនយោបាយ និងសហគមន៍ស្រាវជ្រាវនៅកម្ពុជា ជាមួយចំណេះដឹងអំពីជំនាញខុសៗគ្នាជាច្រើន ឧបករណ៍ វិធី សម្រាប់រួមបញ្ចូលដំណើរការគោលនយោបាយជាក់ស្តែងឆ្ពោះទៅអនាគតមួយដែលមាននិរន្តរភាព
- ពង្រឹងសមត្ថភាពស្រាវជ្រាវមិនត្រឹមតែនៅកម្ពុជាប៉ុណ្ណោះទេ ប៉ុន្តែក្នុងប្រទេសដទៃនៅអាស៊ីផងដែរ ដើម្បីបន្តធ្វើឲ្យមានវឌ្ឍនភាពក្នុងការកសាងផែនការកាបូនតិច និងយុទ្ធសាស្ត្រដែលផ្អែកលើសេដ្ឋកិច្ចបែបតង តាមរយៈបណ្តាញបែកបែកចំណេះដឹង សម្រាប់ការផ្តោតប្តូរឧត្តមគតិ
- ជម្រុញឲ្យកម្ពុជា និងប្រទេសជិតខាងអាចចូលរួមនៅក្នុងបណ្តាញនេះ ដើម្បីលើកកម្ពស់កិច្ចសហការបន្ថែមទៀតឆ្ពោះទៅកំណើនដែលមានកាបូនតិច។ និង
- រកអោយឃើញនូវការឯកភាពគ្នានៃគំនិតផ្សេងៗគ្នាលើលទ្ធផលនៃការសិក្សា

អ្នកស្រាវជ្រាវ និងអ្នកកសាងគោលនយោបាយចំនួន៧១នាក់ បានចូលរួមនៅក្នុងសិក្ខាសាលាដើម្បីពិភាក្សាបញ្ហាទាំងនេះ។

ធៀតៗគ្នានេះ ខ្ញុំសូមសំដែងការកោតសរសើរជ្រាលជ្រៅដល់វាក្យសិក្សា និងអ្នកចូលរួមពីប្រទេសកម្ពុជា និង ប្រទេសផ្សេងទៀតនៅអាស៊ាន គ្រឹះស្ថានសិក្សា និងវិទ្យាស្ថានស្រាវជ្រាវ ដែលបានរួមចំណែកនៅក្នុងកិច្ចប្រជុំនេះ។ ខ្ញុំសូមបន្ថែមការវាយតម្លៃខ្ពស់ចំពោះបណ្ឌិត **ទិន ពន្លក** អគ្គនាយករង នៃក្រសួងបរិស្ថានដែលបានផ្តល់ការណែនាំ និងគាំទ្រដល់ការរៀបចំសិក្ខាសាលានេះ។ សូមថ្លែងអំណរគុណដល់លោក **ស៊ី ជី** ប្រធាននាយកដ្ឋានប្រែប្រួលអាកាសធាតុ និងលោក **ហាក់ ម៉ៅ** ប្រធានការិយាល័យភាពងាយរងគ្រោះ និងការបន្សុំនឹងការប្រែប្រួលអាកាសធាតុ នៃនាយកដ្ឋានប្រែប្រួលអាកាសធាតុនៃក្រសួងបរិស្ថាន ដែលបានផ្តល់កិច្ចប្រឹងប្រែងជាច្រើនដើម្បីសម្របសម្រួលកិច្ចប្រជុំនេះ។

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