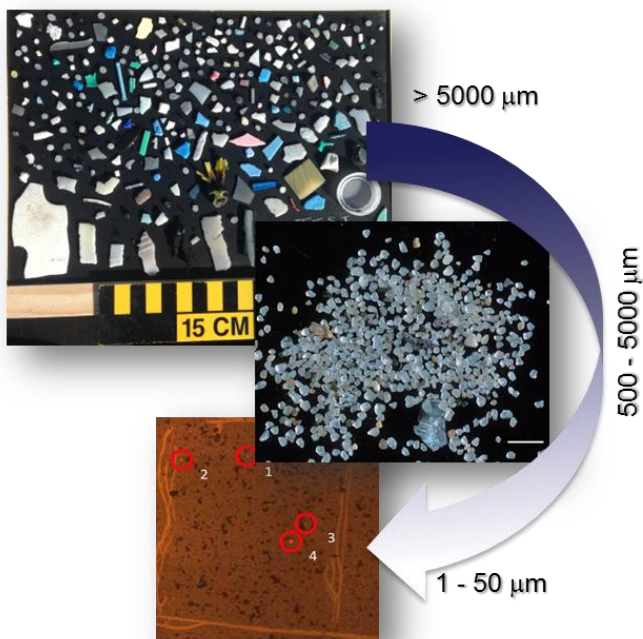


Expert Workshop on

Microplastics in the Water Environment

18 (arrival) - 22 (departure) August 2019, Thailand



Background

Today plastic materials are present in nearly all spheres of modern life, starting from simple packaging, clothes containing synthetic fibers, containers, drinking bottles and tyres to various life-supporting medical equipment. Their manufacture, use and discharge have significantly increased the amount of plastic waste, including plastic marine litter in oceans which is detrimental to the ecosystems and human health. When improperly managed, plastics can make their way into the aquatic environment. Single use plastic makes up approximately 80-85% of the total number of marine litter items, measured through beach counts. Global Plastic Production is raising rapidly. By 2030 the world may produce 619 million tonnes of plastic every year. Marine litter and microplastics are having a great impact on global environment and human health. How to improve reuse and recycling, minimize plastic waste and promote plastic alternatives, have received much attention recently for the purpose of controlling plastic litter in the freshwater and marine ecosystems.

A further threat is not only the size (< 5 mm) or the physical property but also the chemicals and micro-organisms bound to the MPs that have toxic impacts on both aquatic and terrestrial species. Not to mention that the toxic impacts can be realized throughout the world via globalization and trading of food. Research related to MPs is at its infant stage and thus is facing a number of un-knowns and incompletely answered questions. Most of known literature studies are concentrated in the Northern hemisphere (Europe, North America, etc.) but very few studies are known in the Southern hemisphere for example, Asia or Africa. In addition, most of the investigations were carried out in marine ecosystem, however, the main source of MP pollution actually originates from terrestrial and freshwater ecosystems. Until today, no reliable inventory of MP pollution of rivers, estuaries, and sediments has been carried out in order to assess the current state and subsequent health risk to human and other living organisms.

Objectives

The objectives of this expert workshop are:

- To provide the participants with state-of-the-art knowledge of microplastic pollution and its related implications;
- To identify and deliberate upon the research needs and concepts against the background of increasing threats to ecosystems, wildlife, and human health.

Topics

The main topics will be:

- Life Cycle Assessment of Plastics
- Distribution, Sources and Abundance of Microplastics
- Monitoring of Microplastics
- Regulation and Management of Plastic Waste and Microplastics
- Political and Environmental Dimension for Prevention of MPs Pollution
- Ecological and Social Impacts/Risks of Microplastics
- Microplastics (e.g. microbeads) in Manufactured Products and Emissions to the Environment
- Knowledge Gaps and Research Priorities about Microplastics
- Removal Technologies for MPs from Aqueous Environment with special focus on Water and Wastewater Treatment Plants
- Analytical Methods for MPs Analysis and Standardization

Expected Outcomes

At the end of the expert workshop, participants will

- Have an improved understanding of microplastic genesis and threatening impact on ecosystem, wildlife and human beings
- Have obtain a holistic view on the microplastic problem and its inherent risk potential and negative impacts
- Have identified potential areas/topics for research on microplastic pollution and standardization in microplastic characterization and analysis
- Network establishment in the field of microplastic research

SCHEDULE

Day	Date	Activity
Sunday	18.08.2019	ARRIVAL
Monday	19.08.2019	Keynote Oral presentation of participants
Tuesday	20.08.2019	Keynote Oral presentation of participants
Wednesday	21.08.2019	Summary, Closing / Field trip
Thursday	22.08.2019	Departure

Target Audience:

The target participants of this workshop are experts from universities, state research institutions, and state agencies, who are doing research and work in the field that is related to the topic of this expert workshop. Further, all associate and full exceed-Swindon members, who are interested in this field and do research, are addressed as well.

Number of participants:

The number of participants is limited to 40-45.

Submission of paper:

For extended abstract paper submission please carefully read and use the following template: [Template for Abstract](#) .

The abstract has to be submitted with the application. Selected applicants are asked to submit a full paper till 09 August 2019.

Workshop Book Series:

The authors of the accepted presentations (based on the abstracts submitted) are also requested to submit a full paper and copyright agreement. The authors are further requested to prepare the full paper according to the guidelines below. **The full papers will be published in an international journal or in form of a book with ISBN number.**

Guidelines for paper submission:

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Template for Abstract

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Application:

Please apply online until **18 April 2019** under:
<http://sea.exceed-swindon.org/apply-workshop-conference/>

Each candidate will be informed about the outcome of his/her application **until 28 April 2019**.

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Contact Institutions:

Organisational:

Dr. Mukand Babel
Professor
Km 42, Paholyothin Highway, PO Box 4, Klong Luang, Pathumthani
12120 Thailand, msbabel@ait.asia

Contentual:

Dr Sandhya Babel
Professor
School of Biochemical Engineering and Technology
Sirindhorn International Institute of Technology
Thammasat University
PO Box 22, Pathumthani 12121, Thailand, sandhya@siit.tu.ac.th

Dr. Alice Sharp
Environmental Science Research Centre, Faculty of Science,
Chiang Mai University
alice.sharp@cmu.ac.th

Venue:

Island of Koh Samui / Thailand (Hotel will still be announced).

TU Braunschweig EXCEED Head Office:

Prof. Dr. Andreas Haarstrick
Scientific Coordinator
Excellence Center for Development Cooperation
Sustainable Water Management
Beethovenstraße 51a
D-38106 Braunschweig, Germany
Email: coordination-exceed@tu-braunschweig.de
Tel.: +49 531 391 3935

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