EU-ASEAN Webinar Series

GREENTECH AND INNOVATION MAPPING Dialogue
Green Technologies for Plastic Value Chain Management

Webinar Series 5: *Innovative Approaches in Managing Plastic Wastes in the Marine Environment*

24 June 2021 I 15:30 - 18:00 (GMT+8) I Online Event

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(see available materials about the Webinars in this website)

Programme
draft as June 18, 2021

Time	Program/Activity	Resource Speaker/ Person In-Charge
3:15 - 3:30 PM *(9:15 – 9:30 AM CET)* (15 min)	Registration/ Log-In	Zoom Participants
Opening Session		
3:30 - 3:35 PM *(9:30 – 9:35 AM CET)* (5 min)	Welcoming Remarks	**Mr. Crispian Lao** Commissioner and Vice Chairman**,** National Solid Waste Management Commission (NSWMC), Philippines
3:35 - 3:40 PM *(9:35 – 9:40 AM CET)* (5 min)	Opening Remarks	**Dr. Mego Pinandito** National COSTI Chair Indonesia, Ministry of Research and Technology, Indonesia
3:40 – 3:45 PM *(9:40 – 9:45 AM CET)* (5 min)		**Pierrick Fillon-Ashida** ASEAN Desk Officer, European Commission Directorate General for Research and Innovation (DG RTD)
3:45 - 3:50 PM *(9:45 – 9:50 AM CET)* (5 min)	EU-ASEAN GreenTech & Innovation Mapping Dialogue: Introduction and Rationale	Dr. Michael Braun Project Coordinator, GreenTech and Innovation Mapping
SESSION 1: Advances in Managing Plastic Wastes in the Marine Environment		
3:50 - 4:00 PM *(9:50 – 10:00 AM CET)* (10 min)	Macroplastics under the microscope: a holistic picture from riverine litter inputs to the most frequent items populating our ocean	**Dr. Daniel González Fernández** Research Scientist, Department of Biology, Universidad de Cadiz, Spain
4:00-4:10 PM *(10:00 – 10:10 AM CET)* (10 min)	Examples of Innovation and Technologies in Managing Marine Plastic Wastes	**Dr. Suchana Apple Chavanich** Professor, Department of Marine Science Chulalongkorn University, Thailand
4:10 – 4:20 PM *(10:10 – 10:20 AM CET)* (10 min)	***TOPIOS:** Tracking of Plastic in our Seas	**Dr. Laura Gomez Navarro** Assistant Professor, Institute for Marine and Atmospheric Research, University of Utrecht, The Netherlands

4:20 – 4:30 PM *(10:20 – 10:30 AM CET)* (10 min)	**SEAMAP** (South East Asia Marine Plastics): Reduction, Control, and Mitigation Marine Plastic Pollution in the Philippines	**Dr. Christian Dunn** Project Co-investigator, School of Ocean Sciences Bangor University, Northern Wales, United Kingdom
4:30-4:40 PM *(10:30 – 10:40 AM CET)* (10 min)	Panel Discussion and Open Forum (Q&A Session)	Moderator
4:40 - 4:45 PM *(10:40 – 10:45 AM CET)* (5 min)	**Health Break**	
SESSION 2: Responding to Challenges in Managing Plastic Wastes in the Marine Environment		
4:45 - 4:55 PM *(10:45 – 10:55 AM CET)* (10 min)	***UPCLYCLING THE OCEANS:** High quality products made from marine plastic litter	**Ms Irene Diez Ruiz** General Manager, ECOALF Foundation, Spain
4:55 -5:05 PM *(10:55 – 11:05 AM CET)* (10 min)	Singapore's Response to the Challenges in Managing Plastic Wastes in the Marine Environment	**Dr. Narasimalu Srikanth** Program Director and Principal Research Scientist, ERI@NTU, Nanyang Technological University, Singapore
5:05 - 5:15 PM *(11:05 – 11:15 AM CET)* (10 min)	***GOJELLY:** A gelatinous solution to plastic pollution	**Dr. Jamileh Javidpour** Assistant Professor, Department of Biology, University of Southern Denmark
5:15 – 5:25 PM *(11:15 – 11:25 AM CET)* (10 min)	*Lao's Challenges in Managing Plastic Wastes in the Environment*	**Dr. Khandala Khamphila** Lecturer, Faculty of Agriculture and Forestry, Champasack University, Lao People's Democratic Republic
5:25 – 5:35 PM *(11:25 – 11:35 AM CET)* (10 min)	Rethinking Plastics- Circular Economy Solutions to Marine Litter	**Ms. Lena Kampe** Key Expert, Pollution Control Department, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Bangkok, Thailand
5:35 – 5:45 PM *(11:35 – 11:45 AM CET)* (10 min)	Panel Discussion and Open Forum (Q&A Session)	Moderator
KEY FLASH GUEST		
5:45 - 5:50 PM *(11:45 – 11:50 AM CET)* (5 min)	**KEY FLASH Guest:** *Green Hub – Center for Supporting Green Development*	**Ms. Trang Nguyen Thi Thu** Co-founder and Deputy Director, GreenHub, Hanoi, Vietnam
Closing Session		
5:50 - 5:55 PM *(11:50 – 11:55 AM CET)* (5 min)	Brief Overview of EU Initiatives: SouthEast Asia-Europe Joint Funding Scheme (JFS) for Research and Innovation	**Dr. Adele Clausen** Scientific Officer, International Bureau, Federal Ministry of Education and Research, Germany
5:55 – 6:00 PM *(11:55 – 12:00 noon CET)* (5 min)	Closing Remarks	**Pierrick Fillon-Ashida** ASEAN Desk Officer, European Commission Directorate General for Research and Innovation (DG RTD)
Moderator		

Prof. Dr. Evelyn B. Taboada
Senior NK Expert, EU-ASEAN GreenTech & Innovation Mapping Dialogue

Master of Ceremonies (Emcee)
Dr. Noel Peter B. Tan
Visiting Scientist, Philippine Council for Industry, Energy, and Emerging Technologies Research & Development (PCIEERD)
Department of Science and Technology

*SPECIAL TALKS: HIGHLIGHTED EU HORIZON 2020 PROJECTS and ITS ABSTRACTS

TOPIOS: Tracking of Plastic in our Seas The amount of plastic in our ocean is exponentially growing, with recent estimates of more than 5 million metric tonnes of plastic reaching the ocean each year. This plastic infiltrates the ocean food chain and thus poses a major threat to marine life. However, understanding of plastic movement and its budget in the ocean is inadequate to fully establish its environmental impact, prompting the EU and G7 to recently make marine litter a top science priority. It is now recognised that the amount of plastic entering our ocean is several orders of magnitude larger than the estimates of floating plastic on the surface of the ocean. More than 99% of plastic within our ocean is therefore 'missing'. This project will make breakthroughs towards closing the plastic budget by creating a novel comprehensive modelling framework that tracks plastic movement through the ocean. Building on well-established previous work to follow generic water parcels through hydrodynamic ocean models, this project will modify these 'virtual' parcels to represent pieces of plastic by, for the first time, simulating fragmentation, sinking, beaching, wave-mixing and ingestion by biota. The new parameterisations that underpin this modelling will be based on field data and new coastal flume wave tank lab experiments. The simulated plastic particles will be tracked within state-of-the-art hydrodynamic ocean models, in order to compute maps of pathways and transports around our oceans and on coastlines and in biota. This numerical modelling will be used to evaluate a broad suite of scenarios and test hypotheses, including where the risk to marine biota is greatest. The results from this project will inform policymakers and the public on which countries, for example, are responsible for which part of the plastic problem, crucial for mitigation and legal frameworks. It will also inform engineers on where and how to best invest resources in mitigating the problem of plastic in our ocean.

UPCYCLING THE OCEANS: High quality clothes made from marine plastic litter. ECOALF is an SME that design and market high quality textile products and accessories made of recycled materials (bottles, fishing nests, tyres, coffee, cotton...).The main objective of the UPCYCLING THE OCEANS project is to produce and sell fabrics and clothes made from marine plastic litter, by recycling and industrial methods to convert these plastics into high properties textiles. European seas contain many tons of waste, mainly plastic (around 400 kg per km2). This plastic litter has a very negative impact in the marine environment even affecting the food chain (potentially triggering endocrine and/or carcinogenic processes).To contribute to mitigate this problem ECOALF proposes to implement a collaborative scheme with fishermen's organisations (agreements already signed) to collect plastic from seas; to implement an industrial process that includes waste management, pellets production and additivation, spinning and fabrics, and clothes manufacturing; and to distributions and marketing the new products in Europe. To that end ECOALF proposes a feasibility study:-To analyse the economic feasibility of the initiative (production cost, volume of sales, incomes; relevant economic indicators; sensitive analysis).-To identify logistical needs to obtain the marine plastic litter and to establish a mechanism to provide the consumer with a reliable Guarantee of Origin (GoO) that reflects that the clothes are made 100% from plastic waste and which percentage is from marine origin.-To ensure the technical feasibility to additivate properly the flakes to obtain pellets that fulfil with ECOALF

fabrics requirements. To define the adequate terrestrial / marine mix to ensure stability during the sinning process.-To carry out a survey among clients and distributors to assess the market reaction to these products and to select at least four countries to carry out a market test.

GOJELLY: A Gelatinous Solution to Plastic Pollution. The objective of the GoJelly project is to develop, test and promote a gelatinous solution to microplastic pollution by developing a TRL 5-6 prototype microplastics filter (GoJelly) for commercial and public use, where the main raw material is jellyfish mucus. In doing so, the consortium addresses two environmental issues with one approach by removing the commercially and ecologically destructive sea and coastal pollution of both jellyfish and microplastics. This innovative approach will ultimately lead to less plastic in the ocean, municipal demand (and thereby competitive prices) for jellyfish raw material to fill the "mucus-need" by filter developers, and in turn more jobs for commercial fishers in off- seasons. The by-products of the GoJelly biomass have other uses as well, ensuring that GoJelly also delivers a green innovation, resulting in novel, valuable resource for the food and feed industry as well as agro-biological fertilizer for organic farming. The GoJelly prototype products will be tested and demonstrated in three different European seas (Norwegian, Baltic and Mediterranean), by a range of stakeholders, including commercial fishers and industry partners. Tying it together, the project will also ensure the possibilities for broader European promotion and utilization of GoJelly at the local, regional and global level by delivering a socio- ecological methodological toolbox for forming and implementing policies. GoJelly will broadly communicate its results in several formats such as traditional social media, open lab ship cruise, and in the form of an experimental online game depicting different management scenarios under different jellyfish- and microplastics combinations. An interdisciplinary and international consortium consisting of technology developers, business analysts, fishing companies, research institutes, and both natural and social scientists will realize GoJelly, and will ensure the uptake of GoJelly products by industry and policy makers.