

**THAILAND GREENHOUSE GAS MANAGEMENT ORGANIZATION
(PUBLIC ORGANIZATION)
THE KINGDOM OF THAILAND**

**PROJECT FOR CAPACITY DEVELOPMENT
ON CLIMATE CHANGE
MITIGATION/ ADAPTATION
IN THE SOUTHEAST ASIA REGION**

**PROJECT ACTIVITY COMPLETION
REPORT**

JUNE 2016

JAPAN INTERNATIONAL COOPERATION AGENCY

ORIENTAL CONSULTANTS GLOBAL CO., LTD.

PACIFIC CONSULTANTS CO., LTD.

**INSTITUTE FOR GLOBAL ENVIRONMENTAL
STRATEGIES**

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- 4 Presentation materials at workshops
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Abbreviations

<i>Abbreviation</i>	<i>Description</i>
ADB	Asian Development Bank
AIM	Asia-Pacific Integrated Model
AIT	Asian Institute of Technology
APAN	Asia Pacific Adaptation Network
ASEAN	Association of South-East Asian Nations
AWGCC	ASEAN Working Group on Climate Change
BMA	Bangkok Metropolitan Administration
BUR	Biennial Update Reports
CCE	Climate Change Economics
CF	Climate Finance
C/P	Counterpart
CB	Capacity Building
CCSD	Climate Change Management for Sustainable Development
CD	Capacity Development
CDM	Clean Development Mechanism
CITC	Climate Change International Technical and Training Center
COP	Conference of the Parties
DEDE	Department of Alternative Energy Development and Efficiency
DFID	Department for International Development
DNA	Designated National Authority
EGAT	Electricity Generating Authority of Thailand
FECC	Financing and Economics of Climate Change
GCF	Green Climate Fund
GHG	Greenhouse Gas
GIO	Greenhouse Gas Inventory Office, Japan
ICEF	Innovation for Cool Earth Forum
IGES	Institute for Global Environmental Strategies
IMPAC-T	Integrated Study Project on Hydro-Meteorological Prediction and Adaptation to Climate Change in Thailand
INDC	Intended Nationally Determined Contributions
IPCC	Intergovernmental Panel on Climate Change
JCC	Joint Coordinating Committee
JCM	Joint Crediting Mechanism
JGSEE-KMUTT	The Joint Graduate School of Energy and Environment, King Mongkut's University of Technology Thonburi
JICA	Japan International Cooperation Agency
LCRS	Low Carbon and Resilient Society
LCS	Low Carbon Society
LoCARNet	Low Carbon Asia Research Network
MM	Mitigation Mechanism
MoC	Memorandum of Cooperation
MONRE	Ministry of Natural Resources and Environment, Thailand
MPWT	Ministry of Public Works and Transport, Lao PDR
MRV	Measurement, Reporting and Verification
NDC	Nationally Determined Contributions
NESDB	National Economic and Social Development Board
NIES	National Institute for Environmental Studies
NMT	National Municipality League of Thailand
OAE	Office of Agricultural Economics
ODA	Official Development Assistance

<i>Abbreviation</i>	<i>Description</i>
OECC	Overseas Environmental Cooperation Center
ONEP	Office of Natural Resources and Environmental Policy and Planning
PCD	Pollution Control Department
PDM	Project Design Matrix
PSU	Prince of Songkla University
R/D	Record of Discussions
REDD	Reducing Emissions from Deforestation and Forest Degradation
REO	Regional Environmental Office
RFD	Royal Forest Department
SDGs	Sustainable Development Goals
SIIT	Sirindhorn International Institute of Technology
TGO	Thailand Greenhouse Gas Management Organization
TNA	Training Needs Assessment
TOT	Train-on-Trainers
TRF	Thailand Research Fund
TTT	Train-the-trainers
T-VER	Thailand Voluntary Emission Reduction
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
WGIA	Workshop on Greenhouse Gas Inventories in Asia

Chapter 1 OVERVIEW

1.1 Project background

Southeast Asian countries are vulnerable to climate change. Despite their rapid economic growth and high potential in implementing climate change mitigation activities, developing countries in ASEAN (Association of South - East Asian Nations), namely Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Vietnam as well as the Kingdom of Thailand (hereinafter referred to as “Thailand”), still significantly require capacity development and assistance to address climate change and implement related activities effectively and in a timely manner.

Thailand Greenhouse Gas Management Organization (Public Organization) (hereinafter referred to as “TGO”) and Japan International Cooperation Agency (hereinafter referred to as “JICA”) jointly implemented the previous technical cooperation project named “The Project for Capacity Development and Institutional Strengthening for GHG Mitigation in the Kingdom of Thailand” (hereinafter referred to as “Phase I of the Project”) from 2009 to 2012. This project achieved its project purpose through such outcomes as enhanced knowledge and expertise of TGO staff on GHG mitigation, enhanced capacity level of TGO staff on training provision, and enhanced review and monitoring capacity of TGO staff on mitigation project.

During the Phase I of the Project, the need to further develop capacity of Thailand and ASEAN developing countries to collectively address climate change at the regional and international levels was recognized, and TGO proposed to establish the Climate Change International Technical and Training Center (hereinafter referred to as “CITC”) as a “one-stop training center” for capacity development on climate change for ASEAN and other interested countries. The proposal and its importance were discussed and acknowledged among representatives of ASEAN developing countries at the “ASEAN Meeting on GHG Mitigation and Low Carbon Society” in August 2011 in Thailand.

In light of the above situation, the Government of Thailand has requested Japan for technical cooperation that aims to further develop capacities related to climate change mitigation and adaptation for TGO and related stakeholders in Thailand and ASEAN countries. Upon this request, JICA dispatched Japanese Preparatory Study Team to Thailand in August 2012 where both parties discussed the details of technical cooperation. As a result of the discussions, Record of Discussions (R/D) was agreed and signed by both parties on 21 December, 2012, and the implementation of the

technical cooperation project, “Project for Capacity Development on Climate Change Mitigation/ Adaptation in the Southeast Asia Region” (hereinafter referred to as the “Project”) was agreed.

Oriental Consultants Co., Ltd., Pacific Consultants Co., Ltd., and Institute for Global Environmental Strategies (IGES) were appointed by JICA to organize and dispatch experts to Thailand to work as JICA Expert Team to implement the Project.

This Project Activity Completion Report describes conducted activities and delivered achievements through the Project, and also analyzes the level of achievement for each defined Project output.

1.2 Project objective

Main objective of the Project is to enhance capacities of TGO as an implementing entity of CITC, with a view of realizing sustainable functioning of CITC.

Overall goal and purpose of the Project have been agreed through the preparatory study as the followings (see Table 1.1 for the latest Project Design Matrix):

Overall Goal

The Climate Change International Technical and Training Center (CITC) is acknowledged as a training center of climate change in the ASEAN region and function as networking platform.

Project Purpose

Capacities of TGO as focal point of CITC are enhanced with programs in response to the needs of stakeholders in Thailand and ASEAN developing countries.

Outputs

1. CITC is prepared for establishment through collaboration among TGO and relevant organizations.
2. Trainings of mitigation and adaptation are conducted by TGO and Thai stakeholders.
3. Capacity development program on mitigation and adaptation are shared among ASEAN countries.

Table 1.1 Project Design Matrix (PDM)

The Project for Capacity Development on Mitigation/ Adaptation for Climate Change in the Southeast Asia Region

PDM version 1 (21 June 2014)

Target area: Thailand and ASEAN developing countries

Target group: TGO, Government agencies related to Climate Change

Cooperation period: 2013- 2016, 3 years

Narrative summary		Indicators	Means of verification	Important assumption
Overall goal				
The Climate Change International Technical and Training Center (CITC) is acknowledged as a training center of climate change in the ASEAN region and function as networking platform.		Regional trainings and seminars responding to the needs of ASEAN developing countries are sustainably conducted by the CITC.	Participants' evaluation sheets of the trainings and seminars.	ASEAN developing countries utilize the CITC for their own capacity building in further implementing Climate Actions.
Project purpose				
Capacities of TGO as focal point of CITC are enhanced with programs in response to the needs of stakeholders in Thailand and ASEAN developing countries.		Systems of training management, knowledge and logistics for CITC are established. Cooperation of related organizations is sustained for development and implementation of training programs.	Progress Report of the Project.	Thai government continues support of the CITC by securing budget and seeks strategic partners to sustain and expand activities.
Outputs				
1.	CITC is prepared for establishment through collaboration among TGO and relevant organizations.	<ul style="list-style-type: none"> • Structure of the CITC, mission statement and budget are described in CITC document. • Website-based knowledge platform for information dissemination is established. • Training materials (textbooks in Thai and English) are prepared for selected training courses. 	<ul style="list-style-type: none"> • The CITC business plan • Number of literatures/ documents uploaded on CITC website. • Training materials for selected training courses. 	<ul style="list-style-type: none"> • Related Thai government organizations sustain the support of climate change policy and coordinate with ASEAN developing countries. • ASEAN developing countries participate trainings, and collaborate by providing experiences of their own

2.	Trainings of Mitigation/ Adaptation are conducted by TGO and Thai stakeholders.	<ul style="list-style-type: none"> Trainers are developed for selected courses. At least 70% of trainees are satisfied (80% evaluation score) about course contents. 	<ul style="list-style-type: none"> Trainer database. Evaluation sheets of participants Record of training contents and participants 	countries.
3.	Capacity development program on Mitigation/ Adaptation are shared among ASEAN countries.	<ul style="list-style-type: none"> Seminar/ workshop/ training is conducted for ASEAN developing countries 	<ul style="list-style-type: none"> Progress Reports of the Project Reports of seminar/ workshop/ training 	
Activities		Inputs from Japan	Inputs from Thailand	Precondition
1-1	Set-up institutional framework of the CITC.	<p>Long-term and Short-term experts on specific technical issues</p> <p>1) Team Leader</p> <p>2) LCS</p> <p>3) Mitigation</p> <p>4) Adaptation</p> <p>5) GHG Inventory</p> <p>6) Curriculum development and training management</p> <p>Local consultants (curriculum development, etc.)</p> <p><Machinery and equipment> Scanner, notebook, LCD projector, electronic active board, video camera, TV monitor, and training equipment such as analytical tools where needed.</p> <p><Training> Trainings in Japan. Part of necessary expenses for trainings in Thailand, meetings and operation cost for activities identified in the Project.</p>	<p>1) Project Director</p> <p>2) Project Manager</p> <p>3) Project Coordinator</p> <p>4) Relevant counterparts</p> <p><Office space and facilities> Office space in TGO Training facility</p> <p><Operational cost> Necessary expenses for local trainings, meetings and operation cost for activities identified in the Project.</p>	Stakeholders in Thailand as well as in ASEAN developing countries acknowledge to the CITC concept.
1-2	Conduct needs assessment on target groups in Thailand (governments, and non-governments) and ASEAN focal points of climate change.			
1-3	Identify training resources by coordinating stakeholders in Thailand and ASEAN developing countries depending on the themes			
1-4	Develop curriculum (with Thai stakeholders or with international stakeholders depending on the themes)			
1-5	Strengthen Information management system by developing information knowledge platform and website			
2-1	Conduct trainings on selected topics for related stakeholders.			
2-2	Develop trainers through train the trainers (TTT) activities			
3-1	Develop training courses for ASEAN developing countries based on the needs assessment.			
3-2	Organize workshops to share knowledge and experience on climate change with focal persons of climate change in ASEAN developing countries			

1.3 Project implementation approach

TGO and JICA Expert Team took into full consideration the following implementation approaches of the Project so that TGO will be able to continuously and self-reliantly operate CITC after completion of the technical cooperation project.

1) Assistance for capacity development

In order for TGO, as a responsible agency for operation and management of CITC, to be able to continuously and self-reliantly operate and manage CITC after the completion of the Project, JICA Expert Team provided technical advice and support to TGO.

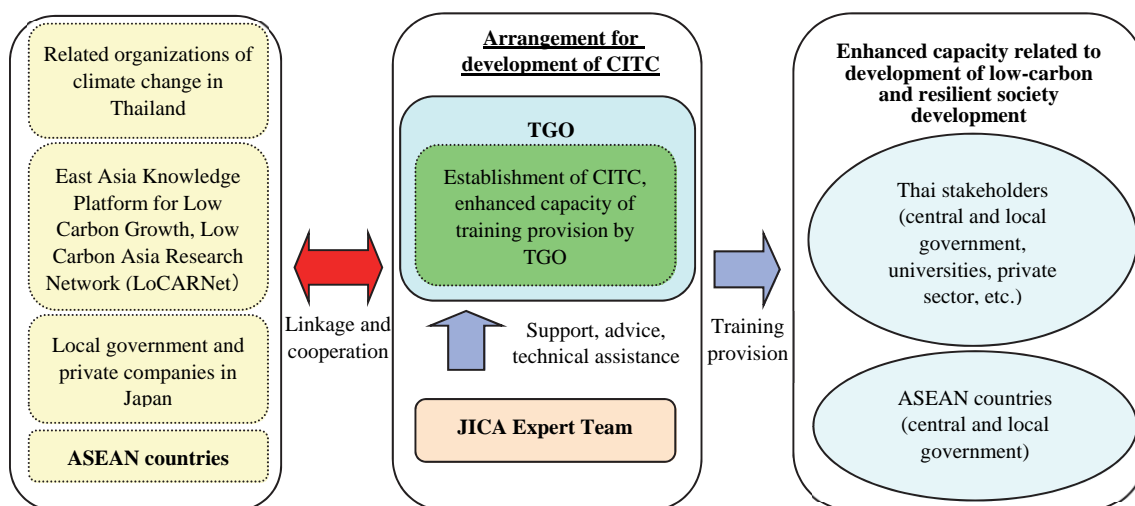


Figure 2.1 Concept of technical cooperation

2) Capacity assessment

In the course of the Project, JICA Expert Team, through discussions with TGO, conducted capacity assessment in order to effectively and efficiently achieve the capacity development. Through the capacity assessment, JICA Expert Team identified the points of TGO's capacity that had a room for further improvement, and established the capacity goal.

3) Training needs assessment for CITC training program

Training needs assessment (TNA) for prospective participants of training courses was conducted under the Project to identify training needs of main target groups of CITC training programs, with initiative by TGO.

Based on identified training needs, TGO and JICA Expert Team jointly prepared

training curriculum and training materials. JICA Expert Team conducted technical capacity development for TGO so that TGO will be able to continuously develop and update CITC training curriculums by themselves.

4) Implementation of “Training the trainers (TTT)”

“Train the trainers (TTT)” activities were conducted for some training courses as a mean of capacity development of trainers from TGO and other related organizations.

5) Sustainable management of CITC

Taking into full account CITC is positioned as the flagship project under MONRE, TGO and JICA Expert Team jointly implemented the Project, with technical transfer from JICA Expert Team to TGO.

6) Impact of the Project

With aim to promote low carbon and resilient society development and implementation of climate change mitigation and adaptation measures in Thailand, TGO and JICA Expert Team invited training participants from central and local governmental agencies in charge of planning and implementation of climate policies and measures in Thailand. Such efforts were made in prior to implementation of training, based on network of CITC.

TGO and JICA Expert Team actively promoted CITC at various international, regional, and bilateral meetings and conferences so that the CITC is acknowledged as a training center of climate change in the ASEAN region and function as a networking platform. Such promotion activities led to establishment and strengthening of CITC’s networks.

Also, JICA Expert Team and JICA long-term expert assisted TGO to hold a COP side event and attend regional conferences, as well as invited representatives to CITC workshops from international organizations such as UNFCCC Secretariat, UNDP, and ASEAN Secretariat.

7) Collaboration with relevant institutions in Thailand, ASEAN countries and international institutions

a) Collaboration with Thai institutions

JICA Expert Team assisted TGO to enhance collaboration and cooperation with various relevant institutions including central and local governmental agencies that

are involved in planning and implementation of climate change mitigation and adaptation measures, as well as academic institutions in Thailand.

b) Collaboration with institutions related to climate change in ASEAN countries and international institutions

TGO and JICA Expert Team made close consultation on CITC training curriculum development and training materials development with researchers in Thailand and other ASEAN countries including those from “Low Carbon Asia Research Network (LoCARNet)” who have abundant expertise on issues related to climate change.

In parallel, JICA Expert Team assisted TGO to strengthen networks with relevant institutions in Japan and international institutions through CITC trainings and international conferences as well as technical training program in Japan.

c) Collaboration and coordination with other JICA projects in climate change field in ASEAN countries

TGO and JICA Expert Team utilized expertise and experiences from the following climate change-related JICA projects in Thailand and other ASEAN countries for CITC trainings and workshops:

- The Project for Bangkok Master Plan on Climate Change 2013-2023 in Bangkok, Thailand
- Integrated Study Project on Hydro-Meteorological Prediction and Adaptation to Climate Change in Thailand (IMPAC-T) as a successful Thai-Japanese joint climate change adaptation research project
- JICA/ JST joint Science and Technology Research Partnership for Sustainable Development program (SATREPS) under “the Project for Development of Low Carbon Society Scenarios for Asian Regions” in Iskandar, Malaysia

8) Promotion activities on CITC

Promotion activities were carried out to effectively disseminate the information of CITC as well as the Project to the related organizations in Thailand, ASEAN countries and international organizations. With the strong initiatives of TGO, various media were used such as CITC website and information platform, TGO and CITC newsletters, TGO’s YouTube channel called Climate Change Channel,

and press conferences.

Also, TGO conducted promotion activities with close cooperation with JICA long-term expert for establishment of network with stakeholders in climate change field in ASEAN countries and international institutions, at COP side events and ASEAN conferences.

Chapter 2 ACHIEVEMENT OF THE PROJECT

2.1 Activity 1: Preparation for establishment of CITC

2.1.1 Establishment of institutional framework of CITC

TGO Capacity Building and Outreach Office (hereinafter referred to as “CB Team”) with support from JICA Expert Team developed Business Plan that defines institutional and implementation framework of CITC. Business Plan was developed in English language.

Structure and outline of Business Plan is shown in Table 2.1.

Table 2.1 Components of CITC Project Document

Chapter	Component	Outline
1	Introduction	Background of establishment, CITC’s vision and missions
2	Organization Structure/ CITC Management	Organizational structure and role of each division
3	Characteristics of Services and Business Model	Description of services, business model, knowledge clusters
4	Strategic Plan	Strategic growth plan
5	Marketing Plan	Target group analysis, value analysis
6	CITC Activity Plan	Activities of CITC
7	Financial Management	Training cost analysis and financial management

In the course of development of Business Plan, TGO and JICA Expert Team had a series of meetings and discussions on various contents including:

- Process for training center establishment
- Role, responsibilities and qualifications of training managers
- Strategy setting and management, marketing and PR strategy
- Resource management, organizational arrangement, collaboration and partnership for financial and operation management, logistic arrangements and process for resource person arrangement
- Training of trainers and staff training
- Approach for quality management and training evaluation
- Development of a business model for institutional management with consideration from financial viewpoint (collection of training fee and arrangement for appropriate training fee collection method etc.)
- Brand value creation and effective PR/ marketing plan/ strategy development for CITC as an appealing training center with advantage over other competing training centers

In addition, JICA Expert Team conducted a questionnaire survey and interviews for training related institutions in Japan i.e. JICA Headquarters, IGES and Overseas

Environmental Cooperation Center (OECC). Collected information was shared with TGO for further consultation. Also, JICA Expert Team collected information related to activities by training institutions and donor institutions in other countries and shared the information with TGO.

TGO also utilized an opportunity of trainings in Japan (details will be described in 2.2.2 Implementation of training in Japan) to learn expertise and experiences by training institutions in Japan

The Business Plan was first shared among stakeholders at the 1st JCC meeting in September, 2013. The document was revised based on the comments received by JCC members, and shared and approved at the 3rd JCC meeting in February 2015 as “CITC Business Plan: 5 years plan (2015 – 2019).”

2.1.2 Needs assessment in Thailand and ASEAN countries

TGO and JICA Expert Team, through a series of discussions, defined steps to be taken to develop and update CITC training programs and training materials as shown in Figure 2.1.

Training Needs Assessment (TNA) is one of the first important steps of CITC’s training curriculum development processes. To analyze and identify effective TNA approach and methodology for the upcoming CITC training programs, TGO and JICA Expert Team conducted a series of meetings and discussions.

Table 2.2 and Table 2.3 summarize the outline and the result of TNA activities conducted during the Project period, each of which was principally conducted under the strong commitment by TGO. For each of the TNA activities below, planning and preparation of TNA meeting or workshops, development of questionnaires, arrangement for TNA meetings and workshops, analysis of TNA results were made with initiative by TGO, and JICA Expert Team provided technical advices.



Photo 2.1 Discussion on TNA method

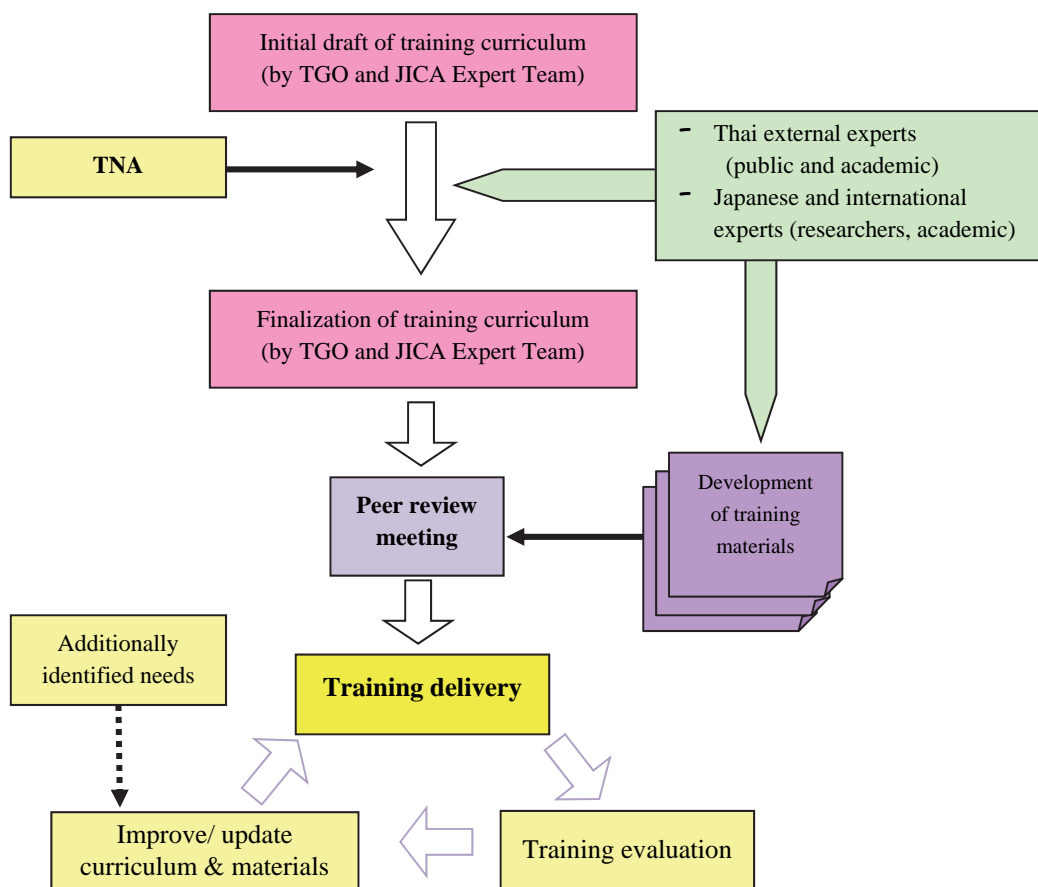


Figure 2.1 Steps of CITC training program development

Table 2.2 Outline and result of TNA activities (for Thai stakeholders)

Training Cluster	Main target group of training	Target group of TNA	TNA method	Identified training needs, feedbacks from TNA participants
GHG Inventory Management	Thai central government (implementers)	DEDE, EGAT, OAE, JGSEE, DIW, PCD and academic institutions	Questionnaire survey (Aug 2013) Workshop (Nov 2013)	<ul style="list-style-type: none"> - Challenge in each institution side - Goal of CITC training - Identification of training resources - Importance of exercises and field visits
Low Carbon Society Development	Central government (policymakers and implementers)	ONEP, DEQP, RFD, DNP, DMCR, REO, OTP, OAE, private sector, academic institutions, etc.	Questionnaire survey (June, 2013) Stakeholder conference (September 2013)	<ul style="list-style-type: none"> - Training needs on strategy, planning, financial arrangement, human resource development framework for Thai stakeholders on climate change issues - Participants have good basic understanding of calculation of GHG emission amount, mitigation potential assessment, decision making and policy management on climate change policy and low-carbon and climate-resilient urban development.

Training Cluster	Main target group of training	Target group of TNA	TNA method	Identified training needs, feedbacks from TNA participants
	Local government (local leaders and practitioners)	Municipalities, academic institutions	Participatory workshop (August 2013)	<ul style="list-style-type: none"> - Challenges in each institution side and training needs (lack of communication, political will and necessary resources) - Identified target groups; media, local leaders, municipality officials (policymakers and practitioners) and academic institutions - Objective and contents of CITC training (outline of LCRS, best practices, importance and tools of communication, and LCRS planning method and tools)

Table 2.3 Outline and result of TNA activities (for ASEAN stakeholders)

Cluster	Main target group of training	Target group of TNA	TNA method	Identified training needs, feedbacks from TNA participants
GHG Inventory Management	ASEAN stakeholders	Representatives from central government and academic institutions in ASEAN countries	Workshop and questionnaire survey (Aug 2014)	<ul style="list-style-type: none"> - Training needs on sustainable and low-carbon city development including GHG inventory management by local government - Necessity in technical support on data collection and institutional capacity for Non-Annex I Parties - Training needs on basic environment concepts and economics of climate change projects and energy data development - Training needs on improvement in adequateness and accuracy of information and activity data, local emission factors - Training needs on continuous data verification and validation, development of system for complete GHG inventory data collection and country-specific emission factors management, supporting database development and further collaboration among relevant agencies - Training needs on national inventory system development and continuous operation
Climate Change Management for Sustainable Development (formerly titled Low Carbon and Resilient Society) Development	ASEAN stakeholders	Representatives from central government and academic institutions in ASEAN countries	Workshop and questionnaire survey (May 2014)	<ul style="list-style-type: none"> - Training needs on training and public awareness raising efforts at national level, improved dissemination activities on related knowledge and experiences of climate change and strengthening of climate change research network among academia, scientists and researchers - Training needs on knowledge dissemination and improvement of understanding targeted for all levels of stakeholders especially director-class

Cluster	Main target group of training	Target group of TNA	TNA method	Identified training needs, feedbacks from TNA participants
				central government officials and local government practitioners
<p>Climate Change Management for Sustainable Development</p> <p>(formerly titled Low Carbon and Resilient Society Development)</p>	ASEAN stakeholders	Central and local government, academic sector from ASEAN countries	<p>Workshop (June 2015)</p> <p>Questionnaire survey</p>	<p>[target group]</p> <ul style="list-style-type: none"> - Importance of target group selection (central government and local government) - Set qualification of trainees <p>[training topic]</p> <ul style="list-style-type: none"> - Prioritize topics among broad range of cross-cutting issues - Should focus more on adaptation, in which ASEAN countries are very interested - In addition to the topics that suit national circumstance, should cover common issues in the southeast Asian region - Cover practical topics that can be applied by trainees - Should conduct TNA in each country and identify country-specific training needs <p>[training approach]</p> <ul style="list-style-type: none"> - Spend more time on case studies and good practices - Exercise is important and effective: the theme should be based on national or local circumstance - Should conduct TTT so that trainees will act as a trainer back in their country
Mitigation Mechanism	ASEAN stakeholders	Central and local government, academic sector from ASEAN countries	<p>Workshop (June 2015)</p> <p>Questionnaire survey</p>	<p>[training topic]</p> <ul style="list-style-type: none"> - Should clearly show the linkages with SDGs during training - Should spend longer time in mitigation technology session - Should introduce mitigation technology that meets national condition and needs - MRV issue is important - Non-infrastructure mitigation approaches such as awareness raising is important - Should cover REDD topic - In addition to good practice, people can learn from unsuccessful cases and failures - Adaptation has higher priority than mitigation <p>[training approach]</p> <ul style="list-style-type: none"> - Wide range of topics are all important and should be covered by any way such as

Cluster	Main target group of training	Target group of TNA	TNA method	Identified training needs, feedbacks from TNA participants
				<ul style="list-style-type: none"> dividing into parallel training sessions - Site visit is highly effective for trainees from local government
Climate Finance	ASEAN stakeholders	Central government and academic sector from ASEAN countries, local government, private sector and financial institutions in Thailand	Workshop (October 2015) Questionnaire survey	<p>[target group]</p> <ul style="list-style-type: none"> - The theme is for advanced trainees who have already basic knowledge on climate change science and economics - Targets should include local government and private sector as well - Suitable for chamber of commerce or industrial associations as well - Financial institutions and finance-related government agencies should attend <p>[training topic]</p> <ul style="list-style-type: none"> - Should cover wider topics from the perspective of finance to achieve low carbon society and sustainable development - Should generate tangible outputs - Should add a lecture or exercise session that introduces how to write a proposal to access climate finance/ funds - Should take more time for case studies - Should conduct TNA in each country and identify country-specific training needs <p>[training approach]</p> <ul style="list-style-type: none"> - Both lectures and exercise sessions should be included - Mutual learning approach is effective rather than one-way lecture style training - Should allocate interpreters for non-English speakers



Photo 2.2 TNA Workshop (left: CCSD course, right: CF course)

2.1.3 Identification of training resources

It is imperative for CITC to establish and maintain collaborative networks with external

organizations and individuals in order to effectively design and sustainably operate training programs for a variety of stakeholders in Thailand and ASEAN countries on many topics related to climate change mitigation and adaptation.

TGO, JICA Long-term Expert, and JICA Expert Team continuously identified and established networking and partnership with various domestic and international organizations and individuals who are involved in various stages of training program development. Such organizations vary from governmental agencies and academic sector in Thailand, international organizations to private sector as shown in the Figure below.

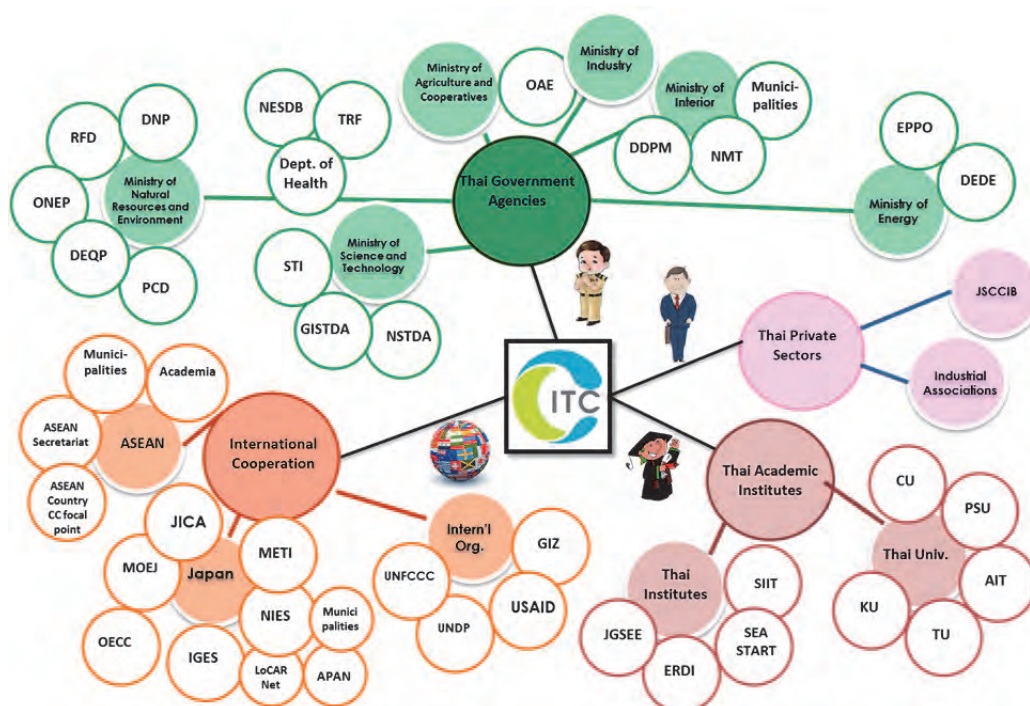


Figure 2.2 CITC networks as of May 2016

Various types of collaboration approaches have been and will continuously be taken with such organizations under CITC capacity building activities, including:

- Input on training needs information
- Assistance on training curriculum development and update
- Assistance on training materials development and update
- Input on peer review on training curriculum
- Provision of lecture and presentation at a CITC training and workshop
- Co-hosting training and workshop with CITC
- Provision of venue and facilities for CITC training and workshop

To further establish and strengthen CITC networks, TGO and JICA long-term expert attended and promoted CITC in various occasions of domestic, regional, and international

meetings and conferences as listed below.

Table 2.4 Conferences and meetings for CITC networking and promotion

Name of conference/ meeting	Period	Place
LoCARNet Annual Meeting at ISAP	Jul 2013	Yokohama, Japan
Asia LEDS* Forum * Low Emission Development Strategies	Sep 2013	Manila, Philippines
Thailand Climate Change Adaptation Expo	Sep 2013	Bangkok, Thailand
2 nd Green Mekong Forum	Oct 2013	Bangkok, Thailand
Symposium organized by LoCARNet/UTM	Oct 2013	Johor Bahru, Malaysia
3 rd Green Economy and Green Growth (GEGG) Forum	Nov 2013	Yangon, Myanmar
Meeting with ASEAN Secretariat Meeting with DNPI and KLH, Indonesia	Feb 2014	Jakarta, Indonesia
Capacity-Building Workshop on Low Carbon Development Policies for Cambodia, Lao PDR and Myanmar	Feb 2014	Phnom Penh, Cambodia
5 th ASEAN Working Group on Climate Change (AWGCC)	Apr 2014	Jakarta, Indonesia
6 th International Forum for Sustainable Asia and the Pacific (ISAP)	Jul 2014	Yokohama
Meeting with Ministry of the Environment, Japan and OECC	Jul 2014	Tokyo
12 th Workshop on Greenhouse Gas Inventories in Asia (WGIA12)	Aug 2014	Bangkok Thailand
Workshop on Capacity Development Role for GHG Inventory Preparation in ASEAN countries: How can trainings facilitate to breakthrough the barriers on GHG inventory preparation?	Aug 2014	Bangkok Thailand
Southeast Asia Network of Climate Change Offices (SEAN-CC) Climate Finance Workshop	Aug 2014	Bangkok Thailand
Meeting with MONRE, MAF, MPWT and JICA Laos office	15-16 Sep 2014	Vientiane, Lao PDR
Meeting with Prof. Yamamoto, Vice President of AIT	23 Sep 2014	Pathumthani, Thailand
Asia-Pacific Climate Change Adaptation Forum 2014	1-3 Oct 2014	Kuala Lumpur, Malaysia
UNEP Training Workshop on IPCC Greenhouse Gas Inventory Guidelines	9-10 Oct 2014	Singapore
Low Carbon Technology Workshop	16 Oct 2014	Bangkok, Thailand
MONRE's press conference event (Introduction of CITC)	27 Oct 2014	Bangkok, Thailand
Low Carbon Society Development – Climate Technology Supporting Policy	30 Oct 2014	Hanoi, Vietnam
Meeting with MOEJ, Tokyo Metropolitan Gov't and OECC	5-7 Nov 2014	Tokyo, Japan
Asia LEDS Forum 2014	11-13 Nov 2014	Yogyakarta, Indonesia
ODA 60th Anniversary Seminar	24 Nov 2014	Bangkok, Thailand
LoCARNet 3rd Annual Meeting 2014	25-26 Nov 2014	Bogor, Indonesia
COP20 side event “Climate Change Capacity Development Activities in Southeast Asia Regions: Enhance Capacity through the CITC”	2 Dec 2014	Lima, Peru
Low Carbon Technology Workshop	27-28 Jan 2015	Bangkok, Thailand

Name of conference/ meeting	Period	Place
The 4th (Green Economy and Green Growth) GEGG Forum	3-4 Feb 2015	Nay Pyi Taw, Myanmar
Meeting with Hat Yai Municipality and Prince of Songkla University	9 Feb 2015	Hat Yai, Thailand
Joint Crediting Mechanism Workshop	17 Feb 2015	Bangkok, Thailand
Bangkok Regional Workshop on Low Carbon Technology Transfer and Diffusion	2-3 Mar 2015	Bangkok, Thailand
The 6th ASEAN Working Group on Climate Change, AWGCC	12-13 May 2015	Vientiane, Lao PDR
Collaboration with National University of Laos	12 May 2015	Vientiane, Lao PDR
Bonn Climate Change Conference 2015 (SBI42/ SBSTA42/ ADP2-9)	1-11 Jun 2015	Bonn, Germany
The 13th Workshop on GHG Inventories in Asia	5-7 Aug 2015	Bali, Indonesia
Taking Stock and Looking Ahead: Using Technologies to Address Climate Change	26-27 Aug 2015	Manila, Philippines
Enhancing action for a better response to climate change toward COP 21 and beyond workshop for Cambodia, Lao PDR and Myanmar	21 Sep 2015	Phnom Penh, Cambodia
ICEF 2 nd Annual Forum 2015	7-8 Oct 2015	Tokyo, Japan
LoCARNet 4th Annual Meeting 2015	11-13 Oct 2015	Johor Bahru, Malaysia
COP21 Side Event "Sustainable Development And Climate Change :Toward Enhancing The Role Of Capacity Development For Implementation Of INDCs In The ASEAN Countries "	3 Dec 2015	Paris, France
Meeting with Indonesian Ministry of Environment and Forestry, ASEAN Secretariat, JICA Indonesia	Jan 2016	Jakarta, Indonesia
Signing of MoC between CITC and municipality of Huay Kaw Kum on capacity building and outreach to support low carbon city development	11 Feb 2016	Huay Kaw Kum, Thailand
Sustainable Energy & Technology Asia (SETA2016)	23 Mar 2016	Bangkok, Thailand
Enhanced Cooperation: Asia-Pacific Forests and Climate Change Capacity Building	12 May 2016	Bangkok, Thailand

2.1.4 Development of training curriculums and training materials

TGO and JICA Expert Team jointly developed CITC training programs (curriculums) for Thai and ASEAN stakeholders following the steps for CITC training program development (see Figure 2.2).

Both sides discussed topics to be covered by CITC training courses that will lead to the achievement of CITC's vision and missions as defined in the Business Plan, and identified 4 themes (clusters) as described in the table blow.

Table 2.5 Overview of CITC training clusters

Theme (Training cluster)	Overview and objective
GHG Inventory Management	<ul style="list-style-type: none"> - Institutional arrangement for collection of data related to GHG emission/ absorption sources/ amount and GHG emission reduction/ absorption potential in an appropriate manner. - Approach for GHG inventory development and management aiming for the preparation of National Communication and Biennial Update Report (BUR) submitted to UNFCCC.
Climate Change Management for Sustainable Development (CCSD)*	<ul style="list-style-type: none"> - Method for Low Carbon and Resilient Society (LCRS) development and good practices for promotion of LCRS including both climate change mitigation and adaptation topics.
Mitigation Mechanism (MM)	<ul style="list-style-type: none"> - Domestic and international schemes and initiatives for project/ program implementation for low-carbon development.
Financing and Economics of Climate Change (FECC)*	<ul style="list-style-type: none"> - Approach for consideration of economic and financial arrangement for related policies and measures of sustainable LCRS development. - Current nature and variety of climate financing opportunities and the types of climate mitigation/ adaptation projects that they can support.

* Name of the training clusters was changed from “Low Carbon and Resilient Society Development (LCRS)” to Climate Change Management for Sustainable Development (CCSD), and from “Sustainable GHG Management” to “Financing and Economics of Climate Change (FECC).”

Each of the above training clusters contains several training courses that are customized specifically for training target groups. Table below shows training courses that were developed during the Project period. (See 2.2.1 “Low Carbon and Resilient Society Development (LCRS)/ Climate Change Management for Sustainable Development (CCSD) cluster” and 2.3.2 “Implementation of trainings for ASEAN countries” for training programs.)

Table 2.6 List of CITC training programs

Training cluster	Target group/ training name
GHG Inventory Management (GHGI)	Thai Central government implementers*
Climate Change Management for Sustainable Development (CCSD)	Thai Central government directors
	Thai Central government practitioners
	Thai Local government executives
	Thai Local government practitioners
	ASEAN stakeholders
Mitigation Mechanism (MM)	Thai stakeholders*
	ASEAN stakeholders
Financing and Economics of Climate Change	“Climate Change Economics” for Thai central government*
	“Climate Finance (CF)” for ASEAN stakeholders

* Program was developed mainly by TGO and external Thai experts

TGO and JICA Expert Team discussed and defined the concept of training materials for CITC courses as well as a share of related workload and cost between two sides. Based on consultation between both sides, it was confirmed that training materials include presentation (PowerPoint) materials for each lecture/ session and a textbook of each training course, which includes comprehensive and systematic description of the contents to be covered in each training course.

These two types of training materials were developed by TGO and JICA Expert Team, with support from experts from academic and research institutions in Thailand, Japan and international organizations that have extensive expertise in policy planning and implementation of climate change mitigation and adaptation.

Throughout the course of textbook development, technical officials of TGO showed a strong initiative including defining the table of contents, coordinating with external experts, checking the contents and revising, and editing and designing of the document. JICA Expert Team provided advices from technical and management perspectives.

Developed training materials are submitted as Technical Cooperation Outputs 2 (data submission only).

2.1.5 Strengthen information management system

1) Update of CITC portal website

TGO has established CITC's official website as a portal for 1) information dissemination on CITC activities including training programs and various events, 2) information sharing with stakeholders in Thailand and ASEAN countries, 3) knowledge portal on climate change mitigation and adaptation, and 4) networking platform.

TGO had already developed CITC portal website (<http://citic.in.th/>), which currently contains the following information:

- CITC objectives and missions, background information based on the Business Plan
- Overview of CITC training programs and event schedule
- Announcement on CITC events and presentation materials used for each event (e.g. COP side event and ASEAN workshops, report of various CITC training courses)



Photo 2.3 CITC Portal webpage

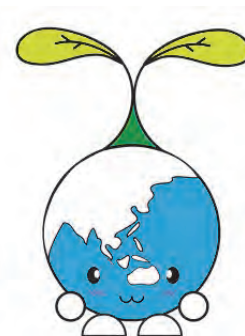


Figure 2.4 "Khun Earth" (CITC official mascot character)

- Videos of the events and interviews (through Climate Change Channel on YouTube)
- PR documents and leaflets for general public utilizing “Khun Earth,” an official mascot character of CITC

2) Development of CITC e-learning system

TGO had developed CITC e-learning system by developing and reviewing a system design plan, mainly focusing on the following components:

- Data management and server management system
- Quality control and user acceptance test (UAT)
- User role management
- Course management (reporting system, curriculum revision)
- Exercise function



Photo 2.4 Discussion on e-learning

TGO then finalized e-learning system that contains strengthened functions on course management system and user interface design. TGO launched a pilot workshop of e-learning course on Climate Change Economics for Prince of Songkla University.

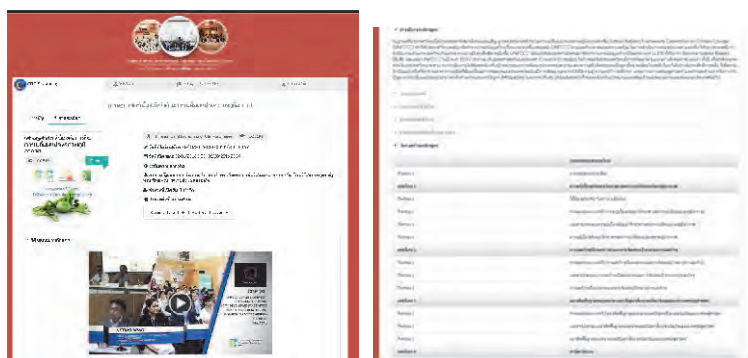


Figure 2.5 CITC e-learning interface (Left: Portal site, Right; Curriculum)

2.2 Activity 2: Implementation of trainings for Thai stakeholders

TGO and JICA Expert Team conducted trainings for various Thai stakeholders based on the developed training curriculums.

Table 2.7 shows the outline of all domestic trainings conducted during the Project period. 10 training courses, including those conducted solely by TGO without support from the Project, were held, in which total of 520 participants attended and 107 trainers were trained through train-the-trainers (TTT) activity.

Table 2.7 Outline of CITC trainings conducted during the Project period

Training course title	Targets	Date	Attendants	
			Participants	Trainers
Greenhouse Gas Inventory Management (GHGI)*	Central government practitioners	Aug-Sep 2014/ May 2015/ July 2015	143 (total of 3 trainings)	19
Low Carbon and Resilient Society Development (LCRS)	Local government practitioners	Dec 2014	38	33
Climate Change Economics (CCE)*	Central government	Mar 2015/ May-June 2015	61 (total of 2 trainings)	13
Low Carbon and Resilient Society Development (LCRS)	Local government executives	Mar 2015	59	-
Low Carbon and Resilient Society Development (LCRS)	Central government directors and practitioners	Sep 2015	37	-
Mitigation Mechanism (MM)*	Central government practitioners, academic institutions and private	Sep 2015	88	42
Climate Change Management for Sustainable Development (CCSD)	Central government, local government, academic institutions and private	Jan 2016	94	-
Total			520	107

* Training courses indicated (*) were principally developed by TGO and Thai external experts.

This clause describes outline and result of the 4 training courses that had received support from the Project in curriculum development as well as training operation and management in a chronological order.

1. “Low Carbon and Resilient Society Development (LCRS) for Local government practitioners” (17 – 19 December 2014) and its TTT program (22 – 23 December 2014)
2. “Low Carbon and Resilient Society Development (LCRS) for Local government executives” (5 – 6 March 2015)
3. “Low Carbon and Resilient Society Development (LCRS) for Central government directors and practitioners” (31 August – 2 September 2015)
4. “Climate Change Management for Sustainable Development (CCSD) for Thai stakeholders” (20 – 22 January 2016)

2.2.1 Low Carbon and Resilient Society Development (LCRS)/ Climate Change Management for Sustainable Development (CCSD) cluster

1. Training for local government practitioners

CITC training for Thai local government practitioners was conducted under the training name “Leadership Program on Low Carbon and Resilient Society (local government)” on 17 – 19 December, 2014. The training was held in Buddy Oriental Riverside Hotel in Nontaburi near Bangkok. All the training arrangement and implementation of training was carried out by TGO with the support from JICA Expert Team.

The total number of participants was 38. Trainees come from municipalities throughout Thailand, most of who were practitioner-level municipality officers belonging to environmental section dealing with environmental issues such as waste and wastewater management of their municipality. The training also had participation from regional environmental offices (REO) and academic institutions.

The training approach taken at this training was a mix of lecture and exercise sessions. Significant amount of time was allocated for exercise sessions in order to enhance understanding of trainees on the perspective of climate change mitigation and adaptation as well as to enhance networking among trainees.

Training program as shown in the table below aims to cover comprehensive topics related to mitigation and adaptation. In the course of identification and selection of training topics, TGO and JICA Expert Team extensively consulted Thai and international experts using the established networks. Aside from the training topics, the program also aims to attract trainees and provide trainees with something useful and practical to their work. In order to achieve this aim, throughout the training, easy terminology and beginner-level concepts were used and also various case studies and good practices in Thailand and abroad including Japan were presented.



Photo 2.5 Training: LCRS for local government



Photo 2.6 Training: LCRS for local government

Table 2.8 Training program of LCRS for local practitioners course

Day	From	To	Topic	Overview	Lecturer	Time
Day 1	8:30	9:30	Registration and pre-test	All trainees are requested to take a Pre-test		
	9:30	9:45	Welcome remarks		Dr. Jakkaniit Kananurak, TGO	
	9:45	10:15	Opening remarks	Dr. Natarika Wayuparb, Deputy Executive Director, TGO Mr. Masahiko Fujimoto, Team Leader, JICA Expert Team		0:15
	10:15	10:35	Introduction to CITC and course overview	Introduction of the course objectives and outline, Very brief self-introduction by all trainees	Dr. Jakkaniit Kananurak, TGO	0:20
	10:35	11:05	Introduction to low carbon and resilient society of Thailand	Participants learn images of future LCS/LCRS municipality in Thai local contents: how LCS/LCRS leads to solution of local issues	Dr. Natarika Wayuparb, Deputy Executive Director, TGO	0:30
	11:05	11:25	Coffee break			0:20
	11:25	11:40	Introduction to climate change and concept of LCS	Participants learn climate change basics and science, concept of LCS-LCRS as well as international trend of LCS movement	Dr. Shuzo Nishioka, IGES	0:15
	11:40	12:45	Lunch break			1:05
	12:45	13:25	Overview of climate change adaptation	Participants learn the basics of climate change adaptation and vulnerability; types of climate change impacts and trend of local adaptation planning and actions Participants also learn major adaptation measures taken in urban, semi-urban and rural areas in Asia and also inter-relationship with mitigation	Dr. Mariko Fujimori, JICA Expert Team	0:40
	13:25	13:40	Importance of institutional management to achieve LCS	Participants learn importance of institutional management/ arrangement to effectively realize sustainable LCRS at a local level, such as organization and structure, human resources through learning good practices in Thailand municipalities	Dr. Sirinthornthep Towprayoon, JGSEE	0:15
	13:40	14:00	Coffee break			0:20
	14:00	15:40	Group exercise: share experiences and knowledge by trainees	Trainees speak about and discuss their future LCRS vision of their municipality through group discussion, and through opinion exchange with national and international experts		1:40
	Day 2			Wrap-up	Participants are given with overall wrap-up of the contents and issued covered in the first day of training	Ms. Apaphatch Hunsirirakun, TGO
9:00		9:40	Overview of climate change mitigation and financial opportunities	Participants learn importance and trend of local-level mitigation planning and mitigation actions through hearing about good practices of major mitigation measures taken in urban, semi-urban and rural areas in Asia. Participants also learn available funds for planning and implementing mitigation projects at a local level	Dr. Kazuhito Yamada, JICA Expert Team	0:40

Day	From	To	Topic	Overview	Lecturer	Time
	9:40	10:10	Mitigation in Thailand: waste management and wastewater treatment	Participants learn how sectoral activity by municipality leads to climate change mitigation. Participants also learn the importance and significance of mitigation actions in terms of their co-benefits	Mr. Chayo Juikiri, Pollution Control Department	0:30
	10:10	10:25	Coffee break		0:15	
	10:25	10:55	Mitigation in Thailand: energy efficiency		Mr. Narong Pooyoo, DEDE	0:30
	10:55	11:25	Filling the gap to achieve LCS		Mr. Somchai Chariyacharoen, Municipality League of Thailand	0:30
	11:25	12:25	Group exercise: Problem analysis in municipalities	Participants discuss and analyze existing problems of their municipality (environmental and other problems), related to major mitigation sectors (waste, wastewater, energy and others)		1:00
	12:25	13:25	Lunch break			1:00
	13:25	13:45	Case study in Thailand 1: Municipality of Phisanulok	Participants learn some of the good practices taken in Thailand related to LCRS formulation and implementation. Participants also learn key barriers and also actual benefits the municipality faced and obtained through such activities.	Mr. Suthee Huntrakoon, Municipality of Phisanulok	0:20
	13:45	14:05	Case study in Thailand 2: Municipality of Huay Kao Kum		Mr. Phuchong Mahawongnan, Municipality of Huay Kao Kum	0:20
	14:05	14:25	Case study in Thailand 3: Municipality of Khon Kaen		Mr. Chaowalit Hongyon, Municipality of Khon Kaen	0:20
	14:25	14:40	Coffee break			0:15
	14:40	16:10	Group exercise: Selection of mitigation options for municipality	Based on the identified local problems during the exercise session, trainees identify possible mitigation options as well as barriers to implement such mitigation measures. Trainees enhance their understanding through group discussion and presentation, and opinion exchange with other groups and experts		1:30
Day 3	8:30	8:45	Wrap-up of Day 3	Participants are given with overall wrap-up of the contents and issued covered in the second day of training	TGO	0:15
	8:45	9:00	Importance of communication and outreach	Participants learn importance and significance of communication to convey key messages to stakeholders	Dr. Jakkani Kananurak, TGO	0:15
	9:00	9:30	Climate change impact in Thailand and vulnerability	Participants learn climate change impacts in Thailand through various cases. Participants also learn some of the good practices of climate change adaptation taken at a local level	Dr. Vilas Nittivattananon, Asian Institute of Technology (AIT)	0:30
	9:30	9:45	Climate change adaptation action: formulation process	Participants learn overall adaptation project formulation steps and their key points	Dr. Mariko Fujimori, JICA Expert Team	0:15
	9:45	11:15	Group exercise: Selection of adaptation options for municipality	Participants identify climate change impacts in their municipalities and identify adaptation options for three major issues, i.e. disaster management, agriculture, and human health,		1:30

Day	From	To	Topic	Overview	Lecturer	Time
	11:15	11:30	Coffee break			0:15
	11:30	12:00	Adaptation in Thailand: disaster management	Participants learn how sectoral activity leads to adaptation by municipality through learning some ongoing good practices in Thailand	Dr. Jariya Jariyajaroen, SEA START (System for Analysis, Research and Training)	0:30
	12:00	12:30	Adaptation in Thailand: agriculture		Mr. Somchai Boonpradap, Dept. of Agriculture	0:30
	12:30	13:00	Adaptation in Thailand: human health		Ms. Siriwan Jantanajulka, Dept. of Health	0:30
	13:00	14:00	Lunch break			1:00
	14:00	14:20	Case study in Thailand: Application of GIS data and other tools in Thai municipalities	Participants learn useful tool for adaptation planning at municipal level, and also case study for important adaptation issue	Ms. Mingkwan Kuntha, Geo-Informatics and Space Technology Development Agency (GISTDA)	0:20
	14:20	14:40	Case study in Thailand: "Adaptation Measures for Coastal Erosion in Upper Gulf of Thailand based on Community Network"		Ms. Panatda Thatsiri, Chumchonchai Foundation	0:20
	14:40	15:10	Post-training test and Training Evaluation	All trainees take a post-test in order to evaluate how much knowledge and understanding have been improved through attending training program		0:30
	15:10	15:40	Closing and Certification	Closing and Certification Announcement of TTT program	TGO	0:30

- Result of training evaluation

In order to check the effectiveness of the training and to analyze how much trainees' knowledge and understanding have improved by attending CITC training, all trainees were asked to take two sets of test; pre-test and post-test. Each test contains 15 questions that ask basic to moderate level technical questions on climate change mitigation and adaptation. Questions were developed by TGO and JICA Expert Team and all questions were prepared in Thai language.

It was revealed that most trainees have enhanced their understanding by attending the training, which was shown in the improved test score (from 67% average score for pre-test to 84% for post-test).

In addition to the above knowledge evaluation, all trainees were also asked to evaluate the CITC training program in terms of its overall training approach and operation. Most of the trainees gave a favorable evaluation of the training as summarized in the table below.

Table 2.9 Training evaluation result for LCRS for local practitioners course

Category	Question	Average score (maximum = 5.0)
Training approach	Training theme and objective was clearly explained.	4.5
	Overall training approach (mixture of lectures, group exercises and discussions) was appropriate.	4.3
	Amount of training topics was suitable (or too much/ little).	3.9
	Class participation and interaction were encouraged.	4.5
	Adequate time was provided for question and answer session.	4.1
	Training materials were well prepared and useful.	4.6
	Duration of training program (3 days) was appropriate.	4.3
Training operation	Training was smoothly operated by CITC secretariat.	4.6
	Training venue and location was sufficient.	4.5
	Accommodation and training facilities were sufficient.	4.6
	Transportation was appropriately arranged.	4.1
Overall	Please rate the overall quality of training sessions .	4.4
	Did the training meet your expectation ?	4.7

Table 2.10 Training session evaluation result for LCRS for local practitioners course

	Session title	Average score (maximum = 5.0)
Day 1	Introduction to low carbon and resilient society	4.5
	Introduction to climate change and concept of LCRS	4.3
	Overview of climate change adaptation	4.3
	Importance of institutional management to achieve LCRS	4.4
	Interactive session: share experiences and knowledge by trainees	4.4
Day 2	Overview of climate change mitigation and financial opportunities	4.3
	Mitigation in Thailand: waste management and wastewater treatment	4.3
	Mitigation in Thailand: energy efficiency	4.2
	Mitigation in Thailand: landuse and forestry	4.1
	Group exercise: Problem analysis in municipalities	4.4
	Case study in Thailand: mitigation project A	4.4
	Case study in Thailand: mitigation project B	4.5
	Case study in Thailand: mitigation project C	4.4
Group exercise: Selection of mitigation options for municipality	4.3	
Day 3	Climate change impact in Thailand and vulnerability	4.3
	Climate change adaptation action: formulation process	4.3
	Group exercise: climate change impacts in municipalities	4.3
	Adaptation in Thailand: disaster management	4.2
	Adaptation in Thailand: agriculture	4.4
	Adaptation in Thailand: human health	4.3
	Case study in Thailand: Application of GIS data and other tools in Thai municipalities	4.5
	Case study in Thailand: "Adaptation Measures for Coastal Erosion in Upper Gulf of Thailand based on Community Network"	4.5
	Group exercise: Selection of adaptation options for municipality	4.4
	Importance of communication and outreach	4.4

Below are some of the additional comments from participants regarding overall training operation and management:

- More detailed contents should be covered.
- Number of topics can be reduced and focus more on each topic.
- Training should be 5-day long so that we can learn more details of each content.
- Speakers should be given more time for presentation.
- Barriers and solutions of the existing project should be shared.
- Too much case studies.
- Training contents should be summarized at the end of each day.
- Topics related to public relation should be covered.
- Prefer to have worksheet in addition to flip chart for exercise sessions.
- Field trip should be contained in the training package.
- Hotel is too far from airport.

In the following week of the above training, train-the-trainers (TTT) event was held for prospective trainers. The event was held on 22 and 23 December 2014 at Hotel ibis Bangkok Riverside in Bangkok.

Prospective trainers were selected from trainees who participated in “Leadership Program on Low Carbon and Resilient Society (local government).”

Objective of the TTT program is not only to further enhance trainers’ understanding on climate change issues but also to equip trainers with necessary basic skills to be a “trainer” of climate change mitigation/ adaptation in their municipality and also future trainer of CITC training programs. To meet this objective, the program covered such topics as how to communicate with stakeholders effectively and how to make an effective presentation, and also group exercises to learn how to effectively educate climate change issues and convey key messages to citizens in their municipality.

Each trainer in the group was evaluated by Thai experts and JICA Expert Team in terms of quality of communication and presentation and also training materials developed by the group.



Photo 2.7 TTT: Low Carbon and Resilient Society Development for local practitioners



Photo 2.8 TTT: Low Carbon and Resilient Society Development for local practitioners (Effective presentation)

Table 2.11 TTT program of LCRS for local practitioners course

Day	From	To	Topic	Overview	Lecturer	Time
Day 1	8:30	9:00	Registration	-		0:30
	9:00	9:10	Welcome remarks		TGO	0:10
	9:10	9:20	Opening remarks		TGO	0:10
	9:20	9:35	Overview of TTT program		Dr. Jakkaniit Kananurak, TGO	0:10
	9:35	12:15	Effective communication and presentation Principles for better personality and behavior	Trainers learn how to communicate effectively with stakeholders to convey key messages, and also learn different communication approaches for different target groups. Trainers also learn how to make effective and attractive presentation using PowerPoint and other tools	Lecturer: Ms. Nathama Chaiwarayothin	2:35
	12:15	13:15	Lunch break			1:00
	13:15	16:45	Exercise 1 (Group work): presentation and communication for effective LCRS development in your municipality		Facilitators: TGO	3:30
Day 2	8:30	8:45	Registration			0:30
	8:45	12:15	Exercise 2 (Group work): Developing a presentation on LCRS for your municipality	Trainers demonstrate developing a presentation material using PowerPoint on any topic from the training in the previous week. Trainers learn how to make effective presentation for target group, in this case citizens.	Facilitators: TGO	2:30
	12:15	13:15	Lunch break			1:00
	13:15	14:45	Exercise 2 (Group work) (Cont'd): Presentation on LCRS for your municipality	Each trainer from each group presents the presentation slides they have developed to other trainers and experts. Communication skill and presentation skill are evaluated by experts and lecturer.	Facilitators: TGO	1:30
	14:45	15:45	Certification and closing	Certification Closing remarks	TGO JICA Expert Team	1:00

- **Result of training evaluation**

Result of TTT program evaluation by participating trainers is summarized below.

Table 2.12 TTT program evaluation result for LCRS for local practitioners course

Category	Question	Average score (maximum = 5.0)
Training approach	Training theme and objective was clearly explained.	4.6
	Overall training approach (mixture of lectures, group exercises and discussions) was appropriate.	4.3
	Amount of training topics was suitable (or too much/ little).	4.2
	Class participation and interaction were encouraged.	4.7
	Adequate time was provided for question and answer session.	4.3
	Training materials were well prepared and useful.	4.6
	Duration of training program was appropriate.	4.7
Training operation	Training was smoothly operated by CITC secretariat.	4.9
	Training venue and location was sufficient.	4.6
	Training facilities were sufficient.	4.7
	Accommodation was sufficient.	4.6
	Transportation was appropriately arranged.	4.6
Overall	Please rate the overall quality of training sessions .	4.7
	Did the training meet your expectation ?	4.7

Table 2.13 TTT session evaluation result for LCRS for local practitioners course

	Session title	Average score (maximum = 5.0)
Day 1	Effective Presentation technique and communication	4.6
	Exercise: Communication to community	4.7
	Personality development principles	4.7
	Group work "Developing operational plan and adapt to Low Carbon Society"	4.7
Day 2	Design principles and media development	4.4
	Group work :Power point Presentation	4.6
	Group work: Developing a LCRS proposal for municipality	4.6

Below are some of the additional comments from participants regarding overall training operation and management:

- Each training content should not take so much time
- Training evaluation should be conducted daily
- Sessions on personality improvement can cover wider issues
- Training atmosphere can be more relaxed

2. Training for local government executives

CITC training for local government executives was conducted on 5 and 6 March 2015 in Centara Hotel Hat Yai in Songkla province. The workshop-style training was titled “Workshop on Low Carbon and Resilient Society Development for Municipality Executives.” The training workshop was co-organized by TGO, JICA, Hat Yai municipality, and a CITC partner, Prince of Songkla University.

Total number of workshop participants was 59 including executives such as mayors, vice mayors and other decision-makers of local municipality. Practitioner-level officers from the same local governments as executives also attended the workshop to allow smooth realization and implementation of the vision proposed by executives. Number of local government administrations attended the workshop was 23 which covers all four regions of Thailand. Following is the list of local government administrations who attended the workshop.



Photo 2.9 Training: LCRS for local government executives

TGO and JICA Expert Team discussed and decided to design this training workshop program with special focus on the issue of waste management and its link to climate change mitigation based on the national trend and immediate needs by local governments in Thailand.

The workshop-style training approach, rather than classroom lecture-style approach, was taken for this course, in which various short presentations by national and international experts to envision local executives are contained, followed by discussion and opinion exchange among local executives and experts. In order to enhance networking and allow trainees to visualize future image of LCRS in their municipality, site visit was also included in the program.



Photo 2.10 Training: LCRS for local government executives

For site visit, participants visited and saw the actual waste management practices in Hat Yai municipality as a case study of climate change mitigation, where participants had a chance to observe city's practices such as community-based waste management and outreach activities as well as waste incineration facility. Participants also had a chance to listen to and discuss how the municipality is involved, benefits achieved, difficulties encountered, useful networking, interaction with citizens and other stakeholders.

Table 2.14 Training program of LCRS for local executives course

Day	From	To	Topic	Overview	Lecturer	Time
Day 1	9:00	9:40	Registration			
	9:40	9:50	Welcome remarks		Vice Mayor of Hat Yai	0:10
	9:50	10:10	Opening remarks Presentation: Direction and trend of movement towards low carbon society	Participants learn the introduction of climate change in national context together with national policies and importance of local action.	Dr. Natarika, Deputy Executive Director, TGO	0:20
	10:10	10:20	Introduction to CITC	Participants hear the overview of CITC and its activities, how municipalities can be involved and obtain benefit	Dr. Jakkanit, TGO	0:10
	10:20	10:35	Coffee break			0:15
	10:35	11:30	[Panel discussion 1] Challenges in developing low carbon society	Participants learn some of the key important issues related to climate change and waste management: - Climate change and LCS - Importance and challenges of waste management in municipality - Waste management policy of Hat Yai municipality - Co-benefits and good practices in Japan	Panelists: Dr. Shuzo Nishioka, IGES Mr. Halem Jemarikan, Regional Environmental Office 16 Mr. Direkrit Tawakarn, Sanitary Department, Hat Yai Municipality Dr. Kazuhito Yamada, JICA Expert Team (Moderator: Dr. Jakkanit Kananurak, TGO)	0:55
	11:30	12:30	Introduction of Hat Yai waste incineration plant		Mr. Somchai Lertvisetteerakul, GIDEC Co., Ltd.	1:00
	12:30	14:00	Lunch break			1:30
		p.m.	Site Visit	Waste management practices in Hat Yai municipality including community-based waste management and outreach activities as well as waste incineration facility	-	p.m.
Day 2	9:00	9:30	Wrap-up of Day 1		Dr. Chanisada Choosuk, Faculty of Environmental Management, Prince of Songkla University	0:30
	9:30	9:50	Presentation: Low carbon society opportunity: the challenge in cities	Participants learn case study of waste management and community involvement from the experience of Phanatnikhom municipality	Mr. Wijai Amaralikit, NMT/ Mayor of Phanatnikhom municipality	0:20
	9:50	11:15	[Panel discussion 2] Low carbon society development and waste management by cities	Participants learn case studies from some of the advanced municipalities in Thailand regarding waste management and low carbon society development, though which participants identify possible actions they can take in their municipality that leads to LCRS.	Panelists: Mr. Halem Jemarikan, Regional Environmental Office 16 Mr. Praison Rahurak, Mayor of Huaykawkam Dr. Rungroj Guapanich, Vice Mayor, Hat Yai Mr. Suriyon Yeekunm Mayor of Prik (Moderator: Mr. Somchai Chariyacharoen, NMT)	1:25
	11:15	11:30	Coffee break			0:15

Day	From	To	Topic	Overview	Lecturer	Time
	11:30	12:15	Opinion Exchange: lessons of waste management and vision to move towards low carbon society	Participants share their experience in their municipality about their practices and lessons related to waste management and low carbon development, and exchange opinions with other local government executives as well as national and international experts.	Moderator: Mr. Somchai Chariyacharoen, NMT	0:45
	12:15	12:30	Closing remarks	Vice Mayor of Hat Yai municipality Dr. Banjong Wittayaweerasak, Prince Songkla University Mr. Masahiko Fujimoto, Team Leader, JICA Expert Team		0:15

- Result of training evaluation

Since this training workshop is targeting executives, test to check their knowledge level was not conducted. Similarly, because executives are not considered to be suitable to become a 'trainer,' TTT program was not prepared for this training.

Result of event evaluation of this training workshop is shown in the table below.

Table 2.15 Training evaluation result for LCRS for local executives

Category	Question	Average score (maximum = 5.0)
Training approach	Training theme and objective was clearly explained.	4.2
	Overall training approach was appropriate.	4.2
	Amount of training topics was suitable (or too much/ little).	4.3
	Class participation and interaction were encouraged.	4.1
	Adequate time was provided for question and answer session.	3.7
	Training materials were well prepared and useful.	4.1
	Duration of training program (3 days) was appropriate.	3.5
Training operation	Training was smoothly operated by CITC secretariat.	4.5
	Training venue and location was sufficient.	4.4
	Accommodation and training facilities were sufficient.	4.6
	Transportation was appropriately arranged.	4.6
Overall	Please rate the overall quality of training sessions .	4.3
	Did the training meet your expectation ?	4.5

Table 2.16 TTT session evaluation result for LCRS for local practitioners

	Session title	Average score (maximum = 5.0)
Day 1	Direction and trend of movement towards low carbon society	4.2
	Panel discussion: Climate change and LCS	4.0
	Panel discussion: Importance and challenges of waste management	4.1
	Panel discussion: Waste management policy of Hat Yai municipality	4.1
	Panel discussion: Cobenefits and good practices in Japan	4.1

	Introduction of Hat Yai waste incineration plant	4.4
	Site visits	4.3
Day 2	Low carbon society opportunity: the challenge in cities	4.2
	Panel discussion: REO	4.3
	Panel discussion: Huaykawkam municipality	4.2
	Panel discussion: Hat Yai municipality	4.2
	Panel discussion: Prik municipality	4.3
	Opinion Exchange: lessons of waste management and vision to move towards low carbon society	4.5

3. Training for central government directors and practitioners

Training for Thai central government directors and central government practitioners was conducted on 31 August – 2 September 2015. The training was held at Bangkok Marriott Hotel Sukhumvit in Bangkok. TGO played a main and major role in training preparation and implementation with the support from JICA Expert Team.

The 3-day training received 37 participants from Thai central government agencies who are involved in climate change mitigation and adaptation, as well as academic sector.

Agencies who participated into training include Pollution Control Department (PCD), Royal Forestry Department (RFD), Energy Policy and Planning Office (EPPO), Office of Transport and Traffic Policy and Planning (OTP), Department of Industrial Works (DIW) and Department of Disaster Prevention and Mitigation (DDPM) under Ministry of Interior, Office of Agricultural Economics (OAE) under Ministry of Agriculture and Cooperatives, Department of Health under Ministry of Public Health, and Thai Research Fund (TRF). Representatives from Office of National Economic and Social Development Board (NESDB), Department of Alternative Energy Development and Efficiency (DEDE), and Bangkok Metropolitan Administration (BMA) also participated to the training as a speaker.

Considering the time constraint and availability of central government officials, director-level trainees attended the training on the first day only, while practitioner-level trainees attended the whole 3 days.



Photo 2.11 Training for central government



Photo 2.12 Group exercise

The training program was designed to contain fundamental topics related to climate change policy on mitigation and adaptation in a comprehensive manner. Various training approaches such as panel discussion, exercise and group discussion were incorporated in order to attract trainees' interest and attention.

Training program is shown in Table 2.17.

Table 2.17 Training program “LCRS for central government directors and practitioners” (Day 1)

From	To	Session title	Abstract	Speaker	Hrs.
08.00	08.30	Registration			0.30
08.30	09.00	Pre-test (only for practitioners)			0.30
09.00	09.15	Opening Remark By Mrs. Prasertsuk Chamornmarn, Executive Director of TGO			0.15
09.15	09.45	International climate change talks and negotiations	Trainees learn the trend and current situation of international climate change talks and negotiations as well as the position of Thailand	Dr. Natarika Wayuparb Nitipon, Deputy Executive Director of TGO	0.30
09.45	10.20	Strategy to develop low carbon and resilient society	Trainees gain viewpoint and realize important issues in developing and updating sectoral plan and policy to achieve Low Carbon and Resilient Society	Ms. Ladawan Kumpa, Deputy Secretary General, Office of National Economic and Social Development Board (NESDB)	0.35
10.20	10.50	Coffee Break / Photo session			
10.50	11.25	Thailand's policy on climate change issues	Trainees learn Thailand's plans and policies related to climate change issues	Mr. Kolawat Sakhakorn, Office of Natural Resources and Environmental Policy and Planning (ONEP)	0.35
11.25	12.00	Policy towards the development of Low Carbon Society	Trainees learn approaches that effectively link policy with implementation (link with local policy)	Dr. Chanathip Pharino, Public Well-being Division, Thailand Research Fund (TRF)	0.35
12.00	13.30	Lunch			
13.30	14.15	Concept and importance of low carbon and resilient society	Trainees learn climate change science and its impacts and also learn the importance and opportunity to move towards low carbon and resilient societies	Dr. Shuzo Nishioka, Institute for Global Environment Strategies	0.45
14.15	14.30	Coffee Break			
14.30	16.00	Panel discussion	- Mr. Pralong Damrongthai (Royal Forest Department (RFD)) - Mr. Kobchai Boonyaorana (Disaster Prevention and Mitigation Policy Bureau)	Moderator: Dr. Jakkaniit Kananurak, Director of CITC, TGO	1.5
16.00	17.00	Open discussion	Trainees talk and discuss: policies and actions related to LCRS, and barriers to develop and implement LCRS policies		1.0

Table 2.18 Training program “LCRS for central government directors and practitioners” (Day 2)

From	To	Session title	Abstract	Speaker	Hrs.
09.00	09.40	Overview of greenhouse gas inventory	Trainees learn the importance and standard related to preparation and reporting GHG record, comparison of GHG emission sources by country	Dr. Bundit Limmeechokchai, Sirindhorn International Institute of Technology, Thammasat University	0.40
09.40	10.20	Overview of climate change mitigation and its approaches	Trainees learn the overview and benefit of climate change mitigation as well as mitigation actions that can be taken at a government level through various mitigation approaches (mechanism)	Dr. Kazuhito Yamada, JICA Expert Team	0.40
10.20	10.40	Coffee Break			
10.40	12.30	Case study: climate change mitigation in Thailand	- Mr. Pongphat Mungkung (Bureau of Energy Human Resource Development, Department of Alternative Energy Development and Efficiency: DEDE) - Dr. Malee Uabharadorn (Sustainable Transport Department, Office of Transport and Traffic Policy and Planning: OTP) - Mr. Jakrapong Yamyim (Monitoring and Approval Office, TGO)	Moderator: Dr. Bundit Limmeechokchai, Sirindhorn International Institute of Technology, Thammasat University	1.50
12.30	13.30	Lunch			
13.30	14.30	Exercise: low-carbon vision setting and mitigation strategy development	Trainees discuss and practice setting a Thailand's low-carbon vision and necessary strategy to achieve the vision		1.00
14.30	15.00	Coffee Break			
15.00	16.30	Presentation	Each sector presents the result of group exercise		1.30

Table 2.19 Training program “LCRS for central government directors and practitioners” (Day 3)

From	To	Session title	Abstract	Speaker	Hrs.
09.00	09.40	Overview of climate change adaptation	Trainees learn the overview of climate change adaptation and impacts in Thailand and vulnerability assessment	Dr. Vilas Nittivattananon, AIT	0.40
09.40	10.20	Strengthening resilience against climate change	Trainees learn the importance of mainstreaming climate change adaptation into sectoral policies	Dr. Mariko Fujimori, JICA Expert Team	0.40
10.20	10.40	Coffee Break			
10.40	12.30	Case study: climate change adaptation in Thailand	- Ms. Siriwan Chandanachulaka (Health Impact Assessment Division, Department of Health) - Mr. Wissanu Chareon (Department of Drainage and Sewerage, Bangkok Metropolitan Administration: BMA) - Mrs. Jantida Meedech (Executive Director of Bureau of Agricultural Economic Research, Office of Agriculture Economic)	Moderator: Dr. Vilas Nittivattananon, AIT	1.50

From	To	Session title	Abstract	Speaker	Hrs.	
12.30	13.30	Lunch				
13.30	14.30	Exercise: Mainstreaming adaptation measures in sectoral policies	Trainees practice mainstreaming adaptation into respective sectors' policy and plans.		1.00	
14.30	14.50	Coffee Break				
14.50	16.50	Presentation	Each sector presents the result of group exercise		2.00	
16.50	17.20	Post-test and Certification				0.30

- **Result of training evaluation**

Result of pre-test and post-test, each of which contains 10 questions that ask basic to moderate level technical questions on climate change mitigation and adaptation, yields an increase in scores from average 47% score for pre-test to 72% for post-test. Questions were developed by TGO and external Thai experts and all questions were prepared in Thai language.

Result of training evaluation is shown in the table below.

Table 2.20 Result of training evaluation (LCRS for central government)

Category	Question	Average score (maximum = 5.0)
Training approach	Training theme and objective was clearly explained.	4.5
	Overall training approach (mixture of lectures, group exercises and discussions) was appropriate.	4.1
	Amount of training topics was suitable (or too much/ little).	4.0
	Class participation and interaction were encouraged.	3.9
	Adequate time was provided for question and answer session.	3.8
	Training materials were well prepared and useful.	4.4
	Duration of training program (3 days) was appropriate.	3.8
Training operation	Training was smoothly operated by CITC secretariat.	4.2
	Training venue and location was sufficient.	4.0
	Transportation was appropriately arranged.	3.8
Overall	Please rate the overall quality of training sessions .	3.9*
	Did the training meet your expectation ?	3.8

* Among 9 respondents, 8 trainees (or 88% of all respondents) scored more than 4.0

Table 2.21 Result of training session evaluation (LCRS for central government)

Day	Session title	Average score (maximum = 5.0)
Day 1	International climate change talks and negotiations	4.2
	Strategy to develop low carbon and resilient society	4.1
	Thailand's policy on climate change issues	4.2
	Policy towards the development of Low Carbon Society	4.3
	Concept and importance of low carbon and resilient society	4.3
	Panel discussion	4.0
Day 2	Overview of greenhouse gas inventory	4.1
	Overview of climate change mitigation and its approaches	4.3
	Case study: climate change mitigation in Thailand	4.5
	Exercise: low-carbon vision setting and mitigation strategy development	4.3
	Presentation	4.1
Day 3	Overview of climate change adaptation	4.3
	Strengthening resilience against climate change	4.1
	Case study: climate change adaptation in Thailand	4.6
	Exercise: Mainstreaming adaptation measures in sectoral policies	4.4
	Presentation	4.4

Below are some of the additional comments received from participants regarding overall training operation and management:

- Very useful and informative training. Topics on community-level activities can be covered also.
- Longer time should be allocated for each lecture session
- Consider traffic jam when conducting an event in central Bangkok
- Screen is too high
- Lacking training materials for some lecture sessions

Regarding TTT of this training course, since sufficient number of prospective trainers was not identified among participated trainees, TTT program will not be provided this time.

4. Training for various Thai stakeholders

Training for various Thai stakeholders was held in 20 – 22 January 2016 at Balios Resort Khaoyai, in Nakhon Ratchasima province.

Participants of 94 include mix of stakeholders who are related to climate change adaptation and mitigation planning and implementation, including central government agencies, local governments, academic institutions and private sector. Central government agencies that attended the training include OAE,



Photo 2.13 CCSD training for Thai stakeholders



Photo 2.14 Panel discussion session

Department of Health, PCD, OTP, TRF, Department of Disaster Prevention and Mitigation, DEDE, etc. In addition, 20 local municipalities gathered to the venue throughout the country.

Training program is shown in Table 2.22. 3-day training course contains lectures and discussion sessions and half-day site visit on the topic of adaptation (water management) and mitigation (renewable energy). Lecturers from various organizations such as central government agencies and municipalities, private companies and JICA Expert Team provided lectures on a wide variety of topics including COP21 result and its impacts on national policy planning, water resource management and adaptation, etc.

TGO played a main and major role in planning, preparation and implementation for this training course.



Photo 2.15 Site visit

Table 2.22 (1) Training program “CCSD for Thai stakeholders” (Day 1)

From	To	Topic	Overview	Lecturer/ Moderator	Time
08.30	09.00	Registration and Pre-test			0.30
09.00	09.10	Opening Remarks Dr. Natarika Wayupab Nitiphon, Deputy Executive Director, TGO			0.10
09.10	09.30	Reporting and introduction of CITC Dr. Jakkani Kananurak, Director of Capacity Building and Outreach Office, TGO/ Director of CITC			0.20
09.30	10.30	Global Trend and COP21 results	Trainees learn international and regional contexts of climate actions referring to the latest decisions by international community	Dr. Nattarika Wayupab Nitiphon, TGO	1.00
10.30	10.45	Coffee Break			0.15
10.45	11.45	Strategy and plan on sustainable development and LCRS development including 12 th NESDB plan	Trainees learn the latest national economic and social development plan of Thailand and its emphasis on climate change mitigation and adaptation at national and local levels	Ms. Wannapa Klaysuan, NESDB	1.00
11.45	13.00	Lunch			1.15
13.00	13.30	GHG Inventory and Importance of Mitigation	Trainees learn the importance, benefits, and general approaches to GHG inventory that can be a basis of low-carbon planning/ actions	Ms. Natsiri Julinrak, GHG Information Centre, TGO	0.30
13.30	14.15	Overview of climate change mitigation and linkages with sustainable development and adaptation	Trainees learn good practices and challenges related to climate change mitigation, and interlinkages between mitigation and adaptation	Dr. Kazuhito Yamada, JICA Expert Team	0.45

From	To	Topic	Overview	Lecturer/ Moderator	Time
14.15	15.00	Linkages of adaptation from national to local level	Trainees learn general approaches of adaptation planning and how to effectively link national and local planning	Dr. Mariko Fujimori, JICA Expert Team	0.45
15.00	15.15	Coffee Break			0.15
15.15	17.00	Panel Discussion: Plan and Strategy related to Sustainable Development for Climate Change	<ul style="list-style-type: none"> · Department of Disaster Prevention and Mitigation · Mr. Thada Sukapunpan (Royal Irrigation Department) · Mr. Somchai Boonpradab (Department of Agriculture) 	Moderator: Ms. Chayathorn Thanawattanadamrong, TGO	1.45

Table 2.22 (2) Training program “CCSD for Thai stakeholders” (Day 2)

From	To	Topic	Overview	Lecturer/ Moderator	Time
08.45	09.15	Wrap up of Day 1 By Dr. Chanisada Choosuk (Faculty of Environmental Management, Prince of Songkla University)			0.30
09.15	10.30	Challenges of Flood-Drought Crisis towards sustainable water management	Trainees learn the recently observed climate change impacts of flood and drought in Thailand and their challenges, and consider how to effectively manage water resources	By Dr. Sarintip Taentani, Faculty of Engineer, Naresuan University	1.15
10.30	10.45	Coffee Break			0.15
10.45	12.00	Panel Discussion: Plan and Tools for Implementation of Climate Change Adaptation	<ul style="list-style-type: none"> · Mr. Praisorn Rahurak (Mayor, Huay Khao Kam Municipality) · Mr. Direkrit Tewakarn (Hat Yai Municipality) · Mr. Surapol Tiewtrakul (Bureau of Public Health and Environment, Pichit Province) 	Moderator: Mr. Somchai Chariyacharoen Former Mayor of Muangklang City	1.15
12.00	13.00	Lunch			1.00
13.00	17.00	Site Visit (Lam Ta Kong Dam, Nakorn Ratchasima Province)			4.00

Table 2.22 (3) Training program “CCSD for Thai stakeholders” (Day 3)

From	To	Topic	Overview	Lecturer/ Moderator	Time
08.45	09.00	Wrap up Day 2 By Assistant Professor Dr. Chanisada Choosuk			0.15
09.00	09.45	Mitigation Measures in Energy Sector (City Level)	Trainees learn opportunities and challenges related to renewable energy and energy efficiency and their various benefits and climate change mitigation effects	Department of Alternative Energy Development and Efficiency	0.45
09.45	11.15	Panel Discussion: Role of Private Sector for Climate Change Mitigation	<ul style="list-style-type: none"> · Dr. Alisa Kunchornyakong (SPCG) · Representative from SCG · Representative from Thai Oil 	Moderator: Mr. Somchai Chariyacharoen	1.30
11.15	11.30	Coffee Break			0.15
11.30	12.15	Open discussion: Brainstorming, Sharing Lesson Learned, and Presentation	Dr. Chanisada Choosuk and Dr. Jakkarnit Kananurak		0.45
12.15	12.30	Certification and Closing Ceremony			0.35

- Result of training evaluation

Result of pre-test and post-test, each of which contains 10 questions that ask basic to moderate level technical questions on climate change adaptation and mitigation, yields an increase in scores from average 68% score for pre-test to 85% for post-test. Questions were developed by TGO and external Thai experts and all questions were prepared in Thai language.

Result of training evaluation is shown in the table below.

Table 2.23 Result of training evaluation (LCRS for Thai stakeholders)

Category	Question	Average score (maximum = 5.0)
Training approach	Training theme and objective was clearly explained.	4.2
	Overall training approach (mixture of lectures, group exercises and discussions) was appropriate.	4.4
	Amount of training topics was suitable (or too much/ little).	4.6
	Class participation and interaction were encouraged.	4.4
	Adequate time was provided for question and answer session.	4.1
	Training materials were well prepared and useful.	4.3
	Duration of training program (3 days) was appropriate.	4.5
Training operation	Training was smoothly operated by CITC secretariat.	4.7
	Training venue and location was sufficient.	4.4
	Transportation was appropriately arranged.	4.5
Overall	Please rate the overall quality of training sessions .	4.2
	Did the training meet your expectation ?	4.2

Table 2.24 Result of training session evaluation (LCRS for Thai stakeholders)

Day	Session title	Average score (maximum = 5.0)
Day 1	Global Trend and COP21 results	4.5
	Strategy and plan on sustainable development and LCRS development	4.3
	Importance of GHG inventory	4.2
	Overview of climate change mitigation and linkages with sustainable development and adaptation.	4.3
	Linkages of adaptation from national to local level	4.4
	Panel Discussion: Plan And Strategy related to Sustainable Development for Climate Change	4.5
Day 2	Challenges of Flood-Drought Crisis towards sustainable water management	4.2
	Panel Discussion: Plan and Tools for Implementation of Climate Change Adaptation	4.5
	Site Visit (Lam Ta Kong Dam, Nakorn Ratchasima Province)	4.2
Day 3	Mitigation Measures in Energy Sector (City Level)	4.3
	Panel discussion: Role of City and Private Sector towards Climate Change Mitigation	4.4
	Open discussion: Brainstorming, Sharing Lesson Learned, and Making a Presentation	4.5

Below are some of the additional comments received from participants regarding overall training operation and management:

- Please hold a similar training again and next time the training should cover other sectors as well.
- The training increased motivation of participating institutions
- Good to exchange opinions with many people
- It is better to allocate more time for discussion sessions
- Each session is too short, the course should be 5 days course
- More municipalities should be invited to share the cases
- Hard to find the link between theory-oriented lectures and case studies

2.2.2 Implementation of training in Japan

TGO and JICA Expert Team planned and implemented trainings in Japan with objective to learn expertise and experience that can be useful for CITC establishment and management, and advanced expertise to be applied for low carbon and resilient society development in ASEAN countries including Thailand. The training was targeted for TGO executives and officials as well as Thai stakeholders in relevant institutions.

1) 1st Project Year (1st Group: 25 November - 7 December 2013, 2nd group: 15 - 22 January 2014)

Thai participants in the first Project year were divided into two groups to effectively conduct trainings in Japan: 1st group (TGO technical officials) and the 2nd group (executives from TGO and related agencies in Thailand). Participants of the each training group, training schedule and objective of each training destination are shown in the following tables.

The training program for the 1st group (25 November– 7 December 2013) is titled “Preparation for establishment of Climate Change International Technical and Training Center,” while that for the 2nd group (15 – 22 January 2014) was titled “Establishment of climate change technical training center.”

Training by the 1st group is aimed at obtaining information on the current efforts taken by municipalities and training-implementing institutions in Japan, including know-how’s on training implementation and management approaches. On the other hand, the 2nd group was joined by executive-level representatives from TGO and relevant government agencies who are in a position to make a high-level decision for CITC management; and therefore, visit by the 2nd group is aimed at collecting information on know-how’s necessary to update CITC Business Plan and to conduct high-level consultation sessions with prospective partner institutions to discuss future collaboration with CITC.

TGO and JICA Expert Team discussed and selected destinations and topics to be discussed at each destination based on such needs from Thai side and also available expertise and experience in the corresponding topic at a destination institution in Japan.

Table 2.25 List of participants to training in Japan (1st group)

	Name	Organization/ Department
1	Dr. Jakkani Kananurak	Director, Capacity Building and Outreach Office, TGO
2	Dr. Natarika Wayuparb	Director, Strategy Office, TGO
3	Ms. Natchanan Wathanachinda	Capacity Building and Outreach Office, TGO
4	Ms. Wiriya Puntub	Capacity Building and Outreach Office, TGO
5	Ms. Benya Nuengdee	Capacity Building and Outreach Office, TGO
6	Ms. Bussabongkot Deewaja	Strategy Office, TGO
7	Ms. Phakamon Supappunt	Carbon Business Office, TGO
8	Ms. Neeracha Tridech	Approval and Monitoring Office, TGO
9	Ms. Wararat Cha-umkruea	GHG Information Center, TGO

Table 2.26 Training program in Japan (1st group)

Date	Time	Destination	Contents of training
Wed, 27 Nov 2013	a.m.	Bureau of Environment, Tokyo Metropolitan Government (TMG)	“Low Carbon Growth Strategy” by TMG, examples of dispatch of TMG experts, internal training for newly assigned officials at Bureau of Environment, TMG
	p.m.	Observation of Solar Power Generation Facilities at TMG	Visit to a facility introduced as a countermeasure against climate change and heat island phenomenon by TMG
Thu, 28 Nov	a.m.	Climate Change Policy Headquarters, Yokohama City	“Countermeasures and Challenges for Global Warming” of Yokohama City, examples of dispatch of Yokohama City experts
	p.m.	Tokyo Distant Learning Center, the World Bank	Overview of distant learning program by the center, and observation and discussion of related facilities of distant learning (studios, operator’s room, server room etc.)
Fri, 29 Nov	a.m.	National Research Institute for Earth Science and Disaster Prevention	Overview of research activities on disaster prevention and demonstration project for development of cities resilient to extreme weather events as result of climate change
	p.m.	National Institute for Environmental Studies (NIES)	Overview of following initiatives by NIES: <ul style="list-style-type: none"> - Support for Asian countries for national AIM models and national low-carbon development plans formulated by AIM Project Team - Support for GHG inventory development for Asian countries and efforts for GHG emission amount information management under Japanese national GHG inventory management framework - Efforts on infrastructure development of environmental research in climate change policy measures and knowledge information management by Center of Global Environmental Research
Mon, 2 Dec	a.m.	Environment Bureau, Kitakyushu City	Initiatives for low carbon city/ town development by Kitakyushu City, collaboration with relevant institutions for LCS development efforts by Kitakyushu City and internal training for newly assigned officials at Environment Bureau
	p.m.	Kitakyushu International Technical Cooperation Association (KITA)	Overview of training program by KITA and KITA training courses on LCS development and promotion of promotion of governmental services with citizens' participation

Date	Time	Destination	Contents of training
Tue, 3 Dec	p.m.	The Headquarters of United Nations University (UNU)	Overview of The University Network for Climate and Ecosystems Change Adaptation Research Program by UNU, and UNU's experience in online education
Wed, 4 Dec	a.m.	JICA Headquarters	Overview of training programs by JICA
	p.m.	OECC	Training program for foreign trainees and support efforts for human resource development by OECC under initiatives of JICA and MOEJ
Thu, 5 Dec	a.m. and p.m.	IGES	Overview of framework of climate change mitigation and adaptation, IGES policy research and human resource development programs, and activities by Low Carbon Asia Research Network (LoCARNet)
Fri, 6 Dec	a.m.	JICA	JICA Reporting Session

Table 2.27 List of participants to training in Japan(2nd group)

	Name	Organization/ Title
1	Mr. Sunthad Somchevita	Chairman of the Board of Directors, TGO
2	Dr. Damrong Sripraram	Member of the Board of Directors, TGO
3	Ms. Prasertsuk Chamornmarn	Deputy Executive Director and Acting Executive Director, TGO
4	Dr. Jakkanit Kananurak	Director of Capacity Building and Outreach Office, TGO
5	Mr. Sakol Thinagul	Deputy Director General, Ministry of Natural Resource and Environment (MONRE)
6	Dr. Jirapa Inthisang Trochim	Division Director, Office of Agricultural Economics (OAE), Ministry of Agriculture and Cooperatives

Table 2.28 Training program in Japan (2nd group)

Date	Time	Destination	Contents of training
Wed, 16 Jan 2014	a.m.	AIM Project Team, NIES	<ul style="list-style-type: none"> - Lecture on overview of AIM Model - High-level consultation for collaboration for training curriculum development and training delivery for training module on climate change models under CITC training course
	p.m.	Consultation with JICA Expert Team	Working-level meeting for training curriculum development.
Thu, 17 Jan	p.m.	Global Environment Bureau, MOEJ	<ul style="list-style-type: none"> - Lecture on training program for central and local government officials by a training implementing institution under MOEJ and contents on a respective training course - Exchange of opinions for future collaboration between TGO and MOEJ
Mon, 20 Jan	a.m.	Climate Change Policy Headquarters, City of Yokohama	<ul style="list-style-type: none"> - Lecture on training program for citizens, NGOs and others by Yokohama City - Exchange of opinions for future collaboration between TGO and Yokohama City
	p.m.	GIO, NIES	High-level consultation for collaboration between TGO and GIO that has experience in support for Asian countries in GHG inventory development field
Tue, 21 Jan	a.m.	Forestry Agency, Japan, FFPRI and JIFPRO	<ul style="list-style-type: none"> - Lecture on overview of efforts for training on REDD plus under initiative for international forestry cooperation by Forestry Agency - Exchange of opinions for future collaboration with the Forestry Agency, FFPRI and JIFPRO

Date	Time	Destination	Contents of training
	p.m.	IGES	<ul style="list-style-type: none"> - Lecture on initiatives on e-learning by IGES - High-level consultation for collaboration between TGO and IGES which has expertise in efforts for training or human resource development for Asian countries
Wed, 22 Jan	a.m.	JICA	JICA Reporting Session

As a result of the visit to Japan by the 1st group's, TGO collected information on training operation and management by municipalities and other institutions in Japan, as well as examples of initiatives for low carbon city/ town development by municipalities. At the same time, TGO collected necessary information for selection of potential partner institutions for future collaboration with CITC through exchange of opinions with representatives from each destination.

Consultation with Japanese institutions by the 2nd group promoted TGO's efforts for establishment of partnership with CITC. At the same time, TGO collected the following information related to CITC implementation framework and preparation of CITC Business Plan:

- Training curriculum development approach and expertise in TNA
- Organizational operation of a training center
- Expertise in maintenance and strengthening of network with relevant institutions
- Expertise in development of e-learning

Some of the presentation materials used by each destination institution as well as a presentation material prepared by Thai representatives which was used at JICA reporting session are attached in this Project Activity Completion Report (see Attachment 2).



Photo 2.16 Training in Japan (JICA Headquarters)



Photo 2.17 Training in Japan (Global Environment Bureau, MOEJ)



Photo 2.18 Training in Japan (Forestry Agency, Japan, FFPRI and JIFPRO)



Photo 2.19 Training in Japan (Climate Change Policy Headquarters, City of Yokohama)



Photo 2.20 Training in Japan (NIES)



Photo 2.21 Training in Japan (AIM Project Team, NIES)



Photo 2.22 Training in Japan (GIO, NIES)



Photo 2.23 Training in Japan (IGES)

2) 2nd Project Year (19 - 30 January 2015)

Participants to the training in Japan in the second Project year include TGO officials, representatives from local government administrations in Thailand who attended CITC TTT program as CITC trainers, and related organizations involved in CITC activities. The training program for the period of 19 – 30 January 2015 is titled “Training on low carbon and resilient society development and promotion at a local level.”

Objective of this training trip was set as obtaining information on the efforts for low carbon and resilient society development by municipalities and related organizations in Japan, which can be useful for CITC training curriculum development and management and training delivery.

TGO and JICA Expert Team discussed and selected destinations as well as topics to be covered at each destination based on the needs from Thai side and on available expertise and experience in the corresponding topic at a destination institution in Japan.

Participants of the training program, schedule and training contents at each destination are shown in the following tables.

Table 2.29 List of participants to training in Japan

	Name	Organization/ Department
1	Dr. Jakkanit Kananurak	Director, Capacity Building and Outreach Office, TGO
2	Ms. Apaphatch Hunsirtrakun	Capacity Building and Outreach Office, TGO
3	Ms. Chanyaphak Wathanachinda	Capacity Building and Outreach Office, TGO
4	Mr. Thitipong Piboolgulsamlit	Capacity Building and Outreach Office, TGO
5	Ms. Nateera Kanjawatkul	Capacity Building and Outreach Office, TGO
6	Mr. Pisanupon Sanguannual	Strategy Office, TGO
7	Mr. Somchai Chariyacharoen	Working Group Committee Member, Environment Division, National Municipality League of Thailand (NMT)
8	Dr. Chanisada Choosuk	Assistant Professor, Faculty of Environmental Management, Prince of Songkla University
9	Mr. Arthorn Ukkati	Director of Division of Public Health and Environment, Division of Public Health and Environment, Yantakhao Municipality
10	Mr. Phuchong Mahawongsanun	Director of Public Health and Environment, Division of Public Health and Environment, Municipality of Huaikaokum, Chun District, Phayao Province
11	Mr. Chawalit Hongyon	Bureau of Public Work, Khon Kaen Municipality/ Environmental Engineer
12	Mr. Thanakhom Thammachuen	Chief of Public Health and Environment Division, Public Health and Environment Department, Salaklang Municipality

Table 2.30 Training program in Japan

Date	Destination	Contents of training
Wed, 21 Jan 2015	Global Environment Bureau MOEJ	Lectures on overview on initiatives for low carbon and resilient society development and relevant support for municipalities by the ministry
	Faculty of Social Sciences Hosei University	Lecture on comprehensive concept on climate change adaptation countermeasures and adaptation efforts at municipality level in Japan
Thu, 22 Jan	IGES	Lecture on overview of Global Protocol for Community-Scale GHG Emission (GPC) Guideline
Fri, 23 Jan	Mie Prefectural Government and Mie Prefecture Agricultural Research Institute	- Lectures on overview of initiatives for climate change mitigation and adaptation by Mie Prefectural Government - Lectures on overview of climate change adaptation research program
	Mie Prefectural Environmental Study and Information Center	Visit to a facility for information dissemination and environmental education efforts for citizens in climate change and environmental conservation fields by Mie Prefecture
Mon, 26 Jan	City of Toyama	Lectures on overview of initiatives for Environmental Future City development and waste reduction and recycling by City of Toyama
	Toyama District Clean Center	Visit to a facility for waste collection operated by City of Toyama
Tue, 27 Jan	City of Kyoto Global Environment Policy Office	- Lectures on initiatives on low carbon society development and waste management by City of Kyoto - Lecture on city-citizen partnership for implementation of abovementioned initiatives by City of Kyoto

Date	Destination	Contents of training
Wed, 28 Jan	Solid Waste Final Disposal Site in City of Kyoto	Visit to a facility for solid waste final disposal operated by City of Kyoto
	Kyoto Municipal Waste Edible Oil Fuel Production Facility	Visit to a facility for waste recycling operated under collaboration between City of Kyoto and local citizens
	Kyoto City Environmental Conservation Center (Miyako Ecology Center)	Visit to a facility for information dissemination and environmental education for citizens on climate change and environmental conservation fields by City of Kyoto
Thu, 29 Jan	ICLEI Japan	Lecture on international trend on low carbon and climate resilient city development by Asian countries and networking efforts by municipalities at world level
	City of Kitakyushu Kitakyushu Asian Center for Low Carbon Society	- Lecture on initiatives for low carbon society development by City of Kitakyushu with city-citizen partnership - Lecture on approach model for sustainable city development based on environmental pollution mitigation and environmental quality improvement by City of Kitakyushu
	JICA	JICA Reporting Session

Through the training trip to Japan, participants collected information on initiatives for low carbon and resilient society development by municipalities and other organizations in Japan. At the same time, TGO collected necessary information for CIRC training curriculum development and management, with following items, through exchange of opinions with representatives from each destination:

- Support for design of climate change countermeasures at municipality level,
- Information dissemination activities including PR and outreach activities including utilization of mascots at municipality level,
- City-citizen partnership development through human resource development at municipality level, and
- Networking among municipalities.



Photo 2.24 Training in Japan (Global Environment Bureau, MOEJ)



Photo 2.25 Training in Japan (Faculty of Social Sciences, Hosei University)



Photo 2.26 Training in Japan (Mie Prefectural Environmental Study and Information Center)



Photo 2.27 Training in Japan (City of Toyama)



Photo 2.28 Training in Japan (Solid Waste Final Disposal Site in City of Kyoto)



Photo 2.29 Training in Japan (Kyoto Municipal Waste Edible Oil Fuel Production Facility)



Photo 2.30 Training in Japan (Kyoto City Environmental Conservation Center (Miyako Ecology Center))



Photo 2.31 Training in Japan (ICLEI Japan)

3) 3rd Project Year (1st Group: 17 April 2016- 29 April 2016, 2nd Group: 17 April 2016- 23 April 2016, 3rd Group: 24 April 2016- 29 April 2016)

Thai participants of the third Project year were divided into three groups to effectively conduct trainings in Japan: 1st Group (Director of CITC/ Capacity Building and Outreach Office of TGO), 2nd group (TGO technical officials and officials from related agencies in Thailand) and the 3rd group (executives from TGO and related agencies in Thailand). Participants of the each training groups and training schedule and objective of the visit to each destination are shown in the following tables.

Objective of Japan training trip was set as obtaining information on the efforts for low carbon and resilient society development including initiatives related to climate change adaptation by municipalities and related organizations in Japan, which can be useful for CITC training curriculum development and management and training delivery.

TGO and JICA Expert Team discussed and selected destinations as well as topics to be covered at each destination based on the needs from Thai side and on available expertise and experience in the corresponding topic at a destination institution in Japan.

Participants of the training program, schedule and training contents at each destination are shown in the following tables.

Table 2.31 List of participants to training in Japan (1st Group)

	Name	Organization/ Department
1	Dr. Jakkanit Kananurak	Director, Thailand Greenhouse Gas Management Organization(TGO)/ Director, Capacity Building and Outreach Office, Climate Change International Technical and Training Center

Table 2.32 List of participants to training in Japan (2nd Group)

	Name	Organization/ Department
1	Dr. Natarika Wayuparb Nitiphon	Deputy Executive Director, Thailand Greenhouse Gas Management Organization (TGO)
2	Ms. Chanyaphak Wathanachinda	Technical Expert, Capacity Building and Outreach Office, Thailand Greenhouse Gas Management Organization (TGO)
3	Ms. Chayathorn Thanawattanadamrong	Technical Expert, Capacity Building and Outreach Office, Thailand Greenhouse Gas Management Organization (TGO)
4	Ms. Apaphatch Hunsirtrakun	Official, Capacity Building and Outreach Office, Thailand Greenhouse Gas Management Organization (TGO)
5	Mr. Thitipong Piboolgulsamlit	Technical Expert, Capacity Building and Outreach Office, Thailand Greenhouse Gas Management Organization (TGO)
6	Mr. Rongphet Bunchuaidee	Manager, Greenhouse Gas Technical Support Section, Thailand Greenhouse Gas Management Organization (TGO)
7	Ms. Areeya Lukthan	Official, Strategy Office, Thailand Greenhouse Gas Management Organization (TGO)
8	Mr.Thada Sukhapunaphan	Expert on Hydrology, Royal Irrigation Department, Ministry of Agriculture and Cooperatives
9	Mr. Somchai Boonpradub	Senior Expert in Cropping Systems, Department of Agriculture, Ministry of Agriculture and Cooperatives
10	Ms. Wannapa Khlaisuan	Policy and Plan Analyst, Senior Professional, Agriculture, Natural Resource and Environment Planning Office, Office of the National Economic and Social Development Board (NESDB)
11	Dr. Akarapon Houbcharaun	Economist, Office of Agricultural Economics/ Bureau of Agricultural Economic Research, Ministry of Agriculture and Cooperatives

Table 2.33 List of participants to training in Japan (3rd Group)

	Name	Organization/ Department
1	Mr. Sunthad Somchevita	Advisor, Thailand Greenhouse Gas Management Organization (TGO)/ Chairman of Climate Change International Technical and Training Center (CITC)
2	Mrs. Prasertsuk Chamornmarn	Executive Director, Thailand Greenhouse Gas Management Organization (TGO)
3	Ms. Ladawan Kumpa	Deputy Secretary General, Office of the National Economic and Social Development Board (NESDB)
4	Ms. Pisamai Sathienyanon	Renewable Energy Expert, Central Administration, Department of Alternative Energy Development and Efficiency, Ministry of Energy
5	Ms. Nareerat Thanakasem	Technical Expert, Capacity Building and Outreach Office, Thailand Greenhouse Gas Management Organization (TGO)

Table 2.34 Training program in Japan (1st Group)

Date	Destination	Contents of training
Tue, 19 Apr 2016	Niigata Prefecture Niigata City	Lectures on overview of action plan and initiatives for climate change mitigation by Niigata Prefectural Government and Niigata City Office
	Shinano River Ohkouzu Museum	Site visit on initiative for flood disaster management at regional level in Shinano River area
Wed, 20 Apr	Uonuma City	Site visit on carbon offsetting for increased carbon sink in Uonuma City
Thu, 21 Apr	Nagano Environmental Conservation Research Institute	- Lectures on policies and initiatives for climate change mitigation and adaptation by Nagano Prefectural Government - Site visit on research programs related to climate change countermeasures by Nagano Environmental Conservation Research Institute
	Nagano Prefecture Agricultural Experiment Station	Lectures and site visit on research programs for climate change adaptation by Nagano Prefecture Agricultural Experiment Station
Fri, 22 Apr	(Attendance in JICA Reporting Session for 2nd Group)	
Tue, 26 Apr	Yusuhara Town	Site visit on initiatives for climate change mitigation by Yusuhara Town
	Bureau for Forestry Promotion and Environment, Kochi Prefecture	Lectures on policies and initiatives for climate change mitigation and adaptation by Kochi Prefecture
Wed, 27 Apr	Kochi Coast (Kochi Office of River and National Highway, Ministry of Land, Infrastructure, Transport and Tourism)	Site visit on initiatives for coastal protection and countermeasures against earthquakes and tsunamis at regional level in Kochi Coast area.
Thu, 28 Apr	Institute of Industrial Science, the University of Tokyo	Courtesy visit for opinion exchange on Thai-Japanese joint research project related to climate change adaptation
	Lunch with representatives from JICA Headquarters	

*1st Group participated in training program for 2nd and 3rd Groups.

Table 2.35 Training program in Japan (2nd Group)

Date	Destination	Contents of training
Tue, 19 Apr 2016	Niigata Prefecture Niigata City	Lectures on overview of action plan and initiatives for climate change mitigation by Niigata Prefectural Government and Niigata City Office
	Shinano River Ohkouzu Museum	Site visit on initiative for flood disaster management at regional level in Shinano River area
Wed, 20 Apr	Uonuma City	Site visit on carbon offsetting for increased carbon sink in Uonuma City
Thu, 21 Apr	Nagano Environmental Conservation Research Institute	- Lectures on policies and initiatives for climate change mitigation and adaptation by Nagano Prefectural Government Site visit on research programs related to climate change countermeasures by Nagano Environmental Conservation Research Institute
	Nagano Prefecture Agricultural Experiment Station	Lectures and site visit on research programs for climate change adaptation by Nagano Prefecture Agricultural Experiment Station
Fri, 22 Apr	JICA Reporting Session	

Table 2.36 Training program in Japan (3rd Group)

Date	Destination	Contents of training
Tue, 26 Apr 2016	Yusuhara Town	Site visit on initiatives for climate change mitigation by Yusuhara Town
	Bureau for Forestry Promotion and Environment, Kochi Prefecture	Lectures on policies and initiatives for climate change mitigation and adaptation by Kochi Prefecture
Wed, 27 Apr	Kochi Coast (Kochi Office of River and National Highway, Ministry of Land, Infrastructure, Transport and Tourism)	Site visit on initiatives for coastal protection and countermeasures against earthquakes and tsunamis at regional level in Kochi Coast area.
Thu, 28 Apr	Institute of Industrial Science, the University of Tokyo (*Core member institution of ADAP-T Project in Japan side)	- Courtesy visit for opinion exchange on Thai-Japanese joint research project related to climate change adaptation - High-level consultation for future establishment of partnership between TGO and ADAP-T which has expertise in climate change adaptation field
	Meeting with representatives from JICA Headquarters	

Through the training trip to Japan for 2nd Group, Thai participants collected information on initiatives for low carbon and resilient society development by municipalities and other organizations in Japan. At the same time, Thai participants collected following useful information for CITC training curriculum development and management, through exchange of opinions with representatives from each destination:

- Progress of preparation of climate change action plan and relevant initiatives as well as measures for climate change adaptation by local governments and municipalities;
- Initiatives with strong relationship with climate change adaptation in disaster prevention and agricultural fields at municipality or regional level; and
- PR and outreach activities and initiatives for partnership with local stakeholders at municipality level.

Through the training trip to Japan for 3rd Group, Thai participants conduct high-level consultation session with the University of Tokyo to establish partnership with ADAP-T Project for sustainable CITC management.

At the same time, participants of the 3rd Group collected following necessary information for CITC training curriculum development:

- Progress of preparation of climate change adaptation measures by municipalities;
- Initiatives for renewable energy deployment and forestry conservation at municipality level;
- Initiative for coastal protection with close relationship with climate change adaptation measures at regional level; and
- Thai-Japanese joint research project on climate change adaptation in the field of water resources, coastal protection, urban, forestry and others by Thai and Japanese research institutions.

2.3 Activity 3: Implementation of trainings and workshops for ASEAN stakeholders

2.3.1 Development of training curriculums and training materials for ASEAN courses

Based on the results of Training Needs Assessment (TNA), which was conducted through workshops and questionnaire survey, TGO with the support from JICA Expert Team developed training curriculums for ASEAN stakeholders (for the TNA result, look at 2.1.2 “Needs assessment in Thailand and ASEAN countries”).

CITC has developed training curriculum for the following three training courses during the Project period.

- Climate Change Management for Sustainable Development (CCSD)
- Mitigation Mechanism (MM)
- Climate Finance (CF)

Procedure to develop training curriculum for ASEAN stakeholders is the same as that for Thai stakeholders as shown in “Figure 2.2 Steps of CITC training program development.” TGO technical officers and JICA Expert Team had a series of meetings and discussions to develop the initial draft of training curriculums, which were then modified based on the result of TNA and peer review meetings where external experts and stakeholders provided comments.

Peer review meeting was held for two ASEAN courses, namely CCSD and MM courses. Peer review for CF course was not conducted during the Project period due to the time constraint. At the peer review meeting, international experts and stakeholders, who represent climate change focal point agencies and academic institutions in ASEAN countries, were invited to Thailand to review and examine proposed training curriculums developed by TGO and JICA Expert Team.



Photo 2.32 Peer review meeting

Reviewers provided a wide range of comments and suggestions on the two courses, ranging from training objective, target groups, training topics, duration, and training approaches, etc. which are summarized in Table 2.37.

Table 2.37 Summary of comments from ASEAN peer review meeting

Training curriculum	Reviewers	Raised comments and suggestions
<p>“Climate Change Management for Sustainable Development” and “Mitigation Mechanism”</p>	<p>Climate change focal point agencies, related agencies, academic sector from ASEAN countries</p>	<p>[target group]</p> <ul style="list-style-type: none"> - Should target potential trainers who can coach to other people on certain topics back in their country - Trainees on adaptation is not simple since the theme topics are very broad - Should invite 3 to 4 trainees from certain countries where training needs on climate change issue are especially high - Participation by private sector and NGO can be effective <p>[training topic]</p> <ul style="list-style-type: none"> - Very important to show the link with SDGs - Enhance the session on climate change mainstreaming - Tangible outcomes should be generated by the end of the training - Should add a session that explains co-benefits - Topics should be selected based on the needs, which are different from focal point and line ministries <p>[training approach]</p> <ul style="list-style-type: none"> - It may be effective to impose a homework before the training in order to ensure commitment from trainees - Asking trainees to prepare how they will utilize/ practice what they have learned at the training is effective

Training materials for the three ASEAN courses were developed under the strong initiative of TGO officials. Developed training materials include textbooks, presentation materials, and additional materials for exercise and discussion sessions.

Structure and table of contents for each of the above training materials were developed by TGO officials and JICA Expert Team in cooperation with external experts in Thailand and Japan.

2.3.2 Implementation of trainings for ASEAN countries

Although implementation of training courses for ASEAN was not originally planned at the beginning of the Project, in light of expanding needs from ASEAN stakeholders on holding CITC training courses for the region, and also upon strong commitment and willingness by TGO to start regional training at the earliest date, three training courses for ASEAN countries were held that received the highest demand, namely “Climate Change Management for Sustainable Development (CCSD) for ASEAN stakeholders,” “Mitigation Mechanism (MM) for ASEAN stakeholders,” and “Climate Finance (CF) for ASEAN stakeholders,”

- “Climate Change Management for Sustainable Development (CCSD) for ASEAN stakeholders” course

The very first CITC’s regional training courses for ASEAN stakeholders were held at Pullman Bangkok Hotel G. in Bangkok from 29 February to 4 March 2016.

Two courses, “Climate Change Management for Sustainable Development (CCSD) for ASEAN stakeholders” course and “Mitigation Mechanism (MM) for ASEAN stakeholders” course, were held back-to-back as the two courses are closely related and inter-linked in their contents as well as target trainees. CCSD course was held from 29 February to 1 March and MM course was held from 2 and 4 of March, which 3 March was allocated for site visit session for both courses.

35 participants attended the CCSD course from ASEAN countries, namely Cambodia, Malaysia, Myanmar, Vietnam and Thailand. Trainees who represent climate change focal point agencies, local municipalities that take proactive climate actions in the region, or academic institutions that are keen on research in climate change issues.

The training program of CCSD course covers such policy-oriented topics as the latest international trend of climate change and sustainable development including Paris Agreement and Sustainable Development Goals (SDGs), and also regional trend related to climate change such as ASEAN blueprint and other strategies. The program extensive incorporates a mutual learning approach, a training approach which was suggested during the regional peer review meeting, where trainees from each ASEAN country presented their climate



Photo 2.33 CCSD course for ASEAN



Photo 2.34 Panel discussion

policies and actions, and exchanged their experiences and opinions with other trainees as well as international experts.

Second day of the training extensively covered adaptation topics, about which ASEAN stakeholders had shown strong training needs. The program covered a wide range of topics on adaptation including experiences from another JICA-supported project “Integrated Study Project on Hydro-Meteorological Prediction and Adaptation to Climate Change in Thailand (IMPAC-T)” etc.

Mitigation topics were covered on the first day of Mitigation Mechanism course, which is described in the next clause.

Table below shows the training program of CCSD for ASEAN stakeholders.

Table 2.38 Training program for CCSD course for ASEAN stakeholders (Day 1)

08.30 - 09.00	Registration and Pre-test	
09.00 - 09.15	Opening Remarks By Mrs. Prasertsuk Chamornmarn, Executive Director, Thailand Greenhouse Gas Management Organization (TGO) Mr. Shuichi Ikeda, Chief Representative, JICA Thailand Office	
09.15 - 09.30	Introduction of regional training and introduction of CITC	Dr. Jakkanit Kananurak Director of Climate Change International Technical and Training Center (CITC)
09.30 - 10.15	International talks and negotiations on climate change: COP21 outcomes	Dr. Natarika Wayuparb Nitiphon Deputy Executive Director, TGO
10.15-10.30	Coffee break and Group Photo	
10.30-11.15	Strategies and challenges of climate change management for sustainable development in Southeast Asian countries	Dr. Ampai Harakunarak Assistant Director – Head of Environment Division Cross-Sectoral Cooperation Directorate, ASEAN-Socio-Cultural Community Department
11.15-12.30	Importance of low carbon and climate resilient development and linkage with SDGs	Dr. Shuzo Nishioka, Institute for Global Environmental Strategies (IGES)
12.30-13.30	Lunch	
13.30-16.15	Panel session: updated climate change national plan/ policy and experience of climate change policy integration - Cambodia - Malaysia - Myanmar - Thailand - Vietnam	Panelists: Trainees from Southeast Asian countries Moderators: - Dr. Kazuhito Yamada, JICA Expert Team - Dr. Jakkanit Kananurak Director of CITC
16.15-17.00	Open discussion: challenges and lessons of climate change policy integration	Facilitators: - Dr. Kazuhito Yamada, JICA Expert Team - Dr. Jakkanit Kananurak Director of CITC

Table 2.39 Training program for CCSD course for ASEAN stakeholders (Day 2)

09.00-09.15	Summary of Day 1	Mr. Satoshi Iemoto JICA Expert
09.15-09.55	International talks on climate change adaptation	Dr. Puja Sawhney Asia-Pacific Adaptation Network (APAN)
09.55-10.35	Climate change impacts in Southeast Asian countries	Dr. Vilas Nitivattananon Associate Professor, Asian Institute of Technology (AIT)
10.35-10.50	Coffee break	
10.50-11.30	Integration and strengthening resilience against climate change: importance and approach of climate change adaptation mainstreaming	Dr. Mariko Fujimori JICA Expert Team
11.30-12.15	Application of research in Southeast Asian countries: Experience of IMPAC-T and ADAP-T projects	Dr. Thanya Kiatiwat, Faculty of Engineering Kasetsart University, Thailand
12.15-13.30	Lunch	
13.30-15.30	Panel Discussion: Policies and actions on climate change adaptation in Southeast Asia Panelists: <ul style="list-style-type: none"> Mr. Naing Linn Aung Environmental Conservation Department, Ministry of Environmental Conservation and Forestry (MOECA), Myanmar Professor Damasa B. Magcale-Macandog, University of the Philippines Los Baños, Philippines Dr. Gris Linwattana, Department of Agriculture, Ministry of Agriculture and Cooperatives, Thailand Dr. Nguyen Lanh, Institute of Strategy, Policy on Natural Resources and Environment (ISPONRE), Vietnam 	Moderators: <ul style="list-style-type: none"> Dr. Mariko Fujimori, JICA Expert Team Dr. Puja Sawhney, Asia-Pacific Adaptation Network (APAN)
15.30-15.45	Coffee break	
15.45-16.30	Open discussion: Challenges and lessons in developing and implementing climate change adaptation policies and actions	Facilitators: <ul style="list-style-type: none"> Dr. Mariko Fujimori, JICA Expert Team Dr. Puja Sawhney, Asia-Pacific Adaptation Network (APAN)

- **“Mitigation Mechanism (MM) for ASEAN stakeholders” course**

Training course “Mitigation Mechanism (MM) for ASEAN stakeholders” was held in Bangkok from 2 to 4 March 2016. The second day of the training was allocated for site visit session.

37 participants from ASEAN countries (Cambodia, Malaysia, Myanmar, Vietnam and Thailand) attended the training course, who are, same as for



Photo 2.35 MM for ASEAN

CCSD course, from climate change focal point agencies, local governments and academic institutions. Greater number of participants from private sector was observed for MM course more than CCSD course.

While the training contents of the CCSD course focus on policy-oriented issues such as climate policy development and adaption mainstreaming, program for MM course highlights implementation of mitigation actions, including introduction of various mitigation mechanisms and frameworks such as JCM and CDM, mitigation technologies, and MRV. MM course also incorporates mutual learning method where trainees from ASEAN countries presented their experiences, lessons and issues related to mitigation projects or programs in their country. In addition, ASEAN trainees were shared with knowledge and experience from Japan through hearing experiences in “Ten Actions towards Low Carbon Asia” from a researcher of National Institute for Environmental Studies (NIES).

Training program of MM course is presented in the table below.

Table 2.40 Training program for MM course for ASEAN stakeholders (Day 1)

08.45-09.00	Registration and Pre-test (for Mitigation Mechanism course)	
09.00-10.00	Introduction of climate change mitigation	Dr. Shuzo Nishioka, Institute for Global Environmental Strategies (IGES)
10.00-10.30	International talks on climate change mitigation	Mr. Thawatchai Somman, Strategy Office, TGO
10.30-10.50	Coffee break	
10.50-11.50	Overview of mitigation mechanism	Dr. Bundit Limmeechokchai, Sirindhorn International Institute of Technology (SIIT), Thammasat University
11.50-13.00	Lunch	
13.00-13.45	Importance and overview of MRV	Dr. Bundit Limmeechokchai, Sirindhorn International Institute of Technology (SIIT), Thammasat University
13.45-15.45	Panel Discussion: Policies and actions on climate change mitigation in Southeast Asia Panelists: <ul style="list-style-type: none"> • Dr. Bae Pheaxay National University of Laos • Dr. Ho Chin Siong Universiti Teknologi Malaysia • Dr. Muanjit Chamsilpa, Technical expert from T-VER project, TGO 	Moderator: Dr. Kazuhito Yamada, JICA Expert Team
15.45-16.00	Coffee Break	
16.00-16.45	Open discussion: Challenges and lessons in developing and implementing climate change mitigation policies and actions	Facilitator: Dr. Kazuhito Yamada, JICA Expert Team
16.45-17.15	CCSD Post test	

Table 2.41 Training program for MM course for ASEAN stakeholders (Day 2)

09.00-09.15	Wrap up of Day 3 and Day 4	Mr. Satoshi Iemoto, JICA Expert
09.15-10.00	Overview of mitigation policies	Dr. Ram Shrestha, Professor Emeritus, Asian Institute of Technology (AIT)
10.00-11.00	Overview of mitigation technologies	- Dr. Bundit Limmeechokchai, Sirindhorn International Institute of Technology (SIIT), Thammasat University, Thailand - Dr. Mara Regina Mendis, Regional Resource Centre for Asia and the Pacific, Asian Institute of Technology (AIT)
11.00-11.15	Coffee break	
11.15-12.00	Overview of “10 Actions toward Low Carbon Asia” and contributions to 10 actions	Dr. Mikiko Kainuma, Institute for Global Environmental Strategies (IGES)
12.00-13.00	Lunch	
13.00-14.30	Panel discussion: Good practices on mitigation actions Panelists: <ul style="list-style-type: none"> • Dr. Tran Thanh Tu, Ton Duc Thang University, Vietnam • Prof. Manmohan Kapshe, Department of Architecture and Planning, Maulana Azad National Institute of Technology, Bhopal, India • Dr. Ucok Welo Risma Siagian, Center for Research on Energy, Institut Teknologi Bandung, Indonesia 	Facilitator: <ul style="list-style-type: none"> - Dr. Mikiko Kainuma, Institute for Global Environmental Strategies (IGES)
14.30-15.00	Post-test	
15.00-15.15	Coffee break	
15.15-16.45	Participants presentation	Facilitators: <ul style="list-style-type: none"> - Dr. Mariko Fujimori, JICA Expert Team - Ms. Nareerat Thanakasem, TGO
16.45-17.15	Closing remarks and Certification	

On the second day of MM training program, site visit was conducted and trainees visited Bangpu Nature Education Centre where mangrove trees are planted as a countermeasure of climate change-induced coastal erosion. The project site well demonstrates inter-relationship between adaptation and mitigation and helped trainees to visually understand the importance of such inter-relationship. Moreover, site visit has provided a good opportunity for trainees to exchange opinions with other trainees as well as speakers

**Photo 2.36 Site visit for ASEAN**

and experts, which helped develop and strengthen human networks among the region.

In the final session of MM course, each trainee presented his/ her idea about how to utilize what s/he had learned through the training course when they go back to their country. Each trainee also exchanged opinions with TGO, JICA Expert Team and other international experts during this session.

- **“Climate Finance (CF) for ASEAN stakeholders” course**

Training course of “Climate Finance (CF) for ASEAN stakeholders” was held on 28 and 29 March 2016 in Pullman King Power Hotel, Bangkok. The training was held as a back-to-back event with 3rd CITC Regional Conference (3rd ASEAN Workshop).

45 participants attended the training, including those from Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam. Trainees represent various organizations such as climate change focal point agencies, finance- or economy-related ministries, planning-related agencies, academic institutions and research institutions. Some trainees from private sector in Thailand also attended the training.

The training program starts with lectures on the basics such as climate change science and international framework and trend, overview of Paris Agreement, followed by climate finance and climate mechanisms. Case studies of mitigation and adaptation projects in other countries that utilize climate finance schemes were also presented on the first day of the training.



Photo 2.37 CF for ASEAN

Second day of training focuses on how to access climate finance, and project and finance management, followed by extensive group discussions and presentations to further enhance their understanding on the topics covered in the training.

The course was concluded with presentation by some trainees who mentioned about their plan and ideas about application of what they had learned in the training, and exchanged opinions with lecturers, TGO officials and JICA Expert Team.



Photo 2.38 Group exercise

Training program of CF course is shown in the table below.

Table 2.42 Training program for Climate Finance course for ASEAN stakeholders (Day 1)

08.30 – 09.00	Registration and pre-test	
09.00–09.30	Opening remarks By Mrs. Prasertsuk Chamornmarn, Executive Director, Thailand Greenhouse Gas Management Organization (TGO) Mr. Masanari Yanagiuchi, Senior Representative, JICA Thailand Office	
9.30–10.00	Introduction of CITC, Course Overview and Objectives	Dr. Jakkani Kananurak, Director, Climate Change International Technical and Training Center (CITC)
10.00-11.00	Climate Change Science and Policy	Dr. Robert J. Didham, Education & Knowledge Management, IGES
11.00-11.30	Coffee Break	
11.30-12.30	Overview of Climate Finance Mechanisms Climate Finance Mechanism of GCF	<ul style="list-style-type: none"> · Dr. Tomonori Sudo, College of Asia Pacific Studies, Ritsumeikan Asia Pacific University, and · Mr. Juichiro Sahara, Green Climate Fund (GCF)
12.30-14.00	Lunch	
14.00-15.00	Climate Finance Mechanisms (cont'd)	Dr. Tomonori Sudo and Mr. Juichiro Sahara
15.00-15.30	Climate Change Benefit Analysis	Dr. Pawin Talerngsri United Nations Development Programme (UNDP)
15.30-16.00	Coffee Break	
16.00-17.00	Case Studies of Climate Finance Projects	Dr. Robert J. Didham
17.00-18.00	Stocktaking of country needs and opportunities for climate finance – Group Activity	Facilitator: Dr. Robert J. Didham

Table 2.43 Training program for Climate Finance course for ASEAN stakeholders (Day 2)

09.00-10.15	Accessing Climate Financing Accessing Climate Financing of GCF	Dr. Tomonori Sudo and Mr. Juichiro Sahara
10.15-10.45	Coffee Break	
10.45-12.00	Managing Climate Finance Projects Managing GCF projects	Dr. Tomonori Sudo and Mr. Juichiro Sahara
12.00-13.30	Lunch	
13.30-15.00	Practical on Preparing Project Proposals to Access Climate Funds and Support Services	Facilitators: Dr. Tomonori Sudo and Mr. Juichiro Sahara
15.00-15.20	Coffee Break	
15.20-16.50	Group Work: Developing Supportive Infrastructures for Climate Finance	Facilitator: Dr. Tomonori Sudo
16.50-17.20	Presentation by each group	
17.20-17.40	Post test	
17.40–18.00	Closing Remarks and certification ceremony	Dr. Natarika Wayuparb Nitiphon Deputy Executive Director, TGO Mr. Fujimoto Masahiko, JICA Expert Team

- Result of training evaluation

In the same manner as training courses for Thai stakeholders, trainees were asked to take pre-test and post-test for each training course and the result was analyzed to check the effectiveness of the training courses. Each test contains 10-15 questions that ask basic- to intermediate-level questions related to the topics covered in the training. A set of questions was prepared by TGO, JICA Expert Team and lecturers.

The result of the test revealed trainees had improved understanding for all three courses for ASEAN. For CCSD course, average pre-test score was 61% raised to 74%, while MM course rose from 64% up to 81%, and CF course saw a rise from 61% to 70%.

In addition to the above knowledge test, all trainees were also asked to evaluate the CITC training program in terms of its overall training approach and operation. Most of the trainees gave a favorable evaluation of the trainings as summarized in the tables below.

Table 2.44 Result of training evaluation (for ASEAN stakeholders)

Category	Question	Average score (maximum = 5.0)	
		CCSD and MM	CF
Training approach	Training theme and objective was clearly explained.	4.3	4.1
	Overall training approach (mixture of lectures, group exercises and discussions) was appropriate.	4.2	4.3
	Amount of training topics was suitable (or too much/ little).	4.0	3.8
	Class participation and interaction were encouraged.	4.1	3.9
	Adequate time was provided for question and answer session.	4.3	4.1
	Training materials were well prepared and useful.	4.1	4.0
	Duration of training program was appropriate.	4.1	4.3
Training operation	Training was smoothly operated by CITC secretariat.	4.4	4.3
	Training venue and location was sufficient.	4.5	4.2
	Transportation was appropriately arranged.	4.3	4.2
Overall	Please rate the overall quality of training sessions .	4.3	4.4
	Did the training meet your expectation ?	3.8	4.1

Table 2.45 Result of training session evaluation (CCSD for ASEAN stakeholders)

Day	Session title	Average score (maximum = 5.0)
Day 1	Introduction of regional training and introduction of CITC	4.4
	International talks and negotiations on climate change: COP21 outcomes	4.4
	Strategies and challenges of climate change management for sustainable development in Southeast Asian countries	4.3
	Importance of low carbon and climate resilient development and linkage with SDGs	4.2
	Panel session: updated climate change national plan/ policy and experience of climate change policy integration	4.1
	Open discussion: challenges and lessons of climate change policy integration	4.0
Day 2	International talks on climate change adaptation	4.2
	Climate change impacts in Southeast Asian countries	4.2
	Integration and strengthening resilience against climate change: importance and approach of climate change adaptation mainstreaming	4.2
	Application of research in Southeast Asian countries: Experience of IMPAC-T and ADAP-T projects	4.4
	Panel Discussion: Policies and actions on climate change adaptation in Southeast Asia	4.0
	Open discussion: Challenges and lessons in developing and implementing climate change adaptation policies and actions	3.9

Table 2.46 Result of training session evaluation (MM for ASEAN stakeholders)

Day	Session title	Average score (maximum = 5.0)
Day 1	Introduction of climate change mitigation	4.4
	International talks on climate change mitigation	4.4
	Overview of mitigation mechanism	4.4
	Importance and overview of MRV	4.2
	Panel Discussion: Policies and actions on climate change mitigation in Southeast Asia	4.1
	Open discussion: Challenges and lessons in developing and implementing climate change mitigation policies and actions	4.1
Day 2	Site visit (Bang Pu Nature Education Centre)	4.3
3 日 目	Overview of mitigation policies	4.4
	Overview of mitigation technologies	4.3
	Overview of “10 Actions toward Low Carbon Asia” and contributions to 10 actions	4.5
	Panel discussion: Good practices on mitigation actions	4.1
	Participants presentation	4.1

Additional comments from trainees on CCSD and MM courses include the followings:

- Highly useful for our country whose climate actions are not so advanced
- Comprehensive training that include all important topics such as adaptation, mitigation, policy planning, finance and assistance, MRV, etc.
- It is nicer if we had printed materials for all presentations
- Informative but 5 days (CCSD and MM courses combined) are too long

Table 2.47 Result of training session evaluation (CF for ASEAN stakeholders)

Day	Session title	Average score (maximum = 5.0)
Day 1	Climate change Science and Policy	4.2
	Climate Finance Mechanisms	4.3
	Climate Change Benefit Analysis	4.3
	Case Studies of climate Finance Projects	4.0
	Stocktaking of country needs and opportunities for climate finance	4.1
Day 2	Accessing Climate Financing	4.2
	Managing Climate Finance Projects	4.2
	Practical on Preparing Project Proposals to Access Climate Funds and Support Services	4.3
	Developing Supportive Infrastructures for Climate Finance	4.0

Below are some of the additional comments from trainees of CF course.

- Highly useful training course
- Perfect training operation and logistics
- Achieved objective of training participation
- Case studies are highly useful and should be extended more
- Please hold a similar training in other ASEAN countries
- Since each session is highly valuable, more time should be allocated
- Group exercise session was too short
- Training hours in one day is too long. 3-day course should be better.



2.3.3 Implementation of workshop to enhance networking and to share the knowledge and experiences with ASEAN countries

TGO and JICA Expert Team jointly organized ASEAN workshops under the Project to share the knowledge and experiences on climate change with ASEAN stakeholders and representatives from other relevant institutions in climate change field. TGO and JICA Expert Team have made consultations to decide detailed program for the workshops.

1) First ASEAN Workshop (May 2014)

MONRE, TGO and JICA Expert Team jointly organized the initial ASEAN Workshop on 8-9 May 2014, in Pattaya for promotion of CITC acknowledgement and exchange of the latest technical knowledge and experiences on climate change among ASEAN stakeholders. Along with information exchange among ASEAN stakeholders, official launch of CITC was announced on the first day of the workshop and training needs on Low Carbon Society Development topic in ASEAN region was identified on the second day of the workshop. Overview of the workshop is shown in Table 2.48 (For TNA result, see clause 2.1.2 of this Report).

Table 2.48 Workshop overview (First ASEAN Workshop)

Date and time	(Day 1) 09:00 a.m.- 05:00 p.m., 8 May 2014 (Day 2) 09:00 a.m.- 12:15 a.m., 9 May 2014
Workshop title	Launching of Climate Change International Technical and Training Center (CITC) and Workshop for Capacity Development on Low Carbon Society (LCS) in the Southeast Asia Region: Training Needs Assessment
Organizers	MONRE, TGO and JICA
Participants	Overall: 117 participants (ASEAN stakeholders*: 15 participants, ASEAN Secretariat: 2 participants, TGO: 23 participants, JICA Expert Team: 9 participants) *Number of participants from each ASEAN country Cambodia, Indonesia, Laos, Myanmar, Philippines, Thailand and Vietnam: 2 participants from each country, Malaysia: 1 participant
Topic	<ul style="list-style-type: none"> Information exchange on current status and further steps towards low carbon society development, climate change mitigation and adaptation actions in Southeast Asia region Identification of training needs of central government (policymakers and implementers) and sharing of capacity development resources on LCS development integrated with adaptation perspectives among relevant institutions in Southeast Asian region Enhancement in networking among climate change related institutions in Southeast Asia region
Abstract	<p>Presentation and discussion on the following topics and issues were made with objective of generating mutual understanding of current status of LCS development and climate change actions, as well as formulation of the training development road map on LCS, initiation of LCS capacity development resources mobilization platform and establishment and strengthening of network targeted for climate change related agencies/ institutions in the region:</p> <p>(Day 1: Launching of CITC and LCS seminar)</p> <ul style="list-style-type: none"> Announcement of official launch of CITC Current updates and direction of ASEAN Secretariat on climate change issues JICA's cooperation with ASEAN countries and expectations for CITC Overview of LCS development LCS policy development process, good practices in the Southeast Asia region Capacity development on mitigation and adaptation in the Southeast Asia region <p>(Day 2: TNA workshop)</p> <ul style="list-style-type: none"> TNA results Draft curriculum for Low Carbon Society Development courses and discussion on approaches for shaping up the draft curriculum Linking LCS stakeholders in the Southeast Asia region through CITC <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Photo 2.39 Launching of CITC and LCS seminar</p> </div> <div style="text-align: center;">  <p>Photo 2.40 TNA workshop</p> </div> </div> <p>JICA Expert Team presented on JICA's support for CITC and draft curriculum for low carbon society development course for central government officers, and co-facilitated discussion on approaches for shaping up the draft curriculum with TGO.</p>

Workshop agenda	09.00 - 09.50	<p>Welcome Remarks</p> <ul style="list-style-type: none"> ▪ Mrs. Prasertsuk Chamornmarn, Executive Director, TGO <p>Opening Remarks</p> <ul style="list-style-type: none"> ▪ Mr. Sunthad Somchevita, Chairman of the Board of CITC ▪ Mr. Shuichi Ikeda, Chief Representative, JICA Thailand Office
	09.50 - 10.05	<p>Current Updates and Direction of ASEAN Secretariat on Climate Change Issues</p> <ul style="list-style-type: none"> ▪ Ms. Natalia Derodofa, Senior Officer Environment, ASEAN Secretariat
	10.05 - 10.20	<p>JICA's Cooperation with ASEAN Countries and Expectations for CITC</p> <ul style="list-style-type: none"> ▪ Mr. Yukichi Usui, Deputy Director, Office for Climate Change, JICA
	10.20 - 10.40	Photo Session /Coffee Break
	10.40 - 11.10	<p>Introduction of Climate Change International Technical and Training Center (CITC)</p> <ul style="list-style-type: none"> ▪ Dr. Jakkaniit Kananurak, Director of Capacity Building and Outreach Office, TGO ▪ Mr. Masahiko Fujimoto, Team Leader, JICA Expert Team of "Project for Capacity Development on Climate Change Mitigation/Adaptation in the Southeast Asia Region"
	11.10 - 12.30	<p>Panel Discussion: Overview of LCS Development</p> <ul style="list-style-type: none"> ▪ Dr. Shuzo Nishioka, Senior Research Advisor, Institute for Global Environment Strategies (IGES)/ Secretary-General, LCS-RNet/ LoCARNet Secretariat ▪ Dr. Sirintornthep Towprayoon, The Joint Graduate School of Energy Environment, King Monkut's University of Technology Thonburi (JGSEE-KMUTT) ▪ Dr. Ho Chin Siong, Director of the Office of International Affairs, Universiti Teknologi, Malaysia <p><i>Facilitator: Dr. Jakkaniit Kananurak, Director of Capacity Building and Outreach Office, TGO</i></p>
	12.30 - 13.30	Lunch

13.30 - 15.00	Panel Discussion: LCS Policy Development Process, Good Practices in the Southeast Asia Region <ul style="list-style-type: none"> ▪ Mr. Hak Mao, Researcher, Kyoto University / Chief of Vulnerability Assessment and Adaptation Officer, Climate Change Department, Ministry of Environment, Cambodia ▪ Ms. Murni Titi Resdiana, Coordinator of General Administration Division, National Council on Climate Change (DNPI), Indonesia ▪ Mr. Phouvannasinh Phongsa and Mr. BounEua Khamphilavanh, Ministry of Natural Resources and Environment (MONRE), Laos ▪ Mr. Naing Linn Aung, Staff Officer, Environmental Conservation Department, Ministry of Environmental Conservation and Forestry (MOECAF), Myanmar ▪ Ms. Sandee G. Recabar, Senior Science Research Specialist, Climate Change Office, Climate Change Commission, Philippines ▪ Mr. Prasert Sirinaporn, Director, Climate Change Management Coordination Division, Ministry of Natural Resources and Environment (MONRE), Thailand ▪ Ms. Chu Thi Than Huong, Deputy Director, Science, Technology and International Cooperation Division, Department of Meteorology, Hydrology and Climate Change, Ministry of Natural Resources and Environment (MONRE), Vietnam <p><i>Facilitator: Dr. Natarika Wayuparb, Deputy Executive Director, TGO</i></p>
15.00 - 15.20	Coffee Break
15.20 - 17.00	Panel Discussion: Capacity Development on Mitigation and Adaptation in the Southeast Asia Region <ul style="list-style-type: none"> ▪ Dr. Rizaldi Boer, Director, Centre for Climate Risk and Opportunity Management in Southeast Asia and Pacific, Bogor Agricultural University, Indonesia ▪ Mr. Phouvannasinh Phongsa and Mr. BounEua Khamphilavanh, Ministry of Natural Resources and Environment (MONRE), Laos ▪ Dr. Ho Chin Siong, Director of the Office of International Affairs, Universiti Teknologi Malaysia ▪ Ms. Aye Kyawt Swe, Township Coordinator in CESVI, Myanmar ▪ Dr. Leonardo M. Florece, Dean, School of Environmental Science and Management (SESAM), University of the Philippines Los Banos ▪ Dr. Ladawan Puangchit, Assistant Professor, Department of Silviculture, Faculty of Forestry, Kasetsart University, Thailand ▪ Dr. Nguyen Tung Lam, Head, Department of Integrated Research, Institute of Strategy and Policy on Natural Resources and Environment (ISPONRE), Vietnam <p><i>Facilitator: Mr. Satoshi Iemoto, JICA Expert</i></p>
18.00 - 20.00	Reception Dinner: Hosted by TGO

Table 2.49 List of workshop participants from ASEAN countries (First ASEAN Workshop)

	Country	Name	Organization	Position/ Title
1.	Cambodia	Mr. Sem Sopheak,	Green Environment and Natural Resource Management	Deputy Director
2.		Mr. Hak Mao	Ministry of Environment (MOE) / Kyoto University, Japan	Chief of Vulnerability Assessment and Adaptation Office, Climate Change Department
3.	Indonesia	Ms. Murni Titi Resdiana	National Council on Climate Change (DNPI)	Coordinator of General Administration Division

	Country	Name	Organization	Position/ Title
4.		Mr. Rizaldi Boer, Professor	Bogor Agricultural University	Director, Centre for Climate Risk and Opportunity Management in South East Asia and Pacific
5.	Laos	Mr. Phouvannasinh Phongsas	Ministry of Natural Resources and Environment (MONRE)	Technical official
6.		Mr. BounEua Khamphilavanh	Ministry of Natural Resources and Environment (MONRE)	Senior Officer
7.	Malaysia	Dr. Ho Chin Siong, Professor	Universiti Teknologi Malaysia	Director of the Office of International Affairs
8.	Myanmar	Mr. Naing Linn Aung	Environmental Conservation Department, Ministry of Environmental Conservation and Forestry (MOECAF)	Staff Officer
9.		Ms. Aye Kyawt Swe	CESVI	Township Coordinator
10.	Philippines	Ms. Sandee G. Recabar	Climate Change Office, Climate Change Commission	Senior Science Research Specialist
11.		Dr. Leonardo M. Florece	University of the Philippines Los Banos (UPLB)	Dean of School of Environmental Science and Management
12.	Thailand	Mr. Prasert Sirinapaporn	Office of Natural Resources and Environmental Policy and Planning (ONEP), Ministry of Natural Resources and Environment	Director of Climate Change Management and Coordination Division
13.		Dr. Sirintornthep Towprayoon	The Joint Graduate School of Energy and Environment, King Mongkut's University of Technology Thonburi (JGSEE-KMUTT)	Director of the Joint Graduate School of Energy and Environment
14.	Vietnam	Ms. Chu Thi Thanh Huong	Department of Meteorology, Hydrology and Climate Change, Ministry of Natural Resources and Environment (MONRE)	Deputy Director Science, Technology and International Cooperation Division
15.		Dr. Nguyen Tung Lam	Institute of Strategy and Policy on Natural, Resources and Environment (ISPONRE)	Head, Department of Integrated Research

As to evaluation on overall performance of the workshop, workshop participants gave workshop management and contents relatively a good evaluation. Evaluation result and major comments on workshop management are summarized in the tables below.

Table 2.50 Result of evaluation (First ASEAN Workshop)

Category	Question	Average score (maximum = 5.0)
Workshop management	The event theme was relevant to your work	5.0
	The event design and approach was appropriate	4.0
	Agenda of the event was appropriate	5.0
	Duration of the sessions was appropriate	4.0
	The pace of the event was appropriate	4.0
Workshop contents	Information presented in this event was new	3.0
	The event provided you new insights on LCS	4.0
	The event provided you an opportunity to enhance your network and possibility for sharing knowledge with other participants from ASEAN	4.0
	Knowledge you obtained through this event can be applied to your work	4.0

Table 2.51 Major comments on workshop management (First ASEAN Workshop)

Topics	Comments from workshop participants
Knowledge on LCS	<ul style="list-style-type: none"> - The outcomes of ASEAN Workshop include new basic knowledge on LCS, various approaches/ methods for LCS. - Participants could receive helpful information on LCS initiatives in ASEAN countries - Knowledge obtained at the workshop can be applied to works of participants in their institutions.
Networking	<ul style="list-style-type: none"> - Workshop participants could expand their network of experts on LCS and climate change from ASEAN countries. - Networking with participants from ASEAN countries is important.
Time allocation	<ul style="list-style-type: none"> - Workshop participants had enough time for discussion with resource persons. - Time allocation for presentation by participants is not enough. Day 1 of the workshop is overscheduling. - It is suggested that there will be parallel sessions for better knowledge enhancement in participants' side.
Agenda of workshop	<ul style="list-style-type: none"> - It is suggested that there will be exercise(s) on which participants can work together.

2) Second ASEAN Workshop (June 2015)

MONRE, TGO, and JICA jointly organized the second ASEAN Workshop titled “Regional Workshop for Capacity Development on Low Carbon and Resilient Society in Southeast Asian countries” from 22 to 24 June 2015 at Anantara Bangkok Riverside Resort & Spa in Bangkok.

The workshop was designed with three objectives: 1) to facilitate exchange of the latest technical knowledge and experiences on climate change mitigation and adaptation among ASEAN stakeholders, 2) to identify training needs for CITC training courses for ASEAN countries on “Low Carbon and Resilient Society Development” and “Mitigation Mechanism,” and 3) to establish and enhance networking among stakeholders and experts in the region throughout the workshop including site visit.

During the Workshop, Memorandum of Cooperation (MoC) was signed with four strategic partners of CITC, i.e. OECC, Japan, Prince of Songkla University, Sirindhorn International

Institute of Technology, and National Municipal League of Thailand. Overview of the workshop is shown in Table 2.52 (For TNA result, see clause 2.1.2 “Needs assessment in Thailand and ASEAN countries” of this Report).

Table 2.52 Workshop overview (Second ASEAN Workshop)

Date and time	22-24 June 2015
Workshop title	“Regional Workshop for Capacity Development on Low Carbon and Resilient Society in Southeast Asian countries”
Organizers	MONRE, TGO, and JICA
Participants	Overall: 132 participants (Participants from ASEAN countries: 17, ASEAN Secretariat: 1, APAN: 1, TGO: 20, JICA Expert Team: 9) *Number of participants from each ASEAN country Brunei: 1, Cambodia: 2, Indonesia: 2, Laos: 4, Malaysia: 2, Myanmar: 2, Singapore: 1, Vietnam: 1
Objectives	<ul style="list-style-type: none"> - Information exchange on current status and further steps towards low carbon and resilient society development, climate change mitigation and adaptation actions in Southeast Asia region - Introduction of CITC activities - Identification of training needs and sharing of capacity development resources on “Low Carbon and Resilient Society Development” course and “Mitigation Mechanism” course among relevant institutions in Southeast Asian region - Establishment and enhancement of networking among climate change related institutions in Southeast Asia region
Abstract	<p>Presentation and discussion on the following topics and issues were made with objective of generating mutual understanding of current status of low carbon and resilient society development and climate change actions, as well as formulation of the training development road map on low carbon and resilient society development, initiation of related capacity development resources mobilization platform and establishment and strengthening of network targeted for climate change related agencies/ institutions in the region:</p> <p>(Day 1)</p> <ul style="list-style-type: none"> - Role of CITC as a regional capacity development center to support Southeast Asian countries integration - Signing ceremony for cooperative partnership between CITC and TGO - Capacity development as a key success factor to achieve Low Carbon and Resilient Society - Challenges and opportunities on LCRS development through regional cooperation, considering the vision of Southeast Asian Community - Low Carbon and Resilient Society Development movement and its significance in the region - City-level movement towards Low Carbon and Resilient Society Development in Southeast Asian countries - Realization of city-level mitigation actions for climate change mitigation - National and local strategies and way forward for Climate Resilient Society in Southeast Asia Region <p>(Day 2)</p> <ul style="list-style-type: none"> - Discussion and open discussion on



Photo 2.41 Second ASEAN Workshop



Photo 2.42 Discussion at a parallel session

	<p>development of CITC "Low Carbon and Resilient Society Development" training course for Southeast Asian countries</p> <ul style="list-style-type: none"> - Discussion and open discussion on development of CITC "Mitigation Mechanisms" training course for Southeast Asian countries <p>(Day 3)</p> <ul style="list-style-type: none"> - Site visit on Sufficiency Economy and Sustainable Development 	
Workshop agenda	Day 1	
	09.00- 09.30	Registration
	09.30 – 09.45	Introduction
	09.45 – 10.15	<p>Opening remarks:</p> <ul style="list-style-type: none"> ▪ General Ekachai Chansri Advisor to the Minister of Natural Resources and Environment, Thailand ▪ Mr. Hiroyuki Okajima Minister - Counsellor, Embassy of Japan in Thailand <p>Introduced by: Dr. Natarika Wayuparb Nitiphon, Deputy Executive Director, TGO</p>
	10.15 –10.45	<p>Keynote Speeches:</p> <ul style="list-style-type: none"> ▪ Mr. Larry Maramis Director, Cross-Sectoral Cooperation, ASEAN Secretariat ▪ Dr. Natarika Wayuparb Nitiphon, Deputy Executive Director, TGO
	10.45 – 11.15	Coffee Break / Photo sessions
	11.15 – 11.30	<p>“CITC: Role as a regional capacity development center to support Southeast Asian countries integration”</p> <ul style="list-style-type: none"> ▪ Dr. Jakkani Kananurak, Director of CITC
	11.30 – 12.00	<p>Cooperative partnership signing ceremony between CITC/ TGO with:</p> <ul style="list-style-type: none"> ▪ OECC, Japan ▪ Prince of Songkla University ▪ Sirindhorn International Institute of Technology ▪ National Municipal League of Thailand
	12.00 – 13.30	Lunch
	13.30 – 14.40	<p>Panel discussion: Capacity development as a key success factor to achieve Low Carbon and Resilient Society</p> <p>Challenges and opportunities on LCRS development through regional cooperation, considering the vision of Southeast Asian Community</p> <ul style="list-style-type: none"> ▪ Mr. Larry Maramis Director, Cross-Sectoral Cooperation, ASEAN Secretariat <p>Low Carbon and Resilient Society Development movement and its significance in the region</p> <ul style="list-style-type: none"> ▪ Dr. Shuzo Nishioka Senior Research Advisor, IGES <p>City-level movement towards Low Carbon and Resilient Society Development in Southeast Asian countries</p>

		<ul style="list-style-type: none"> ▪ Mr. Takashi Otsuka Director, ICLEI Japan Office <p>Moderator: Dr. Jakkani Kananurak, Director of CITC</p>
14.40 – 15.00		Coffee Break
15.00 – 17.30		Parallel Panel Discussion Session
<p>Panel discussion: [Mitigation] Realizing city-level mitigation actions</p> <p>Panelists:</p> <ul style="list-style-type: none"> ▪ Brunei Darussalam: Dr. Weerawat Chantanakome ▪ Lao PDR: Mr. Sengkeo Kanngasone, Luang Prabang ▪ Malaysia: Mr. Boyd Dionysius Joeman, Iskandar ▪ Myanmar: Mr. Thwin Kyaw Kyaw, Mandalay ▪ Thailand: Ms. Suwanna Jungrungrueng, BMA ▪ Japan: <ul style="list-style-type: none"> - Mr. Shinya Yasuda, Kyoto City - Mr. Jiro Miguel Ogahara, OECC ▪ Thailand: Ms. Wandee Khunchornyakong, SPCG Public Co., Ltd. <p>Moderator: Dr. Bundit Limmeechokchai, Associate Professor, SIIT</p> <p>Co-moderator: Dr. Kazuhito Yamada, JICA Expert Team</p>	<p>Panel discussion: [Adaptation] National and local strategies and way forward for Climate Resilient Society in Southeast Asia Region</p> <p>Panelists:</p> <ul style="list-style-type: none"> ▪ Cambodia: Mr. Nop Sokhai ▪ Indonesia: Mr. Arif Wibowo ▪ Singapore: Prof. Belinda Yeun ▪ Vietnam: Mr. Nguyen Viet Dung ▪ Thailand: Mr. Prasert Sirinapaporn ▪ Japan: Mr. Koji Sunada, Mie Prefecture ▪ APAN: Dr. Puja Sawhney <p>Moderator: Dr. Vilas Nitivattananon, Associate Professor, AIT</p> <p>Co-moderator: Dr. Mariko Fujimori, JICA Expert Team</p>	
Day 2		
9.30 – 10.00		<p>Summary of Day 1 discussion</p> <ul style="list-style-type: none"> ▪ Dr. Natarika Wayuparb Nitiphon, Deputy Executive Director, TGO ▪ Dr. Bundit Limmeechokchai, Associate Professor, SIIT ▪ Dr. Vilas Nitivattananon, Associate Professor, AIT
10.00 – 10.45		<p>Discussion on development of CITC training course “Low Carbon and Resilient Society Development” for Southeast Asian countries</p>
		<p>Introduction of CITC training program</p> <ul style="list-style-type: none"> ▪ Ms. Apaphatch Hunsirtrakun, CITC/ TGO <p>Result of questionnaire survey on training needs assessment</p> <ul style="list-style-type: none"> ▪ Mr. Tetsuya Yoshida, JICA Expert Team
10.45–11.00		Coffee Break
11.00–12.00		<p>Open discussion on training course: “Low Carbon and Resilient Society Development” for Southeast Asian countries</p>

		<p>Moderator:</p> <ul style="list-style-type: none"> ▪ Dr. Natarika Wayuparb Nitiphon, Deputy Executive Director, TGO <p>Co - Moderators:</p> <ul style="list-style-type: none"> ▪ Dr. Kazuhito Yamada, JICA Expert Team ▪ Dr. Mariko Fujimori, JICA Expert Team
	12.00 – 13.00	Lunch
	13.00 – 13.45	Discussion on development of CITC training course “Mitigation Mechanisms” for Southeast Asian countries
		<p>Introduction of CITC training program</p> <ul style="list-style-type: none"> ▪ Mr. Satoshi Iemoto, JICA Expert <p>Result of questionnaire survey on training needs assessment</p> <ul style="list-style-type: none"> ▪ Mr. Tetsuya Yoshida, JICA Expert Team
	13.45 – 14.00	Coffee Break
	14.00 – 15.00	<p>Open discussion on training course: “Mitigation Mechanisms” for Southeast Asian countries</p> <p>Moderator:</p> <ul style="list-style-type: none"> ▪ Dr. Bundit Limmeechokchai, Associate Professor, SIIT <p>Co - Moderators:</p> <ul style="list-style-type: none"> ▪ Dr. Jakkani Kananurak, Director of CITC ▪ Mr. Masahiko Fujimoto, Team Leader, JICA Expert Team
	15.00 – 15.30	<p>Closing remarks</p> <ul style="list-style-type: none"> ▪ Mr. Sunthad Somchevita Chairman of the board for CITC ▪ Mr. Shuichi Ikeda Chief Representative, JICA Thailand Office
	Day 3	
	07.00 – 15.30	<p>Site visit on Sufficiency Economy and Sustainable Development</p> <ul style="list-style-type: none"> ▪ The Bhumirak Dhamachart Project (The Royal Nature Conservation Center) at Nakornnayok province

Table 2.53 List of workshop participants from ASEAN countries (Second ASEAN workshop)

	Country	Name	Organization	Position/Title
1.	ASEAN	Mr. Larry Maramis	ASEAN Secretariat	Director, Cross-Sectoral Cooperation Division
2.	Cambodia	Mr. Leang Sophal	GHG Inventory and Mitigation Office	Vice Chief
3.		Mr. Nop Sokhai	Ministry of Environment	Senior Official
4.	Indonesia	Mr. Doddy Juli Irawan	Center for Climate Risk and Opportunity Management	Researcher Assistant
5.		Mr. Arif Wibowo	Ministry of Environment	Head, Division of Climate Change Vulnerability
6.	Lao PDR	Mr. Sengkeo Kangnasone	Urban Development Administration Authority, Luang Prabang	Engineer

	Country	Name	Organization	Position/Title
7.		Mr. Bae Pheaxay	National Unoversirt of Lao, Faculty of Environmental Science	Head, Academic Position
8.		Dr. Vatthanamixay Chansomphou	National University of Lao, Faculty of Environmental Science	Assistant Dean
9.	Malaysia	Mr. Boyd Dionysius Joeman	Iskandar Regional Development Authority (IRDA)	Acting Head, Environment
10.		Dr. Ho Chin Siong	Universiti Teknologi Malaysia	Director, the Office of International Affairs
11.	Myanmar	Ms. Saint	Environmental Conservation Department, Ministry of Environmental Conservation and Forestry (MOECAF)	Deputy Staff Officer
12.		Ms. Htway Htway Linn	Department of Meteorology and Hydrology	Deputy Superintendent
13.		Dr. Thwin Kyaw Kyaw	Mandalay City Development Committee	
14.	Singapore	Dr. Belinda Yeun	Singapore University of Technology and Design	Professor, Lee Kuan Yew Centre for Innovative Cities
15.	Vietnam	Mr. Nguyen Viet Dung	Division of Adaptation to Climate Change, Department of Meteorology, Hydrology and Climate change (DMHCC)	

Workshop participants gave a positive evaluation for workshop contents and management. Evaluation result and major comments on workshop management are summarized in the tables below.

Table 2.54 Result of evaluation (Second ASEAN Workshop)

Category	Question	Average score (maximum = 5.0)
Contents and relevance	The event theme was relevant to your work	4.4
	Information presented in this event was informative and interesting	4.4
	The event provided you new insights on LCERS	4.3
	The event provided you an opportunity to enhance your network with other participants	4.5
	Knowledge you obtained through this event is useful and applicable to your work	4.3
Operation and approach	The event was well organized and well prepared	4.3
	Invitation and communication process was appropriate	3.9
	Venue and location of the event was appropriate	4.4
	Duration of the sessions was appropriate	4.3
	Pace of the event was appropriate	4.2

Table 2.55 Summary of comments received from workshop participants (Second ASEAN Workshop)

Category	Comments from participants
Knowledge on LCERS	<ul style="list-style-type: none"> - The outcomes of ASEAN Workshop include new basic knowledge on LCERS (Importance of LCERS, linkage with research and policy, good practices) - Participants could receive helpful information on LCERS initiatives in ASEAN countries (future framework and activities of other countries)

	<ul style="list-style-type: none"> - Knowledge obtained at the workshop can be applied to develop mitigation action plan in their cities. - Participants could understand updated information on CITC training curriculum.
Networking	<ul style="list-style-type: none"> - Workshop participants could expand their network of experts on LCRS and climate change from ASEAN countries. - Participants obtained new network with researchers whose works helps their activities. - Participants recommended adding some more participants from other sectors and researchers. - Participants suggested that capacity building especially academic sectors.
Time allocation and logistics	<ul style="list-style-type: none"> - Time allocation for presentation by participants is not enough. - Participants requested to provide the presentation of speakers and training modules. - Conference room is quite small and some of participants cannot see the presentation clearly.
Agenda of workshop	<ul style="list-style-type: none"> - There should be a poster exhibition of countries to show activities/ programme/ projects taken to account address climate change. - It is suggested that there will be wrap up session after parallel sessions for better knowledge enhancement in participants' side.

3) Third ASEAN Workshop (March 2016)



MONRE, TGO, JICA and the UNFCCC Secretariat jointly organized the third ASEAN Workshop titled “3rd CITC Regional Conference: Climate Change and Sustainable Development - How to Accelerate Climate Actions in Asia through Capacity Building and Climate Finance” from 30 March to 1 April 2016 at Pullman King Power in Bangkok.

The workshop was designed with three objectives: 1) to share the latest international and regional trends on climate change and sustainable development (e.g. Paris Agreement, Sustainable Development Goals (SDGs) and ASEAN Blueprint), 2) to accelerate mitigation and adaptation actions through nationally determined contributions (NDCs), 3) capacity building, technology and climate finance as means of implementation and 4) to share the latest information on climate finance infrastructure and financial mechanisms.

Overview of the workshop is shown in Table 2.56 (For TNA result, see clause 2.1.2 of this Report).

Table 2.56 Workshop overview (Third ASEAN Workshop)

Date and time	30 March-1 April 2016
Workshop title	3rd CITC Regional Conference: Climate Change and Sustainable Development “How to Accelerate Climate Actions in Asia Through Capacity Building and Climate Finance”
Organizers	MONRE, TGO, JICA and the UNFCCC Secretariat
Participants	<p>Overall: 201 participants (Participants from ASEAN countries: 105, TGO: 6, JICA Expert Team: 8, UNFCCC: 1, UNDP: 1, other donors: 4) *Number of participants from each ASEAN country Cambodia: 2, Indonesia: 8, Laos: 6, Malaysia: 3, Myanmar: 3, Philippines: 5, Singapore: 2, Vietnam: 5, Thailand: 71</p>
Objectives	<ul style="list-style-type: none"> - Information exchange on the latest international and regional trends on climate change and sustainable development (e.g. Paris Agreement, Sustainable Development Goals (SDGs) and ASEAN Blueprint) - Acceleration of mitigation and adaptation actions through nationally determined contributions (NDCs) - Information exchange on capacity building, technology and climate finance as means of implementation

<p>Abstract</p>	<p>- Information exchange on climate finance infrastructure and financial mechanisms</p> <p>(Day 1)</p> <ul style="list-style-type: none"> - Outcomes of COP21 and actions to be taken by developing countries - SDGs and climate change - Role of CITC as a regional climate change capacity building center to support sustainable development in the region - ASEAN’s next Blueprint (2016-2025) - Acceleration of implementation of climate change mitigation and adaptation actions across Asia - Climate finance as a key driving force to enable climate actions for sustainable development - Capacity building and awareness raising as key success factors to achieve SDGs and Paris Agreement in Asia <p>(Day 2)</p> <ul style="list-style-type: none"> - Climate change adaptation to achieve sustainable development goals - Climate change mitigation to achieve sustainable development goals - Approach for preparation of climate finance flow and access to climate finance <p>(Day 3)</p> <ul style="list-style-type: none"> - Site visit on initiatives on renewable energy development in Thailand <div style="text-align: right;">  <p>Photo 2.43 Third ASEAN Workshop</p>  <p>Photo 2.44 Discussion at panel session</p> </div>														
<p>Workshop agenda</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Day 1</th> </tr> </thead> <tbody> <tr> <td style="width: 15%;">09:00–09:30</td> <td style="text-align: center;">Registration</td> </tr> <tr> <td style="width: 15%;">09:30–10:00</td> <td> <p style="text-align: center;">Opening Ceremony</p> <p>Opening and welcome Speeches</p> <ul style="list-style-type: none"> • Mr. Sunthad Somchevita, Chairman of the Board, Climate Change International Technical and Training Center (CITC) • Mr. Hiroo Tanaka, Chief Representative, JICA Thailand Office • Mr. David Abbass, Public Information Officer, Communications and Outreach Programme, UNFCCC Secretariat <p>Introduce by: Mrs. Prasertsuk Chamornmarn, Executive Director, Thailand Greenhouse Gas Management Organization (TGO)</p> <p style="text-align: center;">Photo session</p> </td> </tr> <tr> <td>10:00–10:30</td> <td> <p>Keynote Speech Outcomes of COP21 and actions to be taken by developing countries</p> <p>by Mr. David Abbass, Public Information Officer, Communications and Outreach Programme, UNFCCC Secretariat</p> </td> </tr> <tr> <td>10:30–10:50</td> <td style="text-align: center;">Coffee break</td> </tr> <tr> <td>10:50–11:20</td> <td> <p>Keynote Speech Sustainable Development Goals (SDGs) and climate change</p> <p>by Ms. Cassie Flynn, Climate Change Advisor, Coordinator, Boots on the Ground Programme, Low-Emission Climate-Resilient Development Team, United Nations Development Programme(UNDP)</p> </td> </tr> <tr> <td>11:20–11:30</td> <td style="text-align: center;">Q&A Session</td> </tr> </tbody> </table>	Day 1		09:00–09:30	Registration	09:30–10:00	<p style="text-align: center;">Opening Ceremony</p> <p>Opening and welcome Speeches</p> <ul style="list-style-type: none"> • Mr. Sunthad Somchevita, Chairman of the Board, Climate Change International Technical and Training Center (CITC) • Mr. Hiroo Tanaka, Chief Representative, JICA Thailand Office • Mr. David Abbass, Public Information Officer, Communications and Outreach Programme, UNFCCC Secretariat <p>Introduce by: Mrs. Prasertsuk Chamornmarn, Executive Director, Thailand Greenhouse Gas Management Organization (TGO)</p> <p style="text-align: center;">Photo session</p>	10:00–10:30	<p>Keynote Speech Outcomes of COP21 and actions to be taken by developing countries</p> <p>by Mr. David Abbass, Public Information Officer, Communications and Outreach Programme, UNFCCC Secretariat</p>	10:30–10:50	Coffee break	10:50–11:20	<p>Keynote Speech Sustainable Development Goals (SDGs) and climate change</p> <p>by Ms. Cassie Flynn, Climate Change Advisor, Coordinator, Boots on the Ground Programme, Low-Emission Climate-Resilient Development Team, United Nations Development Programme(UNDP)</p>	11:20–11:30	Q&A Session
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11:20–11:30	Q&A Session														

11:30–12:00	CITC: role as a regional climate change capacity building center to support sustainable development in the region by Dr. Natarika Wayuparb Nitiphon, Deputy Executive Director, Thailand Greenhouse Gas Management Organization (TGO)	
12:00–13:00	Lunch	
13:00–13:40	Regional strategy for climate change and capacity building - ASEAN's next Blueprint (2016-2025) by Mr. Rocky Pairunan, ASEAN Secretariat	
13:40– 14:25	How to accelerate implementation of climate change mitigation and adaptation actions across Asia by Dr. Pawin Taleangsri, UN Specialist Team for Sustainable Business, United Nations Development Programme (UNDP)	
14:25–14:55	Climate finance: Key driving force to enable climate actions for sustainable development by Dr. Tomonori Sudo, Associate Professor, College of Asia Pacific Studies, Ritsumeikan Asia-Pacific University	
14:55–15:15	Q&A Session	
15:15–15:45	Coffee Break	
15:45–17:45	<p>Panel session:</p> <p>Capacity building and awareness raising as key success factors to achieve SDGs and Paris Agreement in Asia</p> <ul style="list-style-type: none"> • Ms. Enrica Melandri, Associate Programme Officer, Finance, Technology and Capacity Building Programme, UNFCCC Secretariat (via skype) • Dr. Shuzo Nishioka, Secretary General, LoCARNet, Institute for Global Environmental Strategies (IGES) • Dr. Medrilzam Medrilzam, Ministry of National Development Planning, Indonesia • Representative from ASEAN country • Dr. Masato Kawanishi, Senior Advisor, Japan International Cooperation Agency (JICA) • Mr. Shunsuke Shimbori, Assistant Section Manager, Environmental Activities Section, Kyoto Environmental Activities Association (KEAA) <p>Moderator: Dr. Jakkani Kananurak, Director, Climate Change International Technical and Training Center (CITC)</p>	
18:00–20:00	Reception Dinner (Hosted by Thailand Greenhouse Gas Management Organization (TGO))	
Day 2		
Parallel sessions		
	Adaptation: “Climate change adaptation to achieve sustainable development goals” (at venue Infiniti 2)	Mitigation: “Climate change mitigation to achieve sustainable development goals” (at venue Infiniti 1)
09:00-10:00	<ul style="list-style-type: none"> • Mainstreaming climate change adaptation: as a critical part of sustainable development (cancelled) by Dr. Thanya Kiatiwat, Project manager of ADAPT project, Faculty of Engineering, Kasetsart University • Comprehensive Study on Impact Assessment and Adaptation for Climate Change 	<p>NDCs implementation in Asia</p> <ul style="list-style-type: none"> • An overview of mitigation contributions in NDCs of parties in Asia by Dr. Shobhakar Dhakal, Asian Institute of Technology (AIT) • Integrating market mechanisms to the implementation of INDCs/NDCs by Mr. Anil Raut, UNFCCC

		<p>by Dr. Masato Kawanishi, Senior Advisor, Japan International Cooperation Agency (JICA)</p> <ul style="list-style-type: none"> • Q&A session <p>Coffee break</p> <p>Panel Session: Strengthening resilience and designing adaptation options</p> <ul style="list-style-type: none"> • Water resources by Dr. Pongsak Suttinon, Department of Water Resource Engineering, Faculty of Engineering, Chulalongkorn University • Food security- managing new risk by Mr. Beau Damen, Bioenergy Officer, Forestry, Food and Agriculture Organization of the United Nations (FAO) • Adaptation policies and actions in Asia by Mr. Osamu Mizuno, Asian Institute of Technology (AIT) • Q&A session <p>Co-Moderators:</p> <ul style="list-style-type: none"> • Dr. Bundit Limmeechokchai, Associate Professor, Sirindhorn International Institute of Technology (SIIT) • Dr. Mariko Fujimori, JICA Expert Team 	<p>Regional Collaboration Centre for the Asia-Pacific (RCC Bangkok)</p> <ul style="list-style-type: none"> • NDC and local climate change action planning and implementation in Asia by Dr. Junichi Fujino, National Institute for Environmental Studies (NIES) Japan • Q&A session <p>Coffee break</p> <p>Initiatives and success stories of mitigation actions</p> <ul style="list-style-type: none"> • Technology transfer on climate mitigation technologies – CTCN experiences by Dr. Parimita Mohanty, Climate Technology Centre and Network (CTCN) • NAMA as a tool to integrate climate change mitigation with sustainable development by Mr. Conrado S. Heruela Task Manager, GEF Climate Change Projects, UNEP • Climate change mitigation action: A Case study of a CDM Project activity by Mr. Jay Mariyappan, Managing Director, Sindicatum Sustainable Resources • Mitigation efforts in the waste management sector – an experience from India by Mr. Ashwani Kumar Thakur, Assistant Vice President – CDM, IL&FS Environment • Q&A session <p>Moderator : Dr. Yuqing Ariel Yu, IGES</p>
	12:00–13:15	Lunch	
	13:15–13:40	Plenary	
		<p>Summary of parallel sessions</p> <ul style="list-style-type: none"> • Adaptation: Dr. Bundit Limmeechokchai, Associate Professor, SIIT and Dr. Mariko Fujimori, JICA Expert Team • Mitigation: Dr. Yuqing Ariel Yu, IGES <p>Moderator: Dr. Jakkani Kananurak, Director, Climate Change International Technical and Training Center (CITC)</p>	
	13:40–16:25	Making flow of climate finance and how to access	

	<ul style="list-style-type: none"> • Ms. Benita Gurung, UNFCCC RCC Bangkok • Mr. Juichiro Sahara, Resource Mobilization Specialist, Green Climate Fund (GCF) • Dr. Puja Sawhney, Asia-Pacific Adaptation Network (APAN) • Dr. Surachai Sathitkunnarat, National Science Technology and Innovation Policy Office (STI), Ministry of Science and Technology, Thailand • Dr. Luong Quang Huy, Department of Meteorology, Hydrology and Climate Change (DMHCC), Ministry of Natural Resources and Environment, Vietnam • Mr. Sigurd Klakeg, Ministry of Climate and Environment, Norway <p>Co- Moderators: Dr. Tomonori Sudo, Ritsumeikan Asia-Pacific University and Dr. Kazuhito Yamada, JICA Expert Team</p>
16:25–16:45	<p>Wrap up: how to bridge climate actions with sustainable development through capacity building and climate finance</p> <p>by : Dr. Jakkani Kananurak, Director, Climate Change International Technical and Training Center (CITC) Dr. Ampai Harakunarak International Environmental Consultant</p>
16:45–17:00	<p>Closing Remarks</p> <ul style="list-style-type: none"> • Mrs. Prasertsuk Chamornmarn, Executive Director, Thailand Greenhouse Gas Management Organization (TGO) • Dr. Masato Kawanishi, Senior Advisor, Japan International Cooperation Agency (JICA) • Ms. Benita Gurung, UNFCCC RCC Bangkok
Day 3	
8:30-17:30	<p>Site visit on initiatives on renewable energy deployment in Thailand</p> <ul style="list-style-type: none"> • Sunny Bangchak and Bangchak Renewable Energy Learning Center (Bang Pa-in District, Ayutthaya Province)

Table 2.57 List of workshop participants from ASEAN countries (Third ASEAN Workshop)

	Country	Name	Organization	Position/ Title
1.	Cambodia	Mr. Pich Sokhim	Ministry of Environment	Technical Staff
2.		Mr. Ouen Pov	Ministry of Interior	Vice Governor
3.	Indonesia	Ms. Ardina Purbo	Ministry of Environment and Forestry	Deputy Director
4.		Mr. Wisnu Murti	Ministry of Environment and Forestry	Section Head
5.		Ms. Yuana Rochma Astuti	Ministry of Economic International Cooperation	Assistant of Assistant Deputy Minister
6.		Mr. Rudi yana	Bogor City Government	Sub-Division Head, Intern Region & international Cooperation
7.		Mr. Muhammad Hidayat	Bogor City Government	Bogor City Government's General Advisor
8.		Mr. Widdi Sri Hanto	The Environment Agency, Surakarta City	Head, the Environment Agency
9.		Mr. Hadi Prasojo	Institute Teknologi Bandung	
10.		Ms. Monita Pasaribu	Institute Teknologi Bandung	

	Country	Name	Organization	Position/ Title
11.	Lao PDR	Ms. Thounheuang Bouthavong	Urban Development Administration Authority, Luang Prabang	Engineer
12.		Mr. Phouvannasinh Phongsa		
13.		Mrs. Pany Vorachit		
14.		Mr. Sackdaphone Keoprachan	Department of Natural Resources and Environment of Luongprabang Province	Environment Technical
15.		Dr. Bae Pheaxay	National University of Laos	Lecturer
16.		Ms. Oulavanh Sinsamphanh	National University of Laos	Head, Climate Change
17.	Malaysia	Mr. Ahmad Faizal Bin Ismail	Iskandar Regional Development Authority (IRDA)	
18.		Mr. Boyd Dionysius Joeman	Iskandar Regional Development Authority (IRDA)	Acting Head, Environment
19.		Mr. Chau Loon Wai	Universiti Teknologi Malaysia	Lecturer/ Core Researcher
20.	Myanmar	Mr. Aung Thu Kyaw	Ministry of Environmental Conservation and Forestry	Assistant Director
21.		Ms. Khin Cho Cho Shein	Ministry of Transport	Director
22.		Ms. May Myo Zaw	Ministry of National Planning&Economic Development	Directorate, Investment&Company Administration
23.	Philippines	Ms. Elaine V. Laruan-Hernandez	Department of Foreign Affairs	Principal Assistant
24.		Ms. Maria Regina V. de la Fuente	Department of Foreign Affairs	Desk Assistant
25.		Ms. Margarita R. Songco	National Economic and Development Authority	Deputy Director General
26.		Ms. Frediswinda de Leon De Guzman	Department of the Building Official, Quezon City	
27.		Ms. Damasa B. Magcale-Macandog	University of the Philippines Los Baños	Lecturer
28.	Singapore	Mr. Syed Nouredin	Ministry of Foreign Affairs	
29.		Ms. Lynda Lim	Singapore Environment Institute	Assistant Director
30.	Vietnam	Mrs. Trinh Thi Hai Yen	Ministry of Natural Resources and Environment	Manager
31.		Ms. Nguyen Que Huong Le	Climate Change Bureau, Ho Chi Minh City	
32.		Ms. Nguyen Thi Yen	Institute of Strategy, Policy on Natural Resources and Environment	
33.		Ms. Huynh Thi Bich Hang	Institute of Strategy, Policy on Natural Resources and Environment	
34.		Mr. Tran Thanh Tu	Ton Duc Thang University, HCMC	

Workshop participants gave a positive evaluation for workshop contents and management.

Evaluation result and major comments on workshop management are summarized in the tables below.

Table 2.58 Result of evaluation (Third ASEAN Workshop)

Category	Item	Average score (maximum = 5.0)
Contents and relevance	The conference theme was relevant to your work	4.6
	Information presented in this conference was informative and interesting	4.5
	The conference provided you new insights on sustainable development	4.2
	The conference provided you new insights on climate finance	4.1
	The conference provided you new insights on climate change mitigation	4.1
	The conference provided you new insights on climate change adaptation	4.0
	The conference provided you an opportunity to enhance your network with other participants	4.3
	Knowledge you obtained through this conference is useful and applicable to your work	4.0
Operation and approach	The conference was well organized and well prepared	4.4
	Invitation and communication process was appropriate	4.4
	Venue and location of the conference was appropriate	4.7
	Duration of the sessions was appropriate	4.3

Table 2.59 Summary of comments received from workshop participants (Third ASEAN Workshop)

Category	Comments from participants
Knowledge on LCRS and climate finance	<ul style="list-style-type: none"> - Latest knowledge and expertise on climate finance and relevant institutions - Latest knowledge and expertise on climate finance and impact of invest on climate change - Latest knowledge and expertise on implications of the Paris Agreement at COP21 on developing countries - Knowledge and expertise on direct relevance and position of SDGs, climate change and the Paris Agreement - Latest knowledge and expertise on capacity development on climate change and climate change overview as well as climate change mitigation and adaptation actions - Knowledge and expertise on climate change adaptation and available finance sources for climate change countermeasures - Knowledge and expertise on guidelines for projects to accommodate aspect of climate change countermeasures in the future - Capacity for calculation of GHG emissions reduction amount by participants was enhanced. - Knowledge on best practices in various countries and regions was shared among participants. - More information on example of projects and good practices need to be provided at the conference. - Knowledge and expertise on approaches for mitigation actions implementation in policy context
Networking	<ul style="list-style-type: none"> - Workshop participants could expand their network of experts from other countries and regions. - Participants obtained new network with experts in the field of climate change mitigation and adaptation, technology applicable to climate change countermeasures and climate finance. - Participants expanded international network for climate change projects formulations.
Workshop contents	<ul style="list-style-type: none"> - Main objective of the workshop should be acceleration of capacity development to facilitate developing countries' access to climate finance by GCF, UNDP, GEF and other sources - It is good opportunity to invite both academia and policymakers to share their perspectives on climate change.

Category	Comments from participants
	<ul style="list-style-type: none"><li>- Number of speakers for panel sessions needs to be reduced to avoid information overload. With limited number of speakers, participants could absorb and digest provided information at the sessions<li>- Further improvement is required for lighting arrangement at a part of workshop venue. Participants could not easily see their handouts and even could not take notes.<li>- Further improvement is required for facilitation of interactive communication between speakers and audiences<li>- Communication with the workshop secretariat and preparation of presentation materials were time-consuming. (Comment from a speaker)

Chapter 3 Input to project

3.1 Project schedule

The Project was implemented from June 2013 to May 2016. Following table shows the schedule initially planned at the start of the project as well as the actual schedule of each project activity.

Table 3.1 Project Schedule

Work Item	2013				2014				2015				2016												
	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
(Output 1) Preparation for establishment of CITC through collaboration among TGO and relevant organizations																									
Set up institutional framework of the CITC																									
Conduct needs assessment on target groups in Thailand and ASEAN focal points of climate change																									
Identify training resources																									
Develop training curriculum and training materials																									
Strengthen information management system by developing LCS information knowledge platform and website																									
(Output 2) Implementation of trainings on climate change mitigation/ adaptation																									
Develop and conduct training courses on Climate Change Management for Sustainable Development (LCRS)																									
Develop and conduct training courses on GHG Inventory																									
Develop and conduct training courses on Mitigation Mechanisms																									
Develop and conduct training courses on Climate Change Economics																									
Monitoring of capacity development progress																									
Prepare and implement training in Japan																									
(Output 3) Capacity development program on mitigation/ adaptation shared among ASEAN developing countries																									
Develop specific training course for ASEAN developing countries based on result of needs assessment																									
Organize workshop to share the knowledge and experiences with focal persons of climate change in ASEAN developing countries																									
Preparation work and reporting																									
Conduct Joint Coordinating Committee and Steering Committee																									
Conduct capacity assessment for TGO staff																									
Prepare Progress Report (No.1 to No.5)																									
Mid-term review and terminal evaluation																									
Prepare Project Completion Report																									

- Legends:
- Plan
 - Actual work
 - ▲ Submission of Reports
 - Preparation

3.2 Input to Project

3.2.1 Dispatch of experts

JICA Expert Team dispatched experts as shown in table below.

Table 3.2 Dispatch of JICA experts

Name	Assignment	Dispatch Dispatched	Main Activities
Mr. Masahiko Fujimoto	Team Leader/ Climate Change Strategy	1. 2013/06/03-06/22 2. 2013/08/12-09/07 3. 2013/11/03-11/09 4. 2014/05/05-05/24 (Except for 5/15-16,20-21) 5. 2014/06/15-06/21 6. 2014/07/08-07/22 (Except for 7/11,12,15,18) 7. 2014/08/03-08/09 8. 2014/10/12-10/16 9. 2014/12/14-12/24 10. 2015/01/11-01/15 11. 2015/02/25-02/28 12. 2015/03/01-03/08 13. 2015/05/13-05/16 14. 2015/06/15-06/27 15. 2015/07/23-07/25 16. 2015/08/26-09/04 17. 2015/10/27-10/31 18. 2015/11/25-11/27 19. 2016/01/10-01/16 20. 2016/02/25-03/05 21. 2016/03/24-04/02 22. 2016/05/27-05/31	Provide overall management for interaction with C/P and stakeholders, and super-vision of JICA Expert Team as follows; - Set up institutional framework of the CITC - Identify training resources - Conduct needs assessment on target groups in Thailand and ASEAN focal points - Develop and training curriculum and training materials - Conduct training courses - Support C/P to organize ASEAN workshop - Preparation and conduct JCC meeting - Conduct capacity assessment for C/P - Preparation for Mid-term review and terminal evaluation
Dr. Kazuhito Yamada	Low Carbon Society Development 1	1. 2013/06/12-06/20 2. 2013/09/01-09/07 3. 2013/11/19 4. 2014/03/16-03/18 5. 2014/05/05-05/16 (Except for 5/15) 6. 2014/06/18-06/26 7. 2014/07/18-07/21 8. 2014/08/04-08/09 9. 2014/10/14 10. 2014/12/16-12/20 11. 2015/03/03-03/07 12. 2015/05/13-05/16 13. 2015/06/17-06/27 14. 2015/08/29-09/10 15. 2015/10/27-11/04 16. 2015/12/16-12/22 17. 2016/01/18-01/23 18. 2016/02/25-03/05 19. 2016/03/24-04/02	- Set up institutional framework of the CITC (Preparation of CITC business plan) - Identify training resources - Conduct needs assessment on target groups in Thailand and ASEAN focal points - Develop and training curriculum and training materials - Conduct training courses
Mr. Tetsuya Yoshida	Low Carbon Society Development 2/ Mitigation 2/ Curriculum Development 3	1. 2013/06/03-06/22 2. 2013/07/03-07/10 3. 2013/08/05-09/11 4. 2013/10/21-11/09 5. 2013/11/19 6. 2014/01/29-02/01 7. 2014/05/05-05/24	- Support Team leader for overall management for interaction with C/P and stakeholders - Set up institutional framework of the CITC - Identify training resources - Conduct needs assessment on target

Name	Assignment	Dispatch Dispatched	Main Activities
		(Except for 5/15,16,19-20) 8. 2014/06/10-07/26 (Except for 7/5-9) 9. 2014/08/04-08/23 10. 2014/09/28-10/25 (Except for 10/1-5,22) 11. 2014/11/18-12/24 (Except for 12/22-12/24) 12. 2015/01/04-01/17 13. 2015/02/10-03/20 14.2015/05/14,15,19,22,25-30 15. 2015/06/10-06/26 16.2015/07/06-08,10-18,21,23-8/5 17. 2015/08/19-09/16 18. 2015/10/19-10/31 19. 2015/11/23-11/27 20. 2016/01/08-01/27 21. 2016/02/14-03/09 22. 2016/03/20-04/09 23. 2016/05/18-05/31 24. 2016/06/09-06/11	groups in Thailand and ASEAN - Develop training curriculum and training materials - Conduct training courses - Prepare and implement training in Japan - Plan and support C/P to organize ASEAN workshop - Preparation and conduct JCC meeting - Conduct capacity assessment for C/P - Preparation for Mid-term review and terminal evaluation
Mr. Hitoshi Suzuki	GHG Inventory	1. 2013/11/03-11/09 2. 2014/07/03-07/09 3. 2015/03/01-03/04	- Conduct needs assessment on target groups in Thailand and ASEAN focal points - Develop and training curriculum and training materials for GHG inventory course - Conduct training courses - Assist C/P to analyze e-learning system
Dr. Mariko Fujimori	Adaptation/ Mitigation 1	1. 2013/06/12-06/20 2. 2013/09/01-09/07 3. 2013/11/19 4. 2014/03/16-03/18 5. 2014/05/05-05/16 (Except for 5/6,15) 6. 2014/06/18-06/26 7. 2014/07/9,16,21 8. 2014/08/04-08/09 9. 2014/10/14 10. 2014/12/13-12/20 11. 2015/01/12,16 12. 2015/02/10-14, 25-28 13. 2015/03/03-03/07 14. 2015/05/12-05/16 15. 2015/06/17-06/27 16. 2015/08/29-09/10 17. 2015/10/26-11/04 18. 2015/11/25-11/27 19. 2015/12/16-12/22 20. 2016/01/18-01/23 21. 2016/02/25-03/05 22. 2016/03/24-04/02	- Set up institutional framework of the CITC (Preparation of CITC business plan) - Identify training resources - Conduct needs assessment on target groups in Thailand and ASEAN focal points - Develop and training curriculum and training materials - Conduct training courses
Ms. Tomoko Ishikawa	Curriculum Development 1	1. 2013/06/12-06/20 (Except for 6/18) 2. 2013/09/01-09/10 (Except for 9/4,5) 3. 2014/05/05-05/15	- Set up institutional framework of the CITC - Develop and training curriculum and training materials - Support C/P to organize ASEAN

Name	Assignment	Dispatch Dispatched	Main Activities
		4. 2014/06/15-06/20 5. 2014/07/14-07/18 6. 2014/10/13-10/17 7. 2014/12/16-12/19 8. 2015/02/17-02/19 9. 2015/05/27-05/30 10. 2015/06/21-06/26 11. 2015/10/27-10/31 12. 2016/03/02-03/05 13. 2016/03/27-04/02 14. 2016/05/26-05/28	workshop
Mr. Kentaro Ofuji	Curriculum Development 2/ Training Management 2	1. 2013/06/17-07/10 2. 2013/08/18-09/07 3. 2014/06/02-06/28 4. 2014/07/08-07/22 5. 2014/09/22-10/01 6. 2015/02/23-02/26 7. 2016/05/25-05/31	<ul style="list-style-type: none"> - Set up institutional framework of the CITC(Preparation of CITC business plan) - Conduct needs assessment on target groups in Thailand and ASEAN focal points - Develop and training curriculum and training materials - Prepare and implement training in Japan - Conduct training courses - Conduct capacity assessment for C/P
Mr. Wataru Morimoto	Administrator/ Training Management 1	1. 2013/06/03-07/02 2. 2013/07/29-09/21 (Except for 8/3-4) 3. 2013/08/05-09/11 4. 2013/10/08-11/09 5. 2014/01/29-02/01 6. 2014/03/16-03/20 7. 2014/05/05-05/30 8. 2014/06/18-07/02 9. 2014/09/09-09/17 10. 2014/12/13-12/20 11. 2015/01/11-01/17 12. 2015/02/10-02/14 13. 2015/05/14-05/30 14. 2015/06/10-06/27 15. 2015/07/21-08/14 16. 2015/08/24-09/10 17. 2015/10/19-10/31 18. 2015/12/14-12/18 19. 2016/01/08-01/27 20. 2016/02/14-03/05 21. 2016/03/14-04/06 22. 2016/05/23-05/31	<ul style="list-style-type: none"> - Overall project coordination - Set up institutional framework of the CITC(Preparation of CITC business plan) - Conduct needs assessment on target groups in Thailand and ASEAN focal points - Develop and training curriculum and training materials - Prepare and implement training in Japan - Conduct training courses - Conduct capacity assessment for C/P
Mr. Darnp Phadungsri	Business plan development	1. 2014/05/05-05/30 2. 2014/06/18-07/02 3. 2014/09/09-09/17 4. 2014/12/13-12/20 5. 2015/01/11-01/17 6. 2015/02/10-02/14 7. 2015/05/12-05/20 8. 2015/06/21-06/24 9. 2015/08/29-09/04 10. 2016/02/25-03/05	<ul style="list-style-type: none"> - Set up institutional framework of the CITC (Preparation of CITC business plan)

3.2.2 Training in Japan

Details of training in Japan are explained in “2.2.2 Implementation of training in Japan.”

3.2.3 Provision of equipment

Following equipment were provided based on the request from the Thailand. All equipment are currently managed by TGO.

Table 3.3 Provision of equipment

No	Item	Qty	Date of inspection	Place of usage	Current condition of usage and management
1	Scanner	1 unit	2013/11/08	TGO office	Digitalization of training materials collected and developed
2	Notebook PC	2 units	2013/10/08	TGO office	Preparation of training materials, training implementation, works on group discussions in CITC training
3	LCD projector (for electronic chalkboard)	1 unit	2013/12/08	TGO office	Projection of PPT for training and interactive discussion between trainers and trainees
4	Electronic active board	1 unit	2013/12/08	TGO office	Projection of PPT for training and interactive discussion between trainers and trainees
5	Video recorder	1 unit	2013/09/20	TGO office	Recording of training, use for CITC E-learning program and recording of movie for PR activities
6	TV monitor	2 units	2014/07/10	TGO office	Projection of PPT and outputs of trainer’s work on electronic active board for convenience of trainees sitting in the backside of the training venue

3.2.4 Project cost

Cost of the Project in each Project year is as follows.

First year : 64,642,220 JPY

Second year : 109,283,040 JPY

Third year : 129,733,920 JPY (estimated)

Cost and performed task of subcontracted local consultant are the followings.

Table 3.4 Outline of subcontract to local consultant

Company	Duration	Price (THB)	Task
The Joint Graduate School of Energy and Environment, King Mongkut University of Technology Thonburi	3 months	399,900	Training material development for CITC training courses

3.2.5 Revision of PDM

The Project was implemented in accordance with R/D and attached PDM, signed on 21st December, 2012. TGO and JICA Expert team discussed and modified some parts of the PDM including indicators and means of verification, which were approved by JCC on its 2nd meeting held on 21st July, 2014. Revised parts of PDM are shown in the Table 3.5 below.

Table 3.5 Revised parts of PDM

Revised part		Before revision	After revision (Revised parts are <u>underlined</u>)
Version		0	<u>1</u>
Date		3 rd December, 2012	21 st July, 2014
Cooperation period		2012- 2015, 3 years	<u>2013- 2016, 3 years</u>
Overall goal		The Climate Change International Training Center (CITC) is acknowledged as a training center of climate change in the ASEAN region and function as networking platform.	The Climate Change International <u>Technical and</u> Training Center (CITC) is acknowledged as a training center of climate change in the ASEAN region and function as networking platform.
Output 1 CITC is prepared for establishment through collaboration among TGO and relevant organizations.	Indicators	<ul style="list-style-type: none"> - Structure of the CITC, mission statement and budget allocated. - Website-based knowledge platform for information dissemination - Training resources (trainers/ materials) - Training materials (textbooks in Thai and English) 	<ul style="list-style-type: none"> - Structure of the CITC, mission statement and budget <u>are described in CITC document.</u> - Website-based knowledge platform for information dissemination <u>is established.</u> - Training materials (textbooks in Thai and English) <u>are prepared for selected training courses.</u>
	Means of verification	<ul style="list-style-type: none"> - The CITC business plan - Human resources and budget allocated for the CITC. - Record of utilization of websites. 	<ul style="list-style-type: none"> - The CITC business plan - <u>Number of literatures/ documents uploaded on CITC website.</u> - <u>Training materials for selected training courses.</u>

Revised part		Before revision	After revision (Revised parts are <u>underlined</u>)
Output 2 Trainings of Mitigation/ Adaptation are conducted by TGO and Thai stakeholders.	Indicators	<ul style="list-style-type: none"> - No. and quality of Trainers - Responses of the participants 	<ul style="list-style-type: none"> - <u>Trainers are developed for selected courses.</u> - <u>At least 70% of trainees are satisfied about course contents.</u>
	Means of verification	<ul style="list-style-type: none"> - Evaluation sheets of participants - Record of training contents and participants 	<ul style="list-style-type: none"> - <u>Trainer database.</u> - Evaluation sheets of participants - Record of training contents and participants
Output 3 Capacity development program on Mitigation/ Adaptation are shared among ASEAN countries.	Indicators	<ul style="list-style-type: none"> - Seminar/ trainings conducted for ASEAN developing countries 	<ul style="list-style-type: none"> - Seminar/ <u>workshop is</u> conducted for ASEAN developing countries
	Means of verification	<ul style="list-style-type: none"> - Reports of trainings, etc. 	<ul style="list-style-type: none"> - <u>Progress Reports of the Project</u> - Reports of <u>seminar/ workshop,</u> etc.
		1-5 Strengthen Information management system by developing Low Carbon Society (LCS) information knowledge platform and website	1-5 Strengthen Information management system by developing information knowledge platform and website
		2-1 Conduct different level of trainings: basic course for related stakeholders (government agencies and non-governments).	2-1 Conduct <u>trainings on selected topics</u> for related stakeholders.
		2-2 Develop trainers through training of trainers (TOT) through advanced course for those completed the training in the Phase I or the basic course, and specific course for specified targets	2-2 Develop trainers through <u>training the trainers (TTT) activities</u>
		3-1 Develop specific training course for ASEAN developing countries based on the needs assessment.	3-1 <u>Develop training courses</u> for ASEAN developing countries based on the needs assessment.
Inputs from Japan		<Machinery and equipment> To be decided. / Office equipment, training equipment such as analytical tools and others as needed.	<Machinery and equipment> <ul style="list-style-type: none"> - <u>Scanner, notebook, LCD projector, electronic active board, video camera, TV monitor</u>

3.2.6 Record of Joint Coordinating Committee (JCC) meeting

TGO and JICA Expert Team held Joint Coordinating Committee meeting four times during the Project period. Topics discussed among JCC member organizations and items that were approved by JCC are summarized below.

Table 3.6 Outline of JCC meetings

Number	Date	Topics discussed and approved
First	6 Sept. 2013	<ul style="list-style-type: none"> • Approval of Inception report • Period of implementation of demonstration and actual CITC training course • Contents of CITC training curriculum
Second	21 Jul. 2014	<ul style="list-style-type: none"> • Progress of the CITC Project (Training course development, networking knowledge dissemination and awareness raising activities) • Approval of updated PDM • Progress of JICA technical cooperation activities of the same period • Approval of CITC business plan
Third	27 Feb. 2015	<ul style="list-style-type: none"> • Progress of the CITC Project (Training course development, networking, knowledge dissemination and awareness raising activities) • Progress of JICA technical cooperation activities of the same period and the result of joint mid-term review • Approval of revised CITC business plan • Presentation of the result of the training trip to Japan
Fourth	26 Nov. 2015	<ul style="list-style-type: none"> • Progress and output of the CITC Project (Training course development, networking, knowledge dissemination and awareness raising activities) • Result of “Regional Workshop for Capacity Development on Climate Finance in Southeast Asian countries” and peer review meeting on ASEAN training courses • Output of JICA technical cooperation activities • Approval of upcoming CITC regional conference
Fifth	30 May 2016	<ul style="list-style-type: none"> • Progress and output of the CITC Project (Training course development, networking, knowledge dissemination and awareness raising activities) • Result of training courses for Thai and ASEAN stakeholders • Result of CITC Regional Conference (3rd ASEAN Workshop) • Output of JICA technical cooperation activities and the result of terminal evaluation • Presentation of the result of the training trip to Japan



Photo 3.1 JCC Meeting (1)



Photo 3.2 JCC Meeting (2)

Chapter 4 Achievement of Project and Recommendations

Level of achievement of the Project Purpose and each Project Output, as well as Overall Goal that are defined in the latest PDM is analyzed by using the defined Verifiable Indicators as below.

4.1 Project Purpose

Project Purpose:

Capacities of TGO as focal point of CITC are enhanced with programs in response to the needs of stakeholders in Thailand and ASEAN developing countries.

Verifiable Indicators:

- 1) Systems of training management, knowledge and logistics for CITC are established.
- 2) Cooperation of related organizations is sustained for development and implementation of training program.

Achievement level of the Project Purpose is considered to be very high, because the capacity of TGO as an implementing entity or focal point of CITC was enhanced through the Project activities with TGO's strong ownership and active involvement to the Project although there was a room for further continuous improvement of capacity.

Verifiable indicator 1), "*systems of training management, knowledge and logistics for CITC are established,*" has been achieved, because the model of the whole process of the training management and operation was established for training courses for Thai and ASEAN stakeholders. The knowledge, experience, skill and logistical system that can be essential for continuous training delivery including those for curriculum update and improvement in response to the change of training needs were well accumulated inside CITC through planning, developing and managing numerous training courses during the Project period.

- Training curriculum and training materials were developed for training courses under "GHG Inventory Management (GHGI)," "Climate Change Management for Sustainable Development (CCSD)," "Mitigation Mechanism (MM)," and "Financing and Economics of Climate Change" clusters for Thai and ASEAN stakeholders.

- Procedure of training program development was established and well managed including training needs assessment (TNA), training curriculum and training materials development in cooperation with external experts, peer review by third party experts, and training evaluation. Training was systematically and effectively managed using logistical tools (such as logistic check sheet).

Verifiable indicator 2), “*cooperation of related organizations is sustained for development and implementation of training program,*” has been achieved, because network among outside organizations such as governmental agencies, local municipalities, academic and research institutions in Thailand, ASEAN countries and Japan, as well as international organizations were established.

- Active participation to regional and international conferences on climate change and bilateral meetings with governmental agencies, academic and research institutions in Thailand, ASEAN countries and Japan, as well as international organizations, led to establishment and strengthening of the network of CITC.
- For the continuous cooperation after the Project, MoC (Memorandum of Cooperation) was signed with several domestic and international partners by CITC.

Result of Project terminal evaluation, which was conducted in January 2016, shows that the Project is effectively conducted referring to the five evaluation criteria: relevance: *very high*, effectiveness: *high*, efficiency: *fair*, impact: *high*, sustainability: *high*.

4.2 Project Outputs

The Project aims to generate four Outputs defined in PDM. Achievement level of each of the Outputs is analyzed below.

Output 1:

CITC is prepared for establishment through collaboration among TGO and relevant organizations.

Verifiable Indicators:

1. Structure of the CITC, mission statement and budget are described in CITC document.
2. Website-based knowledge platform for information dissemination is established.

3. Training materials (textbooks in Thai and English) are prepared for selected training courses.

Referring to the verifiable indicators, level of achievement for Output 1 is analyzed as below.

Regarding the verified indicator 1), “*structure of the CITC, mission statement and budget are described in CITC document,*” the structure of CITC, action plan, strategy, service contents, budget planning are stated in the “CITC business plan: 5 years plan (2015 – 2019).”

Regarding the verified indicator 2), “*website-based knowledge platform for information dissemination is established,*” a website of CITC was established and launched by TGO for stakeholders as an information dissemination tool. TGO carries out periodical update of the website including training schedule and uploading event materials for attended participants.

Regarding the verified indicator 3), “*training materials (textbooks in Thai and English) are prepared for selected training courses,*” training materials were developed for 10 training courses under all four clusters for Thai and ASEAN stakeholders.

Therefore, it is considered the Output 1 has been successfully generated and delivered.

Output 2:

Trainings of Mitigation/ Adaptation are conducted by TGO and Thai stakeholders.

Verifiable Indicators:

1. Trainers are developed for selected courses.
2. At least 70% of trainees are satisfied (80% evaluation score) about course contents.

Referring to the verifiable indicators, level of achievement for Output 2 is analyzed below.

Regarding the verified indicator 1), “*trainers are developed for selected courses,*” 107 trainers have been trained through train-the-trainer (TTT) activities for selected courses: 19 trainers for GHG Inventory Management cluster, 33 trainers for Climate Change Management for Sustainable Development cluster, 42 trainers for Mitigation Mechanism cluster, and 13 trainers for Financing and Economics of Climate Change cluster (Climate Change Economics course).

Regarding the verified indicator 2), “*at least 70% of trainees are satisfied (80% evaluation score) about course contents,*” a level of satisfaction of the trainees for Climate Change Management for Sustainable Development courses course (totally 4 courses) was high, as more than 88% of trainees were satisfied (80% satisfaction score) about training course. For training courses for ASEAN stakeholders, a level of satisfaction of the trainees met the target shown in the indicator.

Therefore, it is considered the Output 2 has been successfully generated by meeting the indicators.

Output 3:

Capacity development program on Mitigation/ Adaptation are shared among ASEAN countries.

Verifiable Indicators:

Seminar/ workshop/ training is conducted for ASEAN developing countries.

Referring to the verifiable indicators, level of achievement for Output 3 is analyzed below.

Regarding the verified indicator, “*Seminar/ workshop/ training is conducted for ASEAN developing countries,*” workshops for ASEAN stakeholders were held three times, namely 1st Workshop (8 to 9 May 2014), 2nd Workshop (22 to 24 June 2015) and 3rd Workshop (30 March to 1 April 2016). As for the training for ASEAN stakeholder, Climate Change Management for Sustainable Development course, Mitigation Mechanism course, and Climate Finance course were held in March 2016.

Therefore, it is considered the Output 3 has been successfully generated.

4.3 Steps towards achieving Overall Goal

Overall Goal:

The Climate Change International Technical and Training Center (CITC) is acknowledged as a training center of climate change in the ASEAN region and function as networking platform.

Verifiable Indicator:

Regional trainings and seminars responding to the needs of ASEAN developing countries are sustainably conducted by the CITC.

Referring to the above-mentioned Verifiable Indicator, the possibility of achieving Overall Goal of the Project after 3 to 5 years of the Project completion is expected to be high for the following reasons.

- Through the Project, structure of CITC was established and key personnel of CITC were identified and their capacity was further enhanced. CITC's technical capacity of training management such as development and revision of training curriculum and training materials was enhanced.
- Training curriculum and training materials were developed for all 4 clusters, and these trainings courses were successfully delivered to a large number of domestic and regional stakeholders. In addition to the training courses for Thailand, the training courses for ASEAN stakeholders were developed for three clusters based on the results of TNA with ASEAN countries, and were successfully delivered. It paved the way for CITC's continuous implementation of training activities for ASEAN stakeholders.
- The "CITC Business Plan: 5 years plan (2015 – 2019)" was developed, that describes the structure of CITC, action plan, strategy, service contents budget planning.
- From the viewpoint of technical and management capacity of CITC personnel, experiences and skills that are necessary for continuous delivery of training courses for all four training clusters, and periodical update of the training curriculums and materials were accumulated inside CITC. Robust CITC networks with various organizations such as governmental agencies, municipalities, academic and research institutions in Thailand, ASEAN countries and Japan, as well as international organizations that were established during the Project period will also contribute to sustainable CITC operation and training delivery.

- The logistic tools (such as logistic check sheet) were developed in order to efficiently plan and manage training and other activities of CITC.

4.4 Recommendations

As a regional climate change training center for ASEAN countries, CITC needs to continuously deliver trainings for trainees in ASEAN countries. To do this effectively and sustainably, CITC should further enhance its capacity of training management to deliver trainings in a timely manner by responding to dynamically changing and diversifying training needs from domestic and ASEAN stakeholders. Further strengthening its network with various organizations is essential. In addition, further enhancement and strengthening in technical and management capacity of CITC personnel as well as an increase of CITC human resources are strongly suggested.

Furthermore, CITC should lead Thai and ASEAN stakeholders to address climate change not only through training delivery but also through supporting implementation of mitigation and adaptation measures that are identified through training activities, which will also contribute to the ultimate goal of CITC; achievement of low-carbon and resilient society in Southeast Asia. Technical support and capacity development to accelerate implementation of NDC and its MRV may match the emerging but strong needs from ASEAN countries after the adoption of the Paris Agreement.