



JSPS Core-to-core **CREPSUM**

Collaborative Research and Education Project in
Southeast Asia for Sustainable Use of Marine Ecosystems

Agenda

1. Welcome
2. Report of 2020 activity
 - 2.1 Activity report in 2020: Hiroaki Saito
Additional information from NCs and group leaders
 - 2.2 Status of COVID-19 in each country:
NCs/counties representative (brief report)
 - 2.3 Introduction of PhD thesis of Suhila Binti Rusni: Targeted mutagenesis of the CYP1A gene in Javanese medaka, *Oryzias javanicus*, to understand the metabolism of organic pollutants
3. Discussion for 2021 activities under COVID-19.
 - 3.1 Budget and activity policy under COVID-19 pandemic:
Hiroaki Saito
 - 3.2 Potential joint activities:
(Discussion + Report/proposal from Toshihiko Fujita, Aileen Tan Shau Hwai, Mitsutaku Makino and other attendees)
4. Contribution to UN Ocean Decade and SDGs
5. Other items
6. Closing



Goals of CREPSUM

1. Establish an international science and educational network for the Southeast Asia marine ecosystem
2. Progress marine ecosystem studies on emergent issues for conservation and sustainable use of marine ecosystem services in Southeast Asia.
3. Contribute to UN Decade of Ocean Sciences and UN SDG 14 “Life below water” by preparing best scientific knowledge.

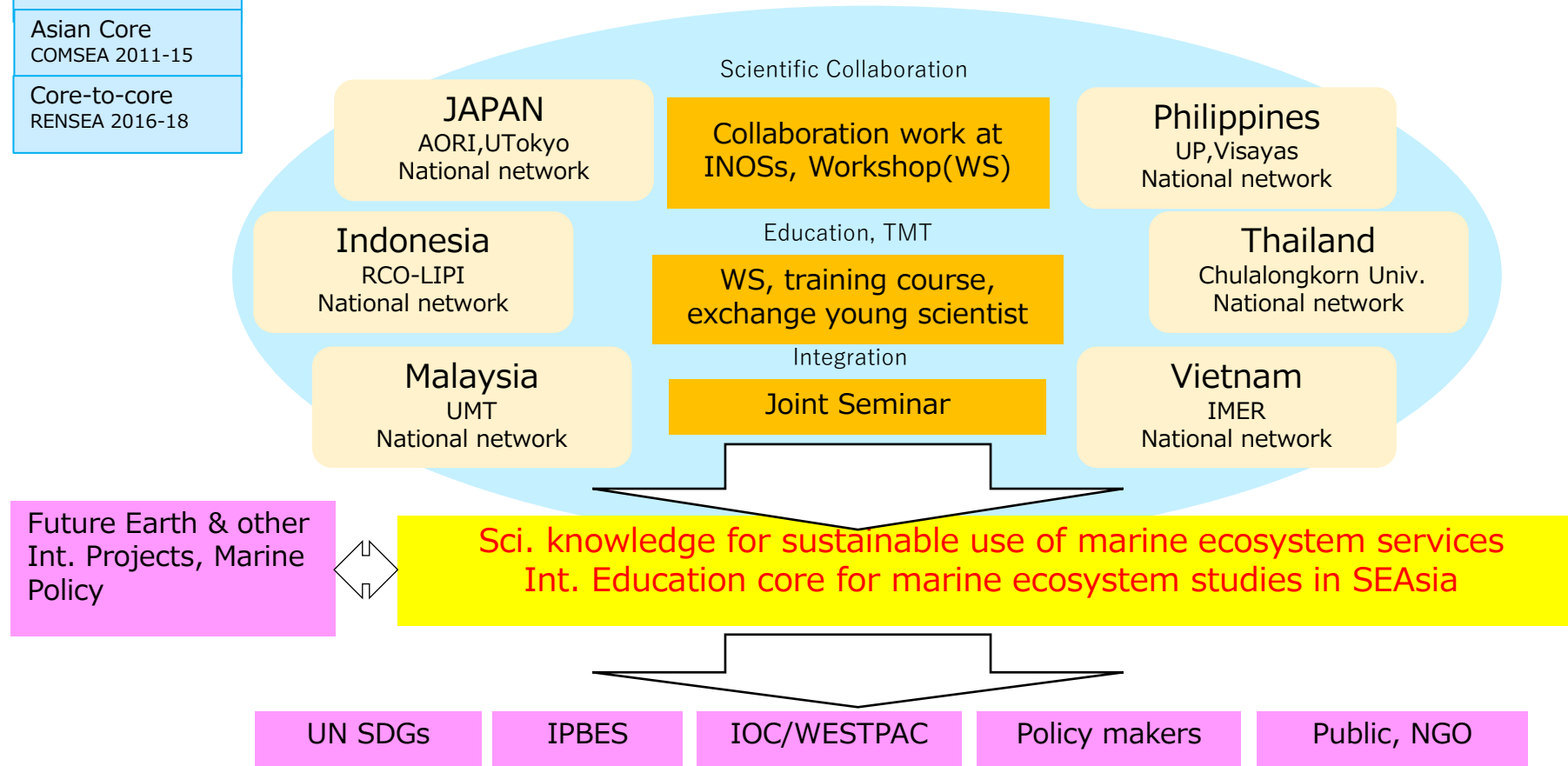
JSPS Predecessor
Activities

Coastal Marine
Science 2001-10

Asian Core
COMSEA 2011-15

Core-to-core
RENSEA 2016-18

Collaborative Research and Education Project in Southeast Asia for Sustainable Use of Marine Ecosystems (Core-to-Core CREPSUM) 2020-2022

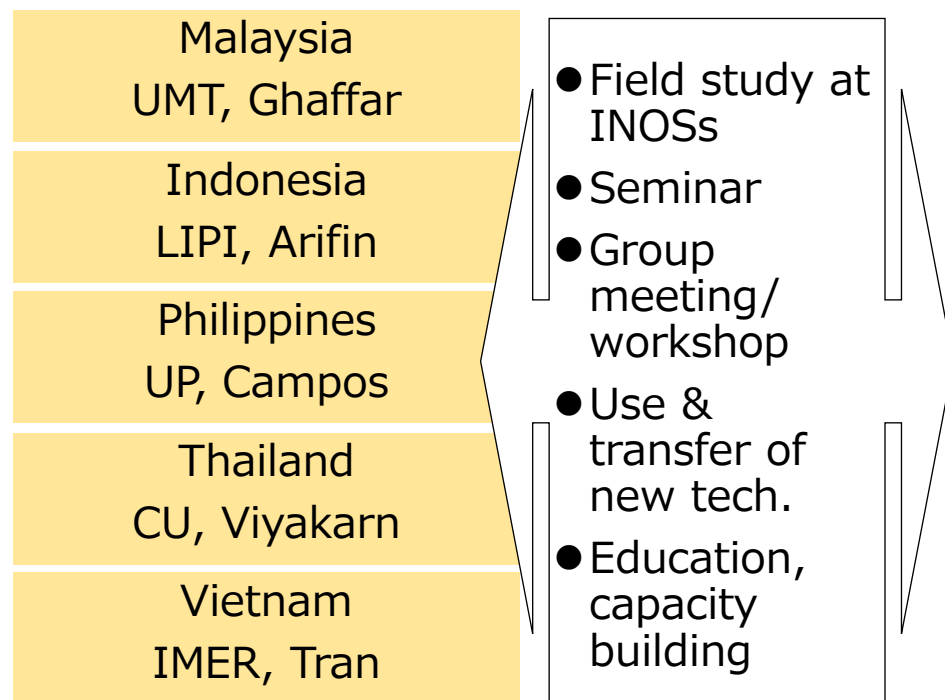


Core Research Institution: Atmosphere and Ocean Research Institute, the University of Tokyo

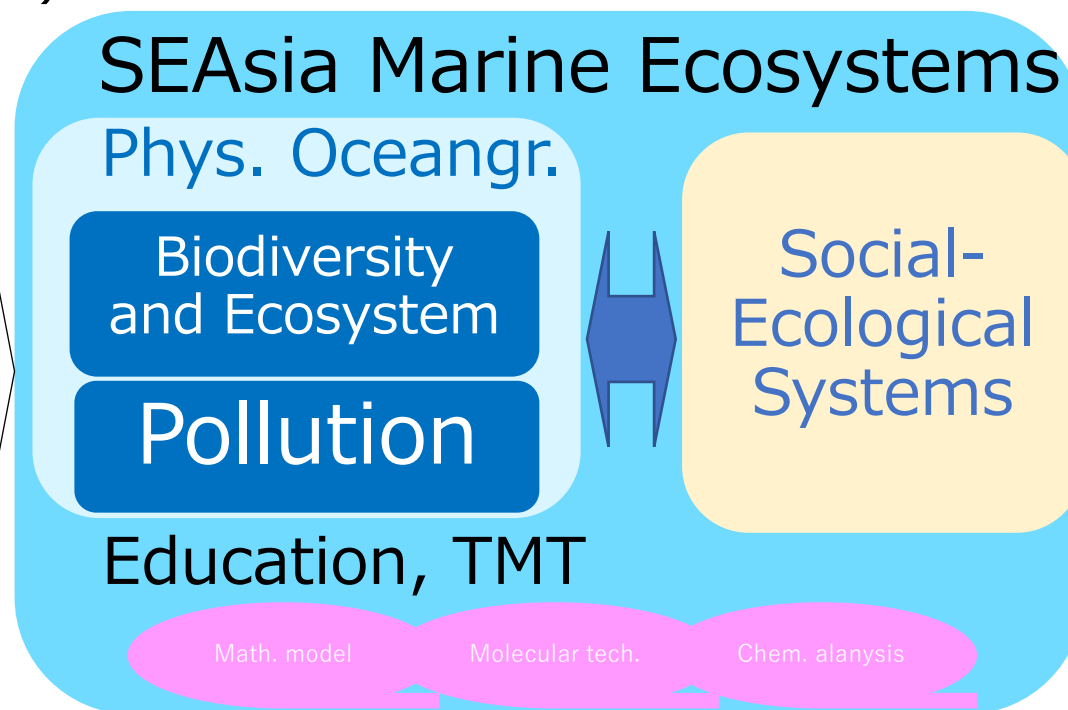
Coordinator : Hiroaki Saito

Secretary office of CREPSUM : Center for Int. Collaboration, AORI, UTokyo

International collaboration
(Core Institutions, Nat. Coordinators)



Research Groups

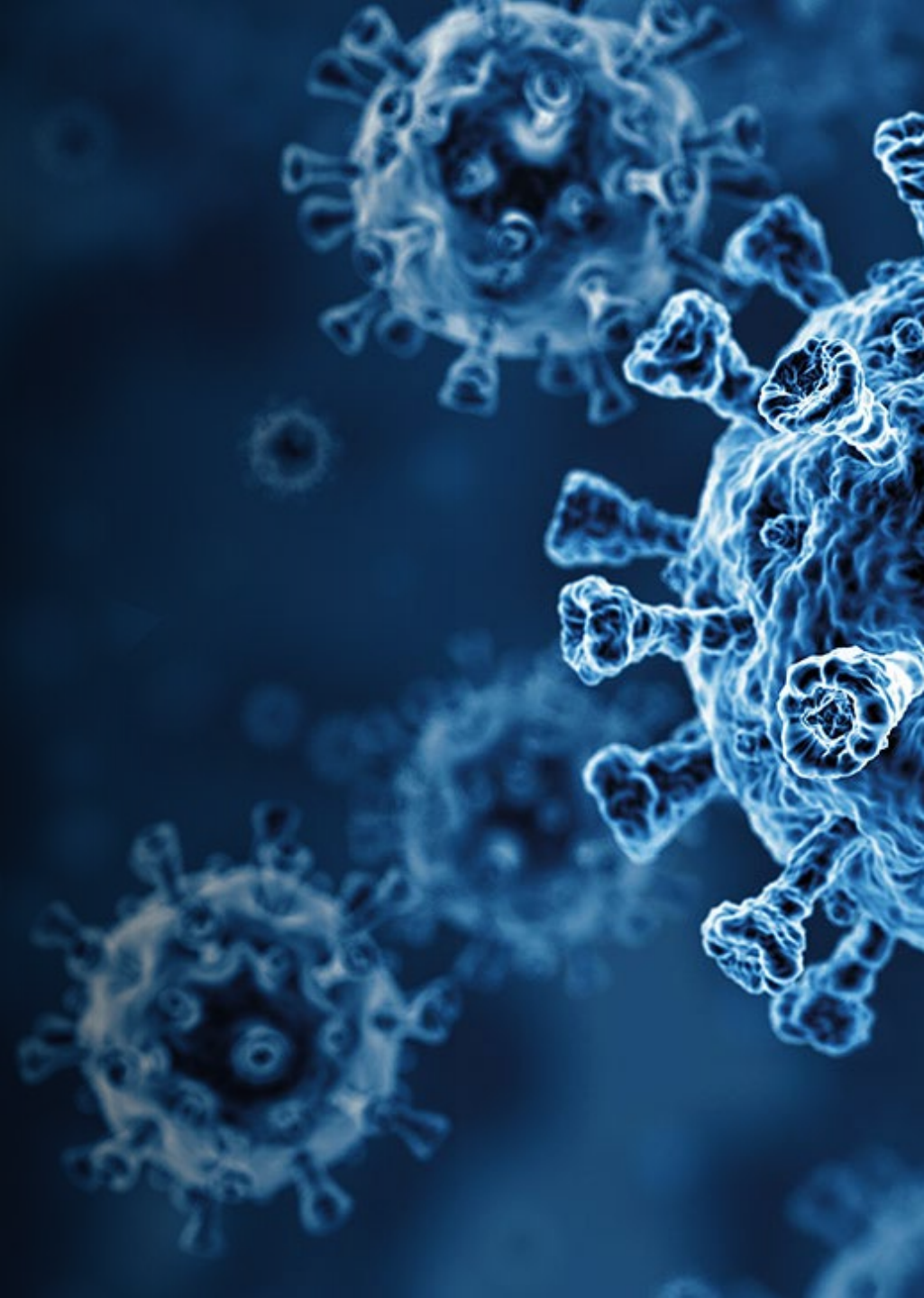




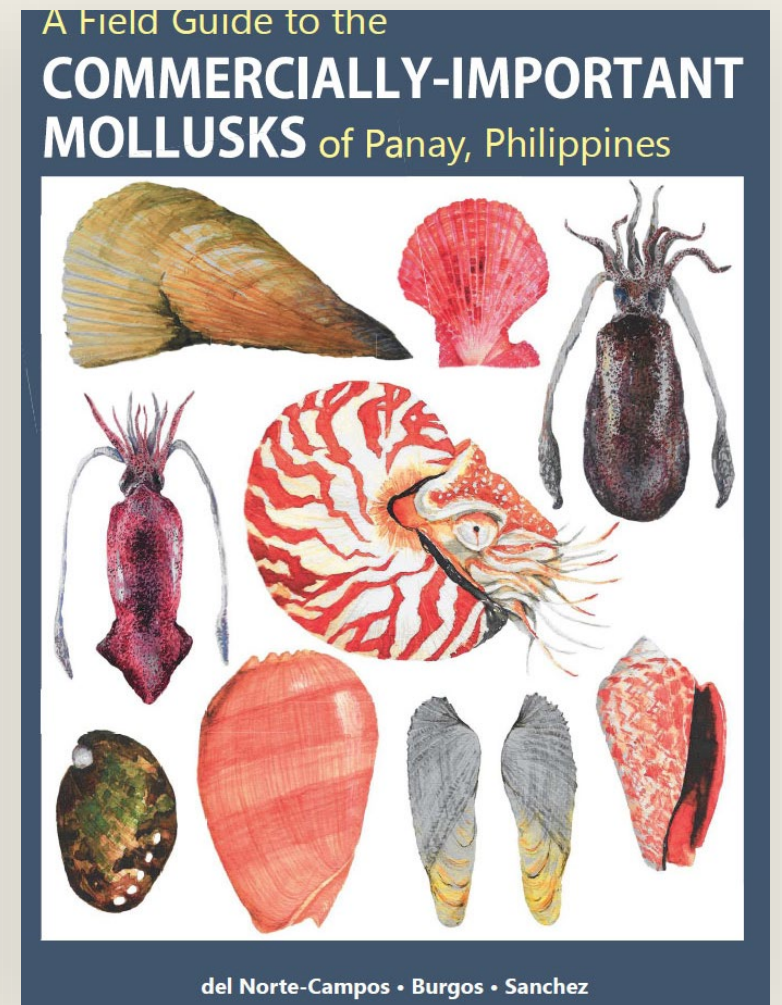
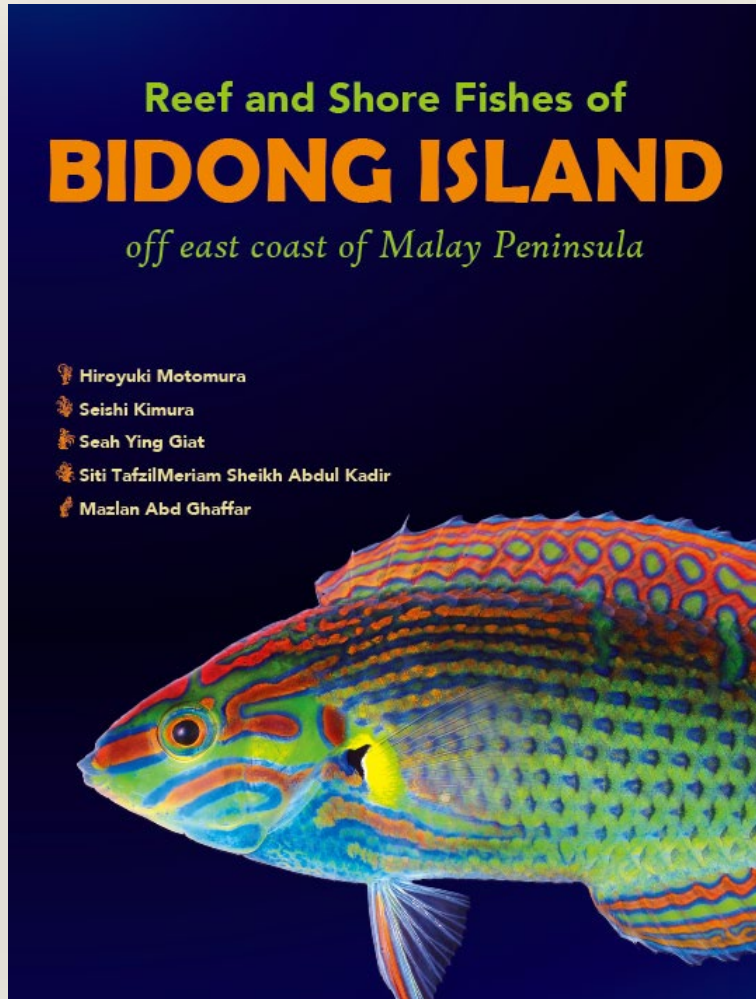
COVID-19 pandemic

- Lockdown
- Travel ban/quarantine
- Delay of business process

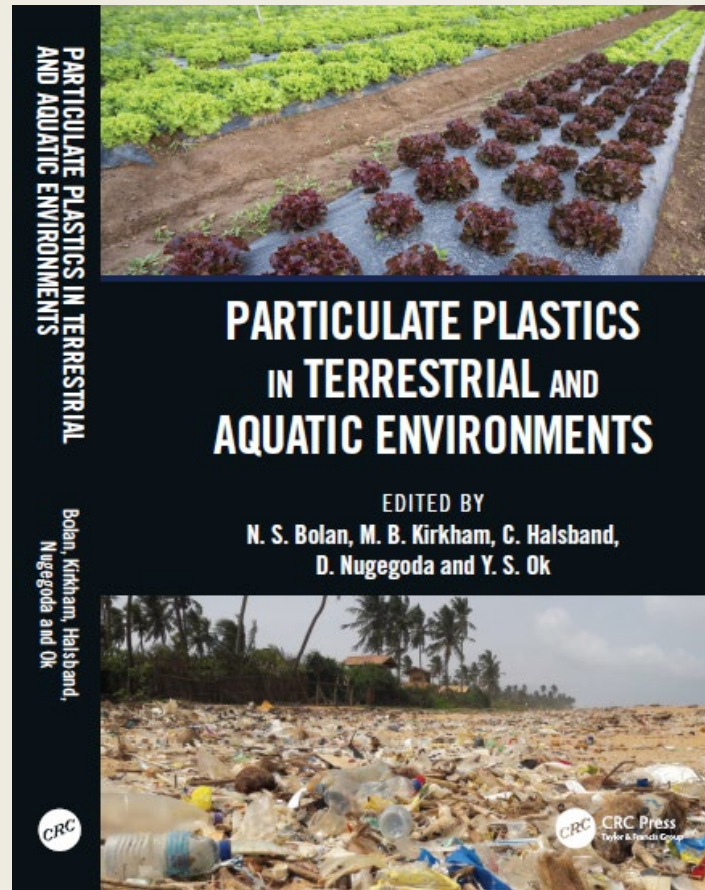
- Extra time for writing?
- Developing technology for virtual/on-line activities
- Budget usage change (e.g., printing)



Field guides



Book and book chapter



20 Particulate-Plastics Distribution and Ecotoxicity in Marine Ecosystems and a Case Study in Thailand

*Suchana Chavanich, Voranop Viyakarn,
Somkiat Khokiattiwong, and Wenxi Zhu*

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20.1 INTRODUCTION

Marine ecosystems, including oceans, deep sea, salt marshes, estuaries, mangroves, and coral reefs, are the largest aquatic ecosystems on earth. They provide multiple ecosystem services to the world's populations. Unfortunately, marine ecosystems are rapidly changing due to several threats, such as global warming, overfishing, pollution, sedimentation, land development, and reclamation of land (Townsend et al. 2018). Among the threats, marine debris, and, in particular, plastic pollution, has become of global concern recently, and it has grown out of control since the introduction of packaging in the middle of twentieth century (STAP 2011).

Plastics are part of the everyday life of billions of people. More than 400 million tons of plastics are produced globally every year, and packaging accounts for more than one third of all plastics produced (UNEP 2016; Plastic Atlas 2019). In 2025, the production of plastic is expected to be as high as 600 million tons per year (Plastic Atlas 2019). The problem with plastic pollution is that it is not only found on land; more than 10 to 20 million tons of plastics are finding their way into the oceans (UNEP 2016). Only a small percentage is recycled (UNEP 2016). Some evidence also suggests that plastics do not float for a long time. Because of degradation and biological interactions, they move to shallower waters, sink to the sea floor, or are washed onto the shores (Plastic Atlas 2019).

When marine debris and marine plastic pollution enter marine ecosystems, they impact fisheries, aquaculture, human health, and food safety. Plastics usually persist in the marine environment over a long period of time without decomposing (Plastic Atlas 2019). Incidents concerning entanglement and ingestion have been widely reported for a variety of marine mammals, reptiles, and birds, which lead to chronic injury and death (Allen et al. 2012; Campani et al. 2013; Thevenon et al. 2014).

Papers

<https://jspscrepsum.wixsite.com/mysite/blog>

Fish subgroup published 75 papers!

Please add acknowledgement, e.g., “This study is (partially) supported by JSPS Core-to-core CREPSUM JPJSCCB20200009”

Photo images are welcome!!

- Takahashi, K. et al. (2021) Toxigenic strains of *Azadinium poporum* (Amphidomataceae, Dinophyceae) from Japan and Vietnam, with first reports of *A. poporum* (ribotype A) and *A. trinitatum* in Asian Pacific. Phycological Res





International Conference on the Ocean and Earth Sciences



INFUNITY SCIENCE EXPLORATION
17 - 20 November 2020, Jakarta

OCEAN SCIENCE FOR BETTER HUMAN LIFE WITH NATURE

◀ KEYNOTE SPEAKERS



PROF. HIROAKI SAITO
Atmosphere and Ocean Research
Institute, The University of Tokyo,
Japan



PROF. WILLEM REMENA
Naturalis Biodiversity Center,
Netherlands



PROF. ZAINAL ARIFIN
Research Center for Oceanography,
Indonesian Institute of Sciences,
Indonesia



PROF. SATISH SINGH
Institut de Physique du Globe
de Paris, France

◀ TOPICS

- Marine and coastal ecosystem dynamics and its association with oceanographic factors in the Indo Pacific region
- Impact of climate change on marine and coastal biodiversity and its possible strategic plans for adaptation and mitigation
- Impact of marine pollution on the marine and coastal ecosystems and its possible strategic plan for adaptation and mitigation

◀ INVITED SPEAKERS

Prof. Yukio Masumoto, The University of Tokyo, Japan
Dr. Dongliang Yuan, China Academy of Science, China
Prof. Casey Dunn, Yale University, USA
Prof. Eric Feunteun, Natural Historical Museum, France
Prof. Youn Ho Lee, KIOST, South Korea
Prof. Takaomi Arai, Universiti of Brunei Darussalam, Brunei
Dr. Didier Aurelle, IMBE-IRD France
Dr. Nina Yasuda, Miyazaki University, Japan
Dr. Michael Miller, The University of Tokyo, Japan
Dr. Davin Setiamarga, National Institute of Technology, Japan
Dr. Muhammad Heidarzadeh, Brunel, University, United Kingdom
Dr. Nick Rawlinson, Cambridge University, United Kingdom
Prof. Iskhaq Iskandar, Sriwijaya University, Indonesia
Prof. Sam Wouthuyzen, LIPI, Indonesia
Prof. Teguh Peristiwady, LIPI, Indonesia
Prof. Edvin Aldrian, BPPT, Indonesia
Dr. Augy Syahailatua, LIPI, Indonesia
Dr. Anna Kusumawardhani, KKP, Indonesia
Dr. Hagi Yulia Sugeha, LIPI, Indonesia
Dr. Udhy Eko Hernawan, LIPI, Indonesia
Dr. Agung D. S., Raja Ali Haji Maritime University, In
Dr. A'an Johan Wahyudi, LIPI, Indonesia
Dr. Nugroho D. Hananto, LIPI, Indonesia
Dr. Ariani Hatmanti, LIPI, Indonesia
Mr. Sora Lokita, KEMENKOMARVES, Indon

◀ REGISTRATION FEE

Paper presenter
- National participant : Rp
- Foreign participant : I'

Prof. Arifin and Prof. Saito gave keynote talks at ICOES, Indonesia Science Expo 2020