



## **STAR-ProBio/LIFECAB Joint Annual Workshop at the EURAS 2019 Conference**

**Date and time:** June 14<sup>th</sup> 2019 from 14:00 to 17:45 (Registration from 13:00)

**Venue:** LUISS Guido Carli University of Rome, Department of Law, Aula Nocco

### **STAR-ProBio**

STAR-ProBio supports the European Commission in the implementation of European policy initiatives, including the Lead Market Initiative in bio-based products, the industrial policy and the European Bio-economy Strategy. The overall goal of the project is to **formulate guidelines for a common framework** promoting the development of regulations and standards that **support the adoption of business innovation models and market uptake in the bio-based products sector**. STAR-ProBio does so by **developing a blueprint for sustainability schemes and tools** applicable to a large spectrum of bio-products, and by making recommendations for a more efficient and harmonized policy regulation framework for the market-pull of such products. The results of STAR-ProBio will be **new and revised assessment methodologies, criteria and indicators** developed by integrating scientific and engineering approaches with social sciences and humanities:

- Environmental assessments focus on end-of-life analysis.
- Economic and social assessments based on stakeholder analysis, surveys and field experiments.
- Indirect land use change issues (ILUC) addressed from an environmental, economic and social perspective.

Proposed methodologies, criteria and indicators are **applied to selected case studies** to illustrate benefits and impacts for bio-based products.

### **LIFECAB**

LIFECAB aims to demonstrate the replicability of a virtuous bio-waste treatment cycle. This cycle will take place at real or close to real operational conditions involving biochemical and chemical processes within a hydrolysis prototype (HP) facility. **Composted municipal bio-waste will be hydrolysed** to yield soluble bio-based substances (SBO) which will in turn be used to **improve the anaerobic fermentation process of the Municipal Bio-waste plant and increase biogas productivity and quality**. Digestate with very low content of ammonia will also be produced thus addressing the provisions of the Nitrates Directive. The project also aims to demonstrate a **new business model for the valorisation of bio-waste** with reduced entrepreneurial risk in three different EU countries. Expected results of the project are:

- Development of a hydrolysis prototype for the production of bio-based products;
- Production of 50 tonnes of soluble bio-based substances (SBO) to be used as an additive in anaerobic digestion tests performed at pilot scale;
- Validation and replication of a new municipal bio-wastes (MBW) anaerobic fermentation process with the addition of SBO for producing digestate with very low ammonia content;
- Demonstration of a business model and economic benefits of the new fermentation process compared to conventional technology.



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## WORKSHOP AGENDA

- **STAR-ProBio/LIFECAB Technical Session (14:00 – 15:30)**  
Objectives, key findings and expected future outputs of the projects. Session chair:  
Valentina Elena Tartiu
  - Michalis Koutinas (Cyprus University of Technology)
  - Sofia Maina (Agricultural University of Athens)
  - Maria Teresa Moreira (University of Santiago de Compostela)
  - Elio Padoan (University of Turin – DISAFA)
- **Coffee break (15:30 – 15:45)**
- **Roundtable Discussion 'Standards as policy tools' (15:45 – 17:15)**  
Session chair: Piergiuseppe Morone, Unitelma Sapienza
  - Knut Blind (TU Berlin & FhG FOKUS)
  - Mauro Cordella (JRC)
  - Mathilde Crepy (ECOS – European Environmental Citizens' Organisation for Standardisation)
  - Monica Delsignore (Università degli Studi di Milano – Bicocca)
  - Uwe Fritsche (Director of IINAS)
  - Liliana Gamba (WWF)
  - Davide Mainero (Acea Pinerolese)
  - Elena Mocchio (UNI)
- **Coffee break (17:15 – 17:45)**
- **Gala dinner (20:30)**





## BIOGRAPHIES TECHNICAL SESSION

### CHAIR:



**Dr. Valentina Elena Tartiu** is a researcher at Bioeconomy in Transition Research Group (BiT), Unitelma Sapienza University of Rome, and project manager of the H2020 project - Sustainability Transition Assessment and Research of Bio-based Products (STAR-ProBio). Valentina's research focuses on the interface between innovation, waste management, green chemistry, transition studies, systems modelling, with a strong focus on sustainability transitions towards circular bioeconomy. Valentina has gained valuable expertise in this field, being involved in several international research projects, COST Action TD1203 (EUBIS), ISWA Young Professionals Group. She has over 25 publications, including scientific articles, book chapters, and editorials. She co-edited the book - "Food Waste Reduction and Valorisation. Sustainability Assessment and Policy Analysis" (Springer).

### SPEAKERS:



**Dr Michalis Koutinas** is an Assistant Professor at the Department of Environmental Science and Technology of Cyprus University of Technology. He obtained the Diploma of the Chemical Engineer from the University of Patras and a PhD from Imperial College London, where he also worked as Post-Doc. He directs the Environmental Bioprocessing Laboratory comprising 3 PhD students and 3 Post-Docs and he has published 26 papers and 2 book chapters. He holds current international funds from WATER JPI and LIFE+ as well as national funds from the Research Promotion Foundation of Cyprus. MK participated in COST Action TD1203 and he currently serves as a member of COST Action CA17128 and the International Forum on Industrial Bioprocesses. His research interests include the use of biotechnological applications for the production of added-value chemicals from waste and renewable resources, application of molecular techniques in environmental biotechnology, biological modeling, biomass biorefineries, biodegradation of xenobiotic pollutants and fermentation technology.



**Dr. Sofia Maina** is a researcher in Food Bioprocesses and Biorefineries group at the Department of Food Science and Human Nutrition - Agricultural University of Athens (Greece). She completed her MSc studies followed by a PhD in Food Bioprocess and Biorefineries at Agricultural University of Athens. During her doctorate, she worked on bioprocess development for the production of chemicals via microbial bioconversion using crude renewable resources. Her research interests are focused on the development of sustainable biorefineries for the production of fuels and chemicals from agricultural residues and industrial wastes, development of sustainable bioprocesses and industrial biotechnology. Currently, she is working on development of efficient and sustainable process, including aspects of pre-treatment, fractionation and fermentation, for valorisation of food waste and industrial side streams.



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**Dr. María Teresa Moreira** is Professor of Chemical Engineering in USC. She works in two research topics: Environmental Biotechnology and LCA and carbon footprint. She has participated and coordinated various projects at National and European level in the field of LCA.

These research activities have produced 250 SCI publications, 2 books, 39 book chapters, supervisor of 17 PhD theses, H-index: 50, Participant in 43 research projects and 32 research contracts with different companies.

She is currently an Associate Editor of Journal of Cleaner Production.



**Dr. Elio Padoan** is a researcher in soil chemistry group at the Department of Agricultural, Forest and Food Sciences – Università degli Studi di Torino. During his doctorate and post-doc years, he worked on soil elemental chemistry of urban areas, with regard to the dynamics of inorganic contaminants and the soil contribution to urban pollution. He has also worked on the remediation of contaminated soils (either of mining areas and urban) through chemical (e.g. lead immobilization through phosphorous amendments) and biological (phytoremediation) methods and on the evaluation of their impact on the bioavailability of finer particles, that could potentially be ingested or inhaled. Currently, he is working on the bio-waste management practices and on the upgrading of urban bio-waste and compost for their use in industrial processes and

agriculture as fertilizers, emulsifiers and detergents.



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## BIOGRAPHIES ROUNDTABLE DISCUSSION

### CHAIR:



**Mr. Piergiuseppe Morone** is Full Professor of Economic Policy at Unitelma Sapienza with a strong interest in green innovation and sustainable development pushing his research at the interface between innovation economics and sustainability transitions, an area of enquiry that has attracted growing attention over the last decade. His work regularly appears in prestigious innovation and environmental economics journals. He is coordinator of STAR-ProBio, an H2020 research project aiming at developing sustainability assessment tools for bio-based products and promote their market penetration. Piergiuseppe is head of the Bioeconomy in Transition Research Group at Unitelma Sapienza involved in the emergence of a circular and bio-based economy. Piergiuseppe is member of the Editorial Boards of Current Opinion in Green and Sustainable Chemistry (ELSEVIER) and Open Agriculture (De Gruyter Open) and acts as Guest Editor for various journal including the Journal of Cleaner Production (ELSEVIER) and Sustainability (MDPI).

### PANNELISTS:



**Prof. Dr. Knut Blind** studied economics, political science and psychology at Freiburg University. In the course of his studies he spent one year at Brock University (Canada), where he was awarded a BA. Finally, he took his Diploma in Economics and later his doctoral degree at Freiburg University. Between 1996 and 2010 he joined the Fraunhofer Institute for Systems and Innovation Research, Karlsruhe, Germany, as a senior researcher and at last as head of the Competence Center "Regulation and Innovation". In April 2006 Knut Blind was appointed Professor of Innovation Economics at the Faculty of Economics and Management at the Berlin University of Technology. Between 2008 and 2016 he held also the endowed chair of standardisation at the Rotterdam School of Management of the Erasmus University. From April 2010 he is linked to the Fraunhofer Institute of Open Communication Systems in Berlin. In 2012, he initiated both the Berlin Innovation Panel and the German Standardization Panel. Besides numerous articles on patents he published further contributions on standardization and further innovation aspects in refereed journals.



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**Dr. Mauro Cordella** holds a university degree in Environmental Engineering and a PhD in Chemical, Environmental and Safety Engineering from University of Bologna. He is a researcher with a tracked experienced in EU policies, Life Cycle Assessment and sustainability of products, inherent safety of chemicals, and biomass-based systems for the production of energy and materials. From 2006 to 2011 he has been employed as researcher at University of Bologna, Imperial College of London and the EU Virtual Institute for Integrated Risk Management. Since 2011 he has been working as Scientific Officer at the European Commission's Joint Research Centre of Seville in projects related to sustainable production and consumption, circular economy and implementation of EU product policies (Ecodesign, Energy label, Ecolabel, Green Public Procurement). For the past two years Mauro mainly focused on assessment and standardisation of material efficiency aspects of products, also representing JRC in CEN/CENELEC/JTC10, and the sustainability assessment of buildings.



**Mathilde Crêpy** is Programme Manager at the European Environmental Citizen's Organisation for Standardisation (ECOS), a network of NGOs defending environmental interests in the European and international standardisation systems, within CEN, CENELEC, ISO and IEC. At ECOS, she works on bioeconomy, environmental footprint, environmental finance and claims and labelling. She manages ECOS' contribution to the EU-funded project STAR-ProBio, developing a toolbox to assess the sustainability of bio-based products. Before joining ECOS in 2017, Mathilde worked 3 years for the European Commission on climate policies and carbon trading mechanisms. She holds MAs in Political Science from Science Po Grenoble (FR) and Constance University (DE) and a LL.M in Environmental Law from Stockholm University (SE).



**Ms. Monica Delsignore** is Professor of Administrative Law at the School of Law of the Università degli Studi di Milano Bicocca, where she teaches Administrative law and Environmental law. Her research interests lie in the field of Public and Administrative Law, broadly conceived.

She is author of two books on arbitration and market regulation and of several articles and contributions to collective works on various topics of Administrative Law and Environmental law.

Her current research interests focus on food law, especially in an environmental perspective.





**Uwe R. Fritsche** studied applied physics at TU Darmstadt, and worked from 1984-2012 as a scientist at Öko-Institut, heading its Energy & Climate Division in Darmstadt (Germany) until 2010, working on sustainable energy, and climate change mitigation. Since 2000, he focused on international activities and projects concerning sustainable use of biomass, land, and resources. In 2012, he co-founded the International Institute for Sustainability Analysis and Strategy (IINAS) and works there as its Scientific Director. His expertise is life-cycle and material-flow analysis of energy, materials and transport systems, bioenergy & bioeconomy, and sustainability governance & metrics. He works mainly on EU and international levels, is Team Leader for IEA Bioenergy Task 40 and Co-Leader of Task 45, leads the Environment Subgroup of the GBEP Task Force on Sustainability, and acts as technical

expert to the EC, FAO, GEF, IEA, UNEP and UNIDO.



**Dr. Liliana Gamba** works as Senior Project Coordinator Sustainable Biomass at WWF Germany. She has more than fifteen years' experience in the development and practical implementation of sustainability policies and strategies in different sectors, including electricity generation, biomass based materials and fuels. In previous positions as consultant at SQ Consult and Ecofys, Liliana advised several projects a large number of organisations worldwide including governments, cooperation agencies, financial institutions, international organizations, industry associations and corporate clients. In her current position, she works on the improvement of sustainability standards, with a particular focus on food security. Liliana holds a PhD degree in Environmental Engineering from the Berlin University of Technology.



**Mr. Davide Mainero** is currently in charge of the engineering and R&D activities for ACEA Pinerolese Industriale. After the Politecnico di Torino school he worked in tunneling on a French site. He gained his professional experiences working for ACEA, starting with the organization of the waste collection system to the management of the landfill, following with the compost plant project and being part of the project and the start up of the biodigestion plant and SRF production. He managed the activities of the ACEA Waste treatment facilities and he works on ACEA new developing projects. He is involved in technical tables at the Comitato termotecnico Italiano (CTI), at Consorzio Italiano Compostatori (CIC) and at Consorzio Italiano Gas (CIG) on a national level and, on an international level, he participates in the ISWA's Biological treatment working group.



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**Mrs. Elena Mocchio** is the Head of UNI Innovation Department. She joined UNI in 2000, and since then she took on several roles within the organisation. She was first International Assistant at the Technical Department and in 2004 she became national and technical Officer for several CEN/Technical Committees. In 2010 she moved to the UNI External Relations, New Business and Innovation Department, a structure set up to carry out innovation business strategies and search of potential markets and related stakeholders. As Head of Office, she is in charge of all development and innovation activities. This includes the process management for the elaboration of national 'reference best practices'; management of European technical Secretariats of CEN Workshops; evaluation of UNI participation at European and international innovation

projects; setting up of networks of stakeholders for collaboration projects; support to UNI for seminars, workshops, events and communication campaigns. Finally, she supports the management for the implementation of UNI ISO 26000 on social responsibility within the organisation. Mrs. Mocchio holds a degree in Foreign Languages and modern literature of the Università Cattolica of Milan.

