



“Gheorghe Asachi” Technical University of Iasi, Romania



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## EDITORIAL

### Leading the Ecological Transition

### ECOMONDO 2022

### *The Green Technology Expo*

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The papers collected in this special issue of *Environmental Engineering and Management Journal* were presented as lectures or posters at the scientific and technical conferences hosted by *Ecomondo 2022* held from the Italian Exhibition Group headquarter in Rimini, Italy, during 8-11 November 2022.

(<http://en.ecomondo.com>).

*Ecomondo* is one of the largest European exhibitions in the field of *Green and Circular Economy*, hosting annually over than 99,000 delegates from more than 140 different nations along with 1,500 industrial exhibition stands in 150,000 square meters and over than 100 conferences and workshops on policies, research and innovation, innovation funding opportunities, education, communication and entrepreneurship and international networking and partnership creation.

As with the previous editions, the aim of *Ecomondo 2022* was to explore and share recent industrial advances and opportunities in industrial technical waste production reduction, recycling and exploitation; sustainable agrifood and wood chains, biowaste collection and exploitation via integrated biorefinery schemes, with the production of biobased chemicals, materials and biofuels, including methane; industrial eco-design; industrial symbiosis, renewable and critical resources; water resources monitoring, protection and sustainable use in the civil and agrifood sectors; wastewater treatment and valorization with nutrients recovery and water reuse; marine resources protection and sustainable exploitation and port regeneration; sustainable remediation of contaminated sites and marine ecosystems; indoor and outdoor air monitoring and clean up; and circular and smart cities.

Some of the international workshops were focused on the emerging trends in the circular economy

domains and on the role of digitalization and industry 4.0 enabling technologies in process efficiency, eco-design and waste collection in the major industrial value chains. Some other workshops were focused on the technical and regulatory constrains currently affecting the implementation of circular economy value chains in the sectors of electronic and electric products, automotive, construction and demolition, packaging materials and textile and fashion. A special focus was on the recycling of plastic waste, biodegradable plastics and the monitoring, prevention and mitigation of marine litter. Finally, *Ecomondo 2022* also hosted events on the priorities of the Mediterranean macro-region, in close cooperation with the EU commission, and in particular the water scarcity of the area, the Mediterranean Sea contamination (also due to marine litter) and its sustainable exploitation.

*Ecomondo 2022* conferences hosted more than 700 oral communications, about 90 of them were then selected for full paper publications on this journal, the *Procedia Environmental Science, Engineering and Management* and the *Ecomondo proceedings*. This special issue contains some of such papers and provides some of the key information presented and discussed in the frame of some of the mentioned technical and scientific conferences of *Ecomondo 2022*.

We believe that this collection of papers will be useful to people who could not follow the edition of *Ecomondo 2022*. It is primarily towards them but it also aspires to provide permanent records in the promotion, adoption and implementation of the major priorities and opportunities of the green and circular economy in Europe and in the Mediterranean basin, with the conversion of some of the key local environmental challenges into new opportunities for a green and sustainable growth of the territories.

For additional info, please refer to the following link:

<https://en.ecomondo.com>

**Guest Editor:**

Professor **Fabio Fava**, *Alma Mater Studiorum - Università di Bologna*, Italy



**Fabio Fava**, born in 1963, is Full Professor of "Industrial & Environmental Biotechnology" at the School of Engineering of University of Bologna since 2005. He published about 250 scientific papers, 220 of which on medium/high IF peer-review international journals of industrial and environmental biotechnology and circular bioeconomy. He has more than 11000 citations, a H-index of 61 and an i10 index of 150 (Google Scholar) along with 215 papers quoted by Scopus. He is actively working in the fields of environmental, industrial and marine biotechnology and of the circular bioeconomy in the frame of a number of national projects and collaborative projects funded by the European Commission. Among the latter, he coordinated the FP7 collaborative projects NAMASTE, on the integrated exploitation of citrus and cereal processing byproducts with the production of food ingredients and new food products, and BIOCLEAN, aiming at the development of biotechnological processes and strategies for the biodegradation and the tailored depolymerization of wastes from the major oil-deriving plastics, both in terrestrial and marine habitats. He also coordinated the Unit of the University of Bologna who participated in the FP7 collaborative projects ECOBIOCAP, ROUTES, MINOTAURUS, WATER4CROPS, ULIXES and KILL SPILL.

Fabio Fava served and is serving several national, European and international panels, by covering, among others, the following positions:

- Member of the Scientific Committee of the European Environmental Agency (EEA), Copenhagen, for the "Circular economy and resource use" domain (2021-);
- Italian Representative in the "European Bioeconomy Policy Forum" and the "European Bioeconomy Policy Support Facility" of the European Commission (2020-);
- Senior Expert of the Italian delegation to the Programming committee Horizon Europe, Cluster VI: Food, bioeconomy, natural resources, agriculture and environment (European Commission, DG RTD)(2020-);
- Italian Representative and elected vice chair in the "States Representatives Group" della Public Private Partnership "Circular Biobased Europe" (CBE JU), Brussels (2021-);
- Italian Representative in the BLUEMED WG of the EURO-MED Group of Senior Officials (EU Commission DG RTD and Union for Mediterranean) (2017-) and in the initiative on sustainable development of the blue economy in the western Mediterranean the "Western Mediterranean Initiative" WEST MED, promoted by the EU Commission (DG MARE) in close cooperation with 10 countries of the area (2016-);
- Italian Representative in the "Working Party on Biotechnology, Nanotechnology and Converging Technologies" of the Organization for Economic Co-operation and Development (OECD, Paris) (2008-);

Finally, he is the scientific coordinator of the International Exhibition on Green and Circular economy ECOMONDO held yearly in Rimini (Italy)