

# MARIGREEN\_TECB

Workshop in the use of FT-IR for evaluating humification in marine-based composts

## About the Project

The MARIGREEN project aims at upgrading poorly utilized residual materials from the BLUE value chain for application as fertilizers and biostimulants in organic agriculture. MARIGREEN\_TECB consists of a capacity-building and knowledge-transfer workshop bringing together PhD candidates affiliated with MARIGREEN and experts in composting, humic substances, Fourier Transform Infrared spectroscopy (FTIR) analysis, chemical analysis, and horticulture. The workshop is organized by the Norwegian Centre for Organic Agriculture (NORSØK) where marine-based composts and fertilizers for the MARIGREEN project are being made, and will be held at the University of Agronomic Sciences and Veterinary Medicine (USAMV) in Romania where the products are being analyzed and tested in field trials. Among the topics to be discussed is utilizing FTIR for the determination of humic acid (HA) content in raw materials and mature compost. HA content and the ratio between HA and fulvic acid (FA) are often used as indicators for compost maturity and quality. Traditional analysis involves chemical extraction and is time-consuming and costly. FTIR analysis takes only a few minutes per sample and is a valuable method for rapidly measuring the level of humification (i.e., completeness of decomposition) and evaluating product quality, which saves time and money for both researchers and composting practitioners. However, interpretation of the spectra requires special competence and the aid of statistical tools, competence that MARIGREEN partners do not possess. This project will add impact to MARIGREEN by transferring valuable knowledge about process optimization for making marine-based composts and fertilizers and about novel methods for determining compost quality. It will also be an opportunity for young researchers from MARIGREEN to build their professional network.



## Project Overview

3. Additional Call | 2023

### Project Partners:

- **Mr Joshua Cabell Bouman**  
Norwegian Centre for Organic Agriculture
- **Dr Violeta Alexandra Ion**  
University of Agronomic Sciences and Veterinary Medicine
- **Prof THANOS SALIFOGLU**  
Aristotle University of Thessaloniki

### Priority Area:

Training, exchange and capacity building



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 817992.