



Minutes

Title:	MARE - Marine Coastal and Delta Sustainability for Southeast Asia
Number:	610327-EPP-1-2019-1-DE-EPPKA2-CBHE-JP
Coordinator:	Center for Multimedia in Higher Education (ZMML), University of Bremen
Partners:	HCMUNRE, VMU, CTU, MCD, VNIO

Discussion topic: Managing water resources in the Mekong Delta in the context of climate change.

Presented by: Assoc. Prof. Dr. Le Anh Tuan, Can Tho University

Time: June 9, 2023, from 10:00 to 12:30

Format: online and offline

Venue: Meeting Room B, University of Natural Resources and Environment, HCMC, 236B Le Van Sy, Ward 1, Tan Binh District, HCMC.

1. Attendees:

1. Dr. Le Thi Kim Thoa, Vice Dean of Faculty of Marine and Island Resources Management, University of Natural Resources and Environment, Ho Chi Minh City. HCM (Chairman of the meeting).
2. Assoc. Prof. Dr. Le Anh Tuan, Deputy Director of the Institute of Climate Change Research, Can Tho University (DRAGON - Mekong Institute); Senior Lecturer at Faculty of Environment and Natural Resources, Can Tho University. (Indicator).
3. Assoc. Prof. Dr. Hoang Thi Thanh Thuy, Dean of Faculty of Geology and Minerals, University of Natural Resources and Environment, Ho Chi Minh City. HCM.
4. Assoc. Prof. Dr. Dinh Thi Nga, Deputy Director of the Institute for Sustainable Development, University of Natural Resources and Environment, Ho Chi Minh City. HCM.
5. Assoc. Dr. Nguyen Dinh Giang Nam, Senior Lecturer, Head of Water Resources Department, Can Tho University.
6. Dr. Lam Van Thinh, Lecturer, Head of Water Resources Laboratory, Faculty of Environment and Natural Resources, Can Tho University.
7. Dr. Huynh Vuong Thu Minh, Lecturer, Deputy Head of the Department of Water Resources, Can Tho University.
8. Dr. Tran Van Ty, District Head, Department of Construction, Faculty of Technology, Can Tho University.
9. Dr. Vo Quoc Thanh, Lecturer, Secretary, Department of Water Resources, Can Tho University.
10. Dr. Le Huu Quynh Anh, Head of the Department of Sustainable Energy, Faculty of Meteorology, Hydrology and Climate Change, University of Natural Resources and Environment of Ho Chi Minh City. HCM.
11. Dr. Dinh Ngoc Huy, lecturer at the Faculty of Marine and Island Resources Management, University of Natural Resources and Environment, Ho Chi Minh City. HCM.
12. Dr. Bao Van Tuy, lecturer at Faculty of Information Systems and Remote Sensing, University of Natural Resources and Environment, Ho Chi Minh City. HCM.

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Minutes

13. MSc. Huynh Van Hiep, Head of Construction Department, Tra Vinh University.
14. Nguyen Truong Thanh, Lecturer at Faculty of Environment and Natural Resources, Can Tho University.
15. Nguyen Quoc Cuong, researcher, Can Tho University.
16. Nguyen Thi Bach Kim, lecturer, Can Tho University.
17. Nguyen Vu An Quy, reporter of Popular Science magazine.
18. Truong Quoc Phong, reporter of Popular Science magazine.
19. Hoang Nguyen Giap, Center for Marine Conservation and Community Development (MCD).
20. Do Anh Minh, Project Officer, Center for Marine Conservation and Community Development (MCD).
21. Dinh Thi Thuy Hang, Vietnam Maritime University.
22. Nguyen Thi Nuong, Vietnam Maritime University.
23. Nguyen Van So, Department of Natural Resources and Environment of Hau Giang province.
24. Nguyen Xuan Lan, An Giang Natural Resources and Environment Technical and Monitoring Center.
25. Tran Quoc Bao, Lecturer at Faculty of Environment, University of Natural Resources and Environment, Ho Chi Minh City. HCM.
26. Le Thi Phung, lecturer at the Faculty of Environment, University of Natural Resources and Environment, Ho Chi Minh City. HCM.
27. Nguyen Thi Phuong Thao, Vice Dean of Faculty of Water Resources, University of Natural Resources and Environment of Ho Chi Minh City. HCM.
28. Vu Thi Van Anh, lecturer at the University of Natural Resources and Environment of Ho Chi Minh City. HCM.
29. Phan Vu Hoang Phuong, lecturer at Faculty of Hydrometeorology and Climate Change, University of Natural Resources and Environment of Ho Chi Minh City. HCM.
30. Huynh Thi Ngoc Han, lecturer, Department of Natural Resources and Environment Management - Faculty of Environment, University of Natural Resources and Environment of Ho Chi Minh City. HCM.
31. MSc. Le Ngoc Diep, lecturer at the Faculty of Water Resources, University of Natural Resources and Environment, Ho Chi Minh City. HCM.
32. Bui Khanh Van Anh, lecturer at the Faculty of Environment, University of Natural Resources and Environment, Ho Chi Minh City. HCM.
33. MSc. Doan Thanh Vu, lecturer at the Faculty of Water Resources, University of Natural Resources and Environment, Ho Chi Minh City. HCM.
34. MSc. Ngo Nam Thinh, lecturer at the Faculty of Marine and Island Resources Management, University of Natural Resources and Environment, Ho Chi Minh City. HCM.
35. Tran Thi Kim, lecturer at the Faculty of Marine and Island Resource Management, University of Natural Resources and Environment, Ho Chi Minh City. HCM.
36. MSc. Phung Thi My Diem, lecturer at the Faculty of Marine and Island Resources Management, University of Natural Resources and Environment, Ho Chi Minh City. HCM.
37. Nguyen Thi Quynh Thu, expert of the Faculty of Marine and Island Resources Management, University of Natural Resources and Environment, Ho Chi Minh City. HCM.

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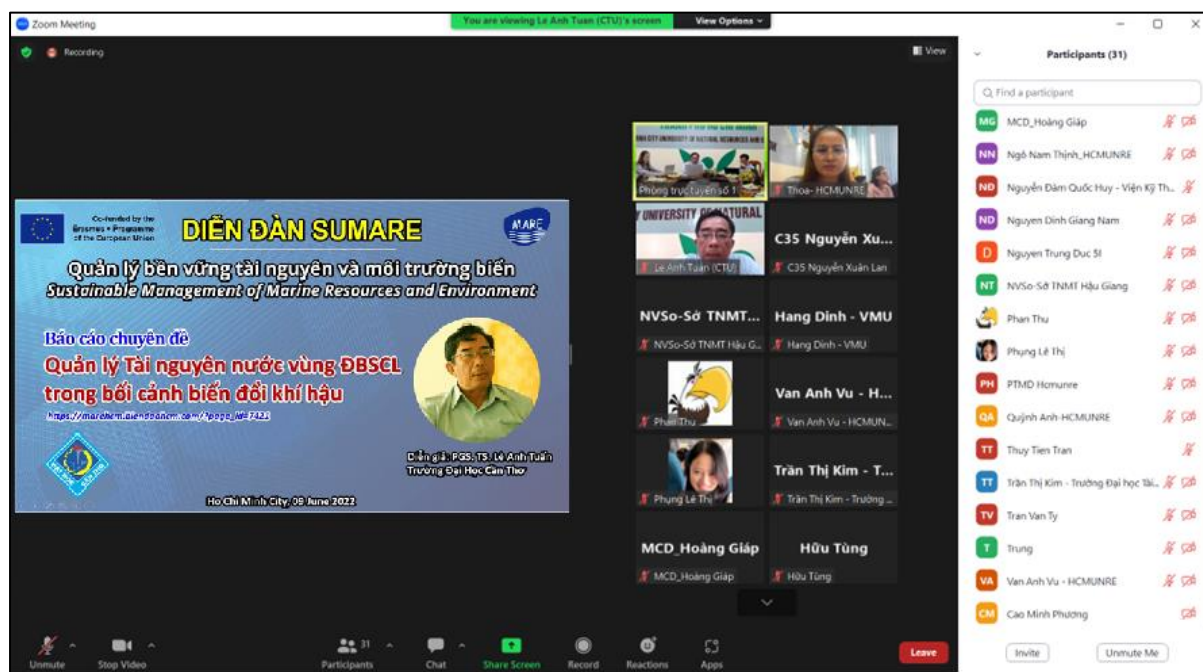


Minutes

38. Ho Cong Toan, Institute of Marine Technology.
39. Nguyen Dam Quoc Huy, Institute of Marine Technology.
40. Do Diem My, Sub-Institute of Hydrometeorological Science & Climate Change.
41. Tran Thuy Tien, Sub-Institute of Hydrometeorological Science & Climate Change.
42. Hoang Phan Phuong Quynh, University of Natural Resources and Environment, City. HCM.
43. Nguyen Pham Minh Do, University of Natural Resources and Environment, City. HCM.
44. Tran Cong Khoi, City University of Natural Resources and Environment. HCM.

2. Contents of the meeting in forum of SUMARE:

Opening the meeting, Dr. Le Thi Kim Thoa, MARE project manager and coordinator welcomed all members attending the meeting, introduced the author, participants and the purpose of the forum SUMARE in the meeting. She also invited the participants to introduce themselves.



Dr. Le Thi Kim Thoa welcome participants to attend the SUMARE forum

Forum of SUMARE
Water resource management in Mekong Delta
in the context of climate change

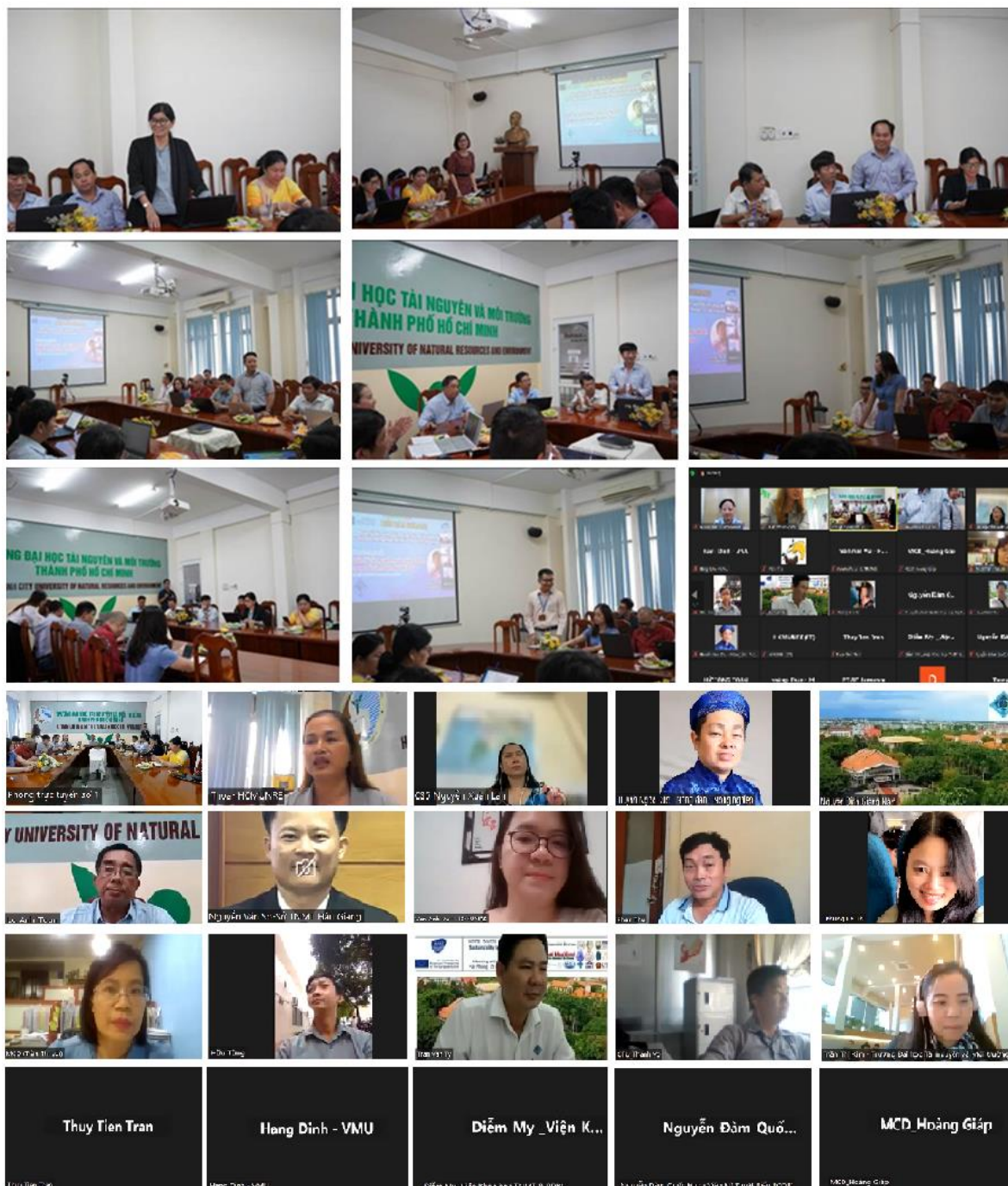
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Minutes



Some photos of participants joined the meeting in offline and online mode

Assoc. Prof. Dr. Le Anh Tuan presented the main content revolving around water resource management in the Mekong Delta in the context of climate change.

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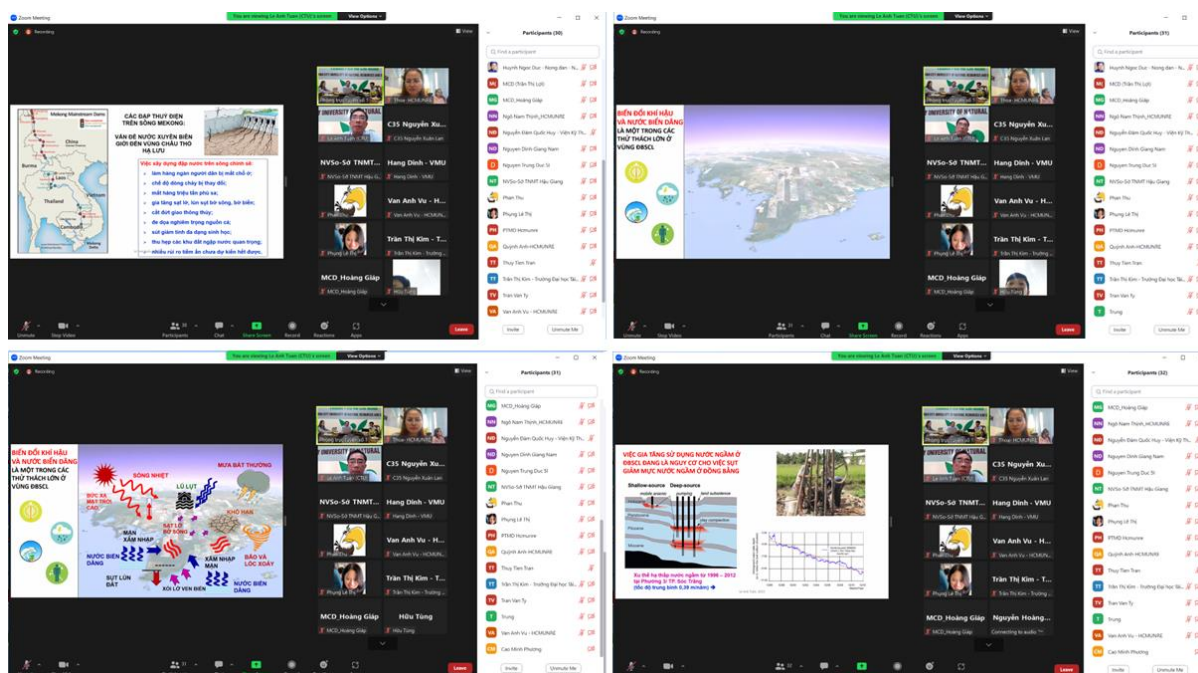
Minutes

Mekong Delta: Vulnerability of Vietnam's "Rice Bowl"

Assoc. Prof. Dr. Le Anh Tuan said, although water resources are inexhaustible and the climate is a part of nature, if we do not know how to manage effectively, it will bring incalculable impacts and consequences.

According to Assoc. Prof. Dr. Tuan, the protection of water resources has long been understood as the main use for agricultural production. When it comes to water, people often think of volume rather than water quality. However, from the perspective of a professional researcher, he sees that the Mekong Delta is not only facing the problem of quantity but also quality, and also related to water homogeneity. As the last downstream of the Mekong river system. Each year, the Mekong Delta receives approximately 500 billion m³ of water from upstream. The average flow of the Mekong River in the flood season is about 39,000 m³/s, but in the dry season the flow from upstream to the delta decreases dramatically, averaging only 2,500 m³/s. In the dry season, the lack of water is easy to cause salinity, while the flood season formed in the rainy season has abnormal changes.

Mekong Delta is an area without many concerns about food security because it is the largest rice producer in Vietnam. According to statistics, the Mekong Delta has an area of rice cultivation ranging from 1.60 to 1.75 million hectares/2.1 million hectares of total agricultural land. On average, 7 tons of rice is produced every 100 days here and no other delta has such high biological productivity. Yield output continuously increased year by year and peaked in 2013 with 24,850,000 tons.



Assoc. Prof. Dr. Le Anh Tuan presented in the forum SUMARE

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Minutes

To serve the rice agriculture and daily life of more than 18 million people, the Mekong Delta has a dense system of canals. The total length of canals dug in the Mekong Delta is 91,064km, more than twice that of the Earth's equator (40,075km in circumference).

However, the Mekong Delta region is paying a huge price. Because according to estimates, to have 1 ton of rice will have to use up to 4000 m3 of water. Accordingly, each year this land will consume approximately 100 billion m3 of water for nearly 25 million tons of rice. This is a huge amount of water, worth pondering. He also said that recent studies have shown that the Mekong Delta is a vulnerable area because all residents are living in coastal areas with elevations below 10m.



Some photos taken in the forum SUMARE

After the presentation, participants had the opportunity to ask questions, express opinions or share knowledge and experiences related to water resource management and climate change in the Mekong Delta. The discussion was very lively and there were contributions from all participants. Issues discussed include:

- Mr. Tran Quoc Bao - lecturer at the University of Natural Resources and Environment of Ho Chi Minh City asked a question related to the view of Assoc. Prof. Dr. Le Anh Tuan on whether there should be a sluice to prevent saltwater intrusion. He mentioned that Assoc.Prof.Dr. Le Anh Tuan removed Tra Vinh landmark in his lecture and proposed research to bring back Tra Vinh landmark. He also asked

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Minutes

him explained the reason why Tra Vinh landmark is no longer there, because it is typical and corresponds to the Mekong Delta, which is one of the 9 landmarks of the region.

- Next, Mr. Ho Cong Toan (Institute of Marine Technology) asked a question about whether Cai Lon and Cai Be sluices will become the second Ba Lai sluices.
- Dr. Nguyen Thi Phuong Thao shared her experiences and practices on water resource management in the Mekong Delta.
- MSc. Ngo Nam Thanh commented that in the report of Assoc. Prof. Dr. Le Anh Tuan pointed out that in the past, the Long Xuyen Dong Thap 10 Quadrangle had a small water level but a small discharge. However, now, with the construction of dykes along with flood prevention works, the water level has decreased but the flow rate has increased, causing increasingly serious erosion. An Giang province is applying the solution of building a series of reservoirs to store water in the flood season and discharge water from the lake to reduce salinity. The question raised here is about the impact of this solution on the downstream area and how people can adapt to this change in water resource management.
- Dr. Le Huu Quynh Anh asked a question, Would Prof. Tuan suggest some effective nature-based solutions (Nature-Based Solutions) to ensure water safety for urban areas, specifically in Can Tho city, and the challenges of implementing these solutions?

Assoc. Dr. Le Anh Tuan responded to comments, provided more useful information and shared experiences in water resource management. Other members also contributed ideas and discussed the topic.

Dr. Le Thi Kim Thoa thanked Assoc. Prof. Dr. Le Anh Tuan for his sharing and thanks to all participants, The academic information exchange took place very excitingly and ended successfully. SUMARE Forum is looking forward to interested scientists, register with the forum to share/exchange academic information to the scientific community.



SUMARE Academic Exchange Forum ends at 13:00 pm on the same day.

----- THE END -----