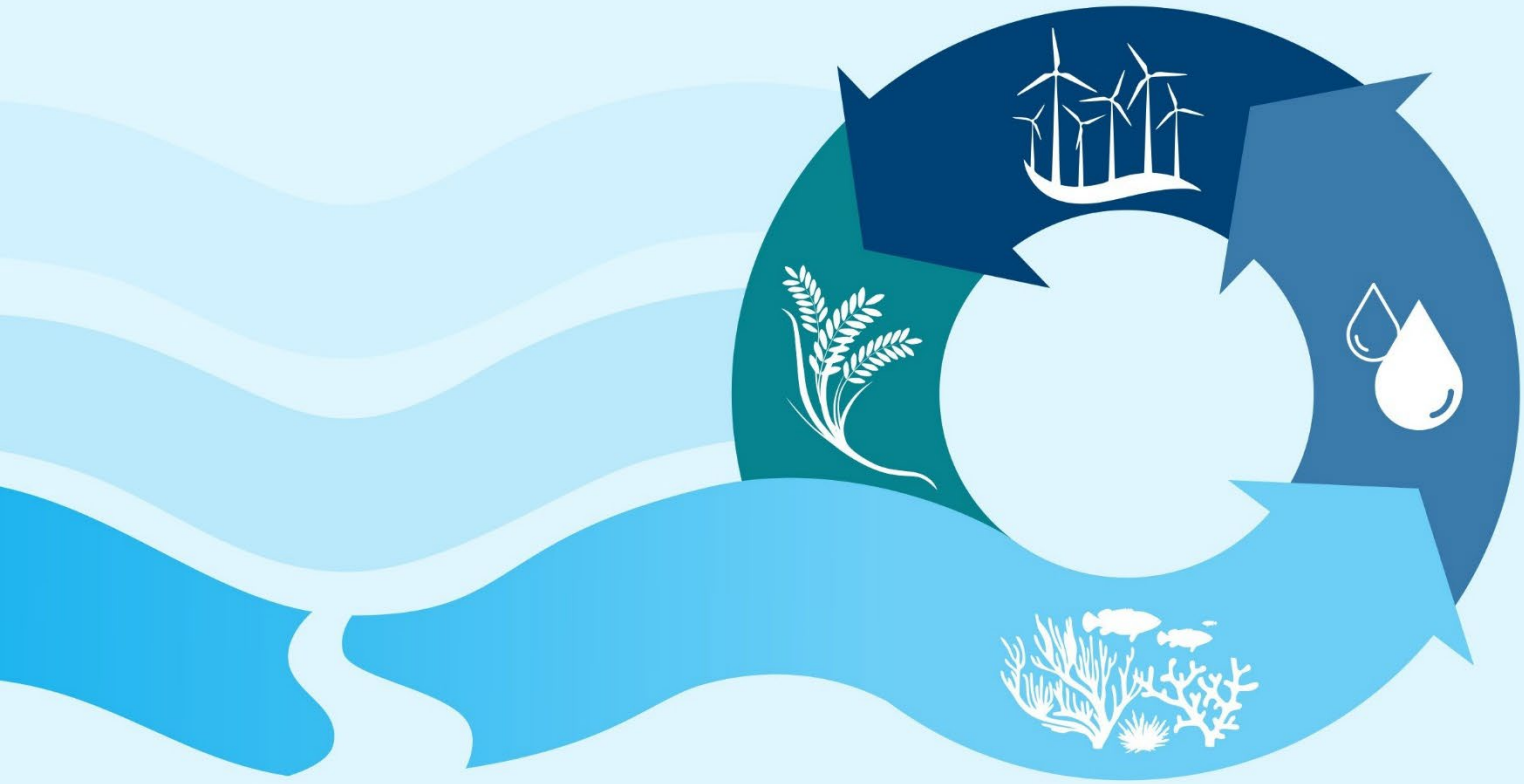
GEF/UNDP/ASEAN PROJECT ON REDUCING POLLUTION AND PRESERVING ENVIRONMENTAL FLOWS IN THE EAST ASIAN SEAS THROUGH THE IMPLEMENTATION OF INTEGRATED RIVER BASIN MANAGEMENT (IRBM) IN ASEAN COUNTRIES

Regional Orientation Workshop on the Development of Water-Energy-Food-Ecosystem Toolkit for River Basins in Southeast Asia

3 June 2025
Holiday Inn Resort Baruna, Bali, Indonesia



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

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1. Introduction

1.1 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 is currently undertaking an analysis of competing uses and users of water to assess existing and future water uses and the implications on the water-energy-food ecosystem (WEFE) nexus at the basin/sub-basin level. A WEFE Guidance Toolkit configured to align with the IRBM Project's objectives and river basin contexts has been developed that can help users gain a better understanding of the linkages between the components of the WEFE nexus. The tool also enables users to understand how the entire WEFE system responds to various changes and trends, supporting more informed decision-making. The information generated from the analysis and application of the WEFE Toolkit will be incorporated into the State of River Basin baseline reports that the seven river basins under the project are expected to prepare.

1.2 In line with this, a Regional Orientation Workshop on the Development of Water-Energy-Food-Ecosystem Toolkit for River Basins in Southeast Asia was organized on June 3, 2025 at Holiday Inn Resort Baruna in Bali, Indonesia. The workshop aims to: a) introduce the WEFE nexus study and the Rapid Evaluation of the Water, Energy, Food and ecosystem (REWEFe) Toolkit, its technical aspects and demonstration of its application in selected river basins in Indonesia, Lao PDR and the Philippines; and b) discuss the opportunities and potential for replicating the application of the toolkit in other river basins in Southeast Asia.

1.3 The program for the Regional Orientation Workshop was divided into two parts: Part 1 (09:00 - 12:00) - Introduction and demonstration of the REWEFe toolkit for analyzing WEFE nexus security issues in Southeast Asian river basins; and Part II (13:00 - 16:45) - Hands-on exploration of the REWEFe toolkit for WEFE analyses and way forward. Part 1 of the workshop was intended for all participants while Part 2 was aimed at participants with more technical background. The program of activities is given in **Annex A**.

1.4 The workshop was attended by the Chairperson of the ASEAN Working Group on Water Resources Management (AWGWRM), representatives of the National Focal Points of AWGWRM from seven ASEAN Member States (AMS), namely: Cambodia, Indonesia, Lao PDR, Malaysia, Philippines, Thailand and Viet Nam, national implementing partners and local government partners from the six AMS (Cambodia, Indonesia, Lao PDR, Malaysia, Philippines and Viet Nam), UNDP, ASEAN Secretariat, regional and international

organizations, academic institutions and the Regional Project Management Unit (RPMU). A total of 62 participants joined the workshop, of which 31 (50 per cent) were female. The full list of participants is given in **Annex B**.

2. Opening Session

2.1 **Mr. Oudomsack Philavong, AWGWRM Chairperson and Director General of the Department of Water Resources, Ministry of Natural Resources and Environment, Lao PDR,** warmly welcomed the participants and thanked GEF, UNDP, ASEAN, and PEMSEA Resource Facility (PRF) for organizing the workshop. He highlighted the critical interlinkages among water, energy, food security, and ecosystem health, especially in Southeast Asia, where water security has a large impact on its economic development. He cited that agriculture and food security in the region heavily depend on water availability, where more than 90 per cent of total water usage in some ASEAN countries is reported for agricultural water withdrawal. In addition, the impacts of climate change will continue to decrease freshwater availability in the Southeast Asian region. He underscored the focus of the workshop where the application of the REWEFe tool in three river basins, i.e., Ciliwung River Basin, Nam Tha River Basin and Pasac-Guagua Watershed will be demonstrated. The Toolkit that was configured based on the requirements and contexts of the IRBM Project river basins will be assessed for its applicability across Southeast Asia. He encouraged the participants to explore the toolkit's potential to support integrated planning and sustainable water resource management in their respective river basins.

3. Background and Introduction to the Workshop

3.1 **Ms. Nancy Bermas, Regional Project Manager of the IRBM Project, Regional Project Management Unit, PRF,** provided an overview of the IRBM Project and explained the rationale of conducting the WEFE nexus study as one of the outputs under Component 1: Baseline Assessment of Source to Sea Management Continuum of the IRBM Project. Results of the WEFE assessment will be integrated in the State of River Basin reports that will be prepared in the seven river basins under the project. Finally, she outlined the objectives, expected outputs and program for the day's workshop.

4. Introduction to the WEFE Nexus and the REWEFe Toolkit

4.1 **Mr. Brecht D'Haeyer, Hydrologist, FutureWater,** presented the concept of the WEFE nexus and emphasized that with the continuing increase in population (10.6 billion people by 2050) and increase in energy, food and water demands, adopting a nexus approach is crucial in response to growing challenges related to resource management and sustainability. Mr. D'Haeyer also highlighted the linkages between the WEFE nexus and the UN Sustainable Development Goals (SDGs), as well as the impacts of the cross-cutting aspects of climate change and inequality in WEFE nexus resources by gender, social and economic class. Using Mentimeter, he posed several questions to gather the participant's general perspectives on water and sustainable development.

4.2 Mr. D'Haeyer introduced the REWEFe Toolkit that is able to (1) determine the synergies and trade-offs within the WEFE nexus, (2) quantify the inter- and intra-linkages between the WEFE sectors, and (3) conduct scenario analysis based on management/ policy interventions and socioeconomic projections to support informed decision making. The REWEFe tool can be applied in different scales/boundaries (or nexus unit). For its application in the IRBM Project, the nexus unit is defined at the basin level. While the toolkit does not have temporal resolution, it can be filled annually (or using appropriate time intervals) to allow comparison of changes through time. Mr. D' Haeyer also highlighted the strengths and limitations of the tool.

4.3 Mr. D' Haeyer demonstrated the application of the REWEFe tool in three priority river basins of the IRBM Project, i.e., Ciliwung River Basin (Indonesia), Nam Tha River Basin (Lao PDR) and Pasac-Guagua Watershed (Philippines). Baseline WEFE results in the three river basins were explained and compared with results using different scenarios. Hypothetical scenarios that were accounted for include: 1) climate change and socioeconomic/demographic changes; 2) changes in renewable energy production/import; 3) changes in nutrient land management; and 4) introduction of various technologies, e.g., desalinated water, solar-powered agriculture, rice-fish integrated system, etc. The synergies and trade-offs among the different WEFE components were explained resulting from the different scenarios.

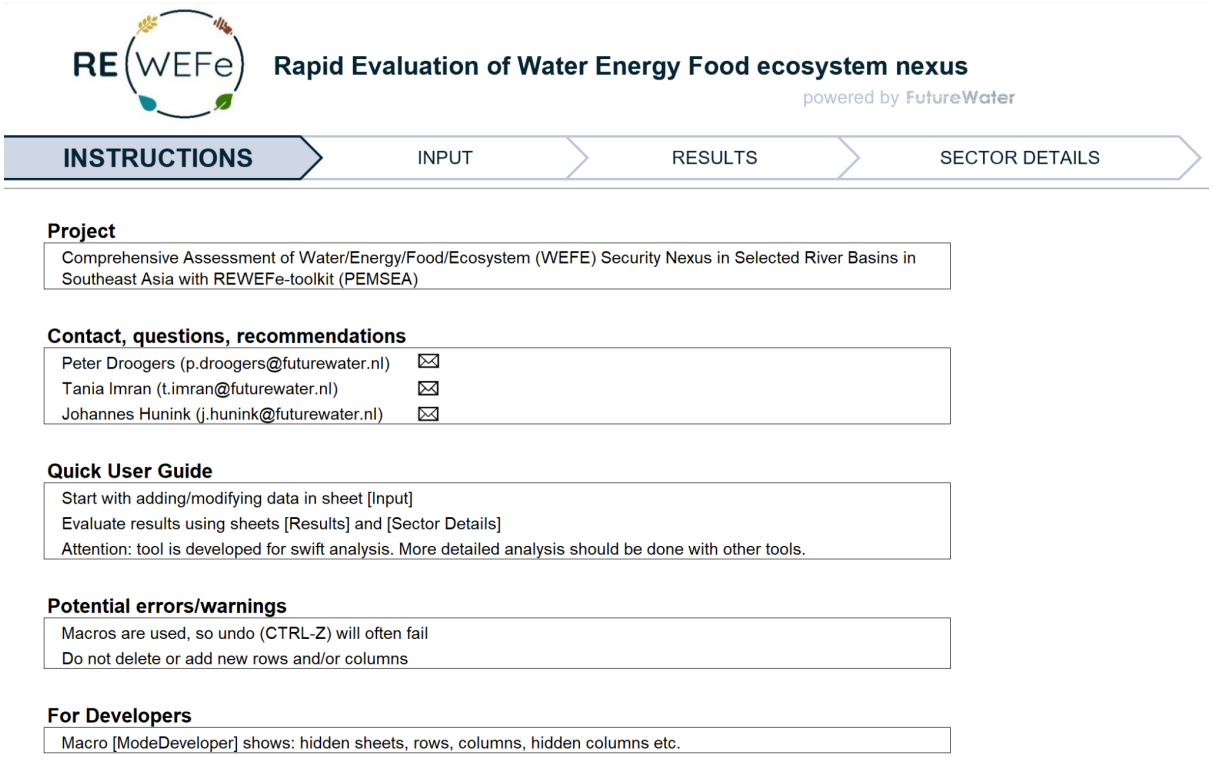
5. Hands-on Exploration of the REWEFe Toolkit

5.1 Following the introduction of the toolkit, Mr. D'Haeyer guided the participants in downloading and accessing the REWEFe Toolkit, which can be accessed through this link: bit.ly/45zGZgd.

5.2 The REWEFe Toolkit folder includes: (1) data input requirements; (2) method protocol, which details the purpose, functionality, strengths and limitations, data requirements and analysis of the REWEFe tool, including how outputs of the tool can be communicated; (3) Excel-based application using baseline input data of Pasac-Guagua Watershed; and 4) Excel-based application with scenario analysis. For purposes of demonstrating the application and functionalities of the REWEFe tool, data from Pasac-Guagua Watershed were used.

5.3 The different tabs in the Excel-based application were explained, which include:

1) Quick instructions on the use of the tool;



2) Input tab where required data are inputted and different scenarios are defined;

RE WEFe **Rapid Evaluation of Water Energy Food ecosystem nexus**

powered by FutureWater

INSTRUCTIONS | **INPUT** | RESULTS | SECTOR DETAILS

Scenarios

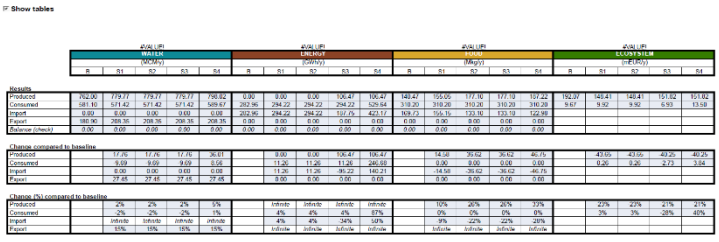
Scenario	Description	Show results
Baseline (B)	Status quo for Pasac-Guagua basin as per information provided and complemented with open source statistics.	
Scenario 1 (S1)	Aquaculture expanding upstream, and agriculture expanding upstream, increased GW punmping	☑
Scenario 2 (S2)	Same as S1, but fishpond yield is increased to reflect integrated rice-fish systems.	☑
Scenario 3 (S3)	Same as S2 with Introduction of solar energy production for irrigated agriculture (0.1% of irrigated area)	☑
Scenario 4 (S4)	Same as S3 but with introduction of desalinated water plant with capacity of 50,000 m3/day	☑
Scenario 5 (S5)		☐

Land use		B	S1	S2	S3	S4	S5
Total	(km2)	426	426	426	426	426	
Nature	(%)	13.53%	3.53%	3.53%	3.53%	3.53%	
Other	(%)	14.24%	14.24%	14.24%	14.24%	14.24%	
Fishpond	(%)	29.85%	34.85%	34.85%	34.85%	34.85%	
Agriculture	(%)	42.38%	47.38%	47.38%	47.38%	47.38%	
Rainfed (% of Agriculture)	(%)	67.11%	67.11%	67.11%	67.11%	67.11%	
Flood Irrigation (% of Agriculture)	(%)	32.89%	32.89%	32.89%	32.89%	32.89%	
Drip Irrigation (% of Agriculture)	(%)	0.00%	0.00%	0.00%	0.00%	0.00%	
Greenhouse area	(%)	0.00%	0.00%	0.00%	0.00%	0.00%	
Total (check)	*(%)*	*100%*	*100%*	*100%*	*100%*	*100%*	

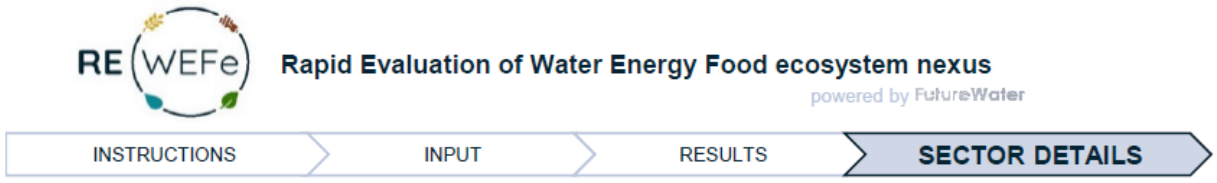
Population							
Total	(cap)	566,576	566,576	566,576	566,576	566,576	
Domestic water demand	(m3/p/y)	24	24	24	24	24	
Return flow urban	(%)	80%	80%	80%	80%	80%	
Food demand	(kCal/p/d)	2,400	2,400	2,400	2,400	2,400	
Energy demand urban	(kWh/p/y)	352	352	352	352	352	

Industry							
Units	(-)	100	100	100	100	100	
Industrial water demand	(m3/u/d)	213	213	213	213	213	
Return flow industry	(%)	85%	85%	85%	85%	85%	
Energy demand industry	(MWh/u/y)	798	798	798	798	798	

3) Results tab showing graphs and summary tables of the WEFE components;



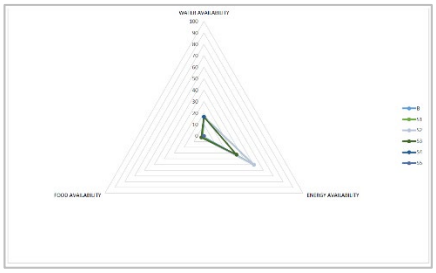
4) Sector details reflecting more detailed quantification of the WEFE components, which are summarized and visualized in the Results tab. The Results and Sector details tabs illustrate the interdependencies between the WEFE sectors and the potential synergies and trade-offs in the different scenarios.



###	WATER	B	S1	S2	S3	S4
	(MCM/y)					
	Produced	762.00	779.77	779.77	779.77	798.02
	Rainfall	918.03	918.03	918.03	918.03	918.03
	Desalination	0.00	0.00	0.00	0.00	18.25
	Reclaimed	9.17	9.17	9.17	9.17	9.17
	Groundwater Delta	165.20	147.44	147.44	147.44	147.44
	Consumed	581.10	571.42	571.42	571.42	589.67
	Evapotranspiration	314.89	277.66	277.66	277.66	277.66
	Flood Irrigation	49.33	52.70	52.70	52.70	55.97
	Drip Irrigation	0.00	0.00	0.00	0.00	0.00
	Greenhouse	0.00	0.00	0.00	0.00	0.00
	Fishpond	211.28	235.70	235.70	235.70	250.34
	Domestic	5.59	5.35	5.35	5.35	5.68
	Industry	0.01	0.01	0.01	0.01	0.01
	Import / Export					
	Inflow	0.00	0.00	0.00	0.00	0.00
	Outflow	180.90	208.35	208.35	208.35	208.35
	Change (%)					
	Produced	0%	+2%	+2%	+2%	+5%
	Rainfall	0%	0%	0%	0%	0%
	Desalination	0%	0%	0%	0%	+999%
	Reclaimed	0%	0%	0%	0%	0%
	Groundwater Delta	0%	-11%	-11%	-11%	-11%
	Consumed	0%	-2%	-2%	-2%	+1%
	Evapotranspiration	0%	-12%	-12%	-12%	-12%
	Flood Irrigation	0%	+7%	+7%	+7%	+13%
	Drip Irrigation	0%	0%	0%	0%	0%
	Greenhouse	0%	0%	0%	0%	0%
	Fishpond	0%	+12%	+12%	+12%	+18%
	Domestic	0%	-4%	-4%	-4%	+1%
	Industry	0%	-4%	-4%	-4%	+1%
	Import / Export					
	Inflow	0.00%	0.00%	0.00%	0.00%	0.00%
	Outflow	0.00%	15.17%	15.17%	15.17%	15.17%
	Other relevant factors					
	Groundwater Recharge (MCM/y)	72.14	63.61	63.61	63.61	63.61
	Groundwater Pumping (MCM/y)	27.54	55.07	55.07	55.07	55.07
	Green Water Shortage (MCM/y)	0.00	0.00	0.00	0.00	0.00
	Blue Water Shortage (MCM/y)	374.68	446.35	446.35	446.35	428.10
	Green Water Stress (%)	0%	0%	0%	0%	0%
	Blue Water Stress (%)	58%	60%	60%	60%	58%

5) WEF Nexus Index, a composite indicator computed from hierarchical datasets of water, energy and food pillars; and

Pillars	SDG	B	S1	S2	S3	S4	S5
Water Pillar							
WATER AVAILABILITY		16.63	16.63	16.63	16.63	16.63	0.00
Annual freshwater withdrawals, total (% of internal resources)	6.4.2	0.04	0.04	0.04	0.04	0.04	0.00
Renewable internal freshwater resources per capita (m3).	6.3.2	0.15	0.16	0.16	0.16	0.16	0.00
Average precipitation in depth (mm/annum).	6.5.1	66.32	66.32	66.32	66.32	66.32	0.00
Energy Pillar							
ENERGY AVAILABILITY		50.43	50.45	50.45	32.88	41.44	0.00
Electric power consumption (kWh/capita).	7.1.1	0.86	0.89	0.89	0.89	1.67	0.00
Energy imports, net (% of energy use).	7.2.1	100.00	100.00	100.00	64.86	81.21	0.00
Food Pillar							
FOOD AVAILABILITY		1.15	1.74	2.64	2.64	3.06	0.00
Average protein supply (gr/capita/day).	2.1.1	1.24	3.63	7.23	7.23	8.89	0.00
Cereal yield (kg/hectare).	2.2.1	3.34	3.34	3.34	3.34	3.34	0.00
Average Dietary Energy Supply Adequacy (ADESA) (%).		0.00	0.00	0.00	0.00	0.00	0.00



6) Literature reflecting the data sources for the WEFE analysis.

Mefri Nature Valuation	https://www.merfi.org/evs	
Land Use %		
evergreen	13.3	30.57471
deciduous		0
wetlands	30	68.96552
mangroves	0.2	0.45977
Coasts/ Islands with coral reefs		0
Sum	**43.5**	**100**

Please fill in the boxes for Area (ha) and hit the tab key:
How many hectares of each ecosystem does your case study include?

Ecosystem	Area (ha)	Min Value (US$)	Mean (US$)	Max Value (US$)
Evergreen Forest	30.57	221,357,.37	537,375	853,392,.12
Deciduous Forest	0	0	0	0
Wetlands	68.97	663,008,.61	871,057	1079104.61
Mangroves	0.46	4458.32	9,349	14,239,.76
Coasts/Islands with Coral Reefs	0	0	0	0
Total economic value range (25 years):		17,213,298	27,457,256	37,701,214
Annual total economic value range:		888824.30	1,417,780	1946736.50

5.4 Mr. D' Haeyer emphasized that the focus of the workshop was to demonstrate how to use the tool, including data input requirements, its functionalities and visualization of results.

5.5 The participants were requested to review the data input requirements in the REWEFe tool and consider possible sources of data when applied in their respective river basins. To better appreciate the functionalities of the tool, the participants were encouraged to alter the default data entries and observe the changes in the results of the WEFE components.

5.6 The participants utilized the remaining time of the workshop exploring the functionalities of the REWEFe tool.

6. Highlights of the Discussion

6.1 The highlights of the discussion are summarized as follows:

- On the REWEFe tool's capability of identifying incorrect data inputs – It was explained that the tool does not automatically flag incorrect data but is reliant on the user's provision of accurate data.
- On how the results and sectoral details in the REWEFe tool were computed – It was noted that formulas were intentionally hidden in the Excel-based application to avoid any accidental deletion and/or alteration by the participants. The formulas can be unhidden, if necessary, but will require a more detailed and technical understanding of the tool and the data input requirements.
- On the difficulty of providing input for an ecosystem value since many countries do not have a standardized methodology and the conduct of ecosystem valuation is resource-intensive – It was recognized that ecosystem value may not be readily available but the value of the tool is in assessing how ecosystem value changes under different scenarios.
- On the data input requirements that may not be readily available – It was explained that the tool can be further configured based on data availability at the river basins. It was also explained that while some data may be difficult to gather, most data are typically available from national/sub-national statistics, GIS datasets, technical/scientific studies, and expert knowledge.

6.2 The representatives from the countries provided their feedback, including recommendations on the application of the REWEFe tool and summarized as follows:

- **Cambodia:** For the application of the REWEFe tool in Kampong Bay River Basin, inclusion of management intervention such as establishment of wastewater treatment facilities and solid waste management should be considered. The tool can be useful to economic and finance agencies if it can show the benefit or value of implementing management interventions. The results from the tool should reflect the real or actual situation to be able to convince policymakers.

- **Indonesia:** Ciliwung River Basin is highly urbanized and issues on improper waste management and the lack of wastewater treatment plants in the rural areas remain. The tool has potential in supporting the preparation of water quality management plan in Ciliwung River Basin and in informing national and regional governments on the needed management interventions. Further training is needed to fully understand the data input requirements and application of the tool.

- **Lao PDR:** There is a need to identify the minimum data requirements of the tool. The tool is quite complicated and further training on its application is needed.

- **Malaysia:** It is an advantage for the IRBM Project since the REWEFe tool is free. It will be useful for policymakers in assessing the pros and cons prior to introduction of new management initiatives, as well as in various IRBM-related studies. Further training and support are needed to be able to understand the back-end of the tool.

- **Philippines:** A more detailed training is needed to fully appreciate the application of the tool. It would be beneficial to link the REWEFe tool with the 32 indicators of the SORB. Further enhancements may consider rendering the tool to be more user-friendly and web-based to make it more accessible.

- **Viet Nam:** The tool is very interesting and easy to use but depends largely on data availability. The indicators/data input requirements should be clearly defined. There may be some difficulty in applying the tool in Viet Nam due to varying data availability at the national and river basin levels.

6.3 Overall, the participants appreciated the usefulness of the REWEFe tool in understanding the WEFE nexus, including synergies and trade-offs. It was highlighted that demonstrating how the results from the tool can help convince decision makers in identifying, developing and implementing appropriate policy and management interventions is necessary. There was consensus that further training is required to fully appreciate the application of the tool in informing policy and decision making, particularly on the WEFE nexus.

7. Materials from the Workshop

7. 1 The PowerPoint presentations during the Regional Orientation Workshop can be accessed at: WEFE Workshop. Photos from the event can also be accessed in the same link.

8. Workshop Evaluation

8.1 The participants were requested to accomplish the evaluation forms at the end of the workshop. Most of the participants (78 per cent) indicated that their expectations from the workshop were met and their level of knowledge on the WEFE nexus and the REWEFe tool have increased by 65 per cent. All of the participants found the course to be relevant and will share their learning in their respective organizations.

8.2 Full results of the workshop evaluation are given in **Annex C**.

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Annex A. Program of Activities

The program is divided into two parts, aimed at the following audiences:

- Part I (09:00– 12:00): *Introduction and demonstration of the REWEFe toolkit for analyzing WEFe Nexus security issues in Southeast Asian river basins*
    - Target participants:
        - AWGWRM National Focal Points from the 10 AMS
        - IRBM Project Operational Focal Points/National Coordinators from the 6 AMS;
        - Local governments in the priority river basins in the 6 AMS;
        - ASEAN Secretariat;
        - UNDP;
        - Regional Project Management Unit, PEMSEA Resource Facility.
- Part II (13:00 – 16:45): *Hands-on exploration of the REWEFe toolkit for WEFe analyses and way forward*
    - Primary target group:
        - IRBM Project Operational Focal Points/National Coordinators from the 6 AMS;
        - Other attendants with relevant technical background and interest.
    - This part comprises hands-on sessions on navigation of the tool and interpretation of its results. The afternoon is aimed at an audience with sufficient technical background. Other participants are welcome to join the sessions as observers.

	Time	Activities
***Part I**: Introduction and demonstration of the REWEFe toolkit for analyzing WEFe Nexus security issues in Southeast Asian river basins*	09:00 – 09:05	Opening session *AWGWRM Chair*
	09:06 – 09:15	Background and introduction to the WEFE nexus study *PEMSEA Resource Facility*
	09:16 – 09:45	Introduction to the WEFe Nexus and the need for a toolkit ● What is the WEFe Nexus (interactive session) ● Purpose and requirements of a toolkit *FutureWater*
	09:45 – 10:20	Introduction to the REWEFe Toolkit ● Development history, theory, data requirements ● Functionality (plenary demonstration) ● Strengths and limitations *FutureWater*
	10:20 – 10:35	Coffee Break
	10:35 – 11:20	REWEFe results for SE Asia

		• Synthesis of results based on:
		  • Pasac-Guagua Basin
		  • Nam Tha Basin
		  • Ciliwung Basin
		• Q&A
		
		FutureWater

	11:20 – 11:50	Interactive session (Mentimeter/ breakout): building blocks of scenarios for WEFe analysis in SE Asia
	11:50 – 12:00	Wrap-up and next steps
	12:00 – 13:00	Lunch Break
Part II: *Hands-on exploration of the REWEFe toolkit for WEFe analyses and way forward*	13:00 – 13:15	Introduction to afternoon session *FutureWater*
	13:15 – 14:00	Hands-on working with REWEFe: input requirements and scenario development **Participants are required to bring a laptop with an active Excel license.** *FutureWater*
	14:00 – 14:45	Hands-on working with REWEFe: interpretation of results – building WEFe Nexus narratives **Participants are required to bring a laptop with an active Excel license.** *FutureWater*
	14:45 – 15:00	Coffee Break
	15:00 – 15:30	Interactive discussion: towards uptake of REWEFe in Southeast Asia • Capacity building needs (technical, practicalities)
	15:30 – 16:30	Open Forum • Discussion/ Summary previous session: Piloting the application of REWEFe in any AMS o How can this be scaled? What are challenges and opportunities for national adaptation? What support is needed? • Way forward *FutureWater*
	16:30 – 16:45	Closing

Annex B. List of Participants

CAMBODIA

Mr. Him Chandath
Acting Director
Department of Water Quality Management
Ministry of Environment
Email: hcdmoe@gmail.com

Mr. Say Vorng
Deputy Director
Department of Water Quality Management
Ministry of Environment
Email: sayvorng@ymail.com, vorng.say@moe.gov.kh

Ms. Nai Rathana
Vice Chief Officer
Department of Water Quality Management
Ministry of Environment
Email: rathananai28@gmail.com

Mr. Moeung Kongkea
Deputy Governor
Kampot Province

Mr. Polo Eng
Director
Kampot Provincial Department of Environment
Email: poloeng9@gmail.com

INDONESIA

Ms. Asiah
Staff
Directorate of Water Quality Protection and Management
Ministry ofEnvironment
Email: asiah1312@gmail.com

Ms. Harni Sulistyowati
Staff
Directorate of Water Quality Protection and Management
Ministry of Environment
Email: lisharnios@gmail.com

Ms. Hani Afnita Murti
Head
Water Quality Planning and Restoration
Ministry of Environment
Email: haniafnita@gmail.com

Ms. Aulia Rahmawati
Staff
Directorate of Water Quality Protection and Management
Ministry of Environment
Email: ulyrahma89@gmail.com

Ms. Ari Roslina Kusnayati
Staff
Directorate of Water Quality Protection and Management
Ministry of Environment
Email: ari.roslina@gmail.com

Ms. Sucahyaning Wahyu Trihasti Kartika
Staff
Directorate of Water Quality Protection and Management
Ministry of Environment
Email: cacasucahyaning@gmail.com

Mr. Aldi Gunawan
Staff
Directorate of Water Quality Protection and Management
Ministry of Environment

Mr. Rodheardo Ismail
Staff
Directorate of Water Quality Protection and Management
Ministry of Environment

Mr. Keza Wibowo
Staff
Directorate of Water Quality Protection and Management
Ministry of Environment

Ms. Arlisa Intania Anjani
Staff
Directorate of Water Quality Protection and Management
Ministry of Environment
Email: arlisaintania@gmail.com

Mr. Tedi Bagus Prasetyo
Staff
Directorate of Law and Cooperation Bureau
Email: tediprstyo@gmail.com

Mr. Budiman
Head
Depok Environmental Agency
Email: budi_imans@yahoo.co.id

Ms. Isdahartati
Center for Coastal and Marine Resources Studies
Bogor Agricultural University
Email: isdahartati@apps.ipb.ac.id

Ms. Ni Nyoman Santi
Head
Bali and Nusa Tenggara Environmental Control Center
Ministry of Environment
Email: nyomansanti56@gmail.com

Ms. Dody Setiawan
Bali and Nusa Tenggara Environmental Control Center
Ministry of Environment
Email: dodysetia@gmail.com

Ms. Mekar Prihatini
Bali and Nusa Tenggara Environmental Control Center
Ministry of Environment
Email: mekarmendrofa73@gmail.com

Mr. I Ketut Suada
Staff
Ministry of Higher Education
Email: ketutsuada@unud.ac.id

Mr. Mahardika
Staff
Bali and Nusa Tenggara Environmental Control Center
Ministry of Environment

Ms. Fatirahma
Staff
Bali and Nusa Tenggara Environmental Control Center
Ministry of Environment

Dr. Harjito
Udayana University
Email: harjito.kln@gmail.com

Dr. Suteja Yulianto
Udayana University
Email: yuliantosuteja@unud.ac.id

LAO PDR

Ms. Sengphasouk Xayavong
Deputy Director, Policy Division
Department of Water Resources
Ministry of Natural Resources and Environment
Email: xsengphasouk@yahoo.com

Mr. Thanongxay Douangnoulack
Director of Division
Department of Water Resources
Ministry of Natural Resources and Environment
Email: tnxdouangnoulak@gmail.com

Mr. Somdee Tengbriacheu
Director
Provincial Office of Natural Resources and Environment
Oudomxay Province

Mr. Vonglack Phonechaleun
Deputy Director
Provincial Office of Natural Resources and Environment
Bokeo Province

Mr. Souksan Phonpadit
Deputy Director
Provincial Office of Natural Resources and Environment
Luang Namtha Province

Dr. Keoduangchai Keokhamphui
Vice Dean
Faculty of Water Resources
National University of Laos
Email: keoduangchai@gmail.com

MALAYSIA

Mr. Roslan bin Sukimin
Deputy Director
Department of Irrigation and Drainage
Email: roslansk@water.gov.my

Mr. Ir. Mahran bin Mahmud
Deputy Director
Department of Irrigation and Drainage
Email: mahran@water.gov.my

Ms. Larifah binti Mohd Sidik
Principal Assistant Director
Department of Irrigation and Drainage
Email: larifah@water.gov.my

Mr. Baharudin bin Ahmad
Deputy Director
Department of Irrigation and Drainage, Kedah
Email: baharudin@water.gov.my

Ms. Noraniza binti Md Saad
Kedah Water Resources Board
Email: noraniza@lsank.gov.my

Ms. Nazira binti Miswan
Kedah Water Resources Board
Email: NAZIRA@lsank.gov.my

PHILIPPINES

Atty. Ricky A. Arzadon
OIC, Executive Director
National Water Resources Board
Email: ricky.arzadon@nwrb.gov.ph

Engr. Susan P. Abaño
Chief, Policy and Program Division
National Water Resources Board
Email: susan.abano@nwrb.gov.ph

Ms. Anabelle Cayabyab
Department Head
Office of the Provincial Environment and Natural Resources Office
Province of Cavite Provincial Capitol
Trece Martires City
Email: pgenro_cavite@yahoo.com, pgenro.icm_cavite@yahoo.com, pgenro.cavite@gmail.com, anadaluyong@gmail.com

Ms. Irene Marie F. Villar
Assistant Department Head
Provincial Government Environment and Natural Resources Office (PGENRO)
Province of Pampanga
Email: pampanga.pgenro@gmail.com, pgenro@pampanga.gov.ph, irenefvillar@gmail.com

Mr. Earl Justin Tiu
National IRBM Project Coordinator - Philippines
Email: etiu@pemsea.org

THAILAND

Ms. Bunthida Plengsaeng
Director
Strategy and Planning Division
Department of Water Resources
Email: foreignaffairs.dwr@gmail.com

VIET NAM

Ms. Tran Thi Le Anh
Deputy Head
Division of Environment Quality Management
Viet Nam Environment Agency
Email: anhvepa@gmail.com

Ms. Nguyen Thu Phuong
Senior Officer
Department of Water Resources Management
Ministry of Natural Resources and Environment
Email: phuong.wr@gmail.com

Mr. Vo Thanh
Director
Sub-Department of Environmental Protection
Da Nang Department of Agriculture and Environment
Email: ThanhV5@danang.gov.vn,
cc: levuhoangtrang@gmail.com

Mr. Nguyen Viet Thuan
Director
Sub-Department of Environment Protection
Quang Nam Department of Agriculture and Environment
Email: vietthuan3012@gmail.com

Ms. To Kim Oanh
National IRBM Project Coordinator - Viet Nam
Email: oanhtk73@gmail.com

ASEAN Working Group on Water Resources Management

Mr. Oudomsack Philavong
Chairperson, AWGWRM
Director General
Department of Water Resources
Ministry of Natural Resources and Environment
Email: oudomsack.philavong@gmail.com

ASEAN Secretariat

Mr. Nam So
Environment Division
Email: nam.so@asean.org

Ms. Farraz Theda
Officer
Environment Division
Email: farraz.theda@asean.org

United Nations Development Programme Bangkok Regional Hub in Asia and the Pacific

Mr. Ugyen Dorji
Program Management and Oversight Specialist
UNDP Bangkok Regional Hub in Asia and the Pacific
Email: ugyen.dorji@undp.org

Global Water Partnership

Mr. Raymond Valiant
Regional Coordinator
GWP SEA
Email: raymond.valiant@gwpsea.org

Economic Research Institute for ASEAN and East Asia

Mr. Achmad Solikin
Programme Manager on Healthcare Policy
Economic Research Institute for ASEAN and East Asia
Email: achmad.solikin@eria.org

Ms. Denisa Athallia
Research Associate
Economic Research Institute for ASEAN and East Asia
Email: denisa.athallia@eria.org

FutureWater

Mr. Brecht D'Haeyer
Hydrologist / PhD Candidate
The Netherlands
Email: b.dhaeyer@futurewater.nl

PEMSEA Resource Facility

Ms. Nancy Bermas
Regional Project Manager
IRBM Project
Email: nbermas@pemsea.org

Ms. Daisy Padayao
Project Technical Officer
Email: dpadayao@pemsea.org

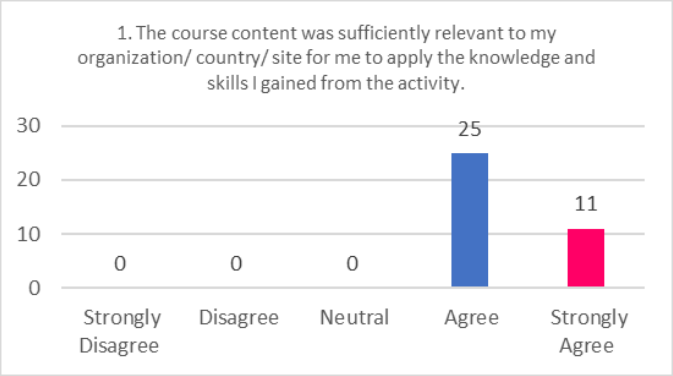
Ms. Kathrine Rose Aguiling
Monitoring and Evaluation Specialist,
IRBM Project
Email: krsgallardo@gmail.com

Ms. Orange Happee Galanay Omengan
Communications and Knowledge Management Specialist,
IRBM Project
Email: oomengan@pemsea.org

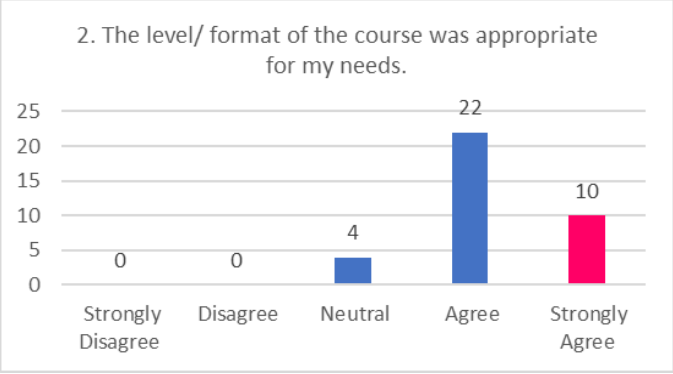
Ms. Diwata Cayaban
Programme Assistant
Email: dcayaban@pemsea.org

Annex C. Results of the Workshop Evaluation

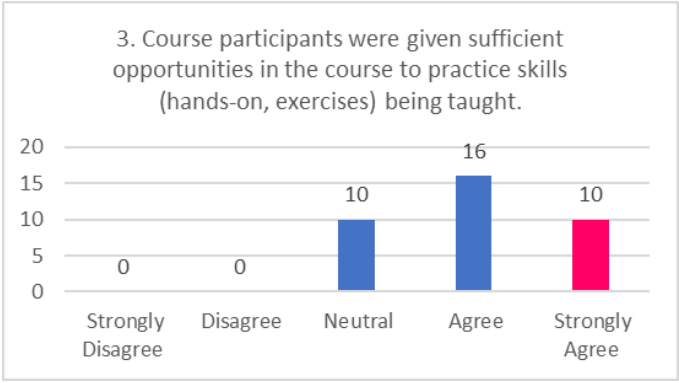
1. All (100 per cent) participants found the course content to be sufficiently relevant to their organization/country/site.



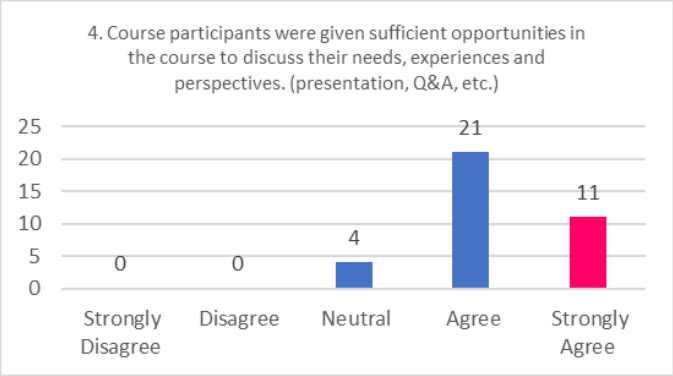
2. 89 per cent of the participants agreed or strongly agreed that the level/format of the course was appropriate for their needs.



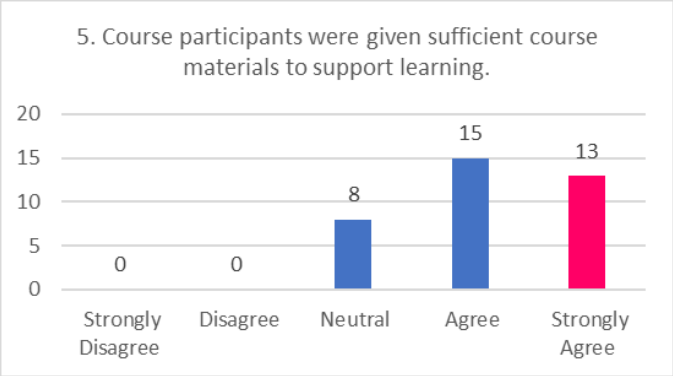
3. 72 per cent of the participants agreed or strongly agreed that they were given sufficient opportunities in the course to practice the skills being taught.



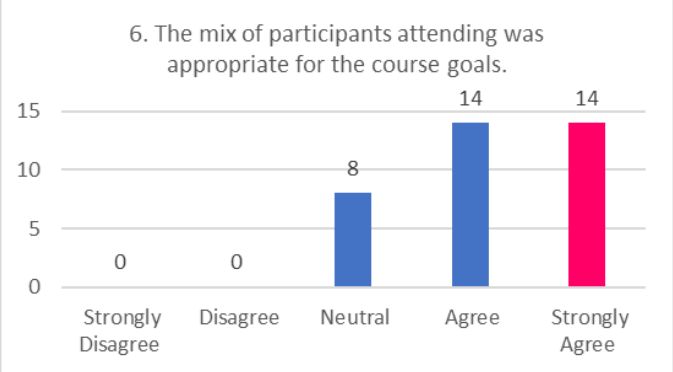
4. 89 per cent of the participants agreed or strongly agreed that they were given sufficient opportunities in the course to discuss their needs, experiences and perspectives.



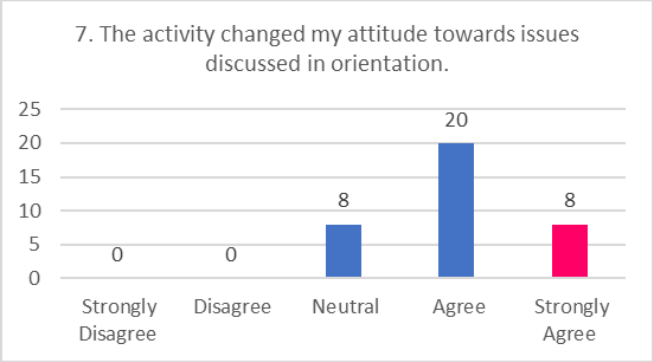
5. 78 per cent of the participants agreed or strongly agreed that sufficient course materials were given to support learning.



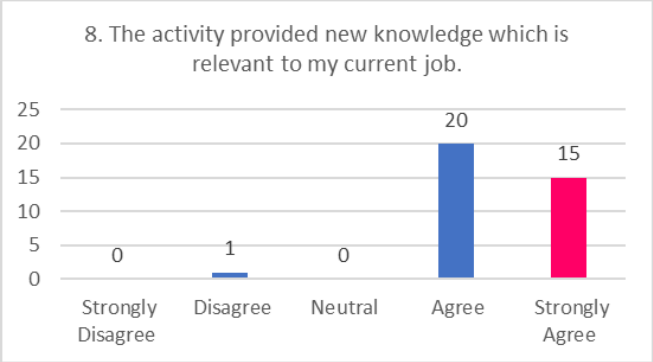
6. 78 per cent agreed or strongly agreed that the mix of participants attending the workshop was appropriate for the course goals.



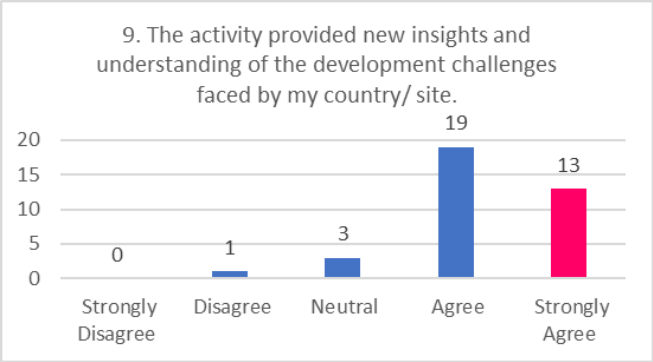
7. 78 per cent of participants agreed or strongly agreed that the activity changed their attitude towards issues discussed during the workshop.



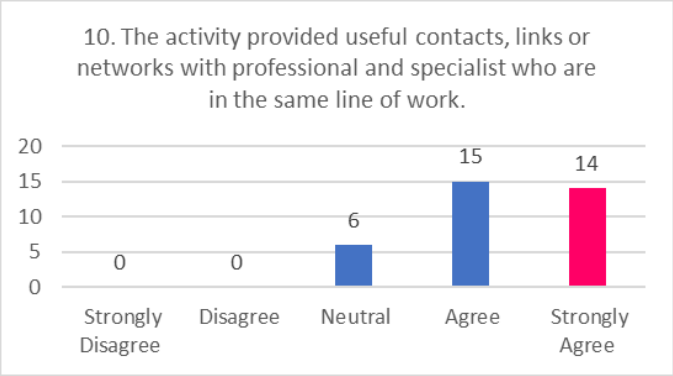
8. 97 per cent of participants agreed or strongly agreed that the activity was able to provide them new knowledge that is relevant to their current job.



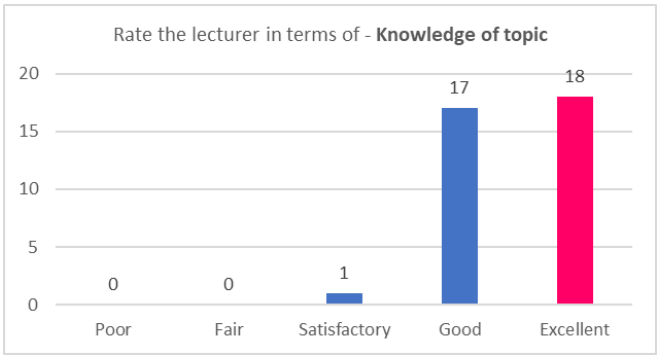
9. 89 per cent of participants agreed or strongly agreed that the activity provided new insights and understanding of the development challenges faced by their country/site.

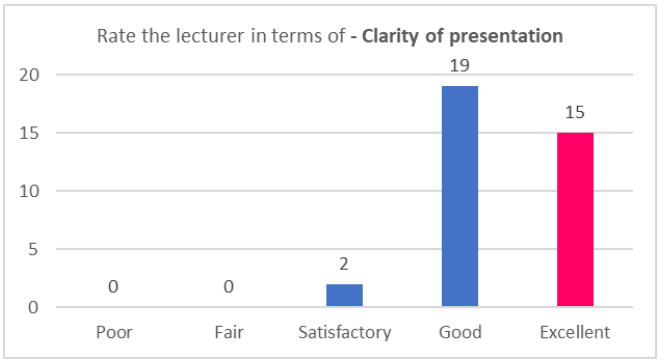


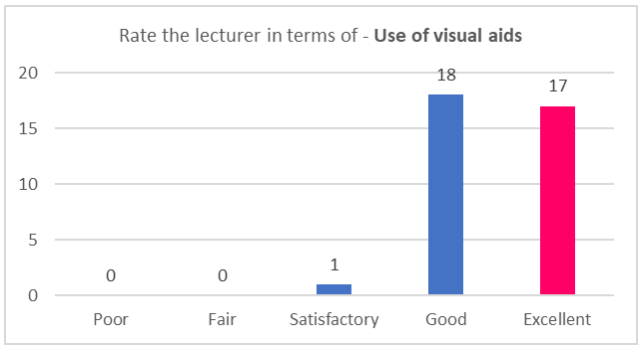
10. 81 per cent of participants agreed or strongly agreed that the activity provided useful contacts, links or networks with professionals and specialists in the same line of work.

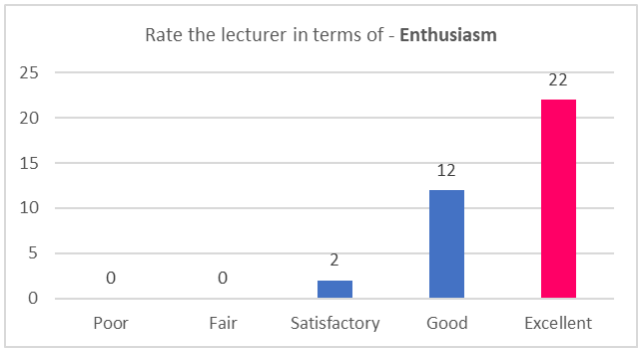


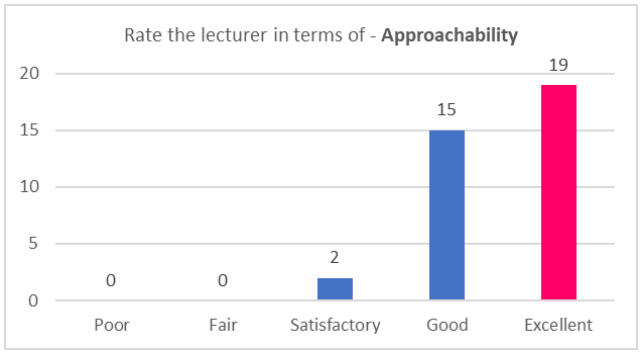
11. Overall, participants responded positively to the lecturer, Mr. Brecht D'Haeyer, in terms of knowledge of topic (97 per cent), clarity of presentation (94 per cent), use of visual aids (97 per cent), enthusiasm (94 per cent) and approachability (94 per cent).



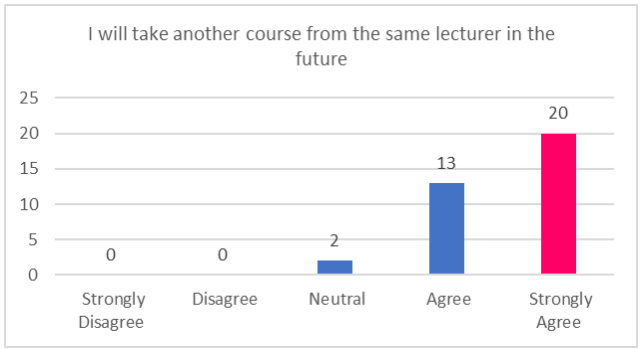




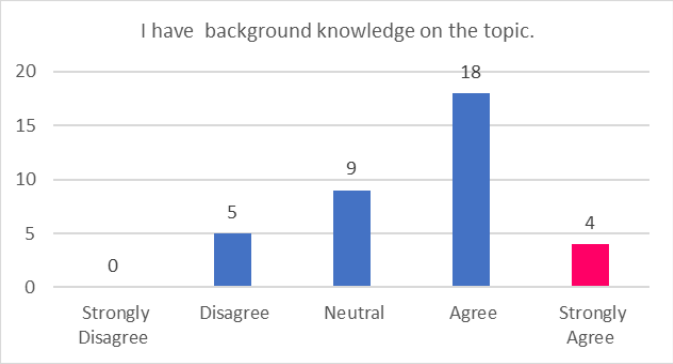




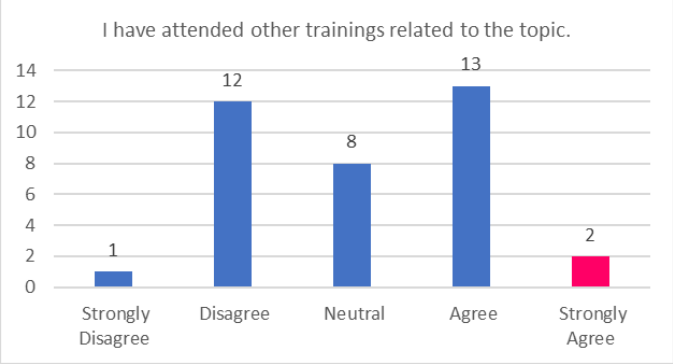
12. 94 per cent of participants agreed or strongly agreed that they will take another course from the same lecturer in the future.



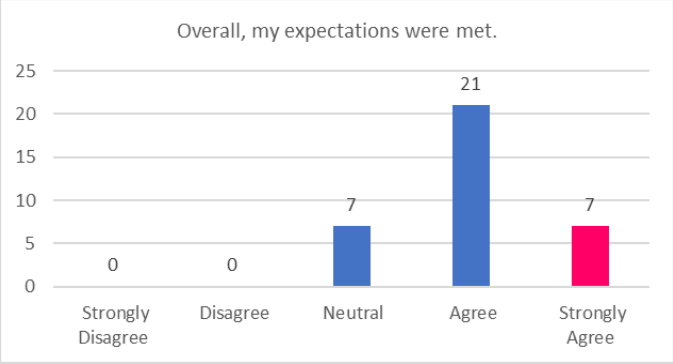
13. 61 per cent of participants agreed or strongly agreed that they have background knowledge on the topic.



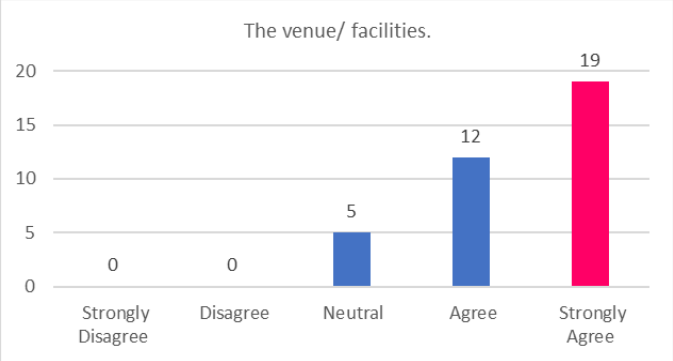
14. 42 per cent have attended other training related to the topic.



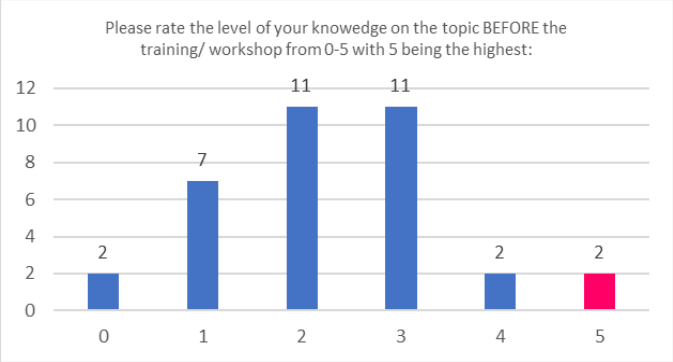
15. 78 per cent of the participants agreed or strongly agreed that their expectations for the activity were met.

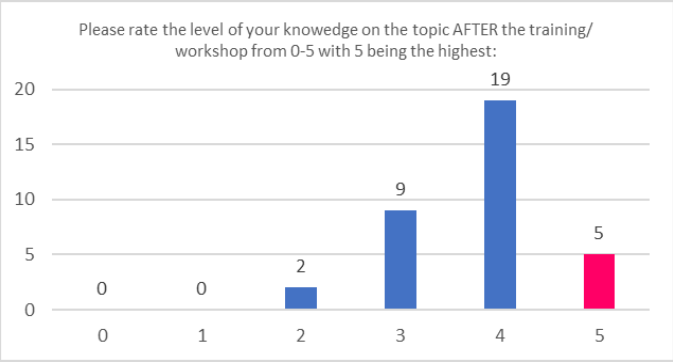


16. 86 per cent of the participants responded positively on the venue of the workshop.

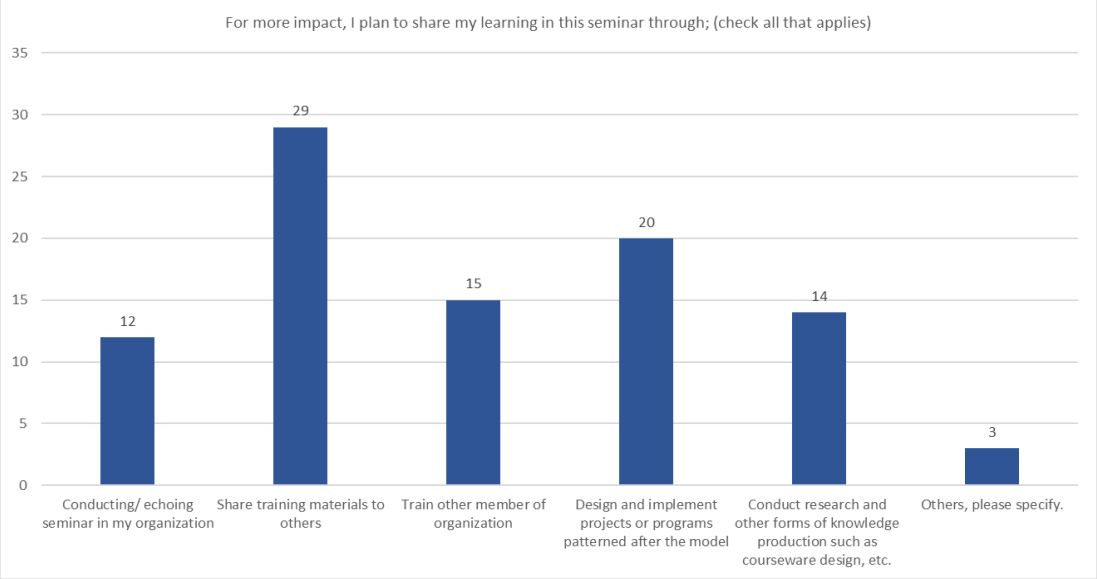


17. The participants reported a 64.63 per cent increase in their level of knowledge after attending the orientation workshop. From an average self-rating of 2.29/5 (46 per cent) to 3.77/5 (75 per cent) before and after the orientation workshop, respectively.





18. The majority of the participants planned to share their learning from the workshop.



19. Other responses include engaging with stakeholders of the IRBM Project and using the knowledge gained to enhance ongoing research projects on water policy/financing.

20. Other general comments/feedback on the activity include:

- Request to provide workshop materials in advance.
- More time is needed to be able to practice the use of the toolkit.
- Include video course on the toolkit so participants can practice on their own.
- Suggestion to conduct a training of trainers for the use of the toolkit.

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About the Integrated River Basin Management (IRBM) Project

Supported by the Global Environment Facility, the Integrated River Basin Management (IRBM) Project aims 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 Project is being implemented by the United Nations Development Programme, and executed by Partnerships in Environmental Management for the Seas of Seas Asia, in collaboration with ASEAN.

(+62) 02 892 92992

info@pemsea.org

PEMSEA Building, DENR Compound,
Visayas Avenue, Quezon City 1165,
Philippines

PEMSEA pemsea pemsea.rf

www.pemsea.org

Learn more about the IRBM Project