

MICROPLASTICS WORKSHOP REPORT





Prepared By : Green Growth Asia Foundation

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EXECUTIVE SUMMARY

INTRODUCTION

On 18th November 2024, students from attended Microplastic Langkawi a Awareness Workshop at SK Temonyong, organized by GGAF and led by Associate Professor Dr. Sarva Mangala Praveena from UPM, with support from The Datai Pledge. The workshop focused on the sources and impacts of microplastic pollution on ecosystems, highlighting the urgent need to reduce plastic waste.

During the workshop, students engaged in activities that demonstrated how microplastics affect water quality and wildlife. They explored practical solutions to minimize their environmental impact, gaining the knowledge and tools to become advocates for environmental conservation in their communities.



VALUE PROPOSITION

PROGRAMME OVERVIEW



18 November 2024



8:30 AM - 14:00 PM



Sekolah Kebangsaan Temonyong

28 Orang Murid 7 Orang Guru



Problem-Solving Skills



Real-World Application

E

Environmental Advocacy



Understanding Microplastic Polllution

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PARTNERS & SPONSORS



THE DATAI PLEDGE



The Datai Pledge was a key enabler in the success of the Mlicroplastic Workshop, providing essential funding that significantly supported the implementation of impactful conservation and sustainability initiatives. Their generous contribution made it possible to deliver an enriching experience, furthering the goals of environmental education and active community engagement.



UNIVERSITY PUTRA MALAYSIA

Universiti Putra Malaysia was a key trainer for the Microplastic Workshop, providing expertise that enriched participants' understanding of environmental conservation and sustainable practices through well-designed training modules.



GREEN GROWTH ASIA FOUNDATION

The Green Growth Asia Foundation coordinated the Microplastic Workshop, managing all planning and execution details. Their thorough preparation of materials ensured the workshop was engaging and provided participants with valuable knowledge and tools for sustainability efforts.



WORKSHOP OBJECTIVES



To enable students to identify and understand the various sources of microplastic pollution in water, such as plastic waste from household items, industrial activities, and runoff from urban areas.



To help students explain the impacts of microplastic pollution on aquatic ecosystems, including the effects on marine life, food chains, and human health.



To ensure students understanding on methodology to analyze microplastics and the characteristics of microplastic particles in water.

DEMOGRAPHIC ANALYSIS



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PROGRAMME HIGHLIGHTS



As part of the workshop activities, each participating school brought three types of water samples representing different environments: river, lake, and sea. In their groups, participants engaged in discussions to identify and understand the potential sources of microplastics specific to each water source. This collaborative exercise encouraged critical thinking and the sharing of about environmental knowledge factors contributing to microplastic pollution.

The workshop began with an insightful session by Dr. Praveena, who shared her knowledge on microplastics. Dr. Praveena introduced the concept of discussed microplastics, their explained sources, and their aquatic life impact and on Her ecosystems. presentation provided a strong foundation for the subsequent activities, emphasizing how microplastics affect our daily lives and the environment.



PROGRAMME HIGHLIGHTS

The atmosphere in the workshop shifted to one of curiosity and collaboration. With Dr. Praveena's guidance, participants observed and assisted in the filtration process to isolate microplastic particles from the water samples. Dr. Praveena demonstrated the proper techniques, and each group helped filter the water, collecting the microplastic residue on filter paper.





Participants conducted hands-on filtration activities, allowing them to apply practical techniques for isolating and examining microplastic particles from the water samples. This step provided valuable insights into the prevalence of microplastics in various environments emphasized and the importance of monitoring and addressing pollution at the source.

Once the filter papers had dried, participants examined them under a microscope to identify the presence of microplastics. A noticeable sense of curiosity and focus as they carefully studied the samples. Many participants expressed a mix of surprise and concern as they observed the microplastics, while others showed excitement as they documented their findings by sketching the microplastics they saw. This hands-on activity sparked thoughtful discussions and reflection.



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POST-PROGRAMME ANALYSIS



MICROPLASTIC KNOWLEDGE

According to our survey, there was a 66% increase in participants' understanding and knowledge after the program, indicating significant gains in awareness. This increase reflects a deeper understanding of the definition of microplastics, sources of microplastic pollution as well as their impact on the environment and human health







UNDERSTANDING LEVEL

The graph shows that most participants rated their understanding as strong, with 29 scoring levels 4 and 5, indicating the workshop improved comprehension. However, 6 participants rated their understanding at levels 2 and З, highlighting areas for growth in supporting those who struggled. These findings identify the workshop's strengths and opportunities for enhancing its impact.

POST-PROGRAMME ANALYSIS

Is Microplastic Harmful to Human and Animals?

PLASTIC POLLUTION AWARENESS

According to our survey, 97.1% of participants recognized that microplastic pollution poses significant harm to humans and animals, highlighting the workshop's effectiveness in awareness and delivering raising kev information. The high percentage reflects the program's success in enhancing participants' awareness. However, the some "maybe" presence of responses suggests that a few participants require further clarification, indicating room for improvement in ensuring all attendees fully grasp the concepts presented.





POLLUTION SOURCE IDENTIFYING

of In one the survey questions, participants were asked to identify the different sources of plastic pollution in water through a multiple-choice format. The results showed that the majority of participants were able to accurately differentiate between various sources of plastic pollution. This indicates that the workshop effectively communicated critical information about the origins and contributors to plastic contamination in aquatic environments. The ability of participants to distinguish these sources highlights the success of the program in enhancing their understanding of this issue, which is crucial for developing awareness and promoting informed actions to address plastic pollution.

POSITIVE IMPACTS

K Enhanced Awareness of Microplastic Pollution

The workshop provided а comprehensive understanding of microplastic pollution, its sources, prevalences, and impacts on marine ecosystems, biodiversity, and human health. This knowledge supports efforts aligned with SDG 14: Life Below Water and SDG 12: Responsible Production, Consumption and encouraging participants to approach environmental challenges with an informed perspective.

Practical Skills in Sampling and Analysis

Participants gained hands-on experience in sampling and analysing microplastics using scientific tools and methods. Activities like samples and observing filtering water microplastics under a microscope effectively connected theory with practice. Feedback suggested that additional equipment, such as microscopes, would enhance more group engagement and efficiency.

) Empowering Sustainable Behaviour

The workshop inspired participants to adopt sustainable practices, such as reducing singleuse plastics, promoting recycling, and advocating for eco-friendly alternatives. These actions foster long-term behavioural change and community-driven solutions to plastic pollution.

Effective Facilitation

Facilitators, especially Associate Professor Dr Sarva Mangala Praveena, were praised for their clear guidance, deepening participants' understanding and ensuring an engaging learning experience. Participants described the workshop as interactive, valuable, and impactful.







CONCLUSION



The microplastics workshop, supported by The Datai Pledge and guided by the expertise of Associate Professor Dr. Sarva Mangala Praveena from Universiti Putra Malaysia (UPM), provided participants with essential knowledge and practical skills to address a critical environmental challenge. Expert-led discussions and hands-on activities, such as water filtration and microscope analysis, enabled attendees to connect theoretical concepts with real-world applications, deepening their understanding of microplastic pollution and its impacts on ecosystems and human health. The interactive format fostered a dynamic learning environment, encouraging active engagement and collaboration among participants.

Valuable feedback underscored the workshop's strengths and highlighted areas for improvement, such as increasing the availability of microscopes for simultaneous group analysis and incorporating relatable activities, like examining microplastics in everyday items. These insights will guide future enhancements, ensuring workshops remain impactful, engaging, and practical. With the continued collaboration of esteemed partners like UPM and The Datai Pledge, we remain committed to empowering participants to take meaningful action toward sustainability and to fostering a collective effort to combat microplastic pollution.

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