



ICoWEFS

2026

INTERNATIONAL CONFERENCE ON WATER,
ENERGY, FOOD AND SUSTAINABILITY

MAY 13 - 15, 2026

PORTALEGRE, PORTUGAL

Programme

Portalegre Portugal 13–15 May 2026

Important notes:

- Oral presenters will have 10 minutes.
- Poster presenters must submit their posters in digital format by 4 May to the conference email address. The presenter will have 3 minutes to present the posters.

Day 1 – May 13th

08.45-9.15 h: Registration

9.15-09.40 h: Opening Ceremony (Room NEXUS – BioBIP II)

Keynote

(Room NEXUS, BioBIP II, Chair: Paulo Brito)

09.40-10.00 h – “Scaling Thermochemical Technologies: Opportunities and Barriers in the Swedish Energy Landscape”

Klas Kengvall (KTH Royal Institute of Technology, Sweden)

Poster Session 1 – Online

10.00-10.30 h

(Room LEI – BioBIP II, Chair: João Galvão)

Poster 1: “Strategies to improve quality of life in Social Housing and prevent degradation into Urban Ghettos” – Daniel Delgado

Poster 2: “Application of Value Stream Mapping in the Food Industry: Financial Impact of Reducing Waste Production” – Pedro Ramos

Poster 3: “Carbon Footprint Assessment of electricity production from residual eucalyptus forest biomass in Portugal” – Nuno Pedro



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Poster 4: “Companies as Learning Spaces: An Interpretive-Narrative Analysis of the ESG School Project in Amazonian Public Education” – Teresa Eugénio

Poster 5: “Carbon Footprint Assessment of electricity production from residual eucalyptus forest biomass in Portugal” – Nuno Pedro

Poster 6: “Impact Of Environmental Factors On The Relocation Of Zea Maize Crops” – Maryna Sturko

Poster 7: “A Structural Analysis of Decentralized Energy Market Designs in the EU” – Maria João Pereira

Poster 8: “Mitigation of Microplastics Using Floating Macrophytes: Experimental Evidence, Operational Limits, and Ecological Implications with a Focus on Lemna minor” – Madalena Picanço

10.30-10.40 h: Coffee break

Parallel Sessions

Session 1

(Room NEXUS, BioBIP II, Chair: Ricardo Gomes)

10.45-10.55 h: “IoT-Based Multiparametric System for Continuous Water Quality Monitoring and Web-Based Data Visualization” - Santiago León Daza

10.55-11.05 h: “Integrated Monitoring of Water and Suspended Solids for Sedimentation Management in Reservoirs for Hydropower Generation” – Eduardo Moreno Aldana

11.05-11.15 h: “HVO's Contributions Regarding the WEF Nexus” – Márcio R Labigalini

11.15-11.25 h: “Study of Temporal Variation in Siltation Rates of Marginal Basins in the Santana Reservoir” - Eduardo Moreno Aldana

11.25-11.35 h: “Occurrence and Analytical Detection of Emerging Contaminants in Water Resources: A Systematic Review” - Pedro Esperanço

11.35-11.45 h: Urban rivers in the Ecuadorian Amazon: water quality criteria for recreational use and environmental perception in Tena City - Felipe Benjamin Carrera Villacres



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11.45-11.55 h: “Effects of ultrasound and nitrite concentration on the mortality rate of *Daphnia* spp. present in a wastewater treatment plant” - Pedro Esperanço

11.55-12.05h: “Measuring Climate Change Adaptation in Hungarian Agriculture within the Water–Energy–Food–Sustainability Nexus” - Csaba Vaszkó

12.05-12.30h: Discussion

Session 2

(Room E105, BioBIP II, Chair: Paulo Mourão)

10.45-10.55 h: “Enhancing Sustainability in Traditional Alentejo Cheese Production through Renewable Energy Integration: A Case Study” – Arian Semedo

10.55-11.05 h: “Characterization of Household Hazardous Waste Through Citizen Science: The DaWeZard Case Study” – Lizete Heleno

11.05-11.15 h: “Decarbonising Mediterranean Forage Systems through Innovative Bayesian Modelling and Real Time Variable Rate Nitrogen Sensing” – Luís Silva

11.15-11.25 h: “Assessing Energy Recovery Potential of Urban Pruning Residues in Cúcuta, Colombia” - Mario Cabellero

11.25-11.35 h: “Optimizing Prodigiosin Bioproduction by *Serratia marcescens* ESACB 596” – Ana Ferraz

11.35-11.45 h: “Demand segmentation in a sustainable coastal destination” – Wilmer Carvache-Franco

11.45-11.55 h: “Responsible Consumption in Colombia: Household Patterns and Pathways Toward Sustainability Transitions” - Angélica Robayo-Avenidaño

11.55-12.05h: “Preliminary insights of community composting practices in Portugal” – Verónica Oliveira

12.05-12.30h: Discussion

Session 3

(Room E024, BioBIP II, Chair: Liliana Ferreira)

10.45-10.55 h: “From Innovation to Adoption: Market Frictions Con-straining Digital Circular Transitions in Agri-Food SMEs” – Ricardo Jorge Correia



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10.55-11.05 h: “Segmentation in sustainable adventure destinations” – Wilmer Carvache-Franco

11.05-11.15 h: “Leaching Approaches for Lithium Recovery from Spodumene” – Joana Almeida

11.15-11.25 h: Impact of Global Warming on the Thermal Design of Residential Slab-on-Grade Floors in Poland and Portugal – Anna Staszczuk

11.25-11.35 h: “Cryogenic Energy Storage Technologies for Renewable Energy Integration” – Arian Semedo

11.35-11.45 h: “Environmental footprint of biohythane ($H_2-CH_4-CO_2$) production from renewable resources: A simplified model based on six-carbon sugars” – Dorian Prato-Garcia

11.45-11.55 h: “Impact of voltage level standardization in power distribution systems” – João Duarte

11.55-12.05 h: “Mechanical Evaluation of Vine Pruning Harvesting Systems for Energy Valorization” – Francesco Toscano

12.05-12.30h: Discussion

12.30-14.00 h: Lunch

Poster Session 2

14.00-14.30 h

(Room LEI – BioBIP II)

Poster 1: “Design of an Integrated Cleaning and Upgrading System for RDF-Derived Syngas to Produce High-Purity H_2/CO_2 Mixtures” – Wilmer Carvache-Franco

Poster 2: “Sheep Wool-Based Nature-Based Solutions for Post-Fire Sediment Stabilization: A Pilot Study in Serra da Gardunha, Portugal” – Daniel Santana

Poster 3: “Removal of dyes from wastewater using raw agricultural waste as absorbents” – Pedro Geraldo



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Poster 4: “Hydrodeoxygenation of Lignocellulosic Pyrolysis Bio Oil: Comparative and Sequential Pathways Using NiMo and FCC Catalysts” – [João Tavares](#)

Poster 5: ““SDG in Motion” - Expanding SGD Outreach through informal process” – [Filipa Ferreira](#)

Poster 6: “Water efficiency in the glass packaging industry” – [Sandra Mourato](#)

Poster 7: “Constraints and challenges encountered in community composting: an overview” – [Inna Shyshka](#)

Poster 8: “Indoor Air Quality as a Learning Opportunity: Monitoring, Awareness and Behaviour in Highly Occupied Classrooms” – [Sandra Mourato](#)

Industry session

(Room NEXUS, BioBIP II)

14.30-14.45 h: H2tALENT: Alentejo's First Green Hydrogen Valley – PACT

14:45-15:15 h: Research, Applications and Digital Twins – HyLab Guilherme Gaspar

15:15-15:45 h: Hydrogen Infrastructure: Industrial Applications and Real Use Cases – PRF Diogo Couto

15.45-16.00 h: **Coffee break**

16.00-16.30 h: Industrial Decarbonisation at Scale: Galp's Green Hydrogen Journey in Sines – Petrogal / Galp Marco Ferraz

16.30-17.00 h: Engineering Green Hydrogen: From Feasibility to Operation – WinPower André Saldanha

17.00-19.00: **Portalegre de Honra**



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Day 2 – May 14th

09.00-09.20 h: Registration

Keynote

(Room NEXUS, BioBIP II, Chair: Paulo Brito)

09.20-09.40 h – “Technological Roadmap for Sustainable Biomethane and Hydrogen Production from Municipal Solid Waste: An EESG Approach”

Ronney Boloy (CEFET-RJ, Brazil)

09.40-09.55 h: Coffee break

Parallel Sessions

Session 4

(Room NEXUS, BioBIP II, Chair: Henrique Almeida)

10.00-10.10 h: “Sustainable Stabilisation of Sheep Whey through Controlled Acidification: A Circular Approach for Safe Animal Feed” – Ana Ferraz

10.10-10.20 h: “Variability of Microplastic Content According to Soil Type and Use” – Luis Araújo Santos

10.20-10.30 h: “Recovery of Phosphorus from Sewage Sludge via Hydrothermal Carbonization and Citric Acid Leaching: A Sustainable Route for Biofertilizer Production” – Junior Diego Becker

10.30-10.40 h: “Beyond Sustainability: Measuring Regenerative Leadership to Transform Business Models” - Ricardo Jorge Correia

10.40-10.50 h: “Assessing Irrigation Effectiveness in Kiwifruit Orchards Using Multitemporal Sentinel-2 Imagery and ERA5-Land Time Series in southern Italy” – Francesco Toscano

10.50-11.00 h: “Proposed Correction to the Shear Stress Formula in Structural Design Standards for Guadua angustifolia Kunth Bamboo in South America” - Angel Chicaiza



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11.00-11.10 h: “Comparative Assessment of Energy Performance and Climate Change Impacts on Residential Buildings in Lisbon/PT and Florianópolis/BR” – Flávio Craveiro

11.10-11.40 h: Discussion

Session 5

(Room E105, BioBIP II, Chair: Ana Luísa Fernando)

10.00-10.10 h: “Occurrence and Analytical Detection of Emerging Contaminants in Water Resources: A Systematic Review” - Pedro Esperanço

10.10-10.20 h: “IoT-Based Multiparametric System for Continuous Water Quality Monitoring and Web-Based Data Visualization” – Santiago Daza

10.20-10.30 h: “Integrated Monitoring of Water and Suspended Solids for Sedimentation Management in Reservoirs for Hydropower Generation” – Emanuel Moreno

10.30-10.40 h: “Urban rivers in the Ecuadorian Amazon: water quality criteria for recreational use and environmental perception in Tena City” - Felipe Villacrés

10.40-10.50 h: “Effects of ultrasound and nitrite concentration on the mortality rate of *Daphnia* spp. present in a wastewater treatment plant” - Pedro Esperanço

10.50-11.00 h: “Study of Temporal Variation in Siltation Rates of Marginal Basins in the Santana Reservoir” – Emanuel Moreno

11.00-11.10 h: “A bibliometric and technical review of energy efficiency metrics in urban LED street lighting” - Juan Unión-Sánchez

11.10-11.40 h: Discussion

Poster Session 3 - Online

11.40 – 12.40

(Room NEXUS, BioBIP II, Chair: Paulo Brito)

Poster 1: “Impact of an Awareness-Raising Intervention on Food Waste in a Portuguese Primary School: A Pre-Post Study” – Beatriz Silva

Poster 2: “Effect of Pyrolysis Temperature on Product Yields and Properties from Olive Pomace in a Fixed-Bed Reactor” – Aldina Ribeiro



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Poster 3: “Constructed Wetlands as an Alternative for Sewage Treatment: Comparative Analysis of Experiences in The State of Rio De Janeiro, Brazil.” – [Ana Herrera](#)

Poster 4: “Technical-Economic Feasibility Analysis of Organic Waste Valorization through Anaerobic Digestion for Biomethane Production and Grid Injection” – [Isabelle Lessa](#)

Poster 5: “Tulsi (Ocimum tenuiflorum): Agricultural practices and cultivation strategies for Iberian crops” – [Maria Isabel Silva](#)

Poster 6: “From Raw to Cooked: Impact of Boiling, Steaming and Sous-vide on the Nutritional Composition, Fatty Acid Profile and Mineral Content of Atlantic Mackerel (Scomber scombrus)” – [Marta neves](#)

Poster 7: “Data-Driven Predictive Framework for Concrete 3D Printing: Machine Learning-Assisted Material Development for Construction Applications” – [Karim Fahfouhi](#)

Poster 8: “Multilevel Governance of the Circular Economy in Brazil: Regulatory Fragmentation and Implementation Pathways” – [Ana Herrera](#)

Poster 9: “Regulation and Incentives for Waste-to-Energy (WTE) Power Generation from Solid Waste in Brazil in Light of the 2035 Mitigation and Adaptation Targets under the Paris Agreement” – [Isabelle Lessa](#)

Poster 10: “Potential of Entomopathogenic Fungi as Biological Control Agents Against Green Leafhoppers in Portuguese” – [Sana Bashir](#)

Poster 11: “Machine Learning for Thermal Optimization of Walls for Additive Manufacturing: A Review” – [Sofia Pessoa](#)

Poster 12: “Technological Model for Agricultural Monitoring of Two Crop Zones in Mexico: Integrating Drones, IoT Sensors, and Satellite Imagery for Lime and Banana-Palm Cultivation” – [Laura Arteaga](#)

Poster 13: “Adsorption of ciprofloxacin in activated carbon derived from pinecones” – [Paula Cristina Silva](#)

Poster 14: “Seaweed-Based Bioplastic Plant Pots: A Review of End-of-Life Scenarios from a Life Cycle and Ecodesign approach.” – [Larissa Togeiro](#)



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Poster 15: “Energy Transition to Electromobility and Fuel Cell Technologies – Challenges” – Jaqueline Silva

Poster 16: “Valorisation of Mediterranean Acorns (*Quercus* spp.) for Sustainable Food Systems and Circular Bioeconomy” – Susana Bernardino

Poster 17: “Regenerative Practices in Douro Viticulture: Indicators, Outcomes, and Sub-regional Impacts” – Susana Campos

Poster 18: TBD

12.30-14.00 h: Lunch

Poster Session 4

14.00-14.30 h

(Room LEI – BioBIP II)

Poster 1: “The microstructure of freeze-dried food products” - Jakub Chrobak

Poster 2: “Challenges in Fish-Specific Habitat Conditions Analysis and Modelling” - Gorana Ćosić Flajsig

Poster 3: “Collaboratively Localizing the SDGs - local actors in the municipality of Loulé (Portugal) moving towards sustainability” – Filipa Ferreira

Poster 4: “European Energy Policies and Their Impact on Energy Consumption and Greenhouse Gas Emissions: An Econometric Scenario Analysis” - Orlando Soares

Poster 5: “Transforming Waste into Beverages: Antioxidant Activity and Total Phenolic Content of a Coffee Husk-Based Beverage as a Sustainable Alternative Compared with Roasted Coffee, and Fully Washed Roasted Coffee from East-Timor” – Daniela Costa

Poster 6: “Analysing the driving forces of CO₂ emissions in Portugal” – Juan Aceituno

Poster 7: “Valorization strategies for an oily sludge coming from a petrol refinery: process simulation” – José Tuesta

Poster 8: “Optimization and kinetic modelling of the carbonization of PAN for Carbon Felt production” – José Tuesta



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Keynote

(Room NEXUS, BioBIP II, Chair: Paulo Brito)

14.35-14.55 h - Ronney Boloy (CEFET-RJ, Brasil)

Parallel Sessions

Session 6

(Room NEXUS, BioBIP II, Chair: Pedro Gala)

15.00-15.10 h: “ENSO and hydrometeorological extremes in Ecuador: a dominant forcing of recent intense rainfall and dry periods?” – Daniel Delgado

15.10-15.20 h: “Cradle-to-Grave LCA of a Washing Machine: A Case Study Using Open LCA – Preliminary results” Bruno Barbosa

15.20-15.30 h: “Infrastructural Factors Influencing Biowaste Management According to Citizens' Opinions” – Luis Araújo Santos

15.30-15.40h: “Integrated assessment of thermal comfort and energy consumption in urban housing in Portoviejo, Ecuador” – Daniel Delgado

15.40-15.50 h: “Study of Compression Perpendicular to the Fibers of Guadua angustifolia Kunth in Ponceloma, Tena, Ecuador” – Angel Chicaiza

15.50-16.00 h: “From pyrolysis to policy: Regional action frameworks for the development of decentralised and mobile pyrolytic technologies” - Catarina Nobre

16.00-16.10 h: “Sustainable Plant Biostimulation: Seaweed Extracts Improve Early Tomato Growth” – Teresa Mouga

16.10-16.20 h: “From farm to table: understanding consumer behaviour in fresh tomato purchase and consumption in Portugal” - Joaquina Pinheiro

16.20-16.50 h: Discussion

Session 7

(Room E105, BioBIP II, Chair: Joel Vasco)



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15.00-15.10 h: “Environmental Implications of Dietary Choices in Higher Education: A Quantitative Assessment of Canteen Meal Carbon Emissions” – [Alexandra Rodrigues](#)

15.10-15.20 h: “A Sustainable Functional Grissini Formulated with Bar-ley Flour and Dried Lavender Flower Powder: A High β -Glucan, Medium Glycemic Index Approach” – [Kubra Ozkan](#)

15.20-15.30 h: “Microplastic Bioaccumulation in Fish: A One Health Perspective on Human Health and Global Sustainability” – [Maria Leonor Silva](#)

15.30-15.40h: “Life Cycle Assessment Tools in European Agri-Food SMEs: Evidence from a Multi-Country Industry Survey” – [Ana Paula Oliveira](#)

15.40-15.50 h: “Energy Demand Forecasting in Wineries During the Harvest Period” – [Cristina Matos](#)

15.50-16.00 h: “Lean Management as a Tool for Enhancing Biodiversity and Sustainability in Educational Institutions” – [Alexandra Rodrigues](#)

16.00-16.10 h: “Winery Management: A proposal of a manual of good practices for water and energy efficiency” – [Cristina Matos](#)

16.10-16.20 h: “Recovery of Phosphorus from Sewage Sludge via Hydrothermal Carbonization and Citric Acid Leaching: A Circular” – [Junior Becker](#)

16.20-16.50 h: Discussion

Poster Session 5

(15.00 – 16.20)

(Room E024, BioBIP II, Chair: Flávio Craveiro)

Poster 1: “Sustainability Assessment of Biodegradable Polymeric Materials in Cosmetic Packaging” – [Iris Correia](#)

Poster 2: “Connections between energy and socio-economic indicators: A multi-scale correlation analysis” – [Lucía Galán-Cano](#)

Poster 3: “Environmental impact assessment (EIA) of the cultivation of three energy crops in three marginal soils” – [Mariana Abreu](#)



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Poster 4: “Wastewater-Based Cultivation of Microalgae for Exopolysaccharide Production” – [Ana Luísa Fernando](#)

Poster 5: “Identification of Marginal Soils for Bioenergy Production – What Geospatial Tools Can Be Used?” - [Mariana Abreu](#)

Poster 6: “From Energy Crops to Nanolignin: Feedstock Selection and Processing Routes for Sustainable Valorization” - [Ana Luísa Fernando](#)

Poster 7: “The water-agriculture-food nexus: insights from the European case” – [MaJosé Acosta](#)

Poster 8: “Sustainability in the Plastic Mold Industry: - Case Study” – [João Galvão](#)

Poster 9: “Impact of Kristin Depression on Water Supply Systems in Leiria: Operational Challenges, Emergency Response, and Climate Adaptation Strategies” – [Ricardo Gomes](#)

Poster 10: “Bioenergy production and net-zero carbon dioxide emissions investigation for a small scale biorefinery unit” - [Charalambos Chasos](#)

Poster 11: “Building Miniatures as a Teaching–Learning Tool for Bioenergy Education in Sub-Saharan Africa” – [Luiz Rodrigues](#)

Poster 12: TBD

Poster 13: TBD

17.00 – 19.00 h: Cultural Visit in Altas Quintas

Day 3 – May 15th

Keynote

(Room NEXUS, BioBIP II, Chair: Paulo Brito)

09.30-09.50 h: TBD



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Carmen Mireya Rangel (LNEG, Portugal)

Poster Session 6

(09.50 – 10.10)

(Room LEI, BioBIP II)

Poster 1: “Designing hydrogen education pathways across EQF levels: Lessons from the H2Excellence project.” Cecília Pedrero

Poster 2: “A Circular Approach to Agro-Waste Valorization through Biohytane Production” – Ana Paul Dias

Poster 3: “Valorization of sewage sludge to produce sustainable biochar” – Bruna Rijo

Poster 4: “Design and Evaluation of a Multi-Stage Biogas Upgrading System for High-Purity Methane Production” – Bruna Rijo

Poster 5: “Design of an Integrated Cleaning and Upgrading System for RDF-Derived Syngas to Produce High-Purity H₂/CO₂ Mixtures” - Bruna Rijo

Poster 6: “Agrivoltaic Shading Effects on Evaporative Demand and Water Balance” – Fernanda Azeredo

Poster 7: “Reconciling energy and agriculture through agrivoltaics: A spatial and scenario-based assessment in Portugal” – Fernanda Azeredo

Poster 8: “Comparative Assessment of Biomass Wastes for Energy Valorization: Physicochemical Characterization and Thermal Conversion Potential” – Catarina Nobre

Poster 9: “Life Cycle Assessment Applied to Sugarcane Biorefineries: A Systematic Review” – Fabiana Ramos

Poster 10: “Seasonal Availability of Vegetable Agro-Industrial Residues and Cascading Valorisation Pathways for Anaerobic Co-Digestion: A Review” – Nuno Martins

10.10-10.20 h: Coffee break



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Closing Ceremony

(10.20-10.40 h)

(Room NEXUS, BioBIP II)

Presentation of the awards for best oral presentation and best poster presentation

Optional Technical Visit

(10.40-12.00 h)