



International Workshop on Emergent Issues of Marine Ecosystems in the Southeast Asia: For Sustainable Use of Marine Ecosystem Services

September 5-7, 2019
AORI, The University of Tokyo,
Japan

Convenor

Prof. Hiroaki SAITO

AORI, UTokyo, Japan

International Steering Committee

Dr. Zainal ARIFIN

LIPI, Indonesia

Prof. Mazlan Bin Abd. GHAFER Univ. Malaysia Terengganu, Malaysia

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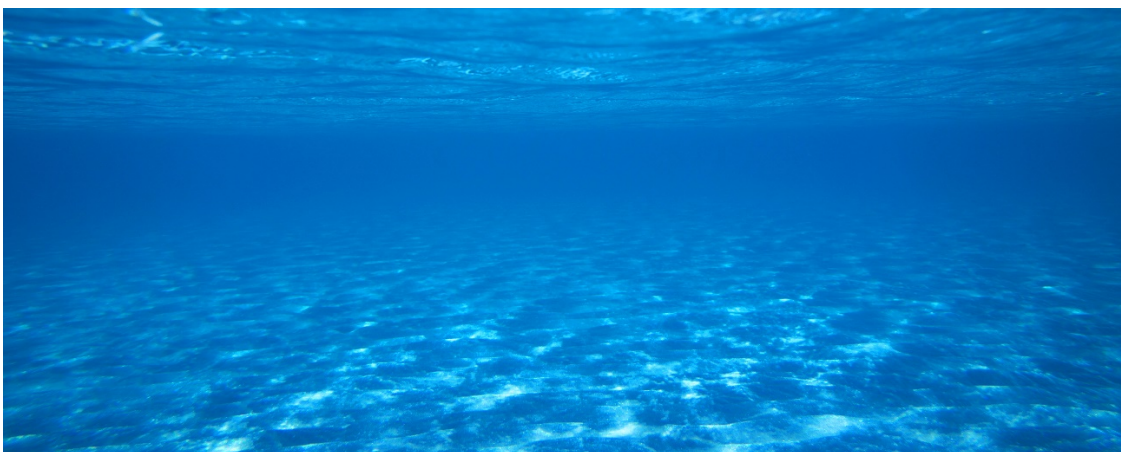


Background of the Workshop

There is an increasing concern of the degradation of marine ecosystems services which our society is dependent on. We receive tremendous benefits such as food supply, water purification, protection from storms and tsunamis and various cultural services. Because of increasing human population and demands on marine products and also anthropogenic climate change, marine ecosystems are rapidly changing and degrading. This is a serious threat for the sustainability of our society.

Marine ecosystems in the Southeast Asian (SEA) is comprised of diverse ecosystems such as coral reefs, mangrove forests, seagrass beds, and deep basin over 4000-m deep. These diverse environments harbor the unique and high biodiversity of the region, known as the hotspot of biodiversity in the world ocean. One important character of the SEA marine ecosystems is high population along the coasts (>600 million). Coastal regions are highly utilized from artisanal fishery to tourism and oil gas industry. Therefore, we need unique strategies for the SEA marine ecosystems which enable sustainable use of marine ecosystem services and development.

The United Nations has proclaimed a Decade of Ocean Science for Sustainable Development (2021-2030) to support efforts to reverse the cycle of decline in ocean health and gather ocean stakeholders worldwide behind a common framework that will ensure ocean science can fully support countries in creating improved conditions for sustainable development of the Ocean. The Decade is essential to reach the goal of UN SDG14 "Life below Water". Scientists are requested from society to prepare best scientific knowledge for decision making for sustainable use of marine ecosystems. However, marine ecosystems in the SEA is quite complex and our knowledge are still limited. In order to respond to the request from society in appropriate timing, it is essential to develop an international science and capacity building network.



Vision

The WS will identify emergent scientific issues for sustainable use of marine ecosystem services and develop a scientific network in the Southeast Asia to realize UN Sustainable Developmental Goal 14 "Life below Water".

Objectives

- Identify emergent issues of marine ecosystems in the SEA.
- Evaluate the impacts of the emergent issues on marine ecosystem structure, dynamics and sustainability.
- Identify knowledge gaps and scientific priorities.
- Shear information of best practice and impediments for scientific activities and dissemination of scientific knowledge.
- Identify essential capacity building activities for SDG14.
- Develop an international scientific network for SDG14.
- Drafting a recommendation on scientific activity for sustainable use of marine ecosystem services and SDG14 in the SEA targeting for science managers and policy makers.

Additional Goal

Planning a next phase scientific program in the SEA marine ecosystem based on the recommendation.



Agenda

Sep. 5 (Day 1)

- 9:20 - 10:00 Registration
- 10:00 - 10:05 **Opening**
- 10:05 - 10:10 **Welcome Remarks: Prof. Tomohiko Kawamura** (Director of AORI)
- 10:10 - 10:40 **Introductory Keynote**
Hiroaki Saito (AORI, Japan)
Developing international science network for sustainable use of marine ecosystem services in the Southeast Asia
- 10:40 - 10:50 **Photo Session**
- 10:50 - 11:05 Coffee
- Country Report
- 11:05 - 11:30 **Zainal Arifin** (LIPI, Indonesia)
Developing integrated marine research for sustainable marine resources in Indonesia
- 11:30 - 11:55 **Mazlan Ghaffar** (UMT, Malaysia), **Aziz Arshad** (UPM, Malaysia), **Aileen Tan S. W.** (Univ. Sains Malaysia)
Emergent Issues on the Climate Change Adaptation and Marine Food Security: The Malaysia Marine Ecosystem Prospectus
- 11:55 - 12:20 **Wilfred Campos** (UP Visayas, Philippines)
Areas for future constructive collaboration in the Philippines under the JSPS Core-to-Core Program
- 12:20 - 13:20 Lunch
- 13:20 - 13:45 **Voranop Viyakarn** (Chulalongkorn Univ., Thailand)
Future research collaboration under the NRCT-JSPS Marine Science in Thailand
- 13:45 - 14:15 **Tran Dinh Lan** (IMER, Vietnam)
Coastal ecosystem services: emergent issues and their valuation in Vietnam
- UN SDGs**
- 14:15 - 14:35 **Yutaka Michida** (AORI, Japan)

UN Decade of Ocean Science for Sustainable Development -Outcomes from the Regional Consultative Workshop for the North Pacific

Multiple stressors and multiple approach

- 14:35 - 14:55 **Toshihiko Fujita** (Natl. Mus. Nature and Science, Japan)
Biodiversity research and taxonomy of marine benthic invertebrates
- 14:55 - 15:15 **Keiichi Matsuura** (Natl. Mus. Nature and Science, Japan)
The Kuroshio Current, an invisible barrier in the sea -- FishPix (Fish Image Database) making a great contribution to zoogeographical study on shallow-water fishes
- 15:15 - 15:30 Coffee
- 15:30 - 15:50 **Suchana Chavanich** (Chulalongkorn Univ., Thailand)
Microplastic research in Southeast Asia
- 15:50 - 16:10 **Yutaka Michida** (AORI, Japan)
Initiatives for Marine Plastic Studies -A guideline for harmonizing ocean surface micro plastic monitoring and related studies
- 16:10 - 16:30 **Chuya Shinzato** (AORI, Japan)
Application of genomics to coral reef monitoring
- 16:30 - 16:50 **Susumu Hyodo** (AORI, Japan)
Ocean DNA project
- 16:50 - 17:10 **Mitsutaku Makino** (AORI, Japan)
Co-design and co-research with local communities: PICES FishGIS project
- 18:30 - Reception (Hotel Sunoak Kashiwanoha)

Sep. 6 (Day 2)

Multiple stressors and multiple approach

- 9:30 - 9:50 **Susumu Ohtsuka** (Hiroshima Univ., Japan)
Impact of jellyfish fisheries on their symbionts
- 9:50 - 10:10 **Akihiko Morimoto** (Ehime Univ., Japan)
Eutrophication in coastal seas in Asia
- 10:10 - 10:30 **Lim Po Teen** (U. Malaya, Malaysia)
HABs in Malaysian waters
- 10:30 - 10:50 **Mitsunori Iwataki** (UTokyo, Japan)

Small harmful algal bloom species recently detected from East and Southeast Asia

10:50 - 11:10 Coffee

11:10 - 11:30 **Koji Inoue** (AORI, Japan)

Molecular approaches for evaluating pollution impact on marine organisms

11:30 - 11:50 **Kotaro Shirai** (AORI, Japan)

High sensitivity analysis for marine ecosystem and environmental study

11:50 - 12:10 **Kazumi Wakita** (Tokai Univ., Japan)

Value of marine ecosystem services: Insights from questionnaire results

Emergent Issues in the SEAsia marine ecosystems (1)

12:10 - 12:40 **Woo Sau Pinn** (Univ. Sains Malaysia, Malaysia)

UN Decade of Ocean Science for Sustainable Development: transforming fundamentals to cutting edge science in the context of marine biodiversity

Nur Leena Wong Wai Sin (Univ. Malaysia Terengganu, Malaysia)

Malaysian marine mollusc:- what else is missing from our biodiversity checklist

12:40 - 13:40 Lunch

Emergent Issues in the SEAsia marine ecosystems (2)

13:40 - 15:25 **Ephrime Metillo** (Mindanao State Univ., Philippines)

Challenges in conducting marine biodiversity research in the Philippines amidst global changes

Hanung Agus Mulyadi (LIPI, Indonesia)

Plankton research in eastern region of Indonesia

Nguyen Van Nguyen (Res. Inst. Mar. Fish., Vietnam)

Some implication on modification of marine fish and plankton community along Vietnam waters

Teruaki Yoshida (Univ. Malaysia Sabah, Malaysia)

Monsoonal effect on zooplankton variation in Malaysian waters: importance of monitoring studies in a tropical climate

Ying Giat Seah (Univ. Malaysia Terengganu, Malaysia)

Progress notes of Malaysian coastal marine fishes exploration

Nguyen Van Quan (IMER, Vietnam)

Emerging issues of the coastal ecosystems in central provinces of Vietnam
Veera Vilasri (Natl. Sci. Mus., Thailand)
A guideline on abundance of marine fishes impacted by jellyfish blooms in Thailand

15:25 - 15:45 Coffee

Emergent Issues in the SEAsia marine ecosystems (3)

15:45 - 16:30 **Dede Falahudin** (LIPI, Indonesia)

An integrated approach to assess the spatial/temporal distribution and chemical- associated of stranded plastic marine debris in tropical beach sediment and seafood

Intan Suci Nurhati (LIPI, Indonesia)

From science to stakeholders: Towards achieving SDG 14.3 on minimizing the impacts of ocean acidification

Dao Viet Ha (Inst. Oceanogr., Vietnam)

Accelerating marine technology transfer for seafood safety in Vietnam

16:30 - 17:00 **General Discussion for identify key scientific issues and CB activities**
Adjourn

Sep. 7 (Day 3)

9:30 - 9:50 **Summary of Day 1 and Day 2**

9:50 - 10:30 **Drafting recommendation**

10:30 - 10:50 Coffee

10:50 - 11:50 **Drafting recommendation**

11:50 - **Closing session**

12:00 - Open Discussion Forum

Attendee

Indonesia

Dr. Zainal Arifin, LIPI
Mr. Dede Falahudin, LIPI
Mr. Hanung Agus Mulyadi, LIPI
Dr. Intan Suci Nurhati, LIPI
Dr. Aida Sartimbul, University. of Brawijaya

Malaysia

Dr. Aziz Bin Arshad, Universiti Putra Malaysia
Dr. Mazlan Bin Abd. Ghaffar, Universiti Malaysia Terengganu
Dr. Po Teen Lim, University of Malaya
Dr. Ying Giat Seah, Universiti Malaysia Terengganu
Dr. Nur Leena Wai Sin Wong, Universiti Putra Malaysia
Dr. Sau Pinn Woo, Universiti Sains Malaysia
Dr. Teruaki Yoshida, Universiti Malaysia Sabah
Dr. Syaizwan Zahmir Zulkifli, Universiti Putra Malaysia

Philippines

Dr. Wilfredo L. Campos, University of Philippines Visayas
Dr. Annabelle Campos, University of Philippines Visayas
Dr. Ephrime B. Metillo, Mindanao State University IIT
Dr. Wilfredo H. Uy, Mindanao State University Naawan

Singapore

Ms. Iffah Iesa, Lee Kong Chian Natural History Museum

Thailand

Ms. Isara Arsiranant, Department of Marine and Coastal Resources
Dr. Sujaree Bureekul, Chulalongkorn University
Dr. Suchana Chavanich, Chulalongkorn University

Ms. Supattra Taleb, Burapha University
Dr. Veera Vilasri, National Science Museum
Dr. Voranop Viyakarn, Chulalongkorn University

Vietnam

Dr. Dao Viet Ha, Institute of Oceanography
Dr. Tran Dinh Lan, Institute of Marine Environment and Resources
Dr. Nguyen Van Nguyen, Research Institute of Marine Fisheries
Dr. Nguyen Van Quan, Institute of Marine Environment and Resources
Dr. Cao Thi Thu Trang, Institute of Marine Environment and Resources

Japan

Dr. Toshihiko Fujita, National Museum of Nature and Science.
Dr. Kenichi Hayasizaki, Kitasato University
Dr. Susumu Hyoudo, AORI, The University of Tokyo
Dr. Koji Inoue, AORI, The University of Tokyo
Dr. Mitsunori Iwataki, The University of Tokyo
Ms. Siyu Jiang, AORI, The University of Tokyo
Dr. Tomohiko Kawamura, AORI, The University of Tokyo
Dr. Seishi Kimura, Mie University
Ms. Wai Mun Lum, The University of Tokyo
Dr. Mitsutaku Makino, AORI, The University of Tokyo
Dr. Keiichi Matsuura, National Museum of Nature and Science.
Dr. Yutaka Michida, AORI, The University of Tokyo
Dr. Akihiko Morimoto, Ehime University
Dr. Masanori Nakae, National Museum of Nature and Science.
Dr. Yuichiro Nishibe, AORI, The University of Tokyo
Dr. Susumu Ohtsuka, Hiroshima University
Dr. Hiroaki Saito, AORI, The University of Tokyo
Dr. Chuya Shinzato, AORI, The University of Tokyo
Dr. Kotaro Shirai, AORI, The University of Tokyo
Dr. Haruka Takagi, AORI, The University of Tokyo
Dr. Kazuya Takahashi, The University of Tokyo
Dr. Kazumi Wakita, Tokai University

Mr. Wiwit, AORI, The University of Tokyo

Mr. Kuo Hong Wong, AORI, The University of Tokyo

Dr. Takuya Yahagi, AORI, The University of Tokyo

Dr. Rei Yamashita, AORI, The University of Tokyo

Mr. Sheng Ye, AORI, The University of Tokyo

Dr. Ikhsani Idha Yulia, AORI, The University of Tokyo

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Food

