

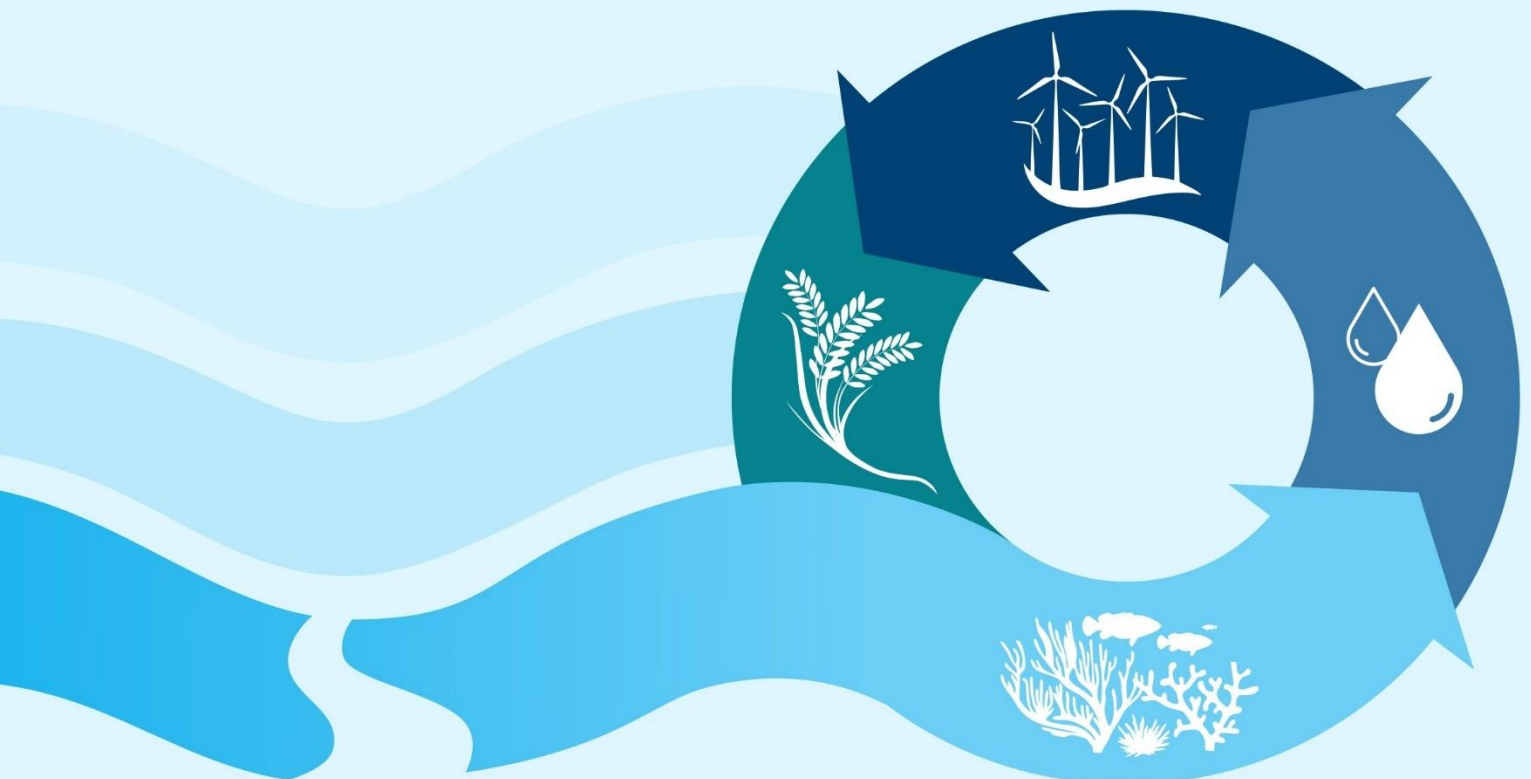


GEF/UNDP/ASEAN PROJECT ON REDUCING POLLUTION AND PRESERVING ENVIRONMENTAL FLOWS IN THE EAST ASIAN SEAS THROUGH THE IMPLEMENTATION OF INTEGRATED RIVER BASIN MANAGEMENT (IRBM) IN ASEAN COUNTRIES

Regional Training on the REWEFe Toolkit and WEFE Nexus Application in Southeast Asia

21-24 April 2026

**Lanson Place Mall of Asia, Pasay City,
Metro Manila, Philippines**



Regional Training on the REWEFe Toolkit and WEFE Nexus Application in Southeast Asia

June 2026

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About Us

Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) is a regional coordinating mechanism for the sustainable coastal and marine development in the East Asian Seas Region.

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1. Introduction

1.1 Background

The GEF/UNDP/ASEAN Project on Reducing Pollution and Preserving Environmental Flows in the East Asian Seas through the Implementation of Integrated River Basin Management (IRBM) in ASEAN Countries through the Regional Project Management Unit (RPMU) of PEMSEA Resource Facility (PRF) organized a Regional Training on the Rapid Evaluation of the Water, Energy, Food and Ecosystem (REWEFe) Toolkit and Water, Energy Food and Ecosystem (WEFE) Nexus Application in Southeast Asia on April 21-24, 2026 in Manila, Philippines, in collaboration with FutureWater.

The IRBM Project is being implemented by PRF and aims to establish functional IRBM mechanisms to reduce pollution, sustain freshwater environmental flows, and adapt to climate change across seven priority river basins in Cambodia, Indonesia, Lao PDR, Malaysia, Philippines, and Viet Nam.

The REWEFe toolkit was developed by FutureWater and tailored to meet the specific needs of the IRBM Project and the Southeast Asian region WEFE Nexus context. Following its successful demonstration in three priority river basins of the IRBM Project, a need for regional capacity building was identified to support broader uptake of the toolkit within sound IRBM governance processes. This training represented a key milestone in that capacity building effort.

Prior to the training, an Orientation Workshop was held in Bali, Indonesia on June 3, 2025, at which the REWEFe tool was introduced to more than 60 delegates including the National Focal Points of the ASEAN Working Group on Water Resources Management (AWGWRM), national implementing partners, IRBM project national coordinators, local governments from the seven river basins, the ASEAN Secretariat, UNDP, and RPMU representatives. Feedback from the Bali workshop highlighted practical training, user-friendly guides, and inter-agency collaboration as the top capacity building needs, directly informing the design of this training.

1.2 Training objectives

The training aims to strengthen regional capacity targeting both academic and government personnel from Southeast Asia in the application of the WEFE Nexus approaches and use the REWEFe toolkit as a decision-support instrument within integrated river basin governance and planning processes.

The specific objectives were to:

- Introduce IRBM governance principles and cross-sector coordination mechanisms relevant to the Southeast Asian context.
- Present the WEFE Nexus conceptual framework and its relevance for sustainable development and climate resilience.
- Guide participants in translating policy plans and sector strategies into structured, quantitative scenarios.
- Provide hands-on exposure to the REWEFe toolkit, including model structure, data requirements, scenario setup, and interpretation of results.
- Explore the science–policy interface, focusing on how analytical outputs on WEFE Nexus synergies and trade-offs can inform decision-making processes.

By the end of the training, participants were able to:

- Explain key IRBM governance principles and their relevance for cross-sector coordination in the WEFE domain.
- Apply WEFE Nexus thinking to identify interlinkages, trade-offs, and synergies across the pillars of IRBM governance.
- Translate policy goals and development strategies into quantitative scenarios suitable for structured analysis.
- Understand the architecture, data needs, and analytical logic of the REWEFe toolkit, including its strengths and limitations.
- Run and interpret basic scenarios in REWEFe, and critically assess the implications of results for policy dialogue.
- Strengthen the science–policy interface by integrating quantitative findings into governance, planning, and investment discussions.
- Identify pathways for national-level uptake, including potential follow-up technical workshops and institutional embedding of the REWEFe toolkit.

2. Training curriculum and agenda

2.1 Overview

The training combined governance and institutional dimensions with technical application of the REWEFe toolkit, with approximately equal emphasis on each. The four-day programme was structured to progressively build participant capacity, moving from governance concepts and WEFE theory (Day 1) through hands-on toolkit exercises (Days 2–3) to a science-policy dialogue simulation (Day 4).

Day 1 focused on IRBM governance, WEFE Nexus conceptual framing, and translating policy strategies into scenarios. Day 2 introduced the REWEFe toolkit, its theoretical foundation, data requirements, and practical exercises on baseline assessments. Day 3 concentrated on scenario development, trade-offs and synergies, and group exercises using the Pasac-Guagua case study basin. Day 4 focused on science-policy interaction through a policy dialogue simulation.

The training methodology integrated: (i) structured lectures with Q&A; (ii) interactive breakout sessions for contextualisation and country-specific discussion; and (iii) applied hands-on exercises with the REWEFe toolkit. This adaptive facilitation approach allowed sessions to be adjusted to participants' backgrounds and learning pace. A pre-test was administered at the start of Day 1 and a post-test at the end of Day 4 to assess learning outcomes.

2.2 Training materials

Training materials included presentations on IRBM governance, WEFE Nexus theory, REWEFe applications, data collection approaches, scenario analysis, and policy dialogue simulations. Training materials provided to participants included:

Pre-training:

- REWEFe Practical Guidelines for Participants (for Days 2, 3 and 4).
- REWEFe User Manual, Guidance Document, Input Descriptions, and Method Protocol

- Pre-populated REWEFe Excel toolkit files (REWEFe_PEMSEA_p1/p2/p3.xlsm) for case study exercises using the Pasac-Guagua basin (Day 3).

During training:

- Introduction to the IRBM Project, IRBM governance framework, WEFE Nexus conceptual framework, and introduction to REWEFe (Day 1),
- REWEFe theory and applications – tool structure, synergy/trade-off mapping exercise, data requirements, and baseline analysis exercises (Day 2),
- REWEFe modelling – scenario building, WEFE indicators under different scenarios, group exercises (Day 3),
- Science-policy interface and Policy Dialogue Simulation (Day 4),

2.3 Training agenda: - summary of daily content

2.3.1 Day 1 – IRBM Governance, WEFE Nexus Concepts, and Scenario Thinking

Day 1 established the conceptual foundation for the training. It opened with a welcome remark by Dr. Sevillo David, Jr, Executive Director of the Department of Environment and Natural Resources-National Water Resources Board, Philippines, and followed by an overview of the IRBM Project by Ms. Nancy Bermas, Regional Project Manager of the IRBM Project. The pre-test was administered before lectures began to capture baseline knowledge of the participants.

Lectures covered the Framework of IRBM Governance – including IRBM principles, institutional arrangements, and coordination mechanisms – followed by the WEFE Nexus conceptual framework, explaining the interdependencies between water, energy, food, and ecosystem sectors and why an integrated approach is essential given projected increases of 60 percent in energy demand, 80 percent in food demand, and 55 percent in water demand by 2050. The afternoon introduced the REWEFe tool, tracing its development from BONEX (Boosting Nexus Framework Implementation in the Mediterranean, a PRIMA-funded project¹) to WatNEX, (Water Accounting Engine for WEFE Nexus Decision-Making)² and culminated in interactive breakout sessions where participants translated real policy plans and strategies from their countries or sectors into quantitative scenarios.

¹ <https://www.futurewater.nl/projects/bonex-boosting-nexus-framework-implementation-in-the-mediterranean-nl/>

² <https://www.futurewater.eu/tools/watnex/>

2.3.2 Day 2 – REWEFe Theory, Applications, and Baseline Exercises

Day 2 provided the theoretical grounding and first hands-on experience with REWEFe. Morning sessions covered the theoretical basis of the tool, including its balance-based accounting logic (production + import = consumption + export), its scope across more than 50 WEFE modelling tools, and applications at different spatial scales. A small group exercise on mapping synergies and trade-offs was conducted before moving into data requirements for WEFE modelling.

In the afternoon, participants began the first hands-on exercises using the Pasac-Guagua case study basin in the Philippines. Part 1 focused on understanding REWEFe indicators and metrics and collecting baseline data; Part 2 involved entering the baseline and identifying WEFE issues from the results. Each participant worked with their own laptop and the REWEFe toolkit Excel file.

2.3.3 Day 3 – Scenario Development, Trade-offs, and Group Exercises

Day 3 built on the baseline established in Day 2 to develop intervention scenarios. Morning sessions covered WEFE indicators under different scenarios, including synergies and trade-offs, illustrated using international case studies (including the Morgana and Botte irrigation district in Italy). Hands-on exercises involved defining and populating scenarios in the REWEFe tool for the case study basin.

The afternoon's final exercise required participants to work in country or regional groups to define a baseline and at least one scenario for a real or representative basin relevant to their context. Groups then presented their scenario results to the plenary, demonstrating their ability to translate real-world policy goals into quantitative REWEFe analyses and communicate findings.

2.3.4 Day 4 – Science-Policy Interface and Policy Dialogue Simulation

Day 4 was designed to bridge technical analysis with governance decision-making. The morning introduced the science-policy interface, addressing how the language and evidence needs differ between scientific analysis and policy dialogue, and how REWEFe outputs can be communicated effectively to decision-makers.

The central exercise was a structured Policy Dialogue Simulation, in which participants were divided into a Technical Team (using REWEFe to analyse scenarios) and a Policy Team (representing WEFE sectors – water, energy, food, ecosystem) for three policy scenarios related to water conservation:

- S1: Drip irrigation intervention (Water–Food–Ecosystem)
- S2: Hydropower introduction (Water–Energy–Ecosystem)
- S3: Introduction of desalination plant (Water – Ecosystem – Energy)

Through structured steps – background setting, role preparation, analysis, knowledge sharing, and policy dialogue – participants practised translating technical REWEFe outputs into policy recommendations, identifying trade-offs and coordination needs. The day closed with the post-test, training evaluation, and awarding of certificates.

3. Participants

3.1 Participant profiles

The training was conducted in a hybrid format, i.e., in-person at Lanson Place, Manila and online via Zoom. A total of 28 participants (Annex 1) from the six participating Southeast Asian countries attended the training on-site. **(Table 1)**. Although the online attendance varied day-to-day, in total, 18 participants were able to complete the 4-day training. The online participants were also from the six participating countries, with an additional participant from China. The training drew participants from government agencies, national universities and research institutions, and the PEMSEA Network of Learning Centers and Local Governments (PNLC, PNLG).

Table 1. Participant profiles

Country	Organization Type	Participants	M / F
Cambodia	Government (Ministry of Environment) & University (Royal University of Phnom Penh, Royal University of Agriculture), IRBM Project National Coordinator	4	3M / 1F
Indonesia	Government (Ministry of Environment), Research/University (IPB Univeristy), IRBM Project National Coordinator	3	0M / 3F
Lao PDR	Government (Department of Water Resources, Ministry of Agriculture and Environment) & University (National University of Laos), IRBM Project National Coordinator	3	2M / 1F
Malaysia	Government (Department of Irrigation and Drainage Malaysia, Kedah Water Resources Board)	3	2M / 1F

Country	Organization Type	Participants	M / F
Philippines	Government (DENR-Environmental Management Bureau, DENR-Ecosystems Research and Development Bureau, DENR-River Basin Control Office, DENR-Foreign Assisted and Special Projects Service, DENR-National Water Resources Board, Department of Agriculture-Bureau of Soils and Water Management, Provincial Governments of Cavite and Pampanga, & University (Cavite State University)	12	5M / 7F
Viet Nam	Government (Danang Environmental Protection Agency), University (University of Danang), IRBM Project National Coordinator	3	0M / 3F
Total		28	12M / 16F
Online Participants	Government, University	18	9M / 9F

In terms of gender, the on-site participants comprised of 57 percent female and 43 percent male participants, while online participants were comprised of 50 percent female and 50 percent male participants. Educational backgrounds were predominantly at master's degree and doctoral level, with disciplines spanning civil and water engineering, environmental management, geography, agricultural engineering, and environmental science. Most participants had prior experience with Microsoft Excel and GIS tools.

Pre-training self-assessment of on-site participants (from the participant registration form, n=20) indicated the following average knowledge levels on a 1–5 scale:

- IRBM Framework: 3.6 (Basic–Good knowledge)
- WEF Nexus: 3.1 (Basic knowledge)
- Science-Policy Interface in IRBM: 2.8 (Little–Basic knowledge)
- REWEFe Tool or other WEF models: 2.4 (Little knowledge)
- IRBM Governance and Decision Making: 3.0 (Basic knowledge)

These scores confirm that participants generally had some foundation in IRBM but limited prior exposure to WEF Nexus quantitative tools, and its use in developing IRBM governance and policy recommendations, consistent with the training's positioning as an introductory-to-intermediate capacity building event.

Participants' expectations, as expressed in the pre-registration form, centered on (i) gaining practical skills in applying the REWEFe Toolkit, (ii) deepening understanding of the WEFE Nexus approach, and (iii) strengthening cross-sectoral and cross-country collaboration. Several participants specifically mentioned the need for hands-on, step-by-step exercises using real basin data.

3.2 Trainers

Table 2. Overview of trainers

Name	Role	Expertise
Brecht D'Haeyer	Lead Trainer / WEFE Nexus Expert	WEFE Nexus modelling, REWEFe tool development, scenario analysis, capacity building.
Dipankar Aich	Co-Trainer / IRBM & Water Governance Expert	Water governance, IRBM, climate adaptation, science-policy interface/

4. Training performance – pre- and post-test analysis

A knowledge assessment was conducted at the beginning of Day 1 (pre-test) and at the end of Day 4 (post-test) using an interactive quiz platform (Aha-slides) (**Table 3**). Both tests covered identical or closely matched topic areas including WEFE concepts, IRBM principles, REWEFe tool characteristics, and IWRM–IRBM–WEFE relationships. Scores were recorded on a points-based leaderboard, with correct answers and response speed contributing to the total score. The pre-test and post-test had at least 34 participants, reflecting attendance patterns across the four days. Sixteen participants were matched by name across both tests to enable a paired comparison (Details in Annex 2).

Table 3. Pre- and post-test evaluation statistics

Metric	Pre-test	Post-test	Change
Overall accuracy (all participants)	49.8%	64.1%	+14.3 percentage points
Overall accuracy (matched group, n=16)	52.2%	64.9%	+12.7 percentage points
Average leaderboard score (all)	341	612	+79%
Average leaderboard score (matched group)	383	683	+78%
Top individual score	796	1,113	+40%
Participants scoring above 60% accuracy	~30%	~65%	+ 35 percentage points
Zero-timeout answers (questions not attempted in time)	Present	Absent	Improved engagement

The overall accuracy rate improved from 49.8 percent in the pre-test to 64.1 percent in the post-test, a gain of 14.3 percentage points. The matched group (n=16) showed a consistent improvement from 52.2 percent to 64.9 percent (+12.7 pp), providing stronger evidence of learning gains for the same individuals. Average leaderboard scores nearly doubled across both the full and matched groups, and the elimination of unanswered (timed-out) questions in the post-test indicates that participants responded with greater confidence and within time limits.

Of the 16 matched participants, 12 (75 percent) improved their accuracy and 4 (25 percent) showed a decline. Three of the four decliners had relatively high pre-test scores (above 57 percent), suggesting a 'ceiling effect', which means that they had limited room for further improvement between the pre- and post-test scores. One participant showed a substantial decline of 33 percentage points, which is an outlier warranting individual follow-up.

Across all countries, the greatest gains were recorded on the following topics:

- Main purpose of the WEFE tool / approach: 80 percent (pre) to 100 percent (post) in the matched group.

- 'Which statement is true?' (IRBM governance concept): 0 percent to 53–57 percent – this question was effectively unanswered in the pre-test due to its design, making the absolute gain indicative of content learning.
- WEFE trade-off example: 33 percent to 63 percent (+30 pp).
- Is IWRM the same as IRBM?: 61–75 percent to 87 percent (+12–26 pp across groups).
- Key principle of IRBM: 73–75 percent to 87–93 percent (+12–20 pp).

Concepts that remained challenging across all countries and groups include:

- 'Water is at the core of the WEFE Nexus' (correct answer: No): 23–38 percent accuracy – indicating persistent difficulty with this conceptual inversion. One possible reason is that the participants' field of work involves water-centred approaches more, working on river basin issues, than the remaining WEFE sectors.
- 'Which of the following statements is correct?' (on REWEFe characteristics): 14–44 percent – a technically demanding question requiring precise understanding of the tool's spatial and temporal resolution.
- 'Is IWRM the same as WEFE Nexus approach?': modest improvement (57 percent to 60 percent), suggesting this distinction needs more explicit treatment in future training.

5. Participants' feedback

5.1 Summary of participant feedback

A structured evaluation form was completed by 25 participants at the end of Day 4 by PEMSEA (**Table 4**). The form used a 1–5 Likert scale for course ratings and descriptive ratings (Excellent/Strongly Agree to Poor/Strongly Disagree) for lecturer assessments. Participants also self-assessed their post-training knowledge levels and indicated how they planned to apply and disseminate their learning. Overall feedback from participants was highly positive. Participants particularly appreciated the balance between conceptual lectures, practical exercises, and policy dialogue simulations. Hands-on exercises using the REWEFe toolkit and EarthMap were identified as especially valuable.

- Interactive group exercises improved understanding of WEFE trade-offs.
- Participants appreciated the practical orientation of the REWEFe exercises.
- The science-policy dialogue simulation was considered highly relevant.
- Participants requested follow-up technical workshops and additional case studies.

Table 4. Feedback from participants as recorded in the evaluation by PEMSEA on April 24, 2026.

Evaluation Statement	Mean Score (out of 5)	% Excellent / Strongly Agree
The course content was sufficiently relevant to apply the knowledge and skills gained	4.68	84%
The activity provided new knowledge relevant to my current job	4.84	72%
The activity provided new insights into development challenges	4.44	68%
Course materials were sufficient to support learning	4.56	72%
Sufficient opportunities to discuss needs, experiences, and perspectives	4.44	60%
The training changed my attitude towards the issues discussed	4.48	60%
Sufficient opportunities to practise skills through hands-on exercises	4.32	64%
The mix of participants was appropriate for the course goals	4.40	56%
The training provided useful contacts and professional networks	4.40	52%
The level and format of the course was appropriate for my needs	4.36	56%

Participants' written comments highlighted several recurring themes:

Strengths

- The hands-on exercises and group work were highly valued for building practical understanding of WEFE trade-offs and REWEFe operation.
- The Policy Dialogue Simulation on Day 4 was cited as a standout activity for its real-world relevance.
- Trainers were praised for their subject knowledge, engagement, and approachability.
- The multi-country, multi-sector mix of participants enriched discussions and facilitated regional networking.

Areas for Improvement

- Multiple participants requested teaching assistants or co-facilitators for the hands-on toolkit sessions to ensure each participant receives adequate support.
- More case studies from different basins and countries would improve contextual understanding.
- Additional time for hands-on exercises, particularly for data entry and scenario interpretation, was requested.
- One participant suggested translating the WEFE manual into local languages to improve accessibility.
- Sharing presentation materials and the REWEFe user manual immediately after each session was recommended.

5.2 Summary of feedback on trainers

Lecturers received very strong ratings overall. Knowledge of topic was rated Excellent or Good by all respondents, with 80 percent rating it Excellent (**Table 5**). Enthusiasm, approachability, and use of visual aids were also highly rated. Clarity of presentation received the widest spread of ratings (56 percent Excellent, 40 percent Good), and qualitative comments suggest that addressing questions more directly and managing time during lecture sessions would further improve delivery. Notably, 96 percent of participants indicated they would take another course from the same lecturers.

Table 5. Feedback on trainers.

Criterion	Excellent / Strongly Agree	Good / Agree
Knowledge of topic	80% (20/25)	20% (5/25)
Use of visual aids	68% (17/25)	28% (7/25)
Enthusiasm	68% (17/25)	32% (8/25)
Approachability	68% (17/25)	28% (7/25)
Would take another course from the same lecturers	76% (19/25)	20% (5/25)
Clarity of presentation	56% (14/25)	40% (10/25)

5.3 Post-Training Knowledge Self-Assessment

Self-assessed post-training knowledge by the participants was predominantly at the 'Good Knowledge' level across all five topics (**Table 6**). The REWEFe Tool category showed the widest spread, with some participants still at 'Little Knowledge', reflecting the tool's steep initial learning curve for participants with limited prior Excel-based modelling experience. IRBM Framework and IRBM Governance were the strongest areas post-training, confirming the effectiveness of the governance-focused sessions.

Table 6. Post-training knowledge self-assessment.

Topic	Pre-training	Post-training	Gain
IRBM Framework	3.6	3.92	+ 8.89%
WEFE Nexus	3.1	3.6	+ 16.13%
Science-Policy Interface in IRBM	2.8	3.64	+ 30%
REWEFe Tool or other WEFE models	2.4	3.36	+ 40%
IRBM Governance and Decision Making	3.0	3.68	+ 22.67%

6. Next steps and opportunities

The training highlighted strong interest in continued capacity building on WEFE Nexus applications and integrated basin governance in Southeast Asia. Participants expressed interest in applying the REWEFe toolkit within their own basins and institutions. Future follow-up activities may include country-specific coaching sessions and technical workshops, advanced scenario modelling exercises, and further integration of REWEFe outputs into State of River Basin reporting and IRBM planning processes.

All 25 respondents (100 percent) indicated they plan to share training materials with others. The most commonly cited dissemination pathways were:

- Conducting echo seminars or sharing within their organisation (72 percent, 18/25)
- Training other members of their organisation (64 percent, 16/25)

- Conducting research or developing courseware (52 percent, 13/25)
- Designing and implementing projects or programmes modelled on the training (44 percent, 11/25)

Several participants expressed specific plans, including integrating REWEFe into university curricula, applying the tool in country-specific basins with potential funding support, and sharing it with policy-making colleagues and students.

6.1 Recommendations for Follow-up Capacity Building

Based on the training results, participant feedback, and the observed learning gaps, the following actions are recommended:

- **Country-specific follow-up workshops:** Country-specific follow-up workshops are recommended for all countries.
- **Teaching assistant support:** Future training editions should include at least one additional technical assistant during hands-on REWEFe exercises to allow individualized guidance, particularly for participants with limited prior modelling experience.
- **National data preparedness:** Participants should be encouraged to prepare national or basin-level data prior to any follow-up training to enable application of REWEFe in their own contexts, rather than relying solely on the provided case study.
- **Translated and localized materials:** Development of simplified REWEFe guidance materials in regional languages (Bahasa Indonesia, Bahasa Malaysia, Khmer, Lao, Vietnamese) would improve post-training independent application.
- **Integration into IRBM planning cycles:** PEMSEA and national IRBM coordinators should explore pathways for embedding REWEFe outputs into State of River Basin reporting and IRBM master planning processes.

6.2 Opportunities for Continued Engagement

The training revealed strong regional interest in continued engagement around WEFE Nexus application and IRBM governance. Specific opportunities identified include:

- **Advanced scenario modelling workshops:** Targeting participants who demonstrated strong progress and interest in deeper technical application.

- **Cross-country basin collaboration:** The Pasac-Guagua case study demonstrated the value of a shared learning basin; future editions could rotate or expand the case study to include basins from other participating countries.
- **University curriculum integration:** Several academic participants (Philippines, Cambodia, Viet Nam) expressed intent to integrate REWEFe into degree programmes and research.
- **State of River Basin reporting:** REWEFe outputs can directly contribute to PEMSEA's existing SORB reporting framework, providing a concrete institutional home for the tool.

Annex 1 – List of participants attending the training

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21–24 April 2026 | Manila, Philippines | Organised by FutureWater & PEMSEA

On-site Participants	Online Participants	Countries Represented
28	18	7
Cambodia, Indonesia, Lao PDR, Malaysia, Philippines, Viet Nam	Cambodia, China, Indonesia, Lao PDR, Malaysia, Philippines	Cambodia, China, Indonesia, Lao PDR, Malaysia, Philippines, Viet Nam

A. On-Site Participants

The following 28 participants attended the training in person at the venue in Manila, Philippines. Participants are listed by country in alphabetical order.

Name	Title / Position	Organisation	Email
CAMBODIA			
Mr. Chandath Him	National Project Coordinator, IRBM Project	IRBM Project National Coordinator for Cambodia	hcdmoe@gmail.com
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Name	Title / Position	Organisation	Email
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LAO PDR			
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Name	Title / Position	Organisation	Email
		Resources Office (OPENRO) , Cavite	
VIET NAM			
Ms. Kieu Thi Kinh	Associate Professor	University of Danang (UD)	ktkinh@ued.udn.vn
Ms. To Kim Oanh	National IRBM Project Coordinator – Viet Nam	IRBM Project National Coordinator for Vietnam	oanhtk73@gmail.com
Ms. Tran Thi My Nuong	Expert	Danang Environmental Protection Agency	tranmynuong@gmail.com

B. Online Participants

The following 18 participants joined the training online. They are listed chronologically by country (alphabetical) and then by name within each country.

#	Name	Title / Position	Organisation	Country
1	Mr. Sareth Vin	Director of HRM Division	Koh Kong Province	Cambodia
2	Ms. 张亚楠	Senior Engineer / Head of Research & Monitoring	Yancheng Wetland and World Natural Heritage Protection Centre	China
3	Ms. Dyah Prakasita Afifah	Project Technical Assistant	IRBM Project, PEMSEA / Ministry of Environment, Indonesia	Indonesia
4	Mr. Ketut Gede Dharma Putra	Researcher	Centre for Sustainable Development	Indonesia
5	Mr. Rasyad Muhara	Head	Setda	Indonesia
6	Mr. Phetdala Oudone	Lecturer	National University of Laos	Lao PDR
7	Ms. Noor Aida Saad	Lecturer	Universiti Sains Malaysia	Malaysia
8	Ms. Wan Nurdini Wan Mohd Hassim	Executive Officer	LUAS (Lembaga Urus Air Selangor)	Malaysia
9	Mr. Alvin Kristoffer Artienda	Development Management Officer III	National Water Resources Board (NWRB)	Philippines

#	Name	Title / Position	Organisation	Country
10	Mr. Ariel Despogado	Engineer II	National Water Resources Board (NWRB)	Philippines
11	Ms. Caryl Faith Lebantino	Public Utilities Regulation Officer II	National Water Resources Board (NWRB)	Philippines
12	Mr. Isaiah John Mangunay	Special Investigator III	National Water Resources Board (NWRB)	Philippines
13	Ms. Janeith Gano	EMS I - Environmental Management Specialist I	GENRO	Philippines
14	Mr. Kenneth John C. Castillo	Engineer	National Water Resources Board (NWRB)	Philippines
15	Ms. Marie Frances Nievaes	Associate Professor	University of the Philippines Visayas	Philippines
16	Ms. Marjolene Amante-Landero	CDA I – Community Development Assistant I	GENRO	Philippines
17	Mr. Richard Camanzo	Engineer II	National Water Resources Board (NWRB)	Philippines
18	Ms. Sharmaine Bantas	Senior Science Research Specialist	DENR-ERDB-WWRDEC	Philippines

Annex 2 – Training Agenda

Time	Topic	Responsible
Day 1 – 21 April 2026: IRBM Governance, WEFE Nexus Concepts & Scenario Thinking		
09:00–09:05	Welcome and opening remarks	DENR-NWRB Philippines
09:05–09:15	Personal introduction of participants	All Participants
09:15–09:40	Introduction to the training – learning objectives and programme	Brecht D'Haeyer, FutureWater
09:40–10:00	IRBM Project Overview	Nancy Bermas, PEMSEA
10:00–10:45	Framework of IRBM governance – Lecture & Q&A	Dipankar Aich, FutureWater
10:45–11:00	Coffee break	
11:00–11:45	WEFE Nexus thinking and conceptual framework – Lecture & Q&A	Dipankar Aich
11:45–12:30	Introduction to the REWEFe tool: from BONEX to WatNEX	Brecht D'Haeyer
12:30–13:30	Lunch break	
13:30–15:15	Interactive session: From policy plans/strategies to scenarios – Breakout groups	Dipankar Aich & Brecht D'Haeyer
15:15–15:30	Coffee break	
15:30–16:30	Plenary discussion and recap of breakout session	Dipankar Aich & Brecht D'Haeyer
16:30–17:00	Final Q&A / Wrap-up	All participants
Day 2 – 22 April 2026: REWEFe Theory, Applications & Baseline Exercises		
09:00–09:15	Welcome, introduction and Day 1 recap	Brecht D'Haeyer
09:15–10:30	Theory behind the REWEFe tool – Lecture & Q&A	Brecht D'Haeyer
10:30–10:45	Coffee break	
10:45–11:25	Small group exercise: mapping synergies and trade-offs	Brecht D'Haeyer
11:25–12:30	REWEFe tool applications at different scales – Lecture & Q&A	Brecht D'Haeyer & Dipankar Aich


12:30–13:30	Lunch break	
13:30–14:30	WEFE modelling: data requirements and inputs – Lecture & Q&A	Brecht D'Haeyer
14:30–15:15	Hands-on exercise Part 1: REWEFe indicators & metrics; collecting data for case study basin	Brecht D'Haeyer & Dipankar Aich
15:15–15:30	Coffee break	
15:30–16:30	Hands-on exercise Part 2: Baseline analyses and identifying WEFE issues	Brecht D'Haeyer & Dipankar Aich
16:30–17:00	Final Q&A / Wrap-up	All participants
Day 3 – 23 April 2026: Scenario Development, Trade-offs & Group Exercises		
09:00–09:15	Welcome, introduction and Day 2 recap	Brecht D'Haeyer
09:15–10:00	WEFE indicators under different scenarios: synergies and trade-offs – Lecture & Q&A	Brecht D'Haeyer
10:00–10:45	Hands-on exercise Part 3a: Scenario building – defining scenarios through data review	Brecht D'Haeyer & Dipankar Aich
10:45–11:00	Coffee break	
11:00–12:30	Hands-on exercise Part 3b: Scenario building – assessing WEFE for case study basin	Brecht D'Haeyer & Dipankar Aich
12:30–13:30	Lunch break	
13:30–15:15	Final group exercise: Define baseline + 1 scenario for your region (by country/region)	Brecht D'Haeyer & Dipankar Aich
15:15–15:30	Coffee break	
15:30–16:30	Group presentations: results from country scenario exercises	All/selected participants
16:30–17:00	Final Q&A / Wrap-up	All participants
Day 4 – 24 April 2026: Science-Policy Interface & Policy Dialogue Simulation		
09:00–09:15	Welcome, introduction and Day 3 recap	Brecht D'Haeyer
09:15–10:00	Science/policy interface: generating policy messages for IRBM governance	Dipankar Aich
10:00–10:45	Policy Dialogue Simulation Steps 1 & 2: Group formation, role clarification, policy framing	Dipankar Aich & Brecht D'Haeyer
10:45–11:00	Coffee break	

11:00–11:45	Policy Dialogue Simulation Step 3: Group analysis using REWEFe for assigned policy scenarios	Dipankar Aich & Brecht D'Haeyer
11:45–12:30	Policy Dialogue Simulation Step 4: Technical and policy teams present findings	Dipankar Aich
12:30–13:30	Lunch	
13:30–15:15	Policy Dialogue Simulation Step 5: Policy dialogue and presentation of key outcomes	Dipankar Aich & Brecht D'Haeyer
15:15–15:35	Post-test (knowledge assessment)	FutureWater
15:35–16:00	Training evaluation and discussion on next steps	Brecht D'Haeyer / PEMSEA
16:00–17:00	Wrap-up and certificate ceremony	Brecht D'Haeyer / PEMSEA



About the Integrated River Basin Management (IRBM) Project

Supported by the Global Environment Facility, the Integrated River Basin Management (IRBM) Project is working to set-up functional management mechanisms in priority river basins of six ASEAN countries to reduce pollution and sustain freshwater environmental flows as well as adapt to climate change vulnerabilities. The regional Project is being implemented by the United Nations Development Programme Bangkok Regional Hub, and executed by Partnerships in Environmental Management for the Seas of East Asia, in collaboration with ASEAN.

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the IRBM Project

