

The 7th China-Southeast Asian Countries Marine Cooperation Forum



October 26-27, 2021

Beihai, China

Hosted by:

Ministry of Natural Resources, China

People's Government of Guangxi Zhuang Autonomous Region, China

Organizers:

First Institute of Oceanography, Ministry of Natural Resources, China

Fourth Institute of Oceanography, Ministry of Natural Resources, China

Department of Marine and Coastal Resources, Ministry of Natural Resources and
Environment, Thailand

Department of Natural Resources of Guangxi Zhuang Autonomous Region

The Oceanic Administration of Guangxi Zhuang Autonomous Region

Beihai Municipal People's Government

Minutes of the 7th China-Southeast Asian Countries

Marine Cooperation Forum

The 7th China-Southeast Asian Countries Marine Cooperation Forum, with the theme “*Embrace the Ocean Decade, Deepen the Blue Partnership*”, was successfully convened on-site in Beihai, China and online via Webex on 26-27 October, 2021. A total of 307 government officials and scientists from 9 countries participated the Forum.

At the opening ceremony, three speeches were delivered by H.E. Dr. Hong Wang, Vice Minister, Ministry of Natural Resources of China, H.E. Dr. Pornsri Suthanaruk, Deputy Director General, Department of Marine and Coastal Resources, Ministry of Natural Resources and Environment of Thailand, H.E. Mr. Shiyong Huang, Vice Governor of Guangxi Zhuang Autonomous Region of China, respectively. Hong Wang pointed out that this year marks the 30th anniversary of China-ASEAN partnership. Over the past three decades, marine cooperation between China and Southeast Asian countries has grown and deepened with increasing mutual trust. For future cooperation, he raised three points: “Firstly, we should strive to be more open and cooperative for win-win outcomes, embrace the aspirations and interests of all parties, and make the sea where all countries live together with a sea of peace, friendship and cooperation. Secondly, we should further expand our understanding of the ocean, and work together to promote the ocean scientific transformation under the framework of the *UN Decade of Ocean Science for Sustainable Development (2021-2030)*, so that scientific research results can better serve ocean governance and sustainable development, and more public products to the region can be provided. Thirdly, we should further explore diverse cooperation programs and foster cooperation through policy exchanges, experience sharing, joint research, technology transfer and demonstration projects, to better safeguard the health, safety and sustainable development of the oceans.” Pornsri Suthanaruk noted that over the years, the China-Southeast Asian Marine Cooperation Forum has developed into an important platform for both sides to share knowledge and experience in managing marine resources and environmental crises. Marine ecosystems are critical to the livelihoods of coastal populations in Southeast Asian countries. Therefore, China and Southeast Asian countries should strengthen cooperation to jointly cope with the oceans’ habitat degradation and biodiversity reduction. Shiyong Huang said in his remark that Guangxi is the only coastal province in western China and the closest port to ASEAN. Guangxi government hopes to work with Southeast Asian countries to boost all-around cooperation in all fields of marine affairs and build a marine community with a shared future. To this end, we should strengthen marine environmental protection and promote green and low-carbon marine development, strive to achieve a prosperous blue economy and enhance cultural exchanges and mutual learning.

The forum was then continued with the plenary session, during which five keynote speeches were delivered. Prof. Fangli Qiao, Chair of the Forum and Deputy Director General of First Institute of Oceanography gave the first keynote speech with the title of “*For A Predicted Ocean of UN Ocean Decade: Challenges and Solutions*”. The

second was from Ms. Sumana Kajonwattanakul, co-chair of the Forum and Director of Marine and Coastal Research and Development Institute, Ministry of Natural Resources and Environment of Thailand, in which she talked about “*Challenges in marine and coastal resources management in Thailand*”. In the third speech, Dr. Nyoman Radiarta, co-chair of the Forum and the Director of Marine Research Center, Ministry of Marine Affairs and Fisheries of Indonesia, introduced “*The variability of Natuna-Off-Shelf Current and its relation with fisheries and marine resources as a new proposal of Indonesia-China ocean-climate joint research*”. Dr. Aimee T. Gonzales, Executive Director of PEMSEA, gave the fourth one and illustrated “*Ocean governance, science and technology - progress and challenges in the EAS region*”. The last one was presented by the vice mayor of Beihai Municipal People’s Government, who talked about “*Ecological restoration practice of land and sea coordination and active implementation of Ocean Decade – ecological restoration project of Beihai coastal national wetland park (Feng-jia-jiang Basin)*”.

In the afternoon of Oct. 26th, four parallel sessions were taken place, with the themes as: 1) Ocean and Climate Monitoring, Forecasting and Services; 2) Marine Biodiversity and Ecosystem Protection; 3) Marine Geological Processes and Disaster Reduction; and 4) Ocean Policy and Ocean Management.

Session One was chaired by Dr. Nelly Florida Riama, with two co-chairs being Prof. Fredolin Tangang, and Prof. Daji Huang. About 90 participants attended Session One. A total of 33 presentations had been submitted to Session One. Twelve presentations were selected and delivered on October 26th as the oral presentations, including two invited talks. The rest 21 presentations were selected as the poster presentations and were shown on the Forum website at <http://www.cseamarineforum.org/>. The twelve oral presentations were delivered by scholars from four countries, e.g. China, Indonesia, Thailand and Malaysia. The presentations were mainly on monitoring, data analysis, forecasting and services. Six talks were related to monitoring and data analysis, four were related to forecasting and services, and two others covered monitoring, forecasting, and services. The scientific findings based on monitoring and data analysis were shared with the participants in Session One, including the Marine Heatwaves in SCS and BoB and their negative effects on coral reef, the extreme Indian Ocean Dipole in 2019 and its impact on forest fire in Indonesia, the inter-annual variation of Malacca Strait throughflow and its controlling mechanism, the variability of sea-level and current on Andaman Shelf, and Hypoxia in the East China Sea and its formation and variabilities. The development and advancement on the forecasting and services were shared with the participants in Session One, including the challenging on the improvement of ocean forecasting system, Malaysian Meteorological Department Marine Weather Forecasting System, Development of the Operational Marine Environment Forecast System of 21st-Century Maritime Silk Road, Storm Surge Modeling in the Southern of Java using Coupled 4D-VAR Circulation-Waves Model. The latest advancement of the international programs were also shared in Session One, including Capacity Building under UN Ocean Decade: Past and future, Climate and Ocean: Variability, Predictability and Change (CLIVAR). There were also scientific breakthrough that

were coming from the keynote speakers and posters as follow: Identified the dominant role of surface waves in the vertical mixing of upper ocean; Identified the key role of surface waves in air-sea heat and momentum fluxes; Developed surface wave-tide-circulation fully coupled model, FIO-COM; Developed the atmosphere-wave-ocean fully coupled Typhoon model, FIO-AOW; Developed the earth system model with surface waves and Climate Prediction System, FIO-CPS. During the discussion session in the morning of October 27th, Session One reviewed the presentations submitted to the session and discussed two cooperative proposals, all the participants wished to put promote these two proposals as the solid cooperative projects.

Session Two was chaired by Dr. Kongkiat Kittiwatanawong, Prof. Agung Dhamar Syakti, Dr. Sandric Leong Chee Yew, Dr. Saifullah Arifin Jaaman, and Prof. Xuelei Zhang. About 70 participants attended Session Two, among which fifteen speakers delivered oral presentations and four presented posters online. The fifteen oral presentations were delivered by scholars from three countries, e.g. Malaysia, China and Thailand. Session Two discussed twice, one on October 26 and the other on October 27. The topics discussed focused on marine endangered species including dugongs, cetaceans and sea turtles. Other topics were also discussed such as biotoxins, eutrophication, microplastics and environmental monitoring, in relation with marine endangered species. The presentations were mainly on eco-hazards and biodiversity conservation. For eco-hazards, (1) four (three orals and one poster) presented harmful algal blooms and hypoxia, drawing attention to eutrophication-resulted harmful algal blooms and hypoxia; (2) two orals presented venomous jellyfish, raising the importance of integrating morphological and molecular studies; and (3) two orals presented microplastics, describing the status of microplastics pollution in the Andaman coast and importance of protocol standardization. For biodiversity conservation, (1) one oral presented zooxanthellae associated with host corals, pointing out the importance of incorporating genetic diversity of zooxanthellae before coral restoration; and (2) nine (six orals and three posters) presented marine endangered species, addressing important research methods, biological connectivity, pathogen, and importance of areas such as the Gulf of Thailand and Bay of Brunei. The last oral presented improvement of pompano fish feed with soy protein concentrate. During the discussion of Session 2, participants proposed continued and further cooperation between China and Southeast Asian countries on two projects.

Session Three was chaired by Prof. Zhifei Liu and co-chaired by Prof. Fernando Siringan and Prof. Nugroho D. Hananto. About 80 people attended Session Three. A total of 14 participants gave oral presentations and 6 provided posters. Speakers were from Cambodia, China, Indonesia, Malaysia, Myanmar, Philippines, Thailand, and Vietnam. Two-session discussion slots were arranged including 40 minutes in end of afternoon session of Oct. 26 and 15 minutes in end of morning session of Oct. 27. This session reported on the progresses of multiple-scale geological processes and disaster reduction, including tectonics and magmatism, environmental and climatic evolution, estuarine and coastal processes, disaster prevention and mitigation, sedimentary process and observation. New ideas or highlights achieved recently but not presented

either in oral or poster presentations were discussed. Future collaborations were also fully discussed and proposed. The session made major progresses in the following five aspects under the theme of marine geological processes and disaster reduction: (1) Tectonics and magmatism: Four oral and one poster presentations focused on this topic. X. Niu and N. D. Hananto presented their seismic data on mantle and oceanic crust to reveal deep structures beneath Southeast Asia and applied them to interpret the occurrence of strong earthquake and tsunami. Q. Yan and X. Yu reported geochemical features of Cenozoic magmatic activities and discussed the formation mechanism of the South China Sea. X. Luan introduced the advances of China-ASEAN Marine Seismic Data Center and applied the seismic collection to study tectonic evolution through reservoirs in the Southeast Asia region; (2) Environmental and climatic evolution: K. Soben presented the impact of climate change on vegetation carbon and soil carbon of forests in Cambodia and highlighted the decreased carbon sink due to shrunken forest cover. B. Wu and Y. Bai studied sedimentary organic carbon preserved in the Gulf of Thailand and applied its source to sink process affected by climate change and anthropogenic forcing; (3) Estuarine and coastal processes: A total of seven presentations (5 orals and 2 posters) focused on this topic. E. Sathiamurthy and H. B. Shaari presented the changes of river channels on the east coast of the Malaysia Peninsular, and highlighted the coastline retreat affected by erosion at Kelantan and Kuala Nerus estuarine areas. B. V. Vuong emphasized the increased human interferences on the morphological change occurred in the Red River delta area. T. Jarupongsakul developed an artificial mangrove belt barrier for alleviating the effect of future sea-level rise in the Upper Gulf of Thailand. X. Xu and D. Chen presented seawater intrusion and dynamic process in the coastal transition zone; (4) Disaster prevention and mitigation: Strong storms and severe earthquakes may cause climatic and geological disasters. F. Siringan and S. M. Lwin reported storm-affected coral boulder and gravel bar in northwestern Philippines and various coastal landforms along southeastern Myanmar. Tsunami induced by strong earthquakes highlighted by N. D. Hananto needs further attentions for disaster prevention and mitigation; (5) Sedimentary process and observation: Z. Liu and X. Shan reviewed source-to-sink sedimentary processes in the Southeast Asian region including the South China Sea through their large-scale investigation and long-term cooperation among the Southeast Asian countries. They emphasized that the monsoon climate in tropical areas and the unique geological setting of Southeast Asia were the most important influences on sediment transport from source to sink and deposition in marine environment. Three arrangements and actions were proposed to enhance collaboration under the theme of marine geological processes and disaster reduction, as well as for contributing to UN Decade of Ocean Science for Sustainable Development (2021-2030).

Session Four was chaired by Prof. Sakanan Plathong, and co-chaired by Prof. Zhiwei Zhang. About 70 experts, managers and scholars from Southeast Asian countries and China participated in the presentation and discussion of Session Four. 10 experts from China, Thailand, Indonesia and other countries made speeches during Session Four in the afternoon of October 26. Three issues focused in this session, e.g. Marine Spatial Planning, Blue Economy and Nature Based Solutions. The topics

covered global international guide on Marine Spatial Planning and regional cooperation suggestions, marine management, marine spatial planning and blue economy initiative in China, Indonesia, Thailand and Cambodia, Nature-based Solution for coastal resilience in China, etc. Ten speakers made their informative speeches on marine ecosystem conservation and how to achieve the goal of the sustainable ocean development among China and ASEAN countries. The main topics involved: (1) Marine Spatial Planning. Marine spatial planning has been becoming a recognized and effective tool to support ocean policy and management in China and Southeast region. Due to IOC-UNESCO's promotion of MSP worldwide and its successful applications and the remarkable achievement in promoting development and reconcile conflicts between utilization and conservation, most Southeast Asian countries realize the effectiveness of MSP, and are accelerating their MSP progresses to achieve sustainable development. Some of the Southeast Asian countries have established close cooperation with China for compiling marine spatial planning through capacity building. Besides, a new international guide on MSP has been released recently by IOC-UNESCO, which provides solid technical basis for MSP development both in China and EAS region, and also the localization of this guide needs more work to be done. Further, in terms of MSP research, there are several new frontier topics, such as climate change incorporation, climate change adaption, blue economy and blue carbon. (2) Blue Economy. In wish to accelerate marine development, bearing in mind the importance of marine ecosystems at the same time, the emergence of blue economy concept provides a solution, which aims to stimulate ocean economy and ensure ocean health simultaneously. Now it has become the goals of countries to realize the sustainable use of marine resources and marine ecosystem conservation. For example, Thailand is successfully implementing its blue economy initiative in Trat Province as a case study to explore the successful way to achieve blue growth. (3) Ecological Restoration. Nature-based Solutions have become the main principle in implementing ecological restoration projects to protect, sustainably manage, and restore natural or modified ecosystems, which address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits. Speakers in this session also introduced a dune restoration project in China, which was a successful illustration of Nature-based Solution, which received high interest of audience.

After the parallel sessions, the plenary session was held again in the morning of 27th Oct. The chair of the Forum, Prof. Fangli Qiao, chaired the plenary session. Four session chairs reported to the Forum of their sessions' basic information, scientific progresses and the cooperation proposals between China and southeast Asian countries. Hot discussion followed, all participants agreed that this Forum was very helpful in exchanging scientific and management progresses on marine affairs, and expected further cooperation between China and southeast Asian countries. At the end, Prof. Fangli Qiao reviewed the Forum and gave a closure remark and the Forum came to a successful ending.

The 11 proposed projects are:

1. Ocean and climate prediction and service
2. Marine Heatwaves over Monsoonal Oceans - a multidisciplinary way to tackle the relationship among MHW, human and marine life
3. Smart Perception of Marine Ecosystem (SMART)
4. Patterns of marine eco-hazards and ecosystem health
5. Tectonics and magmatism, environmental and climatic evolution
6. Exchange and share data platform for marine geological processes and disaster reduction
7. Solutions to the Conflicts of Ocean Uses: Accelerate Marine Spatial Planning in Southeast Asian Countries
8. Research for sustainable blue economy in China and Southeast Asian Countries
9. Cooperation on Coastal Ecological Restoration and Management to Improve Coastal Resilience
10. Marine aquaculture and fisheries
11. Capacity building on technology transfer, training, and education

In the afternoon of Oct. 27th, the International Scientific Committee of the Forum was successfully held. Indonesia expressed the willingness to host the 8th China-Southeast Asian Countries Marine Cooperation Forum, and was approved by the International Scientific Committee.

The Agenda and participants lists are attached in Annex I and Annex II, respectively.

Annex I

The 7th China-Southeast Asian Countries Marine Cooperation Forum Agenda

October 26-27, Beihai, China

October 26 (Tuesday), 2021	
Morning (UTC+8 9:00-11:50)	
Time	Program
08:00-09:00	Registration
09:00-09:20	Opening Ceremony (1 st Floor, Beibu Gulf Grand Ballroom 一楼北部湾宴会厅) <i>Host: Zhanhai Zhang, Chief Engineer, Ministry of Natural Resources, China</i>
	Welcoming remarks by H. E. Dr. Hong Wang, Vice Minister of Ministry of Natural Resources, China
	Opening speech by H. E. Dr. Pornsri Suthanaruk, Deputy Director General of Department of Marine and Coastal Resources, Ministry of Natural Resources and Environment, Thailand
	Opening speech by H.E. Mr. Shiyong Huang, Vice Governor of Guangxi Zhuang Autonomous Region of China
09:20-09:50	Group Photo & Coffee Break
Plenary Session <i>Host: Prof. Tiegang Li, Director General of First Institute of Oceanography, China</i>	
09:50-10:10	Keynote speech by Prof. Fangli Qiao, Deputy Director General of First Institute of Oceanography, China (Title: For A Predicted Ocean of UN Ocean Decade: Challenges and Solutions)
10:10-10:30	Keynote speech by Ms. Sumana Kajonwattanakul, Director of Marine and Coastal Research and Development Institute, Ministry of Natural Resources and Environment, Thailand (Title: Challenges in marine and coastal resources management in Thailand)
10:30-10:50	Keynote speech by Dr. Nyoman Radiarta, Director of Marine Research Center, Ministry of Marine Affairs and Fisheries, Indonesia (Title: The Variability of Natuna-Off-Shelf Current and Its Relation with Fisheries and Marine Resources: As a New Proposal of

	Indonesia-China Ocean-Climate Joint Research)		
<i>Host: Dr. Li Li, Director of International Cooperation Department, First Institute of Oceanography, China</i>			
10:50-11:10	Keynote speech by Dr. Dao Viet Ha, Direct General of Institute of Oceanography, Vietnam Academy of Science and Technology, Vietnam (Title: Recent highlight researches in South China Sea from Vietnam--Marine Biology, Ecology and Environment)		
11:10-11:30	Keynote speech by Dr. Aimee T. Gonzales, Executive Director, PEMSEA (Title: Ocean governance, science and technology - progress and challenges in the EAS region)		
11:30-11:50	Keynote speech by the representative of Beihai Municipal People's Government (Title: Ecological Restoration Practice of Land and Sea Coordination and Active Implementation of Ocean Decade--Ecological Restoration Project of Beihai Coastal National Wetland Park (Fengjiajiang Basin))		
Afternoon (UTC+8 14:00-18:00): Parallel Sessions			
Session 1: Ocean and Climate Monitoring, Forecasting and Services (2 nd Floor, Weizhou Island Function Room#1, 二楼涠洲岛多功能1号厅)			
Convener: Nelly Florida Riama			
14:00-14:30	The marine heatwaves variations in South China Sea (Invited Talk)	Weidong Yu	Sun Yat-Sen University, China
14:30-15:00	The challenging on the improvement of ocean forecasting system (Invited Talk)	Andri Ramdhani	Agency for Meteorology Climatology and Geophysics, Indonesia
15:00-15:15	Capacity building under UN Ocean Decade: Past and Future	Xunqiang Yin	First Institute of Oceanography, China
15:15-15:30	Climate and Ocean: Variability, Predictability and Change (CLIVAR)	Liping Yin	CLIVAR Office, China
15:30-15:45	Malaysian Meteorological Department Marine Weather Forecasting System	Diong Jeong-Yik	Malaysian Meteorology Department, Malaysia
15:45-16:00	Development of the operational marine environment forecast system of 21st-Century Maritime Silk Road	Guimei Liu/ Benxia Li	National Marine Environmental Forecasting Center, China
16:00-16:20	Coffee Break		
Convener: Fredolin Tangang			
16:20-16:35	Inter-annual variation of Malacca Strait throughflow and controlling	Chalermrat	Department of Marine and Coastal

	mechanism	Sangmanee	Resources, Thailand
16:35-16:50	Current understanding of marine heatwaves and future research needs in the Bay of Bengal	Yun Qiu/ Xinyu Lin	Third Institute of Oceanography, China
16:50-17:05	Evolution of extreme Indian Ocean Dipole in 2019 and its impact on forest fire in Indonesia	Iskhaq Iskandar	University of Sriwijaya, Indonesia
17:05:17:20	Hypoxia in the East China Sea: A rising ecosystem issue varying with multiple drivers	Feng Zhou	Second Institute of Oceanography, China
17:20:17:35	Observed seasonal and tidal variability of sea level and current on Andaman Shelf	Chalermrat Sangmanee	Department of Marine and Coastal Resources, Thailand
17:35:17:50	Storm Surge Modeling in the Southern of Java using Coupled 4D-VAR Circulation-Waves Model	Khafid Rizki Pratama	Agency for Meteorology Climatology and Geophysics, Indonesia
Session 2: Marine Biodiversity and Ecosystem Protection (2 nd Floor, Weizhou Island Function Room#2, 二楼涠洲岛多功能 2 号厅)			
Conveners: Kongkiat Kittiwatanawong, Xuelel Zhang			
14:00-14:15	Assessing the genetic diversity of zooxanthellae associated with host coral species in Perhentian Island	Po Teen Lim	University of Malaya, Malaysia
14:15-14:30	Expansion of emerging HABs in Asian waters--opportunity for more cooperation between China and ASEAN countries	Douding Lu	Fourth Institute of Oceanography, China
14:30-14:45	Hypoxia-inducing microalgae blooms in the coastal ecosystem of Malaysia	Kieng Soon Hii	University of Malaya, Malaysia
14:45-15:00	Hypoxia in Thai waters: A Case Study of the Upper Gulf of Thailand	Khanittha Uthaipan	Xiamen University, Thailand
15:00-15:15	Morphological study of <i>Carukiidae</i> (Cubozoa), <i>Pelagidae</i> and <i>Lobonemidae</i> (Scyphozoa), and <i>Physaliidae</i> (Hydrozoa) from the coastal along the Andaman Sea and the Gulf of Thailand	Isara Arsiranant	Department of Marine and Coastal Resources, Thailand
15:15-15:30	Genetic diversity of the venomous jellyfish in Thai seawaters	Jie Xiao	First Institute of Oceanography, China
15:30-15:45	Description of the marine food webs in Brunei Bay as indicated by stable	Maizah Mohd	Universiti Malaysia Terengganu,

	isotopes analysis ($\delta^{13}\text{C}$ and $\delta^{15}\text{N}$)	Abdullah	Malaysia
15:45-16:00	Effect of dietary lipid levels on replacing fish meal with soy protein concentrate in golden pompano <i>Trachinotus ovatus</i> diet	Xing Ren	Fourth Institute of Oceanography, China
16:00-16:15	Coffee Break		
Conveners: Agung Dhamar Syakti, Sandric Leong Chee Yew			
16:15-16:30	Genetic diversity of dugong (<i>Dugong dugon</i>) along the sea coasts of Thailand	Korakot Nganvongpanit	Chiang Mai University, Thailand
16:30-16:45	Solving mysteries of sea turtle life history in the South China Sea	Mohd Uzair Rusli	Universiti Malaysia Terengganu, Malaysia
16:45-17:00	Bryde's whales (<i>Balaenoptera edeni</i>) in the Upper Gulf of Thailand and the Beibu Gulf, Photo-ID comparison	Patcharaporn Yaowasooth	Department of Marine and Coastal Resources, Thailand
17:00-17:15	Auto-detection of marine mammals from drone photos based on deep learning	Lu Sun	First Institute of Oceanography, China
17:15-17:30	Smart Perception of the Marine Ecosystem	Xuelei Zhang	First Institute of Oceanography, China
Conveners: Kongkiat Kittiwatanawong, Agung Dhamar Syakti, Sandric Leong Chee Yew, Xuelei Zhang			
17:30-18:00	Discussion		
Session 3: Marine Geological Processes and Disaster Reduction (2 nd Floor, Xingdao Lake Function Room#1; 二楼星岛湖多功能 1 号厅)			
Convener: Fernando Siringan			
14:00-14:20	Source-to-sink transport processes of fluvial sediments in the South China Sea: Progress and prospect	Zhifei Liu	Tongji University, China
14:20-14:35	Incidences of severe coastal erosion on the east coast of Peninsular Malaysia: Case study of Kelantan Delta and Kuala Nerus seaside	Edlic Sathiamurthy	Universiti Malaysia Terengganu, Malaysia
14:35-14:50	Morphological change in the northern Red River Delta, under increasing human interferences	Bui Van Vuong	Institute of Marine Environment and Resources, Vietnam

14:50-15:10	Coral boulder transport and gravel bar formation by storms in Lumaniag village, Batangas, northwestern Philippines	Fernando Siringan	University of the Philippines, Philippines
15:10-15:30	Development of artificial mangrove belt barrier for alleviating the effects of future sea-level rise in the upper Gulf of Thailand	Thanawat Jarupongsakul	Chulalongkorn University, Thailand
15:30-15:45	Coastal Landforms caused by deposition and erosion along the shoreline of Myeik area, Tanintharyi Region, Myanmar	Soe Moe Lwin	Dagon University, Myanmar
15:45-16:00	China-ASEAN Cooperation in marine sedimentology: Progress and prospects	Xuefa Shi/ Xin Shan	First Institute of Oceanography, China
16:00-16:20	Coffee Break		
Convener: Zhifei Liu			
16:20-16:35	Dynamic processes of the curved subduction system in Southeast Asia	Weiwei Ding / Xiongwei Niu	Second Institute of Oceanography, China
16:35-16:50	Tsunami sources in active tectonic setting: lessons learned from tsunami occurrences across Indonesian Archipelago during last two decades	Nugroho D. Hananto	National Agency for Research and Innovation, Indonesia
16:50-17:05	Cenozoic magmatism in the South China Sea	Quanshu Yan	First Institute of Oceanography, China
17:05-17:20	Hydrocarbon accumulation in an active accretionary prism, a case study in the deepwater Rakhine Basin, Myanmar offshore	Xiwu Luan	Qingdao Institute of Marine Geology, China Geological Survey, China
17:20-18:00	Discussion		
Session 4: Ocean Policy and Ocean Management (2 nd Floor, Xingdao Lake Function Room#2; 二楼星岛湖多功能 2 号厅)			
Convener: Zhiwei Zhang			
14:00-14:20	An overview of the implementation of coastal and marine spatial planning in Indonesia: an opportunity and challenge	Ario Damar	Department of Aquatic Resources Management - IPB University, Indonesia
14:20-14:40	MSP initiative in Thailand	Sakanan Plathong	Prince Songkhla Univeristy, Thailand

14:40-15:00	MSPglobal International Guide on Marine Spatial Planning and regional suggestions	Zhiwei Zhang	First Institute of Oceanography, China
15:00-15:20	China Marine Spatial Planning Approach and Its Application in Cambodia	Xin Teng	National Ocean Technology Center, China
15:20-15:40	Key success for marine and coastal resources management in Thailand	Chanokphon Jantharakhantee	Department of Marine and Coastal Resources, Thailand
15:40-16:00	Scenario Analysis in Marine Spatial Planning under Climate Change: Present Applications, Challenges and Trends	Shenghui Li	Shanghai Jiao Tong University, China
16:00-16:20	Coffee Break		
Convener: Sakanan Plathong			
16:20-16:40	Marine Spatial Planning in Phang-Nga Bay, South of Thailand	Phongtheera Buapet	Prince Songkhla University, Thailand
16:40-17:00	Blue economy initiative in Trad province, eastern coast of Thailand	Suthep Jualaong	Department of Marine and Coastal Resources, Thailand
17:00-17:20	Nature-based Solution for Coastal Resilience through Dune Restoration	Jianhui Liu	Third Institute of Oceanography, China
17:20-17:40	Evaluation of fisheries subsidies in Aceh Province, Indonesia	Muhammad Taisir Afrian	Universitas Syiah Kuala, Indonesia
17:40-18:00	The Development and Deficiencies of National Marine Park in China and Suggestions for Improvement	Mingjun Zhang	Ocean University of China, China
October 27 (Wednesday), 2021			
Morning (UCT+8 9:00-10:00): Parallel Sessions			
Session 1: Ocean and Climate Monitoring, Forecasting and Services (2 nd Floor, Weizhou Island Function Room#1, 二楼涠洲岛多功能1号厅)			
Convener: Daji Huang			

09:00-10:00	Discussion		
Session 2: Marine Biodiversity and Ecosystem Protection (2 nd Floor, Weizhou Island Function Room#2, 二楼涠洲岛多功能 2 号厅)			
Conveners: Agung Dhamar Syakti, Xuelei Zhang			
09:00-09:15	The 1 st microplastic survey in offshore of Andaman coastal of Thailand	Phaothep Cherdsookjai	Department of Marine and Coastal Resources, Thailand
09:15-09:30	Microplastic research in the South China Sea and importance of protocol standardization	Chengjun Sun	First Institute of Oceanography, China
09:30-10:00	Discussion		
Session 3: Marine Geological Processes and Disaster Reduction (2 nd Floor, Xingdao Lake Function Room#1; 二楼星岛湖多功能 1 号厅)			
Convener: Nugroho D. Hananto			
09:00-09:15	Impact of climate change in the forests for Cambodia	Kim Soben	Royal University of Agriculture, Cambodia
09:15-09:30	Tropical mangrove channel meander of Sungai Kerteh, Peninsular Malaysia	Hasrizal Bin Shaari	Universiti Malaysia Terengganu, Malaysia
09:30-09:45	Seawater intrusion and blue economy in coastal areas	Xingyong Xu	Fourth Institute of Oceanography, China
09:45-10:00	Discussion		
Session 4: Ocean Policy and Ocean Management (2 nd Floor, Xingdao Lake Function Room#2; 二楼星岛湖多功能 2 号厅)			
Conveners: Zhiwei Zhang, Sakanan Plathong			
09:00-10:00	Discussion		
October 27 (Wednesday), 2021			

Morning (UTC+8 10:00-12:00): Plenary Session		
10:00-10:30	Coffee Break	
10:30-12:00	Plenary Session (1 st Floor, Beibu Gulf Grand Ballroom 一楼北部湾宴会厅) <i>Host: Fangli Qiao</i> <i>Co-hosts: Sumana Kajonwattanakul, Daji Huang</i>	
	1. Session chairs report to the plenary (each 10 minutes)	
	2. Discussion	
	3. Closing Remarks	
Afternoon (UTC+8 14:30-17:30): ISC Meeting		
14:30-17:30	International Scientific Committee Meeting (By invitation only)	Visit the campus of the Fourth Institute of Oceanography (voluntarily)*

*Please contact Ms. Mingming Xie Tel: 17812166507

Annex II

Participants List

No.	Name	Affiliation	Nationality
1	Dara Sum	Ministry of Environment	Cambodia
2	Thav Sopheak	Royal University of Agriculture	Cambodia
3	Kim Soben	Royal University of Agriculture, Phnom Penh, Cambodia	Cambodia
4	Kim On Korn	Royal University of Phnom Penh	Cambodia
5	Sophat Seak	Royal University of Phnom Penh	Cambodia
6	Seak Sopath	Royal University of Phnom Penh, Cambodia	Cambodia
7	Andri Ramdhani	Agency for Meteorology Climatology and Geophysics (BMKG)	Indonesia
8	Dava Amrina	Agency for Meteorology Climatology and Geophysics (BMKG)	Indonesia
9	Nelly Florida Riama	Agency for Meteorology Climatology and Geophysics (BMKG)	Indonesia
10	Yosafat Donni Haryanto	Agency for Meteorology Climatology and Geophysics (BMKG)	Indonesia
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