



RECEPL SERIES  
6.

SUOR ORSOLA  
BENINCASA  
UNIVERSITÀ EDITRICE



*Jean Monnet Chair EUGREENEXT  
“European Green Rights:  
reshaping fundamental rights for next generations”*

1<sup>st</sup> International Workshop  
A.Y. 2021-2022

*ABSTRACTS BOOK*

**DESIGN OF RIGHTS  
FOR ECO-FOOD  
AND ECO-FERTILITY**

MARKETS  
AND CAUSAL RELATIONS

*Edited by*  
Ilaria Amelia Caggiano

29. September 2021  
Suor Orsola Benincasa University  
*Webinar*



Co-funded by  
the European Union





ReCEPL SERIES  
6.



## ReCEPL SERIES

**1. Gatt L., Montanari R., Caggiano I. A. (eds.)**

*Privacy and Consent. A Legal and UX&HMI Approach*

University Suor Orsola Press, 2021, ISBN 978-88-96055-878

**2. Gatt L. (ed.)**

*Social Networks and Multimedia Habitats. Jean Monnet Chair PROTECH. "European Protection Law of Individuals in Relation to New Technologies". 1<sup>st</sup> International Workshop A.Y. 2019-2020*

University Suor Orsola Press, 2020, ISBN 979-12-80426-00-0

**3. Grimaldi P.**

*Le fonti di energie rinnovabili nella circular economy*

University Suor Orsola Press, 2021, ISBN 979-12-80426-05-5

**4. Gatt L. (ed.)**

*Legal design for transparency in consumer contracts operating in online and offline environments. A new chance for the interaction between academics and stakeholders.*

*2<sup>nd</sup> International Workshop A.Y. 2020-2021*

University Suor Orsola Press, 2022, ISBN 979-12-80426-10-9

**5. Gatt L., Gaeta M. C., Aulino L. (eds.)**

*From human being to cyborg. National Cases on Human Embryos and the EU Court of Justice: from artificial procreation to human enhancement in the era of transhumanism. Jean Monnet Chair PROTECH. "European Protection Law of Individuals in Relation to New Technologies"*

*3<sup>rd</sup> International Workshop A.Y. 2021-2022*

University Suor Orsola Press, 2023, ISBN 979-12-5511-003-3

**6. Caggiano I. A. (ed.)**

*Design of rights for eco-food and eco-fertility: markets and causal relations. Jean Monnet Chair EUGREENEXT "European Green Rights: reshaping fundamental rights for next generations"*

*1<sup>st</sup> International Workshop A.Y. 2021-2022*

Suor Orsola Università Editrice, 2023, ISBN 979-12-5511-007-1



Co-funded by  
the European Union



*Jean Monnet Chair EUGREENEXT*  
*“European Green Rights: reshaping  
fundamental rights for next generations”*

1<sup>st</sup> International Workshop  
A.Y. 2021-2022

*ABSTRACTS BOOK*

# **DESIGN OF RIGHTS FOR ECO-FOOD AND ECO-FERTILITY:**

## **MARKETS AND CAUSAL RELATIONS**

*Edited by*  
Ilaria Amelia Caggiano

29 September 2022  
Suor Orsola Benincasa University



UNIVERSITÀ DEGLI STUDI  
SUOR ORSOLA  
BENINCASA

The *ReCEPL Series* is directed by Lucilla Gatt.  
The members of the scientific committee are available here:  
<https://www.unisob.na.it/ateneo/c008.htm?vr=1>

This research has been anonymously refereed

No part of this publication may be reproduced, stored, retrieved system,  
or transmitted, in any form or by any means, without the written permission of the publisher,  
nor be otherwise circulated in any form of binding or cover.

*Editing*

Luciana Trama

*Design and printing*

Flavia Soprani, Carmine Marra

*Impaginazione*

Federica d'Anna

*Traduzioni e adattamento*

Emiliano Troisi

© Copyright 2023 by Suor Orsola Benincasa University. All rights reserved.  
The individual essays remain the intellectual properties of the contributors.

ISBN 979-12-5511-007-1

The Book is licensed under a Creative Common Attribution 4.0 International Licence CC-BY-NC-ND.  
All the details on the license are available at: [creativecommons.org/licenses/by-nc-nd/4.0](https://creativecommons.org/licenses/by-nc-nd/4.0).  
Free access to the Book at: <https://universitypress.unisob.na.it/index.php/libri.html>.  
The intellectual property of the individual contributions remain with the authors.

*The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.*

## TABLE OF CONTENTS

9	<i>Scientific Committee</i>
11	<i>Editorial Committee</i>
13	<i>List of Authors</i>
17	<i>Workshop Schedule</i>
23	<i>Preface</i>
	<b>WORKSHOP INTRODUCTION</b>
24	Ilaria Amelia Caggiano <i>Design of rights for eco-food and eco-fertility</i>
27	<b>WORKSHOP ABSTRACTS</b>
28	<b>MORNING SESSION</b> <i>The right to health and sustainability</i>
29	Erik Franklin <i>Over half of known human pathogenic diseases can be aggravated by climate change</i>
30	Alessandro Leone <i>Bisphenol A exposure and symptoms of anxiety and depression among women of reproductive age</i>
31	Luigi Montano Gianluca Montanari Vergallo Paola Grimaldi <i>Reproductive biomarkers and the establishment of civil liability for health damage from environmental pollution</i>
32	Pierpaolo Di Micco <i>Open issues with last wave of COVID-19 pandemic: a commentary regarding frail patients and non-responders to vaccination in clinical practice</i>
33	Valentina Zampaglione <i>Climate change and the protection of fundamental rights and freedoms</i>

- 34 Anna Anita Mollo *Vulnerability and sustainability: first insights into a study on the impact on people with disabilities and future generations of [neuro]technological devices*
- 36 **MORNING SESSION** *Rights of consumers and sustainability*
- 37 Michala Meisalles *Empowering consumers by standardising mandatory disclosure. Critique and reform of mandatory disclosure rules in EU consumer law*
- 38 **MORNING SESSION** *Consumer rights to food and sustainability*
- 39 Maria Cristina Gaeta *Consumer protection and green agri-food products in the digital age*
- 40 Benedetta Faedi Duramy *Child Participation and Food Experiential Learning: A New Approach to Childhood Obesity*
- 41 Fabrizio Capoccioni *Aquaculture products and traceability: a tool to be implemented for a better consumer awareness*
- 42 Fabrizio Cesareo *The food information requirement: the challenge of labelling vis-à-vis environmental law and new technologies*
- 43 Roberto Montanari Arianna Fantesini *User Experience evaluation and fruition in nutritional label*
- 44 Antonella Correnti *The impact of online advertising and marketing on food consumption behaviour*
- 46 **AFTERNOON SESSION** *Rights, markets and sustainability*
- 47 Laura Valle *The agri-food sector is a highly regulated one, mostly by legislative rules coming from the EU*
- 48 Arturo Maniaci *Planned obsolescence and purchaser-consumer protection*
- 49 Claudia Benanti *Company due diligence and sustainability*
- 50 Georges Cavalier *A Call for EU Farm to fork general tax policy rules*
- 51 Maria Paola Francesca Bottoni *Right to food and corporate responsibility*
- 52 Francesca Ferretti *Food waste and environmental sustainability: legal aspects of the role of AI*

- 53 Matteo Tofanelli *Covid-19 and food safety: Blockchain and the Internet of Packaging as priorities for Industry 4.0*
- 54 Francesco Ribezzo *Regulation and governance models for the use of blockchain for food security*
- 55 Emiliano Troisi *Blockchain-based food supply chains: the role of smart contracts*
- 57 **ROUND TABLE** *Business and sustainability in agriculture and relevant markets*
- 58 Roberto Mazzei *Biomethane project: production of biomethane from buffalo, bovine and agricultural by-products*
- 60 Fabrizio Ventimiglia *CSB and Sustainability*
- 61 Rosario Rago *Case Study Rago Group. Made in Italy & Sustainable Agriculture Since 1892*
- 62 Daniele Perillo *Case Study Progetto Mo.Vi.Da*
- 63 Santa Ingenito *Microbial bioformulations for agriculture: production and application challenges*
- 64 Ciro Buonocore *Case Study U-leaf*
- 65 Lucrezia Pellegrino Melissa Gargiulo Dana Sigona Claudia Percossi *Misleading food labeling: the Petti case*





## SCIENTIFIC COMMITTEE

1<sup>st</sup> INTERNATIONAL WORKSHOP ON “DESIGN OF RIGHTS FOR ECO-FOOD AND ECO-FERTILITY: MARKETS AND CAUSAL RELATIONS”  
– 29 SEPTEMBER 2021 –  
SUOR ORSOLA BENINCASA UNIVERSITY

### **Ilaria Amelia Caggiano** *Chair Holder*

Full Professor of Private Law and New Technologies Law  
Vice-director of the Research Centre of European Private Law (ReCEPL)  
Vice-director of European Journal of Privacy Law & Technologies  
Suor Orsola Benincasa University

### **Lucilla Gatt** *Senior Advisor, Senior Researcher and Expert*

Full Professor of Private Law and New Technologies Law  
Director of the Research Centre of European Private Law (ReCEPL)  
Director of European Journal of Privacy Law & Technologies (EJPLT)  
Suor Orsola Benincasa University



## *EDITORIAL COMMITTEE*

### **Anna Anita Mollo**

Ph.D. in Humanities and Technologies: an integrated research path,  
Senior Researcher of the Research Centre of European Private Law (ReCEPL)  
Editorial Team Member of European Journal of Privacy Law & Technologies  
(EJPLT)  
Suor Orsola Benincasa University

### **Emiliano Troisi**

Ph.D. (c) in Humanities and Technologies: an integrated research path,  
Junior Researcher of the Research Centre of European Private Law (ReCEPL)  
Editorial Team Member of European Journal of Privacy Law & Technologies  
(EJPLT)  
Suor Orsola Benincasa University

### **Mario Triggiani**

Junior Researcher of the Research Centre of European Private Law (ReCEPL)  
Suor Orsola Benincasa University



## *LIST OF AUTHORS*

**Claudia Benanti** – Associate Professor of Private Law, Università di Catania

**Maria Paola Francesca Bottoni** – Ph.D. student in Civil Law, Università degli Studi di Camerino

**Ciro Buonocore** – Rotaract Club delegate, district 2101 - Scafati Angri Realvalle

**Fabrizio Capoccioni** – Confirmed researcher CREA

**Georges Cavalier** – Co-Director Tax LL.M and member of Louis Josserand Research Team – Business Law Center, University Jean Moulin – Lyon 3, Lyon (FR)

**Fabrizio Cesareo** – Postdoctoral Researcher and Contract Professor of Private Law, University of Milan-Bicocca

**Antonella Correnti** – Postdoctoral Researcher in Comparative Private Law, Università di Messina

**Pierpaolo Di Micco** – Ph.D. Genetica e medicina molecolare, Internal Medicine Specialist PO Rizzoli Ischia

**Benedetta Faedi Duramy** – Professor of Law, Golden Gate University, San Francisco (US)

**Arianna Fantesini** – Ph.D. student in Humanities and Technologies, Università degli Studi Suor Orsola Benincasa

**Francesca Ferretti** – Ph.D. student presso l'Università degli Studi di Camerino

**Erik Franklin** – Associate Research Professor, Hawaii Institute of Marine Biology, UHM

**Maria Cristina Gaeta** – Research Fellow of Private Law, Università degli Studi Suor Orsola Benincasa

**Melissa Gargiulo** – BA, MA students Università degli Studi Suor Orsola Benincasa

**Paola Grimaldi** – Research fellow, Università degli Studi Luigi Vanvitelli

**Santa Ingenito** – Agronomist analyst at Fertileidea S.r.l.

**Alessandro Leone** – Research Fellow, Università degli studi di Milano

**Arturo Maniaci** – Associate Professor of Private Law, Università Statale of Milan

**Roberto Mazzei** – Chief of the Economic Area – Coldiretti Campania

**Michala Meisalles** – Senior Law Lecturer, University of Derby

**Marisa Meli** – Professor of Private Law, Università degli Studi di Catania

**Anna Anita Mollo** – Postdoctoral Researcher in Private Law – LOSPD, Scuola Superiore Meridionale

**Gianluca Montanari Vergallo** – Associate Professor, Università La Sapienza of Rome

**Roberto Montanari** – Postdoctoral Researcher and Contract Professor of Private Law, University of Milan-Bicocca

**Luigi Montano** – MD, Ph.D. programme, Head of Uro-andrology service in Lifestyle medicine, ASL Salerno

**Lucrezia Pellegrino** – BA, MA students Università degli Studi Suor Orsola Benincasa

**Claudia Percossi** – BA, MA students Università degli Studi Suor Orsola Benincasa

**Daniele Perillo** – Grape and Olive Farm, Winery “Tenuta Nucilla”

**Rosario Rago** – Deputy President BoD Rago Group

**Francesco Ribezzo** – Ph.D. student, Università degli Studi di Bari Aldo Moro

**Dana Sigona** – BA, MA students Università degli Studi Suor Orsola Benincasa

**Matteo Tofanelli** – Legal Counsel, Studio Di Ciommo & Partners

**Emiliano Troisi** – Ph.D. (c), Università degli Studi Suor Orsola Benincasa

**Laura Valle** – Associate Professor of Private Law, Free University of Bozen

**Fabrizio Ventimiglia** – Avvocato, CSB President

**Valentina Zampaglione** – Ph.D., Università degli Studi di Napoli Federico II





## WORKSHOP SCHEDULE

### **INSTITUTIONAL WELCOME** 9.00 / 9.30

Lucio d'Alessandro

*Rector, Suor Orsola Benincasa University*

Tommaso Edoardo Frosini

*Director of the Department of Legal Sciences*

Antonio Tafuri

*Lawyer, President of Naples Bar Association*

Antonio Carannante

*Assessore of Procida Municipality*

Luigi Montano

*Coordinator of the Eco-Food Fertility Project*

Cristiano Capurro

*Incoming president Rotary Club Campania Napoli*

### **MORNING SESSION** 9.30 / 13.30

*Morning Chair*

Ilaria Amelia Caggiano

*EUGREENEXT Chair Holder, Università degli Studi Suor Orsola Benincasa*

### **INTRODUCTION**

Marisa Meli

*Professor of Private Law, Università degli Studi di Catania*

*"The right to health and sustainability – Diritto alla salute e sostenibilità"*

Erik Franklin

*Associate Research Professor, Hawaii Institute of Marine Biology, UHM*

*Over half of known human pathogenic diseases can be aggravated by climate change*

Alessandro Leone

*Research Fellow, Università degli studi di Milano*

*Bisphenol a exposure and symptoms of anxiety and depression among women of reproductive age*

Luigi Montano *MD, Ph.D. programme, Head of Uro-andrology service in Lifestyle*

*medicine, ASL Salerno Gianluca Montanari Vergallo Associate Professor, Università La Sapienza of Rome Paola Grimaldi Research fellow, Università degli Studi Luigi Vanvitelli*

*Reproductive biomarkers and the establishment of civil liability for health damage from environmental pollution*

Pierpaolo Di Micco

*Ph.D. Genetica e medicina molecolare, Internal Medicine Specialist PO Rizzoli Ischia*

*Lessons learnt by SARS CoV2 pandemic*

Valentina Zampaglione

*Ph.D., Università degli Studi di Napoli Federico II*

*Climate change and the protection of fundamental rights and freedoms*

Anna Anita Mollo

*Postdoctoral Researcher in Private Law – LOSPD, Scuola Superiore Meridionale*

*Vulnerability and sustainability: first insights into a study on the impact on people with disabilities and future generations of [neuro]technological devices*

Q&A session

*“Rights of consumers and sustainability – Diritti del consumatore e sostenibilità”*

Michala Meisalles

*Senior Law Lecturer, University of Derby*

*Empowering consumers by standardising mandatory disclosure – Critique and reform of mandatory disclosure rules in EU consumer law*

Maria Cristina Gaeta

*Research Fellow of Private Law, Università degli Studi Suor Orsola Benincasa*

*Consumer protection and green agri-food products in the digital age*

“Consumer rights to food and sustainability –  
*I diritti del consumatore all'alimentazione e sostenibilità*”

Benedetta Faedi Duramy

*Professor of Law, Golden Gate University, San Francisco (US)*

*Experiential learning in food: a new approach to childhood obesity*

Fabrizio Capoccioni

*Confirmed researcher CREA*

*Aquaculture products and traceability: a tool to be implemented for a better consumer awareness*

Fabrizio Cesareo

*Postdoctoral Researcher and Contract Professor of Private Law, University of Milan-Bicocca*

*Over half of known human pathogenic diseases can be aggravated by climate change*

Roberto Montanari *Postdoctoral Researcher and Contract Professor of Private Law, University of Milan-Bicocca* Arianna Fantesini *Ph.D. student in Humanities and Technologies, Università degli Studi Suor Orsola Benincasa*  
*User Experience evaluation and fruition in nutritional label*

Antonella Correnti

*Postdoctoral Researcher in Comparative Private Law, Università di Messina*

*The impact of online advertising and marketing on food consumption behaviour*

Q&A session

Ilaria Amelia Caggiano – Annalisa Mombelli (ReLab)

*Presentation of the EUGREENEXT Project Website*

Ilaria Amelia Caggiano

*Presentation of the Green Law Section of the European Journal of Privacy Law and Technology*

**LUNCH** 13.30 / 14.30

**AFTERNOON SESSION** 14.30 / 19.30

Afternoon Chair

Lucilla Gatt

*ReCEPL Director, Università degli Studi Suor Orsola Benincasa*

“Rights, markets and sustainability – *Diritti, mercati e sostenibilità*”

Laura Valle

*Associate Professor of Private Law, Free University of Bozen*

*The agri-food sector is a highly regulated one, mostly by legislative rules coming from the EU*

Arturo Maniaci

*Associate Professor of Private Law, Università Statale di Milan*

*Planned obsolescence and purchaser-consumer protection*

Claudia Benanti

*Associate Professor of Private Law, Università di Catania*

*Company due diligence and sustainability*

Georges Cavalier

*Co-Director, University of Lyon Tax LL.M*

*Louis Josserand Research Team – Business Law Center*

*University Jean Moulin – Lyon 3, Lyon (FR)*

*A Call for EU Farm to fork general tax policy rules*

Maria Paola Francesca Bottoni

*Ph.D. student in Civil Law, Università degli Studi di Camerino*

*Right to food and corporate responsibility*

## Q&A session

*“Technologies and sustainability – Tecnologie per la sostenibilità”*

Francesca Ferretti

*Ph.D. student presso l'Università degli studi di Camerino*

*Food waste and environmental sustainability: legal aspects of the role of AI*

Matteo Tofanelli

*Legal Counsel, Studio Di Ciommo & Partners*

*Covid-19 and food safety: Blockchain and the Internet of Packaging as priorities for Industry 4.0*

Francesco Ribezzo

*Ph.D. student, Università degli Studi di Bari Aldo Moro*

*Regulation and governance models for the use of blockchain for food security*

Emiliano Troisi

*Ph.D. (c), Università degli Studi Suor Orsola Benincasa*

*Blockchain-based food supply chains: the role of smart contracts*

## Q&A session

## **ROUND TABLE**

### **Moderator**

**Ilaria Amelia Caggiano**

*EUGREENEXT Chair Holder, Università degli Studi Suor Orsola Benincasa*

**“Business and sustainability in agriculture and relevant markets –  
Impresa e sostenibilità in agricoltura e mercati rilevanti”**

**Roberto Mazzei**

*Chief of the Economic Area – Coldiretti Campania*

*Biomethane project: production of biomethane from buffalo, bovine and agricultural by-products*

**Fabrizio Ventimiglia**

*Avvocato, CSB President*

*CSB and Sustainability*

**Rosario Rago**

*Deputy President BoD Rago Group*

*Case Study Rago Group*

**Daniele Perillo**

*Grape and Olive Farm, Winery “Tenuta Nucilla”*

*Case Study Progetto Mo.Vi.Da*

**Santa Ingenito**

*Agronomist analyst at Fertileidea S.r.l.*

*Microbial bioformulations for agriculture: production and application challenges*

**Ciro Buonocore**

*Rotaract Club delegate, district 2101 – Scafati Angri Realvalle*

*Case Study U-leaf*

**Pellegrino Lucrezia Gargiulo Melissa Sigona Dana Percossi Claudia**

*BA, MA students Università degli Studi Suor Orsola Benincasa*

*Misleading food labeling: the Petti case*



## PREFACE

The book gathers the abstracts of the papers and speeches given in the "*Design of Rights for Eco-food and Eco-fertility: Markets and Causal Relations*" Workshop, held at the Suor Orsola Benincasa University, on September 29, 2022, as the 1<sup>st</sup> International Workshop of the Jean Monnet EUGREENEXT Chair "European Green Rights: reshaping fundamental rights for next generations" (2021-2024).

The event, held face-to-face and online, hosted the contributions of young scholars, academics, business, and civil society representatives from Italy and abroad, who shared their own research, business, or policy making experiences.

Consistent with the objectives and target groups of the project, the event received the patronage of territorial institutions, professional bodies, national and local associations, as representatives of the instances underlying the project, to enable discussion and dissemination at regional and national level.

The speakers gave their speeches in Italian or English.

The collection below contains the original version (when given in english) or a translation in English (edited by the editorial board) of the contribution summary (abstracts).

EUGREENEXT Project thanks again all the speakers for their fruitful contribution.



## *WORKSHOP INTRODUCTION*

### **ILARIA AMELIA CAGGIANO**

Holder of the EUGREENEXT Jean Monnet Chair

Full Professor of Private Law

Vice-Director of the Research Centre of European Private Law (ReCEPL) Vice-Director of European Journal of Privacy Law & Technologies (EJPLT)

Suor Orsola Benincasa University

The international workshop "Design of Rights for Eco-food and Eco-fertility: Markets and Causal Relations" is part of the disseminating and debating activities of the EUGREENEXT Jean Monnet Chair.

The Jean Monnet Chair entitled EUGREENEXT "European Green Rights: reshaping fundamental rights for next generations" (2021-2024) intends to highlight the protective approach in European Law, with respect to health, natural environment, and welfare of living beings, in the interest of present and next generations (sustainability).

An integrated approach to the relationship between human health and environment (including animals and flora) brings to the conception of a new circular vision of the economy, renewed consumer policy and regulation, and new systematic consideration of the relationships between all those entities.

This perspective implies multi-disciplinarity and is rooted in a conception of rights, and human rights in the light of sustainability, as in the United Nation 2030 Agenda. This view can nourish the interpretation of EU Charter to define European Green Rights and enable effective protection.

In this framework, the objective of the 2022 workshop "Design of Rights for Eco-food and Eco-fertility: Markets and Causal Relations" is to discuss the relationship between ecosystems and human health, having regard to the role of businesses and markets, from farm to fork, and the impact of pollution on health, from a wide range of perspectives.

According to medical scholarship and recent data released by the WHO, environmental exposure is responsible for nearly a quarter of all diseases; about 24 percent of all diseases worldwide are due to exposure to environmental factors. These risks, however, could be prevented through targeted interventions.

Therefore, regulation is crucial, but also its application in practice, choices of businesses and markets development in the food supply chain, as well as information and advertising to consumers, in order to define the substance of individual rights (e.g. right to healthy environment, consumer protection, health).

Actual content of rights depends also on available remedies in case of violation. This is the case of dangerous activities or damages to the environment, as high levels of pollution, that can affect human health (and fertility as an aspect of it): here, it is worth to verify how losses can be compensated, and the causal connection between the conduct and the plaintiff's harm. Causes and consequences of pandemics or other widespread diseases have been included in the workshop spectrum.

The event hosts contributions from law (public and private), medicine, biology, statistical study, design and legal design, science and social sciences and was organized in sessions and successive debates, mainly held by researchers, and, finally, a round table as an ideal space for public engagement, involving case studies of businesses and civil society (associations and confederations) and discussions among these actors.



***WORKSHOP  
ABSTRACTS***

## MORNING SESSION

Chaired by

**ILARIA AMELIA CAGGIANO** *EUGREENEXT Jean Monnet Chair Holder*

***The right to health and sustainability – Diritto alla salute e sostenibilità***

Rights of consumers and sustainability – Diritti del consumatore e sostenibilità

Consumer rights to food and sustainability – I diritti del consumatore all'alimentazione e sostenibilità

**ERIK FRANKLIN**

Associate Research Professor, Hawaii Institute of Marine Biology, UHM

*Over half of known human pathogenic diseases can be aggravated by climate change*

It is relatively well accepted that climate change can affect human pathogenic diseases; however, the full extent of this risk remains poorly quantified. Here we carried out a systematic search for empirical examples about the impacts of ten climatic hazards sensitive to greenhouse gas (GHG) emissions on each known human pathogenic disease. We found that 58% (that is, 218 out of 375) of infectious diseases confronted by humanity worldwide have been at some point aggravated by climatic hazards; 16% were at times diminished. Empirical cases revealed 1,006 unique pathways in which climatic hazards, via different transmission types, led to pathogenic diseases. The human pathogenic diseases and transmission pathways aggravated by climatic hazards are too numerous for comprehensive societal adaptations, highlighting the urgent need to work at the source of the problem: reducing GHG emissions.

## ALESSANDRO LEONE

Research Fellow, Università degli studi di Milano

### *Bisphenol a exposure and symptoms of anxiety and depression among women of reproductive age*

Bisphenol A (BPA) is a chemical compound used in multiple areas, including the manufacture of food packaging and containers. Dietary exposure accounts for >90% of total exposure. It is considered an endocrine disruptor, as it is suspected to adversely affect fetal development during intrauterine life and contribute to the development of obesity, diabetes and cardiovascular disease and, more recently, mental illness in adulthood. European law (Regulation (UE) 321/2011) banned BPA from polycarbonate infant feeding bottles, but it remains authorized for all other products with a tolerable daily intake of 4 µg/kg body weight/day (EFSA2015). We conducted a cross-sectional study of 56 women aged 18-40y to investigate the association between BPA exposure and the presence of anxiety and depressive symptoms. Subjects, recruited at ICANS, University of Milan, completed the STAI2 and QD questionnaires to investigate anxiety and depressive symptoms, respectively. A blood sample was taken to determine exposure to total and unconjugated-BPA (metabolically active form). After adjustment for BMI, total BPA was not associated with anxiety and depression, whereas unconjugated-BPA (transformed in square root for linearity) was significant associated with depression score (b=0.03, 95%CI: 0.00,0.05). Our data suggest that BPA exposure is associated with depressive symptoms in women in reproductive age.

**LUIGI MONTANO**

MD, Ph.D. programme, Head of Uro-andrology service in Lifestyle medicine, ASL Salerno

**GIANLUCA MONTANARI VERGALLO**

Associate Professor, Università La Sapienza of Rome

**PAOLA GRIMALDI**

Research fellow, Università degli Studi Luigi Vanvitelli

*Reproductive biomarkers and the establishment of civil liability for health damage from environmental pollution\**

In recent decades, in addition to bad lifestyles, the role of environmental factors in influencing the population's state of health has become increasingly evident, with detrimental effects, even transgenerational, documented in the scientific literature. In fact, as demonstrated by the Ecofoodfertility research project, the widespread contamination of air, water and soil by human activities, with the introduction of gaseous, liquid or solid substances that enter the body through the air, food and skin routes, as well as the more subtle one of electromagnetic fields, seems to have as its elective target the male and female reproductive system with mechanisms of oxidative, genetic, epigenetic, immune-disregulating and endocrine interference damage. Starting from the scientific, medical and legal literature on the above-mentioned aspects and from the very recent rulings of the European Court of Human Rights on the subject of compensation for health damage caused by environmental pollution, the authors, as part of the research activities of the Jean Monnet Chair newly established at the Suor Orsola Benincasa University, will assess reproductive biomarkers as a new investigation model for ascertaining the causal link in order to come ever closer to a direct and measurable correlation between the source of pollution and its impact on human health.

\* (tradotto dall'italiano a scopi redazionali)



## PIERPAOLO DI MICCO

PhD Genetica e medicina molecolare, Internal Medicine Specialist PO Rizzoli Ischia

*Open issues with last wave of COVID-19 pandemic:  
a commentary regarding frail patients and non-responders to  
vaccination in clinical practice*

The year 2021 was next to finish and the year 2022 began and the world fighting the pandemic due to SARS-CoV-2. The clinical scenario is now really different from the onset of pandemic after first waves of vaccinations campaign. Severe lung failures are less frequent the vaccination campaign and because the presence of COVID-19 variants of concern that seem to be less virulent, in particular B.1.1.529 (Omicron)., severe lung failures may be found in anti Vax people and in immunocompromised patients because immunological toward SARS-CoV-2. Furthermore, because the presence of less virulent lately, we are observing more frequently patients with positive naso-pharyngeal swab to SARS-CoV-2 and with acute medical diseases but without interstitial pneumonia COVID-19. These unfortunately induce frequent difficulties to the internal and external triage systems also to the collocation and distribution of patients positive to SARS-CoV- or without COVID-19 into the hospital.

**VALENTINA ZAMPAGLIONE**

Phd, Università degli Studi di Napoli Federico II

*Climate change and the protection of fundamental rights and freedoms*

The phenomenon of climate change is severely testing the fundamental rights and freedoms of present and future generations. An analysis of the main case law on the subject shows the considerable divergence existing between the law in books and the law in action and the great limits of the instrument of civil liability, especially in a system, such as the Italian one, which subordinates compensation for damages to rigorous proof of the causal link between conduct and event. Added to this is the fact that the qualification of greenhouse gas emissions into the atmosphere among the illicit facts that give rise to a compensatory obligation is difficult to reconcile with the principles underlying emissions trading systems, which are particularly effective in the fight against climate change, as demonstrated by the positive experience of the EU ETS market and those that have arisen in its wake, such as the Chinese market.

## ANNA ANITA MOLLO

Postdoctoral Researcher in Private Law - LOSPD, Scuola Superiore Meridionale

*Vulnerability and sustainability: first insights into a study on the impact on people with disabilities and future generations of [neuro]technological devices\**

The 2030 Agenda approved in 2015 by the United Nations adopted no less than seventeen Sustainable Development Goals (SDGs), which, to be such, must foster the egalitarian growth of all individuals. This strategy places people at the centre, to "leave no one behind" and to achieve a more inclusive society, guaranteeing people with disabilities the same opportunities for growth. Starting from these starting points, it seems appropriate to make a legal reflection on the relationship between sustainable development, on the one hand, and the paradigm of vulnerability, on the other, the latter being understood as a universal human condition in which the individual appears conditioned in his or her actions as part of an unbalanced relationship.

What we intend to analyse relates to a particular profile of vulnerability – relational – where it is noted that situations of disadvantage can be determined by the context in which the subject operates, where the vulnerability that seems to refer to persons with disabilities does not depend on a pathological condition but on the limitations determined by a non-inclusive society. With particular reference to sustainable development in the technological sphere (goal 17 of Agenda 2030) we intend to investigate what impact the use of technological devices (e.g. neurotechnologies) has on people with disabilities, with particular reference to the legal category of capacity. How can such devices alter, limit or modify a person's capacity? Does this have implications for the right to health and health equity objectives? These questions are the starting point for a broader reflection on how future generations may suffer significant prejudices due to a society that does not respect the principles of sustainable technological development, undermining the fundamental rights of the individual and creating situations of serious social inequality. An ethical and legal analysis that intends to look at technologies as a resource and not as a limitation but, at the same time, takes a critical perspective. This is to identify the risk profiles of [neuro]

technologies in a preventive way, to build (and not impose) a protection that involves – in addition to the jurist – not only the creators of the technological tools (companies, designers, etc.) but also and above all the recipients of the same, that is, persons with disabilities in an active and central role. All of the above on the assumption that the relational aspect of vulnerability must be taken into due account for the protection not only of persons with disabilities in the present but, above all, of future generations.

\* (tradotto dall'italiano a scopi redazionali)

## MORNING SESSION

Chaired by

**ILARIA AMELIA CAGGIANO** *EUGREENEXT Jean Monnet Chair Holder*

The right to health and sustainability – Diritto alla salute e sostenibilità

***Rights of consumers and sustainability – Diritti del consumatore e sostenibilità***

Consumer rights to food and sustainability – I diritti del consumatore all'alimentazione e sostenibilità

**MICHALA MEISALLES**

Senior Law Lecturer, University of Derby

*Empowering consumers by standardising mandatory disclosure.  
Critique and reform of mandatory disclosure rules in EU  
consumer law*

The decision-making ability of a consumer to make use of mandated information depends not only on their ability to access this information, but also their ability to make effective use of such information. One way of ensuring a more effective use of mandatory information disclosed is to simplify the comparison process from the buyer's point of view, so she is better able to make a comparison of different products and contracts on offer in the marketplace. For this reason, the imposition of a standard content, layout and time of disclosure goes a long way towards ensuring a more efficient use by buyers of mandated information for comparative purposes, arguably helping generate a – lingua franca – common disclosure language which is more accessible and user-friendly from the buyer's point of view. (Easterbrook and Fischel 1984: 700-3). This paper argues that standardised content and layout of mandated information not only goes a long way towards alleviating certain difficulties linked to mandatory disclosure, but also has a function to play in its own right by optimising decision-making by buyers faced with a purchasing decision. To this end, this paper looks at the current regulatory regime, assessing the role of information-based measures and the problems linked to such measures (part 2) before looking at the role played by standardised content and layout of information in European consumer disclosure regulation through the prism of two case studies (part 3). This piece starts with a look at the evolution of consumer rights in the West and emergence of the right of consumers to information (part 1) and concludes with a look at the ways in which the standardisation of content and layout can be used more broadly in consumer regulation.

## MORNING SESSION

Chaired by

**ILARIA AMELIA CAGGIANO** *EUGREENEXT Jean Monnet Chair Holder*

The right to health and sustainability – Diritto alla salute e sostenibilità

Rights of consumers and sustainability – Diritti del consumatore e sostenibilità

***Consumer rights to food and sustainability – I diritti del consumatore all'alimentazione e sostenibilità***

**MARIA CRISTINA GAETA**

Research Fellow of Private Law, Università degli Studi Suor Orsola Benincasa

*Consumer protection and green agri-food products in the digital age\**

Technological innovation at the basis of the digital revolution represents a strong point in the world economy, but for some time now scientific debate has highlighted how an uncontrolled development of new technologies can entail serious risks for individuals, as well as for the environment to which they belong, in relation to the various industrial sectors. In this perspective, the contribution proposes to identify private instruments to guarantee the eco-sustainable development of new technologies in order to guarantee an adequate level of consumer and environmental protection with particular regard to the agro-food sector, especially the 'green' one. In particular, the subject of analysis is the regulation of green agrifood products, with regard to their production and marketing, especially online. In this sector, the use of new technologies increases the risk of harm to consumers, both economically and in terms of health protection and, more generally, damages the environment. While on the one hand there is an increase in average attention to a healthier lifestyle, on the other hand there is an increase in the production of green food products, which, however, do not possess the characteristics. In this scenario, the civil protection of the consumer and the environment can be guaranteed by means of specific private instruments based on a new methodological approach, centred on the varying effectiveness of legislative acts and the diversification of the type of regulation. Its content, then, must be based on the balance between innovation and eco-sustainability.

\* (tradotto dall'italiano a scopi redazionali)



## **BENEDETTA FAEDI DURAMY**

Professor of Law, Golden Gate University, San Francisco (US)

### *Child participation and food experiential learning: a new approach to childhood obesity*

Child obesity is a major public health issue. It affects about 13.7 million children and adolescents in the United States and over 124 million worldwide. Alarming obesity projections have sparked widespread concern, albeit not much consensus on how to address the problem. Obesity has been often viewed as a matter of personal responsibility, and especially of parental responsibility when it concerns children. Elsewhere, I discussed the importance of adopting instead a children's rights approach to hold governments accountable for preventing and combating child obesity. This paper focuses in particular on the right of children to participate in decision-making processes affecting their lives recognized under Article 12 of the Convention on the Rights of the Child. The paper argues that its implementation through experiential food learning opportunities integrated into early childhood school curricula deserves much attention and holds some promise for effective solutions. Experiential learning theory suggests that students increase their understanding and learning through their own experiences. Specific programs conducted in some schools across the United States show that: young children instinctively connect with food and nature through tactile and playful experiences, honing their imagination, observation and inquiry skills; they naturally develop a preference for healthy eating; and they learn portion control, how to care for plants, and grow their own food. Students' engagement suggests that food-related experiential components in early childhood school curricula are powerful and can positively influence children's future eating behaviors and attitudes.

**FABRIZIO CAPOCCIONI**

Confirmed researcher CREA

*Aquaculture products and traceability: a tool to be implemented for a better consumer awareness*

Traceability of food products, including those from aquaculture, is already in place since several years in European countries. However mandatory information for farmers and retailers are still few. Farmed fish and mollusks are very important food in human diet, but consumers will be able to select best products only with a better awareness about safety, health, welfare and quality of these aquatic cultured species. Implementation of traceability and certification laws and tools are essential elements in this context.

## FABRIZIO CESAREO

Postdoctoral Researcher and Contract Professor of Private Law, University of Milan-Bicocca

### *The food information requirement: the challenge of labelling vis-à-vis environmental law and new technologies\**

In line with global perspectives, European consumers seem to be endowed with new rights, such as ethical ones, e.g. the choice of food as well as environmental ones, or rather the consideration of the impact of their choices on environmental sustainability. Of course, this main combination has to cope with another made up of economic aspects, i.e. the selection of the lowest prices, and health aspects, paying close attention to the ultimate effects of the integration of food products into the human organism. It is EC Regulation 178/2002 that guarantees the consumer's right to information and contains statements that have influenced the development of national disciplines, this derived EU source represents the guideline for the protection of consumers of foodstuffs; on the other hand, EU Regulation 1169/2011, which consolidates and updates the existing European labelling rules, contains more relevant answers on the requirements that the information paradigm, i.e. the label, must contain in order to prevent the final consumer from being misled. Regulatory and institutional innovation in private agri-food law is a central topic of research in recent times, both from a domestic as well as a European and comparative perspective. In this context, the relationship between technological innovation and legal innovation constitutes a central and qualifying dimension. This analysis allows, therefore, to identify the emergence of a prospective multilevel system, which looks to the international community with the aim of achieving vertical and horizontal cooperation.

\* (tradotto dall'italiano a scopi redazionali)

**ROBERTO MONTANARI**

Professor of Interaction Design, Università degli Studi Suor Orsola Benincasa

**ARIANNA FANTESINI**

Ph.D.(s.) in Humanities and Technologies, Università degli Studi Suor Orsola Benincasa

*User Experience evaluation and fruition in nutritional label*

In food consumption, the role of labels plays a significant role in guiding consumer behaviour. Naturally, the requirement that is primarily in the interest of the public player and the consumer is to include within them both a transparency of product contents and an assessment of health impacts. Despite the fact that this demand is also shared by the economic players themselves in the field, a universal model has not yet been defined that is able to meet the following needs: to make nutritional information comprehensible to all; to allow an analytical and critical interpretation by the consumer; to have a sufficiently structured and constant feedback in the various labels. In this sense, several markets – starting with the United States – have made significant progress towards achieving a universal food labelling model. The objectives of this paper are to review the extent to which the process of label integration has been pursued in the various geographical contexts, particularly in the European and US areas; and to assess how beyond legal constraints the element of understanding plays into the consumer experience and whether this is examined in advance.

## **ANTONELLA CORRENTI**

Postdoctoral Researcher in Comparative Private Law, Università di Messina

### *The impact of online advertising and marketing on food consumption behaviour*

The paper, with reference to the issue of the impact of online advertising and marketing on food habits, intends to highlight the importance of accuracy and completeness of information, at the service not only of wellbeing, but also of the freedom of self-determination of consumers-users, so as to guarantee food safety as set out in Goal 2 of Agenda 2030. Central to the reflection will be the examination of labelling regulations, in the light of the recent decisions of the Italian Competition and Market Authority on misleading advertising and unfair commercial practices, aimed at ensuring healthy food choices for the wellbeing of the individual [AGCM Measures nos. 30240, 30241, 30243 of 12 July 2022, in Bollettino no. 29, 1 August 2022].

## AFTERNOON SESSION

Chaired by

**LUCILLA GATT** *ReCEPL Director, Università degli Studi Suor Orsola Benincasa*

***Rights, markets and sustainability – Diritti, mercati e sostenibilità***

Technologies and sustainability – Tecnologie per la sostenibilità

**LAURA VALLE**

Associate Professor of Private Law, Free University of Bozen

*The agri-food sector is a highly regulated one, mostly by legislative rules coming from the EU*

Certification systems in the sector answer to the need of operators to be compliant with the compulsory rules of law, and also with the non-compulsory but suggested ones. The certification systems most widely adopted in the field are the BRC-Food, the IFS, the ISO 22000, the FSSC 22000. Nonetheless, in their current version, certification systems don't guarantee that the certified activities and processes are environmentally and socially sustainable in their content and their objectives. A revision of these systems is starting to be put in place. For example, the SQNPI an Italian Certification System was revised in 2021 with the purpose to be a system of "sustainable quality".

Taking in account the EU Green Deal process, the next years will plausibly show an adaptation of the certification systems to the new law regulations released. Possibly, that will result in the implementation of new sustainable ways of production and of product distribution.

## **ARTURO MANIACI**

Associate Professor of Private Law, Università Statale of Milan

### *Planned obsolescence and purchaser-consumer protection*

Planned obsolescence is a practice implemented by companies to deliberately render a product unusable after a certain period of time or to make it outdated in order to increase the sales rate through premature replacement needs. This phenomenon has a negative impact on sustainability because it wastes resources, pollutes the environment and increases the consumption of raw materials to be used in new production processes. This research aims to analyse the legal problem of planned obsolescence in the sale of consumer goods, even in the light of European legislation (Directive n. 2005/29; Directive n. 2019/771; Commission Regulation n. 2021/341).



**CLAUDIA BENANTI**

Associate Professor of Private Law, Università di Catania

*Company due diligence and sustainability*

In my presentation, I will assume a broad understanding of sustainability, including the protection of labour rights and the environment. To this end, I will examine the Proposal for an EU directive of 23.2.2022, COM (2022) 71, which envisaged the imposition of due diligence obligations on companies operating in the EU states, which prevent or minimise the negative impact on the protection of labour rights and/or the environment of the companies' activity. I will emphasise how this obligation also extends to monitoring the work of companies operating in the same supply chain.

Finally, I will examine the nature and content of this obligation.

## **GEORGES CAVALIER**

Co-Director Tax LL.M and member of Louis Josserand Research Team – Business Law Center, University Jean Moulin – Lyon 3, Lyon (FR)

### *A Call for EU Farm to fork general tax policy rules*

Sustainable tax has an incentive function for society: it helps to incite taxpayers, consumers in particular, to engage in “greener” consumption, and could be a powerful tool for designing rights for eco-food and eco-fertility. The state of the art of the research shows that Europe’s main concern is to require the consumption of energy product to be taxed at minimal rates. This is not eco-friendly taxation, as it incentives for fossil fuels. This paper is making a European call for eco-friendly taxation, as leaving it to Member States shows discrepancies: an EU country’s efforts on sustainable taxation could be complicated by a lack of action in another EU country. It calls not only for deactivation of incentives to fossil fuels, but to insert an eco-friendly tax incentive, for instance in the harmonized corporate tax base projects, and to set EU farm to fork general tax policy rules.

**MARIA PAOLA FRANCESCA BOTTONI**

Ph.D.(s.) in Civil Law, Università degli Studi di Camerino

*Right to food and corporate responsibility\**

The Guide to Legislation for the Right to Food published by FAO in 2010 states: 'Today, striving to ensure that every person enjoys adequate food is seen not only as a moral imperative and an investment with enormous economic returns, but also as the realisation of a fundamental human right'. Twelve years later, the FAO again states that 11.7% of the world's population faces severe food insecurity. This means that despite the hope for progress, 828 million people suffered from hunger in 2022. The dramatic numbers confirm that the right to food, despite being regulated in various legal experiences around the world, is today one of the least realised human rights. Compared to this dramatic scenario, what role can law, as a tool for guiding human conduct and not as a rhetorical instrument, play? The following pages offer a legal investigation into the role of law in the fight against food insecurity, with particular reference to the role of agribusinesses in promoting the right to food.

\* (tradotto dall'italiano a scopi redazionali)

## FRANCESCA FERRETTI

Ph.D.(s.) in Civil Law, Università degli Studi di Camerino

### *Food waste and environmental sustainability: legal aspects of the role of AI\**

Artificial intelligence systems are devices capable of processing data, communicating and self-learning. These technologies offer numerous application possibilities in environmental protection and sustainable management of common resources. In the agrifood sector, precision agriculture, also thanks to the collection of satellite data through drones, provides farmers with solutions to optimise production and reduce food waste along the entire supply chain (from farm to fork). In addition, reducing waste along the agri-food supply chain makes it possible to control the production and allocation of food resources, not only to guarantee levels of food security, but also with a view to increasing attention to the circular economy.

The paper will analyse the legal implications of the use of artificial intelligence to ensure environmental sustainability in an "ecocentric" perspective and conscious consumption, avoiding unfair commercial practices, such as greenwashing. It is precisely European consumer law that poses further questions to the legal expert, in terms of privacy protection, the processing of personal data and the right to self-determination in food choices, threatened by consumer profiling through data mining. Particular attention will be paid to human-software interactions and the resulting liability profiles, in the light of both Directive 85/374/EEC and the European Commission's Proposal for a Regulation of 21 April 2021.

\* (tradotto dall'italiano a scopi redazionali)

**MATTEO TOFANELLI**

Legal Counsel, Studio Di Ciommo & Partners

*Covid-19 and food safety: Blockchain and the Internet of Packaging as priorities for Industry 4.0\**

In light of the Covid-19 pandemic, it is possible to observe a significant increase in stress states in the population (consumers) that has affected every field and in particular that of food safety. This status is also due to the socio-economic uncertainties caused by the pandemic, which has also led to a rethinking of the objectives of the industries, which have had to respond to the sustainability demands addressed by government policies and the demands of consumers and environmental associations. Food safety has become a major concern for consumers since the pandemic, who have developed a new and heightened sensitivity to the sustainability of raw material production processes linked to the need to make informed and sustainable purchasing choices. It is therefore necessary to address the blockchain and with it the many possibilities related to data protection and security, which concerns not only interesting data for the consumer but also for the entire supply chain, for example, the impact of the production of a given product and its sustainability. All this is possible thanks to the blockchain, i.e. the system of algorithms that works to process all data related to the product, the production and marketing methods of the various supply chains. In the end, therefore, in relation to blockchain and the Internet of Packaging, it is worth reflecting on the functionality of the use of such means from the point of view of food safety, i.e. the capacity of such tools, which, together with IoT technologies, aim to ensure food safety in relation to traceability, preservation and identification.

\* (tradotto dall'italiano a scopi redazionali)

## FRANCESCO RIBEZZO

Ph.D.(s.), Università degli Studi di Bari Aldo Moro

### *Regulation and governance models for the use of blockchain for food security\**

The globalisation process has had a considerable impact on the agri-food chain sector, which today is a complex market, in which multiple actors operate, pursuing different interests, with their own quality standards, often unwilling to share information useful for food traceability. This market context, together with the emergence of cases of food fraud and counterfeiting, has highlighted the need for efficient coordination between the players involved. The latter, who are called upon to comply with regulations to protect public health and safety, must also face increased management costs. In view of these critical elements, food safety could be facilitated by the use of a technology such as blockchain, which is characterised by instantaneousness, transparency and low costs. Assigning digital identifiers via blockchain to producers would allow for traceability of supplies. Wastage could also be avoided, product quality controlled while safeguarding the environment and consumer safety.

\* (tradotto dall'italiano a scopi redazionali)

## EMILIANO TROISI

Ph.D.(c.), Università degli Studi Suor Orsola Benincasa

### *Blockchain-based food supply chains: the role of smart contracts*

Given blockchain's ability to record and maintain information in an accessible, verifiable, non-repudiable and tamper-proof manner, this technology appears to provide a secure environment to improve product traceability and provenance throughout the extended supply-chain, which would particularly benefit the agri-food industry. Indeed, the extension and the multi-participant/multi-phase nature of the production cycle that characterize modern agri-food supply chains has made them increasingly difficult to manage, while ensuring that stakeholders are properly informed, that counterfeiting is identified and prevented, that safety standards are met, and that the origin and quality of agri-food products are properly certified. It is a growing opinion, among scholars, that blockchain – as a resilient record-keeping and tracing system - could overcome some of these critical issues; accordingly, smart contracts would be a potentially innovative tool to automatically execute agreements between the various parties involved and, perhaps, help monitor, regulate, and verify each (processing, storage, transfer, etc.) stage that forms the workflow. This paper – building upon the extant academic literature – aims to explore – in particular – the role of smart contracts in food-(block)chain traceability systems, evaluating suitability, critical issues and consistency with the current regulatory framework. Finally, the possible contribution of smart contracts – when combined with IoT devices – for more effective (fully or partially automated) controls on food products will be analyzed.





## ROUND TABLE

Moderator

**ILARIA AMELIA CAGGIANO** *EUGREENEXT Jean Monnet Chair Holder*

***Business and sustainability in agriculture and relevant markets  
– Impresa e sostenibilità in agricoltura e mercati rilevanti***

## ROBERTO MAZZEI

Chief of the Economic Area – Coldiretti Campania

### *Biomethane project: production of biomethane from buffalo, bovine and agricultural by-products\**

This project is developed in co-operation with Sorgenia Renewables Srl and PSR&Innovazione Campania.

The project aims at the creation of a biodigester for the production of biomethane and compost in the municipality of Baia e Latina (Caserta, Italy). It stems from the need to respond to environmental, public health and food industry challenges in a context characterised by high pollution – as well as illegal disposal – of livestock wastes found in drainage canals or water drains that are fundamental in the management of buffalo farms. Biogas production enables a circular economy and by-product management model, thus overcoming the environmental impact problems caused by incineration, mitigating the increase in concentration of greenhouse gases (CO<sub>2</sub>) in the atmosphere and providing a solution to desertification caused by the impoverishment of soil organic fertility. Specifically, the biodigester is able to valorise by-products (deriving from livestock breeding, olive mills, cheese factories, fruit waste, residual biomass) that would otherwise be treated as waste, producing biomethane (energy, automotive) and compost/nitrogenous fertilisers to replace chemical fertilisers (for PO IV gamma, olive growing, animal husbandry, farms). The fundamental criterion for biogas production is the short and controlled supply chain that takes into account the fact that this source is perfectly capable of adapting to locally available resources and by-products, generating environmental benefits (reduction of carbon emissions produced by transport) and social and economic benefits, starting from the reuse of residues that would be difficult to manage in the territory.

In summary, through a multidisciplinary approach, the project proposes an innovative technological model of sustainability in the

**Round Table** *Business and sustainability in agriculture and relevant markets*

food industry, contributing to a virtuous circle in which the sustainable management of (natural) resources, human health and respect for human rights (e.g. to a healthy environment, consumer protection) become inseparable.

\* (tradotto dall'italiano a scopi redazionali)

## FABRIZIO VENTIMIGLIA

Avvocato, CSB President

### *CSB and Sustainability\**

Centro Studi Borgogna is a Think Tank, established in 2017, which operates as a Cultural and Legal Promotion Association, a laboratory of ideas that promotes the culture of law – inspired by the principles of ethics, honesty and legality – to contribute to the debate on the main sensitive issues of our country. It intends to encourage and increase the study of law in an interdisciplinary perspective, offering a space for common discussion between lawyers, magistrates, businesses, public administration and representatives of civil society. The Centro Studi Borgogna has a particular interest in the topic of sustainability, which is being pursued through ad hoc events and a cycle of meetings dedicated to Energy – held between March and May 2022 – with the aim of taking stock of the transformation project that envisages the transition to the prevalent use of renewable sources. In Italy, in fact, despite growing attention to the environmental factor and Italians' renewed interest in green energy and sustainable mobility, we are at a standstill. Another example of this is the conference entitled "Sustainability and Corporate Strategy", held last April – focusing on sustainability and the importance of environmental issues in the corporate landscape. Indeed, companies are increasingly aware that there is a growing link between a sustainable company's green practices and success. Sustainability therefore ceases to be merely environmental and expands its boundaries to include the company's "sustainable" business model.

\* (tradotto dall'italiano a scopi redazionali)

## **ROSARIO RAGO**

Deputy President BoD Rago Group – Confagricoltura Campania

*Case Study Rago Group.*

*Made in Italy & Sustainable Agriculture Since 1892*

A serious attention to environmental sustainability is one of the key elements in Rago's corporate values. Rago group's challenge is a totally innovation-oriented approach. Investments in green energy have increased for almost 10 years, indeed today all processes work with energy from renewable sources. Many innovations have been implemented such as electric machines, solar panels, optical sorters, removal of bacterial charge using ozone and water sterilized with UV probe. To compensate the CO<sub>2</sub> production has been created a green park of 15 thousand square meters, also useful to preserve biodiversity.

One of the latest projects is the Vertical Farm, one of the first Italian verting farming. Thanks to this innovative system Rago Group can have several benefits such as: water saving, removal of chemical products and a strong reduction soil use. The aim is to make the entire production process environmentally sustainable, through constant and continuous investments with the goal of an enlightened capitalization of resources, from water to land to solar energy. Working to create a sustainable process to achieve one of the European climate fundamentals, zero environmental impact within 2050.

Then Rago Group carries on its ancient traditions as well as the latest technologies innovation as declared from the company's motto that accompanies all activities since 1892 "we are the same as we always have been yet... we still keep pace with the times!".

## **DANIELE PERILLO**

Grape and Olive Farm, Winery "Tenuta Nucilla"

### Case Study Progetto Mo.Vi.Da\*

The presentation will cover: the development, introduction and implementation of innovative process models aimed at reducing environmental impact and the production of high quality grapes for the production of low sulphite wines. The focus of the intervention will be on reducing the environmental impact (of grape production) through precision agriculture. It will include a description of the innovative tools available to the farmer for the interpretation of agro-climatic data in order to reduce and/or optimise the number of phytosanitary treatments.

\* (tradotto dall'italiano a scopi redazionali)

## SANTA INGENITO

Agronomist analyst at Fertileidea s.r.l.

### *Microbial bioformulations for agriculture: production and application challenges\**

The achievement of wise and sustainable agricultural production is undoubtedly one of the greatest challenges of the 21<sup>st</sup> century, especially with a view to ensuring sufficient food to meet the demands of an ever-increasing world population. The current production methods adopted in conventional agriculture, based on the misuse of pesticides and chemical fertilisers, create a long list of problems for the environment and human health further aggravated by the existence of endemic pathogens and the emergence of new ones. One of the most promising strategies for combating phytopathogens and/or increasing the growth, yield and nutritional quality of agricultural production is the development of microbial bioformulates that can naturally combat pathogens, establish beneficial interactions with the plant, rebalance the microbiome of the rhizosphere and be more resistant to changes in the environment. Also under consideration by researchers is the need to develop new, highly efficient production processes for these bio-formulates, to allow for an improvement in system economy, quality and process yields. Particularly promising in this respect are tests on the utilisation of industrial or agro-food waste, intriguing and innovative devices that would make it possible to recycle material at low cost and at the same time avoid the problem of its dispersion and disposal.

\* (tradotto dall'italiano a scopi redazionali)

## **CIRO BUONOCORE**

Rotaract Club delegate, district 2101-Scafati Angri Realvalle

### Case Study U-leaf

U-Leaf è una startup innovativa che ha l'obiettivo di sviluppare sequestratori di polveri atmosferiche, facilmente integrabili nell'arredo urbano, per l'abbattimento delle polveri sottili classificate PM2.5 e PM10 e gas climalteranti, che risultano, da studi scientifici, inquinanti particolarmente dannosi per l'ambiente e la salute umana. U-leaf propone un prodotto che migliori la qualità dell'aria riducendo i rischi per la salute, per mezzo di una tecnologia progettata per essere facilmente integrabile in elementi di arredo urbano, facile da installare e replicabile in qualsiasi parte del mondo. Da nostre stime, un singolo purificatore u-leaf può abbattere circa 3 Kg di PM10 all'anno. L'equivalente di 200 alberi adulti. U-Leaf potrà essere l'elemento principale per i progetti di riqualificazione urbana nonché segnale sociale importante per indurre cambiamenti comportamentali ecosostenibili.



**LUCREZIA PELLEGRINO MELISSA GARGIULO  
DANA SIGONA CLAUDIA PERCOSSI**

BA, MA students Università degli Studi Suor Orsola Benincasa

*Misleading food labeling: the Petti case*

Nowadays, the food labeling system and the issue of fake labeled products is significant for both consumers and producers. This study examines how the food labeling influences the consumer's decision and, therefore, how relevant it is to create a clear and correct label. To demonstrate the direct link between fake labeling and the consumer's choice, this research investigates the case of the Italian company "Petti, leader in the tomato production involved in a food fraud in 2021. It is known as "the biggest food fraud ever discovered in Italy". Indeed, the company claimed that their highly known tomato sauce was "100% Made in Italy" but later on it has been proved that only a small percentage of the raw material used in the production was cultivated in Italy. A structured survey conducted with 50 participants supported the thesis that consumers take into account the information written on the label, especially about the origin of the product. Nevertheless, few participants highlighted how food labels are usually challenging to understand. Another bug in the food system is the traceability of the production chain.

How can these two problems be solved?

It is possible to offer two innovative solutions.

Printed on June 2023  
Area University Press, Università degli Studi Suor Orsola Benincasa  
Via Suor Orsola, 10 – 80135 Naples  
Italy