Country Report - Thailand

Thailand National Training on Circular Economy Indicators, 21-30 May 2025

under the European Commission funded project on Enhancing countries' capacity for measuring progress on the transition towards a circular economy, 2024-2026

Table of Contents

1. Introduction 1
2. General training information 1
3. Key observations and recommendations 2
4. Training Evaluation 2
5. Training documentation 4

List of participants 4

Agenda 7

Photos 10

1. Introduction

The 2030 Agenda for Sustainable Development has elevated the profile of the environmental dimension of development and its monitoring. The UN Environment Assembly adopted Resolution 5/11 (2022) on Enhancing circular economy as a contribution to achieving sustainable consumption and production invites Member States to integrate circular economy approaches into national and regional strategies and action plans. In this regard, the UNECE Task Force on Measuring Circular Economy, formed of international, regional and national organizations, developed the statistical framework intended to be the international statistical framework used to measure the progress of countries in their transition to a circular economy.

This project aims to build capacity to accelerate the transition towards a circular economy in the context of sustainable development at different levels. Enhancing institutional technical capacities to regularly produce circular economy and waste datasets is imperative to inform and develop evidence-based policies. The project focuses on various Sustainable Development Goal (SDG) indicators and others related to Sustainable Consumption and Production (material footprint, domestic material consumption, circular material use rate, material productivity), waste (municipal solid waste, hazardous waste, national recycling rate, food waste and loss), water (water stress, pollutants discharges to water bodies) and emissions (greenhouse gas emissions).

Newly developed tools were used to assist in the compilation of the data necessary to calculate the above-mentioned indicators. These tools are formed of (i) Excel spreadsheets containing detailed variables that are calculated together to generate the value of indicators, and (ii) step-by-step documents to guide government officials on filling the Excel spreadsheets.

2. General training information

The training was held at the National Statistics Office (NSO) premises between 21 and 30 May 2025 in Bangkok, Thailand. The training was attended by 70 participants, 73% were females and 27% were males.

Participants attending the training were government officials (by alphabetical order) from the Bangkok Metropolitan Administration; Department of Agriculture; Department of Alternative Energy Development and Efficiency; Department of Climate Change and Environment; Department of Energy Business; Department of Fisheries; Department of Health; Department of Industrial Works; Department of Livestock Development; Department of Primary Industries and Mines; Food and Drug Administration; Forest Industry Organization; Institute of Technology and Informatics for Sustainable Development; Metropolitan Waterworks Authority; National Science and Technology Development Agency; National Statistical Office; Office of Agricultural Economics; Office of Natural Resources and Environmental Policy and Planning; Office of the National Economic and Social Development Council; Office of the National Water Resources; Office of the Permanent Secretary, Ministry of Natural Resources and Environment; Office of the Permanent Secretary, Ministry of Energy; Office of Transport and Traffic Policy and Planning; Pollution Control Department; Royal Irrigation Department;

Thailand Greenhouse Gas Management Organization (Public Organization); Trade Policy and Strategy Office; and Wastewater Management Authority.

Participants attended the sessions on sustainable consumption and production indicators including the following indicators: Material footprint (SDG indicator 8.4.1/12.2.1), Domestic material consumption (SDG indicator 8.4.2/12.2.2), Circular material use rate, Material productivity, water indicators including Water stress (SDG indicator 6.4.2) and Wastewater (SDG indicator 6.3.1) and the sessions on waste indicators including Municipal solid waste (SDG 11.6.1), Hazardous waste (SDG indicator 12.4.2), National recycling rate (SDG indicator 12.5.1), Food waste and loss (SDG indicator 12.3.1) and Greenhouse gas emissions (SDG indicator 13.2.2). All materials were shared with participants during the training, including presentations, Excel tools as well as other training related materials.

3. Key observations and recommendations

The participants showed interest in the technical material provided and proactively participated in the training. Although pre-filled data was prepared prior to the training by the organizers, participants searched for data related to the discussed topic and actual data was used during the hands-on exercises.

Overall, all training participants were collaborating among themselves and with the trainer. The large number of participating organizations contributed to the success of the training. Some technical issues were raised as a result of specifically working with city level data (identifying the appropriate values that represent the size of the population of Bangkok).

Coordination and awareness of some data collection activities reinforced the need for continuous collaboration beyond the scope of the training, although scarce funding and retaining human resources were flagged as significant challenges to frequently collect data.

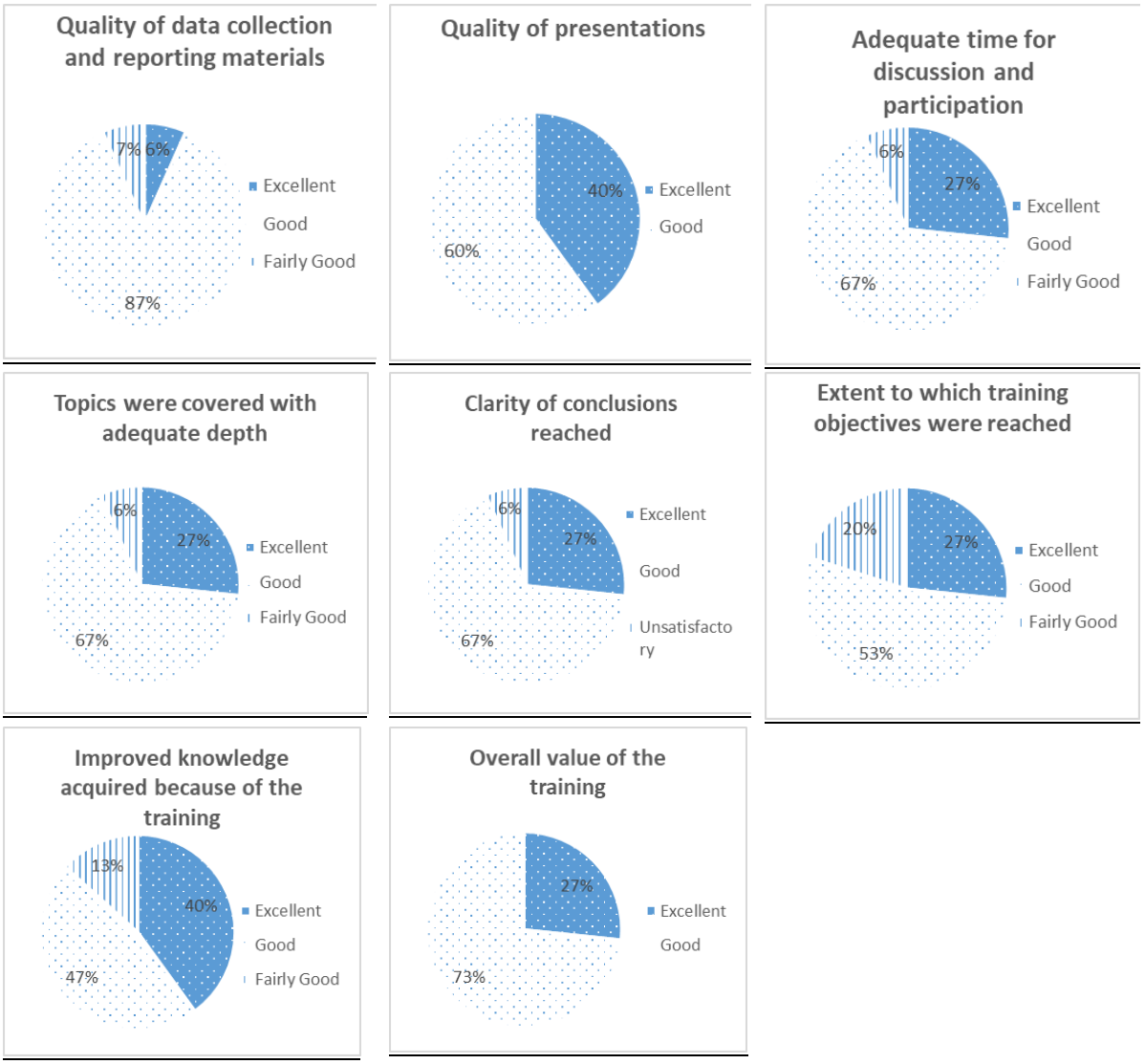
4. Training Evaluation

Quality of technical material

Fifteen participants (21% of total participants) responded to the online anonymous evaluation of the training, which was available online for more than 3 weeks. Six percent of respondents rated excellent the quality of data collection and reporting materials, while 40% rated excellent the quality of the presentations and 27% the adequate time allocated for discussion and participation. 27% rated excellent (a) the coverage of topics with adequate depth, (b) the clarity of the conclusions reached as well as (c) the extent to which the training objectives were reached. 40% of respondents rated excellent improved knowledge acquired by the training, and 27% rated excellent the overall value of the training.

Additional comments from respondents revolved around (a) the appreciation for the training format that encourages participation and the shared knowledge that helps better understand the content, (b) the very good quality of presentations, (c) longer training period was proposed as topics are somehow complex and it takes time to delve deeper into each topic, (d) “the collection of data in a way that involves data owners sharing their information can be utilized to support work that is appropriate to the current situation of the country”, and (e) the use of

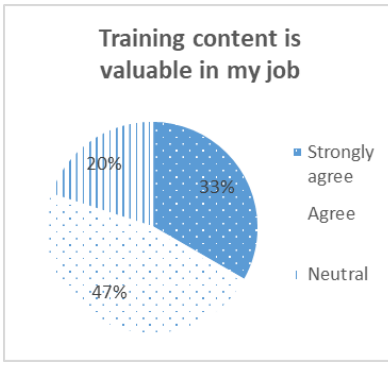
mockup data is needed as data vary depending on its contextual situation (population data for Bangkok for instance).

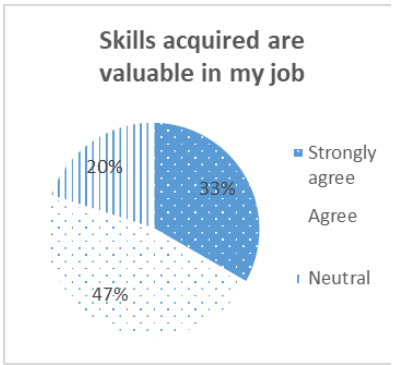


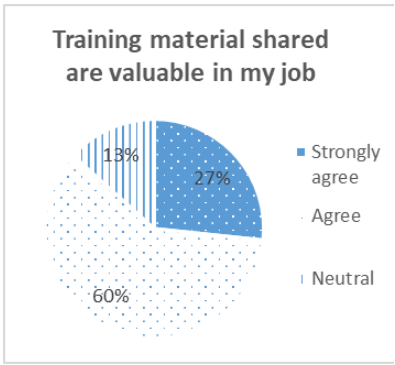
Content and conduct of the presentations

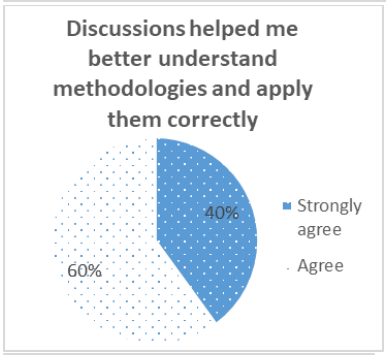
33% of respondents strongly agreed that (a) the training content is valuable to their job and (b) the skills acquired are valuable to their job. 27% strongly agree that the training material shared are valuable to their job. In addition, 40% strongly agreed that discussions helped them better understand methodologies and how to apply them correctly, while 34% strongly agreed that the Excel tools were helpful and they will be used in performing data work.

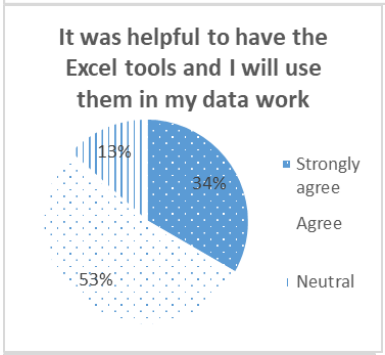
Respondents commented on (a) how the training enhanced their knowledge and understanding and how it can be applied to their work, (b) how well conducted it was, and (c) length of the training period, which makes it difficult for participants to attend every day.

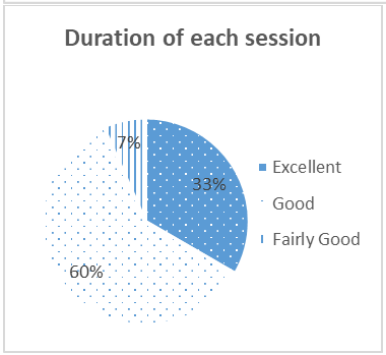


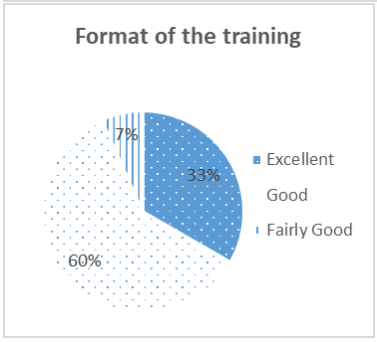












Organization of the training

33% rated excellent (a) the duration of each session and (b) format of the training. Overall, 27% rated excellent the planning and organizing of the training.

5. Training documentation

List of participants

Name of participant	Institution	Email
Dr. Nongnuch Phulsawat	Institute of Technology and Informatics for Sustainable Development	nongnucp@mtec.or.th
Mr. Adisak Chaitheweep	Department of Industrial Works	pongpopcorn@gmail.com
Mr. Adun Mohara	Food and Drug Administration	adun.fda@gmail.com
Mr. Apisit Chotipan	Department of Livestock Development	planning_policy@dld.go.th
Mr. Boonyachat Meesapthong	National Statistical Office	bmeesuptong@gmail.com

Mr. Ekkawichit Wetchapanit	Office of the Permanent Secretary, Ministry of Energy	ekvichit_v@energy.go.th
Mr. Khajornpong Jumun	Metropolitan Waterworks Authority	Khajornpong@mwa.co.th
Mr. Kunchadej Boonpen	Department of Agriculture	Kunchadej.123@gmail.com
Mr. Natthasit Limpawattanawanit	National Statistical Office	nuttasit.ball35@gmail.com
Mr. Nawat Phrombunkaew	Office of Natural Resources and Environmental Policy and Planning	mainawat1133@gmail.com
Mr. Pathom Chaiphreukthon	Thailand Greenhouse Gas Management Organization	pathomc@tgo.or.th
Mr. Pawarit Sakpatthanaphong		
Mr. Phanu Chuchuang	National Statistical Office	panu.c@outlook.com
Mr. Phasin Sapphanek	Strategy and Evaluation Office, Bangkok Metropolitan Administration	bma.evaluate@gmail.com
Mr. Prawit Banjong	National Statistical Office	prawit.b@nso.go.th
Mr. Sansook Suwannasom	Department of Alternative Energy Development and Efficiency	sansook_s@dede.go.th
Mr. Sarot Thairatsatien	National Statistical Office	sarot.tha@gmail.com
Mr. Suphawit Chanpum	National Statistical Office	supawich98@gmail.com
Mr. Thawatchai Na-Udom		
Mr. Warosak Santiworakhom	Department of Industrial Works	warosak.s@diw.mail.go.th
Ms. Areerat Kongsri	Department of Industrial Works	Kongsri.areerat@gmail.com
Ms. Awasda Mankongsathra	Department of Livestock Development	planning_policy@dld.go.th
Ms. Chuleekorn Sawatwong	Office of the National Water Resources	envionwr@gmail.com
Ms. Jantima Samneangngam	Institute of Technology and Informatics for Sustainable Development	jantimau@mtec.or.th
Ms. Kamonwan Pinato	Office of Natural Resources and Environmental Policy and Planning	Kamonwan.kpin@gmail.com
Ms. Kannika Iamsiri	Pollution Control Department	jeab_tipprasertsin@hotmail.com
Ms. Kawinthra Wannawong	Royal Irrigation Department	gavinny.pan@gmail.com
Ms. Nampet Petsut	National Statistical Office	nampet.petsut@gmail.com
Ms. Nanjira Muangyai	National Statistical Office	nanjira.mue@gmail.com
Ms. Narissara Chanphet	National Statistical Office	narissara.chanpet@gmail.com
Ms. Naritsara Kongduang	National Statistical Office	naritsara.knk@gmail.com
Ms. Natthamon Oythip	Department of Industrial Works	nutthamon.o@diw.mail.go.th

Ms. Natthanun Chaloemthip	Department of Industrial Works	nattanan.c@diw.mail.go.th
Ms. Natthasuangkorn Aungsophapong	Royal Irrigation Department	ploy-ung@hotmail.com
Ms. Nichamon Potjana	Office of Agricultural Economics	nichamonpotjana@gmail.com
Ms. Nichanan Thadkaew	Office of Natural Resources and Environmental Policy and Planning	ntk842@gmail.com
Ms. Nichapat Chittangkul	Department of Energy Business	Nichaphat@doeb.go.th
Ms. Ornanong Pongpaew	Department of Alternative Energy Development and Efficiency	ornanong_p@dede.go.th
Ms. Parinya Chianwichai	Department of Livestock Development	
Ms. Pavarisa Chaiphet	Office of Transport and Traffic Policy and Planning	pavarisajune@gmail.com
Ms. Pavitra Treenawong	Office of Agricultural Economics	ormsin.pt@gmail.com
Ms. Peerada Phaosuwan	Office of the National Water Resources	prd.phaosuwan@gmail.com
Ms. Penpich Palakong	National Statistical Office	penpichpalakong@gmail.com
Ms. Pensiri Yosyingyong	National Statistical Office	pensiriy2024@gmail.com
Ms. Pichamon Tochomngam	Bangkok Metropolitan Administration	nokpichamon2524@gmail.com
Ms. Pichaya Ponrit	Department of Primary Industries and Mines	picchapan@gmail.com
Ms. Pichayaporn Dechsakul	Office of the National Economic and Social Development Council	pichayapron.d@gmail.com
Ms. Pinitda Saengpakarn	National Statistical Office	pinijda@gmail.com
Ms. Praditha Likhitpattanakul	National Statistical Office	l.praditha@gmail.com
Ms. Prakaytham Suksatit	Institute of Technology and Informatics for Sustainable Development	prakayts@mtec.or.th
Ms. Pranita Kimnok	Office of the Permanent Secretary, Ministry of Natural Resources and Environment	Workplan0302@gmail.com
Ms. Prapatip Pongsup	National Statistical Office	prapatip.po@gmail.com
Ms. Rungnapa Charoensuk	Department of Industrial Works	rungnapa.c@diw.mail.go.th
Ms. Saffa Mohamed Ahmed	National Statistical Office	saffa.sbu@gmail.com
Ms. Salisa Rittimanomai	National Statistical Office	salisa.ritti@gmail.com
Ms. Surisar Nusuk	Trade Policy and Strategy Office	dae2031988@gmail.com
Ms. Taweeporn Kannee	Office of the National Economic and Social Development Council	Taweeporn@nesdc.go.th

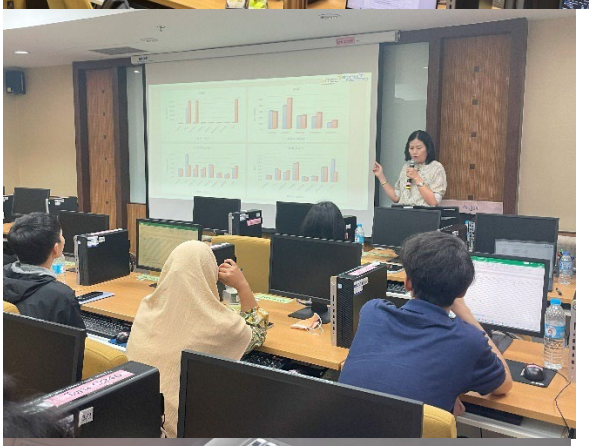
Ms. Tanaporn Sawakewang	Strategy and Evaluation Office, Bangkok Metropolitan Administration	tanapornsawakewang@gmail.com
Ms. Thanathorn Yoadsomsuay	Department of Industrial Works	thanatorn.y@diw.mail.go.th
Ms. Thanpitcha Ritthawa	National Statistical Office	Thanpitcha085588@gmail.com
Ms. Thanyamon Mankit	Department of Climate Change and Environment	Thanyamon.mankit@gmail.com
Ms. Thanyathon Osathaphan		
Ms. Thassaniwan Chomin	National Science and Technology Development Agency	Tassanc@mtec.or.th
Ms. Thida Ketsrikaew	Department of Fisheries	planpolicy6@gmail.com
Ms. Thipsinee Donmek	Strategy and Evaluation Office, Bangkok Metropolitan Administration	bma.evaluate@gmail.com
Ms. Valailak Komolrit	Wastewater Management Authority	valailak.k@wma.mail.go.th
Ms. Wipharat Phiosawat	Forest Industry Organization	iaun59@gmail.com
Ms. Wiratchaphan Suthapanit	Department of Health	wiratchapan.s@anamai.mail.go.th
Ms. Yupaporn Joakhaw	Office of the Permanent Secretary, Ministry of Natural Resources and Environment	malee.chorkao@gmail.com

Agenda

Wednesday 21 May 2025	
Session 1: Opening and introduction	
08:30 – 9:30	Welcome remarks - Thailand National Statistical Office - Therese El Gemayel (UNEP)
9:30 – 10:30	Presentation of the project and training objectives Introduction of participants Introduction to the training and presentation of the agenda and materials.
10:30 – 11:00	*Coffee break*
11:00 – 11:30	Presentation on the link of national data to international frameworks
11:30 – 12:30	Presentation by the Thailand National Statistical Office about environment statistics and environmental accounts in Thailand. National data sources and main stakeholders. Presentation by the Thailand National Statistical Office about Material Flow Accounts in Thailand. National data sources and stakeholders.
12:30 – 13:30	*Lunch*
13:30 – 15:00	Presentation by UNEP about Material Flow Accounts and related indicators. Practical work about Material Flow Accounts
15:00 – 15:30	*Break*
15:30 – 16:30	Practical work about Material Flow Accounts
Thursday 22 May 2025	
Session 2: Material Flow Accounts (EW-MFA) - continued	

08:30 – 10:30	Practical work about Material Flow Accounts
10:30 – 11:00	*Coffee break*
11:00 – 12:30	Practical work about Material Flow Accounts
12:30 – 13:30	*Lunch*
13:30 – 15:00	Practical work about Material Flow Accounts
15:00 – 15:30	*Break*
15:30 – 16:30	Practical work about Material Flow Accounts
Friday 23 May 2025	
Session 3: Material Flow Accounts (EW-MFA) - continued	
08:30 – 10:30	Practical work about Material Flow Accounts
10:30 – 11:00	*Coffee break*
11:00 – 12:30	Practical work about Material Flow Accounts
12:30 – 13:30	*Lunch*
13:30 – 15:00	Practical work about Material Flow Accounts
15:00 – 15:30	*Break*
15:30 – 16:30	Practical work about Material Flow Accounts

Monday 26 May 2025	
Session 4: Waste (Municipal solid waste and hazardous waste and recycling rate)	
08:30 – 09:30	Presentation by Thailand institutions (the National Statistics Office and/or any other agencies or ministries) about waste, waste statistics and accounts. National data sources and stakeholders.
09:30 – 10:30	Presentation by UNEP about circular economy indicators related to waste
10:30 – 11:00	*Coffee break*
11:00 – 12:30	Practical work about waste indicators
12:30 – 13:30	*Lunch*
13:30 – 15:00	Practical work about waste indicators
15:00 – 15:30	*Break*
15:30 – 16:30	Practical work about waste indicators
Tuesday 27 May 2025	
Session 5: Waste - continued (Municipal solid waste, hazardous waste and recycling rate)	
08:30 – 09:30	Presentation by UNEP about circular economy indicators related to recycling rate
09:30 – 10:30	Practical work about waste indicators
10:30 – 11:00	*Coffee break*
11:00 – 12:30	Practical work about waste indicators
12:30 – 13:30	*Lunch*
13:30 – 15:00	Practical work about waste indicators
15:00 – 15:30	*Break*
15:30 – 16:30	Practical work about waste indicators
Wednesday 28 May 2025	
Session 6: Waste - continued (food losses and food waste) and air emissions	
08:30 – 10:30	Presentation by Thailand institutions (the National Statistics Office and/or any other agencies or ministries) about food losses and food waste. National data sources and stakeholders.

09:30 – 10:30	Presentation by UNEP about circular economy indicators related to food
10:30 – 11:00	*Coffee break*
11:00 – 12:30	Practical work about waste indicators
12:30 – 13:30	*Lunch*
13:30 – 14:00	Presentation by Thailand institutions (the National Statistics Institute and/or any other agencies or ministries) about the air emissions statistics, accounts and inventories. National data sources and stakeholders.
14:00 – 15:00	Presentation by UNEP about the circular economy indicator related to air emissions
15:00 – 15:30	Break
15:30 – 16:30	Practical work about air emissions indicators
Thursday 29 May 2025	
Session 7: Level of water stress and wastewater treatment	
08:30 – 10:30	Presentation by Thailand institutions (the National Statistics Institute and/or any other agencies or ministries) about the level of water stress and wastewater production and treatment. Water statistics and accounts. National data sources and stakeholders.
09:30 – 10:30	Presentation by UNEP about circular economy indicators related to water
10:30 – 11:00	*Coffee break*
11:00 – 12:30	Practical work about water stress and wastewater discharges indicators
12:30 – 13:30	*Lunch*
13:30 – 15:00	Practical work about water stress and wastewater discharges indicators
15:00 – 15:30	*Break*
15:30 – 16:30	Practical work about water stress and wastewater discharges indicators
Friday 30 May 2025	
Session 8: Review and closing of the training	
08:30 – 10:30	Review and finalization of training outcomes
10:30 – 11:00	*Coffee break*
11:00 – 12:00	Discussion on the link of national data to international frameworks
12:00 – 13:00	Presentation of training outcomes and conclusions Next steps Closing remarks
13:00 – 14:30	*Lunch*

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