



## **3rd International Conference on Quaternary and Future Earth: Harmonious Coexistence of Ocean and Humans**

(第三屆地球之第四紀與未來國際研討會：人類與海洋的和諧共存)

**National Taiwan Ocean University, Keelung, June 26-27, 2019**

### **Conveners:**

- **Min-Te Chen (Chief Convener)**

Institute of Geosciences / College of Ocean Science and Resource, National Taiwan Ocean University, Keelung, Taiwan

\*Secretary & Contact Person: Ms. Chia-Ju LIAO ([liaochiaju@gmail.com](mailto:liaochiaju@gmail.com))

### **Organized and Sponsored by:**

- The Ministry of Science and Technology (MOST)
- The Earth Science Research Promotion Center (ESRPC)
- National Taiwan Ocean University (NTOU)
- Taiwan Ocean Research Institute (TORI)

### **Program Committee:**

The program committee will be composed by the chief convener and appointed members from the College of Ocean Science and Resource of NTOU. The chief convener and program committee will be responsible for reviewing all submitted abstracts and drafting the agenda, and the final report of the workshop. The chief convener will be responsible for submitting proposal of publishing special issue in high quality international journals.

### **Conference Objectives and Expected Impacts:**

The main objective of the proposed **3rd International Conference on Quaternary and Future Earth: Harmonious Coexistence of Ocean and Humans** is to bring together a diverse group of researchers who study geological/biological and oceanographic studies, earth and ocean environmental changes, anthropogenic and human settlements in the western Pacific and East Asia, coastal and marine environmental studies, terrestrial and earth processes, biosphere, human history, geography and anthropology, and past and future perspectives of earth and ocean environmental changes since early Quaternary (~2.6Ma). Our recent science findings indicate that the health of the oceanic Earth and the health of humans are highly coupled. Though sustaining life could be in a variety of different ways, oceans provide us, in fundamental, with the air we breathe, the food we eat, even some of the medicines we use to cure disease. Moreover, the oceans are honest recorders

for long-term, past earth climate and environmental history that allows us to distinguish anthropogenic impacts from natural variability over various time scales from deep time in the past to the future. However, imbalance in the oceans can have deleterious effects on human health and our utilizations of marine organic and inorganic resources. In particular, ocean acidifications caused by the increased atmospheric  $p\text{CO}_2$ , melting of continental ice sheets and rising sea levels, and proliferation of harmful algal blooms and pathogenic micro-organism pollution can cause human illness or, in acute cases, death, while also wreaking economic havoc through beach and fishery closures. Understanding this corollary between the health of the ocean and our own, policymakers and researchers sought to emphasize an inter-disciplinary approach in studying this important relationship, pairing geologists and oceanographers and other scientists with environmental and bio-geological expertizes.

National Taiwan Ocean University (NTOU) is now one of main body to promote the ocean and earth environmental science in Taiwan. The ocean and earth environmental research is a multi-disciplinary science focused on the past and future perspectives of Earth and the future. The inter-disciplinary approach could flourish this particular type of scientific research, and echoes the global scientific communities such as INQUA, PAGES, Future Earth, etc. Currently, scientists from geological/biological and oceanographic studies, earth and ocean environmental changes, anthropogenic and human settlements in the western Pacific and East Asia, coastal and marine environmental studies, terrestrial and earth processes, biosphere, human history, geography and anthropology in Taiwan all work in a cooperative effort in a form of international conference to promote this multi-disciplinary research program that would advance our understanding on human health and its relevance to oceanographic and geological/biological research. NTOU had initiated a successful 1st and 2nd conferences of such in 2016 and 2017. This conference, in order to better attract participants from the countries other than Taiwan, proposes to invite active scientists from **Southeast Asia** with a hope to further expansion of the scope of the conference in the next few years. This time, in particular, we invited faculty members from the School of Marine and Environmental Sciences, **Universiti Malaysia Terengganu (UMT)**, Malaysia to increase cooperation on marine and earth environmental sciences between Malaysia and Taiwan. We plan to hold a series of conferences mainly focusing on better integration of new findings of geological and oceanographic studies, earth and ocean environmental changes, anthropogenic and human settlements in the western Pacific and East Asia, coastal and marine environmental studies, terrestrial and earth processes, biosphere, human history, geography and anthropology, and past and future perspectives of earth and ocean environmental changes since early Quaternary.

The invited speakers will be selected from Southeast Asia and also Japan and Europe. We will plan to invite more international and domestic speakers from Taiwan and other international countries through supports of the other channels to increase the visibility and impact of western Pacific from the multi-disciplinary geological and oceanographic studies, earth and ocean environmental changes, anthropogenic and human settlements in the western Pacific and East Asia, coastal and marine environmental studies, terrestrial and earth processes, biosphere, human history, geography and anthropology, and past and future perspectives of earth and ocean environmental changes since early Quaternary research results to be presented in the conference.

### **Conference Dates:**

- June 26-27, 2019 (plus 0.5 day optional post-conference field trip)
- June 25: Arrival to Keelung (International participants)
  - June 26: Meeting (2 keynote speeches, invited oral, poster presentations), and banquet dinner
  - June 27: Meeting (2 keynote speeches, invited oral, poster presentations, with 0.5 day post-conference field trip to the northeast coast to observe neo-tectonics and sea-eroded geological features, and dinner in Taipei city (back to Keelung Kodak Hotel at night)
  - June 28: Departure for your home town (international participants) or personal trip

### **Format and Schedule:**

The meeting will span 1.5 days (June 26-27, 2019), with 0.5 day post-conference field trip (June 27, 2019) to northeastern coastal areas to observe the evidence of neo-tectonics and sea-eroded geological features, and past sea level changes from coral terrace. We will spend 1.5 days in June 26-27, 2019 for keynote, oral and poster presentations from invited speakers and attendants from both international and domestic. The following themes will be highlighted, but not exclusively in the workshop:

- 1. Geological, biological and oceanographic studies on Quaternary western Pacific and East Asia;**
- 2. Historical background of anthropogenic and human settlements in the western Pacific and East Asia;**
- 3. Biogeography and endangered biological species;**
- 4. Ecosystem sustainability and environmental pollution;**
- 5. Marine resource and future green energy.**

### **Abstract Submission and Registration:**

One page abstract (in English or Chinese, 1 page, no format); Submission Deadline: **June 1, 2019**; and please contact the meeting secretary Ms. Chia-Ju LIAO ([liaochiaju@gmail.com](mailto:liaochiaju@gmail.com)) if you want register the meeting and submit abstracts. **No registration fee** is planned for the conference.

### **Field Trip:**

0.5 day post-conference field trip (June 27, 2019) to northeastern coastal areas to observe the evidence of anthropogenic impacts to natural coastal environments, industries of local fishery and mineral resources, and past sea level changes from coral terrace will be arranged. Detailed of the field trip program will be announced later. Participants must pay for the expenses of the field trip by themselves (~100USD) If you want to participate, please inform the meeting secretary Ms. Chia-Ju LIAO ([liaochiaju@gmail.com](mailto:liaochiaju@gmail.com)) no later by **June 1, 2019**.

**Accommodations:**

All international participants will be arranged to live in Keelung Kodak Hotel (柯達大飯店)(<http://keelung.khotels.com.tw/en/> ). We have booked a block of hotel rooms with special discount rate of during the conference week. Please contact Ms Chia-Ju LIAO ([liaochiaju@gmail.com](mailto:liaochiaju@gmail.com)) if you want to book hotel rooms for attending this conference as early as possible.

**Travel and transportation:**

The conference will take place in June 26-27, 2019 at The Second Auditorium (第二演講廳) in Administration Building of National Taiwan Ocean University (NTOU), Keelung. The Keelung City is located at the northern coast of Taiwan. The connection between Taiwan Tao-Yuan International Airport and Keelung is one hour and 15 minutes by driving. More detailed logistics will be announced later. Our meeting secretary will arrange airport pickup service for invited international speakers. Please contact the meeting secretary and inform your arrival and departure flight information.