



INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION  
COMMISSION OCÉANOGRAPHIQUE INTERGOUVERNEMENTALE  
COMISIÓN OCEANOGRÁFICA INTERGUBERNAMENTAL  
МЕЖПРАВИТЕЛЬСТВЕННАЯ ОКЕАНОГРАФИЧЕСКАЯ КОМИССИЯ  
اللجنة الدولية الحكومية لعلوم المحيطات  
政府间海洋学委员会

IOC Sub-Commission for the Western Pacific (WESTPAC), c/o the Department of Marine and Coastal Resources of Thailand  
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## CONCEPT PAPER

*(Draft v.2, dated 23 June 2018)*

The Second WESTPAC Workshop on  
**Distribution, Source, Fate and Impacts of Marine Microplastics in Asia and the Pacific**  
15-17 October 2018, East China Normal University, Shanghai, China



The UNESCO/IOC Sub-Commission for the Western Pacific (WESTPAC) and the East China Normal University (ECNU) are pleased to invite you to join this event that will take place on **15-17 October 2018**, Shanghai, China.

### 1. About the event

Plastic is the most prevalent type of marine debris found in our coasts and ocean. Microplastics (MPs) are small pieces of plastic, commonly defined as less than 5 millimeters in diameter/length. Because of their very tiny size and ubiquity in marine environment, MPs could be ingested and accumulated in the bodies of many marine organisms such as mammals, sea birds, sea turtles, fishes and invertebrates. As MPs absorb and efficiently concentrate toxic persistent organic pollutants (POPs) present in sea water, these may also become bioavailable to the ingesting organisms. Transfer of microplastics along the trophic chain can potentially reach human consumers of seafood. In recent years, the world has seen mounting concerns over microplastics in ocean environment and its potential effects on biodiversity, food security, and human health.

Considering the limited scientific knowledge on the generation, movement and fate of microplastics in marine environment and their ecological impacts, the IOC Sub-Commission for the Western Pacific (WESTPAC) established, at its 11th Session (21-23 April 2017, Qingdao, China), a programme that aims to establish a marine microplastics monitoring and research network; and develop joint-monitoring and research efforts to study and mitigate MPs in the region, in order to understand the sources, distribution, fate and effects of marine MPs in the Western Pacific and its adjacent regions.

The inception workshop was held on 20-22 September 2018, in Phuket, Thailand with the participation of more than 50 experts from 10 countries in the region. Participants reviewed the current status of plastics and microplastics pollution at global, regional and local level, and examined existing methods and protocols for sampling and laboratory analysis of MPs. Following the presentations on MPs research and monitoring efforts in respective institutions and countries, all participants agreed that harmonizing standard operating procedures in the region for sampling and analysis for MPs in beach, surface water and marine biota would be an important first step.

As an initial step, more than 50 sites (beach) were proposed by participants to join this programme, with samples to be taken in accordance with the draft SOPs in beach sediment that has been elaborated at the workshop. Meanwhile two working groups were established with one on development of SOPs for microplastics in surface water, and the other on marine organism to keep strengthening the established network of scientists who are interested in studying the effects of microplastics in marine organisms. All participants also decided to conduct the 2<sup>nd</sup> workshop in late 2018.

The East China Normal University (ECNU), founded in Shanghai in 1951, is one of the most prestigious public research universities in China. The Plastic Marine Debris Research Center of the East China Normal University serves as China's first research and the most advanced center dedicated to monitoring technologies, ecological impact assessment, management and control of marine plastic and microplastic pollution. With advanced equipments and technology for marine plastic and microplastic research, the Center carries out comprehensive scientific research on oceanography, chemistry and biology related to the life processes of marine plastic and microplastics.

## **2. What we aim to achieve?**

The first day will be dedicated to a microplastics science symposium, with invited presentations on the latest research findings on microplastics, its research or assessment approaches, methods, and techniques, and its impacts at global, regional and local scales. This symposium will also be an opportunity for participants to share their latest research results and to explore new opportunities of collaborative research in the region.

The 2<sup>nd</sup> and 3<sup>rd</sup> day will be a follow up to the inception workshop (20-22 September 2017, Phuket, Thailand), with objectives to finalize, with feedbacks to be received from the pilot sites, the draft standard method for microplastic sampling and analysis in beach sediment; to develop a harmonized microplastic sampling and analysis protocol in surface water; to review the progress made since last year in the pilot sites and by two working groups (microplastics in surface water and marine organisms); to examine strengths, challenges and lessons learned from the programme implementation in the past; and to explore partnership building opportunities and future research directions, while taking into account the results generated from the science symposium on the first day.

## **3. Who will participate?**

The microplastic science symposium will convoke experts, researchers, students, government representatives from within and outside the region, and is open to the global community interested in acquiring a regional and global knowledge about the microplastic research, monitoring in the region.

In addition to invited experts for the science symposium, most participants will be invited from among the participants in the inception workshops, particularly those who are conducting monitoring and research in their selected pilot sites.

Other participants who are interested to join the network or develop collaborations, will be welcome. Again, they should have experience conducting microplastics related research and monitoring, and/or be able to lead and carry out monitoring and research in their countries for moving forward.

## **4. How to register or apply financial assistance**

For anyone who is interested to join the event, please fill in the attached Registration Form.

There is a very limited resource in support of the international travel of some colleagues, particularly those from the developing states. A joint committee will be established to select the most

suitable participants that would be provided financial support. The selection will be made mainly based on **the applicant's CV, his/her work experience, and his/her engagement in WESTPAC or other relevant international programmes**. Updated information on the workshop will be made available, in due course, at the WESTPAC website (<http://iocwestpac.org> )

Please submit registration forms duly completed to Ms Nachapa Saransuth ([n.saransuth@unesco.org](mailto:n.saransuth@unesco.org) ) and Ms Lu Wang ([lwang@sklec.ecnu.edu.cn](mailto:lwang@sklec.ecnu.edu.cn) ) as early as possible, with a copy to [w.zhu@unesco.org](mailto:w.zhu@unesco.org), preferably before **26 July 2018**.