

29<sup>th</sup> May 2017

University of Malta (Valletta Campus)

# Towards a Zero Carbon Economy Beyond 2030

## Sustainable Urban Centres

- > Green Urban Centres
- > Circular Economy
- > Green Finance



# AGENDA

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**08:30 REGISTRATION**

**09:00 WELCOME SPEECH AND CONFERENCE HOST**

**Edwin Ward**, Chairman, Paragon Europe

**09:15 INTRODUCTION**

The Minister will introduce Malta's place in the wider European context, highlighting policy developments which are encouraging the shift towards low carbon in Malta with a focus on urban centres. The CEO of Climate-KIC will link these to the efforts of the Knowledge Innovation Community, highlighting the Smart Sustainable Districts Flagship Programme.

**Hon. José Herrera MP**, Minister for Sustainable Development, the Environment and Climate Change, Malta

**Kirsten Dunlop**, Chief Executive Officer, Climate-KIC

**Anton Theuma**, Chief Executive Officer, Paragon Europe

**09:45 SCENE SETTING**

The Deputy Director-General will set the scene with the latest developments on climate change initiatives launched by the Commission, touching upon circular economy, climate change and energy efficiency in the Mediterranean.

**Joanna Drake**, Deputy Director-General in charge of Coordination of Resource-efficiency policies and instruments in DG Environment  
(video-message)

**10:00 COFFEE BREAK**

**10:30 SMART SUSTAINABLE DISTRICTS**

Introduction Speech and Moderator: **Tim Taylor**, Smart Sustainable Districts Programme Manager, Climate-KIC

Panel:

**Keith Budden**, Head of Business Development, CENEK

Low Carbon, Clean Mobility and Electric Vehicles

**Čedo Maksimović**, Professor at Department of Civil Engineering, Imperial College London

Blue Green Solutions for Urban-Suburban-Rural Sustainability/Resilience Interactions

**Emmanuel Soyeux**, Senior Expert in Water Resources & Aquatic Environment, Veolia

Sustainable Water Reuse for Cities in the Mediterranean Area

**Leonardo Rosado**, Professor, Chalmers University of Technology

Strategic Planning for Circular Economy in City Districts

**Christoph Mazur**, Smart Sustainable Districts Service Lead, Climate-KIC

Smart Solutions for Buildings and Energy

Q&A

**12:30 LUNCH**

**13:30 PARALLEL SESSION I – GREEN URBAN CENTRES**

Challenges: urban mobility and sustainable buildings in smart districts

Introduction Speech and Moderator: **Alexiei Dingli**, Mayor of Valletta

Panel

**Peter Paul Barbara**, Manager and National ITS Co-ordinator, Transport Malta

Electromobility Action Plan in Malta: Lessons Learned and Way Forward

**Giovanni Pavesi**, CEO, Linde Gas Italy

Hydrogen Mobility Italy

**Dario della Sala**, Head of Division "Sustainable Materials", ENEA

Circular and Non-Circular Paths for Raw Materials in Manufacturing

**George Cutajar**, Director, Malta Competition and Consumer Affairs Authority (MCCAA)

Green Roofs – Towards an Environmentally Friendly and Sustainable Architecture

**Matthew Spiteri**, Managing Director, Altern Limited

Sustainable Buildings: Not Just One Solution

Q&A

**15:00 Ideation Exercise and Debate**

**13:30 PARALLEL SESSION II – CIRCULAR ECONOMY**

Challenges: waste management in the HORECA sector and water management in agriculture

Introduction Speech and Moderator: **Vincent R. Attard**, President, Nature Trust Malta

Panel

**Manuel Sapiano**, Chief Technical Officer, The Energy and Water Agency of Malta

Water Re-Use within the Context of the EU Circular Economy Package



**Juan Jose Bonello**, Senior Lecturer at the Institute of Applied Sciences, Malta College of Arts, Science and Technology (MCAST)  
Decreasing the Water Footprint at the Institute of Applied Sciences, MCAST

**Clyde Falzon**, Strategy Implementation Manager, WasteServ Malta Limited  
Circular Economy from a Maltese Waste Management Perspective

**Begoña Pérez Villarreal**, Director of Innovation, EIT Food  
EIT Food and our Zero Waste Agenda

**Jochen Froebrich**, Coordinator of Water and AgriFood, WssTP  
Green Economic Growth in River Basin, the Role and Needs for Living Labs

Q&A

15:00 Ideation Exercise and Debate

### 13:30 PARALLEL SESSION III – GREEN FINANCE

Challenges: financing green projects for municipalities and businesses

Introduction Speech and Moderator: **Anton Theuma**, Chief Executive Officer, Paragon Europe

Panel

**David M. Schembri**, Mayor of Qrendi Local Council  
SEAPs and their Financing from a Local Council's Perspective

**Amber Wismayer**, Executive Board, Building Industry Consultative Council of Malta  
Financing Green Cultural Heritage

**Sara Pettersson**, Climate and Environment Planning Unit, City of Gothenburg  
Green Bonds - Opportunities and Challenges from a City Perspective

**Alfred Buhagiar**, Executive for SME Finance, Bank of Valletta  
Financial Instruments for Eco-Friendly Projects of Businesses

**Costantinos S. Psomopoulos**, Professor at Electrical Engineering Department, Piraeus University of Applied Sciences  
Energy Efficient Buildings and Small Scale RES towards Sustainable Communities - Smart Green Funding for Successful Projects

Q&A

15:00 Ideation Exercise and Debate

### 16:00 COFFEE BREAK

### 16:15 PROJECT PRESENTATIONS

**Eloisa Macedo**, Researcher at R&D Group on Transportation Technology, University of Aveiro  
CISMOB - Cooperative Information Platform for Low Carbon and Sustainable Mobility

**Antonio Galgano**, Professor at Geosciences Department, University of Padova  
Cheap-GSHPs - Cheap and Efficient Application of Reliable Ground Source Heat Exchangers and Pump

**Petri Kuisma**, Principal Lecturer, Lapland University of Applied Sciences  
REMIX - Smart and Green Mining Regions of EU

**Nadia Theuma**, Executive Director, Paragon Europe  
FREEWAT - FREE and Open Source Tools for WATER Resource Management

**Marie Prouteau**, Consultant, Euronovia  
SOLPART - High Temperature Solar-Heated Reactors for Industrial Production of Reactive Particulates

**Damien Gatt**, Researcher at Institute for Sustainable Energy, University of Malta  
ZEROCO2 - Proposing Policy Drivers Towards Near-Zero Carbon Dioxide Buildings

**Dario Padovan**, Associate Professor of Sociology, University of Turin  
DIMMER - District Information Modelling and Management System for Energy Reduction

**Antonella Luciano**, Laboratory Resources Valorisation, ENEA  
Ongoing Projects and Experience on Circular Economy and Resource Efficiency

**Louis Borg**, Chief Executive Officer at ECO Group Ltd  
New Energy Based On Clean Energy

**Antoine Gatt**, Faculty for the Built Environment, University of Malta  
LifeMedGreenRoof Project - Green Roofs in the Mediterranean

17:45 ANNOUNCEMENT OF THE VALLETTA DECLARATION

18:00 CLOSING

18:15 NETWORKING COCKTAIL

## Welcome Speech and Conference Host

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**Edwin Ward** Chairman, Paragon Group

Edwin Ward is CEO of Ogilvy & Mather International (Malta) and during his 40 year advertising industry career he has worked on clients such as Audi, AXA, Barclays, BAT, BIC, Bupa, Chestertons, Citroen, DHL, Dogs Trust, European Parliament, FinanceMalta, Gillette, GSK, Guardian, HSBC, Intercontinental, Kodak, Kraft, Kindred Group, Lufthansa, Malta Tourism Authority, Malta Enterprise, Malta International Airport, Maltco Lotteries, Mitsubishi, Nestlé, Novartis, Philips, Porsche, Qatar Foundation, Relais & Chateaux, SAP, Shell, The Phoenicia Malta, Western Union, Unibet and Unilever. He is Chairman of the Paragon Group and all its related entities, a Maltese business with offices in Malta and Brussels employing approximately 70 talented professionals working on EU projects, EU tenders, EIT KIC's, joint undertakings, renewable energy, digital, mobility and research with the European Commission; and, providing advisory services to research centres as well as companies like Tata, Huawei, Proximus, Dell and Bosch. Edwin has 35 years of experience in the successful creation and implementation of major corporate brands as well as in the utilisation of innovation as an enabler for strengthening brands and business performance. He has collaborated with Paragon for more than 10 years and is currently overseeing Paragon Europe's expansion programme 2015-2020. He Chairs the Malta Digital Cluster housed at Malta Life Sciences Park as part of Paragon Europe's pioneering of clusters on the Maltese Islands. He is a Visiting Lecturer at the University of Malta, and is Director of the Institute of Directors Malta Branch. Edwin is Malta's representative to the European Confederation of Directors' Associations in Brussels.

## Introduction Speakers

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**Hon. José Herrera MP**

Minister for Sustainable Development, the Environment and Climate Change, Malta

Dr José A. Herrera is a member of the Maltese government. He is a lawyer and has served as a Member of Parliament for 20 years. Hon. Herrera was appointed as Minister for Sustainable Development, the Environment and Climate Change in April 2016. He was previously appointed as Parliamentary Secretary for Competitiveness and Economic Growth in April 2014 and Parliamentary Secretary for Culture and Local Government in March 2013.

Hon. Dr José A. Herrera was educated at St Aloysius College and went on to graduate from the University of Malta as Notary Public in 1985 and then as Lawyer in 1986. For 31 years Hon. Herrera practiced his profession as a lawyer, owning a legal office, specializing in criminal law.



## **Kirsten Dunlop** Chief Executive Officer, Climate-KIC

Kirsten Dunlop joined as Climate-KIC CEO from Suncorp, an Australian financial services conglomerate, where she acted as Executive General Manager Strategic Innovation.

At Suncorp, Kirsten was instrumental in the formation of Climate-KIC Australia, based on the proven Climate-KIC model from the European Union.

A joint British-Australian national, Kirsten's career spans academia, consulting, banking, insurance, design, innovation and leadership across Europe, Australia and North America. Her strong focus on managing change, driving innovation and emphasis on an empowering and inspiring company culture will help drive forward Climate-KIC's important work in speeding up the transition towards a zero carbon economy.



## **Anton Theuma**, Chief Executive Officer, Paragon Europe

Dr. Anton Theuma is co-founder and has been CEO of the Paragon Group since incorporation in 2004. He has a Doctorate Degree in Knowledge Economy and participated and managed various EU co-funded projects including FP6, FP7, CIP, COST, IEE and Interreg and has also provided assistance to clients seeking business advice, EU funding and investor funding.

Dr. Theuma advises public and private organisations on Innovation and Entrepreneurship and he is involved in policy, programme and project related work at EU level on Innovation and Entrepreneurship, Smart Specialisation and is a member of the FINEs cluster. He has significant experience dealing with stakeholders in the triple helix of industry, technology transfer incubators and investment coaches, mentors, fund managers and institutional funds.

He has led the Paragon Group from a single start-up company to a diversified group having significant interests. Dr. Theuma is currently responsible for Smart Specialisation Strategy as an expert for DG Regio, managing peer review for Italy and the Balkans. He is also a founder member of EURADA's Committee on Financial Instruments, having been an author of the H2020 financial strategy for the European Commission.

## Scene Setting



## **Joanna Drake**

Deputy Director-General in Charge of Coordination of Resource-Efficiency Policies and Instruments in DG Environment

As from 16 March 2016 Joanna Drake is Deputy Director-General in charge of Coordination of Resource-efficiency policies and instruments in DG Environment (ENV). She is Doctor of Laws from University of Malta, where she also completed the Diploma Notary Public. From 2015 to 2016, Dr Drake was Principal Adviser and Chair of Task Force on The Collaborative Economy, New Business Models And SME's at DG Internal Market, Industry, Entrepreneurship and SMEs (GROW). She connected the various strands of activities inside DG GROW, with a view to developing a set of recommendations for the Commission to consider its positioning on complex and multi-faceted phenomena such as UBER, AirBnB and Blablacar. Before this position, from 2010 to 2015, she has been Director for SME's and Entrepreneurship in DG GROW.

# Smart Sustainable Districts

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MODERATOR

**Tim Taylor** Smart Sustainable Districts Programme Manager, Climate-KIC

Tim Taylor manages Climate-KIC's Smart Sustainable Districts programme, working with cities across Europe to deliver integrated low-carbon systems innovation and action at the district scale.

Tim specialises in developing and delivering sustainability projects and programmes that create positive social, economic and environmental change - especially complex projects that require businesses, organisations and communities to identify and work towards a collective ambition. He has previously worked on projects in the UK, Maldives and New Zealand.

Tim has a sound knowledge of sustainable systems opportunities across the areas of energy, buildings, circular economy and international development; and an interest in models for community co-creation and management of their local social and physical infrastructure. He specialises in establishing viable governance, investment and business models for the implementation of complex sustainable systems projects.



**Keith Budden** Head of Business Development, CENEK

Low Carbon, Clean Mobility and Electric Vehicles

Keith is a postgraduate qualified social scientist with twenty five years experience in sustainable development, public policy and programme delivery. At Cenex he has helped to develop a range of low emissions vehicle programmes and has forged new relationships with the private sector and the European Commission, delivering clean air and low carbon mobility solutions. He has expert knowledge of EU and UK innovation funding and low carbon/low emissions public policy. He has recently led on the development of EU funded programme to deliver electric vehicle car clubs in disadvantaged neighbourhoods.

Keith has previously worked for E.ON delivering their sustainable cities programme, and for Birmingham City Council, leading on environmental programmes, climate change and energy. He was awarded Fellowship of the Royal Society of Arts and Technology in 2009 in recognition of his work on tackling climate change.



**Christoph Mazur** Smart Sustainable Districts Coordinator, Climate-KIC

Smart Solutions for Buildings and Energy

Christoph is an Engineering and Economics Researcher at Imperial College London. His research interests and consulting experience span:

- Transport, Mobility, Energy sector, Renewables, Electricity System
- Technology and Innovation policy review
- Technology assessment
- Analysis of Socio-technical systems
- German and UK industry

Further fields of interest include: Innovation Policy, Energy policy, Energy economics, Transition Science, Diffusion Economics, Electric Mobility, Sustainability Sciences, Climate Change, Sustainable businesses, Innovation management, Urban Environments





**Ćedo Maksimović** Professor at Department of Civil Engineering, Imperial College London  
Blue Green Solutions for Urban-Suburban-Rural Sustainability/Resilience Interactions

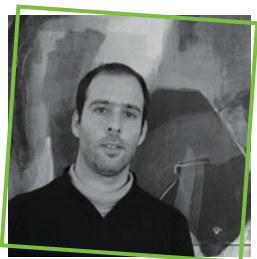
Professor Ćedo Maksimović PhD of Imperial College London, Head of UWRG- Urban Water Research Group. His research areas include Integrated Urban Water Management, BGD Blue-Green infrastructure- BG Solutions, Innovative planning of resilient urban – suburban-rural interactions, Smart urban water systems, Next generation Wastewater treatment & resources recycling, Capacity building for sustainability .

Amongst the most recent projects: RainGain, Prediction of Urban Pluvial Flooding ; Blue Green Dream, Synergy of urban water (blue) infrastructure and urban vegetated (green) areas; DIANE\_CM, Decentralised Integrated Analysis and Enhancement of Awareness through Collaborative Modelling and Management of Flood Risk (DIANE-CM). He is Editor in Chief of URBAN WATER JOURNAL, (ISI) and of Urban Water Book Series published by Taylor and Francis. Professor Maksimovic created and coordinated the UNESCO network of IRTCUD/CIW urban water centres and served as Urban Water / Blue Green Solutions expert and as Chief advisor to UNESCO IHPVI on Integrated Urban Water Management (IUWM). He published over 420 papers and authored and edited 44 books. He is also recipient of the 2009 ICE's (Institution of Civil Engineers) Premium Prize "Telford Gold Medal" for the paper on intelligent sensors and networks. In November 2015 his team of BGD – Blue Green Dream won the "Business Green Technology Award, R/D program of the Year". His most recent publication is BLUE GREEN SOLUTIONS A Systems Approach to Sustainable Resilient and Cost-Efficient Urban Development



**Emmanuel Soyeux,**  
Senior Expert in Water Resources & Aquatic Environment, Veolia  
Sustainable Water Reuse for Cities in the Mediterranean Area

Emmanuel Soyeux is senior expert in Veolia's Research Centre. His field of expertise is water resources management, both in terms of quantity and quality. He has a background in Agronomics and Water Sciences and Technologies. His professional experience includes environmental impact on water bodies, development of tools and methodologies for the assessment of water resources contamination risks, impact of sanitation on receiving waters (rivers and coastal areas) and monitoring water quality using buoys or satellite. Emmanuel Soyeux has been involved in several EU research projects: Co-Operative Agreements (FP4), MicroRisk (FP5), Mareclean (Life Environment), SWARM (Eureka Acqueau) and is currently active in the dissemination of DEMOWARE results dealing with water reuse for urban, agricultural and industrial uses (FP7). Emmanuel Soyeux is with Veolia since 1994.



**Leonardo Rosado,** Professor, Chalmers University of Technology  
Strategic Planning for Circular Economy in City Districts

Dr. Leonardo Rosado has a background on Environmental Engineering, Engineering Design and Sustainable Energy Systems. He has more than ten years of expertise in Industrial Ecology, Material Flow Accounting and is the developer of a groundbreaking method that allows a complete quantification of material flows at the city level – the Urban Metabolism Analyst model, with disaggregation by economic activities, municipalities within the metropolitan area and by product types. Currently, working under the Circular Economy field developing new methods for identification of resource flows by product types and economic activities and support the design of strategies which allow achieving Circular Economy, as for example, waste management, urban mining, industrial symbiosis, closed loop value chains. The main objective of his work has been in advancing science through applied research on challenges faced by stakeholders at multiple levels, from regional bodies to cities, from large companies to small and medium enterprises. He is also member of the consortium of the SSD (Smart Sustainable Districts) flagship from Climate-KIC where he has been supporting the program with tools on identifying replication potential of knowledge in various districts in different cities in Europe and in proposing Circular Economy priorities for districts.

# Parallel Session I - Green Urban Centres

## Challenges: urban mobility and sustainable buildings in smart districts



MODERATOR

### **Alexiei Dingli**, Mayor of Valletta

Prof Alexiei Dingli is the Mayor of Valletta, the Capital City of Malta. He was the Mayor who submitted the bid for Valletta to become the European Capital of Culture in 2018 and is a founding member of the Valletta 2018 foundation. He is also involved in various comities in order to ensure the regeneration of the Capital City. Prof Dingli is also an Associate Professor of Artificial Intelligence within the Faculty of ICT at the University of Malta. His work includes research on the Future of the Internet, the Semantic Web, the Social Web, Digital Games, Digital Governance, Digital Natives and Intelligent Transportation amongst others. He pursued his Ph.D. at the University of Sheffield in the UK. His work was rated World Class by a panel of international experts. His research in Mobile Technologies and Smart Cities was also awarded a first prize by the European Space Agency and an e-Excellence Gold Seal at the prestigious CeBit Conference in Germany. He has published several posters, papers, book chapters and books in the area. He also pursued an MBA with the Grenoble Business School in France specialising on Technology Management.



### **Peter Paul Barbara**, Manager and National ITS Co-ordinator, Transport Malta

Electromobility Action Plan in Malta: Lessons Learned and Way Forward

Since 2002 Peter Paul Barbara has been involved in project design and management. He is an ardent advocate for Electromobility and green propulsions systems both in Malta and abroad and has been instrumental in the setting up of the National Electromobility Platform and ITS (Intelligent Transport Systems) He is also the co-drafter of the Malta National Electromobility Action Plan, which plan foresees the eventual electrification of transportation in Malta. Currently he is in fact the National Coordinator of Electromobility in Malta. Besides Electromobility, Peter Paul is also responsible for the deployment of ITS as well as implementing a future transport ecosystem based on ITS and electric propulsion systems on the Smart City Concept while in the meantime promoting new sustainable urban mobility solutions and innovation. A demonstration project implemented by his unit has since then won two international awards for sustainable mobility and innovation in island states. He is also author of a number of articles in specialised international publications. In his presentation, Peter Paul will be presenting the Platform and elaborating on the National Electromobility Action Plan and its achievements so far.



### **Giovanni Pavesi**, CEO, Linde Gas Italy

Hydrogen Mobility Italy

Graduated in chemical engineering at Politecnico di Milano, Giovanni Pavesi joined Linde Gas Italia in 1991 as Technical Director and Tonnage Segment Development Manager. In 2009 he becomes Commercial Director and since 2012 he is Chief Executive Officer. From May 2013 he is President of Assogastecnici.



## **Dario della Sala** Head of Division "Sustainable Materials", ENEA

Circular and Non-Circular Paths for Raw Materials in Manufacturing

Dario della Sala graduated in Rome, University "La Sapienza" in 1983. In 1987 he joined Enicerche S.p.A. (ENI group) and in 1990 ENEA, the Italian National Agency for New Technologies, Environment and Sustainable Economic Development. Throughout the years, in ENEA he was appointed repeatedly as a Head of Laboratory and Head of Project, in Naples and Rome, committed to develop semiconductor-based device technologies, laboratories and equipments for solar cells, sensors, organic-LEDs, culminated with the foundation of the public-private laboratory "TRIPODE" in Naples. He fostered the creation of the Italian community for raw materials, and related actions with relevant national organisations. The main result is the foundation of the Co-location Centre SOUTH (Italy-Spain-Hungary-Malta) in the Knowledge Innovation Community "EIT RAW MATERIALS", where Mr. Della Sala has been Interim General Manager in 2015. As a member of the EIP on Raw Materials he contributed to the Strategic Implementation Plan for the topics of substitution of critical raw materials. He is presently member of the Sherpa Group of the EIP. As an expert appointed by the Italian Ministry for Education, University and Research, he collaborates with the Italian Delegate for the Societal Challenge 5 of H2020. He has been in the board of CAMPEC (R&D consortium for the development of polymer applications) and the Regional Centre of Competence on New Technologies in Campania. Currently he is Council Member of the Italian Association for Industrial Research. Since 2015, he is in charge of the Division "Sustainable Materials" in ENEA.



## **George Cutajar** Malta Competition and Consumer Affairs Authority (MCCAA)

Green Roofs – Towards an Environmentally Friendly and Sustainable Architecture

Mr. George Cutajar is the Director of the Standardisation Directorate within the Malta Competition and Consumer Affairs Authority. He is responsible for the participation in European Standardisation for Malta as a member state and for standardisation projects to develop national standards. He has a MSc degree in Physics specialising in the field of Microwaves in Medical Applications.

Mr. Cutajar has over 17 years of experience in quality and environmental management systems development, implementation and certification. He is also in charge of a number of certification schemes intended to be implemented by the industry to minimise the adverse effects on the environment, to contribute to circular economy and to support sustainable development. These include EU Ecolabel certification, EMAS Verification and Organic Farming Certification.



## **Matthew Spiteri**, Managing Director, Altern Limited

Sustainable Buildings: Not Just One Solution

Matthew Spiteri studied Mechanical Engineering at the University of Malta, with part of the undergrad studies being done in Michigan, USA. In 2015 Matthew acquired a Master Degree in Mechanical Engineering from the University of Malta through a research study done on micro-combined heat and power. Through this study and his work experience, he has acquired extensive expertise on co-generation, and has also been involved within this subject on various fronts. Matthew is also a certified ISO50002 Energy Auditor, and together with the Altern team has gained extensive experience by offering energy audit services to some of the largest corporations in Malta.

Matthew is the founder and one of two directors of Altern Limited, which is an engineering company based in Malta, working within the sustainability sector. Altern offers products and services to some of the largest entities on the island, as well as a number of companies within Europe. Altern's main works involve industrial scale Photovoltaic Systems, LED Lighting, Efficient Heating Systems, Energy Management and Energy Auditing.

Altern was set up in 2008 with the objective to tackle issues related to energy. The company's first goal was to promote cost effective measures that can be easily implemented, leading to immediate improvements in our dependence on conventional sources of energy. Altern, together with its partners, has a strong research and development set-up, which in turn fuels new commercial products. Part of its LED product range is manufactured locally, giving the possibility of offering cost-effective, custom-built LED lighting.

# Parallel Session II - Circular Economy

## Challenges:

waste management in the HORECA sector and water management in agriculture



MODERATOR

**Vincent R. Attard**, President, Nature Trust Malta

Mr. Vincent Attard is qualified in Business Management and Administration. He occupied the post of Central Bank of Malta Executive up to 2006 and was then appointed as a CEO of Nature Trust - FEE Malta in 2006. A position which he holds to date. Mr. Attard is Board Member of the Mediterranean network of NGO - Mediterranean Information Office for Environment, Culture and Sustainable Development, where he is responsible for Finance. Mr. Attard is also National Coordinator for the Foundation for Environmental Education FEE, based in Denmark.



**Manuel Sapiano**, Chief Technical Officer, The Energy and Water Agency of Malta  
Water Re-Use within the Context of the EU Circular Economy Package

Manuel Sapiano leads the Water Unit within Malta's Energy and Water Agency with responsibilities for the development of National Policies and Management Plans for the Water Sector and the undertaking of National Water Conservation and Stakeholder Engagement Initiatives. Furthermore, he also coordinates the implementation process of EU related water legislation in the Maltese islands, and in this role is currently coordinating the implementation of Malta's 2nd River Basin Management Plan.

At a European Level, he fulfils the role of Water Director for Malta within the Common Implementation Strategy (CIS) of the Water Framework Directive. He also represents Malta as one of the co-chairs of the Water Reuse CIS Task Group.



**Juan Jose Bonello**, Senior Lecturer at the Institute of Applied Sciences,  
Malta College of Arts, Science and Technology (MCAST)  
Decreasing the Water Footprint at the Institute of Applied Sciences, MCAST

Juan José Bonello is a lecturer at the Institute of Applied Sciences at the Malta College of Arts, Science & Technology (MCAST). He is also part of the Water Research and Training Centre, through which he is able to mentor degree students during their final year dissertation,

He graduated from the University of Malta in 2011 with a Bachelor of Science (Honours) degree in Biology and Chemistry. The research project associated with his Bachelor's degree involved studying the habitat preference of the sea cucumber, *Holothuria polii*. In 2013, he obtained a Masters of Science in Biology. His research focused on analysing a number of cobble beds around the Maltese Islands in terms of functional diversity.

Working as a tour guide at the Argotti Botanical gardens during his undergraduate course and becoming a qualified SCUBA diver, Juan was able to fully appreciate the natural environment as well as experience the impact caused by anthropogenic activities.

During his Master's degree Juan carried out duties as a Project Assistant at the Department of Biology of the University of Malta. After his second degree, he worked as an Environmental Scientist with a local renowned Environmental Monitoring company, through which he obtained extensive experience in the field.



## **Clyde Falzon**, Strategy Implementation Manager, WasteServ Malta Limited

Circular Economy from a Maltese Waste Management Perspective

Clyde Falzon is an emergent expert in the field of waste management. He recently concluded his PhD at the RWTH Aachen University, Germany on Waste Management within Islands. As part of his PhD he also collaborated with the University of Southern Denmark to further explore various waste management strategies. After initially graduating as a Mechanical Engineer Dr. Falzon completed his Dual Masters degree in Integrated Science and Technology and Environmental Resource Management at the James Madison University and University of Malta. His dissertation focussed on reducing Greenhouse Gas emissions from the Maltese waste management sector. Apart from the extensive academic background, Dr. Falzon also has a sound practical experience in the local waste management sector obtained through his tenure at WasteServ Malta Ltd. In fact he worked for three years within the Operations Division where he was responsible for the proper management of hazardous waste including ELV, WEEE, waste oil and asbestos amongst other waste streams. Over the past two and a half years, Dr. Falzon worked within the Strategy Implementation Division at Wasteserv and recently he was entrusted with the role of Strategy Implementation Manager. This role focuses on the implementation and monitoring of waste management projects covering the Maltese islands. Current projects include the introduction of organic waste collections; Waste to Energy analysis; participation in various waste management committees, providing feedback to emerging waste policies and marine litter initiatives during Malta's EU Presidency.



## **Begoña Pérez Villarreal**, Director of Innovation, EIT Food

EIT Food and our Zero Waste Agenda

Begoña Pérez-Villarreal is at present the Interim Director of Innovation at EIT-Food (<https://eit.europa.eu/eit-community/eit-food>). She holds a B.Sc. Honours degree in Pharmacy-Univ.Navarra (Spain), D.E.S.S. in Food Microbiology-Univ. Lille (France), DEA-Food Industries Management-Instituto Int. San Telmo (Spain). As the Business Director of the Food Research Division of AZTI ([www.azti.es](http://www.azti.es)), she has been involved in RGD&I activities and technology transfer to the food industry, particularly in the SME area, concerning quality issues and product development for 25 years. She has published 75 articles and is co-author of 5 new food products patents. Her research interest the last years has been focused on authentication, traceability and sustainability of the food chain, and prospective analysis of trends for the food sector. Project management experience: she has been responsible for 100 research projects, management team member of 15 European projects, and has been the coordinator of two European projects of the 7FP. Scientific network: she is the chair of the Executive Board of the European Association for Food Safety ([www.safeconsortium.org](http://www.safeconsortium.org)), member of different scientific committees: Spanish Society of Microbiology, European Sensory Science Society, and collaborates with several EU Technological Platforms: FoodforLife, European Aquaculture Technology and Innovation Platform (EATIP), European Fisheries Technology Platform (EFTP).



## **Jochen Froebrich**, Coordinator of Water and AgriFood, WssTP

Green Economic Growth in River Basin, the Role and Needs for Living Labs

Dr. Jochen Froebrich is senior researcher at Wageningen Environmental Research. He graduated at the Leibniz University Hannover, Germany. Over more than two decades he had worked on solutions for key water challenges, such as water scarcity and drought, and to reach a stronger link between land and water management, especially in Africa, Asia and in the Mediterranean area. His wide expertise in the area of land and water management allowed him to establish various interdisciplinary research teams, to coordinate successfully a variety of EU research projects and to execute transdisciplinary research. Today, his particular interest is in co-innovations and public private partnerships, e.g. the establishment of innovation cooperatives in South Africa. Dr. Froebrich is leader of the Working Group Water and AgriFood of WSSTP. He also represents Wageningen Research in the working group Europe of the Top Sector Water, is part of the Holland Circular Hotspot and member of the Smart City Holland Alliance core group. He developed the Alterra Program on Green Growth, which exploits in an interdisciplinary way innovation and new business opportunities for sustainable development and inclusive growth. He is also closely involved in the Large Scale Demonstration project SYSTEMIC, to advance Circular Economy in Europe, to valorise organic waste, and to reduce the nutrient emissions to water bodies.

# Parallel Session III – Green Finance

## Challenges: financing green projects for municipalities and businesses



MODERATOR

**Anton Theuma**, Chief Executive Officer, Paragon Europe

Dr. Anton Theuma is co-founder and has been CEO of the Paragon Group since incorporation in 2004. He has a Doctorate Degree in Knowledge Economy and participated and managed various EU co-funded projects including FP6, FP7, CIP, COST, IEE and Interreg and has also provided assistance to clients seeking business advice, EU funding and investor funding.

Dr. Theuma advises public and private organisations on Innovation and Entrepreneurship and he is involved in policy, programme and project related work at EU level on Innovation and Entrepreneurship, Smart Specialisation and is a member of the FINeS cluster. He has significant experience dealing with stakeholders in the triple helix of industry, technology transfer incubators and investment coaches, mentors, fund managers and institutional funds.

He has led the Paragon Group from a single start-up company to a diversified group having significant interests. Dr. Theuma is currently responsible for Smart Specialisation Strategy as an expert for DG Regio, managing peer review for Italy and the Balkans. He is also a founder member of EURADA's Committee on Financial Instruments, having been an author of the H2020 financial strategy for the European Commission.



**David M. Schembri**, Mayor of Qrendi Local Council

SEAPs and their Financing from a Local Council's Perspective

On completion of his studies David received a commission with the Armed Forces of Malta in the rank of Lieutenant, and where on the termination of his engagement he took up employment within the public services specialising in Underwater Marine Construction. David further qualified as a commercial underwater diving superintendent and was responsible for numerous major underwater construction and salvage projects, both locally and abroad.

In 2013, David was elected as the Qrendi Mayor and where Tourism, Education, Heritage, Culture and the Environment rank high in his council's programme and agenda. Under his guidance, the Qrendi community and schools have worked in close collaboration with all the Maltese Non Government Organisations, receiving both Local, National and International recognitions.



**Amber Wismayer**

Executive Board, Building Industry Consultative Council of Malta

Financing Green Cultural Heritage

Perit Amber Wismayer graduated from the University of Malta in 2010 with a B.E.&A. (Hons.), and subsequently obtained a Masters degree from London in environmental studies and energy efficiency. She holds the post of Hon. Secretary of the Kamra tal-Periti, and represents the KTP within the Architects Council of Europe on the Environment and Sustainable Architecture Working Group. Perit Wismayer's areas of interest include policy, heritage architecture and energy studies. She participates actively, both locally and internationally, at various levels in this field, and is a consultant to Her Excellency, the President of Malta, on matters related to energy efficiency and sustainability. Perit Wismayer is currently engaged in an ongoing research project with the University of Bath, which addresses energy efficiency in heritage buildings and focuses on San Anton Palace, Malta.



## **Sara Pettersson**, Climate and Environment Planning Unit, City of Gothenburg

Green Bonds - Opportunities and Challenges from a City Perspective

Sara works at the Gothenburg City Hall as an urban development officer focusing on the climate and environment. She is the city's climate and environmental expert in connection with Gothenburg's green bond issuance. Sara has extensive experience in waste management and circular economy, working in various positions as head of unit, process manager and project manager for the City of Gothenburg and a neighboring municipality since 2003.

She is also a member of the Kommuninvest Green Bonds Environmental Committee who for example serve as an advisory board to Kommuninvest and participate in the further development of the Kommuninvest Green Bonds framework. Kommuninvest is a Swedish municipal-owned credit market company that offers Swedish municipalities and Swedish county council funding solutions and accounts for more than 40 percent of the Swedish local government sector's borrowing.

Sara has a Master's degree in Business Economics, focusing on ecological economics, from the Mälardalen University.



## **Alfred Buhagiar**, Executive for SME Finance, Bank of Valletta

Financial Instruments for Eco-Friendly Projects of Businesses

Mr Alfred Buhagiar joined the bank in 1981 and has occupied various roles within Credit. He was involved for several years in credit policies, procedures and products.

In 2006, he took up the role of a Relationship Manager responsible for a portfolio of large corporates and represented the Bank and participated in Syndicated Loans.

Between 2012 and 2016, he was assigned as Head of 2 Business Centres which cater for the credit needs of SMEs.

In January 2017, he was appointed as Executive - SME Finance responsible for all commercial credit to SMEs at 5 Business Centres and branches.

Mr Buhagiar is an ACIB and also has a degree in Financial Services.



## **Costantinos S. Psomopoulos**,

Professor at Electrical Engineering Department, Piraeus University of Applied Sciences

Energy Efficient Buildings and Small Scale RES towards Sustainable Communities - Smart Green Funding for Successful Projects

Constantinos S. Psomopoulos, Professor of Piraeus University of Applied Sciences, Vice President of the Electrical Engineer Dept: Graduated from the School of Electrical and Computers Engineering, NTUA Greece in 1997 and received his Ph.D. from the same School in 2002. He has extensive experience in design, construction and operation in the field of electromechanical installations, including energy savings, in industry and buildings, and RES installations (over 10MWp). He has worked for several years in different industrial sectors (Shipyards industry, Waste Management, Energy, etc). He took part as senior expert / engineer in national, EU and international projects related to energy, resource efficiency and energy performance of buildings and industry, made several professional publications in scientific journals, and conference proceedings in the field of energy / resource efficiency, electrotechnical equipment, ecodesign of products and systems. He is working with EU Committees on EcoDesign Directive, since 2006 He is a certified expert in Critical Energy Infrastructure Protection according to 2008/114/ EC Directive. He is Project Manager of the one of the official governmental courses/seminars for the Hellenic Energy Auditors for Buildings according to EPBD, executed in PUAS. He is Vice Director and responsible for the Energy Efficiency and RES courses in the MSc Program "Management and Energy Optimisation of Systems". He joined the Academic staff of PUAS in October 2007, the research team of Earth Engineering Center of Columbia University NY since 2011, and he is Visiting Professor in University d' Auvergne (now Clermont Auvergne) since June 2016.

# Project Presentations

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**Eloisa Macedo**, University of Aveiro

CISMOB - Cooperative Information Platform for Low Carbon and Sustainable Mobility

Eloisa Macedo has a MSc degree in Mathematics and Applications with specialization in Technological and Business Mathematics, and finished her PhD on Mathematics in 2016, both from University of Aveiro, Portugal. Her PhD research work was considered to be deserving of distinction and merit by the international jury. Her research interests include Operational Research, Optimization and Data Analysis. Other fields of interest are based on transportation and environmental analysis. Currently, she is a post-doctoral researcher in the Department of Mechanical Engineering at the University of Aveiro in the European project CISMOB. The main aim of CISMOB project is related to promote innovative ways to reduce carbon footprint and increase the sustainability of urban areas by improving the efficiency in the use of urban transport infrastructure through ICT.



**Antonio Galgano**, University of Padova

Cheap-GSHPs - Cheap and Efficient Application of Reliable Ground Source Heat Exchangers and Pump

Antonio Galgano, is an Associated Professor in Geothermics, Phd in Engineering Geology, University of Padova, Italy. His main research topics focus on ground environmental and energetic suitability of low enthalpy geothermal systems and underground heat/cool storage. Antonio is member of European Geothermal Energy Council, member of the Steering Committee of the European Geothermal Panel in Brussels, member of the Italian National Thermo-technical Commission and Member of the Scientific Committee of the Energy Research Center "Levi Cases", University of Padova. He is an Associated Researcher to the Italian National Research Council - Institute of Geosciences and Earth Resources - Geothermal working group (Italy) and he lectures at the Department of Production Engineering, Thermo-energetic and Mathematical Models, University of Genoa, at the International School of Geothermics, at the National Research Council of Italy. Antonio has authored more than 120 scientific papers published in national and international journals and books. Antonio is also active in funded projects, most notably he was Head of Research on suitable underground aquifers international project with partnership of the Government of Eritrea and the United Nations (2006-2007). Currently he is the Scientific Co-coordinator CHEAP-GSHPs "Cheap And Efficient Application Of Reliable Ground Source Heat Exchangers And Pumps" a H2020 project.



**Petri Kuisma**, Lapland University of Applied Sciences

REMIX - Smart and Green Mining Regions of EU

Mr. Petri Kuisma, DSc (Tech: Heat Transfer and Fluid Dynamics)), is a principal lecturer in the heat ventilation, air conditioning systems and energy technology at the Lapland University of Applied Sciences, where he works as an expert in heat pumps, refrigeration technology, energy efficiency and sustainable utilisation of the Arctic natural resources. During his working career, he has been involved many national and international development projects, acquired expertise in the following areas; energy auditing qualifications for buildings, energy auditing qualifications for renewable energy and energy auditing qualifications for big company. In his current position he is applying her experiences and knowledge to support Lapland University of Applied Sciences to be strong partner on the Arctic Industry and Circular Economy Cluster to develop resource efficient solutions on industrial symbiosis and to provide good breeding ground for the new emerging industries to grow.

He is involved in international projects such as: "Network for Expertise for Energy in Cold Climate", "Biomass to Energy and Chemicals", "Efficient Control of Heat & Ventilation in Low Energy Houses for Single Families", "Use of Heat Pump Promotion in Barents Region", "Efficient Energy Management in Barents Region", "Quality Label. Heat pump test according to EN 14511", "Low Carbon Energy Self-Sufficient Community in Arctic Area" and "Energy Efficiency in Arctic Area".





## **Nadia Theuma**, Executive Director, Paragon Europe

FREEWAT - FREE and Open Source Tools for WATER Resource Management

Dr. Nadia Theuma is Paragon Europe's Executive Director responsible for project management and has been personally overseeing Paragon's growing portfolio of internal and client projects as co-founder. She has a Doctorate in the development, marketing and management of cultural and sustainable tourism. Dr. Theuma has a consolidated experience in project management especially linked to regional branding and development.

She is an international speaker and an established author in the field with over 30 peer-reviewed papers. She has served as a Board member on Government Boards and within international academic and research networks. She is increasingly in demand by various European regions and Commonwealth countries with the aim to offer assistance in her areas of international expertise.

In 2013, Dr. Theuma was appointed as an expert by DG Enterprise and Industry on sustainable tourism and is running a nationwide research initiative for Mediterranean nations to determine the main sustainable tourism indicators. She has been intimately involved in the growth and evolution of the Paragon Group, and sits on the Tourism Working Group of ERRIN.



## **Marie Prouteau**, Euronovia

SOLPART - High Temperature Solar-Heated Reactors for Industrial Production of Reactive Particulates

Ms. Marie Prouteau is specialized in the writing and management of research, development and innovation projects funded by European programmes. With more than 9 years of experience in this field (including a Master degree in European funding programmes), she has participated to the management of several EU projects including the management of activities dedicated to the communication and exploitation of the results of the projects.

She started her career at the French National Centre for Scientific Research and more specifically for the CNRS-PROMES French laboratory specialized in the field of Concentrated Solar Energy. With this experience, she has acquired strong expertise in the development and management of EU projects related to renewable energies in general.

She is working now for Euronovia, a French consulting company in EU funds, and is in charge of the development of dissemination and exploitation activities for H2020 collaborative projects in the solar energy field (ORC-PLUS, SOLPART, NEXT-CSP).



## **Damien Gatt**, Researcher at Institute for Sustainable Energy, University of Malta

ZEROCO2 - Proposing Policy Drivers Towards Near-Zero Carbon Dioxide Buildings

Ing. Damien Gatt is employed with the University of Malta Institute for Sustainable Energy as a Research Officer focusing on the Interreg Europe project entitled ZEROCO2. He was previously employed with the Sustainable Energy and Water Conservation Unit (SEWCU) within the office of the Prime minister, where he was responsible for various renewable energy and energy retrofitting projects. Damien is a warranted mechanical engineer having graduating in 2008, from the University of Malta. In 2015, he graduated with an MSc with distinction in Sustainable Energy from the University of Malta and is currently undertaking his PhD with the Institute for Sustainable Energy. His main areas of interest are the modelling, design and optimization of energy efficient buildings and HVAC. He is a qualified ISO 50002 Energy Auditor and Energy Performance Certificate (EPC) Assessor.



## **Dario Padovan**, Associate Professor of Sociology, University of Turin

DIMMER - District Information Modelling and Management System for Energy Reduction

Dario Padovan is Associate Professor of Sociology at the University of Turin and he is member of the Department of Culture, Politics and Society. He works since long time on history of social sciences, environmental sociology, social metabolism, sustainable consumption, sociology of risk, environmental conflicts. He is coordinator of the Unesco Chair on Sustainable Development at the University of Torino. He is member of Editorial Committee of Theoria Journal (Buenos Aires), Chosmos & History (Melbourne, Australia). He is member of Esà RN 12 on "Environment and Sociology", and of RN 6 on "Sociology of Consumption". Recently is doing research on household metabolism, environmental accounting, urban metabolism regulation, circular economy, sociology of practices, energy, environmental conflicts, smart energy grids, socio-technical systems transition.



## **Antonella Luciano**, Laboratory Resources Valorisation, ENEA

Ongoing Projects and Experience on Circular Economy and Resource Efficiency

Antonella Luciano graduated with honors in Environmental Engineering in 2004 at "Sapienza" University of Rome and received a PhD in 2008. She has over 12 years of experience in research and design activities acquired both in public and private sector. She was post doc researcher at the "Sapienza" University of Rome until 2012 and senior engineer consultant at Sogesid S.p.A. until 2013. From 2013 she is researcher at ENEA.

She has carried out research in the fields of contaminated sites remediation, waste and wastewater management and treatment. She was responsible of researches for the study and development of numerical models for various applications (i.e. leaching of heavy metals from contaminated soils, remediation of DNAPLs contaminated aquifers, design of new technologies for wastewater treatment, atmospheric dispersion of pollutants emitted by waste management facilities). She also participated to research activities on the ELVs waste management.

She is involved in R&D activities and in national and international projects in the field of eco-innovation, with particular for the development and implementation of environmental technologies for process and product, resource efficiency, Industrial Symbiosis, Life Cycle Assessments.

She is member of international and national working groups: ECO-AP Working Group on "Planned Obsolescence", Italian Circular economy council working group, Raw Material Group of the Italian Ministry of Economic Development, Waste and wastewater management Commission of the Order of Engineers of the Province of Rome, Technical Committee on contaminated Soil (CTTC); AIAT (Italian national association of environmental engineers).



## **Louis Borg**, Chief Executive Officer at ECO Group Ltd

New Energy Based On Clean Energy

Louis Borg has been a pioneer in introducing the concept of an Energy Audit in Malta. He has a Masters Degree in Sustainable Energy and he is currently undertaking his PhD in Sustainable Development during which he has published a number of papers. Louis currently teaches Sustainable Development and Advance Project Management at MCAST University Collage.



## **Antoine Gatt**, Faculty for the Built Environment, University of Malta

LifeMedGreenRoof Project - Green Roofs in the Mediterranean

Antoine Gatt holds a bachelor and Master's degree in landscape architecture from the University of Gloucestershire UK. He has many years of experience in large and small projects both in the Maltese islands and abroad. He has worked and managed a number of EU funded projects related to agriculture and the environment.

For the past three and a half years he has been managing the LifeMedGreenRoof project at the University of Malta where he is researching the potential of green roofs locally and encouraging the dissemination of the technology to render urban areas more sustainable. Antoine advocates the importance of green infrastructure especially in urban environments so as to improve the quality of urban life and increase urban biodiversity. He lectures at the University of Malta and at MCAST on issues related to landscape design, green infrastructure and ecosystem services.



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