



# MAINSTREAM BIO

MAINSTREAMING SMALL-SCALE BIO-BASED SOLUTIONS ACROSS RURAL EUROPE

## REVOLUTIONIZING EUROPE'S RURAL REGIONS: CIRCULAR BIOECONOMY OPPORTUNITIES

### WEBINAR 3: *NUTRIENT RECYCLING SOLUTIONS FOR PRIMARY PRODUCERS*

*Wednesday April 24<sup>th</sup> 2024, 11.00 CET*



Funded by  
the European Union

| Time  | Topic   | Speaker  |
|-------|---|--|
| 11:00 | Webinar introduction and Nutrient Recycling solution                                    | Dragica Grozdanic<br>Bioeconomy Researcher<br>Munster Technological University |
| 11:10 | Nutrient recycling practices  | Piotr Skowron<br>Senior Researcher<br>IUNG                                     |
| 11:25 | Innovations to support stabilisation and management of slurry                           | Stephen Nolan<br>Field trials lead and technical consultant<br>GlasPort Bio    |
| 11:35 | SeaMeGro insights: The production of biostimulants from marine resources                | Henry Lyons<br>Scientific Director<br>Nutramara                                |
| 11:45 | Panel Discussion  | All  |
| 12:00 | Follow up session: Interactive Q&A Session and moderated discussion with the presenters | All  |
| 12:10 | Webinar Closure   | Dragica Grozdanic<br>Bioeconomy Researcher<br>Munster Technological University |

## Registration options:

### Option 1: Registration Link:

Click [here](#) to register for the webinar.

### Option 2: Scan QR Code:

Scan the QR code below to register for the webinar:



## Information

### ***What the webinar is about?***

The Nutrient Recycling Solutions for primary producers Webinar will provide some new insights, practical tools and actionable practices for effective nutrient management and recycling through practical case study examples, with the goal of empowering primary producers to optimize nutrient use efficiency over the long term while reducing the waste and improving soil health and productivity of their crops.

### **Nutrient Recycling solution**

Nutrient Recycling Solutions (NRS) will explore innovative approaches to the management and reuse of nutrient recycling technologies in different agricultural systems such as composting, anaerobic digestion, charcoal production and others. It will provide insight into the importance of nutrient recycling for environmental sustainability, the importance of maintaining healthy soil and will also provide insight into what we might expect in the near future.

### ***Nutrient recycling practice***

Nutrient Recycling Practices will provide an overview on the types of practices, strategies and methodologies available for nutrient recycling in order to reduce waste and increase nutrient use efficiency. We will also discuss how this data can be accessed by all participants in the future via the Mainstream BIO toolkit online platform.

### ***Innovations to support stabilisation and management of slurry***

Innovations to Support Stabilization and Management of Slurry will cover a multiple benefits of stabilising slurry, including reducing GHG emissions whilst retaining carbon and nitrogen for downstream utilisation in order to mitigate the environmental impact of slurry while maximizing its potential as a valuable resource for soil fertility and renewable energy production. This case studies will provide some practical examples of how GlasPort Bio's develop and scaleup of their slurry additive, from lab-scale through to on-farm deployment.

### **The production of biostimulants from marine resources**

The production of biostimulants from marine resources will explore the innovative use of marine's bio-materials to create products with stimulated properties that aimed to improve and stimulate plant growth, building the plant health mechanism to biotic and abiotic stresses and impact on an overall crop yield. It will delve into the unique components of marine resources, such as seaweed and their potential as sustainable sources of bioactive compounds.



## Speakers

**Dragica Grozdanic** is a bioeconomy researcher in the Circular Bioeconomy Research Group at Shannon Applied Biotechnology Centre, Munster Technological University in Kerry. She is working on regional bioeconomy development and policy for Robin and Mainstream Bio project, both EU funded by Horizon Europe. She was an Irish ambassador for the EU Horizon Project Coopid and a partner in two other EU Horizon Projects, Smart protein led by UCC and Valpro Path led by Teagasc. Her special interest is in sustainable agricultural practices and alternative plant protein production in the EU.

**Piotr Skowron** is a specialist in the field of fertilization, agricultural environment protection, impact of agriculture on the environment. His scientific interests concern the issues of the migration of nutrients from soil to water, the share of agriculture in the dispersion of nutrients in the environment, the possibility of reducing environmental pollution, with particular emphasis on agriculture, modern and low-emission fertilizers and technology of their application, modern laboratory and environmental research methods. He was national project manager of the MANURE STANDARDS project (2018-2019), financed by Interreg BSR programme. From 2021 he is project manager of the ORGSAFETY project, financed by The National Centre for Research and Development. He is an expert of the Ministry of Agriculture and Rural Development in the international group Helcom AGRI.

**Stephen Nolan** is an anaerobic digestion (AD) operations and R&D professional, with expertise in optimisation of AD systems for maximising renewable natural gas (RNG/biomethane) and organic fertiliser production. Since completing his PhD in AD microbiology, Stephen has worked with multiple Irish, European and UK AD plants to optimise resource utilisation, managed Green Generation through development of the first Irish biomethane-to-grid project, and troubleshooted various operational crises at full-scale plants. This work has included several research projects with leading Irish researchers examining various aspects of resource recovery and increasing value and circularity of typically low-value/unusable waste fractions. Current work includes mitigation of GHG emissions from agriculture (GlasPort Bio), ongoing AD development and optimisation projects, utilisation of food-contaminated plastics, production of high-value intermediates (ELLIPSE project with Green Generation) and downstream CO<sub>2</sub>-capture and conversion to usable biomass via microalgae (EirAlgae project with UCD). These methods will increasingly see AD become a complete circular biorefinery model.

**Henry Lyons** obtained B.Sc(Hons) and PhD degrees in chemistry from University College Dublin and had over thirty years' experience in 3<sup>rd</sup> level academic institutions before moving to the private sector to commercialise some R&D work on developing novel products from natural resources. After eight years as a Lecturer in Chemistry in the Dublin Institute of Technology he returned to Kerry to become the first Head of School of Science at the newly established Tralee RTC which was later known as the Institute of Technology, Tralee and is now part of Munster Technological University. In 1998 he became Head of Development at the Institute with responsibility for external liaison with public and private sector groups in the region as well as campus enterprise development. He was the main driving force behind the establishment of the Shannon Applied Biotechnology Centre. He took the early retirement option in 2005 to become Technical Director of Brandon Products Ltd and in 2017 became the Scientific Director of Nutramara Ltd, a new marine biotechnology company which was set up to manufacture a range of food ingredients and nutraceuticals from marine macroalgae. Henry has had a lifelong interest in natural products derived from marine and terrestrial plants and has used his background in science to help several coastal communities in setting up small enterprises and environmental projects. This has helped in the creation of much needed employment in these areas and the development of some innovative products and solutions for sustainable agriculture.













**MAINSTREAM BIO**  
MAINSTREAMING SMALL-SCALE BIO-BASED  
SOLUTIONS ACROSS RURAL EUROPE

## The project

MainstreamBIO is an Horizon Europe EU funded project, which sets out to get small-scale bio-based solutions into mainstream practice across rural Europe, providing a broader range of rural actors with the opportunity to engage in and speed up the development of the bioeconomy. Recognizing the paramount importance of bioeconomy for addressing key global environmental and societal challenges, MainstreamBIO develops regional Multi-actor Innovation Platforms in 7 EU countries (PL, DK, SE, BG, ES, IE & NL). The project aims to enhance cooperation among key rural players towards co-creating sustainable business model pathways in line with regional potentials and policy initiatives. MainstreamBIO supports 35 multiactor partnerships to overcome barriers and get bio-based innovations to market with hands-on innovation support, accelerating the development of over 70 marketable bio-based products and services. Furthermore, the project develops and employs a digital toolkit to better match bio-based technologies, social innovations and good nutrient recycling practices with available biomass and market trends as well as to enhance understanding of the bioeconomy with a suite of educational resources building on existing research results and tools. To achieve these targets, MainstreamBIO involves 10 partners across Europe, coming from various fields. Thus, all partners combine their knowledge and experience to promote the growth of bioeconomy in a sustainable and inclusive manner.

Coordinator: **Q-PLAN INTERNATIONAL ADVISORS PC (Q-PLAN)**

| Partner   |   | Short Name |
|---|---|------------|
|  | Q-PLAN INTERNATIONAL ADVISORS PC  | Q-PLAN     |
|  | MUNSTER TECHNOLOGICAL UNIVERSITY  | MTU        |
|  | STICHTING WAGENINGEN RESEARCH   | WR         |
|  | INSTYTUT UPRAWY NAWOZENIA I<br>GLEBOZNAWSTWA, PANSTWOWY INSTYTUT BADAWCZY | IUNG       |
|  | RISE PROCESSUM AB   | PROC       |
|  | AGRAREN UNIVERSITET - PLOVDIV   | AUP        |
|  | FBCD AS   | FBCD       |
|  | EURIZON SL  | INN        |
|  | DRAXIS ENVIRONMENTAL SA   | DRAXIS     |
|  | WHITE RESEARCH SPRL   | WHITE      |

**CONTACT US** [info@mainstreambio-project.eu](mailto:info@mainstreambio-project.eu) **VISIT** [www.mainstreambio-project.eu](http://www.mainstreambio-project.eu)



MainstreamBio



@MainstreamBio



MainstreamBio Project



MainstreamBio Horizon Europe Project