

**KINGDOM OF THAILAND
THAILAND GREENHOUSE GAS MANAGEMENT ORGANIZATION**

**PROJECT FOR CAPACITY DEVELOPMENT
TO ACCELERATE LOW CARBON AND
RESILIENT SOCIETY REALIZATION
IN THE SOUTHEAST ASIA REGION**

PROJECT ACTIVITY COMPLETION REPORT

SEPTEMBER 2020

JAPAN INTERNATIONAL COOPERATION AGENCY

ORIENTAL CONSULTANTS GLOBAL CO., LTD.

PACIFIC CONSULTANTS CO., LTD.

**INSTITUTE FOR GLOBAL ENVIRONMENTAL STRATEGIES
OVERSEAS ENVIRONMENTAL COOPERATION CENTER,
JAPAN**

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2.1	Training guideline
2.2	Training material (textbook)
2.3	Training material (presentation materials)
3	Mitigation Mechanism and Decarbonization (MM) course for Southeast Asian countries: Basic course (May 2018)
3.1	Training guideline
3.2	Training material (textbook)
3.3	Training material (presentation materials)
4	Mitigation Mechanism and Decarbonization (MM) course for Southeast Asian countries: Advanced course (1st round, December 2019)
4.1	Training guideline
4.2	Training material (presentation materials)
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5.1	Training guideline
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5.3	Training material (presentation materials)
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Abbreviations and Acronyms

Abbreviations	Description
ADAP-T	The Project for Advancing co-design of integrated strategies with adaptation to climate change in Thailand
ADB	Asian Development Bank
AE	Accredited Entity
AFOLU	Agriculture, Forestry and Other Land Use
AIT	Asian Institute of Technology
AMS	ASEAN Member States
ASEAN	Association of South-East Asian Nations
BCP	Business Continuity Plan
BTR	Biennial Transparency Report
BUR	Biennial Update Report
CB	Capacity building
CCA	Climate Change Adaptation
CCSD	Climate Change and Sustainable Development
CDM	Clean Development Mechanism
CF	Climate Finance
CITC	Climate Change International Technical and Training Center
CLMV	Cambodia, Lao PDR, Myanmar, Vietnam
CMA	the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement
COP	Conference of the Parties
CSO	Civil Society Organization
DAC	Development Assistance Committee
DAE	Direct Access Entity
DCC	Department of Climate Change
DEDE	Department of Alternative Energy Development and Efficiency
DEQP	Department of Environmental Quality Promotion
EGAT	Electricity Generating Authority of Thailand
ESG	Environmental, social and corporate governance
EU	European Union
EV	Electric Vehicle
FCV	Fuel Cell Vehicle
GCF	Green Climate Fund
GGGI	Global Green Growth Institute
GHG	Greenhouse gas
GHGI	Greenhouse Gas Inventory
GIO	Greenhouse Gas Inventory Office of Japan
HFC	Hydrofluorocarbon
ICAS	Institute for Global Change Adaptation Science
IGES	Institute for Global Environmental Strategies
INDC	Intended Nationally Determined Contribution
IPCC	Intergovernmental Panel on Climate Change
IPCC-TFI	IPCC Task Force on National Greenhouse Gas Inventories
IPPU	Industrial Processes and Product Use
Japan-CLP	Japan Climate Leaders' Partnership
JCC	Joint Coordinating Committee
JCM	Joint Crediting Mechanism
JETRO	Japan External Trade Organization
JICA	Japan International Cooperation Agency

Abbreviations	Description
JSCCIB	Joint Standing Committee on Commerce, Industry and Banking
KPI	Key Performance Indicator
LULUCF	Land Use, Land-Use Change and Forestry
M&E	Monitoring and Evaluation
MM	Mitigation Mechanism and Decarbonization
MOC	Memorandum of Cooperation
MONRE	Ministry of Natural Resources and Environment
MOST	Ministry of Science and Technology, Vietnam
MOT	Ministry of Transport
MRV	Measurement, Reporting and Verification
MTEC	National Metal and Materials Technology Center
MURC	Mitsubishi UFJ Research and Consulting Co., Ltd.
NAMA	Nationally Appropriate Mitigation Actions
NAP	National Adaptation Plan
NDA	National Designated Authority
NDC	Nationally Determined Contribution
NGO	Non-Governmental Organization
OECC	Overseas Environmental Cooperation Center
OECD	Organisation for Economic Co-operation and Development
ONEP	Office of Natural Resources and Environmental Policy and Planning
PDM	Project Design Matrix
PEA	Provincial Electricity Authority
PIN	Project Idea Note
PO	Plan of Operation
PR	Public Relations
QA/ QC	Quality Assurance/ Quality Control
R/D	Record of Discussions
SCP	Sustainable Consumption and Production
SDGs	Sustainable Development Goals
SIIT	Sirindhorn International Institute of Technology
T-VER	Thailand Voluntary Emission Reductions
TCFD	Task Force on Climate-related Financial Disclosures
TGEIS	Thailand Greenhouse Gas Emissions Inventory System
TGO	Thailand Greenhouse Gas Management Organization (Public Organization)
TICA	Thailand International Cooperation Agency
TNA	Training Needs Assessment
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNFCCC-RCC	UNFCCC Regional Collaboration Centre
UNIDO	United Nations Industrial Development Organization
UNU-IAS	United Nations University Institute of Advanced Studies
USAID	United States Agency for International Development
VJU	Vietnam Japan University
VNU	Vietnam National University
WGIA	Workshop on Greenhouse Gas Inventories in Asia

Chapter 1 Overview

1.1 Background

Thailand Greenhouse Gas Management Organization (Public Organization) (TGO) was established by the Thai cabinet resolution in 2007 as an autonomous governmental organization under the Ministry of Natural Resources and Environment (MONRE) to act as an implementing agency on greenhouse gas (GHG) emission reduction in Thailand. TGO also has a secretariat function of the NCCC of Thailand, along with the Office of Natural Resources and Environmental Policy and Planning (ONEP). TGO has been engaged in development and evaluation of climate change measures, and promotion of human development for stakeholders related to climate change.

In order to support TGO in enhancing its capacity to promote climate change mitigation, the “Project for Capacity Development and Institutional Strengthening for GHG Mitigation in the Kingdom of Thailand” was conducted under the cooperation between TGO and Japan International Cooperation Agency (JICA) from 2010 to 2012. Following the “ASEAN Meeting on GHG Mitigation and Low Carbon Society,” which was held in Thailand in August 2011, and in response to the needs to develop capacities of Southeast Asian countries to address climate change on a regional level, TGO proposed to establish a regional training center on climate change issues as a “one-stop training center” for the region.

In order to support TGO in addressing the capacity building needs of the region through the training center, the “Project for Capacity Development on Mitigation/ Adaptation for Climate Change in the Southeast Asian Region” was implemented from 2013 to 2016. Since the official establishment of Climate Change International and Technical Training Center (CITC) in May 2014, a range of training courses have been developed and conducted in response to the needs of stakeholders in Thailand and other countries in Southeast Asia, and the capacity of TGO officials to provide and manage training courses had been improved. Accordingly, CITC had started to gain its recognition among key stakeholders in Thailand and other countries in Southeast Asia.

In recognition of the needs to further enhance the capacity of CITC as a “one-stop training center of the region” so that its stakeholders can take obtained knowledge into actions, the “Project for Capacity Development to Accelerate Low Carbon and Resilient Society Realization

in the Southeast Asia Region” (the “Project”) has been requested by TGO. Based on the request and a series of discussions, the Government of the Kingdom of Thailand and the Government of Japan agreed the details of the Project and signed the Record of Discussions (R/D) on the Project on March 29, 2017.

Oriental Consultants Global Co., Ltd., Pacific Consultants Co., Ltd., Institute for Global Environmental Strategies (IGES) and Overseas Environmental Cooperation Center, Japan (OECC) were commissioned by JICA to organize and dispatch experts to Thailand to work as JICA Short-term Expert Team to implement the Project.

This Project Activity Completion Report describes the results of the Project which was jointly conducted by TGO and JICA Short-term Expert Team in cooperation with JICA Long-term Expert from October 2017 to August 2020.

1.2 Objectives and outputs of the Project

Main objective of the Project is to enhance capacities of officials of Capacity Building and Corporate Branding Office¹ (hereinafter called the “CB office” or “CB team”) of TGO as an operating body of CITC, with a view of realizing sustainable operation of CITC.

Overall Goal, Project Purpose and Project Outputs are as follows:

Overall Goal

Realization of actions to address climate change is accelerated in Thailand and other Southeast Asian countries through CITC.

Project Purpose

The capacity of CITC to assist stakeholders to develop and realize climate change activities, as a well-known “one-stop training center of the region,” is enhanced.

Outputs

1. CITC’s training courses are sustained and upgraded.
2. Planning and/or implementation of climate change activities in Thailand and other Southeast Asian countries are supported through CITC training.
3. Direction towards achieving the sustainability of CITC, as a training center in the Southeast Asia region, is established.

¹ The former department name “Capacity Building and Outreach Office” was changed to “Capacity Building and Knowledge Communication Office” in October 2019 and then has been changed to the current name since July 2020.

The Project Design Matrix (PDM) of the Project is shown in the next page. No revision was applied on the PDM during the Project Period; however, in light of the global impact from the COVID-19 pandemic which prevented foreign nationals including JICA Short-term Experts from traveling to Thailand, TGO and JICA concluded a Meeting Minutes to prioritize some specific Project activities instead of revising the PDM. The details of the Meeting Minutes which was signed on 25 May 2020 are described in Section 3.5 of Chapter 3.

Table 1 Project Design Matrix (PDM)

Project Title: “Project for the Capacity Development to accelerate Low Carbon and Resilient Society realization in the Southeast Asia region”

PDM version 1 (13 January 2017)

Target area: Thailand and other Southeast Asian countries

Counterpart agency: TGO

Target group: TGO, Government agencies related to climate change

Project period: 2017-2020, 3 years

Narrative summary		Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Overall goal				
Realization of actions to address climate change is accelerated in Thailand and other Southeast Asian countries through CITC.		<ul style="list-style-type: none"> * Outputs of CITC’s training courses are applied to Thailand and other Southeast Asian countries’ climate change policies and activities. * Some of the action plans prepared by trainees in CITC training courses are taken into implementation and/or mainstreamed into the relevant policies and programs. 	<ul style="list-style-type: none"> * Relevant policy documents * Project monitoring/evaluation and follow-up documents 	
Project purpose				
The capacity of CITC to assist stakeholders to develop and realize climate change activities, as a well-known “one-stop training center of the region,” is enhanced.		<ul style="list-style-type: none"> * Capacity to manage and deliver training in order to be a training center of the Southeast Asia region is enhanced in CITC. * Some action plans prepared by trainees in CITC training courses are submitted to relevant authorities. * Network of CITC with related organizations is strengthened. 	<ul style="list-style-type: none"> * CITC documents * Action plans * Project reports * Project monitoring/evaluation and follow-up documents 	<ul style="list-style-type: none"> * The governments of Thailand and other Southeast Asian countries maintain support for planning and implementation of climate change activities.
Outputs				
1.	CITC’s training courses are sustained and upgraded.	<ul style="list-style-type: none"> * Training curriculums are developed and/or upgraded. * Developed training and teaching materials are utilized. 	<ul style="list-style-type: none"> * Training curriculums * Teaching materials * Project monitoring/evaluation and follow-up documents * List of trainers * Project reports 	<ul style="list-style-type: none"> * TGO continues to work with stakeholders in Thailand and other Southeast Asian countries.
2.	Planning and/or implementation of climate change activities in Thailand and other Southeast Asian countries are supported through CITC training.	<ul style="list-style-type: none"> * Action plans for climate change activities are prepared by trainees during CITC training courses. * Specific platform for knowledge and experience sharing is developed. 	<ul style="list-style-type: none"> * Project monitoring/evaluation and follow-up records * Project reports * Action plans 	

3.	Direction towards achieving the sustainability of CITC, as a training center in the Southeast Asia region, is established.	<p>* Revised Business Plan is endorsed by the Sub-Committee on Capacity Building under the TGO Board of Directors, and implemented.</p> <p>* Prototype for the 'Digital Capacity Building Gateway' is developed.</p>	<p>* Feasibility study report on networking</p> <p>* Revised Business Plan</p> <p>* Project reports</p>	
Activities		Inputs from Japanese side	Inputs from Thai side	Preconditions
1-1	<p>Make continuous improvement of regular training courses in CITC: namely Climate Change and Sustainable Development (CCSD), Mitigation Mechanism (MM), GHG inventory (GHG-I), and Climate Finance (CF) (*).</p> <p>1-1-1 Improve and/or upgrade existing basic courses.</p> <p>1-1-2 Develop advanced courses.</p> <p>1-1-3 Develop and/or update training guidelines (**) and training materials.</p> <p>1-1-4 Conduct the training courses as developed and/or updated in the activities 1-1-1 and 1-1-2.</p> <p>1-1-5 Strengthen networks with potential resource persons and alumni for improvement of training courses.</p> <p>1-1-6 Conduct monitoring and evaluation through (1) tests before and after the relevant training courses and (2) satisfaction survey of training participants.</p>	<p><Long-term and Short-term experts></p> <p><Machinery and equipment></p> <p><Part of necessary expenses for training></p>	<p><Office space></p> <p><Operation cost for activities></p> <p><Counterpart assignment></p>	<p>* Networks developed during the previous phase of the Project are reconfirmed.</p>
1-2	<p>Develop new training courses to meet the needs for capacity development in Thailand and other Southeast Asian countries on (1) adaptation and (2) legislation, regulation, policies, and measures on climate change.</p> <p>1-2-1 Develop the training courses.</p> <p>1-2-2 Develop training guidelines (**) and teaching materials.</p> <p>1-2-3 Conduct the training courses as developed in the activity 1-2-1.</p> <p>1-2-4 Strengthen networks with potential resource persons and alumni for improvement of training courses.</p> <p>1-2-5 Conduct monitoring and evaluation through (1) tests before and after the relevant training courses and (2) satisfaction survey of training participants.</p>			
2-1	<p>Develop at least one new "Signature training course" to support planning and/or implementation of climate change activities in Thailand and other Southeast Asian countries.</p> <p>The "Signature training course(s)" should contain the following key characteristics:</p> <p>(1) Be designed and conducted to support planning and/or implementation of climate change activities in Thailand and other Southeast Asian countries;</p> <p>(2) Focus on specific issues, such as (a) forestry and climate change, (b) water, agriculture and climate change, and (c) disaster management and climate change, for a limited number of participants (e.g. 10-15 persons);</p> <p>(3) Incorporate (a) hands-on training, (b) assignment of action plans to training participants, and (c) site-visits.</p> <p>2-1-1 Design "Signature training course(s)" and obtain approval by the Project Director.</p> <p>2-1-2 Develop training guidelines (**) and teaching materials.</p> <p>2-1-3 Conduct the training course(s) as designed in the</p>			

	activities 2-1-1. 2-1-4 Conduct monitoring and evaluation through (1) tests before and after the relevant training course(s), (2) satisfaction survey of training participants, (3) information on the status of planning and implementation of climate change action activities based on the action plans prepared by training participants.			
2-2	Promote bilateral cooperation on climate change. 2-2-1 Identify target country or countries for bilateral cooperation on climate change. 2-2-2 Identify specific needs and resources for mutual capacity development with the target country or countries as identified in the activity 2-2-1. 2-2-3 Design the program(s) for bilateral cooperation on climate change with the target country or countries according to the needs and resources as identified in the activity 2-2-2. 2-2-4 Conduct the program(s) as designed in the activity 2-2-3. 2-2-5 Evaluate the results of the activity 2-2-4.			
3-1	Revise and implement CIRC Business Plan to achieve sustainability. 3-1-1 Review the implementation of CIRC Business Plan. 3-1-2 Revise CIRC Business Plan by focusing on strategic issues: namely networking, partnership, marketing, and funding strategies among others. 3-1-3 Propose the revised CIRC Business Plan to the Sub-Committee on Capacity Building under the TGO Board of Directors for approval, leading to implementation.			
3-2	Disseminate lessons to be learned based on the activities for Output 1 and 2, through media, publications and organized events/seminars.			
3-3	Study feasibility of setting a high level network on climate change between Thailand and Japan, as well as among Southeast Asia countries.			
3-4	Design and develop a prototype of 'Digital Capacity Building Gateway', which may include the functions of: (1) Tracking the flow from application to follow-up, (2) Training programs and participants, (3) Training materials, and (4) Status of action plans.			

Notes

(*) While the course on CF is offered only in English, the other courses will be provided in both Thai and English languages.

(**) The objective and contents of training guidelines are similar to those of the General Information (GI) for acceptance of trainees by JICA

1.3 Project approach

TGO and JICA Short-term Expert Team took into full consideration the following approaches and principles in implementing the Project so that TGO would continuously and self-reliantly operate CITC after completion of the Project.

(1) Principle of technical cooperation

In order for TGO to continuously and self-reliantly operate and manage CITC after the completion of the Project, JICA Short-term Expert Team provided technical support to TGO.

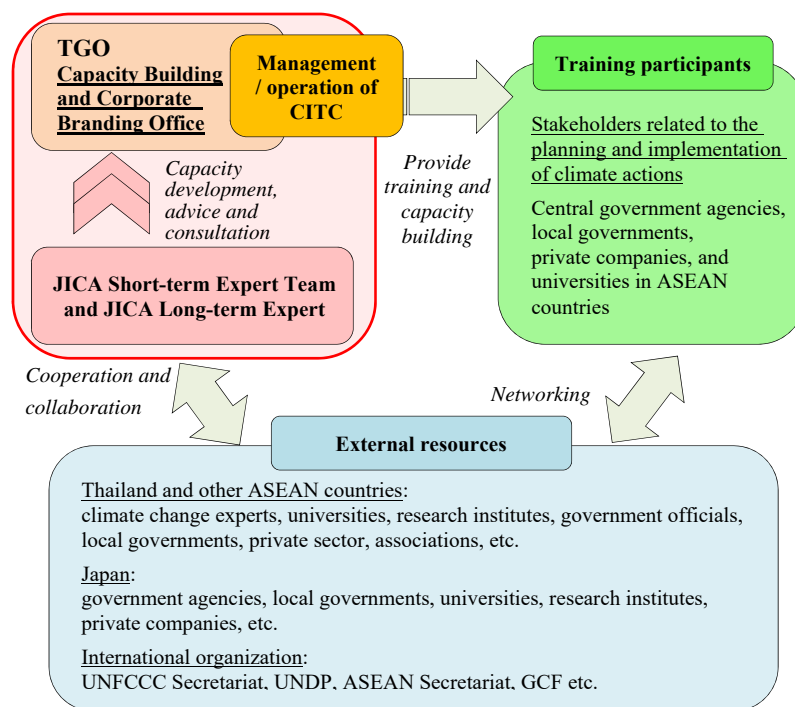


Figure 1 Implementation structure

(2) Capacity assessment and monitoring

For continuous and self-reliant operation of CITC, further enhancement in TGO's individual and organizational capacity related to training curriculum development and training operation and management is important. TGO and JICA Short-term Expert Team conducted the following activities for capacity assessment and monitoring in order to effectively and efficiently achieve the capacity development goal.

Initial capacity of CB Office members including officials and staff, who are in charge of management and operation of CITC, was identified at the beginning of the Project through interviews.

Each CB member then set her/ his own capacity goal that should have been achieved by the end of the Project. Capacity goal was set to be in line with or beyond her/his Key Performance Indicator (KPI) of the year. In setting a capacity goal, it is important to clarify the role and responsibility of each official under CITC activities, which can be categorized as technical capacity, training management/ operation capacity, and capacity for networking and PR/ marketing activities etc. TGO has ensured that the knowledge and skills obtained through the Project would be continuously used to operate CITC.

The capacity of target officials was monitored regularly and the achievement level was checked in comparison with the set capacity goal. Capacity monitoring was jointly conducted two times during the Project; at the beginning and the intermediate stage of the Project. Final assessment was not conducted due to the COVID-19 pandemic. TGO and JICA agreed to conduct internal assessment that will be done by TGO after completion of the Project.

(3) Cooperation with relevant organizations

1) Networking and cooperation with relevant organizations

The Project supported coordination and collaboration with various organizations for smooth operation of the Project. These organizations included, inter alia, ONEP, Thailand International Cooperation Agency (TICA), and UNFCCC Regional Collaboration Centre for Asia-Pacific Region (UNFCCC-RCC).

The Project also further enhanced collaboration with organizations with which CITC had already established networking. These organizations included various governmental agencies, cities, academia and research institutions, and private sectors in Thailand, other countries in Southeast Asia, Japan, and other countries as well as regional and international organizations.

2) Experience sharing of other JICA projects on climate change

The Project promoted collaboration with other projects which were implemented by JICA in Southeast Asia. The Project promoted sharing of knowledge and experiences through CITC from such projects as “the Project for Advancing Co-design of Integrated Strategies with Adaptation to Climate Change (ADAP-T),” which was carried out in Thailand from the support from JICA and Japan Science and Technology Agency (JST).

(4) Promotion activities

Promotion activities were carried out to effectively disseminate the outcome of the CITC activities and the Project among the relevant organizations and general public in Thailand and other countries in Southeast Asia. The websites of TGO and CITC, the CITC Facebook page,

TGO's YouTube channel (Climate Change Channel), and other media were continuously used by TGO for the promotion of CITC. Promotion was conducted also through regional and international conferences or seminars on climate change.

(5) Project monitoring and evaluation

TGO and JICA Short-term Expert Team in coordination with JICA Long-term Expert jointly and regularly monitored the progress of the Project using the Monitoring Sheet in light of the PDM and Plan of Operation (PO).

(6) Smooth and effective implementation of the Project

The following operational measures were taken in order to implement the Project smoothly and effectively;

1) Flexible mobilization of JICA Short-term experts

JICA Short-term Expert Team tried its best effort to mobilize its experts in a flexible manner within the given assignment period to meet the needs of TGO.

2) Regular communication between TGO and JICA Short-term Expert Team

Progress of the Project and any issue arisen at the course of the Project operation were shared between Thai side and Japanese side through close communication as well as meetings among TGO executives, the Director and officials of CB office, JICA Long-term Expert and JICA Short-term Expert Team. Thai and Japanese sides maintained close communication all the time to carry out the Project as planned.

3) Coordination with JICA Long-term Expert

TGO and JICA Short-term Expert Team closely worked and coordinated with JICA Long-term Expert through daily discussions and regular meetings.

Chapter 2 Outcome of the Project

2.1 Activities related to Output 1:

CITC's training courses are sustained and upgraded

This section describes the results of activities related to the Project Output 1, which is “CITC’s training courses are sustained and upgraded.” During the Project period, the TGO with the support from JICA Short-term Expert Team developed training curriculum and delivered training courses as summarized below.

Table 2 List of CITC training courses supported under the Project

Name of course	Category	Delivery date	Venue	Number of participants	Number of participating countries
GHG Inventory (GHGI)	Basic	July 2020	*Online	11	5
Climate Change and Sustainable Development (CCSD)	Basic	August 2020	Bangkok	46	10
Mitigation Mechanism and Decarbonization (MM)	Basic	May 2018	Bangkok	60	10
	Advanced (1 st)	Dec 2019	Bangkok	43	8
	Advanced (2 nd)	July 2020	*Online	9	3
Climate Finance (CF)	Basic	May 2018	Bangkok	52	10
	Advanced (1 st)	Sep 2019	Bangkok	25	8
	Advanced (2 nd)	July 2020	*Online	8	5
Climate Change Adaptation	Basic (new course)	Sep 2019	Bangkok	27	7
	Basic	July 2020	*Online	Joint training with CF advanced (2 nd)	
Enabling Environment (Climate Law and Regulation)	Basic (new course)	July 2020	*Online		

In this section, the results of the following activities for each of the above CITC training courses are described:

- a. Course outline
- b. Discussion points between TGO and JICA Short-term Experts
- c. Expected training outputs and outcome
- d. Training curriculum²
- e. Training materials
- f. Training delivery and its result
- g. Monitoring and evaluation.

2.1.1 Greenhouse Gas Inventory (GHGI) course for Southeast Asian countries

a. Course outline

TGO and JICA Short-term Expert Team revised the existing curriculum of this course taking into account the results of the previous training delivered by TGO in June 2017 in Bangkok, which was before the commencement of the Project.

TGO and JICA Short-term Expert Team revised the training curriculum in a way that can enhance technical understanding and necessary skill of trainees related to GHG emissions data compilation as well as arrangement for GHG inventory management under the 2006 IPCC Guidelines. The revision of training curriculum was made from the training needs that the transition from the Revised 1996 IPCC Guidelines to the 2006 IPCC Guidelines for GHG inventory management has been the key and imminent task in these countries. The importance of this course is expected to increase in coming years due to the decision by COP24 that required all countries to use 2006 IPCC Guidelines.

Objectives for the revised GHGI course for Southeast Asian countries are as follows:

- To provide practical skills for transition from the Revised 1996 IPCC Guidelines to the 2006 IPCC Guidelines for GHG emissions data compilation and collection;
- To enhance technical understanding and practical skills on data collection and compilation, transition in all covered sectors in Nationally Determined Contribution

² The training guideline specified in PDM is substituted by “Training curriculum” under this Project as this is the term used by CITC. The training curriculum was developed referring to the General Information (GI) format that is indicated in the PDM. The training curriculum contains the following information for trainees: (1) Training title, organizers, (2) Training date and time, location and venue information, (3) Expected output, (4) Eligibility conditions, (5) Training outline, (6) Training program and lecturer information.

(NDC) of each Southeast Asian country, and

- To facilitate sharing of lessons and experiences among Southeast Asian countries on the experience and challenges in the transition process.

Training participants are expected to obtain knowledge and skill sufficient enough to manage transition work for their national GHG inventory based on the 2006 IPCC Guidelines after attending the training.

Targeted trainees are practitioners from GHG inventory compiling agencies including inventory compiler and practitioners in charge of the two target sectors in ASEAN countries, which are Energy (excluding transport) and Industrial Processes and Product Use (IPPU) sectors.

For other remaining two sectors, AFOLU and Waste, TGO will conduct a training for ASEAN countries after the Project period.



Picture 1 Discussion on training curriculum (GHGI)

b. Discussion points between TGO and JICA Short-term Experts

Discussions between TGO and JICA Short-term Experts are summarized in Table 3.

Table 3 Technical discussions with TGO (GHGI)

Conducted from October 2017 to March 2018	
TGO participants	Ms. Nareerat Thanakasem, Ms. Ranida Panthong
Topics	Development of training curriculum and training materials
Discussion points	<ul style="list-style-type: none">- Discussed major topics and points that should be covered in the basic and advanced courses and how to differentiate these two courses, based on the results of TNA which was conducted by TGO in June 2017.- Discussed the importance, benefits and limitations of inviting finance-related agencies to the basic course.- Discussed how to differentiate the CITC training courses from other training courses organized by other entities on the topic of GHG Inventory.- Discussed how to update curriculum and training materials even more efficiently and effectively, for example by making use of the existing curriculum and training materials prepared by other organizations, or co-organize the training with other organizations.
Conducted from April 2018 to September 2018	
TGO participants	Dr. Jakkanit Kananurak, Ms. Nareerat Thanakasem
Topics	Contents to be included in the revised training curriculum

Discussion points	<ul style="list-style-type: none"> - Discussed contents to be included in training curriculum and training materials on inventory data and institutional arrangement related to QA/ QC for transition to the 2006 IPCC Guidelines. - Discussed approaches to share good practices related to the guideline transition including the experience of Thailand Greenhouse Gas Emissions Information System (TGEIS). - Discussed how to set up an effective session to promote further transition efforts. Discussed possible participation by experts from the Consultative Group of Experts (CGE) under UNFCCC and representatives from Southeast Asian countries including Indonesia that finished transition works. Discussed how to design an exercise session that deals with data transition using a set of GHG emission data from the existing National Inventory Report (NIR) from Southeast Asian countries during the training, which is expected to result in a better understanding of transition works by trainees.
Conducted from October 2018 to March 2019	
TGO participants	Dr. Jakkanit Kanarurak, Ms. Nareerat Thanakasem, Dr. Akarapon Houbcharaun, Ms. Apaphatch Hunsiritrakun, Ms. Thunyporn Thongmueang
Topics	Tips for training curriculum development
Discussion points	<ul style="list-style-type: none"> - JICA Experts shared the outline of the 2019 Refinement and explained the characteristics and components of the 2019 Refinement to the TGO side. - JICA Experts explained the outline of the technical workshop on GHG inventory management under the 2006 IPCC Guidelines by international organizations to the TGO side. TGO and JICA Experts discussed the importance of enhancing added value of the GHGI course by focusing on the transition from the Revised 1996 IPCC Guidelines to the 2006 IPCC Guidelines, about which no other organizations have conducted training. - TGO and JICA Experts discussed how to effectively focus certain sector(s) among the 4 sectors under the 2006 IPCC Guidelines. Both sides analyzed the share of GHG emissions in national inventory in the region and also considered resources and sustainability of CITC in selecting target sector(s). - TGO and JICA Experts discussed arrangement for the consultation meeting including potential experts from Thailand and also other international experts from Japan and Southeast Asian countries. - TGO and JICA Experts discussed how to leverage CITC's existing network with UNFCCC-RCC for implementation of the GHGI course.
Conducted from April 2019 to September 2020	
TGO participants	Ms. Nareerat Thanakasem, Ms. Thunyporn Thongmueang



Picture 2 Discussion on curriculum (GHGI)

Topics	Review on the mitigation measures in Japan with national GHG inventory
Discussion points	<ul style="list-style-type: none"> - JICA Short-term Experts shared the outline of efforts taken in Japan by the Ministry of the Environment related to a review on the mitigation measures in Japan with national GHG inventory to the TGO side as a reference for further improvement of the course. - JICA Short-term Experts stressed the importance of utilization of national GHG inventory for a purpose of not only a recording or understanding of national GHG emission volumes or trends but also a review on national mitigation measures through analysis of GHG emission trends for each sector and category in consideration of the domestic socio-economic trends in the past years. - TGO side contributed to the revision work of the training curriculum by providing extensive inputs, which include: <ul style="list-style-type: none"> ➤ The detailed information on the works for transition to the 2006 IPCC Guidelines by Government of Japan should be introduced as a good practice for the transition. ➤ Lectures on GHG inventory preparation for Energy and IPPU sectors under the 2006 IPCC Guidelines should be delivered in the format of parallel sessions for trainees from the responsible line ministry for each sector for effective learning. - A set of dummy data on GHG emission amount, instead of confidential actual GHG emission data of each country, can be used.
TGO participants	Ms. Nareerat Thanakasem, Ms. Thunyaporn Thongmueang
Topics	Preparation of the textbook outline
Discussion points	<ul style="list-style-type: none"> - TGO and JICA Short-term Experts jointly prepared a textbook outline for the revised textbook, and conducted internal consultations with the local consultant. Through this, TGO side enhanced their understanding of a design of the technical component of revised textbook especially on the topic of transition to the 2006 IPCC Guidelines.
Conducted from October 2019 to March 2020	
TGO participants	Ms. Nareerat Thanakasem, Ms. Thunyaporn Thongmueang, Ms. Thitinat Sakranukit
Topics	Revision of training curriculum
Discussion points	<ul style="list-style-type: none"> - During the discussion on target trainees, JICA Short-term Experts stressed the importance of focusing on GHG inventory compiling agency in ASEAN countries to meet the training objective, rather than widening the target to data collectors from line ministries. Taking into account the impact of the training, TGO and JICA Short-term Experts agreed to set the GHG inventory compiling agencies as the targeted trainees for the course. - JICA Short-term Experts suggested to add one lecture session at the beginning of the training that explains the importance and expected roles of GHG inventory management in terms of the enhanced ambition of the Nationally Determined Contribution (NDC) of each ASEAN country under

	<p>the Paris Agreement.</p> <ul style="list-style-type: none"> - TGO and JICA Short-term Experts discussed contents of a group exercise that should provide trainees with an opportunity to enhance their practical skills on the overall works for the transition to the 2006 IPCC Guidelines, such as use of the IPCC Software for compilation of activity data in compliance with the Guidelines, preparation schedule and work flow charts, institutional arrangement for data collection and compilation. - TGO and JICA Short-term Experts discussed the contents to be presented by the selected AMS (Cambodia, Indonesia, Laos and Vietnam) at the country presentation session and concluded the topic should be the current status and challenges each country is facing in transition to the 2006 IPCC Guidelines.
TGO participants	Ms. Nareerat Thanakasem, Ms. Thunyaporn Thongmueang, Ms. Thitinat Sakranukit
Topics	Revision of textbook
Discussion points	<ul style="list-style-type: none"> - TGO and JICA Short-term Experts worked on the revision of following missing information in the submitted first textbook draft from the local consultant. <ul style="list-style-type: none"> ➤ General concept of the transition including difference between the Revised 1996 and 2006 IPCC Guidelines in Chapter 1 ➤ Methodology for estimation of GHG emissions in 2H Other subcategory in Chapter 3 ➤ General information on estimation and combination of uncertainties for 2H Other subcategory in Chapter 3. - JICA Short-term Experts stressed the importance of quality management of CITC textbook from the viewpoint of editorial works (i.e. grammar and layout), and supported TGO on this issue.
TGO participants	Ms. Nareerat Thanakasem, Ms. Thunyaporn Thongmueang
Topics	Textbook peer review
Discussion points	<ul style="list-style-type: none"> - TGO and JICA Short-term Experts discussed on general approach and methodology of textbook peer review activity. Both sides discussed and concluded the objectives, scope, implementation structure and schedule for peer review.
Conducted from April 2020 to July 2020	
TGO participants	Ms. Nareerat Thanakasem, Ms. Ranida Panthong
Topics	Revision of training curriculum and textbook
Discussion points	<ul style="list-style-type: none"> - During the discussion on online training contents, TGO and JICA Short-term Experts discussed adding the following lectures in training curriculum for the online training: <ul style="list-style-type: none"> ➤ A lecture on overview of analysis of the factors in changes of GHG emission volume in each sector and subsector in recent years for identification of necessary mitigation measures and appraisal of implemented mitigation measures in previous years by Government of Japan, with aim to promote better understanding of the role and

	<p>importance of GHG inventory in the process of consideration of further mitigation measures for increased ambitiousness of the Nationally Determined Contribution (NDC) of their countries under the Paris Agreement in training participants</p> <ul style="list-style-type: none"> ➤ A lecture by CB official on overview and outcome of training activities conducted on GHG inventory management under the 2006 IPCC Guidelines for ASEAN countries for dissemination on TGO's activities related to GHG inventory. - TGO and JICA Short-term Experts discussed holding the following sessions instead of a group exercise, with aim to promote better understanding of necessary works for application of the Guidelines or improvement in GHG inventory management under the Guidelines through interactive discussion with resource persons and knowledge sharing among training participants: <ul style="list-style-type: none"> ➤ Online consultation session at which training participants explain contents of their action plan, including progress of their domestic efforts for application of the 2006 IPCC Guidelines for GHG inventory management or improvement in GHG inventory management under the Guidelines, their work plan for July 2020 and onwards, their challenges and gaps in institutional and technical aspects, to resource persons to receive their comments and advices. ➤ Country presentation session at which training participants from each country explain on the action plan which is revised based on comments and advices from resource persons to other training participants with objective of sharing of knowledge on application of the 2006 IPCC Guidelines in some ASEAN countries with the other countries that have not finished full application of the Guidelines. - JICA Short-term experts proposed TGO to be a facilitator for online consultation and country presentation sessions, based on the acquired knowledge at the internal coaching session for TGO staff in June 2020, from viewpoint of self-sustained training operation by TGO.
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c. Expected training outputs and outcome

The expected output of the course is that, through attending this training, the training participants will be able to obtain knowledge and practical skills to apply the 2006 IPCC Guidelines for GHG inventory management on Energy and IPPU sectors.

d. Training curriculum

TGO and JICA Short-term Experts made a series of revisions on the training curriculum. Targeted trainees are practitioners from GHG inventory compiling agencies and line ministries which supervise the energy and IPPU sectors in ASEAN countries.

In light of the CMA18 decision at COP24 that all countries are required to apply 2006 IPCC Guidelines to develop national GHG inventory, one session was added to the curriculum on the role of GHG inventory in increasing ambition of NDC target.

Due to the COVID-19 pandemics, TGO decided to implement the GHGI training in an online training format. Based on this decision, TGO and JICA Short-term experts jointly adjusted training contents and time slot at each training module. The training curriculum was updated and is composed of the following three parts.

- Online lecture using recorded lecture videos
- Live online consultation sessions at which training participants develop and improve the contents of their action plan, including progress of their domestic efforts for application of the 2006 IPCC Guidelines for GHG inventory management or improvement in GHG inventory management under the Guidelines, their work plan, their challenges and gaps in institutional and technical aspects, which they prepare after watching recorded lecture videos, to resource persons to receive their comments and advices.
- Country presentation session at which training participants from each country explain and share the action plan which is revised based on comments and advices from resource persons to other training participants with the objective of sharing a knowledge on application of the 2006 IPCC Guidelines in some ASEAN countries with the other countries that have not finished full application of the Guidelines, as well as overall discussion with other participants including resource persons.

The final training curriculum is shown in [Attachment 1](#).

e. Training materials

TGO and JICA Short-term Exerts designed the revised textbook for the course which can be used as a reference for trainees during and after the training delivery. Although two sectors under the 2006 IPCC Guidelines, namely Agriculture, Forestry and Other Land Use (AFOLU) and Waste, were covered at the online training, textbook for these two sectors was also developed for a future training course by TGO after the Project period.



Picture 3 Discussion on training material (GHGI)

The revised textbook for the GHGI course was designed to facilitate understanding of the specific concept and procedure for works related to transition to the 2006 IPCC Guidelines by training participants from Southeast Asian countries, by providing detailed explanation on specific points to be considered and essential concepts for the transition for each sector under the 2006 IPCC Guidelines, as well as showing concrete examples of good practices and in several countries including Southeast Asian countries.

The textbook was drafted by a local consultant hired by the Project based on the textbook outline that was designed by CB official in charge of the GHGI course. JICA Short-term Experts provided technical support in designing the outline. The CB official also conducted review on the draft textbook and communicated with the local consultant for further improvement.

➤ **Peer review of textbook**

Based on the decision by the Director of CB office, the Project conducted a third-party peer review on the textbooks of selected courses. Through discussions among TGO and JICA side, it was decided that peer review was conducted for the following training materials of CITC:

- Textbook that is newly developed for a training course (excluding manual and guidebook for seminar or workshop-style training course)
- Textbook for an advanced course
- Textbook that requires major revision on its contents

During the Project period, the textbooks for three courses went through peer review, namely GHGI course, MM course (advanced) and CF course (advanced).

TGO played an important role in peer review activity, including identification and communication with peer reviewers and also the review of feedbacks from the reviewers. The Director of CB office as well as JICA Long-term expert also reviewed the textbooks. JICA Short-term Experts supported TGO from technical and financial aspects.

For GHGI course, TGO and JICA Short-term Experts jointly made a review on the draft of all chapters of the textbook that was developed by the local consultant. Both sides also developed the implementation plan of textbook peer review including identification and contracting external reviewers and peer review schedule. Peer review was conducted for not only chapters that were used for the online training (energy and IPPU) but also the other chapters (AFOLU and waste) for the future use by TGO.

Table 4 List of reviewers (GHGI course)

Chapter	Reviewer name
Chapter 1 (Introduction)	Dr. Junko Akagi, JICA Short-term Expert
Chapter 2 (Energy)	
Chapter 3 (IPPU)	
Chapter 4 (Agriculture, Forestry and Other Land Use: AFOLU)	Dr. Rizaldi Boer, Professor, Bohol Agriculture University
Chapter 5 (Waste)	Dr. Retno Gumilang Dewi, Lecturer, Institute of Technology Bandung
All chapters	Mr. Thawatchai Saengkhamasuk (Director of CITC, TGO) Mr. Koji Fukuda (JICA Long-term Expert/ Chief Advisor)

Major comments from the reviewers are summarized in Table 5.

Table 5 Major comments from reviewers (GHGI course)

Chapter	Comment
Overall	- Description needs to be consistent with words and expressions in the 2006 IPCC Guidelines.
Chapter 1 (Introduction)	- General issues and information for all covered sectors under the 2006 IPCC Guidelines need to be described in Chapter 1.
Chapter 3 (IPPU)	- It is necessary to add missing information on uncertainty in IPPU sector.
Chapter 4 (AFOLU)	<ul style="list-style-type: none"> - It is suggested to add preface to show the purpose of preparation of this textbook at the beginning of Chapter 4. - At the beginning of Chapter 4, description on evolution of sub-categories between Land Use, Land Use Change and Forestry (LULUCF) under the Revised 1996 IPCC Guidelines and AFOLU under the 2006 IPCC Guidelines needs to be added. - It is suggested to add information on the 2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands in this chapter. - It is suggested to add information on the tables and figures in the 2006 IPCC Guidelines which correspond to the tables and figures in this chapter. - It is suggested to describe knowledge on effective evaluation of uncertainty of activity data and emission factors. - It is suggested to mention the importance of quality assurance and control (QA/QC) in controlling uncertainty.
Chapter 5 (Waste)	- It is suggested to introduce a domestic effort for estimation of GHG emissions from wastewater management using demographical statistics in Indonesia in this chapter.

The local consultant revised the draft textbook in response to the above comments, and TGO finalized the textbook after their final check of revised contents and editorial check.

For online training, apart from the above textbook, TGO used recorded lecture videos by each lecturer and action plan template for online consultation session which was jointly developed by TGO and JICA Short-term experts.

f. Training delivery and its results

The training was delivered online between 13 and 30 July 2020 using the Microsoft Teams. Online consultation and country presentation sessions were facilitated by TGO and JICA Short-term experts and TGO.

49 training participants from 6 ASEAN countries (Cambodia, Malaysia, Myanmar, Philippines, Singapore and Thailand) registered for the course. Most of them were from the UNFCCC focal point of each country, while training participants included experts from private companies, universities and research institutes. Training participants from 5 ASEAN countries (Cambodia, Malaysia, Myanmar, Philippines and Singapore) attended online consultation sessions.

Before the consultation session, each country prepared the action plan covering the following information based on their understanding of recorded lecture videos which they watched before the consultation session. The overview of action plan developed by trainees is shown in Table 6.

- Implementation structure related to preparation and management of national GHG inventory
- Efforts for application of the 2006 IPCC Guidelines for their national GHG inventory management
- Challenges, gaps and barriers toward full-application of the Guidelines or improvement in the quality of GHG inventory management under the Guidelines from institutional and technical aspects, and capacity needs in relevant fields
- Work plan on full-application of the Guidelines or improvement in the quality of GHG inventory management under the Guidelines

Table 6 Training output (GHGI course)

Country name	Current efforts and challenges for application of the 2006 IPCC Guidelines	Comments from resource persons
Cambodia	- Government of Cambodia has finished full-application of the 2006 IPCC Guidelines for all sectors before submission of their 1 st Biennial Update Report (BUR1) in compliance with the 2006 IPCC Guidelines at the end of April 2020.	- For further improvement in GHG inventory management in the country, it is recommended to set specific priority targeted fields for the improvement and set

Country name	Current efforts and challenges for application of the 2006 IPCC Guidelines	Comments from resource persons
	<ul style="list-style-type: none"> - For Energy sector, Cambodia mainly faces challenges for time series consistency and aggregation of GHG emission data for each subsector. For IPPU sector, they mainly face challenges for use of national statistics of industrial production and consumption and improvement in estimation approaches for cement production and F-gas emission volumes. 	<ul style="list-style-type: none"> - priorities among these fields, based on the result of key category analysis. - It is quite necessary to embark on data archiving and management efforts in any style. For data archiving, excessively sophisticated IT system is not necessary.
Malaysia	<ul style="list-style-type: none"> - Government of Malaysia has finished full-application of the 2006 IPCC Guidelines for all sectors and developed necessary implementation structure for GHG inventory management under the Guidelines. - Malaysia faces challenges in retaining institutional memories for GHG inventory management in GHG compiling agency and rationalization of acquisition process of activity data from line ministries. Also, Malaysia shared their capacity needs on time series consistency and uncertainty of emission factors for certain sub-categories. 	<ul style="list-style-type: none"> - Bottom-up approach often leads to variability in data quality, and it is good practice to take top-down approach. - It is recommended to set milestones on a yearly basis in the work plan towards Biennial Transparency Report (BTR).
Myanmar	<ul style="list-style-type: none"> - Government of Myanmar has finished full-application of the 2006 IPCC Guidelines for all sectors, and developed necessary implementation structure for GHG inventory management under the Guidelines. - Myanmar faces challenges in retaining necessary human resources for sustainable and robust GHG inventory management, capacity development and institutional strengthening pertaining to QA/QC and reporting, improved activity data quality and more access to confidential data including the ones of private companies. Also, they showed their capacity needs in the field of more effective management, implementation and improvement of GHG inventory and mitigation measures. 	<ul style="list-style-type: none"> - It is quite important to develop necessary institutional structure for transparency in GHG inventory reporting. - The 2006 IPCC Guidelines requires key category analysis for the entire GHG inventory, as well as each sector. It is suggested the country will conduct key category analysis for the entire GHG inventory, in addition to existing key category analysis for each sector. - For development of data archiving system, it is important to strengthen network among stakeholders and make clear information and data flows.

Country name	Current efforts and challenges for application of the 2006 IPCC Guidelines	Comments from resource persons
Philippines	<ul style="list-style-type: none"> - Government of the Philippines has finished full-application of the 2006 IPCC Guidelines for all sectors by 2020. They have developed institutional structure for GHG inventory management under the Guidelines with support from international experts. - The Philippines face challenges in retaining knowledge on GHG inventory management in GHG inventory compiling agency, clear division of roles among line ministries for data collection and emission estimates for cross-sectoral GHG emitting activities, identification of necessary activity data for emission estimates with aim to figure out corresponding data providing institutions and capacity of QA/QC planning. Also, they showed their capacity needs in time series consistency and uncertainty. 	(*No comment on the contents of action plan from resource persons.)
Singapore	<ul style="list-style-type: none"> - Government of Singapore has finished application of the 2006 IPCC Guidelines for all sectors but Energy sector. For Energy sector, they estimate GHG emission amount in Tier 1 approach, combining the Revised 1996 and 2006 IPCC Guidelines. - Singapore faces challenges that they are lack of structure for HFC refrigerant data collection from companies in their country and legal system for data submission from these companies. 	<ul style="list-style-type: none"> - It is suggested to make clear and list up necessary elements of existing GHG inventory which requires application of the 2006 IPCC Guidelines for Energy sector, as the next step for full-application of the 2006 IPCC Guidelines. - For emission estimates for HFCs, it is advised that the country refers to the 2019 Refinement to the 2006 IPCC Guidelines as there can be useful information on collection of necessary data for HFCs emission estimates, though the Refinement has not yet been endorsed at meeting of the Parties to the Paris Agreement (CMA).

g. Monitoring and evaluation of the training outcome

TGO conducted an evaluation survey at the end of the online training course. The online survey was conducted for all three online training courses delivered in July 2020, namely GHGI, MM

(advanced, 2nd round), and joint training of Climate Finance (advanced, 2nd round) with Climate Change Adaptation and Enabling Environment. TGO developed the survey questionnaire while JICA Short-term Experts provided technical support.

The total of 18 responses from 7 ASEAN countries were acquired. The result shows that trainees evaluated the online training positively as indicated in the overall score rating of 4.4 out of 5.

Some respondents commented that it was useful that the training covered 2019 Refinement, others requested CITC to share experience of other countries related to how to incorporate local-level GHG emissions into national GHG inventory.

2.1.2 Climate Change and Sustainable Development (CCSD) course for Southeast Asian countries

a. Course outline

The course, which is positioned as an introductory basic course among the CITC training courses, aims to enhance trainees' comprehensive understanding on various topics on climate change such as mitigation, adaptation, climate finance, international climate negotiations, SDGs and so on. The improved course did not only help trainees from Southeast Asian countries to enhance their knowledge on the latest decisions by the COP and requirements under these



Picture 4 Discussion on training curriculum (CCSD)

decisions, but also enhance their understanding and skills on emerging issues on climate change. The course incorporated many interactive sessions such as discussions and group works in addition to the lectures, taking into account the feedbacks from the trainees who attended the past CCSD course.

The course targeted the practitioner-level governmental officers from UNFCCC focal point agencies in Southeast Asian countries but also invite academia, NGOs and private sector from Thailand.

b. Discussion points between TGO and JICA Short-term Experts

Discussions between TGO and JICA Short-term Experts are summarized in Table 7.

Table 7 Technical discussions with TGO (CCSD)

Conducted from October 2017 to March 2018	
Date	Thursday, November 30, 2017 15:00-16:00
TGO participants	Ms. Apaphatch Hunsiritrakun, Ms. Tanawan Pongpanich
Topics	Development of training curriculum and training materials for Thai and ASEAN stakeholders/ management of local consultants
Discussion points	<ul style="list-style-type: none"> - Discussed effective ways to update the existing training materials. Main topics and points that should be updated or added in the revised training materials, considering the latest situation of international negotiations on climate change such as the Paris Agreement and NDCs submitted by ASEAN countries. - Discussed how to select appropriate contents of the training materials, taking into account the expected knowledge level of target trainees and the scope of work in their organization. - Discussed how to incorporate good practices and examples of climate measures into the updated textbook.
Conducted from October 2018 to March 2019	
TGO participants	Ms. Apaphatch Hunsiritrakun
Topics	Overall direction and contents of training curriculum
Discussion points	<ul style="list-style-type: none"> - TGO and JICA Short-term Experts shared views on the basic direction of the course that it should help trainees to enhance comprehensive understanding on not only various conventional climate issues, but also some emerging topics such as circular economy since the course is a regular training course that is delivered annually by CITC. - TGO and JICA Short-term Experts discussed how the course can effectively contribute to the promotion of other CITC training courses for trainees and their organizations. - TGO and JICA Short-term Experts discussed how case studies of certain topics, in addition to theory-oriented lectures on the same topics, can further enhance understanding of trainees. - TGO and JICA Short-term Experts discussed the importance of assigning TGO representatives as a lecturer and moderator for some training modules in order to reinforce self-sufficiency and sustainability of CITC in its international training activities.
Conducted from April 2019 to September 2019	
TGO participants	Ms. Apaphatch Hunsiritrakun
Topics	Approach for exercise design
Discussion points	<ul style="list-style-type: none"> - TGO and JICA Short-term Experts discussed selecting specific articles of the Paris Agreement that are covered by the Katowice Climate Package for the exercise sessions. Taking into account the difficulties and challenges the target trainees from the UNFCCC focal point agencies are facing in fulfilling the requirements, TGO and JICA Experts prioritized the topics on

	<p>NDC and transparency for the exercise.</p> <ul style="list-style-type: none"> - Since some trainees may not be familiar with the emerging topic such as circular concept/ economy, TGO and JICA Short-term Experts discussed and designed the related exercise sessions in a way that trainees can link the new concepts with the familiar topics of climate change and sustainable development. Furthermore, the sessions were designed to enhance active participation from all trainees by having them consider the potential applicability of the circular concept in their NDC.
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c. Expected training outputs and outcome

The course is expected to help trainees from UNFCCC focal point agencies in Southeast Asian countries to enhance their knowledge on climate change in a comprehensive manner and apply such knowledge in their country in promoting climate actions.

d. Training curriculum

The course aims to enhance trainees' comprehensive understanding on various topics on climate change. More specifically, the course highlights the requirements and implications for Southeast Asian countries under the latest decisions by the COP including mitigation, adaptation and climate finance, and also covers the topic of circular economy as an emerging tool for climate change countermeasure.

Based on the feedbacks from trainees who attended the past CITC training courses, TGO improved the curriculum by shifting lecture-oriented course to more interactive one by incorporating various discussion and exercise sessions.

TGO proactively improved and finalized the training curriculum under its strong ownership. Initial revision of the curriculum was done by the TGO official in charge of the training course, and finalization was also principally done by TGO while JICA Short-term Experts provided technical advices to TGO on overall direction of the curriculum and training modules including exercise sessions.

The final training curriculum is shown in Attachment 2.

e. Training materials

Revision of training material for the course was initiated by TGO by developing the textbook outline. Based on this outline which was improved with the support from JICA Short-term Experts, the textbook contents were developed.

The local consultant who was hired by the Project developed the draft textbook contents. Officials from CB office and other departments of TGO reviewed the draft contents and provided feedbacks to further improve the textbook.

The textbook was reviewed and finalized by TGO based on the draft textbook prepared by a local consultant. JICA Short-term Experts also reviewed the draft before finalization. Both training materials were electronically shared with trainees on CITC's website. (See [Appendices 2.2 and 2.3](#) for training materials.)

f. Training delivery and its results

The training was held for 3 days from 7 to 9 August 2019 at a hotel in Bangkok. The training was co-organized by TGO/ CITC, JICA and ONEP. The total 46 participants from all 10 ASEAN Member States (AMS) attended the training course. Participants were representatives from UNFCCC focal point agencies, university (Brunei) and local government (Philippines). From Thailand, participants from MONRE departments, line ministries (energy, transport, agriculture and industry), local government (BMA), private sector (SCG and PTT) and academic institutions attended the course.

Lecturers from TGO, UNEP, UNDP, UNIDO, the embassy of Finland, ONEP, and a Thai private company (SCG) provided lectures and case studies on various topics such as the latest COP decisions (Katowice Climate Package) and requirements for Southeast Asian countries, circular economy concept as countermeasures of climate change. TGO played a leading role in identifying and contacting each lecturer prior to the training delivery.



Picture 5 Lecture (CCSD)

The exercise sessions during the training allowed trainees to discuss and share opinions on the current challenges and countermeasures on implementing NDC and transparency. Through the exercises, trainees identified priority climate change countermeasures in line with their country NDC and relevant plans and policies such as on renewable energy and waste management as well as challenges to transform those measures into implementation. Many countries pointed out engagement and awareness raising/ capacity building of various stakeholders including non-state actors such as general public, private sector, CSO/ NGO, and youths is critical in all aspects but at the same time shared the view that effective incentives such as through taxation must be given to drive such actions.

TGO designed all the exercise sessions and prepared materials for the exercise with the support from JICA Short-term Experts. All the exercise sessions were moderated by TGO officials of CB Office.

A site visit was conducted on the final day of the training with the aim to enhance trainees' understanding on the topics covered in lectures and exercises and also to construct networks among trainees and experts.

g. Monitoring and evaluation of the training outcome

An evaluation survey was conducted on the final day of the training using a questionnaire. The questionnaire was jointly developed by TGO and JICA Short-term Experts. A total of 25 trainees from 10 AMS provided feedbacks on the training course.

Result of the evaluation was positive as shown in the average evaluation score on overall training satisfaction, which was 4.5 out of 5.0 score. Positive feedbacks from trainees contain opinions that highly evaluated their learning on the latest climate change talks and COP decisions as well as circular concept, and the interactive training approach and peer-learning opportunity with other trainees during the training. Other feedbacks contain suggestions to include more case studies on specific topics.

2.1.3 Mitigation Mechanism and Decarbonization (MM) course for Southeast Asian countries

2.1.3.1 Basic course

a. Course outline

TGO and JICA Short-term Expert Team updated the existing curriculum which was developed in March 2016 (during the previous JICA cooperation phase) by thoroughly reflecting the needs from Southeast Asian countries and the recent developments in mitigation mechanism.

The overall landscape of climate change mitigation actions under the UNFCCC framework has evolved significantly since the last training delivery. Paris Agreement requires enhanced support to implement developing countries' mitigation commitments stipulated in Intended Nationally Determined Contributions (INDCs) or NDCs. TGO and JICA Short-term Expert Team discussed and decided to improve the curriculum by not only covering various



Picture 6 Discussion on training curriculum (MM, basic)

updates on the latest trend of international climate change mitigation efforts and relevant issues including Measurement, Reporting and Verification (MRV) but also adding a module that allows trainees to learn practical knowledge on various mitigation options/ approaches/ technologies and MRV practices, as well as critical points to be addressed in preparing a project funding proposal.

b. Discussion points between TGO and JICA Short-term Experts

Discussions between TGO and JICA Short-term Experts are summarized in Table 8.

Table 8 Technical discussions with TGO (MM, basic)

Conducted from October 2017 to March 2018	
TGO participants	Ms. Nareerat Thanakasem, Ms. Ranida Panthong, Ms. Apaphatch Hunsirtrakun
Topics	Development of training curriculum and training materials for MM courses for Thai and ASEAN stakeholders
Discussion points	<ul style="list-style-type: none">- Confirmed major topics and points that should be covered in the basic and advanced courses and how to differentiate these two courses.- Discussed how to set the target trainees taking into account the actual roles

	<p>of ‘implementation’ agencies of mitigation measures and MRV and finance-related agencies.</p> <ul style="list-style-type: none"> - Discussed how to make training courses more participatory for the trainees e.g. by adding extensive exercise sessions and group works that facilitate active participation from all participants.
TGO participants	Ms. Nareerat Thanakasem, Ms. Ranida Panthong
Topics	Update of the existing training materials for ASEAN stakeholders
Discussion points	<ul style="list-style-type: none"> - Discussed major update points of the existing training materials especially focusing on how to describe the contents more clearly and effectively from a viewpoint of readers. - Discussed the effectiveness of including description of rationale of GHG emission reductions for each mitigation technology.
Conducted from April 2018 to September 2018	
TGO participants	Dr. Jakkanit Kananurak, Ms. Nareerat Thanakasem
Topics	Contents to be included in the revised training curriculum
Discussion points	<ul style="list-style-type: none"> - Discussed the importance of setting up a module to discuss among participants on the possible solutions for the issues on mitigation action implementation in Southeast Asian countries. - Discussed the effectiveness of inviting a speaker from UNFCCC-RCC Bangkok for a session that introduces good practices of mitigation action implementation in Southeast Asian countries considering its wide experience of supporting similar activities in the region.
TGO participants	Ms. Nareerat Thanakasem
Topics	Development of training materials
Discussion points	<ul style="list-style-type: none"> - Discussed the approach to update the GHG emissions data of Southeast Asian countries in the textbook by using the most updated data available. - Discussed the recent trend of mitigation technology deployment in Southeast Asia and discussed how to update the related contents in the existing textbook of the training course.

c. Expected training outputs and outcome

The course is expected to help trainees from UNFCCC focal point agencies and line ministries on climate change mitigation in Southeast Asian countries to enhance their knowledge and skill related to planning and implementing (including MRV) mitigation measures under their respective NDC, and apply the knowledge and skill in their work.

d. Training curriculum

The revised curriculum for the basic course includes a module that encourages trainees to learn and share lessons and experiences among participating Southeast Asian countries on the

challenges in development and implementation of mitigation measures to achieve NDC, as well as mobilizing domestic and international finance for mitigation projects.

In particular, the modules that introduce not only the latest trend of international efforts on climate change mitigation and MRV but also practical contents and good practices on various mitigation approaches and technologies as well as financial schemes for mitigation plans and actions that are available in Southeast Asian countries were highlighted. The final curriculum also contains a module where participants can discuss and extend their knowledge on the issues and solutions of MRV implementation. The training course was designed for government officials in the region who have at least 2 years of experience in the field of climate change either at the UNFCCC focal point agency or relevant line ministries for mitigation implementation.

The final training curriculum is shown in [Attachment 3](#).

e. Training materials

JICA Short-term Experts and TGO developed the textbook for the basic MM course, through updating and improving the existing textbook on the course that was developed during the previous phase of JICA cooperation.

The TGO official in charge of the course analyzed the existing textbook and developed the textbook outline with the support from JICA Short-term Experts. Revision work was principally done by JICA Short-term Experts while finalization was done by TGO.

f. Training delivery and its results

The MM course (basic) for Southeast Asian countries was conducted jointly with the Climate Finance (basic) for Southeast Asia from 21 to 24 May 2014 in Bangkok. The trainings were co-organized by TGO/ CITC, JICA, ONEP, and UNFCCC-RCC.

Although the initial plan was to conduct the above two training courses separately as a stand-alone course, the MM course, which covers technical perspectives of mitigation, and CF course, which features essentials in financing climate actions, were conducted consecutively, taking into account Southeast Asian countries are accelerating their efforts on climate actions under NDC. Connecting these two interrelated courses into one can form the training course that better matches the needs of the Southeast Asian countries, which also founded a basis for the path to the upcoming advanced courses that lead to the achievement of the Project Purpose to “develop and realize climate actions.”

The MM course was conducted for the first two days on 21 and 22 May 2018, while the CF course on 23 and 24 May 2018.

The training course accepted 60 trainees in total, including 16 from Southeast Asian countries other than Thailand (14 from UNFCCC focal point agencies and 2 from academia) and 44 from Thailand (central government, local government, private sector).

Lectures were given by experts from TGO (Strategy Office, and Monitoring and Approval Office), UNFCCC-RCC, ONEP, Thai academia and JICA Short-term Expert Team. The lectures covered such issues as the status of GHG emissions and mitigation measures (energy, transport and waste sectors) and the efforts for NDC implementation by ASEAN countries. In



Picture 7 Group work (MM, basic)

addition to the lectures by experts, representatives from each country presented and shared their situation and challenges related to their efforts on mitigation.

In the exercise session on the second day, the trainees were divided into groups to discuss technical, institutional, and economic barriers that prohibit implementation of mitigation measures under their NDC and considered possible countermeasures. Many questions were raised from participants during the exercise, for example on the difference between mitigation schemes such as CDM, JCM, or T-VER, and on the barriers that prevent diffusion of mitigation technologies. The exercise was facilitated by TGO official from CB office and JICA Short-term Expert Team who jointly designed the overall training curriculum including exercise sessions.

g. Monitoring and evaluation of the training outcomes

Three types of evaluation and monitoring of the MM and CF courses (basic) were carried out, which consist of 1) pre-test and post-test, 2) training satisfaction survey, and 3) post-training monitoring survey for trial.

As for the first set of evaluation method, all trainees were instructed to take a quiz both before (pre-test) and after (post-test) the training of each MM and CF course, and the test scores for both tests were compared in order to evaluate how the trainees' level of understanding has improved after participating to the training. Each test consists of 10 multiple-choice questions that are related to the training contents. The result shows that scores for both courses were improved after the training; from 61.7 score to 84.5 for MM course and from 49.3 to 80.7 for

CF course. Quiz for both courses were jointly developed by TGO and JICA Short-term Expert Team while the evaluation was done by TGO.

For the second method of evaluation on training satisfaction, a questionnaire was prepared by TGO and JICA Short-term Expert Team. The questionnaire was also uploaded online so that trainees can easily fill in the answer online. The result shows positive results overall, including satisfaction on training contents and approaches as well as training operation. The results of evaluation are shown in [Appendix 11.1](#). Additional feedbacks from trainees include positive replies such as learning practical experience in other countries and organizations, and suggestions such as incorporation of even more practical training and exercise contents that can be directly used for climate project formulation.

➤ **Trial of the post-training monitoring**

For the third modality, the post-training monitoring, which is called “result-based M&E” for the advanced courses, was undertaken for the MM and CF courses (basic) as a pilot activity, because this monitoring modality was planned for the advanced courses that impose trainees to formulate tangible outputs such as action plan or project proposal, which usually takes time until they are realized. The post-training monitoring trial was undertaken through the online questionnaire survey approximately two months after the training delivery.

Inquiries in the survey are 1) whether the knowledge and experience obtained at the CITC training courses have been utilized in trainees’ own works or their organization, and 2) how such obtained knowledge and experience has been utilized. For the second question, considering that it usually takes long time until the knowledge turns into something concrete, several answers that describe different stages or concreteness of climate action realization were set as follows:

1. Obtained knowledge and experience was shared among the department/ organization
2. Obtained knowledge was used for capacity building of stakeholders in the country
3. Obtained knowledge and skill was used for policy planning in the organization
4. Obtained knowledge and skill was used for the formulation of mitigation projects
5. Obtained knowledge and skill was used to apply to domestic or international fund/ climate finance

Although the number of responds was limited (5 responds), 4 respondents chose the obtained knowledge was used among organization, 2 answered it was used for capacity building activities in their country. Furthermore, 3 responded that CITC training course helped them develop the plans and projects, and 1 person even answered that they used CITC training

contents in applying to climate finance. The result of this survey was referred when CITC formulated the M&E methodology for the advanced courses.

Figure 2 Example of online questionnaire

2.1.3.2 Advanced course (1st round)

The advanced courses were developed for the selected CITC training clusters based on the topics, needs from target trainees, and characteristic of the training course.

TGO and JICA Short-term Expert Team agreed to develop advanced courses in the CF and MM clusters because these clusters should cover not only theoretical modules but also practical training contents that lead to the improvement of the technical skill of trainees related to the planning and implementation of actual climate actions.

Other training clusters, namely GHGI and CCSD, are designed as introductory courses and thus TGO and JICA Short-term Expert Team agreed not to develop advanced courses at the moment.

The advanced courses will not only deal with technically more advanced issues but also will contain extensive hands-on exercise sessions that requests trainees to develop a concrete and tangible climate action, whether it be a project idea note, proposal, or action plan, which can be proposed or submitted to climate-related funds, donors or trainees' own organization.



Picture 8 Discussion on training curriculum (MM, advanced)

a. Course outline

The objective of this MM course (advanced, 1st round) is to enhance the capacity of officials from UNFCCC focal point and relevant ministries, who are engaged in formulation and implementation of mitigation measures in ASEAN countries, to obtain the practical skills on formulation and implementation of mitigation measures that contribute to the achievement of NDCs. In addition, this training course provides trainees with the knowledge that can be applied in establishing or reinforcing national framework of MRV in each country. TGO and JICA Short-term Expert Team referred to the result of training needs assessment (TNA) and discussed that the advanced course can aim for improving practical skills of several elements related to the implementation of mitigation actions such as evaluation of GHG emission reductions and MRV implementation. Combination of lectures on theories and intensive exercise sessions on the topics of GHG evaluation and MRV, case studies in other countries was incorporated into the curriculum in order to equip trainees with practical skills.

The training was scheduled for 3 days. Lectures covered extensive case studies on practical issues and countermeasures in planning, formulating and implementing mitigation measures. Exercise sessions provided an opportunity for trainees to formulate a project summary of mitigation measure that can be implemented in their countries and also to prepare a roadmap on designing an MRV framework for energy-related mitigation measures.

Compared with the basic course conducted in May 2018, which extensively covered conceptual lectures, this advanced course covered more practical and specific knowledge areas related to the formulation approach of as well as procedure to formulate and implement MRV.

b. Discussion points between TGO and JICA Short-term Experts

Discussions between TGO and JICA Short-term Experts are summarized in Table 9.

Table 9 Technical discussions with TGO (MM advanced, 1st round)

Conducted from April 2018 to September 2018	
TGO participants	Dr. Jakkanit Kananurak, Ms. Nareerat Thanakasem
Topics	Contents to be included in the revised training curriculum
Discussion points	<ul style="list-style-type: none">- Referring to the tentative result of TNA for Southeast Asian countries, discussed the necessity and effective approaches to introduce concrete mitigation measures, and good practices and case studies of MRV implementation.- Discussed the effectiveness of including a module that introduces suggested framework and structure establishment for MRV implementation. Also discussed the necessity to carefully follow and appropriately reflect the

	<p>result of the international discussion and agreement regarding the guideline related to MRV of mitigation measure at COP24 and other international events.</p> <ul style="list-style-type: none"> - Discussed how to set the exercise module that involves the project summary formulation by trainees, where the document may contain information on applicable mitigation technology, GHG emission reductions and methods of MRV, in a way that contributes to the realization of actual mitigation actions in Southeast Asian countries.
Conducted from October 2018 to March 2019	
TGO participants	Dr. Jakkanit Kananurak, Ms. Nareerat Thanakasem, Ms. Thunyapom Thongmuang
Topics	Contents to be included in the revised training curriculum
Discussion points	<ul style="list-style-type: none"> - TGO and JICA Short-term Experts discussed to include practical and specific training contents such as actual cases in addition to the conceptual theories. - TGO and JICA Short-term Experts discussed the necessity of initiating preparation of exercise sessions well in advance such as exercise contents and procedures, exercise materials and final image of deliverables, in order to produce better outputs in the limited time. - TGO and JICA Short-term Experts discussed to select energy sector as the target sector considering the potential size of the mitigation measures that can be formulated in conjunction with the increasing energy supply and demand that will sustain in the Southeast Asian countries in the future. - TGO and JICA Short-term Experts discussed key points of introducing Paris rulebook at the training course considering its recent adoption by COP24. - TGO and JICA Short-term Experts discussed how to effectively cover two different subjects, i.e. formulation of mitigation measures and MRV, in a comprehensive and synergetic manner. - Recognizing the different MRV procedures and methods for different levels of mitigation measures, i.e. policy-level MRV and project-level MRV, TGO and JICA Short-term Experts discussed how to practically cover these different levels of MRV in training modules.
TGO participants	Ms. Nareerat Thanakasem
Topics	Development of training materials
Discussion points	<ul style="list-style-type: none"> - TGO and JICA Short-term Experts discussed to include practical contents on mitigation project formulation such as project planning and design, evaluation of feasibility in the textbook for the advanced course. - TGO and JICA Short-term Experts discussed the importance of differentiate the textbook for the advanced course from the basic course by covering specific and practical contents for trainees to actually utilize the material in considering their mitigation measures. - TGO and JICA Short-term Experts discussed the effectiveness to share the MRV/ tracking system of Thailand as an advanced case of MRV framework

	<p>development and operation.</p> <ul style="list-style-type: none"> - TGO and JICA Short-term Experts shared the necessity of describing concrete contents on MRV that allow readers to imagine what kind of MRV framework can be established.
Conducted from April 2019 to September 2019	
TGO participants	Ms. Nareerat Thanakasem, Ms. Thunyapom Thongmuang
Topics	Contents to be included in the revised training curriculum
Discussion points	<ul style="list-style-type: none"> - TGO and JICA Short-term Experts discussed how to encourage trainees to participate actively to group works during the training, referring to the examples of group work in other events and projects. - TGO and JICA Short-term Experts discussed the necessity of including practical and concrete case studies to help trainees to have more concrete idea of mitigation measures that can be implemented in their countries. - JICA Short-term Experts introduce the J-Credit system in Japan and the MRV manuals that were developed in another JICA project related to various levels of MRV frameworks and applicability in Southeast Asian countries.
TGO participants	Ms. Nareerat Thanakasem, Ms. Thunyapom Thongmuang
Topics	Contents to be included in the textbook
Discussion points	<ul style="list-style-type: none"> - TGO and JICA Short-term Experts discussed and shared understanding on the importance of including the topics on securing budget and financial resources for mitigation measure implementation in the textbook. - TGO and JICA Short-term Experts discussed and shared understanding on the importance and usefulness of including case study information on mitigation measures that are planned and implemented outside ASEAN countries. - JICA Short-term Experts explained the importance of referring to various information sources and literatures in CITC textbook, and at the same time stressed the significance of adding extra descriptions that are derived from analysis and synthesis of such information, which can add value to CITC's training materials. It was also explained that a careful attention must be paid in citing other sources to avoid potential violation of copyright.
Conducted from October 2019 to March 2020	
TGO participants	Ms. Nareerat Thanakasem, Ms. Thunyapom Thongmuang
Topics	Measures to enhance delivery of training output
Discussion points	<ul style="list-style-type: none"> - TGO and JICA Short-term Experts discussed an effective way to acquire training objective. Both sides discussed and identified that it is crucial to request trainees in an effective manner to prepare the presentation materials and concluded to provide trainees a template format that thoroughly describes the expected contents clearly before the training delivery. - TGO and JICA Short-term Experts discussed the necessity and setting up on session at the beginning of the training course that clearly explains the expected outputs, outcome and potential M&E indicators, and the continuity with the second MM advanced training course.

TGO participants	Ms. Nareerat Thanakasem, Ms. Thunyapom Thongmuang
Topics	Contents of second MM advanced training course
Discussion points	<ul style="list-style-type: none"> - When discussing on the main theme of the second MM advanced course, JICA Short-term Experts advised TGO to narrow down the theme to the formulation and implementation of mitigation measure for the following reasons; <ul style="list-style-type: none"> ➤ Trainees will be able to utilize the knowledge and skills that are obtained through the training course in their daily work soon after the training. ➤ MRV-related topics can be integrated in the content of the mitigation measures formulation and implementation. - TGO and JICA Short-term Experts discussed the effectiveness to invite the same trainees of the first MM advanced training course to the upcoming second advanced course. Both sides reaffirmed that by making the two courses as a continuous training course, the training output from the first training course can be utilized and effective in achieving the training objective. - In developing the curriculum for the second training course, TGO and JICA Short-term Experts reviewed the comments from trainees and resource persons, such as more effective way of inviting appropriate participants, improve instruction in requesting trainees to prepare presentation during the exercise. - JICA Short-term Experts pointed out the site visit should contribute to the achievement of the training objective, if site visit is to be included in the training curriculum.

c. Expected training outputs and outcome

Expected outputs of the first training course are: a project idea note (PIN) of mitigation measure which can be formulated and implemented in the trainee's country; and, a draft concept note of domestic MRV framework.

It is expected that after the training, the training participants can work on the formulation and implementation of mitigation measures and the establishment/ reinforcement of MRV framework based on the project concept note.

Another training output is roadmaps on the mitigation measures formulation and implementation as well as the MRV framework establishment. It is expected that the steps and timeline of mitigation and MRV will be described in the roadmaps.

The templates of a PIN, concept note for MRV framework, and roadmap are shown below.

Table 10 Template of training outputs (MM advanced, 1st round)

Title of the mitigation measure	To be filled in by trainees		
1. Type of the mitigation measure	Economy-wide	Sector-wide	Program-level
2. Target sector	Energy sector	Transport sector	
3. Background	Explain current status of the mitigation measures (ex. Identified in NDC, Concept stage, listed up in the sectoral master plan ..)		
4. Outline	Explain objective, goal and activity of the mitigation measures. Define policies/ actions/ technologies. Identify baseline and project emissions. Expected mitigation effect will be identified, if possible. Schedule of the implementation		
5. Responsible organization & relevant organizations	To be filled in by trainees		
6. KPIs for MRV (Tracking)	To be filled in by trainees		
7. Financial plan	To be filled in by trainees		
8. Expected issues on formulating and implementing	e.g. Lack of Institutional collaboration among relevant organizations Lack of capacity, knowledge Difficulties on formulating legal framework		
9. Solutions for those issues	To be filled in by trainees		

Draft concept note of domestic MRV framework		
1. Institutional arrangement for MRV (Responsible organization and role)	M	To be filled in by trainees
	R	To be filled in by trainees
	V	To be filled in by trainees
2. Monitoring (tracking) parameter and data source	Name of parameter	Data source
		To be filled in by trainees
		To be filled in by trainees
3. Process of MRV	To be filled in by trainees	
4. Issues /challenges on operating MRV under the current MRV framework	To be filled in by trainees	
5. Possible solutions for the issues/ challenges	To be filled in by trainees	

Steps	Detail	Timeline
Step1	Draft of the project idea note (PIN) of the mitigation measure is finalized	To be filled in by trainees
Step2	The PIN is formally discussed among the board/ management team, decision-/policy-maker of the organization	To be filled in by trainees
Step3	The PIN is formally endorsed/ approved internally	To be filled in by trainees
Step4	The PIN is submitted to the overseeing ministry/ agency and the UNFCCC focal point	To be filled in by trainees
Step5	The mitigation measure is formally endorsed as a mitigation measure that will be described/ linked with the country NDC	To be filled in by trainees
Step6	The PIN is submitted to domestic or international institution to secure the budget	To be filled in by trainees

d. Training curriculum

The training curriculum consists of three main contents; (1) details on Paris rulebook, practical efforts to implement NDC, latest international trends on mitigation such as MRV and transparency, (2) concrete and practical knowledge including issues and lesson learned for planning, formulation and implementation of mitigation measures, and hands-on exercise on developing project summary of mitigation measures, and (3) actual efforts on MRV in Southeast Asian countries and Japan, necessary actions to establish and operate the MRV framework, and exercise on developing a roadmap on designing MRV framework system. For some of the above contents, TGO and JICA Experts discussed to focus on specific target sector, namely energy sector among various mitigation sectors because it is expected that the region will see many mitigation measures in conjunction with the energy supply and demand in the future.

The curriculum was developed in a way that allows trainees to think and actively engage in the exercise so that they can develop the outputs by themselves through the training. Less time is then allocated for lectures and case studies, while more time is allocated for interactive sessions such as exercise and discussion.

Regarding modules on MRV, in order to enhance understanding of trainees from line ministries who may not have direct working experience in MRV, such modules as general introduction of MRV and MRV conducted in the PDCA cycle for practical work were added. To ensure output delivery, several resource persons are assigned for the exercise session as advisors to provide hands-on technical advices.

The final training curriculum is shown in Attachment 4.

e. Training materials

TGO and JICA Short-term Experts developed a new textbook for the advanced course. Both sides had a series of discussions and developed the initial concept and draft outlines of the textbook for this course. Based on this concept, the textbook was developed by the local consultant.



Picture 9 Discussion on textbook development (MM, advanced)

The outline of textbook was designed in line with the training curriculum so that trainees will be able to refer the textbook during and after the training for further learning. While the textbook explains in detail relevant information such as procedures that are necessary for mitigation planning and implementation, the training curriculum provides more concrete information and contents than the textbook through presenting various case studies.

f. Training delivery and its results

The training of the MM course (advanced, 1st round) was held in Bangkok from 18 to 20 December 2019, co-organized by TGO/ CITC and JICA. 22 participants from 8 ASEAN countries (Brunei, Cambodia, Indonesia, Laos PDR, Malaysia, Myanmar, Philippines and Vietnam) and 21 participants from Thailand attended the course.



Picture 10 Panel discussion (MM, advanced)

From the ASEAN countries, practitioner-level officials from the UNFCCC focal point and officials from the relevant ministries who are engaged in the formulation and implementation of mitigation measures (energy and transportation sector) participated while from Thailand, officials from ONEP and relevant agencies such as Ministry of Transport, DEDE, EGAT and Provincial Electricity Authority (PEA) participated.

Lecturers and resource persons from UNFCCC-RCC, NDC-Partnership, USAID, National Metal and Materials Technology Center (MTEC), and IGES provided lectures and technical advice during the exercise sessions.

The topics covered in the training include outlines and issues on implementation of NDCs, hints on formulation and implementation of mitigation measures, lessons learned and solutions on MRV framework establishment using case studies. After the lectures and panel discussion on the key success factors of mitigation measure formulation and implementation and the effective approaches for formulation and operation of MRV for mitigation measures, discussion and exercise were conducted.

During the exercise session, the participants were divided into country groups and were asked to do a group work. Groups elaborated on a PIN of mitigation measures (either economy-wide, sector-wide, or program level) that can be implemented in their country and also developed a concept note for national MRV system. CB team facilitated the exercise together with JICA Short-term Expert and the resource persons.

The outline of the developed PIN and concept note together with the comments from resource persons and trainees on these outputs are summarized in Table 11.

Table 11 List of training outputs (MM advanced, 1st round)

Country	Outputs		Feedbacks/ comments
	Mitigation measure	MRV	
Brunei	Deployment of Electric Vehicle (EV) - Switch 10 % of the gasoline vehicles to electric vehicle by 2035 - Suppress the demand for gasoline vehicles by reinforcing related regulations and standards	- Identified the responsible agencies for the MRV of the mitigation measures in accordance with the MRV system in the country - Issue was not identified due to the absence of the UNFCCC focal point	Mitigation measure: Price of the EV is very high, so the cost is significant issue. It may be very difficult to implement the mitigation measures because it may be significantly affected by the trend of crude oil prices (by trainee from Malaysia t). MRV: Brunei Climate Change Secretariat is not responsible agency for Measurement.
Cambodia	Solar PV in Rural Area - Introduce 1,000 solar home systems in off-grid areas utilizing the governmental subsidies, private funds, JCM and other international funds	- Identified the below MRV framework; M: private sector R: Ministry of Mines and Energy and Ministry of Environment - Issue was not identified.	Mitigation measure: It is better to think concretely how to disseminate the solar home systems in rural areas such as through promotion campaigns MRV: It is necessary to consider more carefully about MRV system for off-grid projects.
Indonesia	Developing of Hydro Electric power plan - Encourage hydropower development - Put emphasis on the hydropower development in national energy plan	- Identified the responsible agencies for the MRV of the mitigation measures in accordance with the MRV system in the country - Establishing relationships and obtaining commitments among stakeholders are issues.	Mitigation measure: More specific measures (policies, plans etc.) to disseminate the hydropower can be considered. MRV: It is better to review whether the existing MRV framework will work.

Country	Outputs		Feedbacks/ comments
	Mitigation measure	MRV	
Lao PDR	Improved Cook stoves (ICS) for Women Economy Empowerment - Dissemination of improved cook stove in rural area - Elimination of the import barriers (tariffs) to disseminate the improved cook stove - Demonstration project implementation to verify the emission reductions	- The number of patients with respiratory illness, the number of imported improved cook stove were identified as MRV indicators beside of the number of improved cook stove. - Identified the below MRV framework; M: Ministry of Mines and Energy R: and Ministry of Natural Resources and Environment - Plan the below roadmap - Finalize the concept of MRV framework by the middle of 2020 - Complete the coordination among relevant ministries and establish MRV framework by the end of 2020	Mitigation measure: It is important to set the incentives to encourage the project. More careful consideration is necessary for the emission reduction calculation method. MRV: It is better to consider more realistic MRV framework for GHG emission reductions.
Malaysia	Biodiesel initiative - Expand the B20 by 2020 and the B30 by 2035 - This mitigation measure has been endorsed in the National Biofuel Blending program and the National Biofuel Policy “Malaysia Biofuel industry Act 2007”	- Measurement of the biofuel consumption will be the issue. - Currently, the biofuel consumption estimated using the amount of total fuel consumption.	Mitigation measure: Proposed measure is the upgrade of the existing measures. It is simple, but effective. MRV: Establishing internal coordination function is very important to establish MRV framework.
Myanmar	Incentive to develop hydropower project - Setting incentives, such as land lease in free, tax exemption, to disseminate hydropower development	- MRV framework was not identified.	Mitigation measure: Proposed incentive scheme is an interesting proposal. It is better to make it more specific. MRV: MRV framework after the operation start should be considered.
Philippines	Electric Vehicle (E.V.) to Replace Tricycle as Inter-village/barangay Local Transport Vehicle - Setting incentives such as local tax incentives, business registration support, priority lane setting - Placing the charging stations to existing gas stations, introduction of	- The below MRV framework was identified. - M: Taxi driver and associations - R: Land transportation office - V: Climate Change Commission - Issues such as a lack of comprehensive policy framework and a lack of	Mitigation measure: Setting and demonstrating an attractive incentive, especially for drivers, is important. MRV: Role of MRV implementation agency, especially related to the measurement and organizing the results, are very critical issues.

Country	Outputs		Feedbacks/ comments
	Mitigation measure	MRV	
	charging equipment for home	professional human resources were identified. - Roadmap to establish MRV framework by end of 2021 was developed.	
Thailand	Power generation from renewable energy - Introducing mega-solar PV (6,000MW), biomass generation (5,570 MW) and Wind power (3,000MW) by 2030	- Identified the MRV implementing agency in accordance with the existing tracking system.	Mitigation measure: It is better to clarify how to expand the proposed mitigation measure. Also, it is important to set and monitor the progress of expansion of the measure using indicators. MRV: It is necessary to consider more detail on the role of agency based on the existing MRV framework.
Vietnam	High Performance Refrigerator introduction - Switch 15% to 85% of the refrigerators in residential area. Switch 10% to 75% of the refrigerators in rural area. - Introducing labeling scheme, manufacturing and import control, replacing program, roadmap setting for regulatory, subsidy program - Start from 2020 and complete by 2028	- Identified the below MRV framework - M: MOT and MOST - R: MONRE - Finalize the concept of MRV framework in 2020 and complete coordination among relevant ministries and agencies in 2021 to establish MRV framework	Mitigation measure: A subsidy scheme should be included in the PIN if the subsidy program is considered as a method to switch low-efficiency refrigerator to high-performance one. Alternate method is to set criteria to drive out the low-efficiency ones from the market. The Top Runner Approach of Japan can be referred. MRV: It is necessary to verify whether the expected MRV framework will work or not.

The quality of the developed PINs and MRV concept varied from country to country. As for PIN, some participants developed PINs on the economy-wide, sector-wide, or program level mitigation measure, which was the instruction for all trainees given by CITC, while others elaborated on conventional project-level mitigation measures. For the MRV concept note, most of the participants included the principle of PDCA cycle in considering their MRV framework that was one of the key lecture topics on MRV. More concrete and specific instruction could be given before or during the exercise in order to deliver more concrete training outputs.

The causes of such variations in output among trainees can be: 1. some trainees did not clearly understand the difference between policy-based mitigation measures (Economy-wide, Sector-wide, Program level) and project-level mitigation measures, and 2. some trainees did not have sufficient knowledge on MRV framework and requirement for their organizations under national MRV system, and 3. allocated time for exercise session was too short to develop both PIN and MRV concept. The roadmap, which indicates the actions and timeframe for mitigation

measure formulation and MRV framework establishment, were well developed by most countries.

g. Monitoring and evaluation of the training outcomes

➤ **Training satisfaction survey**

A training satisfaction survey was conducted on the final day of the training. CITC received responses from 29 participants from all countries.

The overall evaluation score of the training was 4.3 out of 5 points, and the evaluation on the quality of each training session was 2.9 out of 3 points on average. Some participants suggested to make the exercise slot longer. As for the expected training topics in the future CITC courses on mitigation, several topics such as MRV framework establishment, more specific case studies of mitigation measures related to power generation, training on how to prepare Biennial Transparency Report (BTR), and update NDCs were proposed.

The following feedbacks were given to CITC from the lectures/ resource persons; it was effective to have participations from line ministries rather than inviting only UNFCCC focal point agencies; overall training contents and outputs were suitable considering the limited training period. It was also suggested that 1) the need to invite more appropriate participants who can provide appropriate input during training, 2) more specific instruction can be made in giving instructions on exercise sessions.

➤ **Result-based Monitoring and Evaluation (M&E)**

TGO and JICA Short-term Experts discussed approaches of result-based M&E for MM course (advanced, 1st round) and set the monitoring indicators in accordance with the set training outcomes. Through discussions, TGO and JICA Short-term Experts set the followings as outcomes of the training: 1) Mitigation measures are formulated and implemented, and 2) Domestic MRV framework for mitigation is formulated and operationalized.

TGO and JICA Short-term Experts in coordination with JICA Long-term Expert identified several milestones toward generation of the above outcomes and make these milestones as the M&E indicators of the training course. The indicators are shown in the table below. The detailed work plan of M&E is explained in the clause 2.1.7.4.

Table 12 M&E indicators (MM advanced course)

Mitigation measures	MRV framework
1. Draft project idea note (PIN) of the mitigation measure is <i>finalized</i>	1. Design of the concept of domestic MRV framework is <i>finalized</i>
2. The PIN is <i>formally discussed</i> among the board/ management team, decision-/policy-maker of the organization	2. The concept design of domestic MRV framework is <i>formally discussed</i> among the board/ management, decision/policy maker of the organization
3. The PIN is <i>formally endorsed/ approved</i> internally	3. The concept design of domestic MRV framework is <i>formally endorsed</i> internally
4. The PIN is <i>submitted</i> to the overseeing ministry/ agency and the UNFCCC focal point	4. A working group that consists of relevant organizations of cross-cutting sector <i>formally starts discussion</i> on the concept design of MRV framework
5. The mitigation measure is <i>formally endorsed</i> as a mitigation measure that will be described/ linked with the country NDC	5. The concept design of domestic MRV framework that was endorsed in the WG is <i>formally approved</i> by the relevant ministry/ agency
6. The PIN is <i>submitted</i> to domestic or international institution to secure the budget	

Using the above indicators, TGO conducted result-based M&E for CITC alumni who attended the course. Online monitoring was done using the online questionnaire survey 6 months after the training delivery.

TGO received one response from a trainee in Malaysia who shared that no progress was made on the PIN and MRV they developed during the training due to COVID-19. TGO has a plan to conduct M&E together with that for the MM course (advanced, 2nd round) about 3 to 6 months after the training delivery.

2.1.3.3 Advanced course (2nd round)

a. Course outline

The second MM advanced training course was conducted as an online training course in July 2020 under agreement by TGO and JICA as stipulated in the Meeting Minutes of May 2020.

The objective of the course is to enhance the capacity of officials from UNFCCC focal point and relevant ministries, who are engaged in formulation and implementation of policy level mitigation measures in ASEAN countries, to obtain the practical skills on formulation and implementation of mitigation measures that contribute to the achievement of NDCs.

As for the training material, TGO and JICA Short-term Experts in coordination with JICA Long-term Expert revised the textbook which was prepared for the MM course (advanced, 1st round) and finalized through peer review.

b. Discussion points between TGO and JICA Short-term Experts

Discussions between TGO and JICA Short-term Experts are summarized in Table 13.

Table 13 Technical discussions with TGO (MM advanced, 2nd round)

Conducted from October 2019 to March 2020	
TGO participants	Ms. Nareerat Thanakasem, Ms. Thunyapom Thongmuang
Topics	Measures to enhance delivery of training output
Discussion points	<ul style="list-style-type: none"> - TGO and JICA Short-term Experts discussed an effective way to acquire training objective. Both sides discussed and identified that it is crucial to request trainees in an effective manner to prepare the presentation materials and concluded to provide trainees a template format that thoroughly describes the expected contents clearly before the training delivery. - TGO and JICA Short-term Experts discussed the necessity and setting up on session at the beginning of the training course that clearly explains the expected outputs, outcome and potential M&E indicators, and the continuity with the second MM advanced training course.
TGO participants	Ms. Nareerat Thanakasem, Ms. Thunyapom Thongmuang
Topics	Contents of second MM advanced training course
Discussion points	<ul style="list-style-type: none"> - When discussing on the main theme of the second MM advanced course, JICA Short-term Experts advised TGO to narrow down the theme to the formulation and implementation of mitigation measure for the following reasons; <ul style="list-style-type: none"> ➤ Trainees will be able to utilize the knowledge and skills that are obtained through the training course in their daily work soon after the training. ➤ MRV-related topics can be integrated in the content of the mitigation measures formulation and implementation. - TGO and JICA Short-term Experts discussed the effectiveness to invite the same trainees of the first MM advanced training course to the upcoming second advanced course. Both sides reaffirmed that by making the two courses as a continuous training course, the training output from the first training course can be utilized and effective in achieving the training objective. - In developing the curriculum for the second training course, TGO and JICA Short-term Experts reviewed the comments from trainees and resource persons, such as more effective way of inviting appropriate participants, improve instruction in requesting trainees to prepare presentation during the

	<p>exercise.</p> <ul style="list-style-type: none"> - JICA Short-term Experts pointed out the site visit should contribute to the achievement of the training objective, if site visit is to be included in the training curriculum.
Conducted from April 2020 to July 2020	
TGO participants	Ms. Nareerat Thanakasem
Topics	Contents of the online training program
Discussion points	<ul style="list-style-type: none"> - TGO and JICA Short-term Experts and TGO discussed combining online lecture for self-learning by trainees and live consultation with resource persons considering the pros (trainees will be able to learn the materials any time they want) and cons (online training may not be suitable for long lecture and group work) of an online training. - TGO and JICA Short-term Experts discussed approach of live online consultation in the following styles: <ul style="list-style-type: none"> ➤ Live consultation is conducted for each participated country ➤ Trainees prepare a draft work plan of policy level mitigation measure and resource person provides comments and advice on the work plan ➤ Live consultation for each county is conducted twice to improve the prepared work plan
TGO participants	- Ms. Nareerat Thanakasem
Topics	- Template of work plan and submission timing
Discussion points	<ul style="list-style-type: none"> - JICA Short-term Experts pointed out the necessity to instruct well how to prepare a work plan and provide detail example in the template of work plan. - JICA Short-term Experts pointed out the necessity to share submitted work plan to resource person as early as possible considering the time limitation of live consultation. TGO and JICA Short-term Experts discussed to set early due date for submission of a work plan.

c. Expected training outputs and outcome

Expected output of the second training course is a work plan of a policy level mitigation measure that can be formulated and implemented in the trainee's country. It is expected that after the training, the training participants can work on the formulation and implementation of policy level mitigation measures based on the developed work plan.

The templates of a work plan is shown below.

Table 14 Template of training output (MM advanced, 2nd round)

A. Summary of the proposed policy level mitigation measure			
A-1. Country:			
A-2. Name of the proposed policy level mitigation measure:			
A-3. Target sector: () <i>Energy sector</i> , () <i>Transportation sector</i> , Others ()			
A-4. Type of the proposed policy level mitigation measure: () plan, () regulation / rule setting, () taxation, () subsidy / incentive setting, () certificate with market value, () campaign, others ()			
A-5. Outline of the proposed policy level mitigation measure: Background: Contents of the proposed policy level mitigation measure: Contribution to achieve the NDC's target/goal Executing entity(es) and stakeholders:			
Name of entity		Responsibilities	
Schedule for the proposed policy level mitigation measure implementation: Budget and financial source:			
B. Status of the planning and introducing a proposed policy level mitigation measure			
B-1. Preparation status			
B-2. Remaining steps and assumed issues/ barriers to introduce the proposed policy level mitigation measure			
Remaining steps	Assumed issues	Countermeasures for the issues	
C. Action plan to introduce the proposed policy level mitigation measure			
Action	Outputs	Tentative schedule to be achieved (month/ year)	Responsible department

d. Training curriculum

The curriculum of the second MM advanced course was developed and rearranged for online training in the course of the curriculum development.

The training consists of 3 sessions; 1. online lecture in which trainees learn from the recorded lecture videos; 2. live consultation in which trainees discuss with resource persons and improve

their work plan; and 3. live country presentation in which trainees present their work plan and exchange ideas with resource persons and other trainees.

Taking advantage of the characteristics of online training, TGO and JICA Short-term Experts developed the online training curriculum with the following features;

- (1) Online recorded lectures: Lectures are recorded prior to the training opening so that trainees can watch them online at their convenience. To make sure that the trainees watched all lectures, trainees are required to take an online quiz regarding the lecture contents. Since developing a high-quality work plan is the key to training outcome, clear instruction and recorded instruction video is provided for trainees on how to create a project concept sheet.
- (2) Consultation sessions are held up to 2 times for each country (120 minutes each) so that trainees have enough time to exchange opinions on the work plan online with the resource persons. TGO decided to assign a CB official as a facilitator of each consultation session.
- (3) Country presentation session is arranged at the end of the online training period so that trainees can learn from other countries experience in developing the work plan.

The final training curriculum is shown in Attachment 5.

e. Training materials

Main training materials (PowerPoint presentation with narration) for online lecture were prepared by lecturers including TGO official in charge of the course. Also, the revised version of the textbook for the MM course (advanced, 1st round) was used.

➤ Peer review of textbook

TGO conducted a third-party peer review of the draft textbook with the aim of improving and assuring the quality of CITC's training materials. The review was conducted through the following two channels; 1) general review by training participants of the MM course (advanced, 1st round), and 2) technical review by external experts.

For the general review by training participants, TGO shared the draft textbook with the trainees before the training started and collected feedbacks during the training period of MM course (advanced, 1st round). TGO received comments from 3 trainees from Indonesia and Malaysia. Summary of the received comments is listed in Table 15.

Table 15 Feedbacks from trainees on draft textbook (MM advanced course)

Chapter	Comments
Chapter 1	<ul style="list-style-type: none"> - Specify the points to be addressed by sector in mitigation measure formulation and implementation - Emphasize that the data availability is critical point to select mitigation measures - Provide the definition of climate change and baseline of emission reduction
Chapter 2	<ul style="list-style-type: none"> - Indicate necessary data for emission reduction estimation - Specify necessity of increasing the data accuracy (activity data and emission factor) - Touch upon the importance of mutual understanding and agreement among stakeholders for mitigation measures implementation and MRV framework establishment. Also indicate necessity of developing policies to accelerate above - Indicate how to integrate the mitigation measures into policies and plans - Indicate information of the cost of mitigation measures - Emphasize the importance of securing funds in implementing mitigation measures - Mention the hints to implement the formulated mitigation measures
Chapter 3	<ul style="list-style-type: none"> - Clearly state that consideration of the circumstances of each country is necessary to establish MRV framework and its implementation - Clarify that the difference of MRV between MRV for GHG inventory and MRV for mitigation measures

For technical review by external experts, TGO identified the following experts based on discussion among TGO, JICA Short-term Experts, JICA Long-term Expert and the local consultant. TGO and JICA Short-term Experts agreed that the scope of the reviewers will focus on the technical review and provision of suggestions but not development of new contents.

Table 16 List of reviewers (MM advanced course)

Chapter	Reviewer name
Chapter 1 (Mitigation mechanism and NDC implementation) Chapter 2 (Formulation of mitigation measure)	Prof. Dr. Ho Chin Siong, Universiti Teknologi Malaysia
Chapter 3 (MRV)	Dr. Naoki Matsuo (IGES)
All chapters	Mr. Thawatchai Saengkhamasuk (Director of CITC, TGO) Mr. Koji Fukuda (JICA Long-term Expert/ Chief Advisor)

Summary of the major comments received from peer reviewers is listed in Table 17.

Table 17 Feedbacks from peer reviewers on draft textbook (MM advanced course)

Chapter	Comments
Chapter 1	<ul style="list-style-type: none"> - Latest information on the international trends on climate change negotiation and the Paris Agreement should be mentioned. - Terminology shall be consistent with the official documents such as decisions of COPs. - Diagram explaining structure clearly of the chapter should be inserted and headings should be changed to make it easy to understand for readers. - Information source shall be indicated. - Citation shall be indicated clearly.
Chapter 2	<ul style="list-style-type: none"> - If the textbook does not confine to 2 °C, it is better to tap on Global Warming of 1.5°C referring The Special Report and Emission Gap Report. - Incentives, ESG and award systems etc. should be added as measures to proceed policy level mitigation measures. - CDM should be mentioned as just a reference for a project-based mitigation measure. - Background and objectives for GCF should be indicated if GCF is introduced as a proceeding scheme for mitigation measure implementation. - The contents shall be consistent with the Chapter 1.
Chapter 3	<ul style="list-style-type: none"> - Duplication and inconsistent are existed. They shall be corrected. - Scope of MRV for this textbook shall be defined clearly. - If MRV is to be introduced in the context of UNFCCC negotiation history, then it is nice to provide contextual information how and why MRV was agreed. - The reason for showing the example of MRV process and institutional structure should be explained clearly. Also, “Verification” should be explained in the example. - No clear definition on “NAMA MRV”. It should be deleted. - The word of “Transparency” is becoming more common rather than MRV these days. The relation between MRV and Transparency should be explained. - Order of sub chapter and headings should be changed considering the flow of the contents.

f. Training delivery and its results

The training of the MM course (advanced, 2nd round) was held as online training from 13 to 30 July 2020 using Microsoft Teams, co-organized by TGO/ CITC and JICA. 50 participants from 5 ASEAN countries (Malaysia, Myanmar, Philippines, Thailand and Vietnam) and 1 participant from India registered to the course.

From the ASEAN countries, practitioner-level officials from the UNFCCC focal point and officials from the relevant ministries who are engaged in the formulation and implementation of

mitigation measures (energy and transportation sector) participated. Trainees from Malaysia, Myanmar and Philippines attended the live consultations. TGO officer in charge of the course facilitated the live consultation and the country presentation sessions together with JICA Short-term Expert.

Lecturers and resource persons from NDC-Partnership, Thammasat University, IGES and the experts on mitigation measure formulation from Japanese private companies provided lectures.

The outline of the developed work plan and feedbacks from resource persons on these outputs are summarized in Table 18.

Table 18 Training output (MM advanced, 2nd round)

Country	Content of policy level mitigation measure	Feedbacks/ comments from resource persons
Malaysia	Aggressive roadmap for B100 Biodiesel - Switch the gasoline to 100% biodiesel (B100) for the vehicles - B10 Biodiesel mix was introduced in 2019. B20 was launched in some area in 2020. B30 is planned to be introduced by 2025. This plan aims to proceed this to B100. - This plan will contribute to reduce 23% of emissions from the transport sector and 7% of nation emissions. - This is now proposal stage. A roadmap will be prepared considering the progress of B30 introduction.	- It is better to specify the current diesel fuel consumption, the amount of installed biodiesel fuel. - It is necessary to keep in mind that the sustainability of the raw material (palm oil) is an issue. - To introduce B100, there are some issues to be solved such as fuel quality, securing raw materials, securing competitiveness in price, and license for suppliers. - The trainees asked for advice on how to obtain the data such as mileage and fuel consumption of commercial vehicles and private cars. Resource person provided information on the Japanese vehicle inspection system.
Myanmar	1. Energy sector (electricity) 2. Forestry and other land use sector - Explanation on the action for energy sector and forest sector in the NDC. The NDC is now under revising. - Expanding renewable energy is planned. PV and wind power will be introduced widely in the plan instead of hydropower because the hydro power is already sufficient. - It is difficult to specify a target and method in detail. Need to be reviewed by the Ministry of Energy.	- Questioned from resource person on the efforts in the energy field. The trainee explained the target value of the power supply composition described in WP provided by the Ministry of Energy. - It is better to specify the details of the energy sector initiatives which is written in the WP. - It is pointed out that establishing a Tracking system, good relationship and information sharing among other relevant ministries is important issues for the Ministry of Natural Resources and Environmental Conservation. Because

Country	Content of policy level mitigation measure	Feedbacks/ comments from resource persons
		<p>they shall submit BUR and BTR in addition to revision of NDC.</p> <p>-It is necessary to work closely with the relevant ministries and agencies in order to keep consistence with the PDP for energy and the master plan for forestry when revising NDC.</p>
Philippine	<p>Motor Vehicle Inspective System (MVIS)</p> <ul style="list-style-type: none"> - Introduce and disseminate the vehicle inspection system to reduce fuel consumption and reduce CO2 emissions by improving fuel efficiency. - They can reduce emissions of 0.68 Mt CO2e by 2030, 1.26 Mt CO2e by 2040 and 2.25 Mt CO2e by 2050. - A private vehicle inspection station is in operation now. It will be gradually expanded nationwide. 	<ul style="list-style-type: none"> -The number of GHG emissions from transport sector should be reviewed because it is too much. - It is better to explain how the GHG emissions will be reduced by introducing the vehicle inspection system. - It is better to specify the basis of emission reduction calculation. - It is better to explain the introduction schedule that the DOT has. - It is better to mention clearly if a subsidy or any support system is expected. - The trainee questioned on the vehicle inspection system in other country. The resource person explained the Japanese vehicle inspection system.
Malaysia	<p>Implementation of Regulated Energy Efficiency and Conservation Measures</p> <ul style="list-style-type: none"> -Three actions to steadily implement the Energy Efficiency and Conservation (EEC). (1) improve the capabilities and systems of related organizations, (2) raise public awareness, (3) introduce equipment and systems that manage data such as energy consumption. -EEC bill defines three actions: 1. Factory energy management, 2. Energy saving for buildings, 3. Rating and labeling of electrical products -EEC bill has already been drafted and is waiting for government approval, but the details such as role of the executing agency and the plan in the three target actions have not been decided. 	<ul style="list-style-type: none"> -Trainee questioned on good practice to establish institutional scheme for proceeding the EEC bill in cooperation with related organization (especially for reporting system) overcoming the vertically-divided administrative system. - Resource person advised to keep close contact with related ministries and agencies and to continue the discussions to establish a system. - A JICA expert advised that the TGO could share their experience in establishing their institutional arrangement.

g. Monitoring and evaluation of the training outcomes

➤ Training satisfaction survey

TGO conducted an evaluation survey at the end of the online training course. The online survey was conducted for all three online training courses delivered in July 2020, namely MM (advanced, 2nd round), GHGI and joint training of Climate Finance (advanced, 2nd round) with Climate Change Adaptation and Enabling Environment. TGO developed the survey questionnaire while JICA Short-term Experts provided technical support.

The total of 18 responses from 7 ASEAN countries were acquired. The result shows that trainees evaluated the online training positively as indicated in the overall score rating of 4.4 out of 5.

Some feedbacks on MM course were given such as the one that appreciates advice from resource persons as highly useful, and that expects CITC to cover MRV topics in the future training courses.

➤ Result-based Monitoring and Evaluation (M&E)

TGO is planning to conduct M&E of the MM course (advanced, 2nd round) about 3 to 6 months after the training delivery to check the progress of the work plan.

2.1.4 Climate Finance (CF) course for Southeast Asian countries

2.1.4.1 Basic course

a. Course outline

For the CF course, the overall climate finance landscape has remained relatively unchanged since the last training delivery in 2016 during the previous JICA cooperation phase but a great number of new climate actions had been financed by various financial sources including Green Climate Fund (GCF). TGO and JICA Short-term Expert Team discussed and decided to improve the curriculum by not only updating trainees with the latest trend of GCF as the largest climate-specific international fund at present but also with information on other funds and financial



Picture 11 Discussion on training curriculum (CF, basic)

sources so that trainees can learn about various options for their future climate action planning. CF course was also improved by including a module that enhances the practical skills and knowledge of trainees related to the climate project formulation through intensive exercise sessions and experience sharing among participating Southeast Asian countries.

The target trainees are mainly government officials of the UNFCCC focal points and finance or planning ministries in charge of accessing international development financial institutions.

b. Discussion points between TGO and JICA Short-term Experts

Discussions between TGO and JICA Short-term Experts are summarized in Table 19.

Table 19 Technical discussions with TGO (CF, basic)

Conducted from October 2017 to March 2018	
TGO participants	Dr. Jakkanit Kananurak, Ms. Apaphatch Hunsirtrakun, Ms. Tanawan Pongpanich
Topics	Development of training curriculum and training materials
Discussion points	<ul style="list-style-type: none"> - Discussed the importance of adding a module that explains coordination among related agencies within the country that facilitates access to climate finance. - Discussed how to clarify essential elements of formulating a project proposal on climate finance from the view of donor and financiers. - Discussed potential lecturers for the advanced course that can include those who actually have the experience in providing or receiving climate finance in the past. - Discussed how to develop a pay-course in CITC on the topic of climate finance in the future.
TGO participants	Dr. Jakkanit Kananurak, Ms. Apaphatch Hunsirtrakun
Topics	Update of the existing training materials
Discussion points	<ul style="list-style-type: none"> - Discussed major update points of the existing training materials especially focusing on how to make the described contents more usefully for readers. - Discussed the latest trend of climate finance from various funds and financiers that can be incorporated in the updated textbook.
Conducted from April 2018 to September 2018	
TGO participants	Dr. Jakkanit Kananurak, Ms. Apaphatch Hunsirtrakun
Topics	Contents to be included in the revised training curriculum
Discussion points	<ul style="list-style-type: none"> - Discussed the importance of inviting lecturers from various international financial institutions such as Adaptation Fund, GCF, UNDP, ADB, JICA and private sector to the training course so that trainees will be able to acquire practical and first-hand knowledge on investment practices and experiences of climate projects.

c. Expected training outputs and outcome

The course is expected to help trainees to enhance their knowledge and understanding on strategies and investment criteria as well as key elements to be included in a funding proposal document of various climate funds and international organizations with the aim of accessing international climate finance such as GCF.

d. Training curriculum

Given the longstanding needs from ASEAN countries in securing the necessary funds to implement their NDCs and climate projects, the emphasis is placed on capacity building to enhance access to, in particular, the climate funds established under the UNFCCC financial mechanism and international development financial institutions.

Modules in this training course focus on clarifying the strategies, priority areas, and eligibility criteria of the international funds or relevant financial institutions for supporting climate actions by developing countries. It will also include a discussion session to better understand the eligibility criteria for these funds and financial institutions using the projects already approved by the GCF as case studies. Furthermore, another session is set up to facilitate exchange of views among trainees on how to strengthen interagency coordination within the country to mobilize funds more effectively for climate change projects in developing countries.

See [Attachment 3](#) for the final training curriculum.

e. Training materials

TGO and JICA Short-term Expert Team jointly developed the textbook for this course. The textbook was developed principally by JICA Short-Term Expert Team. TGO drafted the textbook outline with the support from JICA Short-Term Expert Team and also reviewed the draft to provide feedbacks. The textbook is attached in [Appendix 6.2](#).

f. Training delivery and its results

As described in the clause 2.1.3.1 of this report, the CF course (basic) was conducted in joint with the MM course (basic). The CF course was conducted for 2 days, 23 and 24 May, 2018 in Bangkok.

The total of 52 trainees participated to the CF training course, including 16 from Southeast Asian countries other than Thailand (same as in MM course), 36 from Thailand (central government, local government, and private companies).

Lecturers of the CF course were experts from UNFCCC-RCC, UNDP, GCF (lecture was provided through the recorded data), Global Green Growth Institute (GGGI), JICA Thailand Office, and JICA Short-term Expert Team. Representative trainees from each country also participated as a presenter of the training course where they presented the current situation and challenges in regards to their access to international funds or financial institutions.

With the aim of enhancing the knowledge and capacity related to the access to international funding including climate funds under the UNFCCC and international development financial institutions, lectures, discussions and exercises were carried out in this training course that covered the strategy, project selection criteria and other requirements by such funds and financial institutions.



Picture 12 Lecture (CF, basic)

In the exercise session, trainees discussed in groups about the project impacts, scale-up effects, sustainability issues focusing on organizational structure, intergovernmental coordination, stakeholder participation, technical aspects, securing O&M cost, gender considerations, and so forth, using climate change projects approved by the GCF as case studies. Through this training course, the trainees enhanced their understanding of

critical points in formulating a climate project to access funds of GCF and other climate funds or international development finance institutions.

Many trainees considered the training was helpful particularly in the point that information on climate funding sources and how to access them, and other countries' experiences was given during the training while some participants provided some useful suggestion such as invitation and interaction with private sector to learn about their experience.

g. Monitoring and evaluation of the training outcome

Training evaluation was conducted together with the MM course (basic). See the clause 2.1.3.1 (7) for the details including the result of satisfaction survey.

2.1.4.2 Advanced course (1st round)

TGO and JICA Short-term Expert Team agreed to develop advanced courses in the CF clusters considering the importance and needs of the area. The advanced course for CF course was conducted twice during the Project period.

a. Course outline

The course aims at enhancing trainees' capacity to prepare the project documentation that can meet the requirements of international climate funds (including finance criteria) under the UNFCCC or international development financial institutions.

Through lectures and various discussions and exercises during the training course, the trainees improve the project concept note. Specifically, the project application template of GCF is used as an exercise material. The template of GCF was selected because the TNA revealed high training needs on proposal writing skill specifically for GCF, and also because the GCF clearly states its investment criteria for assessing climate project proposals, which are publically available and can be used as practical case studies.



Picture 13 Discussion on training curriculum (CF, advanced)

Target trainees are UNFCCC focal point or GCF National Designated Authority (NDA) and also public or private enterprises engaged in formulation and implementation of climate change mitigation and adaptation projects.

b. Discussion points between TGO and JICA Short-term Experts

Discussions between TGO and JICA Short-term Experts are summarized in Table 20.

Table 20 Technical discussions with TGO (CF advanced, 1st round)

Conducted from April 2018 to September 2018	
TGO participants	Dr. Jakkanit Kananurak, Ms. Apaphatch Hunsiritrakun
Topics	Contents to be included in the revised training curriculum
Discussion points	- Discussed various options of target trainees including those from institutions and private companies as potential Direct Access Entities (DAEs) of GCF from the viewpoint of training impacts as well as possibility of conducting the training course as a pay-course in the mid to long term.

	<ul style="list-style-type: none"> - Discussed an effective approach for more sustainable operation of the advanced training course that is extensively supported by GCF. Discussed the possibility of signing of a memorandum between TGO and GCF to achieve such strategic partnership. - Discussed the possible scope of works for local consultants to be employed for the advanced CF course, including the required expertise and experience, the main training topics and the items to be included in training materials in the advanced course.
Conducted from October 2018 to March 2019	
TGO participants	Dr. Jakkanit Kanarurak, Dr. Akarapon Houbcharaun, Ms. Apaphatch Hunsirtrakun
Topics	Important points in training curriculum development
Discussion points	<ul style="list-style-type: none"> - In initiating curriculum development for the advanced course, TGO and JICA Short-term Experts discussed the appropriate output of the training course. - TGO and JICA Short-term Experts discussed CITC's strategy to carry out this training on a regular basis in the future. Both sides discussed it is important in doing so to identify the strength of TGO and also enhance partnership with other key institutions who have expertise in climate finance. - In the course of discussions on the contents of the training, TGO and JICA Short-term Experts discussed the effectiveness of inviting lecturers from not only AEs but also from project executing entities and NDAs from Southeast Asian countries. In addition, with regard to how to divide groups for effective exercise on concept note development, TGO and JICA Short-term Experts recognized the effectiveness of setting up groups where both NDAs and project executing entities join for the enhanced discussion and experience sharing among different actors. - TGO and JICA Short-term Experts discussed how to collect participation fee from the trainees in the future. TGO and JICA Short-term Experts discussed some potential follow-up system or services after training, for example, to provide technical support for trainees to refine the concept note after the training.
TGO participants	Dr. Jakkanit Kanarurak, Dr. Akarapon Houbcharaun, Ms. Apaphatch Hunsirtrakun
Topics	GCF investment guidance
Discussion points	<ul style="list-style-type: none"> - Referring to the existing guidebooks related to GCF investment published by other organizations, TGO and JICA Short-term Experts discussed and shared a common understanding on the images of the textbook and the items to be included, such as project funding proposal template and investment criteria. - TGO and JICA Short-term Experts discussed the significance of having CITC's own training materials and discussed how to differentiate CITC

	textbook from the existing training materials.
Conducted from April 2019 to September 2019	
TGO participants	Dr. Akarapon Houbcharaun, Ms. Apaphatch Hunsiritrakun
Topics	Important points in training curriculum development
Discussion points	<ul style="list-style-type: none"> - TGO and JICA Short-term Experts discussed CITC's strategy to carry out this advanced training on a regular basis in the future. Both sides discussed it is important in doing so to identify the strength of TGO and also enhance partnership with key institutions who have expertise in climate finance. - TGO and JICA Short-term Experts discussed how to collect participation fee from the trainees in the future. Both sides discussed some potential follow-up system or services after training, for example, to provide technical support for trainees to refine the concept note after the training. - In the course of discussions on the contents of the training, TGO and JICA Short-term Experts discussed the effectiveness of inviting lecturers from not only AEs but also from project executing entities and NDAs from Southeast Asian countries for active discussions. In addition, with regard to how to divide groups for effective exercise on concept note development, TGO and JICA Short-term Experts recognized the effectiveness of setting up groups where both NDAs and project executing entities join in the same group for the enhanced discussion and experience sharing among different actors. - Through the planning and implementation of the consultation meeting, TGO and JICA Short-term Experts discussed the importance of building a network with relevant external experts in climate finance.
TGO participants	Dr. Akarapon Houbcharaun, Ms. Apaphatch Hunsiritrakun
Topics	Preparation of training materials
Discussion points	<ul style="list-style-type: none"> - TGO and JICA Short-term Experts discussed the significance of having CITC's own training materials and discussed how to differentiate CITC textbook from the existing training materials by other institutions. From this point of view, as a case study used in teaching materials, both sides identified the areas where TGO has strengths.

c. Expected training outputs and outcome

The objective of the training was to enhance skills of trainees of Southeast Asian countries to access climate funds of international development financial institutions, which is critical for countries to realize climate change mitigation and adaptation actions in their countries. Specifically, the course aims to enhance skills on developing a draft of concept note that can be the basis of a project funding proposal to international development financial institutions such as GCF.

The outcome of the first CF advanced course is that a funding proposal is submitted to international financial institutions (including GCF) based on the draft concept note developed

during the CITC training course.

d. Training curriculum

The curriculum of the training include learning on the essentials of project funding proposal including the investment criteria of GCF, which is provided in the forms of lectures, case studies, and exercise. During the exercise, trainees develop a concept note for GCF based on discussions and consultations with the accredited agencies of the GCF.

While the objective of the CF course (basic) was to enhance the fundamental knowledge to access international development financial institutions and international funds that provide funding for climate actions, this advanced course aims to enhance more practical skills related to accessing these funding institutions. From this point of view, the outcome of the training, which is to develop a concept note for GCF, is more tangible than the basic course.

In order to enhance trainees' ownership and to formulate high-quality concept note during the training, trainees are requested to prepare a draft of concept note in their own country before the training. In addition, accredited agencies of GCF are invited as resource persons who provide direct consultation and hands-on advices in order to ensure that sufficient quality of the concept notes are formulated during the training. For trainees from NDA (and UNFCCC focal point), the training aims to enhance a deeper understanding of the role that NDA should play in GCF projects and its required capacity. For this reason, a parallel session is set up for them to learn from the experience of other NDAs including Indonesia in which GCF projects have been approved.

In the final session, based on the draft concept note developed during the training, each country makes a presentation on the final draft of the concept note and shared a roadmap, which describes a plan of the steps to be taken until the submission of a funding proposal to GCF or other international development financial institutions.

The final training curriculum for this course is shown in Attachment 6.

➤ Expert consultation meeting

Prior to the training delivery, TGO organized an expert consultation meeting where external experts were invited. The purpose of this consultation was to confirm the relevance of the training contents and receive feedbacks for further improvement, to strengthen the network with climate finance specialists with whom CITC/ TGO would create a foundation for cooperation in future climate finance capacity building operations. As external experts, representatives from UNDP, GGGI, GIZ, and AIT were invited.

The following comments were made by the participants. (1) Although the project executing entity is mainly responsible for developing a concept note, the role of NDA is different, such as coordination and engagement with related parties, and therefore, it is meaningful to have an opportunity for NDA trainees to deepen recognition on their roles during the training. (2) Requesting trainees to prepare project outline in advance requires solid guidance. (3) It is necessary to share and disseminate information during the training such as case studies and learning through follow-up activities.

Based on these comments, TGO and JICA Short-term Experts revised the training curriculum and prepared a simple format ('project concept note') which is to be filled in in advance by trainees so that sufficient quality of concept notes can be created, and a session to deepen understanding of NDA's role and required their capacity was also added in the training program.

TGO took the leading role in planning and conducting the consultation meeting including facilitation on discussions while JICA Short-term Experts provided technical inputs upon request from TGO.



**Picture 14 Expert consultation meeting
(CF advanced)**

e. Training materials

TGO and JICA Short-term Expert Team jointly developed the training material (textbook) for this course. Both sides had a series of discussions and developed the textbook concept for the Japanese external consultant who develops the textbook. TGO worked in close communication with the consultant with the technical support from JICA Short-term Experts in the process of the textbook preparation.

The contents of the textbook are composed of mainly two parts; the first part explains overall landscape of international development financial institutions and climate funds that support climate change mitigation and adaptation projects with some explanation on important points to access these funds; and the second part describes critical points to be addressed in project funding proposal to apply international development financial institutions and climate funds, especially GCF. Since the objective of the training is to develop a concept note based on the requirements of GCF, the textbook covers GCF's operational strategy, project application procedures, and application template including investment criteria. Understanding investment criteria is particularly important in preparing a concept note, and this part will be carefully explained by including some case studies.

TGO and JICA Short-term Experts also agreed to further revise the textbook for the future use including the CF course (advanced, 2nd round). Since the objective of the training course is to develop a concept note based on GCF's requirement, in order to describe practical and useful information in the textbook, it is highly useful to take into account information obtained during the training from the instructors and also questions and comments from the trainees.

f. Training delivery

The training was held for 3 days from 10 to 12 September 2019 at a hotel in Bangkok. The training was co-organized by TGO/ CITC and JICA. The total of 25 trainees participated from 8 ASEAN countries (Brunei, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, and Vietnam,), who dispatched representatives from either NDA or UNFCCC focal point together with project executing agency from their country. From Thailand, ONEP, BMA, and private companies attended. Lectures were delivered by the representatives from GCF, UNFCCC-RCC, Mitsubishi UFJ Bank, climate change adaptation consultant, and research institution.

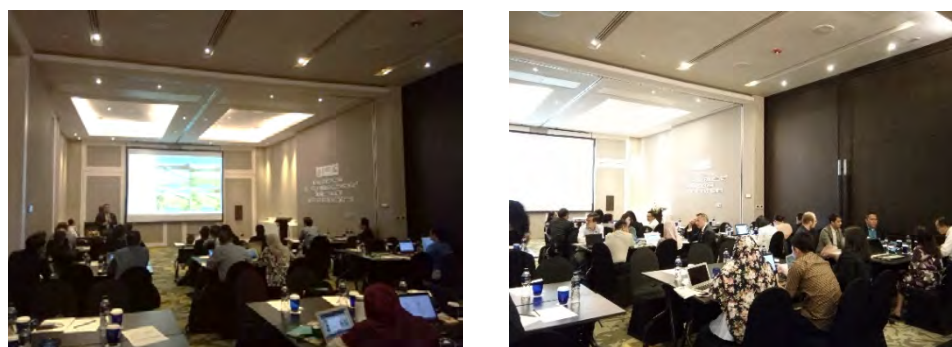
During the intensive exercise sessions, each country tried to complete the draft of the GCF Project Concept Note based on the project idea trainees prepared and brought to the training, through receiving technical hands-on advice and input from the resource persons including lecturers. TGO extensively participated as a facilitator of the training including the exercise.

Although the quality of the completed draft Project Concept Note varies from country to country, the critical aspects including how to meet the GCF investment and justification of GCF funding were addressed in the draft Project Concept Note

In the process of preparing draft Project Concept Note, the following comments were provided from the experts and resource persons including GCF representative. 1) Adaptation projects should be clarified from the viewpoint of climate rationale, differentiating from ordinary development projects, 2) Mitigation projects should clarify paradigm shift aspect and also encourage private sector participation as much as possible, and 3) For small-scale projects, a program-type approach, in which a small pilot project is replicated in other areas widely, could be an option. Table 21 shows the list of projects of which each country prepared the draft concept notes.

Table 21 List of training outputs (CF advanced, 1st round)

Country	Project name	Mitigation/ Adaptation (Sector)	Discussion points in output preparation
Brunei	Green Climate Finance Initiative and FinTech Enabled	Mitigation (Waste)	Policy and institutional framework to scale up the system and awareness raising
Indonesia	Community Based Ecological Mangrove Rehabilitation (CBEMR) on Tanakeke Island, South Sulawesi	Mitigation (Forestation)	Programing to replicate the small pitot project to other areas
	Catalyzing energy efficiency investments in Indonesia	Mitigation (Energy)	Policy and institutional framework to scale up the system including tariff structure
Lao PDR	Strengthening Climate Resilience in Urban Ecosystem Based Adaptation for LuangPrabang and Bolikhamxay Province	Adaptation (Eco based adaptation)	Clarification of project component based on climate rationale
Malaysia	Green Mini Grids	Mitigation (Energy)	Policy and institutional framework to encourage private sector in participating renewable energy
Myamar	Building Resilience to Climate Change in Papua New Guinea (Dummy project for exercise)	Adaptation (Disaster management)	Interpretation of paradigm shift aspects by the project
Philippines	Upscaling Climate Resilience Programme for Indigenous Peoples and Local Communities in the Philippines	Adaptation (Disaster management)	Measures to replicate the project to other areas broadly
Thailand	Improvement of canals and development of low-carbon water transport in Bangkok, Thailand	Mitigation/ Adaptation (Transport/ Flood control)	Climate adaptation rationale and measures to enhance transportation modal shift
Vietnam	Energy Efficiency Improvement in Viet Nam's Chemical Fertilizer sector	Mitigation (Energy)	Policy and institutional framework to encourage private sector participation and scale up energy efficiency system



Picture 15 Presentation (left) and group exercise (right) (CF, advanced)

g. Monitoring and evaluation of the training outcomes

➤ Training satisfaction survey

The satisfaction questionnaire survey of this course revealed a positive response from trainees, total average of 4.6 out of 5.0. The number of respondents was 21 from 8 AMS including 4 from Thailand.

The topics trainees are willing to further learn include approaches to climate action formulation based on the theory of change, and approaches to mobilizing private finance. Several respondents suggested allocating more time for the entire training course including exercise.

➤ Result-based Monitoring and Evaluation (M&E)

The outcome of the first CF advanced course was set to be “a funding proposal is submitted to international financial institutions (including GCF),” based on the draft concept note developed during the CITC training course. Various steps required to reach this goal were identified through discussions between TGO and JICA Short-term Experts and set as monitoring indicators for result-based M&E of the CF course (Advanced). The following are the set of monitoring indicators.

1. Concept note is developed (or roadmap for concept note is developed)
2. Communication is taken within the affiliated organization to win support
3. Consultation is conducted with NDA and AE on concept note
4. Stakeholder consultation is conducted to improve concept note
5. Concept note is submitted to GCF through NDA

TGO conducted the result-based M&E about half a year after the delivery of the first CF course (advanced). TGO dispatched online survey form to all participating countries to monitor the progress of project formulation and implementation in accordance with the developed concept note. 6 countries (Brunei, Indonesia, Malaysia, Myanmar, Lao PDR, and Thailand) shared the progress with TGO.

Among these countries, it was found that 2 countries have advanced their project implementation process after the CITC training. Malaysia conducted a consultation with stakeholders based on the concept note and processing the final national approval for GCF application, while Indonesia identified AE and initiated discussion with GCF. No progress was found for other countries partly due to the lack of project ownership.

TGO compiled the result of M&E and evaluated the training course in its own report. JICA Experts reviewed the report from technical perspective and provided advices to TGO.

2.1.4.3 Advanced course (2nd round)

a. Course outline

The second CF course (advanced) course was jointly developed with Climate Change Adaptation (CCA) course, and Climate Law & Regulation (Enabling Environment) course for ASEAN countries, in accordance with TGO's policy on streamlining training activities. Also, the training was conducted online in accordance with the Minutes of Meeting between TGO and JICA.

The objectives of the joint training course are (1) to increase the capacity to access national and international funding for climate change adaptation projects through formulation of high quality project proposals, and (2) to share experiences in creating enabling environments to support the implementation of adaptation projects and access to funding.

The output of the training is development of a “project concept sheet” which summarizes the most important parts of the project proposal³, such as the assessment of climate change impacts, the analysis of the challenges by the climate impact, the examination of necessary adaptation measures, and the identification of project components. In addition, the roadmap that indicates the path from the project concept note prepared during the training to development of final project proposal is also considered as a training output.

The target trainees of the joint training course are the agencies or companies (both government and non-government) responsible for formulation and implementation of adaptation projects, along with UNFCCC focal points in the ASEAN countries.

b. Discussion points between TGO and JICA Short-term Experts

Discussions between TGO and JICA Short-term Experts are summarized in Table 22.

Table 22 Technical discussions with TGO (CF advanced, 2nd round)

Conducted from October 2019 to March 2020	
TGO participants	Dr. Akarapon Houbcharaun, Ms. Chayathorn Thanawattanadamrong, Ms. Apaphatch Hunsiritrakun

³ “Project proposal” is a document that describes such project details as purpose, activities, implementation and institutional arrangement, project cost, financial plan, implementation schedule, economic and financial analysis and so forth, which will be submitted to financial institutions to obtain their funds. On the other hand, “project concept sheet” summarizes the basic information required to develop a project proposal, and provides a concise summary of the project background, necessity, consistency with national policy, project activities, outputs and outcomes, risk analysis, etc.

Topics	Critical points in development the curriculum for the joint training course
Discussion points	<ul style="list-style-type: none"> - JICA Short-term Experts explained to TGO that this joint course is about finance for adaptation projects, but most importantly, it is not about financing schemes or methods but about project formulation that properly addresses response to climate change impacts. Through discussions, TGO and JICA Short-term Experts agreed the focus of training will be on impact analysis, problem tree analysis, and identification of options for climate adaptation measures.
Topics	Measures to improve the quality of training
Discussion points	<ul style="list-style-type: none"> - In order to improve the quality of training, it is especially important that trainees participate with understanding of the problem of climate change and ownership to solve it, and they must bring project idea which trainees intend to actually obtain funds for. From this point of view, TGO and JICA Short-term Experts discussed and agreed to impose all trainees a homework to prepare a draft project concept note in advance as a requirement for their participation to the training course. - Both sides also discussed appropriate number of resource persons for the joint training course taking into account that each trainee should have a chance to consult them directly one by one so that they can improve the project concept note during the training period.
Topics	Result-based M&E for the first CF course (Advanced)
Discussion points	<ul style="list-style-type: none"> - JICA Short-term Experts proposed to use a simple online survey method for the result-based M&E since it is easy for trainees to respond on the latest progress for the next step. JICA Short-term Experts also suggested to use the results of the survey to determine whether M&E indicators are too ambitious or appropriate.
Conducted from April 2020 to July 2020	
Topics	Online training program
Discussion points	<ul style="list-style-type: none"> - Taking advantage of the characteristics of online training, TGO and JICA Short-term experts discussed as follow; To record lectures in advance and make them available online for trainees to watch, to conduct 90 consultation session twice per country in order to exchange ideas with the resource person online regarding the project concept sheet, and to make it possible for trainees from other countries to participate in consultation sessions. - It was also shared that the TGO staff would be actively involved in the training implementation, including the TGO staff serving as lecture and acting as a facilitator during the consultation sessions.

c. Expected training outputs and outcome

The expected outcome of the training is to develop a project proposal, which can be submitted to domestic budget authority, domestic financial institutions, or international financial institutions through refining the draft project concept note, along with its roadmap which will

be prepared during the training course.

d. Training curriculum

While the focus of the joint training is on the formation of climate adaptation projects, the module on climate finance will provide practical information on international climate finance flows, climate finance sources (domestic and international), and how to access them. The first CF course (advanced) aimed to ultimately obtain funding from international financial institutions, including GCF. On the other hand, in this joint training, the curriculum does not touch the investment standards of specific international financial institutions, because TGO put emphasis on accessing finance from both domestic and international sources.

Lessons learned from the first CF advanced course were taken into account in developing the second CF advanced course. For instance, some trainees did not clearly understand the difference between the conventional development project and adaptation project. The latter usually requires unique steps that are not included in conventional project development process such as evaluation of climate change impacts and problem analysis. Curriculum for the second CF advanced course included lectures



Picture 16 Discussion on training curriculum for the joint training

and exercises to enhance understanding of trainees on this point. To develop higher quality of project concept note during the training course, sufficient time needs to be given to the trainees for direct hands-on consultation with the resource persons, and the resource persons who have practical experience in climate finance need to be assigned. In this respect, TGO and JICA Short-term Experts decided to invite experts working on GCF funding projects as resource persons.

The training curriculum was also divided into three parts by transforming the face-to-face draft curriculum to the online training. The first part is a recording-based lecture, the second part is a consultation sessions between the trainees and resource persons to discuss the project concept sheet, and the third part is the plenary session where all trainees could discuss the project concept sheets to exchange their opinions. Taking advantage of the unique features of online training, the followings were incorporated for the joint course:

- (1) For online lectures, all lectures are recorded prior to the training opening so that trainees can watch them online at their convenience. To make sure that the trainees watched all

lectures, trainees are required to take an online quiz regarding the lecture contents. Since developing a high-quality project concept sheet is the key to training outcome, clear instruction and recorded instruction video is provided for trainees on how to create a project concept sheet.

- (2) Consultation sessions are held up to 2 times for each country (90 minutes each) so that trainees have enough time to exchange opinions on the project concept sheet online with the resource persons. TGO decided to assign a CB official as a facilitator of each consultation session.
- (3) Country presentation session is arranged at the end of the online training period so that trainees can learn from other countries experience in developing the project concept sheet.

See [Attachment 7](#) for the final training curriculum of the joint course.

e. Training materials

The textbook was prepared in conjunction with the CF course (advanced, 1st round). TGO and JICA Short-term Experts decided to improve the quality of this textbook by reflecting feedbacks from the resource persons and comments from the trainees from the CF course (advanced, 1st round). In specific, it was revised based on the lessons learned and feedbacks from the lecturers and resource persons on refining the concept notes and the latest information on GCF, as well as the questions and comments from the trainees, which were shared during the training. In response to this, a Japanese external consultant carried out revision work.

In particular, to better describe the GCF's investment criteria, textbook was revised by adding more detail descriptions on how the criteria should be applied to the project using case studies of GCF approved projects. In addition, considering this joint training course focuses on the formulation of climate change adaptation projects, climate change impact assessment and problem tree analysis aspects are described in detail in the case study in the improved textbook.

CB office provided inputs in this revision process thorough close and direct communication with the consultant.

➤ Peer review of textbook

Peer review was conducted for the textbook. Some of the main feedbacks from the peer reviewers are as follows.

- Since the international framework for climate finance is moving fast in recent years, it would be useful to show the link to the related websites so that readers can obtain such information

- Since there is information that is not always widely known about the GCF support programs, it would be useful to post related sites.
- Among GCF investment criteria, the paradigm shift and the rationale as a measure against climate change are particularly important, and therefore, its explanation should be further enhanced.
- For the case studies of projects approved by GCF, explaining the selection reason makes it easier for readers to understand some of the features of GCF investment.
- The textbook may be useful for the private sector as well, and it is desirable to further enhance the information on private sector investment for climate change and GCF support for the private sector.

The external consultant made revisions based on these feedbacks from the peer reviewers, based on which TGO finalized the textbook.

Table 23 List of reviewers (CF advanced course)

Chapter	Reviewer name
Chapter 1 (Background of Climate Finance) Chapter 2 (Essentials of Green Climate Fund (GCF))	Dr. Joko Tri Haryanto (Ministry of Finance, Indonesia)
Chapter 3 (GCF Concept Notes) Chapter 4 (Examples of the GCF funding projects)	Dr. Yuqing Ariel Yu (UNFCCC-Regional Cooperation Center)
All chapters	Mr. Thawatchai Saengkhamasuk (Director of CITC, TGO) Mr. Koji Fukuda (JICA Long-term Expert/Chief Advisor)

f. Training delivery

The CF course (advanced, 2nd round) was held as a part of the joint training course with CCA (2nd round) course and Climate Law and Regulation course (Enabling Environment) for ASEAN countries.

The training was held in online format via Microsoft Teams from 13 to 30 July 2020, where 54 people registered from 6 ASEAN countries (Cambodia, Indonesia, Lao PDR, Myanmar, Philippines and Thailand) and India. Among them, 5 ASEAN countries (Indonesia, Lao PDR, Myanmar, Philippines and Thailand) and India attended the consultation sessions.

In view of its objective, the joint training was composed of three parts: (1) online lectures, (2) online consultation, and (3) country presentation of training outputs. For online lectures, lecture videos recorded by the lecturers were made available on Microsoft Teams where participants were able to watch them any time between 13 and 17 July. For live consultation, the first

consultation was held from 20 to 22 July and the second one was held from 27 to 29 July, with a slot for each country's duration of 90 minutes. External advisor and JICA Short-term Experts provided advice on how to improve the project document, including the concept of adaptation measures, tips for preparing Project Concept Sheet, points to keep in mind for implementation, and an introduction to the menu of climate finance options suitable for each project. At the country presentation which was held on 30 July, , participants from each country presented the overview of their projects and what they learned from the training and exchanged views on areas for improvement and requests for future training courses.

Summary of the Project Concept Sheets developed by the trainees is presented in Table 24.

Table 24 Training outputs (Joint course/ CF advanced, 2nd round)

Country	Project Name	Sector	Comments from advisors and JICA experts
Malaysia	Community Led Nature Based Flood Mitigation for Marginalised Community at the Sungai Kelantan River Basin - Vulnerability assessment and implementation of nature based flood mitigation	Disaster Reduction (Flood)	<ul style="list-style-type: none"> - More information on the actual circumstances of the targeted communities and the data on the climate change impact and frequency of flood occurrence should be added. - The residents of the target areas have no access to land rights, making the project's sustainability questionable. It is better to change the target areas to the wider areas, state and reconsider the activities.
Myanmar	Promoting the Climate Resilient Infrastructure and water storage technologies in the most vulnerable groups in coastal and mountain areas of Myanmar - Installation of climate resilient housing equipped with fresh water tank and construction of water channel and sewerage routs for vulnerable households - Assessment and projection flood and land slide prone areas	Disaster Reduction (Flood)	<ul style="list-style-type: none"> - The project targeting two different areas having no commonality in climate change impacts is incompatible in one adaptation project. Need to choose one area. - The data showing the target areas' vulnerability to climate change should be added in the PCS. - Synergy between the proposed project and an existing ADB project should be explained as some activities and target areas overlapped. - Supplementary explanation is required under 'Sustainability' regarding the targeted residents' lack of land rights since construction of climate resilient housing is a key project theme.

Country	Project Name	Sector	Comments from advisors and JICA experts
Philippines	Climate-Responsive Health Monitoring Systems (HMS) in the Philippines - Strengthening of methods, tools, and systems for data and information management on climate change and health , and institutional capacity building - Mainstreaming of climate change adaptation in health sector policies through HMS strengthening	Health	- Analysis of correlation between occurrence of dengue infection and climate change impact to health should be added. - Adding activities to do with health sector policy to the project scope will make the project accessible to GCF's Readiness Framework. - Existing bottlenecks of HMS should be explained under 'Barrier Analysis' and measures to ensure project's sustainability under 'Sustainability'.
Thailand (private company)	Sustainable fashion design with an emphasis on greenhouse gas reductions - Development of fashion textile industry with focus on CO2 emission reduction through decreased textile waste, reduction of effluent from dyeing - Development of innovative textile from food waste - Employment generation and awareness raising of ecology amongst local residents	Mitigation (Textile and Apparel industry)	- The project scope to do with climate change impact should be clarified as it looks generalization of textile industry. - Project idea should be developed after identification of partner government agency, which is prerequisite to climate finance. - No co-benefit type approach required for mitigation project but estimated amount of CO2 emission reduction. - It is better study mitigation projects of similar scope in Bangladesh.
Laos	Establish an Early Warning System for Flood Prone Areas, and Improve and Expand Meteorology and Hydrological Networks and Weather Monitoring Systems - Establishment of early warning system for flood, improvement of meteor-hydrological monitoring system	Disaster Reduction (Flood early warning system)	- Evidences and trends of flood occurrence with the scale and timing of floods observed in the past should be provided. - Concrete activities should be shown by collaborating with meteor-hydrological department. - Adding activities covering both 'soft' approaches to community and institutional building of government entities will make the project accessible to GCF's Readiness Framework. - Synergy between the proposed project and an existing GCF project should be explained as some activities overlapped.
India	Establishment of Adaptation Capacity Building Centre (ACBC)	Institutional capacity building	- Adding formulation of implementation plan of adaptation projects to the project scope will

Country	Project Name	Sector	Comments from advisors and JICA experts
	<ul style="list-style-type: none"> - Establishment of agriculture focused capacity building center and institutional capacity building - Development of training contents and implementation 		<p>make the project accessible to GCF's Readiness Framework.</p> <ul style="list-style-type: none"> - Enhancement of existing training centers function, provision of area specific training, etc. would be an effective alternatives to the establishment of new institution observing several existing instructions with similar functions are available.

The degree of completeness varies from one country to another. However, most of the project concept sheets addressed the correlation between the observed/ projected impact of climate change and the proposed adaptation measures and the essential information of the proposed adaptation project were described.

g. Monitoring and evaluation of the training outcomes

➤ Training satisfaction survey

TGO conducted an evaluation survey at the end of the online training course. The online survey was conducted for all three online training courses delivered in July 2020, namely GHGI, MM (advanced, 2nd round), and joint training of Climate Finance (advanced, 2nd round) with Climate Change Adaptation and Enabling Environment. TGO developed the survey questionnaire while JICA Short-term Experts provided technical support.

The total of 18 responses from 7 ASEAN countries were acquired. The result shows that trainees evaluated the online training positively as indicated in the overall score rating of 4.4 out of 5.

Some respondents commented that the training was useful with full of unfamiliar information, while others preferred to have face-to-face interactive training on climate finance and on specific adaptation sectors.

Some of the observed challenges and difficulties encountered during the online training are as follows:

- Many of the participating countries were unable to spend enough time for development and improvement of project concept sheets, which could be attributed to the short time from the nomination of the participants to the start of the training, and participated in consultation sessions alone without forming a country group amongst peer participants

from the same country.

- Some of the trainees' voice was inaudible at the real time online sessions, owing to the poor internet connection.
- Many people registered to the online training but a few participated actively including consultation sessions. It was difficult to secure the participation of registered trainees.

Meanwhile, the limited number of trainees facilitated the focused mutual discussions with friendly and welcoming environment, which might be a benefit of online training.

➤ **Result-based Monitoring and Evaluation (M&E)**

TGO is planning to conduct M&E of the CF course (advanced, 2nd round) about 3 to 6 months after the training delivery to check the progress of the project concept sheets.

2.1.5 Climate Change Adaptation (CCA) course for Southeast Asian countries

2.1.5.1 Basic course (1st round)

a. Course outline

Since TGO had started development of the Climate Change Adaptation (CCA) course for Thai stakeholders before the Project commencement, both sides agreed that the support from JICA Short-term Expert Team will focus on the training course for Southeast Asian countries.

Referring to the TNA results, the main training objective was set as to learn the essential concept of developing and implementing a national-level adaptation plan and its monitoring and evaluation (M&E). Also, the training aims to enhance practical skills related to the implementation of adaptation measures including M&E.



Picture 17 Discussion on curriculum (CCA)

As a result of discussions among TGO and JICA Short-term Experts and JICA Long-term Expert, target trainees are set for UNFCCC focal points and policy makers from relevant central government agencies who are responsible for development and implementation of adaptation measures, as well as academia involved in adaptation policy development process. Although TGO and JICA Short-term Expert Team initially considered targeting key implementers of adaptation measures such as line ministries


to enhance their skill of implementing adaptation measures, both sides concluded to focus on UNFCCC focal points and policy makers as described above since most Southeast Asian countries have not yet reached to the stage of mainstreaming adaptation into their national plans.

b. Discussion points between TGO and JICA Short-term Experts

Discussions between TGO and JICA Short-term Experts are summarized in Table 25

Table 25 Technical discussions with TGO (CCA, 1st round)

Conducted from October 2017 to March 2018	
TGO participants	Ms. Chayathorn Thanawattanadamrong
Topics	Curriculum development for Adaptation courses for ASEAN stakeholders
Discussion points	<ul style="list-style-type: none"> - Brainstormed possible objectives of the new training course and expected training needs by prospective trainees in Southeast Asian countries. - Discussed potential target trainees and also discussed how to set the right targets considering a wider range of involved agencies and organizations in cross-cutting adaptation issues than other CITC training clusters, referring to the involved agencies in National Adaptation Plan (NAP) development and implementation.
Conducted from April 2018 to September 2018	
TGO participants	Ms. Chayathorn Thanawattanadamrong
Topics	Tentative result of TNA, development of training curriculum
Discussion points	<ul style="list-style-type: none"> - Discussed and analyzed the tentative result of TNA and how to effectively translate such varying training needs into a training curriculum. - Discussed the concept and objective of the training course and possible modules. - Discussed options of target trainees, from UNFCCC focal points and line ministries. - Discussed effective training approaches and methodologies, which vary from lecture, a group work, to case studies. - Discussed the effectiveness of including a session on M&E.
Conducted from October 2018 to March 2019	
TGO participants	Ms. Chayathorn Thanawattanadamrong, Ms. Warittha Sripraram
Topics	Points for development of training curriculum and textbook
Discussion points	<ul style="list-style-type: none"> - JICA Short-term Expert provided lecture for TGO regarding the experience in mainstreaming adaptation in Japanese central and local government, and technical process to mainstream adaptation from central level into local level, and challenges to coordinate with related divisions. - TGO and JICA Short-term Experts discussed the variations of terminologies and perceptions on the basic concept of adaptation, which are different from countries, organizations and persons. TGO and JICA Short-term Experts

	<p>discussed it is important to use common terminologies throughout the training and in the textbook to avoid confusion for trainees. TGO and JICA Short-term Experts discussed another effective approach to avoid this confusion is to deploy a lead facilitator during the training, which TGO is willing to take the role.</p> <ul style="list-style-type: none"> - TGO and JICA Short-term Experts had a series of discussions on the selection of case studies, which are critical to promote better understanding for trainees. TGO and JICA Experts also discussed to carry out various group discussions to enhance trainee's practical skills. - TGO and JICA Short-term Experts discussed to use the training session of self-introduction to have trainees explain about each country's adaptation activities with the aim of promoting interactive discussion among speakers and trainees. 	 <p>Picture 18 Discussion on training curriculum (CCA)</p>
Conducted from April 2019 to September 2019		
TGO participants	Ms. Chayathorn Thanawattanadamrong	
Topics	Tips for training curriculum development	
Discussion points	<ul style="list-style-type: none"> - JICA Short-term Expert explained the process of conducting impact assessment and method of identifying the impacts of high priority items. The process and measures to mainstream adaptation into national-level plan was explained to facilitate further understanding of TGO side on the theory and practices of adaptation. - TGO and JICA Short-term Experts discussed the possible training contents and practical lessons that all participants, either from the counties that already developed national level adaptation plans or the ones under developing stage. TGO and JICA Short-term Experts shared the common ground that the training should benefit both. - JICA Short-term Expert introduced the systems of M&E for adaptation and objects to be monitored from the cases of EU countries and raise TGO side's understanding that M&E for adaptation would be conducted for both impact of climate change and adaptation actions. 	
TGO participants	Ms. Chayathorn Thanawattanadamrong	
Topics	Case studies to be covered in the textbook	
Discussion points	<ul style="list-style-type: none"> - JICA Short-term Expert advised TGO that case studies in the textbook and their presentations should be practical on contrast with the concepts and theories parts in the earlier parts of the textbook. JICA Short-term Expert and TGO discussed the outline of the case studies incorporating actual cases on the ground which is along with the theoretical part of the textbook. 	

c. Expected training outputs and outcome

Through participation in this training course, it is expected that government officers from Southeast Asian countries can learn the essential concept and key elements in developing and implementing a national-level adaptation plan and its M&E and then apply the acquired knowledge to their own works.

d. Training curriculum

TGO and JICA Short-term Experts designed the curriculum aiming to contain practical sessions so that trainees can utilize the obtained knowledge in developing adaptation measures in their country. Both sides designed the curriculum in a way that trainees have better understanding on training contents and accommodate interactive communication among speakers and trainees, by incorporating many case studies and group discussion sessions into the curriculum. Case studies are also extensively covered in the training, such as adaptation projects in Mekong Delta region and tourism sector, which Southeast Asian countries share common challenges and interest. A good practice in Thailand is also included to showcase the country's experience by presenting policy recommendation made for policy makers by academic sector through the project, "Advancing Co-Design of Integrated Strategies with Adaptation to Climate Change in Thailand" (ADAP-T).

TGO and JICA Short-term Experts also designed group exercise sessions where trainees are categorized into two groups (a group that will work on mainstreaming adaptation and the other group on M&E). Through the group exercise, the former group will make an action plan for mainstreaming adaptation into national plan and the latter group will make a roadmap for implementing M&E. Through the exercise, the action plan will contain such information as timeline for milestones, future impacts, institutional arrangement among related line ministries, selection of adaptation measures, and description of adaptation measures, while the roadmap will contain expected indicators for M&E and their data source.

The final training curriculum for this course is shown in [Attachment 8](#).

e. Training materials

Based on the textbook outline developed by TGO and JICA Short-term Experts, the textbook was developed by an outsourced Japanese consultant and a Thai local consultant as well as JICA Short-term Experts. TGO side also contributed to textbook development by providing technical views on the case studies to be included in the textbook.

The textbook was designed in a similar structure as the training curriculum considering the smooth understanding by the training participants who can learn the contents before and after the training. For example, the textbook covers such key elements and essential information as impact assessment, adaptation planning, and implementation of adaptation measures,



Picture 19 Discussion on training material (CCA)

while the training program consist of several presentations on case studies and group exercise sessions that can facilitate the participants to discuss and share their understanding and learn practical ways from the peer participants.

f. Training delivery

The training workshop titled “Climate Change Adaptation: National Plan Formulation, Implementation and Framework of Monitoring and Evaluation (M&E)” was held from 4 to 6 September 2019 in Bangkok, jointly organized by TGO and JICA. The total number of training participants was 27, out of which 11 were from ASEAN countries and 16 from Thailand. The total 7 countries participated, namely Cambodia, Lao PDR, Myanmar, the Philippines, Thailand and Vietnam. The participants from Southeast Asian countries are from UNFCCC focal points and climate change adaptation-related government offices. The Thai participants are from ONEP, line ministries (agriculture and water resources), BMA, public companies (power generation and waterworks), and the project personnel from the ADAP-T Project.



Picture 20 Group exercise (CCA)

The exercise sessions covered discussions and group works on 1) impact assessment and planning adaptation measures meeting the impacts of high priority, 2) finding the measures to mainstream adaptation into national-level policy, and 3) framework of M&E for adaptation based upon the existing monitoring system in the ministries/ departments. The group discussions for the first two topics of the above were conducted in two groups,

one group for agriculture and the other for infrastructure (road). During group work on the topic of M&E for adaptation, the trainees discussed and considered the key elements to conduct M&E based upon the existing M&E system that is administered by line ministries of each country.

The group discussions for the infrastructure group identified several adaptation measures against climate change impacts such as road degradation. The agriculture group identified adaptation measures such as quality improvement of rice, rice seed improvement, water management in rice cultivation. The trainees then exchanged ideas on possible ways to ensure budget allocation to adaptation measures and mainstreaming adaptation into their existing policies and plans under the ministries of agriculture or infrastructure. All the trainees actively participated in the discussions and exchanged useful information on the methods of mainstreaming adaptation. For the M&E for adaptation, the trainees exchanged views on key elements of conducting M&E through the presentation by each country.

During the group work on mainstreaming, trainees shared an opinion that for successful mainstreaming of adaptation it would be essential to clearly show the total budget and its cost effectiveness to the policy makers and decision makers as well as to provide the corresponding data and evidences. For all these group discussions, TGO took a leading role of facilitating the sessions along with JICA Short-term Expert.

The participants visited the site of Chulalongkorn University Centenary Park as the site visit, where they learned the concept of green roofs in the park and the effectiveness of the flood management facility.

g. Monitoring and evaluation of the training outcome

The customer satisfaction survey using the questionnaire was conducted on the final day of this training course. A total of 20 trainees from 7 AMS provided feedbacks.

Result of the evaluation was positive and the average evaluation score on overall training satisfaction was 4.2 out of 5.0. Trainees provided their further training needs on adaptation topics such as adaptation M&E frameworks and detailed approach on indicators setting, status on NAP formulation and implementation in other countries, good practices on implementation of adaptation measures, etc. Trainees of this course also highly evaluated the interactive approach of the training, rather than lectures.

The pre-/post-training test was conducted for this course. Questions for the test were jointly developed by TGO and JICA Short-term Experts and they were developed based on the topics the training course covered.

2.1.5.2 Basic course (2nd round)

a. Course outline

As described in the clause 2.1.4.3, the CCA course was conducted online as a part of the joint training course with the CF course (advanced, 2nd round) and Climate Law and Regulation (Enabling Environment) course for ASEAN countries, in which formulation of adaptation projects to seek access to finance is one of the key themes.

In the course of developing a project concept note during the joint training, the trainees are expected to study the climate change issues behind the proposed project, analyze the sequence of the impacts of climate change and hazards caused in various parts of their country, and propose adaptation measures against the causes. The trainees are expected to deepen the analysis of the sequence between hazards and climate change impacts through different types of learning; from lectures on climate change impacts and its assessment and vulnerability assessment, from case studies of developed adaptation measures against climate change impacts from several ASEAN countries, and through the exchanges with peer trainees during group work sessions together with an opportunity to consult resource persons directly one by one to improve the contents of the project concept sheet during the training period.

TGO and JICA Short-term Experts finalized the format after discussions with and suggestions from the external advisor who also acted as a resource person during the online training. Both sides added clear instruction and example of how to fill in the project concept sheet, which incorporates a tool, problem analysis, as an exercise for developing adaptation project.

b. Discussion points between TGO and JICA Short-term Experts

Discussions between TGO and JICA Short-term Experts are summarized in Table 26.

Table 26 Technical discussions with TGO (CCA, 2nd round)

Conducted from October 2019 to March 2020	
TGO participants	Ms. Chayathorn Thanawattanadamrong
Topics	Contents of project concept note of adaptation finance
Discussion points	<ul style="list-style-type: none">- TGO and JICA Short-term Experts discussed the primary contents that should be described in a concept note for adaptation finance which will be used for the joint training, by using the template of GCF's concept note. TGO and JICA Short-term Expert confirmed the steps of how the trainees will turned into logical framework of an adaptation project with project purpose, outputs and activities at the completion of 'impact chain analysis,' which is a tool to analyze the adaptation measures against corresponding

	<p>climate change impacts, and the other contents of the concept note on adaptation part.</p> <ul style="list-style-type: none"> - TGO and JICA Short-term Expert discussed and confirmed how the impacts of climate change and risks would be described in the concept note. JICA Short-term Expert suggested to include such information in the project overview indicating the sequences of problems caused by impacts of climate change, and in addition logical framework of the project in which the activities, outputs, purpose of the project, and project costs are required to fill in the template.
Topics	Measures to improve the quality of training for adaptation part
Discussion points	<ul style="list-style-type: none"> - TGO and JICA Short-term Expert discussed how to secure the quality of training outputs for adaptation part. JICA Short-term Expert shared examples in case the training focuses on 2 to 3 sectors and the other in case the training has no particular sector to focus on. In case the training focuses on 2 to 3 sectors, the participants would be grouped by 2 to 3 counties to work on similar climate change impacts and its adaptation measures in the same sector, which would give participants more opportunity to learn from each other, and allocate more time for group presentations. Whereas in case the training has no particular sectoral focus, it would be essential to secure sufficient number of resource persons who have sectoral expertise in different adaptation sectors. - TGO and JICA Short-term Expert also discussed the way to identify resource persons who have a strength in developing adaptation projects as well as the steps to conduct the group work for adaptation session.
Conducted from April 2020 to July 2020	
TGO participants	Ms. Chayathorn Thanawattanadamrong
Topics	Contents of lecture on common climate change risk in ASEAN
Discussion points	<ul style="list-style-type: none"> - The scope of the lecture was decided through discussions between TGO and JICA Short-term Expert referring to the summary of group work from a regional workshop for AMS counties organized by ONEP and donor agencies in 2019. JICA Short-term Expert provided a summary of the said group works in which the participants from each country raised 3 major climate change risks they faced, explained that many of the participants raised occurrence of hazards particularly floods, temperature rise and decreasing trend of rainfall which affect availability of fresh water and agricultural production.

c. Expected training outputs and outcome

The expected outcome of the joint training for adaptation part is to develop a framework of the adaptation project. The project concept sheet will contain a figure or chart which will be developed through analysis on the linkages between climate change impact, hazard, and

adaptation measures in the context of the trainees' own country through 'Impact Chain Analysis.'

d. Training curriculum

The focus of adaptation part of the joint training curriculum is that the trainees develop their own adaptation projects step by step through participatory group work and guidance from resource persons using the Impact Chain Analysis. In addition to a lecture on climate change impact and vulnerability assessment, the trainees learn climate change impact and adaptation measures and deepen their understanding on possible options of adaptation measures, necessary implementation structures. Learning from the peer participants from the same country working on development of project concept sheet, the trainees can discuss the adaptation options for a climate change impacts, consulting with co-workers with possible implementation structure, having discussions with the concerned government agencies on implementation methods and possible adaptation actions.

TGO and JICA Short-term Experts also planned to impose a self-study to trainees before the training to have them consider and analyze the impacts of climate change and their proposed adaptation measures. In order to avoid writing irrelevant information in the self-study document, sample answers and clear and concrete instructions as well as the list of climate change impact and adaptation options by referring to JICA Climate-Fit (Adaptation), which will be made available as a guide for the self-study. Self-study was, however, not imposed to trainees since CITC was not able to provide enough time for trainees before the launch of online training.

While the curriculum of CCA (basic, 1st round) mainly covered basic steps of developing adaptation policy and measures, the joint training course aims to deliver more tangible outputs through developing project concept sheets for access to finance.

e. Training materials

The adaptation part of the joint training utilized several training materials, such as the presentation materials in PPT format prepared by the lecturers and lecture video recordings. For the topics on common climate change impacts and hazards observed and to be observed in future in ASEAN region, and materials on case studies from several countries on the adaptation measures based on their climate change impacts, and 'Impact Chain Analysis' tool for analyzing the logical sequence linking climate change impact and adaptation actions were prepared and shared with trainees.

f. Training delivery

This course was conducted online a part of the joint training course with CF (advanced, 2nd round) and Climate Law and Regulation (Enabling Environment) courses for ASEAN countries. The delivery of the joint training course was rescheduled, due to the effects of the COVID-19, to 13 to 30 July. The result of the joint training is described in the clause 2.1.4.3.

2.1.6 Climate Law and Regulation (EE) course for Southeast Asian countries

a. Course outline

As described in the clause 2.1.4.3, the Enabling Environment (EE) course, formally named as Climate Law and Regulation course, was conducted online as a part of the joint training with the CF (advanced, 2nd round) and CCA (basic, 2nd round) courses for ASEAN countries.

Training modules on EE aimed at building capacity of trainees on improving their enabling environments in their country related to the implementation of climate change countermeasures by learning what enabling environments are and potential solutions through analyzing case studies and information exchange among participants.



Picture 21 Discussion on direction of curriculum development (EE)

In the EE course, participants identified the existing gaps in their own countries regarding the implementation of adaptation projects and financial access, through a series of group exercises to develop a project concept sheet. Trainees then learned approaches for fulfilling the gaps from case studies and discussions. The course focused on the enabling environments such as law and policy, and institutional arrangements.

For holding the joint training course, the followings were prepared to cover the elements related to EE for the access to climate finance and for implementation of climate change adaptation measures:

- Lecture videos on the theory and practice of creating an enabling environment for accessing climate finance and for the implementation of climate change adaptation actions;
- Specific requirements were set in the project concept sheet, i.e. “Sustainability of adaptation projects” and “Policies for enhancing climate finance access”;

- A guidebook on the theory and practice of creating an enabling environment for the implementation of climate actions.

b. Discussion points between TGO and JICA Short-term Experts

Discussions between TGO and JICA Short-term Experts are summarized in Table 27.

Table 27 Technical discussions with TGO (EE)

Conducted from October 2018 to March 2019	
TGO participants	Dr. Natarika Wayuparb Nitipon, Dr. Jakkanit Kanarurak, Ms. Apaphatch Hunsiritrakun, Mr. Supanut Chotevitayatarakorn
Topics	Climate laws in the world and related training courses provided by other organizations
Discussion points	<ul style="list-style-type: none"> - JICA Short-term Expert presented the state of climate laws and policy development in Southeast Asian countries and discussed overall direction of the course based on that information. - JICA Short-term Expert introduced relevant training courses provided by other organizations, and based on that information, TGO and JICA Experts considered how to differentiate the CITC course from the other existing training courses.
Conducted from April 2019 to September 2019	
TGO participants	Ms. Apaphatch Hunsiritrakun
Topics	Enabling environment for implementing climate actions
Discussion points	<ul style="list-style-type: none"> - Although the “enabling environment” is a terminology that is often used in recent years, there is no unified view of what it specifically refers to. For this reason, JICA Short-term Expert shared the information on how this terminology is used in IPCC AR5 and other documents. - As a result of discussions with TGO, seven elements on the enabling environments were identified, which is used for the consultation session during the Climate Change Adaptation training course.
Conducted from October 2019 to March 2020	
TGO participants	Ms. Apaphatch Hunsiritrakun
Topics	Critical points on enabling environments
Discussion points	<ul style="list-style-type: none"> - TGO and JICA Short-term Expert discussed the necessity to develop enabling environments for the implementation of adaptation measures and the access to the climate finance. The understanding on this point of view was shared from JICA Short-term Expert and this perspective was reflected in the training program.
TGO participants	Ms. Apaphatch Hunsiritrakun
Topics	Contents and of a training material
Discussion points	<ul style="list-style-type: none"> - TGO and JICA Short-term Expert considered the contents of training material taking into account the fact that enabling environment is a common

	<p>topic for all training courses of CITC.</p> <ul style="list-style-type: none"> - JICA Short-term Expert made a recommendation to TGO to formulate a schedule taking into account dissemination opportunities and strategic use of the training materials in mind.
Conducted from April 2020 to July 2020	
TGO participants	Ms. Apaphatch Hunsiritrakun
Topics	Support for a lecture and the material for a joint training course
Discussion points	<ul style="list-style-type: none"> - JICA Short-term Expert advised on the possible content of the lecture that will be presented by TGO official in charge of the course. - TGO and JICA Short-term Expert discussed on the selection of lecturers and the case studies for the lectures on EE for implementing adaptation measures and enhancing climate finance access.
TGO participants	Ms. Apaphatch Hunsiritrakun
Topics	Examination of the contents and use of training materials
Discussion points	<ul style="list-style-type: none"> - Based on the consultation with Thai experts, TGO and JICA Short-term Expert discussed the outline of the training materials and the contents.

c. Expected training outputs and outcome

The expected outcome of the training elements related to the enabling environment was to develop a project concept sheet, which reflects the outputs of the group work on identifying barriers and possible solutions for the project implementation from the perspective of creating or strengthening enabling environments. The project concept sheet served as guidance for smooth project implementation.

d. Training curriculum

Initially, TGO and JICA Short-term Experts were designing a 2-day workshop whose objectives were to enhance target trainees' understanding on international laws on climate change and their linkages with multilateral environmental agreements (MEA) in Southeast Asian countries; to learn and share experiences on domestic climate law development and implementation; and to assess and identify potential approach to enable legal and regulatory environment on climate actions. The target trainees were assumed as policy implementers from the UNFCCC focal point, legal experts and line ministries, who are likely to collaborate each other.

In this connection, TGO and JICA Short-term Experts took into consideration the possibility to collaborate with the organizations that have held training courses or have experience and knowledge on climate laws and regulations such as UNFCCC, UNEP, Ministry of the Environment of Japan (MOEJ), King's College London. Regarding MOEJ, sharing of

knowledge on formulation and operation of relevant climate laws and regulations including the Climate Change Adaptation Act was expected.

After a series of discussions however, both sides concluded that such a law is not the only element to promote the implementation of climate actions. Therefore, both sides decided to design the course that covers various contents on how to create or strengthen “enabling environments for implementation” which include laws, regulations, and policies among others.



Picture 22 Discussion on training curriculum (EE)

The objective of the training was also revisited and modified, which is to promote understanding of the enabling environments to implement climate change countermeasures in Southeast Asia, and to examine the actions that need to be taken to improve the enabling environments of each country.

TGO and JICA Short-term Experts discussed the training contents, which cover such topics as the defining the enabling environment for implementing climate change countermeasures, and review on case studies on mitigation and adaptation measures from the perspective of enabling environments. In this way, participants will be able to understand the process of how the enablers are established and identify the barriers in respective case studies. Based on that, participants will be able to learn what to be paid attention to when taking similar countermeasures in their countries and set milestones for establishing enabling environment.

In order to achieve the training objective, TGO and JICA Short-term Experts decided to organize the training course back-to-back with other CITC training courses, namely CF (advanced, 2nd round) and CCA (basic, 2nd round). Also it was later decided that the training course will be conducted online on Microsoft Teams.

This joint training course focused on creating an enabling environment for the implementation of climate change adaptation measures and facilitating climate finance access.

As a lecturer, TGO officer in charge of the EE course introduced the concept of enabling environment for climate change actions. Also an expert from JICA Project in Indonesia presented a case study on the agricultural insurance as one of the adaptation measures in Indonesia, with a focus on creating an enabling environment for the project implementation. A representative from UNFCCC gave a comprehensive presentation on the key aspects of creating the necessary environment for enhancing access to finance.

The project concept sheet prepared by the participants from each country contained two sections related to enabling environment: “Sustainability of adaptation projects” and “Policies for enhancing climate finance access.” The external advisor and JICA Short-term Experts provided advice on the perspectives of creating and improving enabling environment for respective projects. The details of discussions are described in clause 2.1.4.3.

➤ **Expert consultation meeting**

In order to design the curriculum that meets the needs of Southeast Asian countries, TGO and JICA Short-term Experts agreed to conduct consultation meetings to share and receive feedbacks on outline of the training course and training needs from the participants for the CCA, CF, and MM courses.

Taking the opportunity of the CCA course (basic, 1st round) held in September 2019, TGO and JICA Short-term Experts conducted the consultation, where the outline of the EE training course was introduced and opinions were asked. JICA Short-term Expert also conducted interviews to identify the needs of target countries related to the enabling environments for the implementation of adaptation measures.

Among the seven elements TGO and JICA Short-term Experts identified and introduced as components that make up the enabling environment (1. Legal and policy framework, 2. Institutional arrangements, 3. Capacity building, 4. Technology, 5. Investment and finance, 6. Information, 7. Stakeholder engagement), participants’ interests were inclined mainly to legal and policy frameworks, institutional arrangements, and capacity building. TGO and JICA Short-term Experts revised the training curriculum referring to the result of this meeting.

Finally, since the focus of the joint training is on the formation of climate adaptation projects, the curriculum modules on enabling environment was set to provide an opportunity to look into laws and regulations, policies and implementation systems to facilitate the project implementation.

The information on the enabling environments such as coordination with relevant domestic organizations to increase access to finance for climate adaptation projects, and regulations and incentives required to promote the implementation of adaptation projects were shared by the experts referring to case studies. Participants exchanged ideas on potential solutions for addressing the challenges in their own countries identified through a group work.

e. Training materials

In consultation with the CB office of TGO, a training material (guidebook) on EE course that focuses on the implementation of climate change actions was developed. The structure and contents of the guidebook were set by TGO and JICA Short-term Expert Team but also took into account the advice from multiple local experts who contributed to the guidebook development. The contents of chapters 1 and 2 of this guidebook were used in the lecture of the joint training course. The outline is shown below.

Table 28 Outline of training material (EE)

Outline of the training material	
Chapter 1 Introduction	1.1 What is Climate Action – Definitions and Foundations 1.2 What Environment Would Enable Climate Action? 1.3 Why is an Enabling Environment Important for climate actions?
Chapter 2 An Enabling Environment for Climate Actions and the ASEAN Context	2.1 Introducing Key Factors/Components of an Enabling Environment 2.2 Creating a Supportive Environment for Climate Actions in ASEAN
Chapter 3 Enabling Environment for Access to Public Climate Expenditure	3.1 Climate Finance Framework (CFF) 3.2 Climate Budget Tagging (CBT) 3.3 Integrating climate expenditure into fiscal budget
Chapter 4 Enabling Technological Innovation: Climate Smart Agriculture (CSA)	4.1 Introduction 4.2 The 3 pillars of CSA 4.3 Challenges for CSA adoption 4.4 Enabling environment for CSA adoption

f. Training delivery

This course was delivered online a part of the joint training course with CF (advanced, 2nd round) and CCA (basic, 2nd round) courses for ASEAN countries. The delivery of the joint training course was rescheduled, due to the effects of the COVID-19, to 13-30 July. The result of the joint training is described in the clause 2.1.4.3.

2.1.7 Training operation and management

During the Project period, aside from technical support on curriculum and training material development, JICA Short-term Experts provided various supports to TGO related to operation and management of CITC training activities. In this section, some of the supporting activities are described, namely TNA, training management, online training operation, training M&E and coaching on facilitation skills.

2.1.7.1 Training Needs Assessment (TNA)

In order for CITC to accurately understand the training needs of the prospective trainees in Southeast Asian countries and to develop training curriculum that precisely match their detailed needs, TGO and JICA Short-term Expert Team jointly conducted the Training Needs Assessment (TNA).

Main objective of the TNA was to 1) confirm that the draft training curriculums, which were developed by TGO and JICA Short-term Expert Team, are in line with each country's training needs, 2) identify additional training needs information that are not described in the draft training curriculums, 3) identify existing challenges and barriers related to capacity building in each country, and 4) hear opinions and expectations on CITC and its future activities.

As a first step, TGO and JICA Short-term Expert Team discussed various options and approaches of TNA and their effectiveness, ranging from a questionnaire survey, workshop-style opinion exchange, to an interview survey through email or phone. As a result of discussions, both sides decided to carry out a questionnaire survey and face-to-face interview to maximize the volume and quantity of feedbacks from stakeholders in Southeast Asian countries.

TGO and JICA Expert Team jointly prepared the TNA questionnaire, which was designed for respondents from climate change focal point agencies as well as line ministries that are in charge of mitigation, adaptation, and financing in each Southeast Asian country. The questionnaire was also reviewed by UNFCCC-RCC and ONEP. The questionnaire consists of the four components as follows:

- 1) Respondent's general information including his/ her job description and working experiences, which is useful to check the validity of given needs information and to understand the relationship between needs information and correspondent's affiliation and job description,
- 2) Respondent's or his/ her organization's capacity-related barriers that may be solved by

CITC's training services, such as lack of access to information, lack of certain knowledge and skill, limited access to climate finance, and lack of institutional arrangement and networking to drive climate actions,

- 3) Detailed training needs analysis through evaluation of 5 draft training curriculum for ASEAN countries, namely GHGI, CCSD, MM&CF (including some elements for advanced course), and CCA courses.
- 4) Training experience of respondent's organization, both training delivery and training participation, which is useful information in identifying potential speakers or lecturers of CITC training courses.

TNA was conducted by 1. Request to each AMS through ASEAN Secretariat, 2. Request trainees who attended MM and CF courses (basic), and 3. Request to participants to the CITC Regional Conference held in July 2018, where TNA interviews with AMS representatives were also conducted. Through these activities, TGO received feedbacks from all ASEAN countries.



Picture 23 TNA interview

In accordance with the result of TNA (See [Appendix 12.2](#) for details), TGO incorporated the training topics in high needs into training program or training materials for each course.

TGO has also shared the result of TNA with a wide range of stakeholders as it comprises CITC's original knowledge, such as at the side event of UNFCCC SB50 held in Bonn in June 2019.

Preliminary results of ASEAN regional capacity building needs assessment

Results				
Training Theme				
Identified topics in high demand	Mitigation	Adaptation	Greenhouse Gas Inventory	Climate Finance
	<ul style="list-style-type: none"> • MRV and case studies in the region • Approach to evaluate mitigation effects of mitigation measures • Mitigation technology selection 	<ul style="list-style-type: none"> • Impact assessment methods and case studies • Methodology for prioritization of the adaptation measure • Monitoring and evaluation (M&E) approach 	<ul style="list-style-type: none"> • Inventory preparation • Effective way of collecting activity data 	<ul style="list-style-type: none"> • Approach to formulate bankable climate project that can be applied to international climate funds • Critical points to be addressed in developing a project proposal to international climate funds

Figure 3 Dissemination of TNA results by TGO (presentation at SB50)

2.1.7.2 Training operation and management

JICA Short-term Experts provided support TGO to prepare and operate some of the training courses for ASEAN countries especially at the beginning of the Project period.

For example, in the course of training preparation, TGO and JICA Short-term Expert Team worked jointly using the logistical preparation list, which was designed to check the progress of various tasks on logistical preparation.

It was observed that TGO personnel responsible for logistical preparation have shown strong ownership and commitment. With the technical support from JICA Short-term Expert Team, they showed their skills on training preparation in regional training courses.

Another important aspect of training management, whose ultimate goal is to carry out the training smoothly, is good communication and time keeping. Communication between time keeper, MC and lecturers of each session is essential to flawlessly undertake training course. TGO staff proactively undertook time-keeping and time-schedule management as well as communication with key persons during the training course.



Picture 24 Discussion on training preparation

Discussions between TGO and JICA Short-term Experts are summarized in Table 29.

Table 29 Technical discussions with TGO (training operation and management)

Conducted from October 2017 to March 2018	
Topics	Training management, preparation schedule, budgetary control
Discussion points	<ul style="list-style-type: none">- Discussed important points to be considered in making the timeline for training preparation.- Discussed how to consider and allocate the budget even more efficiently and effectively under the budget constraint.
Topics	Logistical preparation for CITC training courses
Discussion points	<ul style="list-style-type: none">- Discussed how to effectively use the CITC's 'logistical preparation list.'- Discussed how to select the venue: important points to be considered, such as number of participants and training style, budget, etc.- Discussed how to update the training management manual of TGO (only in Thai)
Topics	Development of TNA questionnaire
Discussion points	<ul style="list-style-type: none">- Exchanged opinions on the important elements to be considered in preparing

	<p>the TNA questionnaire and in selecting respondents.</p> <ul style="list-style-type: none"> - Discussed how to develop an effective TNA questionnaire e.g. the length and composition, and covered contents for respondents who have different background and tasks. - Discussed how to efficiently and concisely but formally put all the necessary information in the questionnaire.
Topics	Effective scheduling for training preparation
Discussion points	<ul style="list-style-type: none"> - Discussed how to effectively develop the preparation schedule well in advance which should be shared among the training preparation team. - Discussed the importance of defining the types of training materials which will be distributed at the training well in advance in accordance with the developed preparation schedule. - Discussed how to identify the responsible person who is in charge to training material development, especially if the course requires external support from local consultants, in a way that does not affect the preparation schedule
Conducted from April 2018 to September 2018	
Topics	Preparation of utilization of CITC trainees database
Discussion points	<ul style="list-style-type: none"> - Discussed how to use the CITC's participants database for logistical preparation. - Discussed important points to be considered in developing the participants database which can also be used in developing Digital Capacity Building Gateway.
Topics	Logistical preparation for training courses, effective scheduling for training implementation and logistical issues for the implementation or regional conference
Discussion points	<p>Logistical preparation for CITC training courses</p> <ul style="list-style-type: none"> - Discussed how to develop and upgrade the CITC's 'logistical preparation list' - Discussed how to easily and effectively share the latest situation among the training preparation personnel, introduced the methods to classify the work item with color index. <p>Effective scheduling for training implementation</p> <ul style="list-style-type: none"> - Discussed how to effectively manage the time-schedule of each session of training course. - Discussed importance of good communication between time keeper, MC and speakers, importance of proactive time-keeping.



Picture 25 Discussion on training management

	- Introduced the skills of proactive time-keeping to inform of for the presenters to control their time easily.
Conducted from April 2019 to September 2019	
TGO participants	Mr. Thawatchai Saengkhamasuk
Topics	Scope of disclosure for CITC's training materials
Discussion points	- Since presentation materials prepared in PPT format by external lecturers oftentimes contain confidential data and information that cannot be disclosed to the public, TGO and JICA Short-term Experts discussed the importance of receiving consent from each lecturer prior to sharing the materials with trainees.

2.1.7.3 Design, operation and management of online training

According to the Meeting Minutes in May 2020, JICA Short-term Expert Team provided technical and financial assistance to TGO related to the design and operation of online-based training.

TGO and JICA Short-term Expert Team designed and launched the CITC's first-ever online training platform using Microsoft Teams which accommodates multiple training courses with various uploaded training materials and online rooms for parallel live sessions. Since this design and operational work required certain IT knowledge and skills that are not familiar for TGO, the Project decided to outsource some parts of the works to a local company through sub-contracting.

After discussions among TGO, JICA Short-term Expert Team and sub-contracted IT company, among the candidate online tools/ platforms Microsoft Teams was identified as an online tool for the training courses. After initial design of the platform, both sides conducted a preparatory mini-rehearsal on 3 July, 2020. Both sides and the IT company improved and finalized the online platform before launching the training.

During the online training period in July 2020, TGO and JICA Short-term Expert Team took the role of coordination and operation related to training contents such as time slot arrangement of live sessions or response to inquiries from trainees and lecturers, while the IT company was in charge of providing various technical supports on Microsoft Teams including editing and uploading of the recorded lecture videos or setting up the video meetings for live sessions on the online platform.

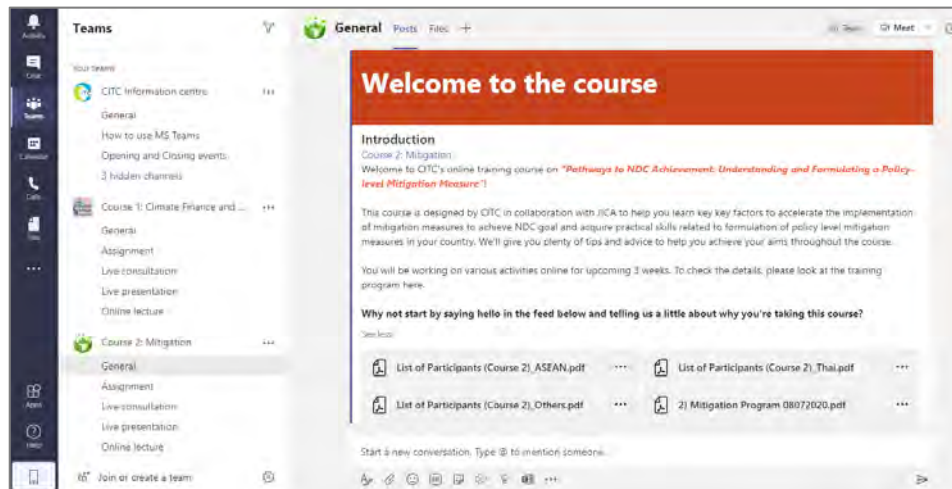


Figure 4 Image of the online training platform on Microsoft Teams

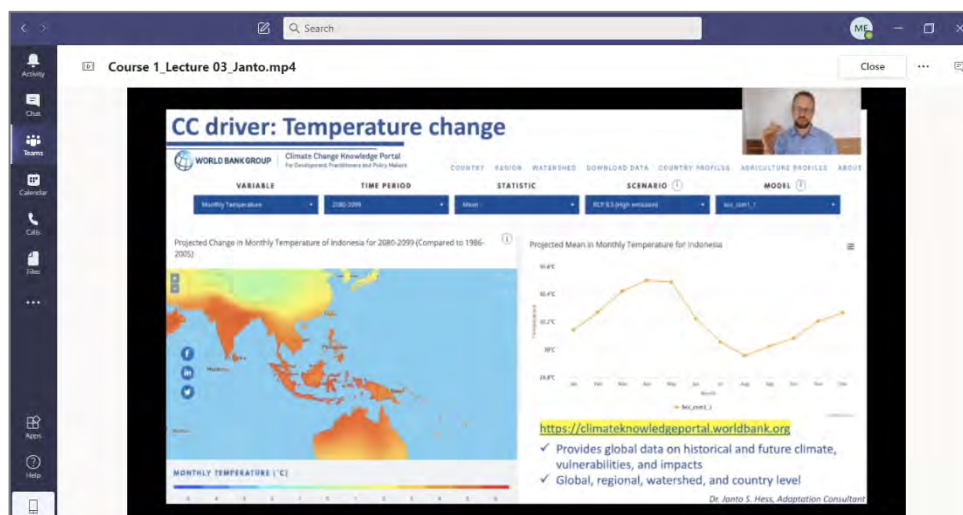


Figure 5 Image of the video lecture on Microsoft Teams

Through the first online training for CITC, TGO and JICA Short-Term Experts identified many lesson for future improvement. Some of the major findings together with suggested actions for TGO by JICA Short-term Expert Team are summarized in Table 30 below. JICA Short-term Expert Team shared these recommendations with TGO after the online training together with some additional comments and feedbacks from lecturers and trainees. Taking them into consideration, TGO will continue to make further improvements on their online training modalities for future training delivery.

Table 30 Findings on online training

Category	Content	Issues/ Lessons	Suggested improvement
Training preparation	Invitation and registration	<ul style="list-style-type: none"> - Invitation was sent on a very short notice, which resulted in the limited number of AMS trainees. 	<ul style="list-style-type: none"> - Give enough time for countries to nominate suitable trainees or consider participation. - Carry out preparation works in accordance with set timeline.
Training operation	Incentive to participate	<ul style="list-style-type: none"> - Only selected (20% of registered) trainees attended main live sessions. - Some trainees seemed to find it difficult to keep motivation for whole training period. 	<ul style="list-style-type: none"> - Invite those who are committed to training courses. - Hold interactive live session between the training activities, so as to promote networking among participants.
	Interaction among country team	<ul style="list-style-type: none"> - Interaction among country members in working on the assignment seemed to be a bit limited. 	<ul style="list-style-type: none"> - Clearly inform all trainees that commitment by all trainees is essential. - Organizer promotes interaction among country members.
	Facilitation	<ul style="list-style-type: none"> - Facilitation to encourage active interaction among participants and resource persons was effective. - However, the session will turn ineffective without appropriate facilitation. 	<ul style="list-style-type: none"> - TGO continues internal coaching activity and assign appropriate CB staff. - Prepare some guiding questions before the session.
Training material	Textbook/ lecture video	<ul style="list-style-type: none"> - It is essential that all textbooks/ lecture videos are made available for trainees before training starts. Some materials (e.g. CF and EE textbook) were not completed by the end of the training. 	<ul style="list-style-type: none"> - Ensure preparation works are performed in accordance with the set schedule. - Make materials available for trainees after the training.
Training design	Timeframe setting	<ul style="list-style-type: none"> - The timeframe between the 1st and 2nd consultation sessions can be extended to allow the participants more time to revise the assignment. 	<ul style="list-style-type: none"> - The timeframe in between 2-4 weeks can be considered.
	Training output	<ul style="list-style-type: none"> - Participation of line ministries is critical in delivering tangible training outputs (climate actions). 	<ul style="list-style-type: none"> - Strengthen CITC network with key ministries and individuals. - Directly contact them for training participation.
	Registration	<ul style="list-style-type: none"> - Allowing multiple-course registration made it too complicated to coordinate with trainees and resource persons. 	<ul style="list-style-type: none"> - Consider limiting the registration to only 1 course per person or avoid parallel live sessions.

Category	Content	Issues/ Lessons	Suggested improvement
Online tool	Online tool	<ul style="list-style-type: none"> - It is essential for the organizer to deeply understand the online tool well in advance so that TGO can (1) design/ update a user-friendly training platform and (2) provide swift response to participants' inquiries. 	<ul style="list-style-type: none"> - Learn the online platform before the training starts such as through internal training. - Make efforts to learn the online tool in daily work where applicable.
	Online tool	<ul style="list-style-type: none"> - Swift response to inquiry from trainees and lecturers is important to keep the momentum of active and interactive online training. 	<ul style="list-style-type: none"> - TGO assigns multiple staff on this task and check the inquiry frequently (e.g. every hour).
	Internet connection	<ul style="list-style-type: none"> - Some countries/ trainees had very weak and unstable connection, which prevented from smooth communication in live sessions. 	<ul style="list-style-type: none"> - Test connection by inviting trainees before training starts to check their connections. - If any issue is found, suggest trainees to changing the connection line. - CITC provides another connection option.
	Instruction for trainees	<ul style="list-style-type: none"> - People found it difficult to locate information or materials uploaded on MS Teams, although user manual and guidance video was prepared. 	<ul style="list-style-type: none"> - Important guidance can be more highlighted on MS Teams and provided in an easy way to find out. - It is good to give registered trainees some time to install and get used to the online training platform before training starts.

TGO also received feedbacks from trainees through online survey during the online training some of which are useful in designing future online courses. Feedbacks include: some trainees felt each session was too long, while others found it difficult to concentrate on the training during their busy schedule as a full-time worker. The latter is specific to online training because the conventional CITC's physical training style can pull trainees apart from their daily works by physically inviting them to Bangkok. Other comment is that some trainees prefer face-to-face training style which can accommodate more smooth and effective communication and exchange of views among participants.

Table 31 illustrates the strengths and weakness of the online training from the general viewpoints, which can be useful for future online training.

Table 31 Pros and cons of online training

Pros	Cons
<ul style="list-style-type: none"> - Learning opportunities are given to wider training targets than that of the conventional training style since online training does not have to usually limit the number of participants. - Trainees can watch the recorded lecture videos anytime as many times as they want. Extensive volume of contents can be also covered by lecture videos although the number and length of lectures must be controlled. It is easy to accumulate the training materials like an online library. - Volume of logistical arrangements (venue, international flights, accommodation and transportation for training participants and lecturers) can be reduced to a great extent which allows the organizer to allocate more time to technical issues and training operation. 	<ul style="list-style-type: none"> - Securing active and committed trainees. If nobody or just a few active training participants join the online training, live interactive discussion sessions may not be effective. - Participation of experienced facilitators is highly important especially in the session where many participants join at the same time and expect concrete output from the session. - Internet connection problem at trainee or lecturer or organizer's side during the live sessions.

2.1.7.4 Post-training monitoring and evaluation (M&E)

TGO and JICA Short-term Experts in coordination with JICA Long-term Expert conducted monitoring and evaluation (M&E) of CITC's training activities in order to check whether/ how the CITC trainings contributed to actual climate change countermeasures. The training M&E was conducted after the training delivery unlike pre-/post-test and satisfaction survey which takes place during the training period. TGO took the lead in developing the methodology and conducting M&E works with the support from JICA Experts.

PDM of the Project requires to apply the M&E to a Signature course (under Output 2); however, TGO and JICA Short-term Experts agreed after discussions to conduct the M&E for the advanced courses (MM course and CF course). This is because the objective of the advanced courses of CITC, which is to generate tangible training outputs, matches the new strategy on result-based capacity building under the CITC Strategy Plan.

TGO and JICA Short-term Experts discussed the possible methodology of the M&E and decided to periodically monitor and evaluate the status of climate actions or related activities, which will be set in accordance with the expected outcome of each advanced training course.

Both sides discussed and agreed to incorporate an online survey approach to gather information and feedbacks from trainees (alumni) rather than face-to-face meeting or interview.

The online monitoring survey aimed to monitor the progress of planning and implementation of climate actions, which were proposed and developed by each trainee during the advanced trainings, in accordance with the set monitoring indicators of each advanced course (see clauses 2.1.3.2 and 2.1.4.2 for monitoring indicators for MM and CF courses respectively).

Regarding the timing of monitoring activity, the launch of M&E was initially scheduled for 6 months after the training delivery of each advanced course; however, M&E was postponed to May 2020 due to the impact of COVID-19 on CITC's work and also resignation of TGO officer in charge of M&E activity and CF course.

During the Project period, TGO proactively conducted M&E on MM (advanced, 1st round) and CF (advanced, 1st round) courses and compiled the result into a report. TGO has a plan to conduct M&E for advanced courses delivered during the Project period using the same approach and methodology.

2.1.7.5 Coaching activities for CB team

Although this activity is not explicitly described in the PDM, the Record of Discussions (R/D) of the Project referred to the activity, and also the capacity assessments for the CB team conducted under the Project revealed the necessity and expectation to improve the staff's capacity on training management, especially knowledge and skill on training facilitation and moderation. In response, the Project decided to conduct internal training activities to improve such capacities of the CB team.



Picture 26 Discussion on coaching activities

Aiming to further enhance capacity (knowledge and skill) on training facilitation and moderation⁴ of the CB team (both officials and project coordinators) and to integrate and apply acquired knowledge and skill on facilitation and moderation when developing and updating the

⁴ Facilitation means a function that supports and promotes all kinds of knowledge creation activities such as group problem solving, idea creation, education, learning by making communication go smoothly.

CITC training courses⁵, these internal coaching activities consist of lectures and exercises on training facilitation and moderation and practical exercise for integration of facilitation/moderation techniques in CITC training courses.

Initial plan was that the coaching activities for CB team was to conduct mainly by JICA Short-term Expert and a local consultant employed by the Project; however, in response to the request from TGO and under the circumstance that JICA Short-term Expert were not able to travel to Thailand due to COVID-19 pandemic, both sides agreed that the local consultant played a central role in conducting the coaching activities in Thai language. The role of JICA Short-term Expert was to provide advice to the local consultant based on the daily feedback during the training period, analyze the results based on the report prepared by the local consultant, and compile recommendations for TGO for future improvement.

The coaching activity was conducted mainly for CB team over the 3 days from 23 to 25 June, 2020. Although an On-the-Job (OJT) training at actual CITC training course was planned for August 2020 initially, it was cancelled due to COVID-19 pandemic.

A short questionnaire was disseminated to the CB team prior to the coaching to explore their past experiences and expectations and to design the training contents and process accordingly. The principal expectations of the coaching activities included: 1) to build confidence as facilitator through practicing facilitation skills (e.g. communication skill, summarizing skill, etc.), 2) to become able to design trainings in a way that promotes participants participation to training and facilitates participants' understanding of issues that are hard to understand, and 3) to enhance knowledge on effective process to design training courses.

In the coaching activities, in addition to lectures on the concept and principles of facilitation and moderation, the participants practiced relevant techniques such as case study and role play in group work exercises. Furthermore, after learning the methodology for effective planning and preparation of the training course, the participants were divided into groups and integrated the knowledge and skills they have gained into designing the training process of selected actual CITC training courses and made presentations.



Picture 27 Demonstration of case study (coaching)

⁵ The CB team staff will learn the viewpoints and concrete methods to effectively integrate and apply acquired facilitation and moderation methods according to training content and target from the stage of curriculum development of the existing CITC training course. By doing so, it is expected that the efficacy of the training course will be further enhanced.

At the end of the coaching activities, the participants conducted a reflection and evaluation, the results of which highlighted that most expectations were met, and the knowledge and skills gained could be applied in their own works. However, although the coaching activities were limited in time, some participants commented that they wanted to practice some more specific techniques suitable for national and international CITC training courses.



**Picture 28 Self-evaluation by
at coaching**

The following recommendations were compiled by JICA Short-term Expert Team based on the result of the coaching activities.

1. Identify specific CB staff who are suitable for facilitators and moderators, and provide them with as many opportunities to gain more confident as possible, such as having them experience being a facilitator and moderator at actual CITC training courses (domestic or international) and participate in external training on facilitation and moderation continuously
2. Invite Thai external experts to regularly conduct internal coaching activities for the entire CB team and related offices. It is preferable that the above-mentioned identified officials and project coordinators will be involved in the planning of this coaching activity. Furthermore, external experts will be asked to give feedback on the performance of assistant facilitators and to see actual CITC training courses and raise points for improvement of the CB team. TGO will need to take necessary budgetary measures to implement the coaching activities regularly.
3. Incorporation as well as test/ adjustment of facilitation sessions as a part of CITC's curriculum development process is recommended. During the post-adjustment of the facilitation sessions, preferably, the facilitators can test all the facilitation exercises in that training curriculum through mock training sessions. Reflecting the results of the test, the adjustments such as reframing questions and revising the steps and tools will be made.

Appendix 14.1 shows the detailed program of internal coaching activity for CB team.

2.1.8 Strengthen networks with potential resource persons and alumni

2.1.8.1 Support in development of the CITC Networking Strategy

As a part of the development of the CITC Networking Strategy, which was led by the JICA Long-term Expert, TGO and JICA Short-term Expert Team conducted stocktaking on CITC's network partner organizations in order to analyze the current status of networking of CITC. Through this stocktaking work, TGO and JICA Short-term Experts identified the existing as well as potential future networking partners, based on which CITC's networking strategy was developed. Each partner organization was analyzed not only from the viewpoint of benefits for



Picture 29 Discussion on networking

the CITC by partnering with each organization but also from the benefits for the partner organization. This is because a long-term networking can be sustained only if a win-win relationship is established between CITC and the partner organization. For this stocktaking work, TGO and JICA Short-term Experts jointly developed a database format for the collection and analysis of CITC networks.

TGO developed a stocktake list of existing and potential network partner organizations in Thailand while JICA Short-term Expert took a stock of those in other areas.

TGO and JICA Short-term Experts, through consultation with the local consultant hired by JICA Long-term Expert, compiled information on existing and potential network partner organizations in Thailand and ASEAN countries, Japan, international organizations and international conferences/ forums, which was integrated into CITC's network guidance document titled "A Guide to CITC/ TGO Networking for Effective and Sustainable Engagement with ASEAN, Thailand and Japan." CITC's networking activities will be maintained and strengthened based on this guidance document.

2.1.8.2 Strengthen networks with CITC alumni and potential stakeholders

Strengthening and maintaining high-quality training is an important factor in maintaining the operation and reputation of CITC as the region's leading training institution. Many CITC alumni who attended the training courses in the past have been active in climate change field, and information sharing with such alumni on a regular basis can lead to the strengthened network of CITC and also lead to the identification of new resource persons such as lecturers.

Since TGO has already developed and issued e-mail magazines to the Thai alumni, TGO and JICA Short-term Expert Team agreed to develop e-mail magazines in English language for the alumni in Southeast Asian countries and other international stakeholders. JICA Short-term Expert gave advice to TGO from such perspectives as effective ways of event information dissemination, tips for development of short message for more attractive email news contents.



Picture 30 Discussion on networking activities

TGO launched English email newsletter, “CITC NEWS” in January 2020 for the alumni in ASEAN countries with the aim of maintaining and strengthening its network with CITC alumni. The first CITC NEWS for ASEAN alumni featured the CITC’s side events at COP25 held in December 2019 and introduced outline of the events. TGO has a plan continue to distribute “CITC NEWS” on a regular basis and introduce CITC activities to the alumni.

Discussions between TGO and JICA Short-term Experts are summarized in Table 32.

Table 32 Technical discussions with TGO (networking activities)

Conducted from October 2017 to March 2018	
TGO participants	Dr. Jakkanit Kananurak, Ms. Chanyaphak Wathanachinda, Ms. Apaphatch Hunsiritrakun, Ms. Tanawan Pongpanich, Ms. Onuma Nadsangjan
Topics	Network strengthening with CITC’s alumni
Discussion points	<ul style="list-style-type: none"> - Discussed and confirmed objectives and expected outputs of CITC networking and knowledge/ PR activities - Analyzed and discussed the effectiveness of developing an e-mail newsletter service in English for alumni from ASEAN countries - Discussed how to strengthen SNS services of CITC (e.g. Facebook and YouTube channel) to increase recognition of CITC.
TGO participants	Dr. Jakkanit Kananurak, Ms. Chanyaphak Wathanachinda, Ms. Chayathorn Thanawattanadamrong, Ms. Apaphatch Hunsiritrakun, Ms. Onuma Nadsangjan
Topics	Development of the email-based news service for CITC alumni in Southeast Asia, Networking strategy plan of CITC
Discussion points	<ul style="list-style-type: none"> - Discussed possible contents, delivery frequency, effective way to link with other SNS services of CITC such as Facebook and YouTube, of the email-based news service for CITC alumni in Southeast Asia, referring to the contents and services for Thai alumni. - Discussed formulating the CITC's networking strategy which should be based on clear understanding on the objective of establishing or

	strengthening networks with each of the current and potential networking organizations and also discussed effective approaches of identifying new networking partners.
Conducted from October 2018 to March 2019	
TGO participants	Ms. Chanyaphak Wathanachinda and Ms. Onuma Nadsangjan
Topics	Method of analysis of networking partners (Stock-take works)
Discussion points	<ul style="list-style-type: none"> - TGO and JICA Short-term Experts discussed the format for effective stocktaking. TGO and JICA Experts discussed various networking criteria/ indicators to accommodate numerous partner organizations and for easy usage for later analysis. Networking partners will be sorted not only by region and also by networking benefit for CITC as well as for partner organization. - JICA Experts advised on evaluation criteria on networking partners, i.e. feasibility, sustainability and complementarity. TGO and JICA Short-term Experts will further consider how to evaluate or score partnership. - For email news for CITC alumni in Southeast Asian countries, TGO and JICA Short-term Experts discussed to include information of recent activities of CITC, such as training activities and organized/ participated regional or international events such as COP and SB side events.
Conducted from April 2019 to September 2019	
TGO participants	Ms. Chanyaphak Wathanachinda
Topics	Information Dissemination at UNFCCC's conference event (SB50)
Discussion points	<ul style="list-style-type: none"> - JICA Short-term Experts provided advice to TGO arranging event agenda, application through the focal point, invitation of speakers, PR of the event, event venue setting and management of the event.
Conducted from October 2019 to March 2020	
TGO participants	Ms. Onuma Nadsangjan
Topics	Measure to improve CITC NEWS
Discussion points	<ul style="list-style-type: none"> - To enrich contents of CITC NEWS, JICA Short-term Expert made suggestions to TGO including the layout, header and selecting of pictures.

2.2 Activities related to Output 2:

Planning and implementation of climate actions in Thailand and other countries in Southeast Asia is supported through CITC training

2.2.1 Develop signature course

The necessity to develop a course for private sector has been raised since the early stage of the Project by various stakeholders including TGO and JCC members. In light of such comments and recommendations to expand the target group of training activities to non-state actors, which were shared in multiple occasions such as JCC and CITC Strategy Plan meetings and also during the training in Japan, TGO and JICA Short-term



**Picture 31 Discussion on curriculum
(Signature course)**

Experts in coordination with JICA Long-term Expert agreed to develop a training course for private sector in Thailand, which will be considered as a signature course in the PDM.

➤ Internal training for CB team (*cancelled)



**Picture 32 Discussion on internal training
program (Signature course)**

Based on the request from TGO, TGO and JICA Short-term Experts elaborated on development of internal training for CB team. The internal training aimed to enhance knowledge and skill so that CB team can develop and update the curriculum for the Thai private course by their own during the Project period. TGO and JICA Short-term Experts discussed and selected the potential topics of internal training and consultation on training topics was made with JICA Long-term Expert and JICA Thailand office.

The planned contents of internal training as of February 2020 were as shown below. The lectures and exercise sessions would be provided by JICA Short-term Experts and external experts in Japan.

However, in light of the situation of COVID-19 and also due to the resignation of the TGO official in charge of this training course, TGO and JICA side concluded to cancel the internal training and continue elaboration of training curriculum of Thai private sector with the support from local consultant who is employed by the Project.

Table 33 Contents of the internal training program for CB team (Thai private course)
 (*cancelled due to COVID-19)

Content	Training method	Objective
Climate projection and downscaling	Day 1 [Lecture]	To understand the rationale of future emission projection and emission gap
	Day 2 [Lecture]	To understand the rationale of climate projection and downscaling
	Day 3 [Exercise]	To experience how to conduct downscaling (statistical method)
Financial impact analysis on the business portfolio	Topic 1 [Lecture and Exercise]	To understand macroeconomic model that estimates the influence to key economic parameters such as electricity price, fuel price, material price caused by climate impacts and exercise how to use macroeconomic model
	Topic 2 [Lecture and Exercise]	To understand the financial impact analysis on the business portfolio of private companies using the key economic parameters influenced by climate impacts and exercise how to conduct the financial impact analysis(Balance Sheet Analysis)
Climate Risk management and business opportunities	Day 1 [Lecture]	To understand the methodologies of climate risk management including BCP and cases of business opportunities
	Day 2 [Exercise]	To experience how to develop climate risk management plan on the viewpoint of finance and analyze business opportunity
	Day 3 [Exercise]	To experience how to develop BCP (in case of flooding)

➤ Development of training curriculum

After a series of discussions, TGO and JICA Short-term Experts agreed the overall direction of the course and also elaborated on some of the topics to be included in the course, which include the scenario analysis on climate-related information disclosure and Business Continuity Plan (BCP) for the risk of climate disaster, based on the suggestion made by JICA Short-term Experts.



Picture 33 Discussion on training curriculum (Signature course)

However, based on the request from TGO considering the impact to the Project caused by the COVID-19 pandemic, it was concluded to develop the training curriculum with the support from local consultant employed by the Project under the working training title “Climate-related Risk Analysis & Management on Private Business and Development of Business Opportunity.” It was also agreed that the development of training materials is excluded from the support from

JICA and will be done self-reliantly by TGO after the Project period. It was also confirmed that TGO will deliver the training by their own after the completion of the Project.

The draft training curriculum for Thai private sector which was developed by TGO and JICA Short-term Experts with the support from the local consultant is shown below. (See [Attachment 9](#) for the finalized training curriculum.)

Table 34 Draft Training Curriculum of Private Course

Day	Objectives	Training method	Contents
Day 1	Learning the benefit and necessity, methodologies of climate-related risk analysis and management, the approach of developing new business	Lecture	Outline of climate-related risks management and business opportunities for private companies in Thailand
		Lecture	Methodologies of climate-related risk analysis and management
		Lecture	Business opportunities created by climate related risks
		Lecture	Cases of advanced private companies responding to the climate-related risks and their practices of risk analysis & management, and Cases of new business opportunities.
		Panel discussion	Challenges and barriers from advanced private companies in responding to the climate-related risks, conducting risk analysis & management and developing new business
Day 2	Experiencing how to conduct climate-related risk analysis and management on the business against physical and transition risks	Lecture	Case studies of climate-related risk analysis and management
		Exercise	How to analyze and manage the climate-related risk to the business of private company
		Presentation Session	Each group explains the developed climate-related risk analysis and management
Day 3	Experiencing how to conduct climate-related risk management, especially using Flood BCP of Thailand	Lecture	Outline of BCP and case studies
		Exercise	How to develop BCP for the case of flood risk
		Presentation Session	Each group explains the developed BCP

The local consultant employed by the Project reviewed the draft training curriculum and identified critical points to be revised in the training contents as shown below.

Table 35 Recommendations from local consultant on draft curriculum (Thai private course)

Module in draft curriculum	Recommendations
Lecture: Outline of climate-related risk management and business opportunities for private companies in Thailand (Day 1)	<ul style="list-style-type: none"> - Example loss and damage summarized from Thai Flood in 2011 is recommended to be added. - Climate scenarios involved in climate-related risks (ex. 2 degree and 4 degree scenario, and the downscale results for Southeast Asia) are recommended to be added.
Lecture: Methodologies of climate-related risk analysis and management (Day 1)	<ul style="list-style-type: none"> - Different approaches to manage climate change risks, namely risk reduction, risk retention, and risk transfer are recommended to be added.
Lecture: Methodologies of climate-related risk analysis and management (Day 1) Business opportunities created by climate related risks (Day 1)	<ul style="list-style-type: none"> - In selecting target sectors, in agriculture sector, food industry may be a better choice than beverage and supper market because some impacts caused by climate change lead to food security problems at first, next they generate subsequent impacts on beverage, supermarket, and restaurant. - In manufacturing sector, energy-intensive industries to represent the energy related risks (e.g., cement, iron and steel) and low-carbon or green industries (e.g., EV, solar cells) to represent the energy related business opportunities are recommended to be selected. - Tourism sector and housing and real estate sector are recommended to be selected because they will also be seriously affected by climate change.
Lecture: Cases of advanced private companies responding to the climate-related risks and their practices of risk analysis & management; Cases of new business opportunities (Day 1)	<ul style="list-style-type: none"> - Introduction of climate risk management and business opportunity development is planned to be done in some different lectures. It is recommended that lecture contents should be changed in different lectures such as introduction of actual cases of advanced companies presented by company officer in one lecture and introduction of typical cases by industries as a reference of exercise in other lecture.
Exercise: How to analyze and manage the climate-related risk to the business of private company (Day 2)	<ul style="list-style-type: none"> - For grouping the participants in the exercise of climate-related risk analysis and management, and BCP, it is recommended that the participants are grouped by type of their own industries considering participants' interests, not randomly. - In the exercise of climate-related risk analysis and management, it is recommended to provide the guidebook which includes the approach for climate-related risk management with typical cases of countermeasures by type of industries. It is expected that the participants can try to develop the climate risk management plan of their own companies using this guidebook.
Exercise: How to develop BCP for the case of flood risk (Day 3)	<ul style="list-style-type: none"> - In the exercise of BCP for flood risk, it is recommended to set 3 scenarios: 1) same severity as Thai flood in 2011 level, 2) 50% severity of 2011 level, and 3) 150% severity of 2011 level using water level and duration including the hazard information from Thai flood in 2011.

Technical discussions between TGO and JICA Short-term Experts on the signature course are summarized in Table 36.

Table 36 Technical discussions with TGO (signature course)

Conducted from October 2018 to March 2019	
TGO participants	Dr. Jakkani Kananurak, Ms. Chanyaphak Wathanachinda, Dr. Akarapon Houbcharaun, Ms. Apaphatch Hunsiritrakun
Topics	Direction of specific course for private sector
Discussion points	<ul style="list-style-type: none"> - In initiating discussion on the private course, JICA Short-term Experts explained the background information about scenario analysis for climate-related risks and opportunities disclosure, including the background and trend of climate-related financial disclosure, the necessity and benefits of climate-related financial disclosure for private company, the guidance of the Scenario Analysis by TCFD, examples of climate risks and opportunities, and case studies by advanced private companies in Japan. - TGO and JICA Short-term Experts discussed the possibility to link the business matching event under CITC with other existing activities such as those organized by the Embassy of Japan, JETRO or JICA Thailand Office. - TGO and JICA Short-term Experts discussed the importance of technical support from CITC for the course participants as a technical follow-up activity in order to ensure the course leads to tangible outcome.
Conducted from April 2019 to September 2019	
TGO participants	Dr. Akarapon Houbcharaun, Ms. Apaphatch Hunsiritrakun
Topics	Direction of specific course for private sector
Discussion points	<ul style="list-style-type: none"> - JICA Short-term Experts suggested TGO to consider whether the candidate training topics can be continuously utilized for the CITC training course and are attractive as a paid course for Thai private sector. - In initiating discussion on the training course, JICA Short-term Experts explained the methodology of scenario analysis for climate-related risks and opportunities disclosure, including introducing the case study of climate risks and opportunities analysis in automobile industry in Japan. - JICA Short-term Experts explained the background information about BCP (Business Continuity Plan), including the necessity and benefits of BCP for private company.
Conducted from October 2019 to March 2020	
TGO participants	Dr. Akarapon Houbcharaun
Topics	Direction of specific course for private sector
Discussion points	<ul style="list-style-type: none"> - JICA Short-term Experts introduced the general approach of climate projection and downscaling to CB team upon the initial request made by TGO to include these topics in the internal training. - JICA Short-term Experts also introduced the latest trend and common development process of Business Continuity Plan (BCP) for the case of flooding as a potential content for the Thai private course.

2.2.2 Promote bilateral cooperation on climate change

2.2.2.1 Identify target countries and specific needs

TGO had initiated and promoted bilateral cooperation with Vietnam and Laos PDR with the aim of providing capacity building support in a manner that more suits the needs of these countries and enhancing mutual learning through interactive programs.

After the commencement of the Project, TGO and JICA Short-term Expert Team discussed and agreed to set Vietnam and Lao PDR as the priority target countries for the bilateral cooperation activities. This is mainly because TGO had started active communication before the commencement of the Project and had reached to the signing of the Memorandum of Cooperation (MOC) with some of the relevant agencies and organizations in these two countries.

2.2.2.2 Design and conduct the programs for bilateral cooperation on climate change

TGO and JICA Short-term Expert Team carried out the bilateral activities based on the work plan, which TGO had developed by its own initiative before the start of the Project. Based on this work plan, both sides started works with discussion on the appropriate methodology of needs identification. After discussions, TGO and JICA Short-term Expert Team decided to incorporate the approach similar to the TNA which is the combination of a questionnaire survey and interview survey through meeting key stakeholders in the country that allow thorough extraction of information on concrete needs as well as the resources that target countries can provide.

TGO and JICA Short-term Expert Team visited key organizations in the target country and identified basic capacity building needs of the country through meetings and interviews using the developed questionnaire. Identified needs were utilized to formulate a bilateral cooperation program.



Picture 34 Meetings in Vietnam with Department of Climate Change (left) and Vietnam National University (right)

Based on the program developed by TGO, the first bilateral dialogue event between Thailand and the Department of Climate Change, Ministry of Natural Resources and Environment (MONRE-DCC), Vietnam was organized on 30 October 2018, and the workshop event with Vietnam National University (VNU) was organized on 1 November 2018 in Hanoi, Vietnam. The first event was co-organized by TGO and MONRE-DCC, and the second event by TGO and VNU. The cost for Thai participants was mostly borne by TGO and the venue fee was borne by MONRE-DCC and VNU. Event program was developed by TGO and the Vietnamese side through direct consultation.

At the dialogue event with MONRE-DCC, total 50 participants joined the event; participants from Thailand include CB office and ONEP, and Vietnamese side includes line ministries, local government, research institute, private sector and JICA Vietnam office.

Speakers from both Thai and Vietnamese sides made presentations to share experiences in their country. Covered topics include climate change legislation, mainstreaming of climate change policies into national and local development plans and efforts by local government. Participants from both countries also exchanged views and opinions on the following topics:

- NDC implementation framework
- LULUCF sector (REDD+) in NDC
- Utilization of market mechanisms (including Thailand's T-VER program)
- Finance on adaptation
- Collaboration with academia
- Engagement of private sector in tourism sector
- Legislation in construction sector (e.g. promotion of Eco-Building)

At the workshop event with VNU, participants from VNU and students of the Master's Program in Climate Change and Development from Vietnam Japan University (VJU) attended and received lectures on climate change and sustainable development issues, and Thai and Vietnamese participants exchanged views and opinions. Presenters were mainly from TGO and ONEP, and JICA Short-term Expert also presented at one of the sessions.



**Picture 35 Bilateral workshop with
MONRE-DCC of Vietnam**

For many technical questions raised by the Vietnamese participants on the topics of policy development process, and coordination among governments and research institutes, TGO

provided answers. TGO also had an occasion to make a courtesy visit to the President and Dean of VNU and discussed further collaboration between CITC and VNU.

JICA Short-term Experts supported these bilateral events and meetings with relevant agencies in Vietnam by providing technical advice and also supported identification of key organizations.

TGO then organized the second joint bilateral workshop with Vietnam titled “Effective mainstreaming of climate change policies into practice” on 3 May 2019 in Bangkok (See Appendix 15.3 for the program). In this workshop, the total 20 participants from both Thailand and Vietnam mainly discussed transformation to 2006 IPCC Guidelines for national GHG inventories, climate finance and MRV for NDC, and shared current status and challenges on these issues.

The dialogue program was developed by TGO while JICA Short-term Expert suggested to set agenda items taking into account the results of the first joint bilateral workshop in October 2018.

For the bilateral cooperation with Lao PDR, based on the experience of bilateral cooperation activities already conducted with Vietnam, TGO prepared for the bilateral dialogue event with the Laos PDR. TGO planned for two events with the Laos side, namely dialogue with Department of Climate Change (DCC), Ministry of Natural Resources and Environment (MONRE), Lao PDR and the seminar event with National University of Laos. JICA Short-term Expert supported TGO thorough providing advice on the draft agenda and selection of Thai speakers.

Although a positive interest was shown from the Lao side at the UNFCCC Bonn Climate Change Conference (SB50) held in June 2019, concrete bilateral dialogue was not held during the Project period mainly due to the COVID-19 pandemic and budget limitation of the Lao side.

In parallel to above bilateral cooperation activities with Vietnam and Lao PDR, TGO and JICA Experts started considering other potential Southeast Asian countries for new bilateral cooperation partners. TGO, JICA Short-term Experts, and Long-term Expert considered the possibility of partnering with such countries as Singapore and Indonesia, which have rather advanced climate change policies and actions than other AMS considering the lessons learnt from partnering with other AMS countries.

Discussions between TGO and JICA Short-term Experts are summarized in Table 37.

Table 37 Technical discussions with TGO (bilateral cooperation)

Conducted from October 2017 to March 2018	
TGO participants	Dr. Jakkanit Kananurak, Ms. Chanyaphak Wathanachinda, Ms. Nareerat Thanakasem
Topics	CITC's bilateral cooperation activities
Discussion points	<ul style="list-style-type: none"> - Discussed and confirmed objectives and expected outcomes of bilateral activities of CITC. - Discussed how to effectively carry out bilateral cooperation activities with Vietnam, including appropriate demarcation of responsibility and budgeting between Thai and Vietnam sides. - Shared the latest information on climate change policies and measures in Vietnam. - Discussed effective method of needs assessment for bilateral activity and suitable contents of the questionnaire.
Conducted from April 2018 to September 2018	
TGO participants	Ms. Chanyaphak Wathanachinda
Topics	Bilateral cooperation programs with Vietnam
Discussion points	<ul style="list-style-type: none"> - Discussed the theme and topics for bilateral cooperation programs with Vietnam based on the capacity building needs in Vietnam side collected through questionnaire and interviews.
Conducted from October 2018 to March 2019	
TGO participants	Ms. Chanyaphak Wathanachinda and Ms. Onuma Nadsangjan
Topics	Development of program for bilateral dialogue event with Vietnam, future direction of bilateral cooperation, etc.
Discussion points	<ul style="list-style-type: none"> - TGO and JICA Short-term Experts discussed program and potential speakers of the second bilateral dialogue event. - TGO and JICA Short-term Experts discussed the future target countries for bilateral cooperation after Vietnam and Laos PDR. Both sides discussed the possibility of cooperate with the remaining CLMV countries (Cambodia and Myanmar), and the Philippines, which is advanced in adaptation efforts, and Indonesia, which is advanced in mainstreaming efforts. - TGO and JICA Experts discussed the way to promote the result of bilateral cooperation, and considered side events at UNFCCC events such as COP and SB.
Conducted from April 2019 to September 2019	
TGO participants	Ms. Chanyaphak Wathanachinda
Topics	2 nd bilateral dialogue event with Vietnam and consider new partner countries
Discussion points	<ul style="list-style-type: none"> - JICA Short-term Expert proposed agenda items of MRV system of NDC and climate finance into 2nd bilateral dialogue event based on the identified needs. - For further consideration of potential new bilateral partner countries, JICA Short-term Expert drafted and provided stock-take list of key line ministries and agencies of Singapore and Indonesia including information of

	participants list of past UNFCCC COP meetings.
Conducted from October 2019 to March 2020	
TGO participants	Ms. Onuma Nadsangjan
Topics	Drafting the agenda for bilateral dialogue with Lao PDR
Discussion points	- In light of the slow response from the Lao side JICA Short-term Expert suggested TGO to propose the draft agenda first. TGO and JICA Short-term Expert also discussed on topics to be included in the bilateral dialogue such as overview of Thailand's climate change policy and the development of legal system.

2.2.2.3 Evaluate the results of bilateral cooperation activities

TGO, JICA Short-term Experts and JICA Long-term Expert evaluated the bilateral cooperation activities conducted during the Project period. Evaluation results was compiled into a report by TGO with the support from JICA Short-term Experts and JICA Long-term Expert.

Prior to the evaluation, TGO, JICA Short-term Experts and JICA Long-term Expert discussed the evaluation approach, especially evaluation criteria and indicators. In order to evaluate the bilateral activities with different target countries in a comprehensive and effective manner, TGO and JICA Short-term Expert referred to the evaluation criteria published by the Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD-DAC). Both sides concluded to apply the following 5 evaluation criteria.

“Impact” was set as the first evaluation criteria. TGO and JICA sides set this criteria to consider the degree of contribution for capacity development of TGO and consider establishment of network with climate change experts of partner country.

“Sustainability” was set as the second evaluation criteria under the idea that bilateral dialogue and cooperation between two countries should be continuously and sustainably carried out. This criteria includes financial sustainability as well. TGO and JICA sides confirmed that it is important that the cost of bilateral cooperation activities should not be an unbalanced financial burden by one or the donor.

“Complementarity” was set as the third evaluation criteria to evaluate the contents of partner country's knowledge and experience that the TGO side can learn, and the precedent cases of TGO and Thailand that the partner country can learn.

“Teamwork/ Cooperation” was set as the fourth evaluation criteria. In the past bilateral cooperation activities, TGO has collaborated with other departments of TGO and climate change related organizations in Thailand including ONEP. These were used as indicators for

evaluating the degree of teamwork and cooperation.

“Satisfaction” was set as the fifth evaluation criteria. Satisfaction is measured through questionnaire surveys and interviews with those who participated to the bilateral cooperation activities conducted with Vietnam or will be implemented in the future.

Details of evaluation criteria and corresponding indicators are shown in the table below.

Table 38 Evaluation criteria and indicators of CITC bilateral cooperation activities

No.	Criteria	Indicator	Evaluation Scores				
			5 (high)	4	3 (medium)	2	1 (low)
1-1	Impact	Capacity Development opportunities for Thailand	(Achieved 4) + Remarkable results	Highly utilized opportunities (Better than expected)	Utilized opportunities as planned	Few opportunities	No opportunity
1-2		Professional Network / Expanded for CITC work (Quality of networking)	High <-----> Low Quality of networking through bilateral dialogue events				
2-1	Sustainability	Cost sharing / Financial contribution (with Expense items incl. travel cost, meeting package, etc.)	Achieved cost sharing (Shared equal expense items)	-	Partial contribution (incl. in-kind contribution)	-	No financial contribution
2-2		Human resources commitment of focal points (as a whole bilateral events)	(Achieved 4) + High level officials joined	Enough staffs with line ministries assigned	Multiple staffs of focal point assigned	Only focal point staff assigned	No responsible staff
2-3		Continuous activities (Any plan of further activities)	Already implemented continuous activities	Planned continuous activities	Communicated among focal point staffs with concrete plans	Communicated among focal point staffs	No plan of further activities
3	Complementarity	Discussion topics / themes	Excellent matched (Better than expected)	Meet needs of learning knowledge and experience	Almost meet needs of learning knowledge and experience	Partially meet needs of learning knowledge and experience	Didn't meet needs of learning knowledge and experience
4-1	Teamwork / Cooperation	Involvement of TGO internal resources	Well involved with multiple experts incl. high level	Well involved with multiple experts	Involved with one expert	Involved but not joined event	No involvement
4-2		Involvement of external resources	Well involved with multiple experts incl. high level	Well involved with multiple experts	Involved with one expert	Involved but not joined event	No involvement
5	Satisfactory	Satisfaction on discussion outcomes	Excellent results (Better than expected)	Reasonable results	Almost reasonable results	Partial results	No result

TGO conducted online survey to acquire some of the direct feedbacks from relevant stakeholders in Vietnam and Thailand related the above indicators.

TGO is now in the process of finalizing the evaluation report, which is expected to be completed by the end of the Project period subject to the feedback from the stakeholders' questionnaire. JICA Short-term Expert Team with the cooperation of JICA Long-term Expert contributed to development of the report through compiling information on the efforts related to the evaluation of CITC bilateral cooperation activities, including development process of evaluation criteria and indicators, and providing advices on the draft report.

Discussions between TGO and JICA Short-term Experts are summarized in Table 39.

Table 39 Technical discussions with TGO (evaluation of bilateral cooperation)

Conducted from April 2019 to September 2019	
TGO participants	Ms. Chanyaphak Wathanachinda
Topics	Evaluation criteria for bilateral cooperation activities
Discussion points	<ul style="list-style-type: none"> - JICA Short-term Expert proposed mainly three criteria as evaluation of CITC bilateral cooperation activities: <ul style="list-style-type: none"> ✓ Sustainability (Includes financial sustainability) ✓ Complementarity (Complement each other's needs of learning and receive benefits for both countries) ✓ Satisfactory (Satisfaction of event participants) - TGO official in charge of bilateral cooperation activities agreed the above initial evaluation criteria, and commented that it would like to consider further ideas on evaluation criteria.
Conducted from October 2019 to March 2020	
TGO participants	Mr. Thawatchai Saengkhamasuk
Topics	Evaluation methods for bilateral cooperation activities
Discussion points	<ul style="list-style-type: none"> - TGO and JICA Short-term Expert revisited the progress of elaboration on bilateral evaluation which was made jointly with the former TGO official in charge of bilateral cooperation activities (who resigned from TGO in December 2019). - JICA Short-term Expert suggested to add, in addition to the initial three evaluation criteria, JICA Short-term Expert proposed criterion related to the involvement of internal experts of TGO and involvement of related Thai domestic organizations, and cooperation activities at international conference and events. And TGO agreed to include those additional evaluation criteria and indicators.

2.3 Activities related to Output 3:

Direction towards achieving the sustainability of CITC is established

All activities related to Output 3 are under the scope of JICA Long-term Expert and the role of JICA Short-term Expert Team is supplemental support to the Long-term Expert. However, due to the delay of the dispatch of the Long-term Expert, JICA Short-term Expert Team conducted some of the activities related to Output 3 until the former assignment of Long-term Expert in September 2018. The results of the activities are described as follows.

2.3.1 Revise CITC Business Plan

Initiation of activities related to the revision of CITC Business Plan (the name of the document was later changed to “CITC Strategic Plan”) was delayed due to the deferred dispatch of the JICA Long-term Expert to the Project. In light of this situation, JICA Short-term Expert Team supported TGO instead until the dispatch of the Long-term Expert.

TGO organized the CITC Strategy Workshop that aims to discuss among domestic stakeholders on mid- to long-term strategy plans of CITC. The total of 32 participants attended this workshop including 9 members of CITC Sub-Committee (and Joint Coordinating Committee: JCC) and 6 experts from academia, and JICA Thailand Office. All the cost of this workshop was borne by TGO.



Picture 36 CITC Strategy Workshop

Topics for discussions mainly focused on long-term vision of CITC and possible strategies on various aspects to achieve that vision, ranging from CITC services, target customers, barriers and issues to implement those strategies. Comments and suggestions raised during this workshop will be incorporated in developing the CITC Strategy Plan.

JICA Short-term Expert Team supported TGO in designing the workshop program and formulating key guiding questions for stakeholders, also provided several recommendations including expanding the CITC service to post-training technical follow-up and consultation.

JICA Short-term Expert Team continued support for the development of CITC Strategy Plan even after the dispatch of JICA Long-term Expert through hiring local consultants who were tasked to draft the plan.

2.3.2 Disseminate lessons learnt through media, publications and seminars/ events

JICA Short-term Expert Team supported TGO in the preparation of the 4th CITC Regional Conference. The conference aims to facilitate knowledge and experience sharing among various stakeholders in Southeast Asian countries and other climate change-related regional and international organizations.

TGO and JICA Short-term Expert Team jointly developed the draft program of the conference in a way that allows participants to gain the latest update on the technical and institutional activities in the region and also to share practical experiences and barriers among the stakeholders in the region.

The 4th CITC Regional Conference titled “Accelerating the Paris Agreement Implementation through Climate Finance, Technology and Capacity Building” was organized from 17 to 19 July 2018 in Bangkok. The conference was co-organized by MONRE, TGO, JICA, UNFCCC-RCC Bangkok, UNDP, DEQP, ONEP and Faculty of Economics of Thammasat University.

The conference had the total of 214 participants, including 15 from Southeast Asian countries (except Thailand), 138 from Thai organizations, and 36 from international and regional organizations. From Southeast Asian countries, 3 delegates attended from Vietnam, 2 delegates from Indonesia, Lao PDR, Malaysia, Myanmar and Philippines, and 1 delegate from Cambodia and Singapore.

Objectives of the conference were set as: 1) to share the latest global and regional trends on climate policies and actions to enhance implementation of the Paris Agreement and ASEAN strategies, 2) to accelerate climate change mitigation and adaptation actions through Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs), 3) to discuss the opportunities for climate finance and approaches to access climate funds; and 4) to discuss the opportunities and lessons learned on technology and capacity building on mitigation, adaptation, good practices and regional collaboration.

JICA Expert Team supported TGO from the planning stage of the conference in program design, discussion with co-organizers, and logistical arrangement and financial support. Most of the costs of organizing the conference were borne by TGO and JICA Expert Team. Thammasat University as one of the co-organizers also provided financial contribution.



Picture 37 Group photo (left) and panel discussion (right) (Regional Conference)



Picture 38 Networking among participants (Regional Conference)

Evaluation of the conference was conducted during the event. Participants were requested to fill in the online survey form during the conference period. The total of 40 answers was collected. The result shows that participants are generally satisfied with the conference in terms of session contents and conference operation and management. Result of the conference evaluation is shown in [Appendix 16.3](#).

2.4 Other activities

2.4.1 Implement training program in Japan

TGO and JICA Short-term Expert Team agreed to conduct training programs in Japan twice during the Project period, although the total of 3 times of training and invitation programs in Japan was initially planned. This change was made due to the resource reallocation to the activity on CITC Business Plan.

The first training was conducted for TGO executives and officials in February 2019 and the second training for TGO officials was conducted in May 2019.

The first training program in Japan was implemented from 3 to 9 February 2019. With its objective to enhance the comprehensive capacity of training operation and sustainability of CITC, the training program was designed so that Thai participants acquire the following outcomes, which will contribute to achieving the Project purpose:

- To acquire direct inputs to elaboration of CITC's domestic and international training courses by examining good practices on the development and implementation of climate policies and measures at both national and local levels in Japan, and also examining latest research results by Japanese university and research institutes;
- To acquire inputs to future approaches to private sector by examining advanced private initiatives and climate actions; and,
- To acquaint with Japanese relevant institutions and individuals to explore possibility for future partnership on CITC activities.

Thai delegates, who consist of TGO executives and officials, shown in Table 40 attended the first training program in Japan.

Table 40 List of Thai delegates (1st training in Japan)

No.	Name	Position/ Affiliation
1	Ms. Ladawan Kumpa	Chairperson, CITC
2	Mr. Sunthad Somchevita	Advisor, TGO/ CITC
3	Mrs. Prasertsuk Patoonsittichai	Executive Director, TGO
4	Dr. Natarika Wayuparb Nitiphon	Deputy Executive Director, TGO
5	Dr. Jakkani Kananurak	Director, Capacity Building and Outreach Office, TGO/ Director, CITC
6	Ms. Chayathorn Thanawattanadamrong	Technical Expert, Capacity Building and Outreach Office, TGO
7	Ms. Apaphatch Hunsirtrakun	Technical Expert, Capacity Building and Outreach Office, TGO

* All positions and affiliations are at the time of training participation.

Destinations of the first training in Japan and the training contents at each destination are described in Table 41.

Table 41 Destinations and contents (1st training program in Japan)

Date	Destination		Contents
Mon 4-Feb	am	Toyohashi City and Toyotane Co., Ltd. (Site visit)	<ul style="list-style-type: none"> Climate change policies and measures by Toyohashi City Local initiatives by the city towards realization of circular society, including activities on local production and local consumption Mitigation and adaptation technologies in agriculture sector (site visit)
Tue 5-Feb	All day	Ibaraki University Institute of Global Change Adaptation Science (ICAS)	<ul style="list-style-type: none"> Recent research activities and findings related to climate change adaptation and its socio-economic impacts, and collaboration with municipalities Development process of the Master's Program for Climate Change and Development in Vietnam Japan University (VJU) Presentation by TGO and opinion exchange: CITC's training curriculum on Climate Change Adaptation for Thai and ASEAN stakeholders
Wed 6-Feb	am	World Bank Disaster Risk Management Hub, Tokyo	<ul style="list-style-type: none"> Country program and knowledge program for mainstreaming disaster risk management for Southeast Asian region under "Japan-World Bank Program for Mainstreaming Disaster Risk Management (DRM) in Developing Countries"
Wed 6-Feb	pm	Ministry of the Environment, Japan (MOEJ)	<ul style="list-style-type: none"> Courtesy call to Mr. Satoru Morishita, Director of Global Environment Bureau, MOEJ Outline of Climate Change Adaptation Act and the National Adaptation Plan of Japan State of policy development and its implementation, Experience on designing and implementing monitoring and evaluation (M&E) of the NAP, including lessons learned and challenges International cooperation policy and activities on climate change by MOEJ
Thu 7-Feb	am	Institute for Global Environmental Strategies (IGES)	<ul style="list-style-type: none"> Recent activities on climate change and city-to-city collaboration Introduction of the Medium-to-Long Term Strategy and lessons learned from the strategy development process Policy research activities in climate change adaptation field
	pm	ICLEI Japan	<ul style="list-style-type: none"> Outline and recent activities including information on successful climate actions at municipality level Presentation by TGO and opinion exchange: TGO/ CITC operation and activities, and opinion exchange on possibility of future collaboration between CITC and ICLEI Japan

Date	Destination		Contents
		Japan Climate Leaders' Partnership (Japan-CLP)	<ul style="list-style-type: none"> Private initiatives and opinion exchange on effective approaches to mobilize private sector
Fri 8-Feb	am	SOMPO Risk Management Inc.	<ul style="list-style-type: none"> Business activities of and feasibility study on developing “Weather Index Insurance” service Result of the feasibility survey on disaster risk financing in Myanmar Recent trend and perspective on private financing to accelerate climate actions, including ESG investment and insurance
	pm	JICA Headquarters	<ul style="list-style-type: none"> Presentation by TGO and opinion exchange: State of progress over development of CITC’s Digital Capacity Building Gateway, and opinion exchange for effective design and operation JICA’s support policy on climate change and recent activities including GCF project formulation

The training program was developed taking into account the training needs of Thai delegates captured through a series of close discussions and also the overall progress and emerging issues of the Project and the latest situation of the Thai Government and TGO/ CITC. For example, Thailand’s National Committee on Climate Change (NCCC) approved the National Adaptation Plan (NAP) in December 2018, two months before the training implementation, in which TGO is stipulated as one of the responsible organizations for capacity building to promote the implementation of the NAP. In this context, knowledge and experiences shared by the Ministry of the Environment, Japan and Ibaraki University seemed well-matched with the timely needs of the Thai side, by focusing the topics on the formulation and enforcement of the “Climate Change Adaptation Act” and implementation of the Japan’s NAP, design of M&E approaches, and effective collaboration among central and local government, academia, private sector and general public.

Moreover, this training program provided a good opportunity for Thai delegates to consider future collaboration with some organizations through discussions and opinion exchange with such potential partners.

Furthermore, discussions with Japan-CLP Secretariat and SOMPO Risk Management Inc. have led to the further understanding on the views of and expectation from the private sector, which are useful to consider CITC’s future approaches for involving private sector including development of a pay-course targeting private companies.



Picture 39 Presentation by Ministry of the Environment (left) and by ICAS of Ibaraki University (right)

The second training in Japan was implemented from 12 to 18 May 2019. With its objective to enhance the technical knowledge and the comprehensive capacity related to sustainable training management by officials from Capacity Building and Outreach Office and other relevant offices in TGO, the training program was designed so that TGO participants can acquire the following outcomes, which will contribute to achieving the Project Purpose:

- To acquire direct inputs to future elaboration of CITC's domestic and international training courses by examining good practices on climate change mitigation actions and GHG inventory management at national and local levels and by academic institutions as well as in private sector in Japan.
- To strengthen capacity for sustainable management of CITC including advanced knowledge management through learning approaches and available tools for training center management by institutions in Japan.
- To acquaint with relevant institutions and individuals in Japan to explore possibility for future partnership on CITC activities.

Thai delegates, who consist of TGO Deputy Executive Director, directors from several TGO office and officials, are shown in Table 42.

Table 42 List of Thai delegates (2nd training in Japan)

No.	Name	Position/ Affiliation
1	Dr. Natarika Wayuparb Nitiphon	Deputy Executive Director, TGO
2	Dr. Bundit Limmeechokchai	Associate Professor, Sirindhorn International Institute of Technology (SIIT), Thammasat University Member of CITC Sub-Committee of TGO
3	Mr. Thawatchai Saengkhamasuk (*Attended under finance by JICA Thailand Office)	Director, Capacity Building and Outreach Office, TGO Director, CITC
4	Dr. Jakkanit Kananurak	Director, Carbon Business Office, TGO
5	Mr. Chessada Sakulku	Director, Greenhouse Gas Information Center, TGO

No.	Name	Position/ Affiliation
6	Mr. Rongphet Bunchuaidee	Director, Technical Development and Support Office, TGO
7	Ms. Nareerat Thanakasem	Manager, Capacity Building and Outreach Office, TGO
8	Dr. Akarapon Houbcharaun	Manager, Capacity Building and Outreach Office, TGO
9	Ms. Chanyaphak Wathanachinda	Technical Expert, Capacity Building and Outreach Office, TGO
10	Mr. Thitipong Piboolgulsamlit	Technical Expert, Capacity Building and Outreach Office, TGO
11	Ms. Neeracha Tridech	Manager, Technical Development and Support Office, TGO

* All positions and affiliations are at the time of training participation.

Destinations of the second training in Japan and the training contents at each destination are described in Table 43.

Table 43 Destinations and contents (2nd training program in Japan)

Date	Destination		Contents
Mon 13-May	pm	Insource, Ltd.	<ul style="list-style-type: none"> - Corporate overview and the knowledge for training service management - The experience for monitoring and evaluation of training outcomes by Insource, Ltd.
Tue 14-May	am	Ministry of the Environment, Japan (MOEJ)	<ul style="list-style-type: none"> - Overview of the works for development of a long-term national strategy for climate change policies in Japan under the Paris Agreement by MOEJ - Outline of the Plan for Global Warming Countermeasures and progress management and evaluation under the Plan - International trends of climate change countermeasures by private companies and overview of support program for decarbonization by Japanese private companies by MOEJ
	pm	City of Kawasaki/ Air Liquide Japan Ltd.	<ol style="list-style-type: none"> 1. City of Kawasaki <ul style="list-style-type: none"> - Outline of the Kawasaki City Global Warming Countermeasures Promotion Plan and implementation structure in Kawasaki City Office - Expertise in collaboration in multiple stakeholders for promotion of various measures under the Plan by Kawasaki City - Outline of city-to-city collaboration project between City of Kawasaki and Bandung City, Indonesia 2. Air Liquide Japan Ltd. <ul style="list-style-type: none"> - Corporate overview - Site visit to Kawasaki Hydrogen Station with a fuel-cell vehicle (FCV) as a good practice of advanced decarbonization technologies in Kawasaki
Wed 15-May	am	Institute for the Advanced Study of Sustainability, United Nations University (UNU-IAS)	<ul style="list-style-type: none"> - Experience on design, management and evaluation of outcomes of human resource development programs by UNU e.g. UNU Global Seminars and UNU Intensive Core Courses - Introduction of networking initiatives by UNU e.g. ProSPER.Net and related activities under these initiatives

Date	Destination		Contents
	pm	Consultations on PDM and CITC training curriculum	<ul style="list-style-type: none"> - Consultation on the draft of revised PDM with Deputy Executive Director of TGO and Director of Capacity Building and Outreach Office, TGO - Consultation on GHGI course, Climate Change Adaptation course and MM course with TGO officials in charge
Thu 16-May	am	Greenhouse Gas Inventory Office, National Institute for Environmental Studies (GIO)	<ul style="list-style-type: none"> - Outline of works for transition from the Revised 1996 IPCC Guidelines to the 2006 IPCC Guidelines in Japan - Previous discussions at the Workshop on Greenhouse Gas Inventories in Asia (WGIA) and expected discussion points for WGIA17 - Opinion exchange on CITC GHGI course
	pm	IGES	<ul style="list-style-type: none"> - Outline of activities in the field of climate change countermeasures at a city level by IGES City Task Force - International policy trends on resource efficiency and circular economy and outline of policy research activities by IGES Sustainable Consumption and Production (SCP) Area
Fri 17-May	am	Mitsubishi UFJ Morgan Stanley Securities Co, Ltd.	<ul style="list-style-type: none"> - Outline of private finance including ESG investment and green bonds - Progress of response to international trends for disclosure of information related to climate change by private companies - Opinion exchange on CITC course for Thai private sector
	pm	IGES	<ul style="list-style-type: none"> - Outline of the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories - Possible training needs in response to adoption of the 2019 Refinement in developing countries including Southeast Asian countries
		Reporting session	<ul style="list-style-type: none"> - Each participant presented their learning through the training.

The training program was developed taking into account the training needs of Thai delegates captured through a series of close discussions and also the overall progress and emerging issues of the Project and the latest situation of the Thai Government and TGO/ CITC.



Picture 40 Lecture at UNU-IAS (left) and site visit at Kawasaki Hydrogen Station (right)

2.4.2 Capacity assessment of TGO officials

Aiming to track the progress of capacity improvement of CB officials and staff during the Project and to further stimulate motivation and ownership of personal tasks under CITC, JICA Short-term Expert Team conducted the capacity assessment. The capacity assessment methodology and its monitoring approach were jointly developed by TGO and JICA Short-term Expert Team in prior to the assessment.

During the Project period, the assessment was conducted twice: at the beginning point (February 2018) and midpoint (September 2019). Third and final assessment will be conducted self-reliantly by TGO after the Project based on the Minutes of Meeting in May 2020.

➤ Initial capacity assessment

JICA Short-term Expert Team conducted the initial capacity assessment for all 12 CB staff (6 officials and 6 project coordinators) through individual interviews. Through the interview, the role and responsibility of each staff under CITC activities were clarified together with their capacity-related challenges and difficulties that may be preventing them from performing the above roles effectively.

Taking into account the role and challenges, each CB staff and JICA Short-term Expert Team jointly set the capacity goal that should be achieved by the end of the Project. Capacity goal was set in line with each official's Key Performance Indicators (KPIs) of the year, but it was also designed to set beyond these internal indicators. The capacity goals were submitted to the Director of CB Office for approval. (See [Appendix 13.2](#) for the result of initial capacity assessment)



Picture 41 Interview with TGO official

➤ Midpoint capacity assessment

JICA Short-term Experts and JICA Long-term Expert conducted the midpoint capacity assessment for all 12 CB staff (6 officials and 6 project coordinators). The assessment was done by interviews using the questionnaire for the following objectives:

- 1) To check the achievement level of the Capacity Goal set in 2018 and review the processes made by each official and staff,
- 2) To understand the future perspectives of each official in light of the new direction under the CITC Strategic Plan

- 3) To revisit and adjust the capacity goal in light of the 2) above.

Table 44 Outline of interview questions

No.	Interview questions
1	Current tasks under CITC and other tasks under TGO
2	Personal KPIs
3	Evaluation of current achievement level of the “Capacity Goal” set in 2018
4	Existing challenges and difficulties to achieve the above 2018 “Capacity Goal”
5	Personal contribution to achieve the new goal and vision set in the CITC Strategic Plan
6	New “Capacity Goal” based on the above answers

The format of the questionnaire and results of midpoint capacity assessment are shown in **Appendices 13.3 and 13.4** respectively.

Through the interviews, it was confirmed that all staff are eager to contribute to achieving the vision and goal of CITC stipulated in the CITC Strategy Plan, as well as three strategy themes (1. Knowledge Management Hub and Networking, 2. Proactive Marketing, 3. Results-Based Capacity Building).

On the other hand, some of the challenges of CITC were revealed, including: 1) chronic work overload under limited human resources, 2) lack of CITC’s own knowledge, and 3) budget constraint under TGO/ CITC for international activities.

Capacity goal, which should be achieved by the completion of the Project, of each staff was revisited and adjusted in light of the CITC Strategic Plan. Revised Capacity Goals range from the goal related to technical capacity to CITC’s sustainability, including improvement in the skills of lecture provision and facilitation, production of a technical report or article on training outcomes, implementation of follow-up activities after the training, and enhance networks with relevant agencies.

The result of midpoint capacity assessment was shared with the Director of CB office for his consideration on CITC’s activity plan and TGO’s internal process, which included setting of KPIs.

Chapter 3 Input to the Project

3.1 Conducted Schedule

The Project was implemented from September 2017 to September 2020. The following table shows the schedule initially planned at the start of the Project and the actual schedule of each project activity listed in the PDM.

Table 45 Project schedule (planned and actual)

Work items	Year / Month												2019												2020														
	2017				2018																																		
Activities related to all outputs																																							
Develop and submit Work Plan (No. 1)																																							
Develop and submit Monitoring Sheet (Ver. 1-7)																																							
Prepare and implement training and invitation program in Japan																																							
Organize Joint Coordinating Committee (JCC)																																							
Conduct capacity assessment																																							
Conduct training needs assessment																																							
Activities related to Output 1																																							
1-1: Continuously improve regular training courses of CITC																																							
Improve, update and conduct existing basic courses																																							
Develop and conduct advanced courses																																							
Develop and update training guidelines and training materials																																							
Strengthen networks with potential resource persons and alumni																																							
Conduct monitoring and evaluation																																							
1-2: Develop new training courses on (1) adaptation and (2) legislation, regulation, policies, and measures on climate change																																							
Develop and conduct new training courses																																							
Develop training guidelines and training materials																																							
Strengthen networks with potential resource persons and alumni																																							
Conduct monitoring and evaluation																																							

3.2 Dispatch of Short-term Experts

The list of JICA Short-term Expert Team, position, assignment period in Thailand and conducted activities during the Project period of each expert is shown below.

Table 46 Dispatch of JICA Short-term Experts

Name	Position	Assignment period	Conducted activities
Mr. Tetsuya Yoshida	Team Leader/ Climate Change Management 1	2017/10/8-21 2017/11/29-12/20 2018/1/14-2/16 2018/2/25-3/3 2018/3/19-31 2018/5/14-31 2018/6/11-22 2018/7/3-27 2018/8/27-29 2018/9/10, 11, 14-20 2018/11/18-30 2019/2/13-22 2019/3/5-16 2019/5/21-29 2019/6/10-26 2019/7/17-8/10 2019/9/1-14 2019/11/12-23 2019/12/15-26	<ul style="list-style-type: none"> • Develop and submit Work Plan (No. 1) • Develop and submit Monitoring Sheet (No. 1-7) • Prepare and implement training and invitation program in Japan • Organize Joint Coordinating Committee (JCC) • Conduct capacity assessment • Conduct training needs assessment • Improve, update and conduct existing basic courses • Develop and conduct advanced courses • Develop and update training guidelines and training materials (basic and advanced courses) • Strengthen networks with potential resource persons and alumni (basic and advanced courses) • Conduct monitoring and evaluation (basic and advanced courses) • Develop and conduct new training courses • Develop training guidelines and training materials (new courses) • Strengthen networks with potential resource persons and alumni (new courses) • Conduct monitoring and evaluation (new courses) • Design and conduct "Signature training course" • Develop training guidelines and training materials (Signature course) • Conduct monitoring and evaluation (Signature course) • Identify target countries for bilateral cooperation • Identify needs and resources with target countries • Design, conduct the programs for bilateral cooperation, and evaluate the results • Revise and implement CITC Business Plan to achieve sustainability • Disseminate lessons learnt through media, publications and seminars/ events • Study feasibility of establishing a high level network on climate change • Design and develop a prototype of 'Digital Capacity Building Gateway' • Develop and submit Project Progress Report (No. 1-5) • Develop and submit Project Completion Report

Name	Position	Assignment period	Conducted activities
Mr. Masahiko Fujimoto	Deputy Team Leader/ Climate Change Management 2	2017/10/8-21 2017/12/5-14 2018/2/25-3/1 2018/5/21-26 2018/6/14-16 2018/7/15-21 2019/2/13-16 2019/3/10-16 2019/7/21-25 2019/9/3-13 2019/11/12-15 2020/1/27-2/1	<ul style="list-style-type: none"> • Develop and submit Work Plan (No. 1) • Develop and submit Monitoring Sheet (No. 1-7) • Prepare and implement training and invitation program in Japan • Organize Joint Coordinating Committee (JCC) • Conduct capacity assessment • Conduct training needs assessment • Improve, update and conduct existing basic courses • Develop and conduct advanced courses • Develop and update training guidelines and training materials (basic and advanced courses) • Strengthen networks with potential resource persons and alumni (basic and advanced courses) • Conduct monitoring and evaluation (basic and advanced courses) • Develop and conduct new training courses • Develop training guidelines and training materials (new courses) • Strengthen networks with potential resource persons and alumni (new courses) • Conduct monitoring and evaluation (new courses) • Design and conduct "Signature training course" • Develop training guidelines and training materials (Signature course) • Conduct monitoring and evaluation (Signature course) • Identify target countries for bilateral cooperation • Identify needs and resources with target countries • Design, conduct the programs for bilateral cooperation, and evaluate the results • Revise and implement CITC Business Plan to achieve sustainability • Disseminate lessons learnt through media, publications and seminars/ events • Study feasibility of establishing a high level network on climate change • Design and develop a prototype of 'Digital Capacity Building Gateway' • Develop and submit Project Progress Report (No. 1-5) • Develop and submit Project Completion Report
Mr. Naoki Mori	Climate Action Planning and Implementation/ Technical Consultation 1	2017/12/5-9 2018/5/21-25 2018/8/27-29 2018/11/19-22 2019/2/13-15 2019/6/18-26 2019/9/5-14 2019/12/22-26	<ul style="list-style-type: none"> • Conduct training needs assessment • Improve, update and conduct existing basic courses (CF) • Develop and conduct advanced courses (CF) • Develop and update training guidelines and training materials (CF) • Conduct monitoring and evaluation (CF) • Develop and submit Project Progress Report (No. 1-5) • Develop and submit Project Completion Report
Mr. Yoshihiro Mizuno	Climate Action Planning and Implementation/ Technical Consultation 2	2017/12/5-9 2018/3/26-30 2018/5/20-26 2018/7/18-20 2018/9/2-7, 9/25-28 2019/1/8-12 2019/3/4-9 2019/5/20-25 2019/7/23-27 2019/9/10-21 2019/11/25-30 2019/12/15-26	<ul style="list-style-type: none"> • Conduct training needs assessment • Improve, update and conduct existing basic courses (MM) • Develop and conduct advanced courses (MM) • Develop and update training guidelines and training materials (MM) • Conduct monitoring and evaluation (MM) • Develop and conduct new training courses (CCA) • Develop training guidelines and training materials (CCA) • Conduct monitoring and evaluation (CCA) • Develop and submit Project Progress Report (No. 1-5) • Develop and submit Project Completion Report

Name	Position	Assignment period	Conducted activities
Mr. Kentaro Ofuji	Climate Action Planning and Implementation/ Technical Consultation 3	2017/12/5-9 2018/3/26-31 2018/5/16-26 2018/9/2-7 2019/3/10-16 2019/7/21-26 2019/11/12-16 2020/2/16-22	<ul style="list-style-type: none"> • Conduct training needs assessment • Improve, update and conduct existing basic courses (GHGI, MM) • Develop and conduct advanced courses (MM) • Develop and update training guidelines and training materials (GHGI, MM) • Conduct monitoring and evaluation (GHGI) • Develop and submit Project Progress Report (No. 1-5) • Develop and submit Project Completion Report
Mr. Wataru Morimoto	Training Management	2017/10/8-21 2017/12/5-14 2018/2/12-17 2018/3/28-4/5 2018/5/7-26 2018/6/25-7/21	<ul style="list-style-type: none"> • Conduct training needs assessment • Improve, update and conduct existing basic courses • Develop and update training guidelines and training materials (basic course) • Conduct monitoring and evaluation (basic course) • Develop and submit Project Progress Report (No. 1-5) • Develop and submit Project Completion Report
Ms. Minako Sasaki (Predecessor)	Climate Change Adaptation	2017/12/5-9 2018/7/17-20 2018/8/26-9/5 2018/11/25-30 2019/3/4-9	<ul style="list-style-type: none"> • Conduct training needs assessment • Develop and conduct new training courses • Develop training guidelines and training materials (CCA) • Strengthen networks with potential resource persons and alumni (CCA) • Conduct monitoring and evaluation (CCA) • Develop and submit Project Progress Report (No. 1-5) • Develop and submit Project Completion Report
Ms. Noriko Ishibashi (Successor)		2019/5/21-31 2019/7/17-27 2019/8/29-9/7 2019/12/22-26	
Ms. Junko Akagi	Climate Law and Regulation	2019/3/10-16 2019/7/22-27 2019/9/1-7 2019/12/22-26	<ul style="list-style-type: none"> • Conduct training needs assessment • Improve, update and conduct existing basic courses (GHGI) • Develop and update training guidelines and training materials (GHGI) • Conduct monitoring and evaluation (GHGI) • Develop and conduct new training courses (EE) • Develop training guidelines and training materials (EE) • Conduct monitoring and evaluation (EE) • Develop and submit Project Progress Report (No. 1-5) • Develop and submit Project Completion Report
Mr. Takuya Shiraishi	Coaching	2019/12/22-26	<ul style="list-style-type: none"> • Conduct coaching activities • Develop and submit Project Progress Report (No. 1-5) • Develop and submit Project Completion Report
Mr. Satoshi Iemoto	Bilateral Cooperation/ Networking	2017/12/11-12 2018/1/15-17 2018/9/4 2018/10/24-11/2 2019/2/14-16 2019/3/5-9 2019/5/26-29 2019/7/22-26 2019/9/16-19 2020/1/7-11	<ul style="list-style-type: none"> • Strengthen networks with potential resource persons and alumni (basic and advanced courses) • Strengthen networks with potential resource persons and alumni (new courses) • Identify target countries for bilateral cooperation • Identify needs and resources with target countries • Design, conduct the programs for bilateral cooperation, and evaluate the results • Disseminate lessons learnt through media, publications and seminars/ events • Study feasibility of establishing a high level network on climate change • Develop and submit Project Progress Report (No. 1-5) • Develop and submit Project Completion Report

Name	Position	Assignment period	Conducted activities
Ms. Mizuki Ono	Project Coordinator/ Climate Change Technical Support	2017/10/8-21 2017/11/29-12/20 2018/2/25-3/3 2018/3/19-31 2018/5/7-26 2018/7/2-21 2018/9/10-20 2018/11/18-24 2019/3/5-16 2019/6/10-15 2019/7/21-8/10 2019/8/27-9/14 2019/11/18-23 2019/12/15-26	<ul style="list-style-type: none"> • Develop and submit Work Plan (No. 1) • Develop and submit Monitoring Sheet (No. 1-7) • Prepare and implement training and invitation program in Japan • Organize Joint Coordinating Committee (JCC) • Conduct capacity assessment • Conduct training needs assessment • Improve, update and conduct existing basic courses • Develop and conduct advanced courses • Develop and update training guidelines and training materials (basic and advanced courses) • Strengthen networks with potential resource persons and alumni (basic and advanced courses) • Conduct monitoring and evaluation (basic and advanced courses) • Develop and conduct new training courses • Develop training guidelines and training materials (new courses) • Strengthen networks with potential resource persons and alumni (new courses) • Conduct monitoring and evaluation (new courses) • Design and conduct "Signature training course" • Develop training guidelines and training materials (Signature course) • Conduct monitoring and evaluation (Signature course) • Identify target countries for bilateral cooperation • Identify needs and resources with target countries • Design, conduct the programs for bilateral cooperation, and evaluate the results • Revise and implement CITC Business Plan to achieve sustainability • Disseminate lessons learnt through media, publications and seminars/ events • Study feasibility of establishing a high level network on climate change • Design and develop a prototype of 'Digital Capacity Building Gateway' • Develop and submit Project Progress Report (No. 1-5) • Develop and submit Project Completion Report
Mr. Tetsuya Yoshida	Business Plan Development	2018/9/12, 13 2019/5/30, 31	<ul style="list-style-type: none"> • Revise and implement CITC Business Plan to achieve sustainability

3.3 Results of the Training in Japan

See section 2.4.1 for the details.

3.4 Revision of PDM

The Project was conducted in accordance with the R/D, which was agreed on March 29, 2017, and the PDM. There was no revision applied to the PDM during the Project period

However, in light of the COVID-19 pandemic from early 2020 which prevented JICA Short-term Expert Team to visit Bangkok, TGO and JICA had a series of discussions and agreed to prioritize the remaining Project activities. Both sides agreed on the prioritized essential activities the Meeting Minutes was signed on 26 May, 2020.

The outline of the prioritized activities is described below as well as the changes made after the signing of the Minutes. (See [Appendix 21](#) for the signed Meeting Minutes.)

Table 47 Progress of Priority Activities under Meeting Minutes

No.	Activity	Description	Support from JICA Project Team	Changes made after agreement
1	Joint Training [Advanced] Climate Change Finance Course, [New and Basic] Climate Change Adaptation, and Enabling Environment and Policy Framework Course for ASEAN Region	<ul style="list-style-type: none"> Climate Finance course streamlined with [New and Basic] Climate Change Adaptation course and Enabling Environment and Policy Framework course, will be conducted as online training for ensuring participation of ASEAN Member States and international resource persons. This course will be conducted back-to-back with Mitigation Mechanism course specified in No. 2. of this table. Both side will jointly prepare outline for enabling environment and Policy framework course and mobilize local consultant to develop supplementary training material for audiences for the future CITC training workshops and dissemination activities 	<ul style="list-style-type: none"> Technical inputs and financial support on Climate Finance curriculum development, training material development (update of textbook), peer review of textbook(s), organization, and result-based M&E Technical inputs and financial support on Enabling Environment and Policy framework training material Support for selecting and applying existing online tool and service available to enable online training. For an applied online tool and service, JICA supports conducting a demonstration of online training as far as possible. Support for coordination with AMS participants and international resource persons who are new to CITC training. 	N/A (Completed)
2	Joint Training [Advanced] Mitigation Mechanism and Decarbonization and [Basic] GHG Inventory Course for ASEAN Region	Mitigation Mechanism and Decarbonization course streamlined with [Basic] GHG Inventory course, will be conducted as online training for ensuring participation of ASEAN Member States and international resource persons. This course will be conducted back-to-back with Climate Finance course in terms of efficiency.	<ul style="list-style-type: none"> Technical inputs and financial support on Mitigation Mechanism curriculum development, training material development (update of textbook), peer review of textbook(s), organization, and result-based M&E Support for selecting and applying existing online tool and service available to enable online training. For an applied online tool and service, JICA supports to conduct a 	N/A (Completed)

No.	Activity	Description	Support from JICA Project Team	Changes made after agreement
			<p>demonstration of online training as far as possible.</p> <ul style="list-style-type: none"> ● Support for coordination with AMS participants and international resource persons who are new to CITC training. 	
3	Finalization of training material (textbook) and peer review	<p>Both side will jointly</p> <ul style="list-style-type: none"> ● finalize training materials (textbook) for: <ul style="list-style-type: none"> - [Advanced] Climate Finance - [Advanced] Mitigation Mechanism - [Basic] GHG Inventory, and - [Signature] Private course <p>within the project period. Materials for two advanced courses (finance and mitigation) will go through peer review following required step for CITC course development guideline.</p> <ul style="list-style-type: none"> ● Develop handbook/manual on climate finance (covering, for example, how to meet eligibility requirements to access multilateral funds and develop climate change-related training programmes) 	<ul style="list-style-type: none"> ● Technical input to enhance the quality of textbook/training material for all training courses under coordination with JICA long-term expert as JICA internal quality control requirement of project outputs ● Financial support for peer review of training materials through mobilizing external reviewers and local/ international consultants who drafted the training materials for [Advanced] Climate Finance, [Advanced] Mitigation Mechanism, [Basic] GHG Inventory courses. ● Support for coordination with external reviewers ● Technical inputs and financial support on handbook or manual on climate finance development 	<ul style="list-style-type: none"> ● Based on the decision by TGO, the handbook for CF course was not developed during the Project period.
4	[Signature] Private Sector Course	<ul style="list-style-type: none"> ● Both side jointly prepare private sector course by utilizing local consultant to develop draft curriculum and training material within project period, with the topic <i>Climate Risk Analysis Management on Private Business and Development of</i> 	<ul style="list-style-type: none"> ● Financial support for mobilizing local consultant to lead the activity ● Technical inputs to improve curriculum and training material 	<ul style="list-style-type: none"> ● Based on the decision by TGO, training material for Signature course was not developed during the Project period. It be developed by TGO after

No.	Activity	Description	Support from JICA Project Team	Changes made after agreement
		<p><i>Business Opportunity.</i></p> <ul style="list-style-type: none"> The course will be organized by TGO in Year 2021. 		the completion of the Project.
6	Bilateral Cooperation	<ul style="list-style-type: none"> Both side develop and apply evaluation framework and methodology for on-going bilateral cooperation between TGO and Viet Nam within project period. Bilateral dialogue with Lao and Viet Nam will be organized and finalized by TGO in Year 2021. 	<ul style="list-style-type: none"> Support for application of new evaluation criteria to the case of Viet Nam Technical inputs for preparation of draft report. 	N/A (Completed)
7	Dissemination of Lessons through media, events and publications	<ul style="list-style-type: none"> Both side conduct dissemination of lessons through preparation of United Nations Office for South-South Cooperation (UNOSSC) South-South in Action (SSiA) publication under UNOSSC-TGO-JICA collaboration. Regional Conference will be organized within the project period if COVID-19 is contained and poses less risk for public health 	<ul style="list-style-type: none"> Technical input to improve the contents of publication Financial support for mobilizing local consultant for SSiA Technical input and financial support for CITC Regional conference which cover on meeting packages, online tool and service cost (if online platform is needed), speaker fee and accommodations and travel cost for ASEAN participants and speakers. 	● N/A (*scope of Long-term Expert)
8	Implementation of CITC Network Guidance	Both side implement CITC Network Guidance.	<ul style="list-style-type: none"> Technical input and financial support for baseline studies to enhance future cooperation with UNFCCC and ASEAN Member States 	N/A (*scope of Long-term Expert)
9	Coaching Activities for TGO Staffs	Coaching activities will be managed by local consultant, and conducted in Thai language addressing for TGO staffs within project period.	<ul style="list-style-type: none"> Financial support for mobilizing local consultant to lead and implement the activity Technical input for planning of the activity 	N/A (Completed)

3.5 Results of the Joint Coordinating Committee (JCC)

The JCC of the Project was held 4 times during the Project (5th final JCC is planned for September 2020). Result of each JCC meeting is described below.

➤ The 1st meeting

The first JCC meeting was held on 28 February, 2018 (See [Appendix 17.1](#) for the agenda.). The JCC also functioned as a CITC Sub-committee meeting which is one of sub-committees under the TGO.

The number of attendees was 32, which include 12 JCC members, CB Office of TGO as a secretariat, the Embassy of Japan as an observer and JICA Short-term Expert Team. The following JCC member organizations sent the representative to the meeting: TGO, ONEP, DEQP, TICA, JSCCIB, Kasetsart University (representative of academia/ climate change experts), and SIIT (representative of academia/ climate change experts).

JCC members acknowledged the objectives, approaches and progress of the Project together with other various CITC activities conducted by TGO outside of the Project scope.

Major points of discussion and comments given by the JCC members are summarized as below:

- ✓ Although CITC has done noteworthy works so far, it is a good time to formulate the CITC's mid- to long-term strategy on its future direction including how to be a "one-stop training center of the region." It is recommended to organize a brainstorming workshop where sub-committee members provide inputs on this matter.
- ✓ Training participation and inputs from private sector are important for CITC. It is recommended to consider incentives to mobilize private sector.
- ✓ As the national focal point for capacity building on climate change, DEQP is conducting many activities for mainly general public including students and local governments. Collaboration between CITC and DEQP on capacity building on climate change for domestic stakeholders is effective.



Picture 42 1st JCC meeting

➤ The 2nd meeting

The second JCC meeting was held on 19 November, 2018 (Agenda and meeting minutes are attached as [Appendices 18.1 and 18.3](#) respectively.). The JCC meeting also served as a CITC Sub-committee meeting, which is one of sub-committees under TGO that oversees CITC's activities.

The total of 32 participants attended the JCC meeting including TGO, JCC member organizations (DEQP, TICA, JSCCIB), and representative from academic sector. From the Japanese side, representatives of the Embassy of Japan, JICA HQ, JICA Thailand Office and JICA Experts including Long-term Expert attended.

During the meeting, participants exchanged opinions on the annual activity plan of CITC, which were provided by TGO representatives, and also on the draft contents of the CITC Business Plan (Action Plan), which were shared by the local consultants who were contracted under the Project. The progress and activity plan of the Project was also shared by JICA Experts and acknowledged by JCC.

Some of the comments and suggestions raised by participants regarding the activities and operation of CITC are as follows;

- ✓ CITC should develop training courses that generate tangible outputs.
- ✓ Training curriculum should contain practical contents, for example by extensively including case studies, in order to enhance understanding of trainees.
- ✓ CITC needs to consider developing appropriate monitoring and evaluation (M&E) methodology. Such indicators as the number of trainees who attended the course are not sufficient.
- ✓ CITC should develop a training course for private sector. Private sector should also be involved in the process of CITC Business Plan (Action Plan) development to reflect the viewpoints of CITC's service recipient.

➤ The 3rd meeting

The third JCC meeting was held on 12 June, 2019. The JCC meeting also served as a CITC Sub-committee meeting. (See [Appendices 19.1 and 19.3](#) for the agenda and meeting minutes.)

The total of 31 participants attended the JCC meeting including TGO, JCC member organizations (ONEP, DEQP, TICA, JSCCIB, Thammasat University), and a representative from Chulalongkorn University as a local consultant engaged in development of the CITC

Strategic Plan. From the Japanese side, representatives of JICA Thailand Office and JICA Experts including Long-term Expert attended.

In the meeting, both Thai side and Japanese side discussed the progresses made and achievement of the Project until May 2019, strategic future direction of CITC, final draft CITC Strategic Plan, as well as shared the interpretation of the Project activities stipulated in the Project Design Matrix.

Some of the comments and suggestions raised by participants regarding the activities and operation of CITC are as follows:



Picture 43 3rd JCC meeting

- ✓ CITC needs to make sure to keep tracking of how knowledge gained through the training has been utilized by trainees. “Results” are not well captured by just tracking the numbers of trainings conducted.
- ✓ To refine the CITC Strategic Plan, CITC should 1) define how to measure the “quality” of each activity, and 2) clarify how to set the indicators/ target numbers for each component.
- ✓ CITC should ensure the training delivery and capacity building for Thai stakeholders taking into account the balance between Thai and ASEAN.
- ✓ CITC should reconsider the current task allocations in the responsible office, by assigning appropriate number of officials to undertake the required technical works under CITC.

➤ **The 4th meeting**

The fourth JCC meeting was held on 21 November 2019 (See [Appendix 20](#) for the agenda, meeting minutes and presentation material by JICA Experts). The JCC meeting also served as a CITC Sub-committee meeting.

The total of 30 participants attended the JCC meeting including TGO and JCC member organizations (ONEP, DEQP, JSCCIB, and Thammasat University). From the Japanese side, a representative of the Embassy of Japan, representatives of JICA Thailand Office and JICA Experts including Long-term Expert attended.



Picture 44 4th JCC meeting

In the meeting, both Thai side and Japanese side discussed the progresses made and achievement of the Project until October 2019 and exchanged views on some of the emerging activities supported by the Project, namely result-based M&E and technical follow-up activity for the CITC's advanced courses. Furthermore, the CITC Strategic Plan has been approved by the CITC Sub-committee.

Some of the comments and suggestions raised by participants regarding the activities and operation of CITC are as follows:

- ✓ Post-training approaches including the result-based M&E and follow-up activities are crucial for CITC. The CITC Secretariat are requested to proceed with further consideration in cooperation with JICA Experts.
- ✓ The “results” of the CITC trainings need to be evaluated by setting reasonable and feasible level of expectation such as utilization of the acquired knowledge or indirect efforts for climate actions made by trainees.
- ✓ Evaluation based on output-oriented impacts (e.g. t-CO₂, access to resources) may be too far-reaching, provided not all of the aspired outcomes can be achieved by acquired knowledge or experience through CITC's training, but are much influenced by external factors.

Chapter 4 Achievements of the Project

This section describes the perspectives of JICA Short-term Experts on the achievement level of the Project Purpose, Outputs as well as recommendations to achieve the Overall Goal of the Project. Note that the following description does not represent the views of the JICA and the JICA Technical Cooperation Project.

4.1 Project Purpose

Project Purpose

The capacity of CITC to assist stakeholders to develop and realize climate change activities, as a well-known “one-stop training center of the region,” is enhanced.

Indicators

1. Capacity to manage and deliver training in order to be a training center of the Southeast Asia region is enhanced in CITC.
2. Some action plans prepared by trainees in CITC training courses are submitted to relevant authorities.
3. Network of CITC with related organizations is strengthened.

The level of achievement on the Project Purpose is considered high.

Through the Project, TGO’s capacity on training curriculum development that matches the regional needs as well as capacity on operation and evaluation of training activities have improved. Recognition of CITC among climate stakeholders in Southeast Asia has increased while TGO strengthened CITC’s network with domestic, regional and international organizations and individuals. Furthermore, TGO has developed and delivered advanced training courses of CITC which supported stakeholders in the region to develop and realize climate actions.

The first Indicator has been met since TGO has increased and gained capacity to develop curriculum on the themes that were not covered in the previous JICA cooperation phase, and

TGO can also now develop, revise and evaluate advanced training courses which were formulated under the new direction of CITC that aims to deliver “tangible” training outputs. More specifically, TGO has set up advanced courses under the mitigation and climate finance training clusters and conducted each course twice during the Project period. TGO self-reliantly carried out various activities under these courses and enhanced its capacity on needs assessment, curriculum development, identification of resource persons, and design of exercise/consultation to deliver tangible outputs.

The second Indicator has been satisfied to some extent taking into account that more than 20 action plans (or concept notes) were formulated by training participants of the advanced courses, some of which have progressed toward project implementation according to the result-based M&E conducted by TGO. Although only 2 action plans, namely the ones developed by trainees from Indonesia and Malaysia, have progressed after the training partly due to the COVID-19 pandemic, it is noteworthy that TGO has established the post-training result-based M&E system in CITC, which can be readily applicable to future CITC training courses.

The third Indicator of networking has been fulfilled since TGO established and reinforced networks with various national, regional and international lecturers, resource persons and organizations. Especially TGO has strengthened networks with resource persons for the advanced courses, which will be an important asset for CITC in delivering tangible outputs to stakeholders in the region in the future. Furthermore, CITC news service was launched for ASEAN stakeholders, which is expected to maintaining the networks with alumni in each ASEAN country. It is also noteworthy that TGO has been accredited by GCF as its official Delivery Partner, which contributed to enhancing networks and sustainability of CITC.

4.2 Project Outputs

Output 1

CITC’s training courses are sustained and upgraded.

Indicators

1. Training curriculums are developed and/or upgraded.
2. Developed training and teaching materials are utilized.

TGO developed and revised various training curriculum for ASEAN countries and training materials during the Project period as shown below.

Table 48 List of curriculum and materials developed

Training course		Training curriculum development/ revision	Training material development/ revision
GHGI	Basic	Completed	Completed (with peer review)
CCSD	Basic	Completed	Completed
MM	Basic	Completed	Completed
MM (1 st round)	Advanced	Completed	Completed
MM (2 nd round)	Advanced	Completed	Completed (with peer review)
CF	Basic	Completed	Completed
CF (1 st round)	Advanced	Completed	Completed
CF (2 nd round)	Advanced	Completed	Completed (with peer review)
CCA (1 st round)	Basic	Completed	Completed
CCA (2 nd round)	Basic	Completed	N/A (joint with CF)
EE	Basic	Completed	Completed
Thai private course	Signature	Completed	N/A (out of scope)

Through the Project, training curriculum and training materials for 8 basic courses (including 3 new courses) and 4 advanced courses were developed or updated. Newly developed training materials went through third-party peer review for quality assurance viewpoint. Although some materials were not completed before the training delivery, TGO will utilize all materials in the future training courses upon finalization. Numerous other training materials including presentation materials, supplemental materials for exercise sessions, and lecture videos have been prepared.

Therefore, the Output 1 of the Project has been successfully delivered.

Output 2

Planning and/or implementation of climate change activities in Thailand and other Southeast Asian countries are supported through CITC training.

Indicators

1. Action plans or climate change activities are prepared by trainees during CITC training courses.
2. Specific platform for knowledge and experience sharing is developed.

The first Indicator has been fulfilled. The total of 27 climate change action plans (and concept notes) were prepared by trainees through the 4 advanced courses mentioned above. More specifically, 13 action plans on climate change mitigation measures and MRV framework development (9 action plans on the 1st round of training and 4 on the 2nd round) were produced through the MM advanced courses, and 14 concept notes on climate finance access such as GCF (8 on the 1st round and 6 for the 2nd round) were formulated through the CF advanced courses. Furthermore, result-based M&E conducted by TGO revealed 2 of the above concept notes were progressed after the training delivery, indicating CITC's advanced courses have contributed to planning and realization of climate actions in Southeast Asia.

The second Indicator was also satisfied as bilateral cooperation platform was established between Thailand and another ASEAN country for knowledge and experience sharing.

Therefore, the Output 2 has been successfully delivered.

As for the Output 3, "Direction towards achieving the sustainability of CITC, as a training center in the Southeast Asia region, is established," as described previously, all activities attached to the Output 3 are within the scope of the Long-term Expert. This clause illustrates observations of JICA Short-term Experts on Output 3, especially sustainability and self-reliance of CITC.

CB officials have kept their high-motivation and ownership for CITC-related works during the Project period. TGO will be able to carry out in a self-reliant manner most of the activities related to training, such as revise basic courses and develop advanced courses, design training materials, operate training courses, and conduct training M&E.

It is expected that TGO will continue capacity building for ASEAN stakeholders under the new capacity building strategy of TGO. Diversification of financial sources is recommended to continue such regional activities, including co-organizing training events (cost sharing), continuation of cost-effective online events, and application to external funds such as GCF.

4.3 Toward Achieving Overall Goal

Overall Goal

Realization of actions to address climate change is accelerated in Thailand and Southeast Asian countries through CITC.

Indicators

1. Outputs of CITC's training courses are applied to Thailand and other Southeast Asian countries' climate change policies and activities.
2. Some of the action plans prepared by trainees in CITC training courses are taken into implementation and/or mainstreamed into the relevant policies and programs.

It is likely that the Overall Goal will be fulfilled within 3 to 5 years after the Project period for the following reasons.

- CITC is now equipped with two advanced courses, namely "Mitigation Mechanism and Decarbonization" and "Climate Finance" courses, which support and promote delivery of tangible climate actions in Thailand and Southeast Asian countries.
- Capacity of TGO to develop and update advanced curriculum and training materials has been improved. It is expected more concrete climate actions will be formulated through advanced courses under TGO's plan to continue such advanced courses.

To achieve the Overall Goal, it is recommended that TGO invites more line ministries and organizations (including private sector) that take the role of climate action planning and implementation, rather than focusing on UNFCCC focal point agencies, to CITC training courses. This will require identification of key ministries and organizations in each ASEAN country and creation of networks with them.

It is also recommended to expand the CITC' service by including post-training technical follow-up and consultation activities by CB officials for ASEAN alumni. This also requires much elaborations by TGO starting from further in-depth capacity building of CB staff or securing additional technical staff, to collaboration with other offices of TGO or external resource persons and organizations.

Attachment
– Training guidelines –

**Attachment 1 Greenhouse Gas Inventory (GHGI) course
for Southeast Asian countries (July 2020)**

**Regional Climate Change Online Training on
“GHG Inventory Management for Better Control of Increased Ambitious Decarbonization
Efforts under the Paris Agreement”
13th – 30th July 2020**

Expected Training Outputs:

Through attending this training, trainees will be able to:

- 1) **Obtain practical skills for effective application of the 2006 IPCC Guidelines** that can strengthen national GHG inventory management **or improved national GHG inventory management under the 2006 IPCC Guidelines**,
- 2) **Enhance technical expertise and knowledge on inventory data collection and compilation in accordance with the 2006 IPCC Guidelines**, which can be the basis for increased ambitions of Nationally Determined Contribution (NDC), and
- 3) **Learn and share practical lessons and experiences on application of the 2006 IPCC Guidelines and effective national GHG inventory management under 2006 IPCC Guidelines** among experts and practitioners in Southeast Asian countries.

Expected Training Participants:

The training invites practitioners from government agencies who have a working experience in national GHG inventory management. There is no limitation on the number of participants per country.

- Practitioners from a government agency that is responsible for compilation and management of overall national GHG inventory including energy (excluding transport) and IPPU sectors
- All participants must have at least 2 years of working experience in management of national GHG inventory in energy (excluding transport) and IPPU sectors i.e. compilation and quality control (QC) of inventory data in compliance with the designated reporting formats under UNFCCC

Training Outline:

Training provides specific contents related to application of the 2006 IPCC Guidelines and improvement in GHG inventory management under the 2006 IPCC Guidelines, with support from international experts:

- Practical methods and tips for management of GHG inventory in accordance with the 2006 IPCC Guidelines
- Experience sharing among international experts and participants from Southeast Asian countries:
 - ✓ Application of the 2006 IPCC Guidelines for national GHG inventory management
 - ✓ Effective national GHG inventory management

Part I. Opening and online lectures

Webinar on 13th July 2020

Time	Contents	Speaker
10:00 – 10:10	Opening remarks: 10 min. -LIVE-	Mr. Kiatchai Maitriwong Executive Director Thailand Greenhouse Gas Management Organization (TGO)
10:10 – 10:30	Introduction: 20min. Objectives, expected outputs and contents of the training course -LIVE-	Mr. Thawatchai Saengkhamasuk Director of CITC, TGO

Part II. Online lecture (Video contents)

Open on 13th - 21st July 2020

Training participants can access to recorded video contents within the above period before the Part II. Online consultation starts

Questions and answers will be available for training participants at online platform.

Title	Contents (Tentative)	Speaker
Lecture 1: Importance of GHG inventory under the Paris Agreement: 20 min	<ul style="list-style-type: none"> Purpose and international trends of GHG inventory development under the Paris Agreement MPGs under the Paris Agreement e.g. scope, format and frequency The 2006 IPCC Guidelines application status in ASEAN member states (AMS) and the world Capacity building programs for GHGI improvement under the UNFCCCC e.g. Consultative Group of Experts (CGE) and other related international training workshops by UNFCCC 	Assoc. Prof. Dr. Bundit Limmeechokchai Sirindhorn International Institute of Technology, Thammasat University, Thailand
Lecture 2: Overview of utilization of national GHG inventory for national policy planning and tracking in energy sector: 20 min	<ul style="list-style-type: none"> Role of GHG inventory for national mitigation policy planning and implementation Example of Japan: Analysis of factors for increased/ decreased emissions of CO₂ with energetic origin for energy sector under the Government of Japan 	Mr. Masaaki Nakamura, Analyst, Global Environment Department, Mitsubishi UFJ Research & Consulting Co., Ltd. (MURC), Japan
Lecture 3: Overview of the 2006 IPCC Guidelines: 25 min	<ul style="list-style-type: none"> Updates from the Revised 1996 IPCC Guidelines in the 2006 IPCC Guidelines Overview of 2019 Refinement to the 2006 IPCC Guidelines Supporting tools for GHG inventory management Overview of capacity building opportunities in GHG inventory management field 	Mr. Kiyoto Tanabe, Co-chair, Task Force on National Greenhouse Gas Inventories (TFI), IPCC

Title	Contents (Tentative)	Speaker
	<ul style="list-style-type: none"> ✓ Overview of activities related to capacity building in GHG inventory including UNFCCC Consultative Group of Experts (CGE), IPCC-TFI and IGES ✓ Lessons learnt from participation in several GHG inventory training workshops 	
Lecture 4: GHG inventory management under the 2006 IPCC Guidelines in specific sector (1): Energy sector: 25 min <u>(*Training participants can choose a lecture on specific sector (1) or (2).)</u>	<ul style="list-style-type: none"> • Updates on methodologies (incl. activity data (AD) and emission factor (EF)) in the 2006 IPCC Guidelines (category-by-category) • Case study of good practices on AD collection and setting of country-specific EF for transition work for energy sector 	Ms. Maya Fukuda, Analyst, Global Environment Department, MURC
Lecture 5: GHG inventory management under the 2006 IPCC Guidelines in specific sector (2): IPPU sector: 25 min <u>(*Same as above.)</u>	<ul style="list-style-type: none"> • Updates on methodologies (including AD and EF) in the 2006 IPCC Guidelines (category-by-category) • Case study of good practices on AD collection and setting of country-specific EF for application of the 2006 IPCC Guidelines for IPPU sector 	Mr. Takuji Terakawa, Senior Analyst, Global Environment Department, MURC
Lecture 6: Case study: Transition from the Revised 1996 IPCC Guidelines to the 2006 IPCC Guidelines in Japan: 30 min	<ul style="list-style-type: none"> • Step-by-step transition work in Japan • Changes in GHG emissions volume for each sector after transition to the 2006 IPCC Guidelines • Lessons learnt from the transition work and tips for Southeast Asian countries • Capacity building opportunities for GHG inventory improvement at Workshop on Greenhouse Gas Inventory Asia (WGIA) 	Mr. Hiroshi Ito, GHG Inventory Expert, Greenhouse Gas Inventory Office of Japan (GIO), National Institute for Environmental Studies (NIES), Japan
Lecture 7: Overview of capacity building opportunities for GHG inventory improvement: 20 min	<ul style="list-style-type: none"> • Lessons learnt from trainings on GHG inventory management under the 2006 IPCC Guidelines for Southeast Asian countries by CITC 	Ms. Nareerat Thanakasem, TGO
Lecture 8: Orientation for interactive consultation session: 10 min	<ul style="list-style-type: none"> • Guidance for training participants on how to prepare a draft action plan for online consultation 	Ms. Nareerat Thanakasem, TGO

Part III. Online Consultation

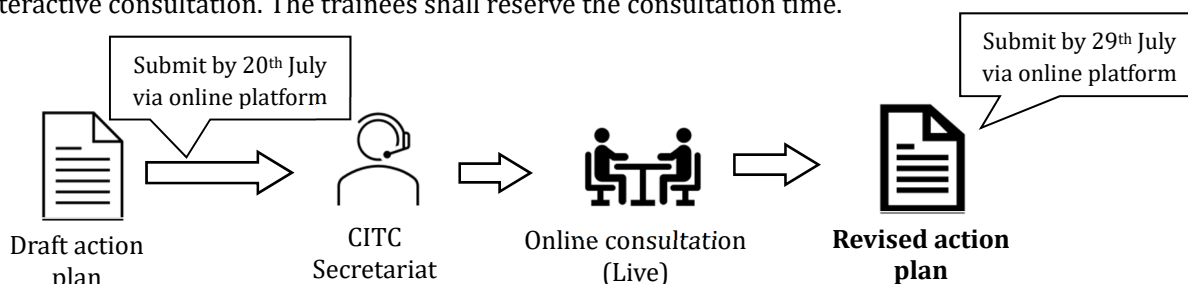
Open on 27th- 29th July 2020

In the online consultation, trainees will have an opportunity to obtain direct hands-on advice on their draft action plan of GHG inventory quality (including application of the 2006 IPCC Guidelines) from international experts.

All countries are requested to submit the draft action plan to the CITC Secretariat **by 20th July.**

(*Action plan format will be provided for each country by the Secretariat upon nomination of trainees.)

- Trainees shall check required description items in their draft action plan for their country, seeing the recorded lecture titled *Orientation for interactive consultation session*.
- Each country is also requested to inform the Secretariat the desired date(s) and time of consultation by the above date.
- A consultation will take place for maximum 90 minutes/ slot. The trainees can have one time of online interactive consultation. The trainees shall reserve the consultation time.



In the online consultation, the following international experts will be available for countries in accordance with the contents of the action plan.

- Mr. Kiyoto Tanabe, Co-chair, TFI, IPCC
- Mr. Hiroshi Ito, GHG Inventory Expert, GIO, NIES

	Date	09:30-11:00 (Thai time)	13:00-14:30 (Thai time)	15:30-17:00 (Thai time)
Consultation -LIVE-	July 24 (Fri)	Country A	Country B	Country C
	July 27 (Mon)	Country D	Country E	Country F
	July 28 (Tue)	Country G	Country H	Country I
	July 29 (Wed)	Country J		

*All countries are requested to **submit the revised action plan to the CITC Secretariat by at 18:00 (Thai Time) on 29th July**, based on the advice from international experts.

Part IV. Country presentation and closing session

Online country presentation on 30th July 2020

Time	Contents	Speaker
10:00 – 12:00, 13:00 – 15:00 (Thai time) -LIVE-	Online country presentation <ul style="list-style-type: none"> Each country presents on the revised action plan as the outputs of the consultation session <ul style="list-style-type: none"> ✓ For each presentation, 15 minutes for the presentation, 10 minutes for comments from advisors. ✓ Trainees other than the presenter (s) from each country are encouraged to participate. 	Representative from each country (TBC) Facilitator: TGO Advisors: Mr. Tanabe, Mr. Ito

Closing on 30th July, 2020

Time	Contents	Speaker
16:00-16:10 (Thai time) -LIVE-	Closing remarks	Representative of Japan International Cooperation Agency (JICA) (TBC)

**Attachment 2 Climate Change and Sustainable Development (CCSD)
course for Southeast Asian countries (August 2019)**

A Circular Economy as Transformational Pathway for Combating Global Climate Challenges

7th-9th August 2019

Venue: 6th Fl. Sigma Room, Pullman King Power Bangkok, Thailand

Background

The global challenges to sustainable development can be divided into three main dimensions-economic, social and environmental. In the environmental dimension, climate change is the most imminent global challenge which threatens the world's welfares. The impacts of climate change are being felt across countries, regions, and the globe. Millions of people are already suffering from the catastrophic effects of extreme disasters exacerbated by climate change such as devastating tropical storms sweeping across Southeast Asia. Asian Development Bank (ADB) indicated that the potential climate change impacts to Southeast Asia countries cumulatively could slow the region's economic development, causing economic losses of \$230 billion roughly, or an equivalent of 6.7% of gross domestic product (GDP), each year by 2100 more than twice the global average loss of 2.6%-and endanger the livelihoods of millions of people in Southeast Asia.

In order to support countries in their efforts towards sustainable development and coping with the adverse impacts of climate change, CITC will organize the 4th training workshop on Climate Change and Sustainable Development. The workshop will aim at discussing the outcomes from the last global climate conference, UNFCCC-COP24, at Katowice, Poland. The discussion will envisage the understanding on the most current climate issues and suggested actions raised during the conference. Additionally, the workshop will introduce the new global agenda for sustainability **Circular Economy** which is a regenerative system in which resource input and waste, emission, and energy leakage are minimized by slowing, closing, and narrowing energy and material loops. Based on Circular Economy concept, two third of global GHGs emissions are released from material use during the extraction, processing and manufacturing of good to serve society's needs. The circular economy is considered as a new paradigm to promote climate actions helping decouple the use of natural resources from economic activities and, simultaneously, accelerate synergistic development in all economic, social and environmental dimensions to achieve Sustainable Development Goals (SDGs).



Climate Change
International
Technical and
Training Center





Training objectives

- Acquire an understanding on the outcomes from global climate conferences which are the emerging challenges for national development.
- Acquire an understanding on approaches to promote climate actions through circular economy and sustainable development.
- Develop networks with stakeholders in AMS and international experts through sharing knowledge, experience and best practices on addressing climate change.

Participants

- Public agencies
- Academic institutions
- Private sectors and media

Training approaches

The training will be provided through the mix of lecture from international experts, workshop/brainstorming, sharing of experiences, group activities, and a site visit.

Day 1
Wednesday 7th August 2019
Theme: Global Talks in Climate Actions

SESSION

SPEAKERS

08.30 - 09.00

Registration and Pre-test

09.00 – 09.10

Welcome Remarks

09.10 -09.20

Opening remarks

09.20 - 09.40

Climate Change and Sustainable Development

09.40-10.00

Towards achieving well below 2°C global temperature goal: Where we are and How do we get there?

10.00-10.30



10.30-11.15

The Katowice Climate Package and its implications to the Parties of the Paris Agreement:

- Mitigation and Transparency
- Adaptation
- Climate Finance and its main challenges.

11.15-12.00

Panel Discussion:
 Opportunities for AMS from the Katowice Climate Package from COP24 outcomes to promote international cooperation and encourage greater ambitions

Dr. Phirun Saiyasitpanich

Deputy Secretary General

Office of Natural Resources and Environment Policy and Planning (ONEP)

Mrs. Prasertsuk Patoonsittichai

Executive Director

Thailand Greenhouse Gas Management Organization (TGO)

Mr. Thawatchai Saengkhamasuk

Director

Capacity Building and Outreach Office, TGO

Mr. Sudhir Sharma

Programme Management Officer

Asia Pacific Office, United Nations Environment Programme

Dr. Kollawat Sakhakara

Director of UNFCCC Focal Point Section

Office of Natural Resources and Environmental Policy and Planning

Mr. Saengroj Srisawaskraisorn

Team Leader

United Nations Development Programme

Mr. Koji Fukuda

Chief Advisor

Japan International Cooperation Agency

Dr. Kollawat Sakhakara

Director of UNFCCC Focal Point Section

Office of Natural Resources and Environmental Policy and Planning

Moderated by

Mr. Thawatchai Saengkhamasuk

Director

Capacity Building and Outreach Office, TGO

12.00 -13.30



13.30 – 14.30

Group exercise 1: Participants discuss challenges in their country to respond to major requirements in the Katowice Climate Package.

14.30-15.00



15.00 - 16.30

Group exercise 2: Participants discuss the capacity building needs to solve the country challenges identified in the Exercise 1.

Day 2

Thursday 8th August 2019

Theme: Circular Economy as transformational pathway towards low-carbon society

SESSION		SPEAKERS
09.30-10.00	Circular Economy as a crucial element for Paris climate goals: Views and experience from Finland	H.E. Mrs. Satu Suikkari-Kleven Ambassador of the Republic of Finland in Thailand
10.00-10.30	Circular Economy as transformational pathway towards low carbon society and key factors for transforming	Ms. Uma Wirutskulshai National Project Coordinator The United Nations Industrial Development Organization (UNIDO)
10.30 - 11.00		
11.00 - 11.30	Case study: Innovation for sustainable value chains	Mr. Narongrit Pinyotrakool Environmental Manager SCG Public Company Ltd., Thailand
11.30-12.00	Group exercise 3: Participants discuss how Circular Economy concept can contribute to the NDC of their country.	
12.00-13.30		
13.30-15.30	Group exercise 3: Participants discuss how Circular Economy concept can contribute to the NDC of their country. (Continue)	
15.30-16.00		

16.00 -17.00

Group exercise 4: Participants discuss how to promote engagement of various stakeholders especially private sector to move towards Circular Economy in their country.

Day 3

Friday 9th August 2019

Theme: Linking SDGs, Circular Economy and climate actions

SESSION

SPEAKERS

09.30 – 10.00

Scaling up climate actions to achieve the SDGs: Maximizing co-benefits for sustainable development in Southeast Asia Countries

Dr. Ampai Harakunarak
Policy Analyst/Economist

10.00 -10.30



10.30 -11.30



to SCGExperience

11.30-13.00



13.00-15.30

Site visit Participants observe a case for the innovation for sustainable value chains by SCG Experiences.

15.30-15.45

Closing Remark

Representative from JICA

15.45-16.30

Travel to hotel

**Attachment 3 Mitigation Mechanism and Decarbonization (MM)
course and Climate Finance (CF) course for Southeast
Asian countries: Basic course (May 2018)**



Regional Collaboration Centre – Bangkok
Promoting Action Against Climate Change

**CITC regional training on
“Mitigation Mechanism and Decarbonization” and “Climate Finance”
for Southeast Asian countries
21st - 24th May 2018, in Bangkok, Thailand**

Expected Training Outputs:

Through attending this training course, trainees will be able to:

- **Learn various mitigation options and approaches, and technologies** that can be applicable in Southeast Asian countries
- **Learn fundamental and comprehensive knowledge on climate finance** through understanding the latest landscape of various domestic and international financing sources
- **Learn lessons and experiences** among Southeast Asian countries on the challenges in **development and implementation of mitigation measures to achieve NDCs**, as well as **mobilizing domestic and international finance** for climate mitigation and adaptation projects

Expected Trainees:

Trainees are expected to be as follows;

Management-level officials from below agencies (who has at least 2 years of working experience in the relevant field)

- Central government agencies of UNFCCC focal point
- Central government agencies related to NDC development and implementation
- Finance-related agencies
- National Planning agency

Training Outline:

- 1) Training course covers a wide range of topics in a comprehensive manner:
 - *International trend and outlook of international mitigation actions*
 - *Conventional and latest mitigation technologies and mitigation options that can be applicable to Southeast Asian countries, and their basic logic on GHG emission reductions*
 - *Essentials for implementation of mitigation measures and MRV*
 - *Experiences and challenges of mitigation actions among Southeast Asian countries*
- 2) Renowned speakers from international organizations and research/academic institutions
- 3) Opportunities to hear first-hand experiences from and to exchange opinions with trainees from other Southeast Asian countries related to their country's climate policies and actions



Day 1 (Monday, 21st May 2018)

(Mitigation Mechanism and Decarbonization)

TIME	SESSION	SPEAKER
8:30–9:00	Registration and Pre-test	
9:00–9:15	Opening remarks	Dr. Natarika Wayuparb Nitiphon Deputy Executive Director Thailand Greenhouse Gas Management Organization (TGO)
9:15–9:45	International trend of GHG emissions and mitigation actions	Mr. Jens Radschinski Head, UNFCCC-Regional Collaboration Centre (RCC) Bangkok
9:45–10:15	Outline of mitigation measures	Mr. Yoshihiro Mizuno JICA Expert
10:15–10:30	Coffee break and Group Photo	
10:30–10:45	Mitigation actions in Thailand	Mr. Thawatchai Saengkhamasuk, Director, Strategy Office, Thailand Greenhouse Gas Management Organization (TGO)
10:45–11:00	Various mitigation approaches and schemes	Dr. Paweena Panichayapichet Manager, Approval and Monitoring Office, Thailand Greenhouse Gas Management Organization (TGO)
11:00–11:45	Mitigation measures in energy, transport and waste sectors	Associate Professor Dr. Bundit Limmeechokechai Sirindhorn International Institute of Technology (SIIT)
11:45–12:15	<i>Open discussion</i> - Challenges and lessons in developing and implementing climate change mitigation policies, actions and MRV	Facilitator: Associate Professor Dr. Bundit Limmeechokechai Sirindhorn International Institute of Technology (SIIT)
12:15–13:30	Lunch	

13:30–15:15	<i>Country presentation on mitigation</i> <ul style="list-style-type: none"> - Current status of GHG emissions and national efforts toward mitigation - Case study of mitigation actions and MRV 	Representatives from Southeast Asian countries
15:15–15:30	Coffee break	
15:30–16:30	<i>Country presentation on mitigation (cont'd)</i>	Representatives from Southeast Asian countries
18:00–20:00	Reception Dinner	

Day 2 (Tuesday, 22nd May 2018)

(Mitigation Mechanism and Decarbonization)

TIME	SESSION	SPEAKER
9:00–10:00	Overview of MRV for mitigation measures	Mr. Sivach Kaewcharoen Environmental, Professional Level Office of Natural Resources and Environmental Policy and Planning (ONEP), Thailand
10:00–10:30	Overview of mitigation technologies and supporting schemes for developing countries	Mr. Yoshihiro Mizuno JICA Expert
10:30–11:00	Technology selection for mitigation actions in Southeast Asian countries	Dr. Surachai Sathitkunararat Director of Energy and Environment, National Science Technology and Innovation Policy Office, Ministry of Science and Technology of Thailand (National Designated Entity of Climate Technology Centre and Network (CTCN) of Thailand)
11:00–11:15	Coffee break	
11:15–12:30	<i>Group work</i> <ul style="list-style-type: none"> - Enhancing the implementation of NDCs and mitigation actions in Southeast Asian countries 	Facilitators: Mr. Yoshihiro Mizuno, JICA Expert Ms. Nareerat Thanakasem, TGO
12:30–13:30	Lunch	
13:30–14:30	<i>Group work (cont'd)</i>	



14:30–14:45	Coffee break	
14:45–16:25	<i>Group work (cont'd)</i> - Presentation of group work	
16:25–16:45	Feedback from trainees	Facilitators: Mr. Yoshihiro Mizuno, JICA Expert Ms. Nareerat Thanakasem, TGO

Day 3 (Wednesday, 23rd May 2018)

(Climate Finance)

TIME	SESSION	SPEAKER
9:00–10:00	Overview of climate finance and landscape of climate financial sources	Mr. Jens Radschinski Head, UNFCCC-RCC Bangkok Mr. Yossef Zahar Senior Finance Advisor, UNFCCC-RCC Bangkok
10:00–10:45	Achieving paradigm shift through climate projects	Mr. Krib Sitathani Project manager, United Nations Development Programme (UNDP)
10:45–11:00	Coffee break	
11:00–12:00	Achieving paradigm shift through climate projects (cont'd)	Mr. Krib Sitathani Project manager, United Nations Development Programme (UNDP)
12:10–13:10	Lunch	
13:10–14:10	<i>Country presentation on climate finance</i> - Domestic procedure to apply to climate finance - Allocation of domestic budgets to climate projects - Challenges of accessing international climate finance	Representatives from countries All lecturers Facilitator: Mr. Naoki Mori, JICA Expert
14:10–15:00	<i>Group work</i> - Critical aspects of accessing international climate finance	Facilitator: Mr. Naoki Mori, JICA Expert
15:00–15:15	Coffee break	



15:15–16:30	<i>Group work (cont'd)</i> - Presentation of group work	Facilitator: Mr. Naoki Mori, JICA Expert
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Day 4 (Thursday, 24th May 2018)

(Climate Finance)

TIME	SESSION	SPEAKER
9:00–10:00	Overview of multilateral climate funds	Mr. Naoki Mori, JICA Expert
10:00–10:30	Coffee break	
10:30–11:30	Green Climate Fund (GCF)	Dr. Binu Parthan, Asia Adviser, Readiness Programme, GCF (Skype presentation)
11:30–12:15	Global Green Growth Institute (GGGI)	Mr. Khan Ram-Indra, Thailand Country Representative, GGGI
12:15–13:15	Lunch	
13:15–14:00	Japan International Cooperation Agency (JICA)	Mr. Yasuyuki Endo Project Formulation Adviser (Climate Change Area), JICA Thailand Office
14:00–14:45	Q&A and discussion	Facilitator: Mr. Naoki Mori, JICA Expert
14:45–15:45	<i>Discussion</i> - Inter-ministerial coordination to accelerate access to international financial support	Facilitator: Mr. Naoki Mori, JICA Expert
15:45–16:15	Coffee break	
16:15–16:45	Feedback from trainees	Facilitator: Mr. Naoki Mori, JICA Expert
16:45–17:00	Post test	
17:00–17:15	Closing Remarks	

**Attachment 4 Mitigation Mechanism and Decarbonization (MM)
course for Southeast Asian countries: Advanced course
(1st round, December 2019)**

Regional Training on
“Enhancing regional capacity of NDC implementation and MRV framework establishment”
18th – 20th December 2019
at Pullman King Power, Bangkok, Thailand

Expected Training Outputs:

Through attending this training, trainees will be able to:

- 1) **Learn key success factors on formulation and implementation of mitigation measures(policies and projects) and their MRV** to achieve NDC goal, through learning practical cases and lessons learned from other countries
- 2) **Enhance practical skills** related to formulation of mitigation measures through developing PINs through exercises and hands-on advice and support from international experts
- 3) **Obtain practical knowledge and latest information** related to the design and operationalization of an appropriate framework, structure and procedure on MRV, and
- 4) **Learn and share lessons and experiences** from policy makers and practitioners who face similar challenges on mitigation and MRV implementation

All trainees are requested to develop the following outputs in the exercise session:

- Project idea notes for concrete mitigation measures (economy-wide, sector-wide, program-leveled) which can contribute to country NDC,
- A draft concept note for potential design of domestic MRV framework for mitigation measures, and draft road map that describe intended steps and timeframe for formulation/ improvement and operationalization of domestic MRV

Expected Training Outcomes:

After attending this training, trainees are expected to:

- Formulate and implement mitigation measures that contribute achieving the country NDC, and
- Establish and enhance domestic MRV framework for mitigation measures

Trainee Qualifications:

Three trainees from the following organizations are invited from each country:

- One official from central government agency that is in charge of;
 - Planning and implementing mitigation measures at national level;
 - Planning and operating MRV framework at national level
- One representative from government agency or public company who is in charge of planning and implementing mitigation measures and MRV in energy sector
- One representative from government agency or public company who is in charge of planning and implementing mitigation measures and MRV in transportation sector

All trainees are required to fulfill the following qualification and condition:

- To have a working experience in the field of development and implementation of mitigation measures(energy or transport sector) and/ or MRV planning, or have completed the basic training course on mitigation that was organized by CITC or other training institutions.

All trainees are requested to agree to share information with CITC on the status of planning and implementation of mitigation measure/ MRV planning, after attending this training course. *(information provided will be used by CITC for training evaluation purpose only and will not be disclosed to third party without prior formal consent)*

Training Outline:

The training covers a wide range of topics in an interactive manner;

- Sharing on practical experiences on formulating and implementing mitigation measures that can effectively contribute to fulfilling the NDC target, ranging from economy-wide, policy-based and project-based mitigation measures
- Case studies and sharing of hands-on experience of formulation and operation of MRV framework on mitigation in other advanced countries
- Exercise to develop a project idea note of feasible and prioritized mitigation measures under NDC through interaction and consultation with experts

Tentative Training Agenda

Wednesday, December 18th, 2019

Day 1: Solutions for translating NDC into concrete mitigation measures in Southeast Asian countries

Time	Subject	Contents	Speaker (tentative)
08.30-09.00	Registration		-
09.00-09.15	Opening remarks		Mrs. Prasertsuk Patoonsittichai Executive Director of Thailand Greenhouse Gas Management Organization (TGO)
09.15-09.30	Objectives, expected outputs and contents of the training course		Mr. Thawatchai Saengkhamasuk, Director of CITC, TGO
09.30-09.45	Self-introduction and ice-breaking session		All participants
09.45-10.25	Lecture: Mitigation and NDC implementation	Status of international climate negotiations on the following issues especially on mitigation and NDC implementation. - Common challenges and needs on NDC implementation - Common barriers of NDC implementation and solutions - Good practices on successful implementation of NDCs	Mr. Deo Gabinete, Regional Specialist, NDC-Partnership.
10.25-10.40	Group photo session		
10.40-10.55	Coffee break		

Time	Subject	Contents	Speaker (tentative)
10.55-12.25	Country presentations: Selected countries share prioritized mitigation measures under NDC based on country's mitigation potential, current progress of mitigation implementation and outcome, as well as various challenges to introduce economy-wide and sector-wide mitigation measures to country or sector wide (10 min. for presentation, 5 min. for Q&A)		Invited countries Moderators: Miss Nareerat Thanakasem, Senior Technical Expert, TGO, Mr. Yoshihiro Mizuno, JICA Expert
12.25-13.30	Lunch		
13.30-14.20	Lecture: Important perspectives to formulate mitigation measures to achieve NDC (economy-wide, policy-level and project-level measures) in Southeast Asia (40 min. for lecture, 10 min. for Q&A)	Necessary steps and hints to ensure effective formulation as well as implementation of mitigation measures at various levels (economy-wide mitigation measure, policy-level and project-level) to achieve NDC taking into account the gap of NDC target and mitigation plans will be explored.	Dr. Bundit Limmeechokchai, Associate Professor, Sirindhorn International Institute of Technology, Thammasat University (SIIT TU), Thailand
14.20-14.35	Coffee break		
14.35-16.15	Panel discussion "Case study of key success factors of mitigation formulation and implementation"	<p>Panelists:</p> <ol style="list-style-type: none"> 1. Dr. Naoki Matsuo, Principal Policy Researcher, Institute for Global Environmental Strategies (IGES) - "Understand your NDC and Its Progress Tracking - Factor Analysis as a strong tool for understanding" 2. Ms. Chanusakul Supirak, Environmentalist, Office of Natural resources and Environment Policy and Planning (ONEP), Thailand, - "Status of NDC Implementation in Thailand" 3. Dr. Nuwong Chollacoop, National Metal and Materials Technology Center (MTEC), Thailand - "Sector-wide mitigation measures in transportation sector" 4. Mr. Winston Chow, Deputy Chief of Party, USAID Clean Power Asia - "Grid-connected solar: What needs to be done to increase deployment?" <p>Moderator : Dr. Bundit Limmeechokchai, Associate Professor, Sirindhorn International Institute of Technology, Thammasat University (SIIT TU), Thailand</p> <p>Discussion topics :</p> <ul style="list-style-type: none"> - How to advance formulation and implementation of all types of mitigation measures (economy-wide, sector-wide, project) to achieve country NDC goal in Southeast Asia - How to understand and fill in the gap between NDC goal and contribution of each mitigation measure - Sharing challenges and lessons learnt from notable mitigation measures under implementation - Learning key success factors in formulating and moving to implementation of effective mitigation measures 	

Thursday, December 19th, 2019

Day 2: Planning and formulation of mitigation measure and their MRV for NDC achievement

Time	Subjects	Contents	Speaker (tentative)
08.30-8.45	Registration		-
08.45-9.00	Summary of Day 1		Miss Nareerat Thanakasem, Senior Technical Expert, TGO
09.00-9.40	Lecture: Essentials of MRV and important steps to establish/ improve MRV framework on mitigation (30 min. for lecture, 10 min. for Q&A)	<ul style="list-style-type: none"> - Essentials of MRV including its concept, background, significance and how it is used - Different MRV for various types of purposes and mechanisms, such as National Communication, BTRs, NDC, project activity and other reporting requirements 	Dr.Yuqing Ariel YU, UNFCCC-Regional Collaboration Centre Bangkok (RCC)
09.40-10.40	Country presentations: Challenges and solutions on establishing and operationalizing domestic MRV framework (10 min. for presentation, 5 min. for Q&A)		Invited countries Moderators: Miss Nareerat Thanakasem, Senior Technical Expert,TGO, Mr.Yoshihiro Mizuno, JICA Expert
10.40-10.55	Coffee break		
10.55-12.10	Panel discussion “Case study: effective approaches for formulation and operation of MRV for mitigation”	<p>Panelists:</p> <ol style="list-style-type: none"> 1. Dr. Naoki Matsuo, Principal Policy Researcher, Institute for Global Environmental Strategies (IGES) “How to integrate GHG MRV into the PDCA cycle - Universal approach to improve the performance of actions triggered by GHG reporting” 2. Mr.Rongphet Bunchuaidee, Thailand Greenhouse Gas Management Organization (TGO), “Success NAMAs Tracking for sector-based MRV on mitigation in Thailand” 3. Assistant Prof. Wongkot Wongapai, Chiang Mai University, Thailand “Project-level MRV mitigation measures in energy sector” <p>Moderator: Mr.Thawatchai Saengkhamasuk, Director of CITC, TGO</p> <p>Discussion topics :</p> <ul style="list-style-type: none"> - Introduction of good practices of MRV; lessons from MRV system formulation and operationalization stages in Japan (Key success factor of MRV for mitigation measures) - Necessary steps to formulate/ improve MRV framework in the country - How to implement PDCA cycle of mitigation measure using KPIs and linkage with domestic MRV framework 	
12.10-13.30	Lunch		

Time	Subjects	Contents	Speaker (tentative)
13.30-14.30	Move to site visit		
14.30-17.00	Study visit: learning center of Electricity Generation Authority of Thailand (EGAT) in Bangkok - Lecture on general climate change policy of EGAT, the Authority's concrete experience on MRV activity in accordance with the MRV frameworks in Thailand		
18.00	Reception dinner by TGO		

Friday, December 20th, 2019

Day 3: Establishing and strengthening MRV framework and implementation structure

Time	Subjects	Contents	Speaker (tentative)
08.30-08.45	Registration		-
08.45-09.00	Summary of Day 2		Miss Nareerat Thanakasem, Senior Technical Expert, TGO
09.00-09.15	Introduction to exercise		Mr. Yoshihiro Mizuno, JICA Expert
09.15-12.00	Exercise 1. All participating countries <u>develop a project idea note</u> of their concrete mitigation measures which can contribute to country NDC 2. All participants <u>develop a draft concept note</u> that describes the potential design of domestic MRV framework for mitigation measures utilizing the output from the previous exercise session, and <u>develop a roadmap</u> that describes intended steps and timeframe for formulation/ improvement and operationalization of domestic MRV framework .		Moderators: Miss Nareerat Thanakasem, Senior Technical Expert, TGO, Mr. Yoshihiro Mizuno, JICA Expert Advisers: Dr. Bundit Limmechokchai, SIIT TU, Dr. Naoki Matsuo, IGES, Mr. Winston Chow, USAID, Mr. Rongphet Bunchuaidee, TGO
12.00-13.00	Lunch		
13.00-13.30	Preparation for presentation		All participants
13.30-15.10	Presentation session: Each country presents the outputs of the exercise sessions on mitigation formulation, MRV planning and roadmap (10 min. for the presentation, 10 min. for comments and Q&A)		Country representatives Moderators: Miss Nareerat Thanakasem, Senior Technical Expert, TGO, Dr. Bundit Limmechokchai, Associate Professor, SIIT TU
15.10-15.25	Coffee break		
15.25-17.05	Presentation session (continued)		Country representatives
17.05-17.15	Evaluation		
17.15-17.30	Closing Remarks		JICA

**Attachment 5 Mitigation Mechanism and Decarbonization (MM)
course for Southeast Asian countries: Advanced course
(2nd round, July 2020)**

Regional Climate Change Online Training on
“Pathways to NDC Achievement:
Understanding and Formulating a Policy-level Mitigation Measure”
13th – 30th July 2020

Expected Training Outputs:

Through attending this online training, trainees will be able to:

- 1) **Learn key success factors to ensure the implementation/expansion of mitigation measures (focusing on policy level mitigation measures) to achieve NDC goal.**
- 2) **Obtain practical knowledge of counter measures to barriers for mitigation measures (focusing on policy level mitigation measures) expansion.**
- 3) **Enhance practical skills related to formulation of policy level mitigation measures through developing Work plan through preparatory work and online consultation with international experts**

All trainees are requested to develop the following output through the training:

- Develop a Work plan of the proposed mitigation measure (focusing on policy level mitigation measures*) implementation or expansion.

* A “Policy level mitigation measure” refers here any policy, regulation, or plan which can set forward GHG emission reductions in a wide scope (economy-wide, sector-wide) such as power regulation (FIT, net-metering, renewable portfolio standard etc.), carbon pricing, dissemination program on energy efficiency improvement, transportation regulation (bio fuel utilization, road pricing) etc..

Expected Training Participants:

** Persons who participated the “Regional Training on NDC implementation and MRV framework” which was held on 18th – 20th December 2019 will be given priority to participate this training course.*

- 1) Online lecture sessions (recorded and available online)

Practitioners from the following organizations in AMS can participate. There is no limitation on the number of participants per country.

- Central government agency that is in charge of planning and implementing the policy level mitigation measures which are/will be listed in the NDC;
- Central government agency or public company that is in charge of planning and implementing policy level mitigation measures in energy sector or transport sector

- 2) Consultation session (online live interaction with international experts)

Practitioners from suitable organization should be selected by the UNFCCC focal point agency based on the country priority in accordance with the country NDC. Although there is no limitation on the number of participants per country, each country can work on only one policy-level mitigation measure.

All trainees are required to fulfill either of the following conditions:

- To have a working experience in the field of planning and implementation of policy level mitigation measures (energy or transport sector)
- To have completed the basic or advanced training course on mitigation that were organized by CITC or other training institutions.

All trainees are requested to agree to share information with CITC on the status of planning and implementation of the proposed policy level mitigation measure, after attending this training course. *(information provided will be used by CITC for training evaluation purpose only and will not be disclosed to third party without prior formal consent)*

Training Outline:

The online training consists of the sessions below.

- Online lectures (recorded);
 - Latest information / topics related to climate change negotiations and NDCs
 - Practical approach on policy level mitigation measure formulation
 - Case studies on countermeasures to cope with the barriers on mitigation measures implementation/expansion in energy sector and transport sector
- Online consultations (country-by-country) (live)
 - Consultations with international experts to improve the Work plan of the proposed policy level mitigation measure.
- Online presentations & discussions (live)
 - The representative of each country presents the final Work plan and trainees and experts discuss on the way forward.

Training Program

Part I. Opening and online lectures

Webinar on 13th July 2020

Time	Contents	Speaker
10:00 – 10:10	Opening remarks: 10 min. -LIVE-	Mr. Kiatchai Maitriwong Executive Director Thailand Greenhouse Gas Management Organization (TGO)
10:10 – 10:30	Introduction: 20min. Objectives, expected outputs and contents of the training course -LIVE-	Mr. Thawatchai Saengkhamasuk Director of CITC, TGO

Part II. Online lecture (Video contents)

Open from 13th to 17th July 2020

Training participants shall access to recorded video contents within the above period before the Part II. Online consultation starts

Questions on each lecture and answers to each question by speaker will be available for training participants at online platform.

Subject	Contents (tentative)	Speaker
Lecture 1: 20 min.	Update of international negotiations on mitigation and NDC after COP25, and How can the countries achieve the NDC in/after the Covid-19 Era?	Mr. Deo Gabinete Regional Specialist, NDC Partnership
Lecture 2: 30 min.	Important perspectives to formulate mitigation measures to achieve NDC (economy-wide, policy level mitigation measures) in Southeast Asia	Assoc. Prof. Dr. Bundit Limmeechokchai Sirindhorn International Institute of Technology, Thammasat University, Thailand
Lecture 3: 30 min.	Important perspectives to formulate mitigation measures to implement (Project level mitigation measures) in Southeast Asia	Ms. Nareerat Thanakasem, Senior Technical Expert, TGO
Lecture 4: 20 min.	Understanding, Designing and Implementing the NDC - Key Cross-Cutting Elements for your NDC and its implementation -	Dr. Naoki Matsuo, Principal Policy Researcher, Institute for Global Environmental Strategies (IGES)
Lecture 5: 20min.	< Energy sector > - Case study of policy level mitigation measures planning and implementation - Issues / barriers on policy level mitigation measures planning and implementation, and the countermeasures	Mr. Noboru Yumoto Energy and Environment Institut e Inc.
Lecture 6: 20min.	< Transportation sector > - Case study of policy level mitigation measures planning and implementation - Issues / barriers on policy level mitigation measures planning and implementation, and the countermeasures	Dr. Yasuki Shirakawa Climate Consulting, LLC President

Part III. Online Consultation

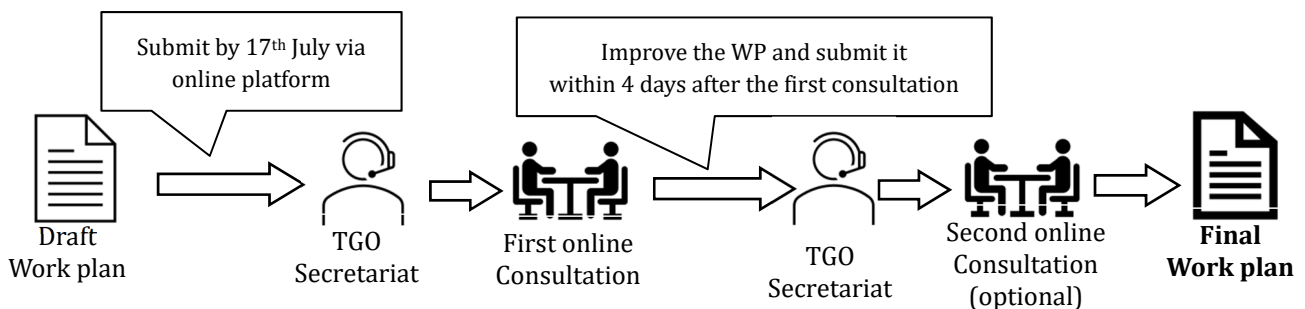
Open from 21st to 29th July 2020

In the online consultation, trainees will have a chance to receive hands-on advice from international experts using the draft Work plan of the proposed policy level mitigation measure.

All countries will be requested to submit the draft Work plan to the CITC Secretariat by 17th July. Each country is also requested to inform the Secretariat the desired date(s) and time of consultation (provide 3 options).

A consultation will take place for maximum 120 minutes.

The trainees can have up to two times of online interactive consultation. After the first consultation, trainees will be asked to improve the draft Work plan and submit it to the CITC Secretariat within 4 days after the first consultation date. If the trainees want to have second consultation with the same international expert, the trainees shall reserve the second consultation time.



In the online consultation, the following international experts will be available for countries in accordance with the contents of the Work plan.

<Name of the resource persons>

- Dr. Naoki Matsuo, Principal Policy Researcher, Institute for Global Environmental Strategies (IGES)
- Dr. Yasuki Shirakawa, Climate Consulting, LLC
- Assoc. Prof. Dr. Bundit Limmeechokchai Sirindhorn International Institute of Technology, Thammasat University, Thailand

Consultation	Date	09:30-11:30 (Thai time)	13:00-15:00 (Thai time)	15:00-17:00 (Thai time)
First consultation	July 21 (Tue)			
	July 22 (Wed)	Maximum 120 min. for each county.		
	July 23 (Thu)			
Second consultation (optional)	July 27 (Mon)			
	July 28 (Tue)	Maximum 120 min. for each county.		
	July 29 (Wed)			

Part IV. Country Presentation and Closing session

30th July 2020

Time	Contents	Speaker
10:00 – 12 :00 13:00 – 15:00	<p>Presentation session <online presentation></p> <p>Each country presents the outputs of the exercise sessions on mitigation formulation and roadmap (10 min. for the presentation, 10 min. for comments and Q&A)</p> <p>Trainees from other countries are encouraged to participate.</p>	<p>Representative from each country</p> <p>Facilitator: TGO</p> <p>Advisors: Dr. Naoki Matsuo, Principal Policy Researcher, Institute for Global Environmental Strategies (IGES), Dr. Yasuki Shirakawa, Climate Consulting, LLC, and Mr. Noboru Yumoto, Energy and Environment Institute Inc.</p>

Closing on 30th July 2020

Time	Contents	Speaker
16:00 – 16:10	Closing Remarks	Representative of Japan International Cooperation Agency (JICA) (TBC)

Attachment 6 Climate Finance (CF) course for Southeast Asian countries: Advanced course (1st round, September 2019)



Regional Workshopon “Climate Finance: GCF Concept Note Write-shop”

As of 10 SEPTEMBER 2019

Training Title and Schedule

Training Title: Climate Finance: GCF Concept Note Write-shop

Schedule: 10th-12th September 2019

Venue: The Suite at Radisson Blu Hotel, Bangkok, Thailand

Expected Training Outputs:

Through attending regional training workshop, trainees will be able to:

- 1) **Learn critical points to be addressed in project document** to apply to international climate finance,
- 2) **Improve practical skills to prepare project document** for climate mitigation and adaptation projects, and
- 3) **Develop a concept note as an output which will be a basis for funding proposal** to apply to climate funds such as Green Climate Fund (GCF) or international financial institutions including multilateral and bilateral development agencies.

Expected Trainees:

Trainees are expected to be as follows;

- Government agencies including NDA or UNFCCC focal point.
- Relevant ministries and agencies, public or private companies including potential DAEs which intend to apply to international funding for climate mitigation or adaptation projects

All trainees participating the CITC workshop “*Climate Finance: Green Climate Fund (GCF) concept note write-shop*” are required to fill in the Project Concept Sheet and submit it to CITC secretariat before joining the workshop.

Training Outline:

- 1) The workshop covers a wide range of topics in a comprehensive manner:
 - *Lecture on how to access to major international financial institutions on climate finance*
 - *Lecture on detailed procedures to apply to GCF*
 - *Lecture on how to develop Concept Note of GCF*
 - *Exercise to analyze projects approved by GCF from the viewpoint of its investment criteria*
 - *Exercise to develop draft Concept Note through interaction and consultation with experts*
- 2) All trainees will have an opportunity to receive inputs and hands-on advices from GCF's Accredited Entities (AEs) to improve draft project Concept Note which each country brings in for the training workshop.



DAY 1: Tuesday, September 10th, 2019

Time	Session	Speaker
08.30 - 09.00	Registration	
09.00 - 09.10	Opening remarks	Mrs. Prasertsuk Patoonsittichai Executive Director Thailand Greenhouse Gas Management Organization (TGO)
9.10-09.20	Welcome remarks	Dr. Kittisak Prukkanone, Director of Measure and Mechanism Development Section, Climate Change Management and Coordination Division, Office of Natural Resources and Environmental Policy and Planning (ONEP), Thailand
09.20 - 09.30	Objectives, expected outcomes and contents of the training course	Mr. Thawatchai Saengkhamasuk Director of Climate Change International Technical and Training Center (CITC) Thailand Greenhouse Gas Management Organization (TGO)
09.30-09.50	Self-introduction and expectations by each trainee	All trainees
09.50 - 10.30	<u>Lecture Session A</u> Overview of climate finance: International negotiation and financial landscape including climate finance under UNFCCC	Dr. Yuqing Ariel Yu UNFCCC-Regional Collaboration Centre Bangkok (RCC)
10.30-10.45	Coffee break	
10.45-11.25	<u>Lecture Session B</u> Overview on how to access to major financial sources on climate finance	Mr. Randy Rakhmadi Senior Analyst Climate Policy Initiative
11.25-12.00	<u>Lecture Session C</u> Approaches to finance climate change projects by private financial institution	Mr. Akira Otaka Director Sustainable Business Office, Solution Products Division, MUFG Bank, Ltd.
12.00-13.00	Lunch	



Time	Session	Speaker
13.00-14.00	<u>Lecture Session D</u> Detailed procedures to apply to GCF <ul style="list-style-type: none"> - Steps in funding proposal development - The gap between concept note and funding proposal - Recent trend of approved projects and key elements of project evaluation 	Mr. Federico Gallopin Lead Energy Specialist Green Climate Fund (GCF)
14.00-15.20	Presentation by countries on their project concept sheet (each 10 minutes)	Trainees as country teams
15.20-15.35	Coffee break	
15.35-16.00	<u>Panel Session A1</u> Case study introduction of mitigation and adaptation projects approved by GCF <ol style="list-style-type: none"> 1. Espejo de Tarapacá project in Chile (Renewable energy) 2. Enhancing adaptive capacities of coastal communities, especially women, to cope with climate change induced salinity project in Bangladesh (10 minutes by each case and Q&A)	GCF's Accredited Entities (AEs) <ol style="list-style-type: none"> 1. Mr. Akira Otaka Director Sustainable Business Office, Solution Products Division, MUFG Bank, Ltd. 2. Mr. Janto S. Hess Climate Change Adaptation Consultant <u>Facilitators:</u> Dr. Akarapon Houbcharaun, TGO and Mr. Naoki Mori, JICA Expert
16.00-17.00	<u>Panel Session A2</u> Presentations and Discussions on the case-study projects from the viewpoint of GCF's investment criteria and other critical points <ul style="list-style-type: none"> - Learn how the successful projects comply with 6 GCF investment criteria and other critical points (i.e., justification of GCF funding request and sustainability/ replicability): Section B3 C2 C3 in the template 	GCF's Accredited Entities (AEs) and Climate Finance Expert <ol style="list-style-type: none"> 1. Mr. Akira Otaka Director Sustainable Business Office, Solution Products Division, MUFG Bank, Ltd. 2. Mr. Janto S. Hess Climate Change Adaptation Consultant <u>Commentators:</u> Mr. Federico Gallopin, GCF and Dr. Yuqing Ariel Yu, UNFCCC-RCC <u>Facilitators:</u> Dr. Akarapon Houbcharaun, TGO and Mr. Naoki Mori, JICA Expert
17.10-17.20	Each trainee/country explains "Take away" on the day	All trainees/country teams
17.20-17.30	Instruction for Write-shop	Mr. Naoki Mori, JICA Expert



DAY 2: Wednesday, September 11th, 2019

Time	Session	Speaker
09.00-09.15	Summary of Day 1 and Instruction for Write-shop	Dr. Akarapon Houbcharaun, TGO and Mr. Naoki Mori, JICA Expert
09.15-10.45	<u>Exercise Session A</u> Write-shop: GCF Concept Note form <ul style="list-style-type: none"> - Section A - Section B - Section C 	Country team write-shop with AEs' and GCF's advise <u>Group Facilitators:</u> <ol style="list-style-type: none"> 1. Dr. Tomonori Sudo Professor, Ritsumeikan Asia Pacific University 2. Mr. Naoki Mori JICA Expert 3. Dr. Akarapon Houbcharaun TGO
10:45-11:00	Coffee break	
11.00-12.30	<u>Exercise Session A (Cont.)</u> Write-shop: GCF Concept Note form <ul style="list-style-type: none"> - Section A - Section B - Section C 	Country team write-shop with AEs' and GCF's advise <u>Group Facilitators:</u> <ol style="list-style-type: none"> 1. Dr. Tomonori Sudo Professor, Ritsumeikan Asia Pacific University 2. Mr. Naoki Mori JICA Expert 3. Dr. Akarapon Houbcharaun TGO
12.30-13.30	Lunch	
13.30-15.00	<u>Exercise Session A (Cont.)</u> Write-shop: GCF Concept Note form <ul style="list-style-type: none"> - Section A - Section B - Section C 	Country team write-shop with AEs' and GCF's advise <u>Group Facilitators:</u> <ol style="list-style-type: none"> 1. Dr. Tomonori Sudo Professor, Ritsumeikan Asia Pacific University 2. Mr. Naoki Mori JICA Expert 3. Dr. Akarapon Houbcharaun TGO
15.00-15.15	Coffee break	
15.15-15.45	<u>Panel Session B</u> Key roles and experiences of NDAs in identifying and formulating GCF projects	NDA representatives <ol style="list-style-type: none"> 1. Indonesia 2. Thailand <u>Facilitators:</u> Dr. Akarapon Houbcharaun, TGO and Mr. Naoki Mori, JICA Expert



Time	Session	Speaker
15.45-17.30	<u>Parallel Session A1</u> Write-shop Section: Continue to refining draft Concept Note and submit the draft to organizers	Trainees other than NDAs with AEs' advise
15.45-17.00	<u>Parallel Session A2</u> Consultation Meeting: identifying challenges and gaps on domestic and international climate finance access (including GCF)	1. Representatives from NDAs 2. Climate Finance Expert (GCF Expert) <u>Facilitators:</u> Dr. Akarapon Houbcharaun, TGO and Mr. Naoki Mori, JICA Expert

DAY 3: Thursday, September 12th, 2019

Time	Session	Speaker
09.00-09.20	<u>Exercise Session B</u> Reflections on Write-shop from AEs and experts	1. Mr. Akira Otaka, MUFG Bank Ltd. 2. Mr. Janto Hess, Climate Change Adaptation Consultant 3. Dr. Tomonori Sudo, Professor, Ritsumeikan Asia Pacific University
09:20-12:00	<u>Exercise Session C</u> Refine project Concept Note by each trainee in consultation with AEs.	Country team write-shop with AEs' assistance <u>Group Facilitators:</u> 1. Dr. Tomonori Sudo Professor, Ritsumeikan Asia Pacific University 2. Mr. Naoki Mori JICA Expert 3. Dr. Akarapon Houbcharaun TGO
12.00-13.00	Lunch	
13.00-14.00	<u>Exercise Session D</u> Preparation for presentation on final draft Concept Note and Roadmap to GCF funding approval Roadmap means a plan for each country that shows the next step to be taken including; (1) Completing Concept Note and submitting to GCF through NDA (2) Finding AEs (if GCF) (3) Completing Funding proposal and submitting GCF or other international financial institution	All trainees <u>Facilitators:</u> 1. Dr. Tomonori Sudo Professor Ritsumeikan Asia Pacific University 2. Mr. Naoki Mori JICA Expert 3. Dr. Akarapon Houbcharaun TGO



Time	Session	Speaker
14.00-17.00 including coffee break	<u>Exercise Session E</u> Presentation on Write-shop outputs and Road map for further development 1. Presentation by countries on final draft Concept Note, focusing on alignment with GCF investment criteria 2. Explanations by each trainee/country explains about Roadmap (each 15 minutes, and comments from resource persons)	All trainees <u>Commentators:</u> 1. Mr. Akira Otaka, MUFG Bank Ltd. 2. Mr. Janto Hess, Climate Change Adaptation Consultant 3. Dr. Tomonori Sudo, Professor Ritsumeikan Asia Pacific University
17.00-17.10	Closing remarks	Mr. Kazuo Takeuchi, Senior Representative, JICA Thailand
17.10-17.20	Secretariat remarks: 1. Follow-up activities to use final draft Concept Note for seeking international funding including GCF and, 2. Monitoring and Evaluation	Dr. Akarapon Houbcharaun, TGO and Mr. Naoki Mori, JICA Expert

Downloading all documents in the workshop, please scan the QR code or use the link below.



or

<https://qr.go.page.link/w6tex>

Attachment 7 Joint course of Climate Finance (Advanced course, 2nd round), Climate Change Adaptation (Basic course, 2nd round) and Climate Law and Regulation for Southeast Asian countries (July 2020)

**Regional Climate Change Online Training on
“Developing Climate Change Adaptation Projects to Access Climate Finance and
Enabling Environment for National Level Adaptation Efforts”**

13th – 30th July 2020

Expected Training Outputs:

Through attending this training course, trainees will be able to:

- 1) Learn the process of designing climate change adaptation projects, i.e., by displaying and assessing risks and identifying adaptation measures;**
- 2) Learn practical experiences on strengthening enabling environment for adaptation project implementation and access to financial sources; and**
- 3) Develop an adaptation project concept sheet, which is a basis for funding proposal.**

Expected Training Participants:

Government officers and non-state actors from ASEAN Member States (AMS), who have at least five years of working experience in the field of climate change policy planning and developing/ implementing adaptation measures. There is no limitation on the number of participants per country.

- Representative(s) from UNFCCC focal point; and
- Representative(s) from line ministries or relevant non-state actors including local government being responsible for planning and implementation of national climate change adaptation policy and projects. There are no restrictions to the sectors of adaptation.

Training Outline:

Training course covers the topics of climate change adaptation project development and available climate finance for the project implementation;

- Online lectures (recorded)
 - Landscape of climate finance and how to access funding sources
 - Climate risk and vulnerability assessment
 - Problem tree analysis, impact chain analysis, and theory of change diagram for adaptation project design
 - Enabling environment for the adaptation project implementation& finance access
- Online consultations (country-by-country) (live)
 - Consultations with an international expert to improve the project concept sheet prepared by respective participating countries. Each country can work on only one project concept sheet.
- Online presentations and discussions (live)
 - Country reports on the revised project concept sheet including roadmap after the online consultations.
 - Feedback from the international expert and discussions among trainees.

All trainees are requested to agree to share information with CITC on the status of implementation of the roadmap indicated in the project concept sheet, after attending this training course. *(information provided will be used by CITC for training evaluation purpose only and will not be disclosed to third party without prior formal consent)*

Training Program

Part I. Opening (live)

Webinar on 13th July, 2020

Time	Contents	Speaker
10:00 – 10:10	Opening remarks: 10 min. -LIVE-	Mr. Kiatchai Maitriwong Executive Director Thailand Greenhouse Gas Management Organization (TGO)
10:10 – 10:30	Introduction: 20min. Objectives, expected outputs and contents of the training course -LIVE-	Mr. Thawatchai Saengkhamasuk Director of CITC, TGO

Part II. Online lectures (Video contents)

Online lectures are recorded in advance and are accessible to trainees from Monday July 13th to Friday 17th July. Trainees are requested to watch all the recorded lectures in the above-mentioned week.

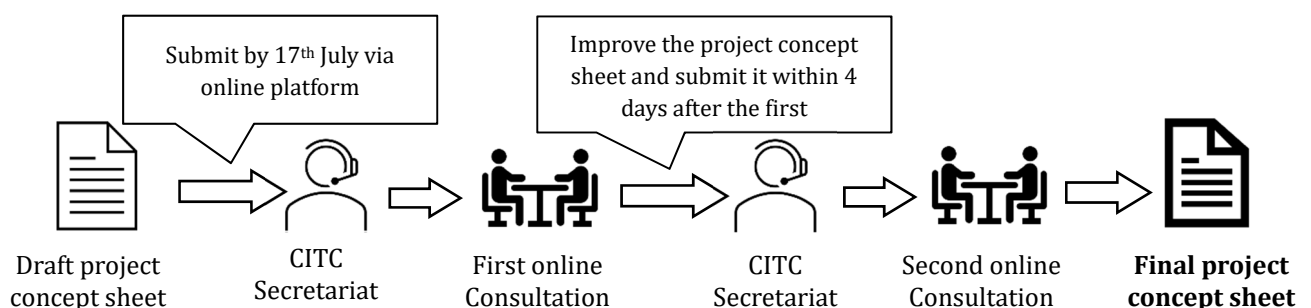
The list of lectures is as follows;

Title	Time	Contents	Speaker
Lecture 1: Landscape of global climate finance and access to climate change adaptation finance	40 min.	<ul style="list-style-type: none"> - Global Climate Finance Landscape (Public and Private finance) - Climate Finance Mobilization in Southeast Asia including domestic, international sources, and private investment - Main international funds' characteristics and funding criteria for accessing climate finance 	Dr. Yuqing YU Programme Manager, Institute for Global Environment Strategies; Deputy Director for IGES Regional Centre
Lecture 2: Common Risk of Climate Change in ASEAN	10 min.	<ul style="list-style-type: none"> - Result from Regional Workshop on Strengthening Climate Resilience of AMS through Experience Sharing 	Ms. Chayathorn Thanawattanadamrong, TGO
Lecture 3: Impacts, risk assessment, vulnerability assessment	50 min.	<ul style="list-style-type: none"> - Current climate change impacts and typical hazards in Southeast Asia - Introduction of methods of risk and vulnerability assessments - Case study: climate change impacts and risk assessments in Asia/ASEAN - Lessons Learned on Progress of Climate Change Adaptation Activities 	Dr. Janto S. Hess Climate Change Adaptation Consultant

Title	Time	Contents	Speaker
Lecture 4: Impact chain analysis and theory of change	60 min.	<ul style="list-style-type: none"> - Method of Impact Chain Analysis - Theory of Change (TOC): Method for developing project ideas and project concept sheet - TOC diagram: Linkage between project's outcomes, outputs, and activities 	Dr. Janto S. Hess Climate Change Adaptation Consultant
Lecture 5: Reflection from experience in developing bankable project proposals	40min.	<ul style="list-style-type: none"> - Critical points which should be addressed in project concept sheets for accessing adaptation finance - Differences between climate change adaptation and development projects 	Dr. Peter King Senior Policy Advisor Institute for Global Environmental Strategies (IGES)
Lecture 6: Introduction to the enabling environment for climate actions	10min.	<ul style="list-style-type: none"> - Framing presentation on the enabling environments for climate actions & climate finance access 	Ms. Apaphatch Hunsiritrakun Technical Expert, TGO
Lecture 7: Enabling environment for adaptation actions	40min.	<ul style="list-style-type: none"> - Common barriers and enablers: implementation of climate change adaptation actions - Case study: Approaches for creating enabling environment in Southeast Asia 	Ms. Akiko Aikawa Chief Advisor, Project of Capacity Development for the Implementation of Agricultural Insurance in Indonesia
Lecture 8: Enabling environment for climate finance access	40min.	<ul style="list-style-type: none"> - Common barriers and enablers: accessing the climate finance for adaptation projects - Case study: Approaches for creating enabling environment in Southeast Asia 	Mr. Yolando Velasco Manager, Climate Finance, UNFCCC Secretariat

Part III. Online Consultation

Online consultation is conducted country by country where all trainees from one country and the international expert discuss and improve the draft project concept sheet. Each country can receive consultation two times, 90 minutes each. After the first consultation, trainees of the country should revise the project concept sheet taking into account the results of the first consultation and submit the revised project concept sheet to the CITC Secretariat within 4 days. The second consultation is carried out in the following week to finalize the project concept sheet.



Timeframe of these consultation is as follows. Each participating country is requested to notify the TGO Secretariat preferred slots up to three for respective consultation sessions. Please see Annex 1 for details.

Consultation	Date	09:30-11:00	13:00-14:30	15:30-17:00
First consultation	July 20 (Mon)	Country A	Country B	Country C
	July 21 (Tue)	Country D	Country E	Country F
	July 22 (Wed)	Country G	Country H	Country I
	July 23 (Thu)	Country J	—	—
Second consultation	July 27 (Mon)	Country A	Country B	Country C
	July 28 (Tue)	Country D	Country E	Country F
	July 29 (Wed)	Country G	Country H	Country I
	July 30(Thu)	Country J	—	—

Part IV. Country Presentation and Closing Session

This is a live plenary session, which invites all trainees to share their improved project concept sheet and what they learned. This session will be organized on July 30th, 13:00-16:00 Thailand Standard Time (TBC), after all online consultations complete.

Closing on 30th July, 2020

Time	Contents	Speaker
16:00 – 16:10	Closing Remarks	Representative of Japan International Cooperation Agency (JICA) (TBC)

(Note 1) Project concept sheet:

Project concept sheet is a basis in developing detailed project document to seek for funding from external sources. It is designed to help trainees develop a project document in an effective and efficient manner during the limited time of the training course, and therefore, it is essential that participants prepare and submit it before the training so that the international expert can provide effective advice and support during the training course.

It is suggested that project to be considered in the project concept sheet is under project preparation stage based on various preliminary studies seeking funds in near future. The project size and sector can be flexible but limited to adaptation projects.

The project concept sheet consists of descriptions on project background, project description, sustainability and reliability of the project, and roadmap for development of a funding proposal.

The template of the project concept sheet is in Annex 1.

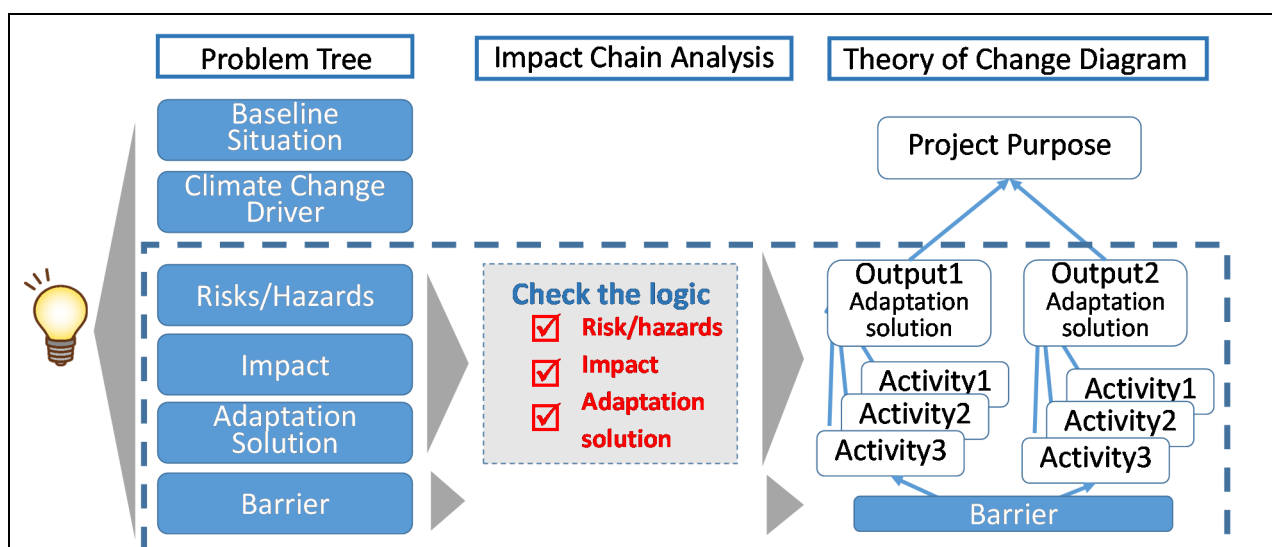
(Note 2): Problem tree, impact chain analysis and theory of change diagram

A problem tree is an analytical tool used to analyze the impact of climate change surrounding a given problem context, and clarify the cause–effect relationship as a problem tree, in this training in a table format.

An impact chain analysis is a tool to inform climate rationale by considering the interrelationship among risks/hazards, impact, solutions and barriers identified through the problem tree analysis.

The theory of change diagram helps clarify a process of project planning and evaluation which maps the relationship between a long-term goal of a project and the intermediate and early changes that are required to bring it about.

Correlation of those outputs from the analytical tools for adaptation project design can be summarized as below.



Attachment 8 Climate Change Adaptation course for Southeast Asian countries: Basic course (1st round, September 2019)



Regional Training Workshop on

“Climate Change Adaptation: National Plan Formulation, Implementation and Framework of Monitoring and Evaluation (M&E)”

4th-6th September 2019

at Mercure Bangkok Siam, Bangkok, Thailand

Expected Training Outputs:

Through attending this training course, trainees will be able to:

- 1) **Learn key elements of designing evidence-based climate change adaptation**, impact assessment, prioritization of climate change adaptation in national plans through mainstreaming, and monitoring and evaluation (M&E) of adaptation; and
- 2) **Enhance practical knowledge on planning adaptation and M&E** of adaptation at national level.

Expected Trainees:

Government officers who have at least 1 year of working experience in the field of climate change policy planning, developing and implementing adaptation measures from;

- UNFCCC focal point agency or related ministries being responsible for planning and implementation of national climate change adaptation policy.
- Relevant ministries and academic institutions being responsible for or assisting mainstreaming process of adaptation into national policies.

Training Outline:

- 1) Training workshop covers a wide range of topics in a comprehensive manner;
 - *Lectures on;*
 - Fundamentals of climate projection, impact of climate change, and common risks
 - Policy formulation of climate change adaptation at national level
 - Adaptation measures from various sectors
 - Monitoring and evaluation of adaptation
 - *Group discussion on the process of impact assessment for integration of adaptation in national policy*
 - *Group work on monitoring and evaluation of national climate change adaptation.*
- 2) All trainees will have an opportunity to hear hands-on practices and experiences in adaptation to and risk reduction of climate change, implementation of climate change adaptation measures from the other participants from the region.

Training Agenda

September 4th, 2019

Day 1: Principles of Climate Change Adaptation and National Climate Change Adaptation Plan

Time	Subjects	Speaker
08:30 - 09:00	Registration and Pre-test	-
09:00 - 09:15	Opening Remarks	Mr. Thawatchai Saengkhamasuk, Director, Capacity Building and Outreach Office, Thailand Greenhouse Gas Management Organization (TGO)
09:15 - 09:30	Explanation of training objectives, expected outcomes and contents of the training course	Ms. Chayathorn Thanawattanadamrong, TGO
09:30 - 09:45	Self-introduction	All participants
09:45 - 10:00	Group photo session	-
10:00 - 10:30	Coffee break	
10:30 - 11:30	Fundamentals of climate change science and impacts in Southeast Asian region	Dr. Makoto Tamura, Associate Professor, Ibaraki University
11:30 - 12:00	Outcome and lessons learnt from the regional workshop on “Strengthening Climate Resilience of AMS through Experience Sharing and Lesson Learn on Progress of Climate Change Adaptation Activities”	Ms. Chompunut Songkhao, Environmental Official, Office of Natural Resources and Environmental Policy and Planning (ONEP), Ministry of Natural Resources and the Environment, Thailand
12:00 - 13:00	Lunch	
13:15 - 14:15	Importance of policy formulation fostering enabling environment to climate change adaptation	Dr. Makoto Tamura, Associate Professor, Ibaraki University
14:15 - 15:30	Group Work: Countries share country policy on climate change adaptation and its latest updates	Moderators: Ms. Chayathorn Thanawattanadamrong, TGO Ms. Noriko Ishibashi, JICA Expert
15:30 - 15:45	Coffee break	
15:45 - 16:30	Mainstreaming adaptation: process and methodology	Dr. Makoto Tamura, Associate Professor, Ibaraki University
16:30 - 17:30	Discussion: Enabling environment for climate change adaptation and its implementation	Representative of TGO/JICA

September 5th, 2019

Day 2: Climate Change Adaptation Plan Formulation and Implementation, and Site Visit

Time	Subjects	Speaker
08:45 - 09:00	Registration	-
09:00 - 09:15	Summary of Day 1	Ms. Chayathorn Thanawattanadamrong, TGO
09:15 - 10:00	Group Discussion: Participants analyze climate change risks and prioritize risks	Moderators: Ms. Chayathorn Thanawattanadamrong, TGO Ms. Noriko Ishibashi, JICA Expert
10:00 - 10:15	Coffee break	
10:15 - 11:00	Case study: the research base of climate change information and the integration to NAP of Thailand (ADAP-T project)	Associate Professor Dr. Thanya Kiatiwat, Vice President, Kasetsart University and Project Manager of ADAP-T Project
11:00 - 11:45	Case study: Local adaptation actions in tourism sector in Thailand	Dr. Akarapon Houbcharaun, Manager, Capacity Building and Outreach Office, TGO
11:45 - 13:00	Lunch	
13:00 - 16:30	SITE VISIT to Chulalongkorn University Centenary Park	
13:00 - 13:15	Registration	-
13:15 - 13:45	Travel to the site by chartered van	-
13:45 - 14:45	Lecture: When infrastructure design meets climate change: "Chulalongkorn University Centenary Park" - When flood and park made something amazing	Representative of Chulalongkorn University
14:45 - 16:15	Site visit at "Chulalongkorn University Centenary Park" Participants will visit key facilities such as green roof, wetland, retention pond, retention lawn, and outdoor classroom	
16:15 - 16:30	Travel back to Mercure Bangkok Siam Hotel by chartered van	-

September 6th, 2019

Day 3: Monitoring and Evaluation for National Climate Change Adaptation Plan

Time	Subjects	Speaker
08:30 – 08:45	Registration	-
08:45 -09:00	Summary of Day 2	Ms. Chayathorn Thanawattanadamrong, TGO
09:00 – 10:15	Group Discussion: Discuss process of mainstreaming adaptation into policy (1) Prioritization of adaptation measures at national and ministerial level (2) Allocation of resources to prioritised adaptation measures	Moderators: Ms. Chayathorn Thanawattanadamrong, TGO Ms. Noriko Ishibashi, JICA Expert
10:15 – 10:30	Coffee break	
10:30 – 11:30	Institutional framework of monitoring and evaluation (M&E) for climate change adaptation	Dr. Michiyo Kakegawa, Associate Professor, Soka University
11:30 – 12:00	Case study: Research on potential framework on M&E	Dr. Pongsak Suttinon, Lecturer, Faculty of Engineering Chulalongkorn University
12:00 – 13:00	Lunch	
13:00 – 13:30	Case study: Monitoring indicators for climate change adaptation from EU countries	Ms. Noriko Ishibashi, JICA Expert
13:30 – 15:30 (Coffee break during group work)	Group Work: Develop action plan for developing M&E framework for adaptation	Moderator: Dr. Michiyo Kakegawa, Associate Professor, Soka University
15:30 – 16:00	Post-Test	-
16:00 – 16:15	Closing Remarks	Mr. Yasuyuki Endo, Representative, JICA Thailand

Attachment 9 Training course for Thai private sector (Signature course)

Training Curriculum for Private Course

Title of Training Course:

Title: “Climate-related Risk Analysis & Management on Private Business and Development of Business Opportunity “

Necessity of Training Course:

Although climate change has been a big impact to private companies, which forces them to change their activities, private companies have experienced to respond to some changes such as a shift of market needs and an evolution of technologies, and also to turn these changes into a new opportunity of growth. On the other hand, the impacts of climate change on their activities depend on the situation of individual company. Therefore, private companies need to understand how their own business will be influenced by climate change in order to manage the risk to their business and turn these change to the new opportunity.

Through this training course, private companies will notice that the correct response to the impact of climate change provides the following benefits:

- To prepare for the methodological risks
- To enhance the mid-term and long-term business continuity
- To build the flexible and resilient management foundation to resist the impact of climate change
- To strengthen the management foundation by gaining the investors trust
- To build a business opportunity to open a new market

Expected Outputs:

Through attending this program, participants will be able to:

- 1) Learn the merit and necessity of climate-related risk analysis and management, development of business opportunities for private company,
- 2) Learn the methodologies of climate-related risk analysis and the measures for climate-related risk management on the business of private company,
- 3) Learn the approach of development of business opportunities leaded from climate-related risk
- 4) Learn example cases, challenges and barriers from advanced companies responding to the climate-related risks analysis & management and development of business opportunity
- 5) Experience how to conduct climate-related risk analysis on the business of private companies by physical/transition risk (ex. policy changes)
- 6) Experience how to conduct climate-related risk management using Flood BCP (Business Continuity Plan) of Thailand.

Expected Participants:

Participants are expected to be;

Middle management level who are responsible for climate change or environmental matters in Thai listed companies

Training Outline:

- 1) Training workshop covers a wide range of topics in a comprehensive manner:
 - Lecture on merit and necessity of climate-related risk analysis and management for private company
 - Lecture on how to analyze and manage the climate-related risk
 - Lecture on approach of development of business opportunities
 - Panel Discussion on example cases, challenges and barriers from advanced companies
 - Exercise how to analyze the climate-related risk

- Exercise how to manage the climate-related risk using Flood BCP of Thailand
 - Group discussion on ideas brought by each trainee for climate-related risk analysis and management exercise
- 2) Trainees will have an opportunity to hear the active experiences from advanced companies, such as example cases, challenges and barriers responding to the climate-related risks analysis & management and development of business opportunity.

Training Agenda

Day 1: Learning the benefit and necessity, methodologies of climate-related risk analysis and management, the approach of developing new business

Training methods and Topics	Contents	Breakdowns
Lecture: Outline of climate-related risks management and business opportunities for private companies in Thailand	- Observed and projected climate-related impacts in Thailand and the example loss and damage summarized from Thai Flood in 2011	- Observed and Projected Climate Change in Southeast Asia - Loss and damages from Thai Flood in 2011
	- Observed impacts on private business activities (ex. Impacts caused by meteorological effects, impacts caused by policy change and change in market needs, indirect impacts through supply chain, long-term impacts)	- Climate scenarios involved in climate-related risks (ex. 2 degree and 4 degree scenario, and if possible the downscale results for Southeast Asia) - Costs of mitigation and adaptation under different scenarios - General direction policy changes on mitigation and adaptation. - Physical Risks vs. Transition Risks - indirect impacts through supply chain, long-term impacts)
	- Necessity and benefit of climate-related risk management and new business development (e.g. enhancing business continuity, meeting request from investors)	- Impact of climate change on business - Pressure to act on climate change felt by business - Why businesses should Invest in climate resilience? - How should corporate management respond?
	- Outline of climate-related risk analysis and management and new business development (only outline)	- Understanding different approaches to managing climate change risks, namely risk reduction, risk retention, and risk transfer - Three-dimensional Approach to Assessing Climate Risk (Hazard, exposure, and vulnerability)
	- Practices of climate-related risk management and new business development in other countries (e.g. Japan, EU, Thailand, other ASEAN countries)	Brief current situation in some important sectors: - Agriculture - Manufacturing - Tourism & Hospitality - Financial service industry

Training methods and Topics	Contents	Breakdowns
Lecture: Methodologies of climate-related risk analysis and management	- Common approach and methodology of climate-related risk analysis and management (detailed explanation, step by step approach based on Task Force on Climate-related Financial Disclosures TCFD guideline)	- Brief approach for identifying Climate-Related Risks: a) Transition Risks (Policy and legal risks, technology risk, market risk, and reputation risk) b) Physical Risks (Acute risk, Chronic risk) - Identifying Climate-Related Opportunities: a) Resource Efficiency b) Energy Source c) Product and Services d) Markets e) Resilience - Identifying Financial Impacts
	- Approaches to collect the future scenario on energy demand, market trend, meteorological forecast, a direction of policy change, etc.	- Scenario Analysis: - Why is scenario analysis useful? - What is a scenario? - How are organizations using climate-related scenario analysis? - Developing and Applying Scenario Analysis - Considerations for Building Climate Change into Scenario Analysis - Analytical Choices in Scenario Analysis - Tools and Data
Lecture: Business opportunities created by climate related risks	- Approach to develop new climate-related business	- Identifying Climate-related Opportunities: - Global warming reduction technology (e.g.; wind and solar energy, bio-fuel, electricity storage and battery, EV charging infrastructure) - Adaptation technology (e.g., flooding related prevention and adaptation, drought resistant crops, erosion prevention and resistant technology, recycling business, insurance service) - Developing climate change strategy in 8 steps ¹
	- Case studies of new climate-related businesses in industry (e.g. 1.Agriculture: food and forest industry 2.Manufacturing: energy intensive industries (cement, iron and steel, paper and pulp), low carbon or green industries (EVs, Solar cells) 3.Energy and electricity 4.Transportation: railway/buses 5.Tourism and tourism-related services	For example for selecting companies for case studies: - Technology based solutions for agriculture (Ricult Thailand) - Energy intensive industry (The Siam Cement, PCL, WBCSD Electric Utilities) - Chemical industry (Indorama Chemicals PLC.) - Hotel (PEEK Case Studies for Hotel) - Real estate (Elevate)

¹ Details of these 8 steps are available in Lebanon Climate Act (LCA). The LCA program is organized by Green Mind in collaboration with the United Nations Development Program (UNDP), and with the support of the Lebanese Ministry of Environment and the Central Bank of Lebanon. Currently there are more than 150 non-state actors have joined the program (See <https://www.lebanonclimateact.com/>). The material contains guideline for private companies to self identify climate action plans to mitigate and adapt in respond to climate change.

Training methods and Topics	Contents	Breakdowns
	(hotels, restaurants) 6.Housing and real estate	
Lecture: Cases of advanced private companies responding to the climate-related risks and their practices of risk analysis & management. Cases of new business opportunities.	<ul style="list-style-type: none"> - Several advanced private companies from relevant industry will present actual case of climate-related risks analysis & management and development of new business. - Companies will be selected from 6 industrial sectors - Topics should cover a selected climate scenario, how to analyze the climate impacts to their business, climate impacts and risks to their business caused by climate change, measures to avoid/ minimize the climate risks, institutional arrangement for climate risks management and existing new business opportunities. 	For example for selecting advanced companies in Asia: <ul style="list-style-type: none"> - Agriculture (Charoen Pokphand Foods PLC.) - Manufacturing (Hitachi) - Energy (CLP Group) - Transport (ANA Group) - Hotel (One of the hotels participated in UNWTO's PEEK Project) - Real Estate (Heitman) The topics should follow the framework that was presented in the earlier lecture and use these 6 sectors as explicit examples.
Panel discussion: Challenges and barriers from advanced private companies in responding to the climate-related risks, conducting risk analysis & management and developing new business	<ul style="list-style-type: none"> - Several advanced private companies from relevant industry will present their challenges and barriers for conducting climate-related risks management and developing business opportunity (e.g. how to persuade top management, how to set parameters for climate-related risk analysis, how to develop the new climate business). 	<ul style="list-style-type: none"> - Each representative will have 2 rounds of presentation, 7 minutes for the risk management and opportunities. Another 3 minutes each for challenges and barriers. Then there should be about 15 minutes for questions and answer. - This will take not more than 1 and a half hour.

Day 2: Experiencing how to conduct climate-related risk analysis and management on the business against physical and transition risks

Training methods and Topics	Contents	Breakdowns
Lecture: Case studies of climate-related risk analysis and management	<ul style="list-style-type: none"> - Introduction of typical cases of climate-related risk analysis and management in industrial sectors (e.g. 1.Agriculture: food and forest industry 2.Manufacturing: energy intensive industries (cement, iron and steel, paper and pulp), low carbon or green industries (EVs, Solar cells) 	<ul style="list-style-type: none"> - It is appropriate to summarize the concept and important step of risk management and opportunities from the TCFD's "The Use of Scenario Analysis in Disclosure of Climate-Related Risks and Opportunities" for the participant again since participant will need them for doing their own exercise. - The summarized topics are: <ul style="list-style-type: none"> - Typical categories of climate-related risks and opportunities (Market technology shifts, Reputation, Policy and legal, and Physical risks)

Training methods and Topics	Contents	Breakdowns
	3. Energy and electricity 4. Transportation: railway/buses 5. Tourism and tourism-related services (hotels, restaurants) 6. Housing and real estate)	<ul style="list-style-type: none"> - Identify and define range of scenarios (parameters, assumptions, analytical choices, and impacts) - Evaluate business impacts (input costs, operation cost, revenues, supply chain, business interruption, timing) - Identifying potential response (e.g., changes to business model, changes to portfolio mix, Investments in capabilities and technologies)
Exercise: How to analyze and manage the climate-related risk to the business of private company	<ul style="list-style-type: none"> - Participants groups that represent different industrial sectors will be formulated - Participants are separated to 6 groups considering their business sector. - Virtual information of companies in 6 industrial sectors is delivered. - The following steps are conducted. <ul style="list-style-type: none"> • 2 climate scenarios are selected for analyzing future climate-related risk (ex. 2 degree and 4 degree scenario). • Condition of future world is clarified in selected scenario. • Impacts to a business of their industrial sectors is clarified considering transition and physical risks in selected scenarios. • Measures to avoid the risks are identified. • Through the climate-related risk analysis, seeds for new business or improving their own business are identified. • Presentation is prepared including the discussion results. 	<ul style="list-style-type: none"> - Identification of impacts, related risks (physical and transition risks), vulnerability or new business opportunities under 2 degree and 4 degree scenario of each sector. - Identify those impacts that are specific to the company and the indirect impacts through relevant supply chains. - Each group may use the documents and materials related to that sector as guidelines - Participants in each team brain storm to reduce, retain, and transfer risks. - Estimate the effectiveness of each risk management option and its related preliminary technology and investment requirements including the relevant operating costs so that these options can be ranked by net benefits. - Identify related challenges and barriers for the selected option and some possible remedies
Presentation Session: Each group explains the developed climate-related risk analysis and management	<ul style="list-style-type: none"> - Each group makes a presentation. - Lectures and resource persons provide feed backs. 	Each representative will have about 10 minutes to present. Then there should be about 15 minutes for questions and answer. So it should take not more than 1 and a half hour.

Day 3: Experiencing how to conduct climate-related risk management, especially using Flood BCP of Thailand

Training methods and Topics	Contents	Breakdowns
Lecture: Outline of BCP and case studies	<ul style="list-style-type: none"> - Necessity and benefits of BCP for private companies (such as protecting the business of company in fulfilling contractual obligations to customers and users which leads maintain and improve the company value) - Process of developing BCP for flood risk based on BCP guidebook such as Guidebook on SME Business Continuity Planning by APEC - Cases of BCP for flood risk in Thailand, other countries - This information should be the useful reference for the exercise of developing BCP. 	<ul style="list-style-type: none"> - BCP Purposes: <ul style="list-style-type: none"> - Protect people - business activities - recover with local community - BCP Framework - Prioritized Activities (PA) and Recovery Time Objective (RTO) - Necessary Resources for Prioritized Activities - Risk Assessment - Survival Strategies (Protection and mitigation, Emergency response, Continuity and recovery strategies) - Strategies for Early Resumption - Financial preparation - Exercising BCP
Exercise: How to develop BCP for the case of flood risk	<ul style="list-style-type: none"> - Participants are separated to 5 groups. - Virtual information of flood hazard information of Bangkok and company's preparation for flood is delivered. - The following steps are conducted. <ul style="list-style-type: none"> • Flood hazard information is collected. • Extent of damage (what, where) using flood hazard information and company's preparation for flood is estimated. • Prioritized activities are selected and Recovery Time Objective (RTO) is set. • Necessary resources (people, fund, information) are identified for conducting prioritized activities. • As BCP, the prioritized activities will be described with necessary resources (people, fund, information), expected schedule, and Recovery Time Objective (RTO). • Presentation is prepared including the discussion results. 	<ul style="list-style-type: none"> - Water level and duration including the hazard information from the previous 2011 flood will be used as a guideline - Each team assess the losses and damages under 3 scenarios: 1) same severity as 2011 level, 2) 50% severity, and 3) 150% severity - Identify activities and resources (investment, information, technology, consultant, man power) needed for <ul style="list-style-type: none"> 1) preventing or reducing the impact (e.g., dike construction, insurance), 2) handling the situation during the flood (e.g., equipment moving plan, alternative working sites, supply chain management during flooding), 3) recovering after the flood (e.g., reconstruction, production plan to catch up for the losses) - Expected schedule and Recovery Time Objective (RTO) are set. - Team member prepare the presentation

Training methods and Topics	Contents	Breakdowns
Presentation Session: Each group explains the developed BCP	<ul style="list-style-type: none"> - Each group makes a presentation. - Lectures and resource persons provide feed backs. 	Each representative will have about 10 minutes to present. Then there should be about 15 minutes for questions, answer, and feedback. So it should take not more than 1 and a half hour.