



BioRural Knowledge-exchange Workshops: Advancing the European Rural Bioeconomy



Workshop 2:
Aquatic systems



28-30 November 2023
Online event

Register



We are delighted to invite you to the BioRural Knowledge-exchange Workshop, a transformative event dedicated to advancing the European Rural Bioeconomy. Join stakeholders from across Europe to explore innovative solutions and strategies for promoting small-scale bio-based initiatives in rural areas.

Benefits of attending the workshop

- Inspiration for rural businesses, industry professionals, community leaders, policymakers and other actors sharing the passion and ambition of advancing rural bioeconomy.
- Gain insights into the European rural Bioeconomy and success stories of bio-based solutions.
- Explore the BioRural Toolkit for information sharing and decision-making support.
- Engage in interactive workshops and contribute to regional development.
- Shape the future of sustainable rural communities.

Save the Date and join us in shaping the future of rural communities through bio-based solutions!

For workshop updates and registration, please follow us on <https://biorural.eu>



Day 1 (28 November 2023)

11:00 Welcome and introduction to the workshop	<i>Maja Berden Zrimec (Algen, Slovenia)</i>
11:05 Overview presentation of aquacultures and bioeconomy / circular economy	<i>Koushik Roy (Uni. South Bohemia, FROV, Czechia)</i>
11:20 Status and perspective of algal technologies	<i>Robert Reinhardt (Algen, Slovenia)</i>
11:35 IMTA, a circulatory approach to aquaculture	<i>Erik Malta (CTAQUA, Spain)</i>
11:50 Microalgae related processes for nutrients recovery from wastes	<i>Gabriel Acien (Uni. Almeria, Spain)</i>
12:05 Microalgae-based biogas upgrading: a sustainability driven technology	<i>Raul Muñoz (Uni. Valladolid, Spain)</i>
12:20 Algae market and value chains	<i>Vitor Veldeho (European Algae Biomass Association)</i>
12:35 Follow-up session: Q&A, moderated discussion with the presenters	<i>Moderators: Robert Reinhardt & Maja Berden Zrimec (Algen, Slovenia)</i>
12:55 Closure of Day 1	



Day 2 (29 November 2023)

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| 11:00 Brief introduction of the Showcase Tour | <i>Maja Berden Zrimec
(Algen, Slovenia)</i> |
| 11:05 High sustainability aquafarming | <i>Irena Fonda
(Fonda aquaculture, Slovenia)</i> |
| 11:15 Sustainable local aquaculture by PUSTELNIA | <i>Anna Pać
(Pustelnia, Poland)</i> |
| 11:25 Alternative protein sources obtainable by biorefinery as partial replacement of dietary ingredients in aquafeed for fish: a case study on sea bream | <i>Katia Parati
(Istituto Spallanzani, Italy)</i> |
| 11:35 Bio Base Europe Pilot Plant - biorefinery valorisation of aquaculture biomass | <i>Tanja Meyer
(BioBase Europe Pilot Plant, Belgium)</i> |
| 11:45 Towards more sustainable aquaculture: alternative fish feed based on BSFL and microalgae | <i>Siggi Penno-Winters
(Arava, Israel)</i> |
| 11:55 Microalgae as part of the circular economy | <i>Carole Llewellyn
(Swansea University, UK)</i> |
| 12:05 Locality: "Nature-positive algae-based food, agriculture, aquaculture and textile products made in North and Baltic Sea ecosystems" | <i>Margarida Costa
(Niva, Norway)</i> |
| 12:15 Innovative hybrid INTensive – EXTensive resource recovery from wastewater in small communities | <i>Ivan Blanco
(Aqualia, Spain)</i> |
| 12:25 Follow-up session: Q&A, moderated discussion with the presenters | <i>Moderator: Maja Berden Zrimec
(Algen, Slovenia)</i> |
| 12:45 Closure of Day 2 | |

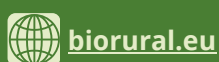


Day 3 (30 November 2023)

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| 11:00 | Brief introduction of the Cross-cutting and emerging themes | <i>Maja Berden Zrimec
(Algen, Slovenia)</i> |
| 11:10 | Opportunities for aquaculture: in circular (bio)economy | <i>Ana Gavrilović
(Uni. Zagreb, Croatia)</i> |
| 11:25 | Sustainable agriculture: integration of algae in agricultural biomethane plants to produce biostimulants | <i>Valeria Mezzanote
(Uni. Milano-Bicocca, Italy)</i> |
| 11:40 | EU regulation and standardisation for the algal sector | <i>Silvio Mangini (Archimede, Italy)</i> |
| 11:55 | Innovation space BioBall - Promoting technologies for regional material use of biogenic by-products and waste streams | <i>Jochen Michels
(BioBall, Germany)</i> |
| 12:10 | Value Chain Generator for circular bioeconomy | <i>Jon Goriup Dermastia
(VCG.ai, Germany)</i> |
| 12:25 | Clusters role in circular economy and Bioeconomy hubs (CEE2ACT) | <i>Mateja Dermastia
(Anteja ECG, Slovenia)</i> |
| 12:35 | Follow-up session: Q&A, moderated discussion with the presenters | <i>Moderator: Maja Berden Zrimec
(Algen, Slovenia)</i> |
| 12:55 | Closure of workshop, evaluation & satisfaction survey | |



Funded by
the European Union



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SPEAKERS

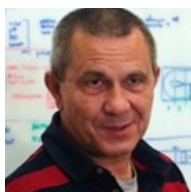


MAJA BERDEN ZRIMEC



Maja Berden Zrimec, PhD, is the Head of the research group and project manager at Algen, algal technology centre, llc. She has more than 25 years of working experience with algal physiology, water ecology, and toxicology, field, and laboratory work. She has been actively engaging in basic and applied research on algal cultivation and wastewater treatment, both internationally (EU) and nationally. She's Algen project manager in BioRural, Cronus and FuelPhoria. Currently, she is editing a special issue on Boosting the Potential of Algae for Biomass Production, Valorisation, and Bioremediation at Frontiers.

ROBERT REINHARDT



Robert Reinhardt has graduated from University of Ljubljana in 1983. He has more than 15 years' experience in algal cultivation, production and wastewater treatment, algal pond design and installation. From 1988 to 2001 he was a founding partner, CTO and CEO in one of the largest Slovenian software development and system integration companies. He's lead Algen designer and developer of algal systems for AlgaeBioGas, Saltgae, Water2Return (H2O2O), LIFE AlgaeCan, Cronus & FuelPhoria (Horizon Europe) and high-grade *Spirulina* production facilities (Italy, Slovenia), and legal issues partner in project Locality (HE).

KOUSHIK ROY



Koushik Roy, PhD, is a circular and sustainable aquaculture system biologist. His research focuses on bridging the land/ water/ farm-to-fork divide, using a nutrients, environment, and nutrition approach in pond-based and land-based aquaculture systems. He is a fish nutritionist, biologist, and ecologist by training. In Central European pond farming, he is developing supplementary feeding concepts that can upcycle local circular resources in an efficient or carbon-neutral manner to produce nutritious food from the ponds. In harmony with the natural food web. Also with a special emphasis on improving farmed fish biomass use efficiency in post-harvest.

ERIK-JAN MALTA



Erik-Jan Malta, PhD, heads the Department of Applied Research and Innovation at CTAQUA, Spain, specializing in seaweed cultivation and sustainable aquaculture. With over 25 years of experience in marine ecosystems and aquaculture, including roles in Spain, Portugal, and Australia, he's a leading figure in Integrated Multitrophic Aquaculture (IMTA). He's managed multiple research projects, including EU's Horizon Europe project NOVAFOODIES and Interreg AA's Aquaculture and Fisheries 0.0. An active member of the SeaWheat COST action, Malta has published extensively and serves on editorial boards in marine sciences.

GABRIEL ACIEN



Graduating in 1992 and earning his PhD in 1996, Gabriel Acien, from the University of Almería, Spain, has been a Chemical Engineering professor since 2012. He has contributed to over 60 European and national projects and holds 15 patents. A prolific author, he has published 200+ papers and 15 book chapters. He is Vice-President of EABA, a member of several international algal societies, and an editor for Algal Research and RELABIAA journals. His significant work in microalgae biotechnology includes enhancing photobioreactor designs and analyzing production economics.

RAUL MUÑOZ



Raul Muñoz, PhD, holds a Master Degree in Chemical Engineering from Valladolid University (Spain) and a PhD Degree in Environmental Biotechnology from Lund University (2005). Raúl is Full Professor at the Department of Chemical Engineering and Environmental Technology at the University of Valladolid. His main fields of expertise are biological gas treatment, biogas upgrading, bioplastic valorization and wastewater treatment in algal-bacterial photobioreactors.

VITOR VERDELHO VIEIRA



Vitor Verdelho Vieira, a seasoned entrepreneur, co-founded Necton, SA, a leader in sea salt and microalgae production, and A4F - Algae for Future, a key player in microalgae technologies. As General Manager of the European Algae Biomass Association, he brings extensive experience in engineering, real estate, biotechnology, and medical devices. Involved in over 40 R&D projects and collaborating with 200+ European organizations, Vieira also mentored 200+ startups at SpinLogic, the entrepreneurship program of the Catholic University in Porto. He teaches at Católica Porto Business School and has a Physics background from Porto University.

ANNA PYĆ



Anna Pyć is the owner of the PUSTELNIA Fish Farm located in South-Eastern Poland, producing carp and rainbow trout. She is also the Vice-President of the Polish Trout Breeders Association and the Vice-President of the Federation of European Aquaculture Producers working as an aquaculture expert in numerous consultations, both on national and international level. She was involved in implementation of EU funds in Poland. From 2006 she was working as Marketing Manager in Aller Aqua - fish feed producer, involved in international conferences for professionals in aquaculture: International Sturgeon Conference and International Carp Conference. She's running family owned fish farm since 2011.

SPEAKERS



KATIA PARATI



As Chief of the Aquaculture Division at the Spallanzani Institute since 2015, Katia Parati leads research in microalgae technology and fish nutrition. Her work focuses on integrating microalgae culture for nutrient recovery from wastewater, genetic studies using Next Generation Sequencing, and extracting bioactive molecules for agriculture and feed. Additionally, she's involved in fish culture research, including feeding trials, conservation of endangered species, and fish semen cryopreservation. She adeptly manages various research projects at regional, national, and European levels.

TANJA MEYER



Tanja Meyer is working in the international area of Bio Base Europe Pilot Plant (BBEPP) as European project coordinator since 2017. She has managed several Horizon2020 projects in the area of micro-and nanotechnology, and industrial biotechnology. She is currently coordinating BBI JU Project SMARTBOX (lignin valorisation towards bio-aromatics) and BBI JU Project Glaukos (Circular solution for the textile industry) and was the coordinator of INTERREG NWE Project BioBase4SME aiming to enhance societal engagement in biotechnologies. Tanja Meyer holds a master degree in Technology and Innovation Management (The University of Brisbane) and an engineer degree in Bio-and Nanotechnologies (South Westphalia University of Applied Sciences).

SIGRID PENNO-WINTERS



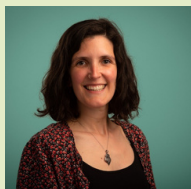
Sigrid Penno-Winters is an experienced aquaculture researcher at Central and Northern Arava R&D, part of the Arava Development Company Co. Ltd. She holds an M.Sc. in Biology, specializing in microbiology, molecular biology, and ecology, and has conducted PhD studies on the genetic diversity of marine phytoplankton, particularly cyanobacteria. Her current research focuses on integrated aquaculture, alternative fish feeding methods using BSFL and microalgae, and the genetic and physiological studies of microalgae. Additionally, Sigrid is a lecturer and supervisor for M.Sc. projects at the Arava International Centre for Agricultural Training (AICAT).

CAROLE LLEWELLYN



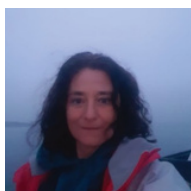
Carole Llewellyn, with over 30 years in microalgae and phytoplankton research, has an impressive portfolio of 93 publications and 7,219 citations, and an h-index of 40. Her career began at Plymouth Marine Laboratory, UK, focusing on phytoplankton biodiversity and oceanic carbon cycling. She later advanced to algal natural product research for environmental sustainability, contributing to carbon challenge solutions and pollution remediation. Llewellyn has led numerous Research Council, Innovate-UK, and international projects. Currently, as an emeritus professor at Swansea University, she provides expert reviewing and consultancy services.

MARGARIDA COSTA



Margarida Costa specializes in marine compounds, starting with bioactive cyanobacteria studies at CIIMAR, Portugal. She pursued her PhD in sponge natural products chemistry at the University of Iceland, supported by a Marie Skłodowska-Curie grant. Margarida has worked on European projects, focusing on cyanobacterial anti-obesity properties, and conducted an industrial postdoc at Allmicroalgae, optimizing microalgae cultivation. Currently, she leads the Microalgae Section at the Norwegian Institute for Water Research (NIVA), Oslo, collaborating in microalgae biotechnology. Her work includes over thirty scientific papers, three book chapters, and a patent.

ANA GAVRILOVIĆ



Prof. Ana Gavrilović heads the Fisheries postgraduate program at the University of Zagreb and teaches at Juraj Dobrila University, Croatia. Her expertise includes aquatic organism cultivation, aquaculture systems, sustainable waste management, and product safety. A consultant for international aquaculture projects and the World Bank, she's also part of the Restore our Ocean and Waters Mission Board and FAO's EIFAAC Committee. Prof. Gavrilović has led various projects, authored over 200 publications, and holds three patents in aquaculture technology.

VALERIA MEZZANOTTE



Valeria Mezzanotte is an Associate Professor of Ecology at the University of Milano Bicocca, where she chairs the Environmental Impact Assessment for the Master's program in Sciences and Technologies for Environment and Landscape, and Applied Ecology for the Bachelor's in Biological Sciences. She holds a Ph.D. in Sanitary Engineering from Politecnico di Milano and a Master's in Agricultural Sciences. Her research focuses on water pollution and recovery, wastewater treatment methods, and environmental assessment. Mezzanotte has published 81 scientific papers in peer-reviewed journals, with an h-index of 26 and a total of 1686 citations.

SILVIO MANGINI



Silvio Mangini is a scientific advisor at Archimede Ricerche Srl, subsidiary of A&A Fratelli Parodi Spa (Genoa) engaged in industrial development of high-quality microalgae biomass and active ingredients manufacture, running the biggest microalgae plant in Italy and founding member of EABA. MSc in Industrial Chemistry with 35 years of experience in energy management, process engineering, food and pharma regulations, microalgae biotechnology. Involved in BioFAT FP7 on algae biofuels and Saltgae H2020 EU projects. Former member of CEN/BT/WG218 and currently Convenor of CEN/TC454 Algae standards /WG5. Member of CEN/TC 460 Food Authenticity. Board member of EABA. Coordinator of Organic production Committee of AISAM.

JOCHEN MICHELS

Jochen Michels has received his PhD in 1994 at the University of Göttingen and has more than 25 years of experience of scientific, as well as research and innovation management. He is employed as scientific officer at DECHEMA. He has coordinated joint research projects in the fields of environmental biotechnology, biorefinery processing and bioeconomy. In 2016, he was coworker of a study on bioeconomy in the Federal State of Hesse. In his current position he is part of the team which is coordinating the innovation space BioBall. Additionally he is also involved in projects regarding biotechnological CCU options as well as hemicellulose valorization. From 2009 he took a lectureship in renewable resources at Frankfurt University of Applied Sciences.

JON GORIUP DERMASTIA

Jon Goriup Dermastia, an ESADE Business School and University of North Carolina alumnus, is a startup founder focused on sustainability solutions. He has developed supply chain and traceability solutions for East African agribusinesses, linking them with European markets. As of early 2022, Jon is the co-founder and CEO of VCG.AI, a platform enhancing circular and resilient value chains in European bio-based industries. VCG.AI is favored in Germany for identifying circular business models and industry connections and is increasingly popular among large agri-food players for profitable climate target achievement through circular models.

MATEJA DERMASTIA

Mateja Dermastia, an expert in sustainable economic development with a Master's in Economic Science and training from Harvard Kennedy School, has over 30 years of experience in both public and private sectors. She specializes in value chains, sustainability, and regional development. Formerly Slovenia's State Undersecretary for economy and CEO of PoliMat, she has led significant projects in agriculture and bio-based materials. She pioneered digital solutions like INATrace in agriculture, contributing to regional green transformation in Europe and Africa. She serves on various advisory boards, including the EC Expert group for BioBased Materials and Financial Mechanisms.

IRENA FONDA

Irena Fonda, with a B.Sc. in Biology and a PhD in Biomedicine from the University of Ljubljana, Slovenia, is the CFO of FONDA, a leading marine aquaculture company. Since 2003, FONDA has operated the only Slovenian marine aquaculture specializing in sea bass (*Dicentrarchus labrax*), sea bream (*Sparus aurata*), and mussel (*Mytilus*) production. The company is known for its unique approach to both raising and selling its aquaculture products. FONDA's educational tourism program was awarded by the national Slovene tourism organization with a Slovenia Unique Experience sign.

IVAN BLANCO

Ivan Blanco, PhD, is works at R&D department of Aqualia with more than 15 years of experience in water and wastewater treatment. He holds a Master's (Florida International University, USA) and a PhD (Universidad de León, Spain) in Environmental Engineering focused on Nature-Based Solutions for wastewater treatment, with international experience in the US and UK. He has 5 years of experience in the British water utility sector (Severn Trent), where he has hold process design responsibility over major projects such as Rugby BioMag or Finham THP. Since June 2021, he joined Aqualia as researcher and project manager of the projects LIFE INTEXT and H2020 NICE, that are part of the portfolio of projects that the company runs in the field of Nature-Based Solutions.

