

# 2<sup>nd</sup> OPEN-AIR CITIES INTERNATIONAL CONFERENCE “LOCAL AND REGIONAL SUSTAINABLE DEVELOPMENT AND URBAN RECONSTRUCTION”

## Book of Abstracts

**open air  
Cities** 2nd Open-Air Cities  
International Conference


**Local and Regional  
Sustainable Development  
& Urban Reconstruction**


**14 - 16 February 2025  
Harokopio University of Athens, Greece**


**Organised by:**  
**OPEN-AIR CITIES  
SYROS INSTITUTE  
Harokopio University of Athens,  
Postgraduate Programme SUSTAINABLE DEVELOPMENT**

**Coorganized by:**  
**EUROPEAN COOPERATION IN SCIENCE & TECHNOLOGY  
Cost Action 22124 - ECO4ALL**

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 Harokopio University of Athens  
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SUSTAINABLE DEVELOPMENT

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## BOOK OF ABSTRACTS

2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025

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## WELCOME INTRODUCTION

Dear Invited guests, Colleagues and Students,

On behalf of the Scientific and Organizing Committee, we welcome you to the 1st OPEN-AIR CITIES International Conference, organized by Open-Air Cities, HAROKOPIO UNIVERSITY of Athens - Postgraduate Programme "Sustainable Development", SYROS INSTITUTE and in co-organization: EUROPEAN COOPERATION IN SCIENCE & TECHNOLOGY, Cost Action CA22124 ECO4ALL.

The conference aims to present and disseminate research results related to the Sustainable Development of cities and regions at a global level.

The main subject is the presentation of relevant research in the field of Sustainable Development.

The conference is organized and structured on the four main pillars of Sustainable Development, which in fact are also the main pillars of Urban and Regional Development: Environment, Economy, Society and Culture. Each of these pillars includes its subcategories, which are detailed through the thematic sections related to the 17 Global Goals of Sustainable Development.

The conference brings together many distinguished researchers of Local and Regional Sustainable Development and Urban Reconstruction from many countries all over the world. Participants have the opportunity to present new research, exchange information, and discuss current issues.

All submitted full papers will be included in the conference proceedings and peer reviewed and published in the international journal *Sustainable Development, Culture, Traditions Journal* ([www.sdct-journal.com](http://www.sdct-journal.com)) (ISSN: 2241-4010)

The papers that will be presented at the conference have the possibility to be included in the conference proceedings and to be published in the international journal *Sustainable Development, Culture, Traditions Journal* ([www.sdct-journal.com](http://www.sdct-journal.com)) (ISSN: 2241-4010), after their final submission to the journal.

I would like to extend particular thanks to the conference Keynote speakers: Moraitis Konstantinos, Plotnic Olesea, Kremlis George, Arauzo-CarodJosep-Maria, Panetsos A. Georgios, RadoglouKalliopi, AngelidisMinas, LalenisKonstantinos, Konstantinidou Elena, Constantina Kottaridi, RodiAlcestis, GospodiniAspa, Salvati Luca and StefanouJoseph.

Also, I would like to thank all the participants, as well as all the colleagues who have prepared the very interesting sessions you will attend at the conference.

I wholeheartedly hope that all participants gain valuable scientific knowledge and find the 2<sup>nd</sup> OPEN-AIR CITIES International Conference an enjoyable and fulfilling experience.



### Chair of the Organizing & Scientific Committees

#### Roido Mitoula

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Greece Cost Action CA22124 ECO4ALL

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## CONCISE CONFERENCE PROGRAMME

### Day 1 - Friday 14/02/2025

90:00-10:00	Registration (Harokopio University) ( <a href="#">main building</a> )
10.00-10.30	OPENING CEREMONY ( <a href="#">Amphitheater: Georgios Karabatzos</a> ) ( <a href="#">main building</a> )
10.30-13.00	Keynote Speeches ( <a href="#">Amphitheater: Georgios Karabatzos</a> ) ( <a href="#">main building</a> )
13.00-14.30	Conference Lunch - Finger Food
14.30-17.30	Keynote Speeches ( <a href="#">Amphitheater: Georgios Karabatzos</a> ) ( <a href="#">main building</a> )
17.30-18.00	Coffee Break
18.00-20.00	<b>Session 2:</b> “Forestry and forest-based wood products: Discussing their role for sustainability and climate neutrality at local, regional and global scale” Organised by Department of Forestry, Wood Sciences and Design, Chaired by <i>Prof Georgios Ntalos</i> ( <a href="#">Amphitheater: Georgios Karabatzos</a> ) ( <a href="#">main building</a> )
18.00-20.00	<b>Session 3:</b> “Culture and sustainable urban development of the city”. Organised and chaired by <i>Antonis Papagiannidis</i> (Greek Language) ( <a href="#">Senate Hall</a> ) ( <a href="#">main building</a> )
16.30-20.00	<b>Session 4:</b> “Cultural Sustainability in Praxis: Digital Transformation and Green Innovation”, Organised and chaired by <i>Dr Bokolas Vassilis</i> and <i>Prof Colantoni Andrea</i> ( <a href="#">Ceremony Hall</a> ) ( <a href="#">New Library Building</a> )
18.00-20.00	<b>Session 5:</b> “Cultural Heritage and Sustainable Development of Places and Cities” Chaired by <i>Prof Polychronopoulos Dimitris</i> ( <a href="#">Room A1</a> ) ( <a href="#">main building</a> )
18.00-20.00	<b>Session 6:</b> “Sustainable Urban Public Space” Chaired by <i>Prof Angelidou Margarita</i> ( <a href="#">Room A2</a> ) ( <a href="#">main building</a> )
18.00-20.00	<b>Session 7:</b> “Urban Regeneration”, Chaired by <i>Prof Lava Riva</i> ( <a href="#">Room A5</a> ) ( <a href="#">main building</a> )
18.00-20.00	<b>Session 8:</b> “Circular Economy and Sustainable Development” Chaired by <i>Prof Dzintra Atstāja</i> ( <a href="#">Room A6</a> ) ( <a href="#">main building</a> )

### Day 2 - Saturday 15/02/2025

09.00-11.00	<b>Session 9:</b> “Natural Disasters, Resilience and Sustainable Development of Places and Cities”, Chaired by <i>Dr Economou Agisilaos</i> ( <a href="#">Amphitheater: Georgios Karabatzos</a> ) ( <a href="#">main building</a> )
11.00-11.30	Coffee Break
11.30-12.00	<b>Keynote Speech</b> ( <a href="#">Amphitheater: Georgios Karabatzos</a> ) ( <a href="#">main building</a> )
12.00-14.00	<b>Session 10:</b> “Landscape and Urban Sustainability: discussing the natural and socio-cultural factors, in a positive or negative mood”, Organised and chaired by <i>Prof Konstantinos Moraitis</i> ( <a href="#">Amphitheater: Georgios Karabatzos</a> ) ( <a href="#">main building</a> )

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14.00-15.00	Conference Lunch - Finger Food
09.00-12.45	<b>Session 11:</b> “ECO4ALL FOR CONSUMER PROTECTION THROUGH CIRCULAR ECONOMY STRATEGIES - THE CONTRIBUTION TO SUSTAINABLE DEVELOPMENT” Organised and chaired by <i>Prof Plotnic Olesca</i> (COST ACTION 22124 ECO4ALL) (Ceremony Hall) (New Library Building)
11.00-11.30	Coffee Break
13.00-14.15	<b>Session 12:</b> “Climate Change”, Chaired by <i>Dr Chatzigrigoriou Pavlos</i> (Ceremony Hall) (New Library Building)
14.15-15.00	Conference Lunch - Finger Food
09.00-11.00	<b>Session 13:</b> “Energy Management and Sustainable Mobility” Chaired by <i>Prof Aspa Gospodini</i> (Room A1) (main building)
11.00-11.30	Coffee Break
11.30-12.00	<b>Session 14:</b> “Cultural Routes and Sustainable Development” Organised and chaired by <i>Assoc Prof Maria Manola &amp; Argyros Leonidas</i> (Room A1) (main building)
13.15-14.00	<b>Session 15:</b> “Sustainable Development, Social Sustainability and Social Policy: trends, transformations and rising challenges” Organised and chaired by <i>Prof Nikos Papadakis &amp; Dr Stelios Tzagkarakis</i> (Room A1) (main building)
14.00-15.00	Conference Lunch - Finger Food
09.00-12.30	<b>Session 16:</b> “Education and Sustainable Development” Chaired by <i>Prof Peraboni Carlo</i> (Room A2) (main building)
11.00-11.30	Coffee Break
12.30-14.00	<b>Session 17:</b> “Alternative Tourism and Sustainable Development” Chaired by <i>Dr Vardopoulos Ioannis</i> (Room A2) (main building)
14.00-15.00	Conference Lunch - Finger Food
09.00-11.00	<b>Session 18:</b> “Sustainable urban development” Organised and chaired by <i>Prof Rodi Alcestis</i> (Room A4) (main building)
11.00-11.30	Coffee Break
11.30-14.00	<b>Session 19:</b> “Smart Cities and Sustainable Development” Chaired by <i>Assoc Prof Konstantinidou Elena</i> (Room A4) (main building)
09:00-09:30	<b>Keynote Speech</b> (Room A5) (main building)
09.30-11.00	<b>Session 20:</b> “The Physiognomy of cities”, Chaired by <i>Prof Joseph Stefanou</i> (Room A5) (main building)
11.00-11.30	Coffee Break
11.30-14.00	<b>Session 21:</b> “Digital Cities and Sustainable Development” Chaired by <i>Assoc Prof Panetsos Georgios</i> (Room A5) (main building)
14.00-15.00	Conference Lunch - Finger Food
09.00-10.00	<b>Session 22:</b> “Urban Environment and Sustainability” Organised and chaired by <i>Prof Skarvelis Michail</i> (Room A6) (main building)
10.00-11.00	<b>Session 23:</b> “Industry, Services and Sustainability” Organised and chaired by <i>Prof Arauzo-Carod Josep-Maria</i> (Room A6) (main building)
11.00-11.30	Coffee Break

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11.30-14.00	<b>Session 24:</b> “Urban and Regional Sustainable Development” Organised and chaired by <i>Prof Nikolaou Dimitra</i> (Room A6) (main building)
14.00-15.00	Conference Lunch - Finger Food

### Day 3 - Sunday 16/02/2025

09.00-10.30	<b>Session 25:</b> “Tourism, Culture and Sustainable Development of Places” Chaired by <i>Olga-Eleni Astara</i> (online) <a href="https://meet.google.com/adr-trzz-gvv">https://meet.google.com/adr-trzz-gvv</a>
10.30-12.00	<b>Session 26:</b> “Cities Physiognomy” Organised and chaired by <i>Joseph Stefanou &amp; Roido Mitoula</i> (online) <a href="https://meet.google.com/fqw-hmbv-pqp">https://meet.google.com/fqw-hmbv-pqp</a>
12.00-13.00	<b>Session 27:</b> “Entrepreneurship and Local Sustainability- ESG Criteria” Chaired by <i>Panagiota Karametou</i> (online) <a href="https://meet.google.com/fqa-rcmd-adi">https://meet.google.com/fqa-rcmd-adi</a>
13.00-14.45	<b>Session 28:</b> “Urban Regeneration and Environment”, Chaired by <i>Dr Papavasileiou Angelos</i> (online) <a href="https://meet.google.com/axo-bpym-zky">https://meet.google.com/axo-bpym-zky</a>
14.00-19.00	<b>Session 29:</b> “ECO4ALL FOR CONSUMER PROTECTION THROUGH CIRCULAR ECONOMY STRATEGIES - THE CONTRIBUTION TO SUSTAINABLE DEVELOPMENT” Organised by <i>Prof Plotnic Olesca</i> (COST ACTION 22124 ECO4ALL) and chaired by <i>Mihaela Tofan</i> (online) <a href="https://meet.google.com/dbk-yiey-dnw">https://meet.google.com/dbk-yiey-dnw</a>

Closing of the Conference

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## KEYNOTE SPEAKERS



**Moraitis Konstantinos**

*Professor, National Technical University of Athens*

**“Eros and the City: Make the Cultural Urban-Scale Flourish!”**



**Plotnic Olesea**

*Professor, Moldova State University*

**“Advancing Consumer Protection through the Circular Economy: Strategic Imperatives of Reduction, Reuse, and Repair”**



**Arauzo-Carod Josep-Maria**

*Professor, Rovira i Virgili University (URV)*

**“What determines drivers and barriers of the implementation of Circular Economy measures at regional level?”**

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*2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025*

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**Gospodini Anastasia-Aspasia**

*Professor, University of Thessaly*

**“Building new places of creative economies; Renewal and re-use abandoned buildings as coworking buildings in Athens’ central districts”**



**Panetsos A. Georghios**

*Professor, University of Patras*

**“Sustainable Architectural Creations in Historic Cities”**



**Salvati Luca**

*Professor, Sapienza University of Rome*

**“Demographic transitions, local economies and Metropolitan systems in-between sustainability and resilience”**

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**Kremlis George**

*Honorary Director of the European Commission*

*Member of the Board of Directors of the European Public Law Organisation and Director of its Circular economy and Climate Institute, as well as Ambassador of the EPLO to Bulgaria*

*Chair of the Bureau of the Espoo Convention & the SEA Protocol and of their MOPs*

**“Circular Economy as a driver of energy transition and carbon neutrality”**



**Rodi Alcestis**

*Associate Professor, University of Patras*

**“Origin and Future of the X-Minute City”**



**Lalenis Konstantinos**

*Professor, University of Thessaly*

**“Democratic Theory, Urban Planning Ideology and Public Participation in the Era of Artificial Intelligence”**

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**Radoglou Kalliopi**

*Professor, Democritus University of Thrace*

**“Urban and peri-urban forests. Their contribution to sustainable development”**



**Angelidis Minas**

*Professor, National Technical University of Athens*

**“City overtourism versus economic, social and environmental sustainability”**



**Konstantinidou Elena**

*Associate Professor, National Technical University of Athens*

**“Architectural Composition and Cities Architectural Heritage”**



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**Constantina Kottaridi**

*Professor, University of Piraeus*

**“Circular Economy as a pillar for regional development”**



**Joseph Stefanou**

*Em. Professor, National Technical University of Athens*

**“Sustainable City Development”**

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2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025

## CONFERENCE SCHEDULE

### DAY 1 - Friday 14/02/2025

- 09:00-10:00 **Registration** (Harokopio University) (main building)
- 10.00-10.30 Welcome introduction by **Prof. Roido Mitoula**, Dean, School of Environment, Geography and Applied Economics, Harokopio University of Athens, Head of Postgraduate Program “Sustainable Development”, Chair of the Organising & Scientific Committee
- Prof Dedoussis George**, Rector of Harokopio University of Athens  
**Vogl Gerda**, Ambassador of the Republic of Austria
- Prof Plotnic Olesea**, Head fo COST ACTION 22124 ECO4ALL  
**Dr Hatzigrigoriou Pavlos**, Head of Syros Institute  
**Assoc Prof Costarelli Vassiliki**, Head of the Department of Economics & Sustainable Development  
**Damatis Nikolaos**, EAEABIOM, General Secretary of the Board of Directors  
**Gialypsos Dimitris**, WATERECO Irrigation and Water Supply

	Keynote Speeches
1. 10.30-17.30	Chaired by Prof Sardianou Eleni & Prof Malindretos Georgios (Amphitheater: Georgios Karabatzos) (main building)
10:30-11:00	EROS AND THE CITY: MAKE THE CULTURAL URBAN-SCAPE FLOURISH! (K02144) <b>Moraitis Konstantinos</b> , Professor Emeritus, National Technical University of Athens
11:00-11:30	ADVANCING CONSUMER PROTECTION THROUGH THE CIRCULAR ECONOMY: STRATEGIC IMPERATIVES OF REDUCTION, REUSE, AND REPAIR (K02027) <b>Plotnic Olesea</b> , Professor, Moldova State University
11:30-12:00	CIRCULAR ECONOMY AS A DRIVER OF ENERGY TRANSITION AND CARBON NEUTRALITY (K02082) <b>Kremlis George</b> , European Public Law Organisation and Director of its Circular economy and Climate Institut
12:00-12:30	WHAT DETERMINES DRIVERS AND BARRIERS OF THE IMPLEMENTATION OF CIRCULAR ECONOMY MEASURES AT REGIONAL LEVEL? (K02029) <b>Arauzo-Carod Josep-Maria</b> , Professor, Universitat Rovira i Virgili
12:30-13:00	SUSTAINABLE ARCHITECTURAL CREATIONS IN HISTORIC CITIES (K02244) <b>Panetsos A. Georgios</b> , Professor, University of Patras
13.00-14.00	Conference Lunch - Finger Food
	Chaired by Prof Abeliotis Konstantinos & Assist Prof Kostakis Ioannis (Amphitheater: Georgios Karabatzos) (main building)
14.00-14.30	URBAN AND PERI-URBAN FORESTS, THEIR CONTRIBUTION TO SUSTAINABLE DEVELOPMENT (K02032) <b>Radoglou Kalliopi</b> , Professor, University of Thrace
14:30-15:00	CITY OVERTOURISM VERSUS ECONOMIC, SOCIAL AND ENVIRONMENTAL SUSTAINABILITY (K02073) <b>Angelidis Minas</b> , Professor Emeritus, National Technical University of Athens

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15:00-15:30	DEMOCRATIC THEORY, URBAN PLANNING IDEOLOGY AND PUBLIC PARTICIPATION IN THE ERA OF ARTIFICIAL INTELLIGENCE (K02026) <b>Lalenis Konstantinos</b> , Professor, University of Thessaly
15:30-16:00	CULTURAL HERITAGE AND SUSTAINABILITY: AN INTIMATE RELATIONSHIP (K02089) <b>Konstantinidou Elena</b> , Associate Professor, National Technical University of Athens
16:00-16:30	CLIMATE NEUTRAL CITIES AND CITIZENS’ WELFARE (K02176) <b>Kottaridi Constantina</b> , Professor, University of Piraeus
16:30-17:00	ENABLING ACCESSIBILITY, DISABLING DISABILITY (K02247) <b>Rodi Alcestis</b> , Professor, University of Patras
17:00-17:30	BUILDING NEW PLACES OF CREATIVE ECONOMIES; RENEWAL AND RE-USE OF ABANDONED BUILDINGS AS COWORKING BUILDINGS IN ATHENS’ CENTRAL DISTRICTS (K02243) <b>Gospodini Aspa</b> , Professor, University of Thessaly
17.30-18.00	Coffee Break
2. 18.00-20.00	Pre-organised Special Session: “ <b>Forestry and forest-based wood products: Discussing their role for sustainability and climate neutrality at local, regional and global scale</b> ” Organised by Department of Forestry, Wood Sciences and Desing. Chaired by <b>Prof Georgios Ntalos</b> (Amphitheater: Georgios Karabatzos) (main building)
18.00-18.15	EUROPEAN PROGRAMS AND GREECE’S FOREST BIO-ECONOMY: REVIEW AND RESEARCH GAP IDENTIFICATION (K02251) <b>Veneti Angeliki, Karagouni Glykeria</b>
18.15-18.30	CARBON FARMING IN FORESTRY AND CARBON STORAGE IN WOOD PRODUCTS. THE NEW CERTIFICATION FRAMEWORK AND THE POTENTIALS FOR THE RELATED MARKETS (K02252) <b>Trigkas Marios, Charitos Evangelos, Karagouni Glykeria, Karageorgos Anthony</b>
18.30-18.45	THE USE OF SUSTAINABLE WOOD-BASED CONSTRUCTION MATERIALS TOWARDS REDUCING ENERGY INPUT (K02253) <b>Ninikas Konstantinos, Ntalos Georgios, Koutsianitis Dimitrios, Mitani Andromachi, Alexaki Pinelopi</b>
18.45-19.00	AI IN SMART FOREST MANAGEMENT: FROM DMRV SERVICES TO INTELLIGENT BIOMASS MANAGEMENT (K02254) <b>Lallas Efthymios, Karageorgos Anthony, Mountzouris George, Chryssikou Vasiliki</b>
19.00-19.15	CAN FORESTS HELP CRYPTOCURRENCIES BECOME SUSTAINABLE? A THEORETICAL APPROACH FOR RELATIVE STRATEGIES (K02255) <b>Trigkas Marios, Charitos Evangelos</b>
19.15-19.30	EVALUATION OF THE POTENTIAL SUPPLY OF AGRICULTURAL AND FOREST RESIDUES FOR BIOENERGY PRODUCTION IN GREECE (K02256) <b>Mitani Andromachi, Ntalos Georgios, Koutsianitis Dimitrios, Ninikas Konstantinos, Alexaki Pinelopi</b>
19.30-19.45	INVESTIGATING THE RELATIONSHIP AMONG ROAD NETWORK ALTITUDE ZONES AND LAND USE: EVIDENCE FROM THE REGIONS OF GREECE (K02257) <b>Stamatiou Christos, Matsouka Maria, Papageorgiou Grigorios</b>
19.45-20.00	A COMPREHENSIVE APPRAISAL OF LANDSLIDE PREVENTIVE MEASURES ON ROAD SLOPES (K02258) <b>Papageorgiou Grigorios</b>

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3. 18.00-20.00	Pre-organised Round Table: “ <b>Culture and sustainable urban development of the city</b> ”. Organised and chaired by <b>Antonis Papagiannidis</b> (Greek Language) (Senate Hall) (main building)
18.00-18.15	ATHENS: A CITY WITHOUT AN "URBAN" CULTURE (K02155) <b>Maravegias Napoleon</b>
18.15-18.30	THE CONCEPT OF "SYSPONDIA" (K02156) <b>Chrysochoou N. Dimitris</b>
18.30-18.45	THE PROTECTION OF THE PHYSIOGNOMY OF CITIES AND GREEN PUBLIC PROCUREMENTS (K02248) <b>Karnavos Dimitris</b>
18.45-19.00	HEALTHY CITY (K02167) <b>Pelegrinis Theodosis</b>
19.00-19.15	CULTURAL HERITAGE AND SUSTAINABLE URBAN TRANSFORMATION: A CONTINUUM FROM ANTIQUITY TO MODERNITY (K02241) <b>Konstantatos Ioannis</b>
19.15-19.30	THE ENVIRONMENT OF CITIES (K02250) <b>Galanopoulou Eleonora</b>
19.30-20.00	Discussion
4. 16.30-20.00	Pre-organised Special Session: “ <b>Cultural Sustainability in Praxis: Digital Transformation and Green Innovation</b> ” Organised and chaired by <b>Dr Bokolas Vassilis</b> and <b>Prof Colantoni Andrea</b> (Ceremony Hall) (New Library Building)
16.45-17.00	CREATIVE INDUSTRIES AND DIGITAL TRANSFORMATION OF TOURISM: ONLINE GAMES AS 'THIRD SPACES' OF COMMUNICATION AND INTERACTION (K02230) <b>Bokolas Vassilis, Papadaki Eirini</b>
17.00-17.15	BRIDGING THE GENDER DIGITAL DIVIDE: STRATEGIES FOR INCLUSIVE TECHNOLOGY ADOPTION IN MARGINALIZED COMMUNITIES IN UGANDA (K02199) <b>Nagasha Judith Irene</b>
17.15-17.30	THE ROLE OF UNIVERSITY - INDUSTRY R&D COLLABORATIONS: DRIVING TO INNOVATION AND SUSTAINABILITY IN DEVELOPING COUNTRIES (GOVERNANCE AND GROWTH MODEL) (K02170) <b>Nuka Dardane, Troshani Ines, Mijo Ketrina</b>
17.30-18.00	Coffee Break
18.00-18.15	ANALYZING HEALTH-RELATED QUALITY OF LIFE AND PROFESSIONAL QUALITY OF LIFE AMONG MIGRANT POPULATIONS IN URBAN SETTINGS: A SYSTEMATIC REVIEW (K02239) <b>Fouskas Theodoros, Vassilakou Tonia, Merakou Kyriakoula, Koulterakis George</b>
18.15-18.30	GREEN ROOFS CONCEPT REVIEW: STRATEGIC COMMUNICATIONS FOR TECHNICAL AND ENVIRONMENTAL SUSTAINABILITY (K02238) <b>Colantoni Andrea, Nosova Bogdana, Skarpelos Yannis</b>
18.30-18.45	DIGITAL SKILLS AND PROFESSIONAL DEVELOPMENT: BUILDING BRIDGES BETWEEN ACADEMIC EDUCATION AND DIGITAL LABOR MARKET (K02242) <b>Skarpelos Yannis, Kaperonis Stavros, Carbone Luisa, Ntrouva Efi</b>
18.45-19.00	DIGITAL LITERACY AND COMBATING MISINFORMATION AS CRITERIA FOR THE SUSTAINABILITY OF PUBLIC HEALTH (K02173) <b>Saridi Maria, Tsintari Elena</b>

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19.00-19.15	CULTURAL TOURISM AND LOCAL SUSTAINABLE DEVELOPMENT: THE CASE OF THE DIGITAL GAMES IN THE MUSEUMS (K02196) <b>Bokolas Vassilis, Skyrianou Martha</b>
19.15-19.30	CHALLENGES OF INTERNATIONALIZATION PROCESS OF UNIVERSITIES IN ALBANIA (K02261) <b>Skendaj Elton</b>
19.30-19.45	DIGITAL GAMES AND SUPPORT FOR CHILDREN WITH LEARNING DIFFICULTIES: RESEARCH AND PEDAGOGICAL APPLICATIONS (K02197) <b>Bokolas Vassilis, Zotou Danai</b>
19.45-20.00	DIGITAL ENTREPRENEURSHIP AND SUSTAINABLE DEVELOPMENT: THE DISTANCE LEARNING OF GREEK AS A FOREIGN LANGUAGE EXAMPLE (K02169) <b>Karageorgou Irene</b>

5. 18.00-20.00	Session: “ <b>Cultural Heritage and Sustainable Development of Places and Cities</b> ” Chaired by <b>Prof Polychronopoulos Dimitris</b> (Room A1) (main building)
18.00-18.15	CULTURAL HERITAGE AND URBAN RESILIENCE: REVIVING TOBACCO WAREHOUSES IN NORTHERN GREECE (K02148) <b>Grigoriadou Maria, Polychronopoulos Dimitris, Kapandriti Anastasia</b>
18.15-18.30	HISTORICAL MEMORY AND SUSTAINABLE DEVELOPMENT WITHIN AN URBAN CULTURAL LANDSCAPE. THE CASE OF THE OLD MUNICIPAL HOSPITAL OF THE UPPER TOWN OF PATRAS (OLD PATRAS). (K02034) <b>Lykourgiotis Angelos</b>
18.30-18.45	MATERIAL AND IMMATERIAL CULTURE AND SUSTAINABLE DEVELOPMENT (HISTORIC CITIES, MONUMENTS, CUSTOMS). THE CASE STUDY OF THE MINOR ASIA REFUGEES IN AITOLIA-AKARNANIA, GREECE (K02048) <b>Tsoka Evangelia</b>
18.45-19.00	THE <b>UNDERWATER CULTURAL</b> HERITAGE AS MANAGEMENT FACTOR OF THE MEDITERRANEAN LANDSCAPE (K02064) <b>Konaxis Ioannis</b>
19.00-19.15	WORLD HERITAGE MONUMENTS AND THE CITY: SOME PRELIMINARY REMARKS ON THE MANAGEMENT OF THE MONUMENTS OF THESSALONIKI, GREECE (K02123) <b>Karadimou Agni</b>
19.15-19.30	THE LEGACY OF HIPPOCRATES IN THE MODERN WORLD AIMING AT WELL-BEING AND SUSTAINABILITY. THE CASE OF KOS. (K02186) <b>Karayanni Anda</b>
19.30-19.45	OPTIMIZING DESTINATION MANAGEMENT: THE ROLE OF BIMs IN PROMOTING CULTURAL HERITAGE AND SUSTAINABILITY (K02188) <b>Poulimenou Sofia Maria, Deliyannis Ioannis, Mazi Ioanna Afroditi</b>
19.45-20.00	REVIVING TRADITION: TOBACCO WAREHOUSES IN KAVALA AS PILLARS OF SUSTAINABLE GROWTH (K02120) <b>Grigoriadou Maria - Alexandra, Kouveli Aikaterini</b>

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6. 18.00-20.00	Session: “ <b>Sustainable Urban Public Space</b> ” Chaired by <b>Prof Angelidou Margarita</b> (Room A2) (main building)
18.00-18.15	TRANSFORMING URBAN SPACES FOR REMOTE WORK: POLICY IMPLICATIONS AND DESIGN STRATEGIES (K02087) <b>Angelidou Margarita, Pouzoukidou Georgia, Roma-Athanasiadou Elli</b>
18.15-18.30	REGENERATIVE AND CIRCULAR CITY DEVELOPMENT THROUGH DISTRIBUTED URBAN PRODUCTION AND THE MAKER MOVEMENT IN THESSALONIKI, GREECE (K02088) <b>Angelidou Margarita, Roma-Athanasiadou Elli, Premyanov Nikolay, Psaltoglou Artemis, Chatziioannou Nikolaos, Tsolakis C. Apostolos</b>
18.30-18.45	SERVICE DESIGN IN URBAN LIFE: PROPOSING A CO-DESIGN MODEL FOR INTERVENTIONS IN URBAN COMMONS (K02112) <b>Chairetakis Dimitrios</b>
18.45-19.00	URBAN OBSERVATORIES. GAZING AT THE CITY. SNAPSHOTS AND ALLEGORICAL INTERPRETATIONS OF THE URBAN LANDSCAPE OF ATHENS (K02116) <b>Moira Maria, Makris Dimitrios, Michalopoulou Katerina</b>
19.00-19.15	STRATEGIC STAKEHOLDER ENGAGEMENT FOR LONG-TERM SUSTAINABILITY OF URBAN DEVELOPMENT PROJECTS (K02147) <b>Zacharis Theo</b>
19.15-19.30	EXPLORING PUBLIC PERCEPTIONS OF THE PARIS 2024 OLYMPICS' SUSTAINABILITY STRATEGY: A CONTENT ANALYSIS OF COMMENTS ON YOUTUBE VIDEOS (K02071) <b>Kübra Büyük Öksüz</b>
19.30-19.45	A SENSITIVE APPROACH TO THE HISTORIC URBAN LANDSCAPE. THE INTERWAR APARTMENT BUILDINGS OF THE LINEAR OPEN SPACE OF FOKIONOS NEGRI IN ATHENS, GREECE (K02132) <b>Eleftheraki Georgina</b>
19.45-20.00	Discussion

7. 18.00-20.00	Session: “ <b>Urban Regeneration</b> ”, Chaired by <b>Prof Lava Riva</b> (Room A5) (main building)
18.00-18.15	THE EXTERNALITIES OF CONTEMPORARY ARCHITECTURE IN TERMS OF SUSTAINABILITY (K02124) <b>Vernadou Emmanouela-Pagona, Lava Riva</b>
18.15-18.30	REDESIGNING A PUBLIC SQUARE FOR MANIFESTATIONS: A SERBIAN EXAMPLE OF SOMBOR SQUARE (K02125) <b>Mitrović Nikola, Mitrović Djordje, Antonić Branislav, Grujičić Aleksandar</b>
18.30-18.45	GAZI - PSALLIDI: EXPLORING DIFFERENCES BETWEEN TRADITIONAL MAP MAKING AND CONTEMPORARY MAPPING PRACTICES UPON TWO ATHENIAN NEIGHBOURHOODS (K02195) <b>Tsakiri Efrossyni, Vrasida Maria, Vasilara Archontoula</b>
18.45-19.00	CINEMA AS A PLANNING “TOOL” FOR A SUSTAINABLE, CHILD-FRIENDLY AND THEREFORE WORTH LIVING CITY (K02070) <b>Chatzifragkios Makrydakos Konstantinos</b>
19.00-19.15	CITY-CENTERED VALUES (K02072) <b>Maniatis Antonios, Adamopoulos Antonios</b>

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19.15-19.30	THE ELLINIKON: A CASE STUDY OF SUSTAINABLE URBAN REGENERATION AND DEVELOPMENT (K02086) <b>Rachiotis Theodoros, Poulaki Panoraia</b>
19.30-19.45	FROM AUTOTROPH SYSTEMS TO CITIES. RETHINKING TERRITORIAL METABOLISM TOWARDS URBAN SUSTAINABILITY (K02185) <b>Apostolou Malvina</b>
19.45-20.00	GOVERNANCE AND SUSTAINABILITY OF SPECIAL URBAN PLANS IN THESSALONIKI: PUBLIC PARTICIPATION AND URBAN TRANSFORMATION (K02192) <b>Theodorakopoulou Vasiliki</b>

8. 18.00-20.00	Session: “ <b>Circular Economy and Sustainable Development</b> ” Chaired by <b>Prof Dzintra Atstāja</b> (Room A6) (main building)
18.00-18.15	THE CIRCULAR ECONOMY - A RESPONSE TO CLIMATE CHANGE (K02031) <b>Dzintra Atstāja</b>
18.15-18.30	INTEGRATING CIRCULAR ECONOMY INTO SUSTAINABLE DEVELOPMENT GOALS: INSIGHTS FROM LIFE CYCLE IMPACT ASSESSMENT (K02119) <b>Rajic Milena, Stanković Zorana, Milosavljević Peđa, Jovanović Vesna</b>
18.30-18.45	STAKEHOLDER PERCEPTIONS ON BARRIERS AND DRIVERS FOR THE ENHANCEMENT OF CIRCULAR ECONOMY IN THE CONSTRUCTION SECTOR (K02128) <b>Oikonomou I. Theoni, Karytsas Spyridon, Karytsas Constantine, Theodoropoulou Eleni</b>
18.45-19.00	CIRCULARITY IN THE BUILT ENVIRONMENT: INSIGHTS FROM ALBANIA (K02145) <b>Keçi Julinda, Imeraj Erinda</b>
19.00-19.15	EDUCATING FOR A CIRCULAR ECONOMY: POLICY AND PRACTICE IN WESTERN BALKAN HIGHER EDUCATION (K02146) <b>Keçi Julinda, Vila Jubjana</b>
19.15-19.30	TOWARD A REGENERATIVE FUTURE: CIRCULAR ECONOMY, ECOSYSTEM CONSERVATION, AND THE CO-EVOLUTION OF SOCIAL-ECOLOGICAL SYSTEMS. (K02260) <b>Charitonidou Marianna</b>
19.30-20.00	Discussion

## DAY 2 - Saturday 15/02/2025

9. 09.00-11.00	Session: “ <b>Natural Disasters, Resilience and Sustainable Development of Places and Cities</b> ”, Chaired by <b>Dr Economou Agisilaos</b> (Amphitheater: Georgios Karabatzos) (main building)
09.00-09.15	BUILDING SUSTAINABLE SOCIAL RESILIENCE FOLLOWS A MORE HOLISTIC APPROACH (K02054) <b>Poli Maria, Malagas Konstantinos, Manola Maria</b>
09.15-09.30	THE USE OF UNMANNED SYSTEMS AND SWARM TECHNOLOGY IN CRITICAL SITUATION MANAGEMENT IN URBAN AREAS (K02126) <b>Papachristos Dimitrios, Lilas Thodoros, Nikitakos Nikitas</b>

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09.30-09.45	QUANTIFICATION OF URBAN AND COMMUNITY RESILIENCE (K02033) <b>Makris N., Chatzikyriakidis G.</b>
09.45-10.00	“TURN AROUND, DON’T DROWN”; LESSONS LEARNT FROM THE 2023 FLOOD IN MAGNESIA, GREECE (K02182) <b>Kyriakidis Charalampos, Athanasia Konstantina Despoina, Dionysopoulou Anna, Plaka Gabriela, Sidiras Vasileios, Xirogiannis Maria, Bakogiannis Efthimios</b>
10.00-10.15	SUSTAINABLE DEVELOPMENT OF HISTORIC CITIES: FLOOD MANAGEMENT STRATEGIES AND RESILIENCE (K02191) <b>Dreliosi Georgia Christina, Karamanou Aspasia</b>
10.15-10.30	THE PROTECTION AND MANAGEMENT OF <b>COASTAL AREAS</b> IN GREECE. EVALUATION OF RECENT LEGAL FRAMEWORK (L. 5092/2024) (K02105) <b>Zygouri Foteini, Lalenis Konstantinos</b>
10.30-10.45	THE AXIOS DELTAIC TERRITORY: ESTABLISHING RESILIENCE IN A GRADIENT OF WETNESS (K02109) <b>Kasselouri Elena</b>
10.45-11.00	A REVIEW OF SMART SOLUTIONS FOR SUSTAINABLE WATER MANAGEMENT WITHIN URBAN AREAS WHILE TACKLING WATER SCARCITY IN GREEK CITIES (K02121) <b>Chasiotis Angelos, Gialama Sofia, Piromalis Dimitris, Nastos Panagiotis</b>
11.00-11.30	Coffee Break

10	<b>Keynote Speech</b> (Amphitheater: Georgios Karabatzos) (main building)
11.30-12.00	DEMOGRAPHIC TRANSITIONS, LOCAL ECONOMIES AND METROPOLITAN SYSTEMS IN-BETWEEN SUSTAINABILITY AND RESILIENCE (K02246) <b>Salvati Luca</b> , Professor, Sapienza University of Rome

10. 12.00-14.00	Pre-organised Special Session: “ <b>Landscape and Urban Sustainability: discussing the natural and socio-cultural factors, in a positive or negative mood</b> ” Organised and chaired by <b>Prof Konstantinos Moraitis</b> (Amphitheater: Georgios Karabatzos) (main building)
12.00-12.15	OPEN-AIR CITIES: COMMON APPROACHES FOR BUILDING, LANDSCAPE AND URBAN-SCAPE DESIGN - THE CONCEPT OF DESIGN SCHEMATIZATION (K02025) <b>Moraitis Konstantinos</b>
12.15-12.30	THE LIMINAL SPACE OF THE GREEN CITY (K02093) <b>Retsos Georgios</b>
12.30-12.45	LANDSCAPE AND URBAN SUSTAINABILITY. CULTURAL ROUTES FOR CULTURAL TRAVELLERS: A POSITIVE APPROACH - CASE STUDY (K02115) <b>Katraouzou Dimitra</b>
12.45-13.00	SUPPORTING ARCHITECTURAL EDUCATION THROUGH PARTICIPATORY LANDSCAPE MAPPING USING CROWDSOURCING AND GIS (K02131) <b>Ioannidis Romanos, Mamassis Nikos, Moraitis Konstantinos</b>
13.00-13.15	TRIKALA CITY CENTER (K02136) <b>Apostolidis Konstantinos, Karachalios Thanassis, Karachalios Sotiris, Belemezi Louzia-Maria, Moraitis Konstantinos, Helidoni Katerina</b>



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13.15-13.30	AN IMPORTANT URBAN RESEARCH PROPOSAL: ADULT EDUCATION FOR SUSTAINABILITY IN THE CONTEMPORARY URBAN LANDSCAPE: THE MEANING OF LIFELONG ACTION THROUGH SUSTAINABLE URBAN COMMUNITIES (K02141) <b>Vallianatou-Voutsina Eleni</b>
13.30-13.45	URBAN PLANNING IN A PROCESS RE- CONSIDERATION AND RE- EXAMINATION. A CASE STUDY THE MUNICIPALITY OF LARISSA, THESSALY, GREECE (K02142) <b>Markatou Maria</b>
13.45-14.00	RE- PLANNING AND RE- DESIGNING THE LARISSA’ S LANDSCAPE INCORPORATING PARAMETERS OF NATURAL AND SOCIO- CULTURAL SUSTAINABILITY (K02151) <b>Markatou Maria, Moraitis Konstantinos</b>
14.00-15.00	Conference Lunch - Finger Food

11. 09.00-12.45	Pre-organised Special Session: “ <b>ECO4ALL FOR CONSUMER PROTECTION THROUGH CIRCULAR ECONOMY STRATEGIES - THE CONTRIBUTION TO SUSTAINABLE DEVELOPMENT</b> ” Organised and chaired by <b>Prof Plotnic Olesea</b> (COST ACTION 22124 ECO4ALL) (Ceremony Hall) (New Library Building)
09.00-09.15	CIRCULAR ECONOMY AS A STRATEGIC IMPERATIVE FOR FOSTERING SUSTAINABILITY AND CONSUMER ENGAGEMENT (K02140) <b>Milošević Isidora, Plotnic Olesea, Stanković Zorana, Tick Andrea, Buzdugan Andriana</b>
09.15-09.30	NORDIC CROSS-BORDER COOPERATION FOR CIRCULAR ECONOMY SUCCESS (K02210) <b>Goncharuk Anatoliy</b>
09.30-09.45	SUSTAINABILITY AND COMPETITION POLICY - VIA CONSUMER PROTECTION (K02214) <b>Mirza Radu</b>
09.45-10.00	THE ROLE OF CIRCULAR ECONOMY IN SUSTAINABLE DEVELOPMENTS GOALS IN ALBANIA (K02215) <b>Hysaj Albina</b>
10.00-10.15	ADVANCING CLIMATE NEUTRALITY THROUGH CIRCULAR ECONOMY SANDBOXES: A FRAMEWORK FOR INNOVATION AND REGULATION (K02217) <b>Zamfir Natalia, Lisnic Iurie</b>
10.15-10.30	EMPOWERING CONSUMERS FOR CIRCULAR FOOD SYSTEMS: INSIGHTS FROM HUNGARIAN RESEARCH ON SUSTAINABILITY AND CONSUMPTION PATTERNS (K02218) <b>Csizmady Adrienne</b>
10.30-10.45	SUSTAINABILITY, CIRCULAR ECONOMY AND CREATIVE COMPUTING (K02219) <b>Cunha Carlos</b>
10.45-11.00	LEGAL ANALYSIS OF CONSUMER RIGHTS TO PRODUCT REPAIR UNDER THE EU DIRECTIVE ON REDUCING, REUSING AND REPAIRING (K02224) <b>Dumančić Kosjenka</b>
11.00-11.30	Coffee Break
11.30-11.45	ENHANCING CIRCULAR ECONOMY THROUGH NATURE-BASED SOLUTIONS IN HIGHER EDUCATION (K02225) <b>Manou Dimitra</b>
11.45-12.00	ESG REPORTING IN ACCORDANCE WITH THE NEW CSRD DIRECTIVE - ARE WE READY FOR A PARADIGM CHANGE IN CORPORATE MANAGEMENT AND BUSINESS? (K02226) <b>Simunovic Lidija, Mikrut Martina Nađsombat, Getoš Krešimir</b>

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12.00-12.15	THE EU’S PROBABILISTIC DEPENDENCY STRUCTURE TOWARDS THE GOAL OF A CIRCULAR ECONOMY (K02227) <b>Esma Nur Cinicioglu</b>
12.15-12.30	A REVIEW OF GREENWASHING AND CIRCULAR INDUSTRIAL PRACTICES FROM CONSUMER’S PERSPECTIVE (K02231) <b>Stanković Zorana, Milošević Isidora</b>
12.30-12.45	APPLY THE PRINCIPLES OF CIRCULAR ECONOMY AND INDUSTRIAL SYMBIOSIS ON THE PRODUCTION SECTORS OF CYPRUS: THE BENEFITS FOR CONSUMERS (K02035) <b>Kyriakidis Andreas, Michopoulos Apostolos</b>
12.45-13.00	THE CONTRIBUTION OF LOCAL GOVERNMENT ORGANIZATIONS AND CITIZENS TO THE ACHIEVEMENT OF THE 12TH SDG IN GREECE (K02228) <b>Angelos Papavasileiou, Agisilaos Economou, Mitoula Roido</b>
13.00-13.15	EU CIRCULAR ECONOMY NETWORK FOR ALL: CONSUMER PROTECTION THROUGH REDUCING, REUSING, REPAIRING (K02229) <b>Plotnic Olesea</b>

12. 13.00-14.15	Session: “Climate Change”, Chaired by <b>Dr Chatzigrigoriou Pavlos</b> (Ceremony Hall) (New Library Building)
13.00-13.15	A REVIEW OF CLIMATE RISK ASSESSMENT METHODS FOR WATER INFRASTRUCTURE IN GREECE (K02041) <b>Gialama Sofia, Chasiotis Angelos, Piromalis Dimitris, Nastos Panagiotis</b>
13.15-13.30	CLIMATE DATA-DRIVEN URBAN POLICIES: A NEW CHALLENGE FOR GREEK LOCAL AUTHORITIES (K02069) <b>Tarani Paraskevi, Bratsas Charalambos, Ioannidis Lazaros, Filippidis Panagiotis-Marios, Vouraki Marianna, Kountouras Efstratios</b>
13.30-13.45	HERitage MONitoring (HER-MON) FOS INCREASING RESILIENCE IN THE CLIMATE CHANGE ERA (K02187) <b>Chatzigrigoriou Pavlos, Chamalidou Alike, Mamalis Dimitrios, Charalampidis Ioannis, Diakodimitriou David</b>
13.45-14.00	KIFISSOS RIVER - A POSSIBLE DISASTER IN ATHENS (K02039) <b>Kampolis Dimitrios</b>
14.00-14.15	SYSTEMIC, TRANSVERSAL, DYNAMIC: AN INTEGRATED APPROACH TO ACHIEVE SUSTAINABILITY IN A COMPLEX LANDSCAPE (K02183) <b>Angelillo Carmen</b>
14.15-15.00	Conference Lunch - Finger Food

13. 09.00-11.00	Session: “Energy Management and Sustainable Mobility” Chaired by <b>Prof Aspa Gospodini</b> (Room A1) (main building)
09.00-09.15	DECODING EUROPE’S ‘RENOVATION WAVE’ ENERGY STRATEGY: REAL ESTATE SHIFTS FOR SUSTAINABLE CITIES (K02055) <b>Vardopoulos Ioannis, Poli Maria</b>
09.15-09.30	END-USER PERCEPTIONS TOWARD THE REQUIREMENTS OF INNOVATIVE THERMAL INSULATION MATERIALS <b>Spyridon Karytsas, Dimitrios Mendrinos, Constantine Karytsas, Carlos L. Rodríguez López, Roberto Rodríguez Álvaro, Irene Beleña Pozo, Amparo Roca de Togores</b>

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09.30-09.45	CONSUMER PERCEPTIONS TOWARD THE USE OF BIOMETHANE - SURVEY RESULTS FROM 11 EUROPEAN COUNTRIES (K02130) <b>Karytsas Spyridon, Christou Myrsini</b>
09.45-10.00	THE IMPACT OF ECONOMIC GROWTH AND ENERGY CONSUMPTION ON ENVIRONMENTAL QUALITY (K02067) <b>Karsiotis Panagiotis, Adamopoulos Antonios</b>
10.00-10.15	QUANTILE CONNECTEDNESS IN RENEWABLE ENERGY COMPANIES AND RELATED COMMODITIES DURING COVID-19 OUTBREAK (K02083) <b>Bikramaditya Ghosh, Hayfa Kazouz, Papadas Dimitrios</b>
10.15-10.30	URBAN ENERGY TRANSITION AND BUILDING INTEGRATED PHOTOVOLTAICS (K02104) <b>Karamanis Dimitrios, Skandalos Nikolaos, Dimitriou Tsampika</b>
10.30-10.45	COGNITIVE BACKGROUND OF THE RELATIONSHIP BETWEEN AUTONOMOUS VEHICLES AND SUSTAINABLE MOBILITY: A CASE STUDY OF GREEK DRIVERS (K02059) <b>Kanellopoulos Panagiotis</b>
10.45-11.00	ANALYZING ENERGY POVERTY IN SOUTHERN EUROPE: A DESCRIPTIVE ANALYSIS USING SUBJECTIVE INDICATORS (K02249) <b>Pastrapa Eleni, Angeletopoulou Paraskevi, Papadaki Stamatina, Mitoula Roido</b>
11.00-11.30	Coffee Break

14. 11.30-12.00	Pre-organised Special Session: “ <b>Culture and Sustainable Development</b> ” Organised and chaired by <b>Assoc Prof Maria Manola &amp; Argyros Leonidas</b> (Room A1) (main building)
11.30-11.45	MONASTERIES AS ELEMENTS OF CULTURE AND SUSTAINABLE DEVELOPMENT. FROM TRAVEL TEXTS TO ENTREPRENEURSHIP (K02080) <b>Tsatalmpasoglou Anna-Irini, Fotini Maniou, Manola Maria</b>
11.45-12.00	CULTURAL ENTREPRENEURSHIP AND SUSTAINABLE DEVELOPMENT IN LEMNOS (K02094) <b>Maniou Fotini</b>
12.00-12.15	DAFNI MONASTERY: PILLAR OF SUSTAINABLE DEVELOPMENT AND CULTURAL ENTREPRENEURSHIP. ARE THERE POSSIBILITIES? (K02133) <b>Manola Maria, Argyros Leonidas, Maniou Foteini, Poli Maria, Papadogoulas Georgios</b>
12.15-12.30	QUALITY ASSURANCE FOR PEOPLE WITH DISABILITIES AND ITS RELATIONSHIP WITH CULTURAL ENTREPRENEURSHIP: A CASE STUDY ON THE MUSEUM OF THE LESVOS PETRIFIED FOREST (K02153) <b>Vouglanis Taxiarchis, Papaioannou Olympia, Maniou Fotini</b>
12.30-12.45	ART IN EDUCATION AND LANGUAGE AS FUNDAMENTAL TOOLS OF CULTURE AND TOURISM (K02154) <b>Papadrosou Maria- Sofia, Papaioannou Olympia, Manola Maria</b>
12.45-13.00	THE ITALIAN MONUMENTS IN LEROS AS HISTORICAL RELICS OR LIVING PARTS OF MODERN ECONOMIC LIFE (K02168) <b>Koltsikoglou Georgios, Manola Maria, Kamaroudis Stavros, Spantidakis Ioannis</b>
13.00-13.15	RELIGIOUS FESTIVALS AND CULTURAL ENTREPRENEURSHIP IN THE MONASTERIES OF LESVOS FROM THE TIME OF THE TRAVELLERS TO THE PRESENT DAY (K02175) <b>Trikalitis Kostas, Maniou Fotini, Tsatalmpasoglou Anna-Irini, Manola Maria</b>

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15. 13.15-14.00	Pre-organised Special Session: “ <b>Sustainable Development, Social Sustainability and Social Policy: trends, transformations and rising challenges</b> ” Organised and chaired by <b>Prof Nikos Papadakis &amp; Dr Stelios Tzagkarakis</b> (Room A1) (main building)
13.15-13.30	MEGATRENDS, THE NEW EUROPEAN STRATEGY ON SUSTAINABLE DEVELOPMENT AND THE ROLE OF EDUCATION, EMPLOYMENT AND RESKILLING IN SOCIAL SUSTAINABILITY (K02028) <b>Papadakis Nikos, Drakaki Maria</b>
13.30-13.45	THE MIGRATION-REFUGEE CRISIS AS AN ‘ASYMMETRICAL THREAT’ IN THE MEDITERRANEAN REGION: FIELD RESEARCH (K02047) <b>Vlachadi Maria, Tsoumpekas Dimitrios</b>
13.45-14.00	SOCIAL SUSTAINABILITY AND SOCIAL VULNERABILITY IN FOCUS: THE CASE OF GREECE (K02077) <b>Tzagkarakis Stylianos Ioannis</b>
14.00-15.00	Conference Lunch - Finger Food

16. 09.00-12.30	Session: “ <b>Education and Sustainable Development</b> ” Chaired by <b>Prof Peraboni Carlo</b> (Room A2) (main building)
09.00-09.15	TOWARDS AN IMMERSIVE VR AND GAMIFICATED EDUCATIONAL MODEL FOR CONSTRUCTION COURSES. A VIEW ON THE BENEFITS AND DRAWBACKS (K02056) <b>Kanellopoulos Panagiotis, Kostopoulos Konstantinos, Katsaros Miltiadis, Antoniou Dimitris</b>
09.15-09.30	A REVIEW OF VR AND GAMIFICATED EDUCATIONAL METHODOLOGY IN VIRTUAL CONSTRUCTION FROM NON TO FULL IMMERSION (K02057) <b>Kanellopoulos Panagiotis, Katsaros Miltiadis, Kostopoulos Konstantinos, Antoniou Dimitris</b>
09.30-09.45	SUSTAINABLE SCHOOL: ENHANCING ENVIRONMENTAL AWARENESS AND ENTREPRENEURSHIP THROUGH SCHOOL PROGRAMS AND VIRTUAL BUSINESSES. THE CASE STUDY OF THE UNIFIED SPECIAL VOCATIONAL HIGH SCHOOL OF AGIOS DIMITRIOS, ATTICA, GREECE (K02065) <b>Stouri Vasiliki, Zervas Konstantinos</b>
09.45-10.00	THE PHILOSOPHY OF ENVIRONMENTAL EDUCATION (K02084) <b>Christou Melpomeni, Vlachos Apostolos</b>
10.00-10.15	RETHINKING SCHOOL ARCHITECTURE: BRIDGING EDUCATIONAL SPACES AND THE URBAN FABRIC (K02100) <b>Filou Vasiliki, Grigoriadou Maria</b>
10.15-10.30	THE ROLE OF MUNICIPAL OPEN FREE UNIVERSITY OF MUNICIPALITY OF NEW FILADELFIA-NEA CHALKIDONA: A SOCIAL FOOTPRINT AN ACCESS TO HIGH LEVEL EDUCATION (K02113) <b>Chronopoulou Georgia</b>
10.30-10.45	STUDENTS AS AGENTS OF CHANGE IN URBAN STUDIES OF PRIMARY EDUCATION IN THE CONTEXT OF THE NEW NATIONAL CURRICULUM: ‘ACTIONS FOR ACTIVE CITIZENSHIP’ (K02177) <b>Christodoulou Nikolaos, Rizaki Aikaterini, Ntoka Aglaia</b>
10.45-11.00	YOUR 2030 – A MULTIDISCIPLINARY EDUCATIONAL PROJECT TO PROMOTE THE THEMES OF SUSTAINABILITY (K02184) <b>Peraboni Carlo</b>

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11.00-11.30	Coffee Break
11.30-11.45	BUILDING A SUSTAINABLE FUTURE: THE INTERPLAY OF QUALITY EDUCATION AND TEACHER WELL-BEING IN SUSTAINABLE DEVELOPMENT (K02189) <b>Anargyrou Aikaterini</b>
11.45-12.00	EVALUATION OF SUSTAINABLE DEVELOPMENT PROGRAMMES BY SECONDARY SCHOOL TEACHERS (K02190) <b>Loupas Efstathios, Martinis Aristotelis</b>
12.00-12.15	BLENDED INTENSIVE PROGRAMS: BRIDGING THEORY AND PRACTICE OF ENVIRONMENTAL EDUCATION? (K02234) <b>Hordecki Bartosz, Sakson-Boulet Anna</b>
12.15-12.30	EUROPEAN UNION AND SUSTAINABILITY: THE MODERN POLITICAL DIRECTIONS AND ITS INCORPORATION IN EDUCATION AND THE GREEK EDUCATIONAL SYSTEM (K02050) <b>Papadopoulou Kl. Vasiliki, Mitoula Roido, Sardianou Eleni, Kaldi Stavroula</b>

17.	Session: “ <b>Alternative Tourism and Sustainable Development</b> ” Chaired by <b>Dr Vardopoulos Ioannis</b> (Room A2) (main building)
12.30-14.00	
12.30-12.45	FOSTERING TOURISM WHILE NEUTRALIZING CULTURAL HERITAGE. THE PARADOXAL URBAN DEVELOPMENT OF TIRANE (ALBANIA). (K02193) <b>Fiano Francesca Romana, Vatnikaj Sidorela</b>
12.45-13.00	SUSTAINABLE CULTURAL TOURISM IN THE GREEK ISLANDS. CASE STUDY: THE ISLAND OF SANTORINI (K02036) <b>Kriga Mimika (Dimitra)</b>
13.00-13.15	CORRELATION BETWEEN THE DEGREE OF PRESERVATION AND PROMOTION OF THE CULTURAL HERITAGE WITH THE LEVEL OF TOURIST ACTIVITY IN THE CITY OF LAMIA (K02044) <b>Pineli Triantafyllia</b>
13.15-13.30	CONTEMPORARY PHOTOGRAPHIC NARRATIVES AS AN EDUCATIONAL TOOL FOR THE DEVELOPMENT OF RELIGIOUS TOURISM IN GREEK URBAN AND REGIONAL AREAS (K02062) <b>Tsilimpokou Vasiliki, Vlassas Vasileios, Koronaiou Aikaterini, Vlassas Grigorios</b>
13.30-13.45	ALTERNATIVE AND SPECIAL FORMS OF TOURISM IN THE GREEK CONTEXT, AS A MOTIVE FOR RUSSIAN SPEAKING TOURISTS TO VISITING GREECE (K02063) <b>Zografos George</b>
13.45-14.00	TIME-DRIVEN ACTIVITY-BASED COSTING & BUDGETING IN ECOTOURISM (AN ECOTOURISTIC HOTEL IMPLEMENTATION MODEL) (K02051) <b>Karagiannis Ioannis, Vazakidis Dimitrios</b>
14.00-15.00	Conference Lunch - Finger Food

18.	Pre-organised Special Session: “ <b>Sustainable urban development</b> ” Organised and chaired by <b>Prof Rodi Alcestis &amp; Chatzidimitriou Angeliki</b> (Room A4) (main building)
09.00-11.00	
09.00-09.15	INDUSTRIAL DOMAINS AS FUTURE’S RUINS: CHALLENGES AND STRATEGIES FOR SUSTAINABLE TRANSFORMATION (K02232) <b>Pikramenou Ourania</b>

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09.15-09.30	THE 'GREEN' DIMENSION OF THE 15-MINUTE CITY. THE CASE STUDY OF ATHENS MUNICIPALITY, GREECE. (K02236) <b>Geronta Eirini Chrysovalanto</b>
09.30-09.45	UNDERGROUND DWELLINGS: THE COEXISTENCE OF MAN AND NATURE BENEATH THE EARTH (K02237) <b>Geneiataki Elissavet, Chatzidimitriou Angeliki</b>
09.45-10.00	MNEMONIC PATHWAYS AT THE ROMAN ODEON AND ROMAN STADIUM OF PATRAS, ACHAIA, GREECE (K02240) <b>Papadopoulou Miranda</b>
10.00-10.15	TOWARDS POST-GROWTH OPERATIONALIZATION: A BIOREGIONAL LENS OF SPATIAL PLANNING (K02259) <b>Xanthopoulos Giorgos</b>
10.15-10.30	CLIMATE RESPONSIVE ENVIRONMENTAL DESIGN IN ARCHITECTURE STUDIES (K02262) <b>Chatzidimitriou Angeliki</b>
10.30-10.45	READINGS OF THE NATURAL AND BUILT LANDSCAPE OF LAKE TRICHONIDA - A GUIDE TO DESIGN INTERVENTIONS BASED ON POINTS OF INTERFACE (Thesis project) (K02263) <b>Bovolou Eirini</b>
10.45-11.00	A LITERATURE REVIEW ON THE INTRODUCTION AND FUTURE DOMINANCE OF THE AUTONOMOUS VEHICLES IN THE CITY WITH THE AIM OF PREPARING THE CITY FOR THE FUTURE (K02265) <b>Petri G. Ioanna, Rodi Alcestis</b>
11.00-11.15	LIVING TOGETHER: AN EXPLORATION OF CO-LIVING FROM THE NEOLITHIC ERA TO THE 21 <sup>ST</sup> CENTURY (K02264) <b>Koutsogiannopoulou Angeliki Panagiota</b>
11.00-11.30	Coffee Break

19. 11.30-14.00	Session: “ <b>Smart Cities and Sustainable Development</b> ” Chaired by <b>Assoc Prof Konstantinidou Elena</b> (Room A4) (main building)
11.30-11.45	DIGITAL INNOVATION AND SUSTAINABLE DEVELOPMENT IN LOCAL GOVERNMENT. THE CASE OF GLYFADA MUNICIPALITY. (K02037) <b>Ahamnou G. Panagiota</b>
11.45-12.00	OUR CITY IS SMART. WHAT ABOUT US? - THE CASE STUDY OF THE MUNICIPALITY OF PERISTERI, ATTICA, GREECE (K02052) <b>Tsagkari Ioulia</b>
12.00-12.15	A REVIEW OF SMART CITIES’ TECHNOLOGIES IN THE GOVERNANCE AND THE EVERYDAY LIFE OF CITIZENS IN GREEK CITIES (K02079) <b>Zompos Kostas, Chasiotis Angelos, Piromalis Dimitris</b>
12.15-12.30	VIRTUAL WORLDS AND SUSTAINABLE ARCHITECTURE: NEW PATHWAYS TO SUSTAINABILITY IN THE ERA OF THE INDUSTRY 4.0 (K02101) <b>Kalemis Alexandros</b>
12.30-12.45	EXPLORING SOCIAL PATTERNS AND CHALLENGES IN ADOPTING SMART HOUSING SOLUTIONS: THE HUNGARIAN CONTEXT (K02106) <b>Csizmady Adrienne</b>
12.45-14.00	Discussion

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20.	<b>Keynote Speech</b> (Room A5) (main building)
09:00-09:30	SUSTAINABLE CITY DEVELOPMENT (K02245) <b>Joseph Stefanou</b> , Professor Emeritus, National Technical University of Athen.

20.	Session: “ <b>The Physiognomy of cities</b> ”, Chaired by <b>Prof Joseph Stefanou</b> (Room A5) (main building)
09.30-11.00	
09.30-09.45	URBAN LANDSCAPES OF SUSTAINABLE CO-EXISTENCE (K02107) <b>Petratou - Fragiadaki Smaragda</b>
09.45-10.00	CO-CREATING PLACE IDENTITY: PARTICIPATORY WORKSHOPS FOR PLACE BRANDING ALIGNED WITH LOCAL VALUES (K02135) <b>Apostolou Angelina, Birou - Athanasiou Vasiliki, Chatzigiannidou Alkisti, Katsavounidou Garyfallia, Kourti Paraskevi</b>
10.00-10.15	CULTURE AND SUSTAINABLE DEVELOPMENT OF CITIES: THE PHYSIOGNOMY OF THE CITY OF LAGKADAS (K02095) <b>Athanasaki Marina</b>
10.15-10.30	THE FORMATION OF THE PHYSIOGNOMY OF THE ISLAND OF ZAKYNTHOS - THE OPINION OF RESIDENTS AND VISITORS (K02061) <b>Papadopoulos Joseph</b>
10.30-10.45	THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF TRIPOLI- THE OPINION OF RESIDENTS AND VISITORS (K02058) <b>Karamanos Konstantinos</b>
10.45-11.00	THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF KALLITHEA - THE OPINION OF RESIDENTS AND VISITORS (K02114) <b>Laoutari Nikoletta</b>
11.00-11.30	Coffee Break

21.	Session: “ <b>Digital Cities and Sustainable Development</b> ” Chaired by <b>Prof Panetsos Georgios</b> (Room A5) (main building)
11.30-14.00	
11.30-11.45	AN ONLINE PLATFORM FOR ENABLING OPEN DATA COLLECTION, STORAGE, ANALYSIS AND CLASSIFICATION OF WATER MANAGEMENT DATA FOR THE ATTICA REGION IN GREECE (K02045) <b>Antoniadis Ioannis, Drakou Evangelia, Tsadimas Anargyros, Kousiouris George</b>
11.45-12.00	TOWARDS A SUSTAINABLE DIGITAL TRANSFORMATION: THE ROLE OF HUMAN RESOURCES IN PUBLIC ADMINISTRATION AND CITIZEN SATISFACTION. THE CASE OF THE MUNICIPALITY OF KILLELER (K02078) <b>Trakala Georgia, Koukoumialos Stylianos</b>
12.00-12.15	THE ROLE OF NEW TECHNOLOGY INTO FIGHTING AGAINST POVERTY AND SOCIAL ALIENATION. STUDYING THE INNOVATIVE DIGITAL PLATFORM USE WITHIN THE REGION OF CRETE (K02097) <b>Spyridaki Aikaterini, Papadakaki Maria, Vassilakis Kostas, Markakis George</b>
12.15-12.30	THE DESIGN AND DEVELOPMENT OF A MOBILE APPLICATION FOR SUSTAINABLE INTERACTION WITH CULTURAL HERITAGE: THE ‘THESSALONIKI REIMAGINED’ PROJECT (K02139) <b>Dialechti Anthi</b>

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12.30-12.45	RECONNECTING MYSTRAS: LINKING ARTIFACTS TO HISTORY THROUGH DIGITAL NARRATIVES (K02235) <b>Panagiotidis V. Vayia, Georgakopoulou Garyfalia</b>
12.45-13.00	CREATION OF A DEVELOPMENT RIGHTS MANAGEMENT MECHANISM USING BLOCKCHAIN TECHNOLOGY (K02194) <b>Christodoulou Dimitrios</b>
13.00-13.15	INFORMATION LITERACY FOR CULTIVATING SUSTAINABLE MINDSET (K02068) <b>Katsira Georgia, Koulouris Alexandros, Vraimaki Eftichia, Efthymiou Foteini</b>
13.15-14.00	Discussion

22. 09.00-10.00	Session: “ <b>Urban Environment and Sustainability</b> ” Chaired by <b>Prof Skarvelis Michail</b> (Room A6) (main building)
09.00-09.15	ASSESSMENT OF THE EFFECT OF GREEN ROOFS ON URBAN STORMWATER MANAGEMENT IN THESSALONIKI, GREECE (K02110) <b>Almazidou-Kairi Ioanna-Viktoria, Salasidou Elissavet, Kapouniari Maria, Zafeirakou Antigoni</b>
09.15-09.30	ACHIEVING URBAN SUSTAINABILITY THROUGH CIRCULARITY: THEORIES AND PRACTICES (K02075) <b>Stogianovits Matei</b>
09.30-09.45	Km Vert (Green Kilometer project) SYSTEM FOR URBAN REGENERATION (K02171) <b>Marcuccetti Andrea</b>
09.45-10.00	THE MULTIFUNCTIONAL ROLE OF BOTANICAL GARDENS FOR THE SUSTAINABLE DEVELOPMENT OF CITIES: AN URBAN RENEWAL STUDY WITH THE CREATION OF AN ARBORETUM AT THE UNIVERSITY OF THESSALY IN KARDITSA, GREECE (K02137) <b>Eleftheriou Vasilis, Samaras Dimitrios, Skarvelis Michail</b>

23. 10.00-11.00	Session: “ <b>Industry, Services and Sustainability</b> ” Chaired by <b>Prof Arauzo-Carod Josep-Maria</b> (Room A6) (main building)
10.00-10.15	INTEGRATING SUPPLY CHAIN PRACTICES TO MITIGATE CIRCULAR ECONOMY RISKS: A QUALITATIVE STUDY OF THE GREEK FURNITURE SECTOR (K02066) <b>Ntio Despoina, Adamopoulos Antonios, Kontsas Stamatios</b>
10.15-10.30	FROM QUANTITATIVE TO QUALITATIVE SERVICES: HOW TO PROMOTE INTEGRATED PLANNING FOR THE REVISION OF THE SERVICE PLAN OF MANTUA, MUNICIPALITY IN ITALY (K02179) <b>Borini Martina</b>
10.30-10.45	SUSTAINABLE DEVELOPMENT AND THE GREEK PHARMACEUTICAL INDUSTRY (K02117) <b>Charitou Aikaterina</b>
10.45-11.00	INDUSTRIAL SYMBIOSIS – SITUATION IN MAURITIUS (K02138) <b>Erceg Aleksandar, Sannegadu Rajesh</b>
11.00-11.30	Coffee Break



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24. 11.30-14.00	Session: “ <b>Urban and Regional Sustainable Development</b> ” Chaired by <b>Prof Nikolaou Dimitra</b> (Room A6) (main building)
11.30-11.45	MANAGING AGRICULTURAL LAND AND LANDSCAPE IN THE ISLANDS: CHALLENGES AND STRATEGIES (K02042) <b>Vlahos George, Pavlis Evangelos</b>
11.45-12.00	COGNITIVE URBAN MAPS AS A BINDING ELEMENT OF LOCAL IDENTITY (K02092) <b>Kalergis Dimitris</b>
12.00-12.15	ISSUES OF DEATH AND ECOLOGY: RECONSIDERING THE ROLE OF FUTURE CEMETERIES IN THE CITY (K02099) <b>Nikolaidi Galini, Lountzis Georgios Dionysios</b>
12.15-12.30	WITH THE GAZE OF PLACE-MULTIFUNCTIONAL COMPLEX IN DORIDA (K02076) <b>Apostolatou Eleni</b>
12.30-12.45	MOVING FROM LOCALITY TO LOCABILITY TOWARDS SUSTAINABLE PLACE BRANDING (K02172) <b>Briana Maria, Malindretos George</b>
12.45-13.00	ANCIENT HARBOR OF LECHAION: REDEFINING THE PLACE (K02096) <b>Nikolaou Dimitra, Sakki Athin, Skoupa Anastasia-Alexandra</b>
13.00-13.15	A SPATIAL ANALYSIS OF URBAN POVERTY: THE CASE OF KUSTEPE NEIGHBORHOOD (K02049) <b>Gözde Arzu Sarıcan, Elifsu Şahin, N.Hülya Berkmen</b>
13.15-14.00	Discussion
14.00-15.00	Conference Lunch - Finger Food

Delegates will soon receive an email regarding a special visit for Saturday, February 15th, from 15:00 to 20:00, to the Athens Olympic Museum and Olympic Athletic Center of Athens ‘Spiros Louis’.

Your participation would be appreciated and confirmation for this visit is required. Please note that this visit is contingent on there being a minimum number of participants.

### DAY 3 - Sunday 16/02/2025

25. 09.00-10.30	Session: “ <b>Tourism, Culture and Sustainable Development of Places</b> ” Chaired by <b>Olga-Eleni Astara</b> (online) <a href="https://meet.google.com/adr-trzz-gvv">https://meet.google.com/adr-trzz-gvv</a>
09.00-09.15	SUSTAINABILITY AND CULTURAL HERITAGE: AXIOM OR OXYMORON? (K02180) <b>Imbesi Paola Nicoletta</b>
09.15-09.30	THE EUROPEAN CITIES: CULTURAL CHANGE FOR SUSTAINABLE CITY SPACES (K02152) <b>Mickov Biljana</b>

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09.30-09.45	THE IMPACT OF HERITAGE-LED URBAN REGENERATION ON DESTINATION IDENTITY AND DESTINATION MARKETING; STAKEHOLDERS’ PERSPECTIVE; THE CASE OF THE TOBACCO WAREHOUSE IN KAVALA. (K02030) <b>Fragkoudi Vasiliki (Vicky), Gkritzali Alkmini, Manolitzas Panagiotis, Sarantakou Eftymia</b>
09.45-10.00	ASSESSING THE FEASIBILITY OF PARTICIPATORY GOVERNANCE IN SUSTAINABLE TOURISM: CASE STUDY, SYROS (K02046) <b>Tsimpoulis Georgios</b>
10.00-10.15	THE ECONOMIC, SOCIAL AND ENVIRONMENTAL IMPACT OF SPORTS TO TOURISM IN THE CASE OF GREECE (K02178) <b>Panagiotopoulos Panagiotis</b>
10.15-10.30	DEVELOPMENT OF ALTERNATIVE FORMS OF TOURISM IN THE ISLAND REGION OF THE MUNICIPALITY OF WEST SAMOS (K02134) <b>Lepenioti Despoina-Dimitra</b>
10.30-10.45	THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF NAFPAKTOS (K02266) <b>Oikonomou Konstantina</b>

26.	<b>Pre-organised Special Session: “Cities Physiognomy”</b> Organised and chaired by <b>Joseph Stefanou &amp; Roido Mitoula (online)</b> <a href="https://meet.google.com/fqw-hmbv-pqq">https://meet.google.com/fqw-hmbv-pqq</a>
11.00-12.30	
11.00-11.15	THE FORMATION OF THE PHYSIOGNOMY OF THE ISLAND OF HERAKLIO. THE OPINION OF RESIDENTS AND VISITORS. (K02040) <b>Michelaki Eleftheria</b>
11.15-11.30	THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF IOANNINA - THE OPINION OF RESIDENTS AND VISITORS (K02098) <b>Spachos Triantafyllos</b>
11.30-11.45	THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF MONEMVASIA - THE OPINION OF RESIDENTS AND VISITORS (K02111) <b>Alpa Natalia-Maria</b>
11.45-12.00	THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF VOLOS - THE OPINION OF RESIDENTS AND VISITORS (K02127) <b>Vasilakou Eftychia</b>
12.00-12.15	ENVIRONMENTAL PROFILE A REGION KARDITSA (K02122) <b>Velagia Maria</b>
12.15-12.30	Discussion

27.	<b>Session: “Entrepreneurship and Local Sustainability- ESG Criteria”</b> Chaired by <b>Panagiota Karametou (online)</b> <a href="https://meet.google.com/fqa-rcmd-adi">https://meet.google.com/fqa-rcmd-adi</a>
12.00-13.00	
12.00-12.15	THE APPLICATION AND EFFECTIVENESS OF ESG CRITERIA IN GREEK COMPANIES (K02090) <b>Kani Anastasia-Theodora, Karametou Panagiota, Mitoula Roido, Economou Agisilaos</b>
12.15-12.30	THE EFFECT OF ESG CRITERIA ON CONSUMER PREFERENCES REGARDING THE CHOICE OF A COMPANY’S PRODUCTS AND SERVICES (K02108) <b>Christofilis Konstantinos, Karametou Panagiota, Mitoula Roido, Sdrali Despina</b>
12.30-12.45	SUSTAINABLE DEVELOPMENT AND ENTREPRENEURSHIP IN MOUNTAIN COMMUNITIES. METSOVO CASE STUDY (K02143) <b>Karagiannis George</b>

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12.45-13.00	THE HUMAN SIDE OF SUSTAINABILITY: THE ROLE OF LEADERSHIP IN EMPLOYEE WELLBEING (K02091) <b>Dologlou Maria, Mitoula Roido</b>
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28. 13.00-14.45	Session: “ <b>Urban Regeneration and Environment</b> ”, Chaired by <b>Dr Papavasileiou Angelos (online)</b> <a href="https://meet.google.com/axo-bpym-zky">https://meet.google.com/axo-bpym-zky</a>
13.00-13.15	THE IMPACT OF ENVIRONMENTAL EDUCATION ON SUSTAINABLE DEVELOPMENT, ENVIRONMENTAL CONSCIOUSNESS AND PRO-ENVIRONMENTAL BEHAVIOUR (K02038) <b>Nastos Georgios, Mitoula Roido, Theodoropoulou Eleni, Astara Olga-Eleni</b>
13.15-13.30	THE ‘ELLINIKON’ RENOVATION PROJECT: BALANCING ECONOMIC DEVELOPMENT AND SOCIAL EQUITY IN ATHENS (K02118) <b>Karametou Panagiota, Mitoula Roido, Papavasileiou Angelos, Tsimpoulis Georgios</b>
13.30-13.45	THE USE OF NEW TECHNOLOGIES IN THE PRIMARY PRODUCTION SECTOR (K02149) <b>Petridis Dimitris, Mitoula Roido, Kalantonis Petros, Astara Olga-Eleni</b>
13.45-14.00	SUSTAINABLE DEVELOPMENT, HUMAN HEALTH AND QUALITY OF LIFE - CASE STUDY: REGIONAL UNIT OF PIRAEUS, GREECE (K02081) <b>Derventi Maria, Mitoula Roido, Theodoropoulou Eleni, Karagianni Vilelmini</b>
14.00-14.15	CONTRIBUTION OF URBAN REGENERATION TO SUSTAINABLE DEVELOPMENT: THE CASE OF PIRAEUS (K02085) <b>Tsiare Kolliopoulou Thaleia Eleni, Mitoula Roido, Economou Agisilaos, Karametou Panagiota</b>
14.15-14.30	IDENTIFICATION OF BOUNDARIES OF MEASUREMENTS FOR CITY ENVIRONMENTAL QUALITY (K02024) <b>Hasni Gayathma Gunasekara, K. K. K. Sylva, T. D. S. V. Dias</b>
14.30-14.45	FROM WASTE MANAGEMENT TO CIRCULAR ECONOMY? THE ROLE OF ENVIRONMENTAL CONFLICTS IN POLICY MAKING IN ATTICA REGION (K02174) <b>Kolokouris Orestes</b>

29. 14.00-19.00	Pre-organised Special Session: “ <b>ECO4ALL FOR CONSUMER PROTECTION THROUGH CIRCULAR ECONOMY STRATEGIES - THE CONTRIBUTION TO SUSTAINABLE DEVELOPMENT</b> ” Organised by <b>Prof Plotnic Olesea</b> (COST ACTION 22124 ECO4ALL) and chaired by <b>Mihaela Tofan (online)</b> <a href="https://meet.google.com/dbk-yiey-dnw">https://meet.google.com/dbk-yiey-dnw</a>
14.00-14.15	CIRCULAR ECONOMY AND SUSTAINABLE CONSUMPTION AS LEVERAGE FOR GREEN GROWTH AND CONSUMER PROTECTION (K02150) <b>Radukic Snezana, Stankovic Zorana, Sakıcı Şehnaz, Yaprak Burak, Avdullahi Ajtene, Dionizi Brikene, Espinosa Nieves</b>
14.15-14.30	CIRCULAR ECONOMY: CONNECTING INDUSTRY WITH SOCIETY (K02200) <b>Gama Nuno</b>
14.30-14.45	OVERCOMING THE BARRIERS TO CIRCULAR ECONOMY PRACTICES IN DIFFERENT REGIONS: THE CASE OF TURKEY (K02202) <b>Karabulut Yasemin</b>
14.45-15.00	FOSTERING CIRCULAR ECONOMY PRACTICES IN ALBANIAN PUBLIC UNIVERSITIES: A PATHWAY TO SUSTAINABLE DEVELOPMENT (K02204) <b>Idrizi Altin</b>

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15.00-15.15	ANALYSIS OF POLICY FRAMEWORKS RELATED TO CIRCULAR ECONOMY IMPACT IN AGRICULTURE, ALBANIAN CASE (K02206) <b>Gecaj Merita</b>
15.15-15.30	THE ROLE OF RENEWABLE ENERGY IN SHAPING INCOME (IN)EQUALITY DYNAMICS IN SOUTHEAST EUROPEAN COUNTRIES (K02207) <b>Kalaj Ermira</b>
15.30-15.45	AN EXAMINATION OF ZERO WASTE MANAGEMENT IN UNIVERSITIES IN THE CONTEXT OF CIRCULAR ECONOMY: A CASE STUDY OF DUZCE UNIVERSITY (K02208) <b>Gultekin Pinar</b>
15.45-16.00	BIBLIOMETRIC ANALYSIS OF ACADEMIC STUDIES PUBLISHED ON CIRCULAR ECONOMY IN TURKEY (K02209) <b>Gültekin Yaşar Selman</b>
16.00-16.15	INTEGRATING CIRCULAR ECONOMY INTO SUSTAINABLE DEVELOPMENT GOALS: INSIGHTS FROM LIFE CYCLE IMPACT ASSESSMENT (K02211) <b>Rajic Milena</b>
16.15-16.30	SMART CITIES AS DRIVERS OF TWIN TRANSITION - EVIDENCE FROM THE REPUBLIC OF SERBIA (K02212) <b>Vukadinovic Simonida, Jesic Jelena, Kisin Jovana</b>
16.30-16.45	FROM POLICY TO PRACTICE: EXAMINING THE AGENCY-DRIVEN DYNAMICS OF TURKEY’S ZERO WASTE MOVEMENT AND ITS IMPACT ON RECYCLING (K02213) <b>Ates Seyithan</b>
16.45-17.00	WASTE MANAGEMENT PRACTICES IN TURKEY PAST AND PRESENT (K02220) <b>Kafadar Muhammed Halid</b>
17.00-17.15	CIRCULAR ECONOMY APPLICATIONS WITHIN THE FRAMEWORK OF SUSTAINABILITY IN TURKEY (K02221) <b>Acma Bulent</b>
17.15-17.30	ENHANCING SUSTAINABILITY WITH CIRCULAR ECONOMY PRACTICES: MULTI-CRITERIA SOLUTIONS (K02222) <b>João Zambujal-Oliveira</b>
17.30-17.45	THE ROLE OF EDUCATION IN SUSTAINABLE CONSUMPTION AWARENESS AMONG ALBANIAN STUDENTS (K02223) <b>Sula Oliana</b>
17.45-18.00	FOSTERING CROSS-BORDER COOPERATION BETWEEN NORTH MACEDONIA AND GREECE FOR CIRCULAR ECONOMY SUCCESS: A MODEL FOR REGIONAL SUSTAINABILITY (K02233) <b>Bojkovska Katerina, Stojkovski Viktorija, Pelivanoska-Dameska Daniela</b>
18.15-18.30	IMPLEMENTATION OF THE GLOBAL GATEWAY STRATEGY THROUGH THE NEW EU CIRCULAR ECONOMY RESOURCE CENTRE (K02102) <b>Khachikyan Sos, Sakici Şehnaz, Cunha Carlos, Yaprak Burak, Rajic Milena</b>
18.30-18.45	CIRCULAR ECONOMY STRATEGIES FOR SUSTAINABLE RESOURCE MANAGEMENT IN THE CONSTRUCTION INDUSTRY (K02198) <b>Petrovski Aleksandar</b>

Closing of the Conference

# **ABSTRACTS**

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## **Keynote Abstracts**

**EROS AND THE CITY:  
MAKE THE CULTURAL URBAN-SCAPE FLOURISH!**

**Dr. Moraitis Konstantinos**

*Professor Emeritus N.T.U.A.*

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**Abstract**

We shall present ‘Eros’, as a metaphor of our need and desire to encounter others and, moreover, as a metaphor of an instinctive force that social ethics and social morality continuously attempt to control. Nevertheless, despite this controlling effort, new desired drives emerge, challenging social controlling indications.

In our text, the title ‘Eros and the City’ seems provocative enough. However, what is even more provocative than the reference to the bodily contact may be the comment that besides your or our top-down restriction, bottom-up desires will attempt to ‘flourish’, definitely. It was in the late 19<sup>th</sup> century that Charles Baudelaire described in his *Les Fleurs du Mal*, his erotic gaze to a seductive lady, in the Parisian urban context of important cultural and political transformations. Were his political aspirations, his political ‘Eros’ more important than his love fantasies? It is in central Athens that a contemporary Greek composer sees his own female image of attraction, “αυτήν που περνάει – the one passing by”; she makes the neutral Athenian streets blooming. I could probably ask for a real garden embellishment of the urban-scape, or for the ‘blooming’ of the collaborative osmosis of the citizens.

In comparison to the previous poetic descriptions, I prefer to insist on the most impressive metaphor of erotic urbanity, on our love for our city itself, or, on our effort for the cohesion of the urban population as presented in three examples:

- a collaborative urban formation of transcultural coexistence in a student’s project under the title Plato’s Gardens,
- a ‘post-processual’ historic itinerary from Kerameikos ancient cemetery to the Islamic temple of Eleonas, and finally,
- a proposed hybrid guided visit of cultural and political narratives, in the twin central squares of the Kaisariani municipality.

**Keywords:** Eros, city and cultural urban-scape, ‘erotic’ urbanity, bottom-up, top-down, urban coexistence, transcultural coexistence, collaborative urban gardening.

**ADVANCING CONSUMER PROTECTION THROUGH THE  
CIRCULAR ECONOMY: STRATEGIC IMPERATIVES OF  
REDUCTION, REUSE, AND REPAIR**

**Plotnic Olesea**

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**Abstract**

The transition from a linear to a circular economy is essential for enhancing consumer protection, reducing environmental impact, and promoting sustainable development. This paper investigates the strategic imperatives of reduction, reuse, and repair within the circular economy, focusing on their role in safeguarding consumer rights and fostering sustainable consumption. As part of the EU Circular Economy Network for All (ECO4ALL) COST Action, this study addresses existing gaps in understanding and implementation by emphasizing consumer empowerment through sustainable practices.

The research examines the legal, economic, and social dimensions of circular economy strategies that involve consumers in sustainable practices. It highlights the current policy landscape, identifying both opportunities and barriers to implementing circular economy measures across EU and non-EU countries. The study also underscores the importance of interdisciplinary collaboration among academia, industry stakeholders, public administration, and civil society to develop innovative solutions that enhance circularity and consumer protection.

Through a comparative analysis of best practices across various countries, this paper provides insights into optimizing circular economy efficiency, particularly in terms of consumer education and behavior change. The findings demonstrate that a proactive consumer role in the circular economy is crucial for achieving the EU’s goals of sustainability, climate neutrality, and economic resilience by 2050.

Ultimately, this paper contributes to the ongoing discourse on the circular economy by integrating consumer protection as a fundamental component of environmental and economic policy. It offers practical policy recommendations and strategies for researchers, policymakers, and industry stakeholders to advance sustainable development through a circular economy that works for all.

**Key words:** circular economy, consumer protection, sustainable development, reduction, reuse, repair, policy recommendations, comparative analysis.

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## **CIRCULAR ECONOMY AS A DRIVER OF ENERGY TRANSITION AND CARBON NEUTRALITY**

**George Kremlis**

*Honorary Director of the European Commission*

*Member of the Board of Directors of the European Public Law Organisation and Director of its Circular economy and Climate Institute, as well as Ambassador of the EPLO to Bulgaria.*

*Chair of the Bureau of the Espoo Convention & the SEA Protocol and of their MOPs*

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### **Abstract**

Circular economy is the new economic model which is intended to hopefully replace the still prevailing linear economy one, described as “take, make, dispose”.

The aim of the circular economy is to reduce the environmental, climate and energy footprint of any human activity to preserve the resources of the planet and their overexploitation. Key resources of the planet such as the critical raw materials, are instrumental for the energy transition as they are needed for eco-innovation, AI, RES, energy storage and electromobility. They needed to be managed efficiently and recovered from waste containing them.

Circular economy is not only reuse and recycling of waste or waste water. It is to be conceived holistically to cover all the sectors of the economy and to be mainstreamed in all of them. It requires circular economy plans both vertically and horizontally. From the national to the local level - we should be speaking about «circular city» - and in the business sector, as circular entrepreneurship and Circular ESG, C-ESG.

Circular economy is a new narrative and a new culture. We have one planet that we need to protect in the framework of the Sustainable Development, the SDGs, the Green Deal, the UNFCCC and the Paris Agreement. Circular economy becomes instrumental in serving all the above and is also a key element of the Taxonomy Regulation of the EU on Green projects and Green financing.

It is the «umbrella» of Green growth, Blue economy and Digital economy and as such it will boost the Green transition and by reducing substantially the emissions enable us to reach climate neutrality by 2050, while protecting the environment, biodiversity and ecosystem services which are vital for the planet.

**Key words:** circular economy, ESG, energy transition, net zero.



**WHAT DETERMINES DRIVERS AND BARRIERS OF THE IMPLEMENTATION OF CIRCULAR ECONOMY MEASURES AT REGIONAL LEVEL?**

**Josep-Maria Arauzo-Carod**

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jointly with:

**Eva Coll-Martínez**

*Associate Professor of Economics, LEREPS, Sciences Po Toulouse - University of Toulouse Capitole, France*

**Elisenda Jové-Llopis**

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**Abstract**

Circular economy (CE) initiatives are considered as key strategies to contributing to energy and ecological transition and to achieving sustainability development goals. Although the importance policy makers give to these measures little is known about what drives and hinder them, so further research is needed to help to provide the optimal conditions maximizing the drivers and minimizing the barriers. Here we aim to identify the drivers and barriers of the implementation of CE measures at EU regional level. To do so we will use the Flash Eurobarometer Survey 498 on “Small and Medium Enterprises, Resources Efficiency and Green Markets, wave 5”, a dataset that allow us to understand how an extensive sample of European regions undertake circular strategies to be more sustainable with reliable, complete, and homogenous data. This survey was undertaken by the European Commission between November and December 2021 and contains information gathered from interviews with 14,158 managers of SMEs from the 27 Member States of the EU and includes a series of questions that allow the exploration of SMEs' activities in relation to the circular economy and the drivers and barriers they face. One of the main strengths of this survey is that the micro-data file contains the codes of the regions where enterprise headquarters are located. This paper will contribute by better understanding what is behind each one of these drivers and barriers, which will facilitate the design of policy tools to boost circularity measures carried out by EU firms and will then facilitate sustainable transition to achieve EU targets of climate neutrality by 2050.

**Keywords:** Circular economy, drivers, barriers, regions, European Union

**THE NEW TRADITIONAL URBAN PLANNING AND ARCHITECTURE  
AS A GUIDE TO SUSTAINABILITY**

**Panetsos A. Georgios**

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**Abstract**

Since the Renaissance, learned architects, as producers of urban and architectural forms, have argued for the validity of their design choices based on the mythical or historical past, invoking the classical theory of imitation or the various versions of historical architecture recorded in theoretical treatises or documented by impressions.

Originality and inventiveness, qualities related to the historical category of artistic avant-garde, became values of architecture and elements of distinction of the architect only with the advent of Modernism, at the beginning of the 20th century.

A little earlier, local traditional architectures, architectures without theoretical substance or interest in innovation, based on the building practice and the decorative, had begun to emerge as one of the potential sources of a new scholarly architecture with ethical and, sometimes, political arguments.

The tug-of-war between (scholarly) Modernism and any (scholarly neo-)Traditional Architecture resulted in the reduction of the latter to a style, which undertook to invest otherwise Modernist structures. The final fusion of the two, especially under the influence of the demand for heritage conservation, produced completely meaningless hybrids, which only respond to the demands of the hasty consumption of images.

In the context of globalization, a New Traditional Urbanism and Architecture emerges not as an obsession with a particular local style, but as an international design approach. Based on the logic of continuous improvement, which governed Classical architecture, it seeks to combine individual intelligence with handed down knowledge. Above all, it is a cultural choice that seeks to incorporate elements largely foreign to the “authentic” tradition: sincere tolerance for the differentiation of stylistic approaches and transcendental views of architecture, knowledge and thought, sound reason and vision, precise performance, economy and sustainability, political responsibility, public duty and symbolic representation, which create communities and identities, cultural plurality and diversity, and of course the responsible, moral and ethical exercise of the corresponding professional practices.

**Keywords:** Literary architecture, traditional architecture, classical tradition, imitation, sustainability

## **URBAN AND PERI-URBAN FORESTS, THEIR CONTRIBUTION TO SUSTAINABLE DEVELOPMENT**

**Radoglou Kalliopi**

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### **Abstract**

Urban Forests and trees outside forests are vital for sustainable development. Forests play a significant role in achieving the United Nations' Sustainable Development Goals (SDGs). They function as extensive carbon sinks, absorbing greenhouse gases and contributing to SDG 13 (Climate Action), and they provide a wealth of biodiversity, aligning with SDG 15 (Life on Land). Forests are indispensable in fostering clean air and water, thus contributing to SDG 6 (Clean Water and Sanitation), SDG 3 (Good Health and Well-being), and SDG 11 (Sustainable Cities and Communities). Peri-urban forests play a multifunctional role and provide various important ecosystem services. Forest management can influence forest structures through silvicultural treatments (forest system, rotation age, and thinning regime) and affect environmental services provision.

This work aims to present the ecosystem services provided by peri-urban forests in Greece, and an analysis of two peri-urban forests will be discussed in the presentation. These forests consist mainly of Conifers species, mainly *Pinus brutia*, and they are vulnerable to disturbances (forest fires), pests and diseases, and environmental stress conditions. They require specific forest management. The peri-urban forest protects the city from floods, regulates the runoff and absorption of rainwater and extreme phenomena, prevents erosion, and protects the soil. It improves environmental conditions in the city, reduces extreme air temperatures, retains a large amount of dust, and protects from noise. The peri-urban forest improves climate change's effects by storing carbon in five pools (above ground, underground biomass, dead wood, forest floor, and soil carbon). Above all, peri-urban forests have a high recreational and amenity value, as they provide recreation to residents of the city, which is highly appreciated due to the lack of open space in the cities and insufficient space for tree growth.

**Key words:** forest ecosystems, forest management, conifers species, environmental services.

## **CITY OVERTOURISM VERSUS ECONOMIC, SOCIAL AND ENVIRONMENTAL SUSTAINABILITY**

**Angelidis Minas**

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Department of Urban and Regional Planning  
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### ***Abstract***

Tourism has undoubtedly contributed significantly to the economic development and cultural prominence of many cities over the last century. In recent decades, world tourism has grown at an accelerating rate, which has had considerable impacts on the economy, the society and the environment of the expanding tourist areas of cities.

The increase in tourist flows (more pronounced during the last two years, that followed the covid period), created pressures that exceed any “capacity limits” of the reception areas. This has been explained in terms of city «overtourism» - characteristically intense in Venice but also intense mainly in cultural heritage zones of several cities of Southern Europe, including Athens.

More severe tensions due to **overtourism** -expressed through the impressive rise of the Airbnb sector- concern housing; in particular, increase in **rents for natives**. Other important tensions include infrastructure (transportation, parking, health facilities) and changes in land use - at the expense of green spaces and areas with traditional building ensembles.

All this requires a new approach for tourism – culture and cities, aligned with the respective UN SDGs – which are gaining wider and wider recognition.

It is more necessary to integrate the strategic priorities for tourism - culture and cities into the overall strategic planning of cities, which should include objectives and measures to address the housing problem, protect and promote cultural heritage and regulate other critical sectors.

The presentation will discuss in more depth both general proposals for the sustainable spatial planning of tourist zones of cities as well as more specific proposals for the tourist zones of Athens in particular.

**Key words:** Overtourism, sustainable development, cities, Athens, European Union

## **DEMOCRATIC THEORY, URBAN PLANNING IDEOLOGY AND PUBLIC PARTICIPATION IN THE ERA OF ARTIFICIAL INTELLIGENCE**

**Lalenis Konstantinos**

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### **Abstract**

The subject focuses on the intersection of democratic governance, urban development, and advanced technology. Democratic theory deals with the principles and practices that enable effective and equitable governance by the people. Historical philosophical insights reveal that figures like Rousseau advocated for direct democracy and expressing the general will, while John Stuart Mill emphasized liberty, representative democracy, and the empowered, informed citizenry necessary for active public dialogue and engagement. Herodotus and Thucydides highlight the foundational role of public discourse in early democratic societies.

Urban planning ideology, informed by these democratic perspectives, emphasizes both technocratic expertise and participatory approaches. Many theorists argue that planning is inherently political and inseparable from issues of politics and ethics. Recognizing this, contemporary planners generally agree that "value-neutral" planning is impractical and inappropriate as an ideal.

Public participation in urban planning is crucial for aligning urban development with democratic ideals. It focuses on inclusive decision-making processes that reflect the diverse needs of communities, empowering citizens to express their preferences through advanced participatory technologies.

AI offers transformative potential in urban planning by optimizing resource distribution, improving traffic flow, and supporting sustainability. However, urban planning ideology must carefully consider the ethical implications to ensure these technologies promote equity and sustainability rather than exacerbate existing inequalities. While AI can enhance democratic processes by facilitating participatory decision-making through the analysis of extensive citizen input, it also poses risks concerning data privacy, algorithmic bias, and transparency, which could undermine democratic values.

Integrating AI in urban planning must be guided by a democratic ethos, ensuring that technological solutions align with public interests and respect democratic principles like participation, representation, and accountability. Maintaining transparency in AI algorithms and processes is crucial for building trust and adhering to democratic ideals, avoiding potential issues of power imbalance or disenfranchisement.

By understanding these foundational democratic theories, we are better equipped to guide the implementation of AI in urban planning, ensuring that it serves the public good and supports robust, participatory governance.

**Key words:** Democratic theory, public participation, planning ideology, participatory planning, artificial intelligence, means of participation

## **CULTURAL HERITAGE AND SUSTAINABILITY: AN INTIMATE RELATIONSHIP**

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### **Abstract**

Cultural heritage and sustainable development are increasingly seen as interconnected concepts that support one another in significant ways. The heritage of the “past” and the sustainability of the “future” are undeniably linked, coexisting and depending on each other. Cultural heritage is regarded as a crucial resource for socio-economic progress and sustainable development, contributing significantly to the creation of smarter, greener, and more socially aware and inclusive societies.

Preserving and promoting cultural heritage is essential for safeguarding the identities, traditions, and histories of communities. It also plays a crucial role in advancing sustainable development across economic, social, and environmental dimensions. Culture is a vital factor in development, and preserving heritage is key to achieving sustainability.

This presentation focuses on several key questions regarding the future and potential uses of the Cultural Reserve in the context of sustainable development. Some of these questions include: Have we fully understood the potential of cultural heritage in promoting sustainability? In what areas and contexts can we explore the connection between cultural heritage and sustainability? How can cultural heritage serve as a driving force for sustainable development? What is the relationship between sustainability and the intrinsic and functional values of heritage? What conflicts, contradictions, pressures, challenges, threats, and issues affect the sustainability, resilience, and longevity of our heritage? What practices can ensure effective and efficient heritage management? What principles, best practices, approaches, methodologies, and tools can be used to integrate cultural heritage into sustainable development? Additionally, what is the current situation in Greece?

The preservation and promotion of cultural heritage, alongside sustainable development policies, is becoming increasingly important. As we face major global challenges such as climate change, energy transitions, armed conflicts, and social inequalities, the need for effective management and integrated protection of architectural cultural heritage has never been more vital.

**Key words:** Cultural heritage, Sustainable development, cultural reserve, sustainability

## **CLIMATE NEUTRAL CITIES AND CITIZENS’ WELFARE**

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### **Abstract**

Six Greek cities have signed climate contracts with the European Commission (EC) driving them to climate neutrality by 2030 through a holistic approach and massive action plans. Climate contracts with the EC are strategic agreements that align national and local climate goals with EU-wide initiatives to combat climate change. These contracts provide a structured framework for funding, collaboration, and implementation of climate policies, ultimately contributing to sustainable development and improving citizens' welfare.

Research on climate-neutral cities underpins their potential to significantly improve citizen welfare through environmental, economic, and social benefits. These benefits entail, Improved Air Quality and Health, economic growth and job creation, social inclusion and community resilience and enhanced urban livability. Cities awarded with the EU Mission Label benefit from financial and technical support, enabling them to implement impactful climate actions while serving as models for others. Furthermore, mechanisms adopted provide guidance and support in transforming cities to modern, smart, climate neutral communities. Such mechanisms include access to resources and funding, policy alignment and coherence with EU objectives, stakeholder engagement.

Athens, Thessaloniki, Kalamata, Ioannina, Kozani, and Trikala are the six Greek cities that have been awarded with the Climate Neutral Label of the EC. These cities, among the 100 European ones, have committed themselves to implement structural plans aiming at a different city model. Climate contracts with the EC are not just environmental tools; by integrating climate action into welfare-enhancing strategies, these contracts offer a pathway to a sustainable and prosperous future for all citizens.

Baretta and Bracchi (2023a; 2023b) examine the European Mission to create at least 100 climate-neutral cities by 2030. They emphasize the role of cities as innovation hubs, using Climate City Contracts (CCCs) to actively engage citizens and stakeholders.

This approach fosters public trust and delivers health, environmental, and economic benefits while reducing urban vulnerability to climate risks. In their second article, they explore the social dimensions of climate-neutral strategies, highlighting their potential to address equity and improve the quality of life for marginalized communities.

Ricciardi and Callegari (2023) focus on innovative urban planning tools, such as digital twins, to model and enhance the resilience and welfare outcomes of climate-neutral cities. Hirvilammi et al. (2021) argue that addressing climate neutrality requires rethinking traditional welfare models to integrate ecosystem health and social wellbeing. The paper highlights how urban initiatives for biodiversity preservation and sustainable living can directly improve mental health, physical health, and social welfare, particularly in the face of global environmental challenges.

This paper aims at stressing the importance of CCCs and provide a case study from a Greek city and its climate contract, so that we can identify key challenges and opportunities and infer policy considerations.

**Key words:** Climate neutral cities, welfare

## **ENABLING ACCESSIBILITY, DISABLING DISABLEISM**

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### **Abstract**

From Leonardo da Vinci’s Vitruvian Man to Le Corbusier’s Modular Man and the standardized figures in architectural handbooks, design has historically been shaped by norms of able-bodiedness. These ideals, rooted in the image of the white, non-disabled male, have long influenced architectural thought, shaping both education and professional practice.

In recent decades, concepts such as Universal Design and All-Inclusive Design have dominated discourse, promoting accessibility for all. However, emerging research in access studies reveals new challenges due to evolving disability and inclusion frameworks, intersectional perspectives, and diverse bodily experiences. While accessibility codes provide a legal baseline, their implementation often stops at minimal compliance—such as the mere addition of ramps—without considering the emotional and experiential impact of spaces. As a result, disabled individuals frequently encounter built environments that fail to support their dignity, autonomy, and full participation in public and private life.

This presentation seeks to move beyond regulatory compliance by exploring critical spatial dimensions of disability and inclusion that can inspire designers to develop accessibility-focused solutions that are creative rather than restrictive. Drawing from historical perspectives and contemporary accessibility thinking, we examine the role of designers in shaping inclusive environments and their impact on users.

Our research investigates the Greek built environment where systemic planning failures have contributed to widespread barriers to dignity and mobility. At scales ranging from apartments and buildings to city blocks and neighbourhoods, we analyse key urban factors that promote inclusive design: adaptability, aesthetics, autonomy, efficiency, equitability, flexibility, perception, privacy, safety, and social interaction.

By integrating culturally specific evidence with innovative urban paradigms, our findings provide a transformative approach to accessibility with far-reaching implications for researchers, practitioners, and policymakers. This research not only expands the discourse on inclusive design but also offers actionable strategies to shape more equitable, dignified, and user-centred environments.

**Key words:** Universal Design, disability studies, accessibility, inclusive environments, design for all, Greek built environment.



**BUILDING NEW PLACES OF CREATIVE ECONOMIES;RENEWAL  
AND RE-USE OF ABANDONED BUILDINGS AS COWORKING  
BUILDINGS IN ATHENS’ CENTRAL DISTRICTS**

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**Abstract**

In the past decade, *‘coworking spaces’* (CWS) have emerged as a new and promising urban phenomenon promoting new entrepreneurship, creativity and innovation, and especially related to young professional practitioners. The emergence of CWS is strongly associated to real market conditions in many large European cities. More specifically, high rent prices of office spaces act as constraints for young entrepreneurs and professional practitioners of the creative middle classes to make a start and develop their business. Moreover, existing real estate laws as well as landlords usually require tenants to sign multi-year leases, often a 3 to 5-year minimum commitment. Given the unpredictable future of new businesses, entrepreneurs and young professionals are reasonably reluctant to make such long-term commitments, opting to start in a home-office. However, home-office is often not a proper professional installation due to location away from the city centre or inner-city zone. This creates certain difficulties for young entrepreneurs and professionals to meet their clients and also bad feelings of a kind of isolation. Handling the above situation, abandoned old industrial edifices and warehouses, and yet old vacant office buildings in declined urban areas, were renovated and transformed into Coworking spaces (CWS) in many large European cities. CWS are regarded as accelerators of flourishing urban economies, designed to host creative people and entrepreneurs who endeavor to break isolation of home-office, and to find a proper modern environment that favors meetings and collaboration. The rise of CWS and its implications and impacts are largely unstudied yet.

This presentation focuses on Athens’ inner-city areas and their potentials of creating CWS. Following almost a decade of public depth economic crisis in Greece (2010-18), a large number of commercial spaces, office spaces, residences, as well as whole buildings have been abandoned and remain unused in declined inner-city areas in Athens. The present paper provides maps of existing vacant spaces and buildings; it analyses and classifies them into specific categories and spatial clusters. It finally draws from experience in other European cities to propose guidelines to local authorities, policy makers, and building owners, for their reuse and transformation into CWS, and the creation of specific new epicentres of entrepreneurship, creativity and innovation in Athens’ inner-city areas.

**Keywords:**‘coworking’ buildings, spatial clusters of new entrepreneurship, creativity and innovation, Athens’ inner-city areas.

**DEMOGRAPHIC TRANSITIONS, LOCAL ECONOMIES AND METROPOLITAN SYSTEMS IN-BETWEEN SUSTAINABILITY AND RESILIENCE**

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**Abstract**

By integrating different exploratory and interpretative approaches, this study identifies various explanatory models of the life cycle of a metropolitan system, based on progressive phases that respond to differentiated and complex regional and local contexts, with specific reference to the European continent. The empirical results indicate the most current trends in the old continent, which has basically reached the end of a long socio-economic cycle, and is about to enter a new urban regime. To better prefigure this new regime, an interpretative framework has been proposed that analyses the development paths and simultaneously analyses the temporal, spatial and sectoral dimensions. The progressive demographic decline and the structural change of many regional economic systems suggest a slow transition towards models potentially less sustainable from an environmental point of view, and with a particularly heterogeneous level of resilience to future exogenous shocks. Also thanks to the impact of the economic crisis and the pandemic, the new urban regime will presumably be very different from those observed throughout the last century. Its integrated analysis requires continuous improvements in official statistics indicators and in interpretative approaches based on exploratory and inferential techniques. In recent years, regional and local socioeconomic systems have increasingly been interpreted as complex, articulated and internally fragmented organisms, difficult to manage and plan. The intrinsic difficulty in the quantitative analysis of how these systems are articulated and consolidated, growing or progressively declining, highlights the need for original interpretative visions, which can link regional economic theory and statistical analysis with the most current themes of demographic, historical and geographical disciplines. The seminar therefore proposes a study path, and a presentation of the research tools used, which integrate different methodologies and empirical approaches. Also by exploiting the rich heritage of digitalized data gradually available on a large scale from unofficial sources, the quantitative analyses presented here allow us to outline evolutionary models of local systems and urban growth, so as to capture differentiated socioeconomic dynamics that have shaped metropolitan regions in Europe over the last century. Based on the use of a large collection of multidisciplinary indicators, the statistical analysis has also allowed the identification and profiling of integrated development dynamics at different scales of observation, which can be traced back to specific historical phases, social contexts and economic cycles, thus contributing to the understanding of how urban development can adhere to principles of sustainability and resilience in the long term. The results of the analysis demonstrate how scale and agglomeration factors – which played a very relevant role in the last century – are increasingly less linked to growth processes, also suggesting the growing importance of non-strictly economic forces acting at a local scale. Larger metropolitan systems seem to escape this general model, adhering to individualistic growth paths that are difficult to predict, even in the short term. Also thanks to the impact of the economic crisis and the pandemic, the new urban regimes in Europe are, already in the most recent decade, very different from those observed throughout the last century. The knowledge acquired stimulates the construction of development models that take greater account of endogenous and exogenous constraints on urban growth, with the aim of planning more sustainable regional economic systems, and allowing metropolitan regions to approach those sustainability and resilience objectives long pursued on paper and more difficult to achieve in practice.

**Keywords:** Economic growth, urbanization, demographic transitions, local economies, metropolitan systems, sustainability, resilience

**Special session:**  
**FORESTRY AND FOREST-BASED WOOD PRODUCTS: DISCUSSING  
THEIR ROLE FOR SUSTAINABILITY AND CLIMATE NEUTRALITY  
AT LOCAL, REGIONAL AND GLOBAL SCALE**

Organized by:

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**Abstract and Topics**

Forests have long played an extremely important role in our economy and society, as they help create jobs and are a source of wood, food, medicines, materials, clean water, and many other goods. For centuries, forests have been a thriving source of cultural heritage and construction, tradition, and innovation, with wood serving as a cornerstone of these activities.

However, as important as forests—and the wood they provide—have been in the past, their role will be even more essential for our future. Forests are a natural ally in adapting to and combating climate change and will play a vital role in making Europe the first climate-neutral continent by 2050. Greenhouse gas emissions and removals from forests, as well as forest products like wood, will play a key role in achieving the ambitious net sink target of -310 million tons of carbon dioxide equivalent for the Union. Forests and their wood-based resources also make an important contribution to our ambitious biodiversity targets, safeguard livelihoods in rural areas and beyond, and support a sustainable forest bio-economy based on the most sustainable forest management practices. This is underpinned by a recognized and internationally accepted dynamic concept of sustainable forest management, which considers multifunctionality, forest diversity, and the three interdependent pillars of sustainability.

Furthermore, given the increasing and sometimes competing demands on forests, we also need to ensure that the amount of wood we use remains within the limits of sustainability and is used optimally, in line with the principle of cascading use and the circular economy approach. This will ensure, as far as possible, the substitution of fossil-based materials with wood and other circular products that have a long lifespan and are of greatest value for carbon storage and the circular economy. Wood, as a renewable material, plays a pivotal role in fostering a future that balances innovation with environmental responsibility.

The special session will focus on the role of forestry and forest-based wood products in sustainable development at local, regional and global level and more specifically at the following key topics:

- Sustainable forest management
- Forestry and sustainability
- Biomass- wood for energy production
- Sustainable development of mountainous areas
- Circular economy in forestry and forest – based products
- Forest bioeconomy and innovation
- Wood technology and forest-based wood products
- Non wood products
- Forest based wood biomass and renewable energy.
- Sustainable construction with wood.
- Climate change and the role of forestry and forest based products.
- Carbon markets and the role of forests and wood products

## **BOOK OF ABSTRACTS**

*2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025*

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- Entrepreneurial ventures in the forest value – chain
- Biodiversity and sustainable development
- Agroforestry
- Urban forestry
- Innovative and IT technologies in management of forest resources

**EUROPEAN PROGRAMS AND GREECE’S FOREST BIO-ECONOMY:  
REVIEW AND RESEARCH GAP IDENTIFICATION**

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**Abstract**

This paper explores the ongoing debate surrounding the forest bioeconomy and its potential to transform national economies, with a particular focus on Europe’s strategic policies and financial tools. In light of the recent report on the progress made in implementing the European Bioeconomy Strategy, this study aims to explore how Europe’s renewable organic resources, specifically those derived from forests, can be utilized more sustainably to mitigate the impacts of climate change and address environmental pressures (European Commission, 2011). While significant efforts have been made to monitor and measure forest bioeconomy development across Europe, existing literature reveals a lack of standardized methodologies for assessing its impact across EU member states, making cross-country comparisons challenging. Moreover, there is no consensus on the definition or scope of the forest bioeconomy, further complicating the evaluation of financial support and its effectiveness across different forest bioeconomy sectors, such as sustainable forestry, biomass production, and forest-based industries (Lovrić et al., 2020; Kardung et al., 2020; Rinn et al., 2022).

The objective of this study is to address this gap by evaluating the impact of European funding and expertise on Greece’s forest bioeconomy. Specifically, the study will develop an evaluation model to measure the economic benefits derived from European funding, such as co-financed programs and research projects, and analyze their contribution to regional development and sustainability outcomes in Greece’s forest bioeconomy.

**Keywords:** Forest Bioeconomy, European Programs, Sustainability, Bioeconomy Policies, Greece

## **CARBON FARMING IN FORESTRY AND CARBON STORAGE IN WOOD PRODUCTS. THE NEW CERTIFICATION FRAMEWORK AND THE POTENTIALS FOR THE RELATED MARKETS**

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### **Abstract**

The EU is committed to achieving climate neutrality by 2050 to ensure a sustainable future. The most urgent priority remains the reduction of greenhouse gas emissions. At the same time, the EU must compensate for remaining emissions that cannot be eliminated by scaling up carbon sinks by absorbing carbon dioxide from the atmosphere.

Carbon credits are a type of market-based instrument that allows stakeholders to address greenhouse gas emissions by financing projects that reduce or remove carbon dioxide or other harmful greenhouse gas (GHG) emissions from the atmosphere. The goal of carbon credits is to create a financial incentive for businesses and governments to reduce their carbon footprint and invest in cleaner, more sustainable practices. The carbon market is a system of buying and selling carbon credits. There are several types of carbon markets, including:

- Compliance-based Carbon Markets (CCMs).
- Voluntary Carbon Markets (VCMs).

A harmonized Union certification framework was recently issued to address the above issues. The framework is expected to enhance the environmental integrity and transparency of permanent carbon removals, carbon farming and carbon storage in products, while reducing the associated administrative costs.

This paper is a theoretical approach that explores the potential that the above framework offers in trying to integrate Greek forest land, as well as long-term carbon storage in wood products, into mandatory and voluntary carbon credit markets, through optimized forest management and carbon dioxide (CO<sub>2</sub>) storage and the required collaborative ecosystem of forest owners, public and private, in the forestry sector.

**Key words:** Carbon removals, carbon markets, forestry, wood products, certification framework

## **THE USE OF SUSTAINABLE WOOD-BASED CONSTRUCTION MATERIALS TOWARDS REDUCING ENERGY INPUT**

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### **Abstract**

The construction industry plays a pivotal role in global energy consumption and environmental impact, with traditional building materials and practices contributing significantly to carbon emissions and resource depletion. Sustainable wood-based construction materials present a promising solution to these challenges, offering renewable, low-carbon, and energy-efficient alternatives.

This study explores the potential of wood-based materials in reducing energy input across the lifecycle of construction projects, from production and transportation to use and disposal. Key attributes, including carbon sequestration, thermal efficiency, and adaptability, are highlighted alongside advancements in engineered wood products such as cross-laminated timber (CLT) and glued laminated timber (glulam).

The integration of these materials into modern construction practices not only reduces reliance on energy-intensive materials like concrete and steel but also supports the transition to a circular economy. Challenges such as resource management, certification, and resistance to widespread adoption are also addressed.

The findings underscore that the use of sustainable wood-based materials can significantly lower energy demands, enhance building performance, and contribute to achieving global sustainability goals.

**Key words:** Sustainable construction, wood-based materials, energy efficiency, engineered wood products, cross-laminated timber (CLT), circular economy, green building.

## **AI IN SMART FOREST MANAGEMENT: FROM DMRV SERVICES TO INTELLIGENT BIOMASS MANAGEMENT**

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### **Abstract**

Nowadays, climate change has become a very threatening issue, affecting ecological stability and sustainable management of terrestrial ecosystems worldwide. Various task force groups currently seek big data and Artificial Intelligence (AI) related solutions for retaining forest ecosystems equilibrium. Hence, there is an urged need for investing in new big data AI technologies for achieving forest ecosystem stability and resilience against abrupt climate changes. Advanced technological approaches, such as the dMRV (digital Measurement Reporting Verification) framework, integrated with AI big data management and prediction methods, may be a promising mitigation solution against radical climate change ecosystem challenges. DMRV framework is a package of established technologies such as IoT, and satellite imagery, for environmental data monitoring, enriched with AI and Blockchain for data integrity and transparency.

This paper surveys latest advances in AI-based technologies, as well as case studies in smart forest management and sustainable development. As the migration of Forestry 4.0 to Forestry 5.0 paradigm encourages Human-AI interactions, this work aims at inspiring both forest officials and scientists to invest in AI technology solutions for efficient forest management against climate change challenges.

**Key words:** Forest ecosystems, AI technologies, dMRV, tree pruning biomass, sustainable management, smart forest



## **CAN FORESTS HELP CRYPTOCURRENCIES BECOME SUSTAINABLE? A THEORETICAL APPROACH FOR RELATIVE STRATEGIES**

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### **Abstract**

Cryptocurrencies and blockchain technology have recently emerged as innovative tools in carbon markets. The decentralised and transparent nature of the blockchain makes it suitable for monitoring and verifying carbon credits, ensuring that credits are not double counted or fraudulently claimed. By creating a secure and transparent carbon transaction ledger, blockchain technology can enhance the credibility of carbon markets and increase investor confidence.

On the other hand, the environmental debate surrounding Bitcoin mining has largely focused on energy consumption and carbon emissions. Bitcoin's Proof of Work (PoW) algorithm is designed to be energy-intensive, requiring miners to solve cryptographic puzzles to validate transactions. This computing power, in turn, consumes large amounts of electricity, making Bitcoin mining subject to criticism in the context of global climate change.

The growing involvement of cryptocurrencies and blockchain technology presents new avenues of growth in carbon markets. By facilitating direct investments in forest conservation through contracted credits, these technologies enhance both the transparency and accessibility of carbon credit transactions. Nevertheless, it is vital to consider the environmental impacts of blockchain mining and cryptocurrency mining, as high-energy blockchain platforms may inadvertently counteract the environmental benefits of carbon credits. A transition to more sustainable blockchain protocols, such as proof-of-stake, will be necessary to ensure that the integration of digital technology aligns with the climate goals of carbon markets.

In conclusion, forest-based carbon credits, when integrated with blockchain technology, emerging innovations and fair governance, have the potential to contribute significantly to achieving global climate goals. As carbon markets continue to evolve, the combination of technology and natural conservation promises an escalating path to a carbon-neutral future, with forests at the core of climate resilience and environmental stewardship. By investing in forest conservation and expanding carbon credit markets, governments, companies and individuals can play a vital role in the global transition to a low-carbon economy, ensuring the protection of key natural resources for future generations.

**Key words:** Carbon markets, bitcoin, cryptocurrencies, forestry, blockchain

**EVALUATION OF THE POTENTIAL SUPPLY OF AGRICULTURAL AND FOREST RESIDUES FOR BIOENERGY PRODUCTION IN GREECE**

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**Abstract**

This study examines the potential supply of agricultural and forest residues for bioenergy production in Greece, focusing on both the quantity and availability of these feedstocks. Utilizing official statistical data, field surveys, the research identifies the primary residue types from crop production, orchard pruning, and forest management. Emphasis is placed on evaluating the logistical aspects of collection and transportation, as well as the environmental impacts of residue extraction. Preliminary findings indicate that Greece possesses a substantial volume of underutilized residues that could serve as a significant source of renewable energy, thereby contributing to national targets for greenhouse gas reduction and energy security. However, challenges remain regarding seasonal variability, collection costs, and the need for modern infrastructure to efficiently convert residues into bioenergy. The study highlights the importance of policy support, integrated resource management, and stakeholder collaboration to optimize residue utilization. These efforts could enhance rural development, create new employment opportunities, and strengthen Greece's transition toward a more sustainable and resilient energy system.

**Key words:** Forest, bioenergy production, agricultural residues

**INVESTIGATING THE RELATIONSHIP AMONG ROAD NETWORK  
ALTITUDE ZONES AND LAND USE: EVIDENCE FROM THE  
REGIONS OF GREECE**

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**Abstract**

This study aims into the fascinating connections amongst the road network length, road density, altitude zones, and land use across Greece’s unique and varied regions. By examining these relationships, geography shapes, the way areas develop and interact within this diverse landscape, can be uncovered.

Using freely available online data, these resources are combined in GIS, to analyze and better understand the road network’s role in shaping Greece’s landscape. The presented analysis focuses on two main road categories, motorways and all other roads. To explore altitude zoning, the road network has been divided into distinct elevation ranges, providing a clearer picture of how roads function at different altitudes. For land use, areas are classified into categories such as urban, agricultural, and forest, relying on the latest Corine Land Cover data to ensure accuracy and relevance.

Areas with low altitudes tend to have denser road networks and urban development, while inland mountainous regions have sparse roads and are primarily rural or forested. Integrated planning considers altitude, land use, and environmental preservation to ensure roads serve development without degrading ecosystems. Understanding this relationship is critical for developing sustainable infrastructure that balances economic growth, environmental conservation, and social equity.

**Key words:** regions of Greece, road network, road density, land use, altitude zones, GIS

## **A COMPREHENSIVE APPRAISAL OF LANDSLIDE PREVENTIVE MEASURES ON ROAD SLOPES**

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### **Abstract**

Landslides of road slopes stand for phenomena resulting in minor to even catastrophic consequences, with impact on road infrastructure and road users. Moreover, properties next to the road may be affected as well. Nowadays, these phenomena occur more and more frequently and their impact becomes more and more higher, due to climate change and forest fires. Thus, adequate preventive measures, are of utmost importance in the context of safety guarantees.

The present paper defines and analyses criteria, such as implementation cost and ease of establishment, implementation range and effectiveness, for appraising measures of landslide prevention, conducting an analytical hierarchy process scheme. A thoughtful set of the appraisal criteria is considered to be a cornerstone for correct and comprehensive evaluation. The preventive measures are selected from most common ones, such as slope change, drainage infrastructures and planting. Results may vary according to special characteristics of each potential landslide field. Evaluation of each criterion may also vary according to the climatic and economic environment in which the appraisal is conducted. In this frame, a measure which is indicated as optimal for a certain study area may be inadequate for another area.

Given the aforementioned, the results show fruitful and interesting findings, attributing scores to the examined measures, in terms of overall and each criterion evaluation. The appraisal methodology presented, may be used as a tool for road operators and competent authorities, so as to assess the most effective preventive measures, with respect to inherent and general characteristics that apply in each case.

**Key words:** Road slopes, landslides, appraisal, preventive measures, evaluation

**Special session:**  
**CULTURE AND SUSTAINABLE URBAN DEVELOPMENT OF THE CITY**  
*powered by the **Foundation for Mediterranean Studies - MeDiterrate***

Coordinator:  
**Antonis Papagiannidis**  
*Economia Group*  
*Foundation for Mediterranean Studies - MeDiterrate*

**Abstract and Topics**

This special session seeks to unravel the intricate connections between cultural heritage, urban identity, and the political economy of sustainable development. It emphasizes the critical role of culture as both a resource and a framework in fostering resilient and inclusive urban environments. Cities, as complex systems of social, economic, and political interactions, provide a fertile ground for examining the interplay between cultural dynamics and the imperatives of sustainability.

The session delves into how cultural norms, historical legacies, and socio-economic transitions shape urban governance, spatial planning, and public policy. It critically examines the urbanisation processes that disrupt traditional socio-economic structures and introduce new modes of production, consumption, and social behaviour. Particular attention is given to the pressures of rural-to-urban migration, which often entails the coexistence of diverse cultural paradigms and the challenge of integrating these into a cohesive urban framework. The session also interrogates the commodification of cultural heritage within urban economies, exploring its dual potential to drive economic growth while risking homogenisation and loss of authenticity.

The political economy dimension is central to this discussion, as the session evaluates how governance models, institutional structures, and public policies influence the allocation of resources and the distribution of opportunities in urban settings. By reflecting on both historical and contemporary examples, it highlights the potential of culturally attuned strategies to address issues of inequality, social exclusion, and environmental degradation. The session positions cities as arenas where cultural identity intersects with economic imperatives, offering a roadmap for reconciling economic growth with social equity and environmental integrity.

Through this lens, the session aims to contribute to a nuanced understanding of the role of culture in shaping urban political economies, advancing a vision of cities as spaces of sustainable coexistence and dynamic cultural exchange. This perspective encourages policymakers, researchers, and practitioners to rethink the urban experience as one that is not only economically viable but also culturally enriching and socially inclusive.

Building on the above, this session’s key areas of focus are:

- Urban Identity
- Sustainable Governance
- Healthy Cities
- Tourism and Urban Economy
- Social Cohesion
- Rural-Urban Dynamics
- Political Economy of Cities
- Public Spaces
- Cultural Resilience

## **ATHENS: A CITY WITHOUT AN "URBAN" CULTURE**

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### **Abstract**

The concentration of population in Athens has led to numerous challenges affecting daily life and overall quality of living. Between 1950 and 1980, the population of the Athens urban complex more than doubled, increasing from 1.4 million to 3 million as 1.6 million people migrated from rural areas across Greece. Although the rural migration to Athens slowed in subsequent decades, it continued, and today (2024), 3.6 million people reside in the wider urban complex.

The uncontrolled expansion of Athens resulted in inadequate urban planning, causing adverse effects on transportation, construction, the social fabric, and green spaces. Natural resources have been significantly depleted, creating an unlivable urban environment. The social, economic, and environmental problems arising from urbanization, alongside the decline of rural areas, have been extensively studied. However, the behavioral patterns of people migrating to Athens—bringing their "rural" cultural norms (habits, attitudes, and perceptions) into a vastly different urban environment—remain insufficiently explored.

This analysis aims to explore the extent to which the blending of "rural" cultural norms with the fragile "urban" cultural model contributes to the behaviors observed in Athens today. These behaviors include indifference toward public spaces, urban planning disorder, transactional political engagement, varying degrees of lawlessness in an impersonal and sprawling city, as well as family solidarity, religiosity, and distrust of institutions.

**Key words:** Urbanisation, cultural transition, social behaviour, socioeconomics

## **THE CONCEPT OF "SYSPONDIA"**

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### **Abstract**

The term 'sympolity' denotes a benevolent bond among partner-members working toward the greater good of their shared organization. Derived from the word 'libation' (spondē), it symbolizes the communal connection formed among members of an association dedicated to a mutual and beneficial purpose, fostering a symbiotic and lasting co-evolution. This presentation draws inspiration from the ancient Greek associations of city-states, or 'sympolities,' of the Classical and Hellenistic periods. It aims to articulate the essential quality of the communal bond, as well as the constitutional foundations and implications of such associations in the contemporary context of the European Union as both a polity and a collection of polities.

Specifically, it frames the modern European Union as a political form of 'union of constitutional co-evolution,' proposing a structured collective legal and political order that, over time and through the lens of constitutional liberty, can shape its own self-recognizable 'demos' and distinctive—though unconventional compared to classical confederal unions and contemporary sovereign federal states—constitutional identity. Overall, the presentation seeks to conceptualize the European Union as a 'sympolity of late modernity,' capable of systematically developing its own framework for public coexistence among partner-members, thereby constituting a complex political entity that transcends traditional international interpretations of unions.

**Key words:** Sympolity, European Union, constitutional co-evolution

## **THE PROTECTION OF THE PHYSIOGNOMY OF CITIES AND GREEN PUBLIC PROCUREMENTS**

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### **Abstract**

Public Authorities are the main consumers in Europe, spending around 2 billion euros, that is the 14% of the European Union's GDP. They procure goods (e.g. structural elements, vehicles, equipment for public spaces in cities, etc.) and services (e.g. building maintenance, transport services, cleaning services, etc.), while at the same time implementing projects, which as a whole or individually may have potentially significant environmental impacts. With this specific condition, it becomes absolutely clear that Public Authorities maintain an important, perhaps even dominant, role in the promotion and use of Green Public Procurement. In other words, they can play an important role in reducing environmental impacts and the environmental footprint, by promoting the procurement of "greener" products, services and projects from the market.

Today, Green Public Procurement, although considered as a voluntary tool, are widely understood conceptually, but has not yet been universally implemented by Public Authorities. Nevertheless, it has been recognized that it constitutes a smart contracting. In any case, they imply an improvement in the performance of the public contract and at the same time the use of the power of the public market in order to achieve very significant environmental benefits mainly at the local level, including the protection or preservation of the city's physiognomy. In other words, they are a particularly dynamic tool for shaping the character of cities on the basis of sustainable standards, but also an excellent means for achieving local objectives and initiatives for the environment and human health. In any case, Green Public Procurement can be an effective tool for addressing urban problems at source, ensuring a high quality of life for city residents.

Considering the value of Green Public Procurement as a tool for protecting the environment and shaping sustainable and healthy cities, Member States need to be encouraged to develop their own national Action Plans for the “greening” of public procurement. Among other things, the coming years should be years of political commitments at international, European and national level.

In Greece, the first provisions on Green Public Procurement appeared in 2010 with Law 3855/2010 (Government Gazette 95 A’), but the first substantial step was taken a decade later, in 2021, when the national Action Plan for Green Public Procurement was approved with Joint Ministerial Decision 14900/2021 (Government Gazette 466 B’). However, national Public Authorities, and especially the Municipalities of our country, which constitute perhaps the largest purchasing power in goods, services and projects and the greatest shapers of the physiognomy of cities, still seem to lack significant experience and knowledge in the issues of Green Public Procurement. Therefore, highly coordinated efforts, support from the Ministries and certainly reorganization and training of the executives of the relevant Municipal Services are required, in order for the already encouraging results of the even limited use of this specific tool to find greater application for the benefit of environmental protection and the improvement of the quality of life of residents, especially of large urban centers.

**Keywords:** Green Public Procurement, city's physiognomy, sustainable and healthy cities, environmental protection



## **HEALTHY CITY**

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#### **Abstract**

The Athenian city, as noted by the 4th-century BC Attic writer Melanthius, has endured through history largely because of the diversity of opinions among its orators. This variety of perspectives ensured that no single view went unchallenged, allowing individuals to freely express their thoughts and, in doing so, counterbalance potentially harmful ideas. This ethos of debate underpins the grandeur of Greek civilization, epitomized by its greatest contributions: philosophy, tragedy, and democracy - each reaching its zenith in 5th-century Athens.

At the heart of philosophy, tragedy, and democracy lies the principle of dialogue: the ability to express one's thoughts while acknowledging the irrevocable right of others to disagree. Philosophy thrived in schools where members were not bound to accept the teacher's beliefs or conform to others' views. Instead, they were free to either embrace or question ideas through discussion. In fact, the greatest critics of leading philosophers were often their own students - Anaximander questioned Thales, Cratylus critiqued Heraclitus, and Aristotle challenged Plato.

Similarly, in tragedy, the characters do not merely tell stories; through their actions on stage, they engage in dialogue, sometimes converging and at other times diverging in their views. Likewise, democracy established a system of governance rooted not in power or ancestry, but in dialogue among citizens, adopting the majority's views while safeguarding the minority's right to dissent.

**Key words:** Dialogue, civilisation, democracy

## **CULTURAL HERITAGE AND SUSTAINABLE URBAN TRANSFORMATION: A CONTINUUM FROM ANTIQUITY TO MODERNITY**

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Greek Network of Resilient Cities*

### **Abstract**

The historical and cultural heritage of the Elliniko – Argyroupolis Municipality constitutes an integral element of its identity, stretching from antiquity to modern times. In ancient Athens, the local population fostered a progressive culture rooted in arts and philosophy, with theaters and public gatherings serving as cornerstones of collective and intellectual activity. Elliniko – Argyroupolis Municipality, established as refugee settlements by Pontic Greeks, preserved this rich cultural lineage. Over recent decades, the city’s history has been interwoven with the operation of the international airport in Elliniko, a landmark that catalyzed regional development. Today, this area is undergoing a transformative redevelopment project of iconic significance.

In the present era, this cultural legacy underpins the municipality’s commitment to sustainable urban development, balancing respect for historical traditions with contemporary progress. The municipality actively integrates environmental conservation with artistic endeavors through projects aimed at enhancing the quality of urban life. These include the regeneration of public spaces, preservation of the natural environment -particularly the Hymettus mountain range- connection to the coastal front, and initiatives promoting recycling, energy efficiency, and cultural festivals. Collectively, these efforts position Elliniko - Argyroupolis Municipality as a model of harmonized cultural preservation and sustainability.

A notable innovation is the municipality's commitment to sustainable urban mobility, exemplified by the deployment of Greece's first electric municipal transportation network. Featuring a fleet of electric vehicles, seven transit stations, and 44 electric bicycles -including an accessible model for individuals with disabilities- this initiative pioneers environmentally friendly transportation solutions. Complementary actions include public awareness campaigns on sustainable mobility, efforts to minimize ecological footprints, and strategies supporting climate neutrality.

Elliniko - Argyroupolis Municipality is also the sole municipality in Attica participating in the "Living Streets" program, alongside six other European cities. This initiative allows residents, particularly younger generations, to experience a more human-centered and neighborhood-focused urban environment.

**Key words:** Cultural heritage, Sustainable development, Urban regeneration, Green mobility, Community engagement

## **URBAN ENVIRONMENT: A STRATEGIC APPROACH TO CLIMATE RESILIENCE**

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### **Abstract**

Cities are increasingly bearing the brunt of climate change, as evident in the rising frequency of extreme weather events, prolonged heat waves, sea level rise, and escalating risks to food and water security. These phenomena exacerbate existing social and economic inequalities. While urban areas are significant contributors to climate change, accounting for nearly three-quarters of global emissions, they also serve as hubs of innovation and sustainable practices. Cities can play a pivotal role in reducing emissions and enhancing resilience through climate investments, ambitious urban planning, and robust policy frameworks.

Drawing on examples from the Municipality of Nea Smyrni, which aims to achieve climate neutrality by 2030, this commentary highlights a strategic approach to climate adaptation, proposing an integrated yet autonomous climate action plan that incorporates climate risk into all urban and sectoral planning policies. Initiatives for green and resilient infrastructure include, among others, enhancing urban green spaces to mitigate urban heat island effects, improving building energy efficiency, promoting low-carbon transport, and advancing sustainable waste management. These efforts not only address climate challenges but also improve quality of life, foster social equity, and promote democratic governance.

The adaptation process must avoid fragmented solutions and instead adopt a holistic planning framework to prevent the transfer of risks from one sector or activity to another. A comprehensive approach, grounded in local conditions, ensures that existing vulnerabilities are addressed effectively and equitably.

**Key words:** climate change, climate neutrality, urban resilience, Municipality of Nea Smyrni, green policies

**Special session:**  
**CULTURAL SUSTAINABILITY *IN PRAXIS*:**  
**DIGITAL TRANSFORMATION AND GREEN INNOVATION**

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In recent years, culture has been dynamically linked to the concept of sustainability. On the one hand, European Union policies relate the cultural sector to economic progress and the needs of the markets. On the other hand, the ongoing digital transformation, the demand for modern skills and the need for green innovations are broadening and enriching the field of cultural actions and developing good practices with a focus on social support and progress. In this context, universities, research institutes, museums, businesses, social bodies, etc. are looking to European funding and international cooperation to develop modern research and good practices that respond to real problems and needs.

The special session will focus on the sustainable development of cultural sector with emphasis in local, regional and urban level and more specifically at the following key topics:

- Climate change and digital media
- Cultural industries and social needs
- Digital communication and learning skills in the working environment
- Digital health and social development
- Digital tools and vulnerable groups
- Gender in the digital world
- Green solutions in urban environments
- Humanities and digital transformation
- Local and Regional Development and Green innovation
- Sustainability and European-funded projects
- Urban Reconstruction and cultural sector

**CREATIVE INDUSTRIES AND DIGITAL TRANSFORMATION OF  
TOURISM: ONLINE GAMES AS 'THIRD SPACES' OF  
COMMUNICATION AND INTERACTION**

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**Abstract**

Culture is an important pillar of development for every country. In addition, the link between cultural heritage and tourism is, according to Anhold, a distinct dimension of the “nation brand hexagon”, an important element of place and destination brands. Creative Industries (CIs) as a modern cultural field include production units that focus on human talent, individual craftsmanship and the ability to create original products that can lead to a comparative economic advantage. The link between CIs and the tourism industry is eloquently reflected in modern forms of alternative tourism, such as cultural and creative tourism, where visitors come into contact with cultural resources and/or interact with the inhabitants of the destination. At the same time, the digital transformation of tourism is taking place, which is progressively linked to the -perhaps more robust- field of CIs, digital games. The importance of this field is recognised by the EU, which, by establishing and adopting legislation and conducting international surveys (2023, 2024), is attempting both to regulate the sector and to highlight the economic, social and cultural dimension of digital games.

This study is based on a broad literature review. It utilises classification, analysis and interpretation of secondary data to outline the emerging relationship between tourism and digital, online games. Massively Multiplayer Online role-playing games (MMOs) have been described as harbingers of the metaverse as they offer a first insight into the future fully functional cross-platform reality. The dimension of the metaverse as a 'meeting place' between the physical and digital worlds is familiar to gamers, who spend a lot of time in game fora. In these 'third places', communities of players meet, connect, communicate and develop social practices, laying the foundations of so-called metaverse gaming. International surveys (2021, 2023) on MMOs and popular platforms (Roblox, Fortnite, Minecraft) have shown that 60% of players participate in parallel activities (not directly related to the game itself): meeting new people, watching videos, participating in live events, going on tours, organising trips to the virtual or real world, attending educational programmes, etc. Recent research concludes that both the choice of tourist destinations and the enhancement of experiences and perceptions of these destinations are linked to the activity of the player and the types of games used. Other studies focus on the development of digital games in tourism destinations, with an emphasis on interactive entertainment, sport and educational experiences. Finally, it is considered that the development of the relationship between the tourism industry and the digital games sector can benefit the industry, on the one hand by the emergence of new business models and the promotion of the tourism product, but also by expanding the possibilities to reach larger audiences - especially young people - and by the consequent development of (digital) accessibility.

**Key words:** creative industries, culture, tourism, digital online games, metaverse gaming

**BRIDGING THE GENDER DIGITAL DIVIDE: STRATEGIES FOR INCLUSIVE TECHNOLOGY ADOPTION IN MARGINALIZED COMMUNITIES IN UGANDA**

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**Abstract**

Digital divide continues to pose notable challenges among marginalized communities in Africa, with a notable gender disparity, in countries like Uganda, This disparity has impeded both social and economic development within communities. This study aims to explore the primary factors driving the gender digital divide, examine barriers to technology adoption faced by women in marginalized communities, assess the influence of cultural norms and gender roles on the gender digital divide, and evaluate strategies for fostering inclusive and user-friendly technology adoption. The research seeks to contribute to the theoretical and conceptual discourse on gender equity in technology adoption, and women’s empowerment. The study will be grounded in Kabeer’s empowerment framework and the theory of change. It will employ a mixed-methods approach, integrating both qualitative and quantitative research methods. The qualitative component will include focus group discussions, interviews with key informants, observations, and photography-based techniques for data collection. The quantitative aspect will utilize structured questionnaires to gather relevant data. The findings will inform policy recommendations and provide actionable insights for the marginalized communities and key stakeholders. Specifically, the study will emphasize the active participation of marginalized communities in technology adoption decision-making processes and the development of strategies that prioritize inclusivity. Additionally, it will propose community-based training initiatives based on the theory of change to address gender-specific barriers to digital literacy to ensure sustainability.

**Key words:** Gender, digital divide, technology

**THE ROLE OF UNIVERSITY - INDUSTRY R&D COLLABORATIONS:  
DRIVING TO INNOVATION AND SUSTAINABILITY IN  
DEVELOPING COUNTRIES (GOVERNANCE AND GROWTH MODEL)**

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**Abstract**

This research thesis investigates the role of academia-industry collaboration in research and development (R&D) as a critical driver for addressing economic challenges and fostering innovation and sustainable economic growth, with a focus on Albania and Kosovo. Both countries, emerging from transitional economies, face significant challenges in maintaining sustainable economic growth, addressing high unemployment rates, and fostering innovation.

The study explores how partnerships between universities and industries can bridge the gap between academic research and industrial needs, with a focus on sectors critical to regional development. By leveraging the research capacities of academic institutions and the practical, market-oriented knowledge of industry, such collaborations can drive innovation, boost competitiveness, and contribute to socio-economic development.

The study explores how partnerships between universities and industries can bridge the gap between academic research and industrial needs, with a focus on sectors critical to regional development. By leveraging the research capacities of academic institutions and the practical, market-oriented knowledge of industries, such collaborations can drive innovation, boost competitiveness, and contribute to socio-economic development.

Findings from this research will provide recommendations for strengthening academia-industry ties, enhancing R&D capacities, and informing policy initiatives aimed at creating a sustainable innovation ecosystem in the Western Balkans. This thesis ultimately aims to contribute to the broader discourse on the role of knowledge economies in fostering regional development and resilience in transitioning markets

**Key words:** academia-industry collaboration, research and development, innovation, economic challenges, sustainable growth, WB, leverage research.

## **ANALYZING HEALTH-RELATED QUALITY OF LIFE AND PROFESSIONAL QUALITY OF LIFE AMONG MIGRANT POPULATIONS IN URBAN SETTINGS: A SYSTEMATIC REVIEW**

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### **Abstract**

Migration to urban centers is becoming increasingly common as individuals seek better quality of life, improved job opportunities, and greater access to urban infrastructure. In this context, the World Health Organization (WHO) highlights the importance of addressing the health of migrants and refugees as a critical aspect of public health. This review examines the Health-Related Quality of Life (HRQoL) and Professional Quality of Life (ProQOL) of migrants living in urban settings across the European Union. It emphasizes the implications for migrant integration, public health policy, and urban planning. Following the PRISMA guidelines for systematic reviews, the research reveals a complex relationship between migrant status, incomplete integration, and various socioeconomic and health-related challenges that affect both HRQoL and ProQOL. Existing literature indicates that language and cultural barriers significantly hinder social integration, exacerbating vulnerabilities and limiting migrants' ability to navigate their new environments. As a result, many migrants experience increased marginalization and discrimination from local populations, who may perceive them as competitors for limited resources. This negative perception diminishes the quality of life for migrants and restricts their access to essential urban services such as housing, healthcare, and employment opportunities. Evidence suggests that many migrants find themselves trapped in precarious, low-status jobs characterized by inadequate pay and job insecurity. This situation heightens their susceptibility to health-related issues and undermines their ProQOL. The analysis underscores how these dynamics create ethno-racial hierarchies of exclusion, complicating the integration process and reinforcing cycles of disadvantage. In response to these findings, the review calls for targeted public health strategies and policy interventions to address the diverse challenges faced by migrant populations. The ultimate goal is to improve their HRQoL and ProQOL in urban areas. This paper underscores the urgent need for comprehensive policies that consider the distinct health and social determinants impacting migrants.

**Key words:** migrants, Health-Related Quality of Life, Professional Quality of Life, integration, exclusion, cities



## **GREEN ROOFS CONCEPT REVIEW: STRATEGIC COMMUNICATIONS FOR TECHNICAL AND ENVIRONMENTAL SUSTAINABILITY**

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### **Abstract**

Green roofs have emerged as a pioneering solution to numerous environmental challenges, reshaping urban landscapes across Europe. In recent years, Europe has witnessed a surge in the adoption of green roofs, driven by a confluence of factors including the pressing need to mitigate climate change, enhance urban biodiversity, improve air quality, and manage stormwater runoff. This eco-friendly roofing innovation involves the installation of vegetated systems atop buildings, effectively transforming barren rooftops into thriving ecosystems. While the concept of green roofs traces back to ancient times, modern advancements in technology, materials, and design have propelled Europe to the forefront of this green revolution.

At the heart of the international Erasmus+ GREENO2 Project (“*Green Roofs in higher education institutions as sustainable cEnters for research, participation, ENvironmental consciousness and O2 generation*”) lies the imperative to amplify its impact and reach through several tools. Among them, the use of strategic communications principles for high-quality and effective communication of GREENO2 Project partners with student and teaching communities is very important. Strategic communications guide and coordinate efforts to engage with key stakeholders and the large public, to whom the results of this project are addressed. Strategic communications contribute to a deep understanding, encourage active participation and, ultimately, stimulate actions towards sustainable development and implementation of green roof technologies. Through joint initiatives, educational programmes and transparent strategic communications, the GREENO2 Project aims to create a cohesive community focused on the development of green infrastructure and promoting environmentally responsible urban development.

In this study we defined a technical review on the state of art of green roofs. By actively communicating with project participants, students, faculty members and university staff, we also described a green roof prototype developed by researchers at the Nello Lupori Educational and Experimental Farm of the University of Tuscia in Viterbo (Italy) in the frame of the GREENO2 Project.

**Key words:** green roofs review, technical aspects, strategic communications, sustainability, environmental challenges

**DIGITAL SKILLS AND PROFESSIONAL DEVELOPMENT: BUILDING BRIDGES BETWEEN ACADEMIC EDUCATION AND DIGITAL LABOR MARKET**

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**Abstract**

The European Union prioritizes investing in the digital literacy of its citizens to foster economic progress and support professional advancement. It promotes the development of digital skills through initiatives such as the Digital Skills Agenda and the Digital Competence Framework (DigComp), while the Digital Europe Programme enhances funding for education, training, and the development of digital tools. Additionally, the Digital Compass 2030 sets the EU’s strategic goals for digital transition, emphasizing the enhancement of digital capabilities, infrastructure development, and the promotion of innovation.

The purpose of this paper is to present the results of the DiFree programme, which aims to provide higher education students and graduates with the digital, entrepreneurial, and professional skills needed for success in self-employment. It highlights the necessity of digital professionalism and entrepreneurial abilities in an ever-evolving labor market. The project seeks to bridge the gap between academic education and the needs of the modern digital labor market. The programme's deliverables address the demands for flexibility and digital skills in this field (interactive e-book, simulation games for skills development, a multilingual digital space with sample CVs, exercises to enhance job search and communication skills). The programme also includes mentoring with guidance from experienced freelancers and self-assessment through a skills platform. Additionally, it offers both virtual and physical collaborative spaces for networking and knowledge-sharing, as well as a guide documenting all the steps and results of the project.

Collaboration among public and private entities, educational organizations, and companies is essential to ensure the development of digital skills and the successful integration of citizens into the labor market. This study highlights precisely this collaboration, as well as the value of educational programs such as DiFree in preparing young professionals for digital freelancing, offering all the necessary tools and resources to enhance their skills.

**Key words:** digital skills, european programme, education and training, labor market

## **DIGITAL LITERACY AND COMBATING MISINFORMATION AS CRITERIA FOR THE SUSTAINABILITY OF PUBLIC HEALTH**

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### **Abstract**

The European Union considers misinformation and fake news as a serious threat to democracy and social cohesion, especially in times of elections, health crises (e.g. pandemics) and more generally, in terms of understanding crucial phenomena (climate change, migration). To meet this situation, coordinated action by Member States, institutions and the media is needed. Against this challenge, the EU has developed a number of initiatives to manage the phenomenon. Among other things, a Transparency centre for monitoring the content of online platforms (such as Facebook, Twitter, etc.) and an independent observatory (European Digital Media Observatory-EDMO) have been set up to tackle misinformation online and protect users from false information.

More specifically, however, misinformation in health becomes a major threat, as it affects people's trust in science, undermines public health but also endangers the personal well-being of the individual. False claims about diseases or treatments can lead to dangerous practices or avoidance of scientifically based solutions (e.g. vaccines). The EU promotes the fight against these phenomena by supporting transnational projects aimed at reducing misinformation as well as increasing transparency on digital platforms.

The purpose of this paper is twofold. At a first level, it attempts to draw data from the ERASMUS+ PROJECT and CORDIS EU RESULTS platforms and to outline the 'landscape' of European funding with regard to programmes that address health misinformation, strengthen health literacy and contribute to the sustainability of public health. On a second level, it presents the results of the integrated European programme, FATOS2U, which aims to train young people to identify and evaluate reliable sources of information, especially in times of social and health crises. This programme enhances young people's participation in society by promoting critical thinking and responsible use of digital media, providing an integrated learning programme, multifunctional digital resources and tools, thus helping to protect public health.

Finally, the present effort highlights the need for cooperation between public and private bodies, scientific organisations and companies to ensure the provision of accurate and reliable information to citizens on the one hand and to develop initiatives to combat false or misleading health news through the development of digital literacy skills for all citizens on the other.

**Key words:** misinformation, sustainability, public health, digital health literacy

**CULTURAL TOURISM AND LOCAL SUSTAINABLE DEVELOPMENT:  
THE CASE OF THE DIGITAL GAMES IN THE MUSEUMS**

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**Abstract**

Cultural tourism, as one of the fastest growing sectors of the tourism industry, plays a key role in promoting sustainable development by strengthening the economy while contributing to the preservation and enhancement of cultural heritage. At the local level, cultural tourism contributes to the economic vitality of communities and the various social, age and professional groups, but also strengthens their cohesion and their members' identity. It also serves as an empowerment tool, enabling local populations to actively participate in the management of their cultural heritage and to benefit from it. In this context, museums - as a key pillar of cultural development and tourist attraction - are re-shaping their strategy and digitally transforming their services. In fact, museums are exploring dynamic ways to connect the general public with cultural heritage, using technology to create interactive experiences that promote immersive storytelling and expand accessibility. Therefore, as museums invest in attracting and engaging the public, they cannot screen out the commercial development, social acceptance and mass use of the digital games sector. This study demonstrates the introduction of digital games in museums over the last decades and explores their role. According to cutting-edge research, digital games potentially promote cultural heritage, raise awareness of their importance and encourage users to visit museums (more often). In addition, the use of this medium motivates population groups (e.g. the so-called digital natives/users) to (re)connect with museum sites and cultural events. In recent years, the use of augmented, and virtual reality (VR) games in museums and exhibitions has significantly increased. In particular, 'serious games' appear to have a variety of educational benefits in heritage environments. Last, apart from being a tool for highlighting the exhibits and involving the public in cultural activities, digital games are also included as a complementary or as basic museum exhibition objects.

**Key words:** cultural tourism, sustainable development, cultural heritage, digital games, museums

## **CHALLENGES OF INTERNATIONALIZATION PROCESS OF UNIVERSITIES IN ALBANIA**

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### **Abstract**

Internationalization in the higher education institutions in Albania has been for some time the center of discussions and initiatives from the main education authorities and HEIs themselves. Internationalization also comes as an imperative from the law “On Higher Education in the Republic of Albania 80/2015” right from the start, Chapter I, Article 1, paragraph e) states: Higher Education is a public responsibility and service whose mission is to support international cooperation in the field of higher education.

Following the fall of the communist regime in the early 90s, the entire landscape of higher education started to change. New universities were formed and they were faced with the immense task of applying standards required. While in 2007, Albanian universities became part of the Bologna Process. One of the challenges they were faced with was the internationalization. Lack of experience and many other elements are the key factors why universities are struggling regarding internationalization.

Despite some efforts undertaken to cooperate with universities abroad, the real sense of internationalization came through the Erasmus+ program back in 2014. Universities in Albania were part of the exchange programs but with limited numbers in the beginning and with an outgoing tendency while the numbers of incoming students remain low due to lack of programs in English.

**Keywords:** internationalization, law, higher education institution, Erasmus+, students, programs

## **DIGITAL GAMES AND SUPPORT FOR CHILDREN WITH LEARNING DIFFICULTIES: RESEARCH AND PEDAGOGICAL APPLICATIONS**

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### **Abstract**

In contemporary juncture digital games prove themselves as a versatile developing field with a variety of dimensions and applications. More specifically, however, the teaching and learning that focus on digital games seem to cultivate the ability to represent the real world while it contributes into the development of mental abilities and contemporary digital skills as well, something that is a priority of the European Union politics. Actually, digital games gain ground more and more every day as differentiated teaching implements, too, while initiatives and good practices for the support of children who face specific learning difficulties develop progressively.

The objective of the present study is double. In the first instance, the role of digital games into the development of communicative and learning skills of children with learning difficulties {dyslexia, dyscalculia, misspelling, attention deficit hyperactivity disorder (ADHD) etc.} is examined. Based on the review of contemporary international bibliography, it is deduced that the ability to personalize, the interactivity and the attractive nature of digital games have a positive effect both on children’s frame of mind and social behavior and on their cognitive empowering as well.

In the second instance good practices are studied which show that digital games succeed learning through multiple channels, enforcing remarkably phonological awareness, reading and writing skills, understanding mathematical concepts and emotion recognition too, in children with dyslexia, autism or attention deficit hyperactivity disorder (ADHD). At the same time, the use of digital tools that incorporate playful techniques instigate significant improvement in measures of attention performance as well as in the improvement of self-organization and self-regulation in students with ADHD and specific learning difficulties.

Finally, gamification and serious games approaches also appear to lead to improved motivation, engagement and self-confidence in children with dyslexia. On the one hand this study opens a dialogue on the dynamics of digital games in supporting children with learning disabilities and on the other hand on the optimization of existing or the creation of new applications in the context of interdisciplinary collaborations.

**Key words:** digital games, learning difficulties, skills, good practices

**DIGITAL ENTEPRENEURSHIP AND SUSTAINABLE DEVELOPMENT:  
THE DISTANCE LEARNING OF GREEK AS A FOREIGN LANGUAGE  
EXAMPLE**

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**Abstract**

At a time of multicultural and multilingual societies and constant digital transformation, a nation’s language is not only a major cultural element, but also a communication tool as well as a necessary condition for personal and professional advancement. The subject of this paper is the study of synchronous and asynchronous distance learning of Greek as a foreign language and its contribution to the digital sustainability of business and related activities.

The interactive educational platform Greek Talk is presented in the study. The project was developed in accordance with the European models of communication and digital skills development and offers lessons in Greek as a foreign language in a modern, digital educational environment. The content is based on original speech and the principles of personalization and personal freedom. At the same time, pedagogical purposes are connected with Modern Greek culture thus motivating active learning while becoming the foundation of cultural awareness.

The study aims to explore teaching foreign languages with the use of digital tools as a business venture and its efficacy within a constructive learning frame. The structural parts of Greek Talk, along with the supportive digital media, the digital books and the teaching activities in use, the accomplished results and the data outline the users’ profiles. Finally, the business development potential of the certain field as well as the application, are discussed.

**Key words:** Greek language, distant education, digital media, sustainable business development

**BOOK OF ABSTRACTS**

*2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025*

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Session:

**“Cultural Heritage and Sustainable Development of Places and Cities”**



## **CULTURAL HERITAGE AND URBAN RESILIENCE: REVIVING TOBACCO WAREHOUSES IN NORTHERN GREECE**

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**Abstract**

Traditionally, heritage has been viewed as a “passive victim” of rapid urbanization, facing threats to its survival rather than being recognized for its potential to actively contribute to the sustainable development of cities. But it is a fact that cities could benefit from the protection of its heritage. It is well known that conserving historic buildings provides significant economic, cultural and social benefits.

Within this context, it is necessary to redefine how cultural heritage nowadays is understood and which role could play for the city’s resilience. In the ever-evolving landscape of urban development, the preservation of architectural and industrial heritage stands as a testament to collective history and identity.

So, in this framework, and by having in mind from one hand that “heritage is dynamic, as it links the past, the present and the future” and from the other hand that heritage protects and enhances collective historical memory, this presentation concerns on two recent research programs on the regeneration, revitalization and integration of architectural heritage of tobacco warehouses in contemporary urban environment of three different cities of northern Greece: Drama, Kavala and Xanthi.

By analyzing two tobacco warehouses as case studies, the aim was to include all the necessary stages - from documentation to restoration good practices - in order for the buildings to be integrated into the urban fabric, as well as the whole socioeconomical city network for its urban resilience. Focusing on the adaptive reuse of tobacco warehouses in these Greek cities, the paper explores strategies that not only safeguard the cultural significance of these structures but also contribute to sustainable urban futures.

Through an in-depth analysis of two tobacco warehouse case studies, the research aims to encompass all crucial stages from documentation to the implementation of effective restoration practices. These efforts seek to ensure that these significant structures are seamlessly woven into the urban fabric and contribute meaningfully to the socio-economic vitality of their respective cities.

**Key words:** cultural heritage, urban resilience, tobacco warehouses, historical urban landscape

**HISTORICAL MEMORY AND SUSTAINABLE DEVELOPMENT  
WITHIN AN URBAN CULTURAL LANDSCAPE. THE CASE OF THE  
OLD MUNICIPAL HOSPITAL OF THE UPPER TOWN OF PATRAS  
(OLD PATRAS).**

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**Abstract**

The dominant objective of a modern state is the achievement of development in the three productive sectors of the Gross Domestic Product: primary (production of raw materials), secondary (processing of raw materials) and tertiary (providing services). Basic parameters of development are social processes and practices, interpersonal communication, economic, political and cultural partnerships, as well as active strategic management policies. Development is a "whole" that requires "total quality management" in order to be properly managed, protected and promoted. The management of cultural heritage and cultural tourism must take into account and pursue "sustainable development", which meets the needs of the present, without compromising the ability of future generations to meet their own needs. Appropriate, feasible and effective cultural management promotes economic, social, cultural and environmental sustainability in a national and local context. The Old Municipal Hospital in the Upper Town of Patras (Old Patras) is a tangible example of the utilization and promotion of the local cultural capital through the process of its reuse and return to society. Being characterized as a "newer monument" by the Ministry of Culture, it receives permanent protection and cultural exploitation.

This presentation focuses on the concept and importance of cultural heritage and sustainable urban development as pillars of an effective cultural policy. It also examines the role of local organizations with cultural action, which -through their principles, objectives, policies and actions- save and promote cultural heritage, but also design urban sustainability programs. The case study investigates the historical physiognomy, use, management and development perspective of the Old Municipal Hospital of Patras as a monument-landmark of the Upper Town of Patras in relation to the sustainable development and promotion of the historical urban area in question.

**Keywords:** development, sustainability, historical memory, place-landscape, Upper Town of Patras, Old Municipal Hospital.

**MATERIAL AND IMMATERIAL CULTURE AND SUSTAINABLE DEVELOPMENT (HISTORIC CITIES, MONUMENTS, CUSTOMS). THE CASE STUDY OF THE MINOR ASIA REFUGEES IN AITOLIA-AKARNANIA, GREECE.**

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**Abstract**

Culture, material and immaterial, is one of the main pillars of Urban and Regional Development. The Greeks of Minor Asia had created a high level culture that led to an upgrade of their quality of life. This quality of life was dramatically changed after the Minor Asia Catastrophe in 1922, a fact that forced them to abandon their homeland and find a new place to settle. Almost 9.000 refugees were located to the prefecture of Aitolia and Akarnania. From the moment of their arrival brought with them their dialects, their traditions and their customs, creating a vibrant mosaic of different cultures due to their diverse origin.

The present paper investigates the culture elements that still remain in use by descendants of these people. The establishment of the cultural associations in the 80's proves the will of the maintenance of their ancestors' culture. The research is based on the study of the documents that exist in these associations and furthermore, in the General State Archives of Greece.

The culture wealth of these groups can be leveraged through innovative practices that aim at sustainable development. The promotion of traditional Minor Asia elements such as cuisine, dance and music through festivals, can attract tourists and boost the local economy.

Furthermore, the establishment of museums and culture centers dedicated to the history and the heritage of the Minor Asia refugees, contributes to the educational procedure and encourages the transmission of knowledge from generation to generation.

**Key words:** Material and immaterial culture, sustainable development, Aitolia-Akarnania

## **THE UNDERWATER CULTURAL HERITAGE AS MANAGEMENT FACTOR OF THE MEDITERRANEAN LANDSCAPE**

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### **Abstract**

The importance of the underwater landscape plays a significant role in the cultural heritage of a region, a fact that was recognized at the international level with the signing of the Convention for the Protection of the Underwater Cultural Heritage in Paris on 2 November 2001 by the General Conference of UNESCO Member States. This international approval was carried out with the prospect of improving the protection measures for the underwater heritage as a reserve of the cultural monumental history of a place. This international agreement is a continuation of the agreement signed on December 10, 1982 by the United Nations Organization on the Law of the Sea and the UNESCO Convention of November 16, 1972 concerning the Protection of the World Cultural and Natural Heritage.

The climate crisis, which has greatly altered the flora and fauna of the Mediterranean underwater areas, as well as the lack of financial resources in order to develop specialized underwater research in the Mediterranean seabed where there are finds of cultural wealth from antiquity, is rapidly making it difficult the correct implementation of the UNESCO agreement and environmental protection.

The UNESCO Convention on the protection and management of the underwater cultural heritage as well as the NATURA2000 network of the European Union which focuses on the protection of fragile marine and underwater areas are international synergies which have the sole purpose of protecting the landscape in environmental, economic and cultural terms level.

This paper highlights the importance of this collaboration of international agreements and emphasizes their interrelated importance with case studies located in the Mediterranean area.

**Key words:** cultural heritage, sustainable tourism, underwater landscape

**WORLD HERITAGE MONUMENTS AND THE CITY: SOME  
PRELIMINARY REMARKS ON THE MANAGEMENT OF THE  
MONUMENTS OF THESSALONIKI, GREECE**

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**Abstract**

The World Heritage Monuments and sites constitute a special category of monuments. Being selected for inscription in the World Heritage List on the basis of certain criteria, they are considered of outstanding universal value. According to the World Heritage Convention, article 5 (a), each State Party shall endeavor “to adopt a general policy which aims to give the cultural and natural heritage a function in the life of the community and to integrate the protection of that heritage into comprehensive planning programmes”. In this way Sustainable Development is introduced as the main axis for the protection and management of World Heritage Monuments, while improving the everyday life of the community is considered as a main goal of the implemented policy.

Palaeochristian and Byzantine Monuments of Thessaloniki, inscribed in World Heritage List since 1988, is a group of monuments, which includes secular, military (the impressive byzantine walls) and mainly religious ones (an important number of fine churches scattered throughout the historic center of the modern city). These monuments could be a main touristic attraction for the city, especially in the context of cultural tourism, while they continue to function regularly as places of worship.

The present paper aims to investigate the role of this internationally recognizable category of monuments in the economic and social life of the city of Thessaloniki and the degree to which they have contributed in improving the quality of citizens’ everyday life. For this purpose, a survey was conducted with questionnaires which address to certain groups, as well as semi-structured interviews with persons involved in the management of the city’s Unesco monuments. The survey began in the summer of 2024 and is still in progress. The first results show that the impact of the Monuments on the city’s life is not analogous to their international status.

**Key words:** management of world heritage monuments, Thessaloniki, cultural tourism, everyday life

**THE LEGACY OF HIPPOCRATES IN THE MODERN WORLD  
AIMING AT WELL-BEING AND SUSTAINABILITY. THE CASE OF  
KOS.**

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**Abstract**

The aim of the paper is to highlight how the 2500-year legacy of Hippocrates, "Father of Medicine", through his vast scientific work, can be utilized in the modern world, at well-being and sustainability, based on values able to improve our lives with a holistic approach.

If well-being is the result of the “art of living”, then Hippocrates is more relevant than ever to guide us through his valuable advice and the value system that runs through it.

Well-being. Meaning:

- Wellness, Physical and Mental Health, Reflects the quality of the social values.
- “Health is a state of complete physical, mental and social well-being”, Hippocrates said before 2.500 years

Hippocrates the Coan (of Kos) 460 B.C.- 370 B.C. ,“Father of Western Medicine”, is the first holistic physician, philosopher and teacher with a 2500-year-old heritage of knowledge .

“HIPOCRATIC OATH” is the basis of the Geneva Declaration, 1947. It is the most important ethical document for the behavior of the physicians after the World War II.

HIPPOCRATIC GARDEN. At least 250 plants are mentioned in the Hippocratic Collection. His Pharmacology is still the source to identify and isolate several modern medicaments like Aspirin against fever, Coumarines for anticoagulation, Ephedrine against cough, Vincristine against cancer, Tamoxiphen against breast cancer, and many others

Kos transformation, in a sustainable way, with ESG practices can be widely inspired by his advices for health and well-being.

Guest experience in Kos will be inspired from Hippocrates's quotes. We’re sharing his quotes so we can benefit from his wisdom and his philosophy.

Hippocrates is a heritage of Kos. His advices lead Kos the way achieving well-being. The hotels, the destination, can develop a strategy to support the Sustainable Development Goals and actively to implement them.

**Key words:** Hippocrates, Sustainability, Culture, Heritage, Well-being, Kos, Tourism

## **OPTIMIZING DESTINATION MANAGEMENT: THE ROLE OF BIMs IN PROMOTING CULTURAL HERITAGE AND SUSTAINABILITY**

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### **Abstract**

The objective of this study is to analyse the relationship between Business Information Models (BIMs) in tourism and cultural tourism sustainability, as a foundation for effective destination management. Within the tourism sector, there exists a wide variety of business models, each designed to address specific customer requirements. The competitive environment in which these models are developed defines their objectives and operational methodologies based on the specific needs they aim to address. By aligning their goals to meet market demands and adjusting their operations accordingly, they ensure their relevance and efficacy within the tourism industry. The analysis aims to categorize the most known and widely used BIMs in the field of tourism services and to collect tourist experience models for travellers to align them (matching) with data and expert activities. BIMs are also utilized to facilitate the creation of extended destination profiles, offering critical insights into cultural resources, tourist demand, and the carrying capacity of a destination. This leads to strategic planning that mitigates over-tourism and supports the sustainable utilization of cultural assets. The fact that these models aid in data-driven decision-making, enables the development of policies that prioritize local community participation and integrate their needs into tourism strategies. Through their data analysis and management capabilities, they enhance the development of strategies that promote sustainability, focusing on cultural heritage preservation and supporting of local needs. Furthermore, by analysing visitor preferences and behaviors, these models help identify tourists who are inclined towards sustainable practices and cultural appreciation. This ensures the attraction of a visitor base oriented towards sustainability goals. Another aspect considered in this paper is the use of artificial intelligence in destination management, not only for the deeper understanding of tourists' needs but mainly for stakeholders responsible to create customised branded experiences rather than uncoordinated visitor experiences. Finally, this paper also highlights the significant role of BIMs in connecting tourism development and sustainability, demonstrating their potential for an inclusive approach to destination management. By integrating advanced information models into tourism practices, the paper contributes to a deeper understanding of how technology and data can drive sustainable cultural tourism strategies.

**Key words:** Business Information Models, AI in tourism, cultural tourism, sustainability

## **REVIVING TRADITION: TOBACCO WAREHOUSES IN KAVALA AS PILLARS OF SUSTAINABLE GROWTH**

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### **Abstract**

Tobacco and tobacco warehouses hold a significant place in Greece’s history, particularly in the Region of Eastern Macedonia and Thrace. The area is renowned for cultivating Oriental Tobacco, which is officially recognized on Greece’s National Inventory of Intangible Cultural Heritage (No. 52| 2020). Beyond its historic and cultural value, this legacy is reflected in the region’s architectural heritage, with numerous tobacco-related structures still prominently integrated into the urban fabric today.

The present paper examines the role of tobacco warehouses in Kavala, a city in Eastern Macedonia and Thrace, in fostering sustainable urban growth and preserving cultural heritage. Once a prominent tobacco hub, Kavala’s historical identity is closely tied to the tobacco industry. Today, these heritage buildings, which were once vital to the city’s economy, are now envisioned as key assets for revitalizing local communities through adaptive reuse.

By analyzing the architectural, social and economic significance of tobacco structures, the research highlights their potential to drive sustainable urban growth, enhance tourism, strengthen social cohesion and safeguard cultural heritage, thereby contributing to the city’s ongoing transformation. Repurposing the warehouses can create a link between Kavala’s rich past and its future, blending history with modern sustainable principles. This transformation can enhance community engagement, promote tourism and create eco – friendly business opportunities. As iconic landmarks of adaptive resilience, tobacco buildings serve as vital assets in addressing contemporary urban challenges, while maintaining a balance between tradition and innovation.

**Key words:** Tobacco warehouses, Kavala, Sustainable Growth, Cultural Heritage, Socio-economic impact.



**BOOK OF ABSTRACTS**

*2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025*

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Session:

**“Sustainable Urban Public Space”**

## **TRANSFORMING URBAN SPACES FOR REMOTE WORK: POLICY IMPLICATIONS AND DESIGN STRATEGIES**

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### **Abstract**

The increasing adoption of remote work is reshaping how we approach urban planning, residential living, and workplace design. This paper delves into the implications of remote work on urban infrastructures, highlighting the need to adapt planning policies to this evolving trend. By addressing residential land use, transportation, energy, and workspace design, the study aims to provide actionable insights for urban planners, architects, and policymakers.

Remote work's influence extends to residential preferences, with mixed-use communities offering local amenities becoming increasingly desirable. Reduced reliance on proximity to workplaces may drive demand for suburban and rural housing, emphasizing the need for more spacious and affordable homes. This shift calls for a reevaluation of urban planning norms (e.g., the European standard of 40 m<sup>2</sup>/person) to accommodate home offices and home outdoor workspaces (e.g., on balconies). Additionally, the increase in home energy consumption calls for enhancements to internet infrastructure and a potential need to shift towards renewable energy sources.

Transportation planning may also shift, with cities prioritising walkability, biking, and public transport over car-centric plans. Workplaces, meanwhile, are evolving toward more flexible models, including smaller satellite offices, coworking spaces, and hybrid setups. These spaces not only reduce operational costs for businesses but also cater to the needs of remote workers by offering shared amenities, flexible leasing, and opportunities for community engagement.

This study, funded by the European Union Horizon Europe project R-Map (GA101132497), began in February 2024 and is currently grounded in a comprehensive literature review. Preliminary findings will be supplemented by ongoing research and first-hand insights to be presented at the 2nd OPEN-AIR CITIES International Conference in February 2025.

**Key words:** Remote work; urban planning; urban policy; urban design; use of land

**REGENERATIVE AND CIRCULAR CITY DEVELOPMENT  
THROUGH DISTRIBUTED URBAN PRODUCTION AND THE MAKER  
MOVEMENT IN THESSALONIKI, GREECE**

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**Abstract**

This paper's goal is to analyse the potential of distributed urban production to lead to regenerative and circular city development in Thessaloniki, by engaging urban and spatial analysis tools, and by building upon the results of the EU Horizon2020 Pop-Machina project (Grant Agreement n. 821479). Pop-Machina grasps the opportunity to nurture the bottom-up development of maker communities and supports them to create new, circular and marketable products collaboratively. This is expected to stimulate urban innovation, reshape the urban productive system, and result in new job creation and the enhancement of the urban regeneration potential of the city.

To this end, this paper (i) provides an overview of the regulatory and strategic context in which the city operates; and (ii) applies an innovative methodology to identify the characteristics of its urban maker ecosystem and the urban assets that may be leveraged as sources of strength for a more circular and regenerative urban production ecosystem. The results of this spatially based investigation of the cultural, socio-economic, regulatory, and technological characteristics of the maker community ecosystem of Thessaloniki provide insights for local, national and EU-level policy recommendations towards optimising distributed urban production for a circular and regenerative development.

More specifically, the study's findings offer insights into the city's metabolism and can inform urban planning and design decisions to embed circular and regenerative measures effectively. They contribute to the development of recommendations for specific types of maker activities and maker infrastructure that should be developed, resonant with the city's making profile, and needs identified in specific neighbourhoods. Last, the paper proposes changes that need to be made across scales to open new pathways for the maker movement's contribution to urban circularity and regeneration.

**Key words:** Thessaloniki; urban policy; urban planning; spatial analysis; urban productive system; urban regeneration; circular economy

**SERVICE DESIGN IN URBAN LIFE: PROPOSING A CO-DESIGN  
MODEL FOR INTERVENTIONS IN URBAN COMMONS**

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**Abstract**

Urban commoning refers to making alternative spaces and relationships amongst local actors, and it is strongly dependent on local community and government. Design has been extensively utilized in the process of identifying, maintaining, or altering commons. However, challenges such as limited adaptability of the local government, local culture that does not facilitate participation, lack of infrastructure, and skepticism towards new methods hinder the development of experiments for a more extensive exploration. Design shows potential for greater impact, if it addresses the commons within a more strategic framework.

This thesis examines the relationship of service design with the urban reality, in search of frameworks through which the latter can be redefined, as we attempt to transition to more sustainable futures. Following a literature review, analyzing first of all the meaning of urban commons, then reviewing approaches not in the design field, the author identifies the characteristics which define design as the most relevant framework through which we can manage today’s urban complexity. This has a goal of contributing to a more fluid social regulation in regards to urban matters, while building infrastructure and tools to support the aforementioned transition. It is deemed most suitable for design activity to occur in the organizational, or meso-level of the system. As a result of that, a model for managing design interventions of urban commons is presented, to be used by a multitude of organizations and actors, enabling parallel interventions towards one common. This model is strongly inspired by co-design, service design, urban commoning, and futuring methodologies.

**Keywords:**Service Design, Co-Design, Urban Commons

**URBAN OBSERVATORIES. GAZING AT THE CITY.SNAPSHOTS AND ALLEGORICAL INTERPRETATIONS OF THE URBAN LANDSCAPE OF ATHENS**

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**Abstract**

The urban landscape of Athens, characterized by a complex interplay of metropolitan experiences, cultural layers, diverse encounters, historical memory, social transformations, and aesthetic impulses, serves as a focal point for observation. Urban observatories have been established in various locations, including Ymittos, Omonia Square, Kifissia Avenue, the electric railway lines, the refugee camps along Alexandra Avenue, Kerameikos, and the dwarfs of Petroupolis, among others. These small-scale architectural interventions propose supervisory trails and pathways, curate Athenian imagery, and function as sites for reflection on the urban imaginary for both residents and visitors. Experimental and alternative structures populate the urban public space, transcending the mundane and repetitive nature of busy urban areas, particularly in squares with high pedestrian traffic or in the serene environments of the mountains. These structures, whether viewed from above, in close proximity, or from a distance, engage with the city and contribute to its mythology through the introduction of new spatial narratives and representations. By fostering embodied presence, they expand the domain of visual culture, facilitating the recollection of monuments and guiding physical contemplation, particularly in relation to emerging technologies. Furthermore, they establish prototypical models for interpreting the materiality of urban spaces, unearthing forgotten fragments of the city's discontinuous, ambiguous, and indistinct identity, while revisiting the memory of historical events and socio-political ceremonies.

The graduate student proposals for the design of architectural structures aimed at observing urban life and public spaces present unique chronotope narratives of Athens' urban character. This city is marked by diversity, contradiction, and unpredictability, where its historical essence, mythological roots, and archaeological landmarks converge with its contemporary, fluid, and chaotic identity. These proposals provide both analogue and digital panoramas that explore historical and cultural, geographical and urban, as well as anthropological and psychographic attributes and variances. They seek to decode the random, the quotidian, and the familiar aspects of urban life and identity.

**Key words:** Spatial narratives, urban observatories, supervision, architectural design, public space, architectural panoramas, chronotopes, memory.

**BOOK OF ABSTRACTS**

*2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025*

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## **STRATEGIC STAKEHOLDER ENGAGEMENT FOR LONG-TERM SUSTAINABILITY OF URBAN DEVELOPMENT PROJECTS**

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### **Abstract**

Sustainability in urban development requires a multi-faceted approach to stakeholder engagement and long-term project planning. This presentation explores the critical role of stakeholder analysis in ensuring the success and continuity of urban development initiatives, focusing on sustainability outcomes beyond the initial four years of project implementation.

The research identifies key stakeholder groups across the quadruple helix model—government, industry, academia, and civil society—and evaluates their impact on project sustainability. Through a comparative analysis of case studies from European cities, the presentation highlights effective strategies for collaboration, resource mobilisation, and policy alignment. These strategies have been shown to enhance project outcomes and address environmental, economic, social, and cultural dimensions of urban sustainability.

This presentation emphasises the need for dynamic stakeholder frameworks that adapt to evolving urban challenges, ensuring inclusive participation and long-term project viability. It provides actionable insights into integrating stakeholder analysis into urban planning processes, contributing to the realisation of Sustainable Development Goals (SDGs), including Goal 11 (Sustainable Cities and Communities) and Goal 17 (Partnerships for the Goals).

This work aims to underscore the importance of sustainability planning that extends beyond the initial project phase, offering tools and methodologies for urban developers and policymakers to design resilient and inclusive cities.

**Key words:** Stakeholder analysis, sustainability, urban development, quadruple helix, project lifecycle, SDGs

## **EXPLORING PUBLIC PERCEPTIONS OF THE PARIS 2024 OLYMPICS' SUSTAINABILITY STRATEGY: A CONTENT ANALYSIS OF COMMENTS ON YOUTUBE VIDEOS**

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### **Abstract**

Mega-events like the Olympics are notable for their substantial impact on host cities. The environmental, economic, and social damages caused by past Olympics have influenced perceptions of such events. Over the past two decades, sustainability has become a core value for the International Olympic Committee, and the Paris 2024 Olympics created a unique experience through various sustainability strategies. The Paris 2024 Olympics have been promoted in the media as the ‘greenest’ Olympics to date. Additionally, as the most digitalized Olympics ever, Paris 2024 has made sustainability-focused strategies more widely known.

This study aims to analyze how the highly publicized sustainability strategies of the Paris Olympics on social media platforms are perceived by viewers. It focuses on the spatially based strategies of the Paris 2024 Olympics and examines their impact on environmental, economic, and social sustainability. The paper also includes a review of how these strategies differ from past Olympics.

The study analyzes the six most-viewed videos from international English-language news channels on YouTube that emphasize the sustainability of the Paris Olympics. The general approach of these videos and the perspectives of viewer comments are analyzed using content analysis with Maxqda-software. Sentiment analysis is conducted to assess how the sustainability strategy of the Paris Olympics is perceived.

Initial findings reveal that, despite neutral or positive portrayals in the videos, many comments criticize the so-called sustainability strategies as causing harm to both nature and the social fabric of the city. Some eco-friendly decisions are seen as ‘cheap’ attempts aimed solely at economic gain. However, some viewers appreciate these efforts. Suggestions also include holding the Olympics repeatedly in the same cities to reduce their impact.

The study highlights that sustainable development cannot be achieved through top-down policies alone; public awareness is crucial. Effective use of media can play a key role in enhancing positive perceptions of sustainability. The findings could encourage local and regional organizations to adopt more participatory decision-making processes for sustainable development.

**Key words:** Mega-events, Sustainable Development, Perceived Sustainability, Olympics



**A SENSITIVE APPROACH TO THE HISTORIC URBAN LANDSCAPE.  
THE INTERWAR APARTMENT BUILDINGS OF THE LINEAR OPEN  
SPACE OF FOKIONOS NEGRI IN ATHENS, GREECE**

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**Abstract**

The Historic Urban Landscape (HUL) represents a carrier that humanity is obligated to preserve without interfering with the invincible force of change that is the city itself. UNESCO's approach to managing historic urban landscapes is holistic, integrating the goals of urban heritage preservation and economic and social development. In Athens, the legal framework protecting the architectural heritage of the city centre promotes archaeological richness and neoclassical interpretation for historical and political reasons, neglecting the protection and promotion of open spaces and important buildings of the 20th century. These buildings complete the image and identity of the city as modern monuments, interpreting the mechanisms of its evolution and how people accept it in their daily lives.

The research project "The Interwar Urban Landscape of Fokionos Negri Street: Documentation, analysis, interpretation" aims to study the historical urban landscape of the linear open space of Fokionos Negri, an area formed in the first half of the 20th century and hosts many buildings characteristic of "Athenian Modernism" and also, a very important area for the social and functional evolution of the Kypseli district and the Athenian centre.

One of the main aims is to identify and study buildings of particular architectural/historical/cultural value, which contribute in a specific way to the composition of the urban landscape, highlighting the overlapping layers of the city's history. In this presentation, we focus on interwar apartment buildings located along the Fokionos Negri Street through maps, archival research, personal observations, interviews of the owners and the patrons of the linear park, films and photo reports when the park was the central leisure pillar in Athens. The multimodal methodological choice seems provide information with interpretive value and depth of experience that can contribute to the understanding and appreciation of the historical urban landscape in Greece.

**Key words:** historic urban landscape, interwar urban heritage, Kypseli, Fokionos Negri Street, Athenian modernism

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**BOOK OF ABSTRACTS**

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Session:

**“Urban Regeneration”**

## **THE EXTERNALITIES OF CONTEMPORARY ARCHITECTURE IN TERMS OF SUSTAINABILITY**

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### **Abstract**

At a time of energy transition, how contemporary architectural design can contribute to United Nations Agenda 2030 for Sustainable Development and the New European Bauhaus (NEB) which aims at transforming the European Green Deal's goals into tangible, positive experiences for the citizens?

Many contemporary green building rating tools and sustainability metrics have limitations in driving truly sustainable outcomes. Focusing narrowly on energy efficiency without considering the whole life cycle and broader environmental and social impacts can lead to suboptimal results. Knowing that the building industry is one of the major contributors to climate change, sustainable building design has to move from an energy efficiency-centered approach to a people-centered experience trying to link sustainability rating systems with comfort of occupants and conservation of natural resources. Buildings can act as significant catalysts for improving or degrading the quality of life and the environment.

This paper investigates the externalities of contemporary architecture in terms of sustainability. Mapping these externalities and shedding light on good practices is crucial for integrating sustainability into planning and helping the decision - making process to contribute to the transformation of the built environment for as many people as possible and for as long as possible. The collection of relevant data on design and construction of sustainable buildings will help establishing design as a decisive factor for reducing carbon footprint and implementing design disciplines to confront contemporary problems such as climate change, access to resources, health and well being. This research underlines the need for an integrative, multidisciplinary approach that sees architectural design not just as a technical or aesthetic endeavor, but as a driver of societal and environmental well-being.

**Key words:** Architecture, sustainability, externalities

## **REDESIGNING A PUBLIC SQUARE FOR MANIFESTATIONS: A SERBIAN EXAMPLE OF SOMBOR SQUARE**

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### **Abstract**

One of the basic functions of a traditional public square is to be a central place for different outdoor events, such as open markets, cultural manifestations, concerts, or religious and political rallies. However, public squares without vibrant surroundings specifically dedicated to outdoor events are rather rare. In many cases, they are particularly formed for these purposes, but some have historically developed into public squares for events.

One such historical example is the Square of the Holy Trinity in Sombor, Serbia. Initially, this square was formed in the city centre to house all functions typical for a central urban square, including shops and administrative buildings in its surroundings. However, during the 20th century, the square in Sombor lost this initial multifunctionality, as surrounding buildings became protected as heritage and got mainly cultural institutions, while the square transitioned to be a city place for specialised mass events, such as a flower market on springs, ethno-bazaar on autumns or ice rink on winters.

The City of Sombor organised an urban-architectural competition for the conceptual (re)design of the Square of the Holy Trinity in 2023. One of the main premises given in the competition instructions was that all proposals for the new design had to preserve the function of a public square for various urban events surrounded by heritage buildings. On the other side, the very same instructions emphasise that the same design proposal had to make the square more functionally active and physically attractive for different users. These two, quite opposite stances made a challenging framework for the new urban design. Between ideas from urban design and the events literature, this paper aims to explain all these constraints during the design process and customisation of the final design for this Sombor square for public events.

**Key words:** redesign, public square, manifestations, cultural heritage, competition, Sombor

**GAZI - PSALLIDI: EXPLORING DIFFERENCES BETWEEN  
TRADITIONAL MAP MAKING AND CONTEMPORARY MAPPING  
PRACTICES UPON TWO ATHENIAN NEIGHBOURHOODS**

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**Abstract**

As part of the "Architectural Design 2" course of the Civil Engineering Educators Department of the School of Pedagogical and Technological Education (ASPETE) that took place during the fall semester 2024-2025, students were asked to survey the Psallidi neighbourhood in Marousi, Athens and on this basis to choose a location for an urban intervention. Nine years ago, during the fall semester 2015-2016, in the "Urban Planning 1" course of the School of Architecture of the National Technical University of Athens (NTUA) students were asked to survey the Gazi neighbourhood in Central Athens and upon their findings to propose an urban intervention.

The methodology for the survey that has been proposed by the teaching team in both cases consisted of three kinds of maps, one analytical and objective and two perceptual and subjective: land uses, mental mapping and psychogeography (of both feelings and multisensory data).

Although coincidentally the two neighbourhoods have a similar trace on a map (size and shape), they differ essentially in that while Gazi is a dense, central area with a mix of uses and forms, Psallidi is a peripheral residential area with relative uniformity.

By comparing the students' maps that emerged from the two mappings, the paper attempts to explore how the latest time-perceptual and subjective approaches contribute to a better understanding of the content of urban space that extends beyond function and embraces aspects such as relationship and interaction of the individual with the urban space. Additionally, it is important to explore the impact on the forms and volumes produced in both areas as a result of the evolutions of the two areas based on their socio-cultural differences. Finally, this study will act as a pilot juxtaposition that will allow researchers to trace social, cultural, and urban function issues by following the triple mapping process.

**Key words:** mental mapping, psychogeography, urban evolution, Marousi, Gazi

**Acknowledgements:** Maria Vrasida and Efrossyni Tsakiri were course moderators for the ASPETE Course. Archontoula Vasilara and Efrossyni Tsakiri were course moderators for the NTUA Course.

**CINEMA AS A PLANNING “TOOL” FOR A SUSTAINABLE, CHILD-FRIENDLY AND THEREFORE WORTH LIVING CITY**

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**Abstract**

According to Jorge Luis Borges “city is always in search of poetic”. The ability of art to shape language, which differentiates each place, also determines its creative expression. Cinematic representation is a special process to investigate the way we imagine cities as an experience, but also as a theoretical construction, since the cinema projects authentic urban images, which interact with the city's residents. Movies allow us to draw some conclusions about how we experience real urban space, how we would like it to be, what we are afraid of or what we hope it can happen in the future. After all, cinema has no right to set aside life, but it must observe, listen and doubt...

As the architectural historian Francois Loyer mentions “to find out what a city is, we should not ask Le Corbusier, but Michelangelo Antonioni, Francesco Rosi or even Jean-Luc Godard”. The study and interpretation of the city in cinema seeks in its representations that social dynamic, which will allow a meditation about the city to be expressed. It is an opportunity to deepen into a theory of representation, for the sake of a theory of spatial practice.

The cinematographic lens roams the city streets, penetrates walls and touches its soul and mind, its myth and word on diachrony. It offers an ability of deepening and metamorphosing the fragmentary and ephemeral urban experience into systematized and unified knowledge, which makes us even capable of urban planning action in an effort for a sustainable, pleasant for children and therefore worth living city. After all the former General Secretary of the United Nations, Ban Ki-moon, pointed out that “our struggle for global sustainability will be won or lost in cities”.

**Key words:** cinema, representation, planning “tool”, urban, sustainable, worth living, city

## **CITY-CENTERED VALUES**

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### **Abstract**

City-centered guarantees consist in forms of legal protection of institutions and human rights in the context of towns and cities. On the one hand, the right to the city has been conceived by the French philosopher Henri Lefebvres as a radical challenge for participation of urban dwellers in decision-making, such as spatial planning, and for social inclusion. It has recently begun to be constitutionalized, as it is the case of the 2008 Constitution of Ecuador, which in article 31 regulates the right of persons “to fully enjoy the city and its public spaces”. On the other hand, the term ‘right to Tourism Municipality’ has not been consecrated, although Tourism Municipality has been introduced in some legal orders of Spanish Autonomous Communities. This institution enables cities, including coastal ones, to develop further their potential as tourist destinations, inter alia through additional financial support.

The present paper investigates novel values and guarantees of urban dwellers and cities, related to both cities and public spaces, like urban rights, in the current framework of the world tendency of urbanization and littoralization and in connection with various normative fields, such as spatial planning law and coastal law.

The results of the research showed that there is a significant tendency of convergence of urban guarantees, despite their heteroclitic background. This is the case of the generic collective right of persons to the city and the special right of a collective figure, such as a municipality, to be designated as a Tourism Municipality and therefore to promote its tourism development. Last but not least, the constellation of city-centered values should be completed by maritime values, illustrated by the principle of port’s hospitality, given that the entelechy of any type of port, urban or not, consists in hospitality being offered to both people and ships...

**Key words:** city-centered values, coastal law, port’s hospitality, right to the city, right to tourism municipality, urban guarantees, urban rights

## **THE ELLINIKON: A CASE STUDY OF SUSTAINABLE URBAN REGENERATION AND DEVELOPMENT**

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### **Abstract**

The Ellinikon project, known as "The Ellinikon", is the largest urban regeneration project in Europe, transforming the site of the former Ellinikon International Airport into a modern, sustainable city. The project includes the creation of a 2,000,000 sqm coastal park, neighbourhoods with state-of-the-art residences, shopping destinations, gastronomy and entertainment options, luxury hotels, casinos, business offices, conference centres, education, sports and cultural centres

The methodology of the study includes a comprehensive review of existing literature on urban regeneration and sustainable development, as well as a case study analysis of the Ellinikon project. The review will examine theories and practices of sustainable urban development, while the case study will focus on the design, implementation and challenges of the project.

Expected outcomes include the emergence of Ellinikon as a model of sustainable urban development, with an emphasis on the creation of green spaces, the integration of new technologies and the promotion of the circular economy. In addition, it is expected to contribute to the economic development of the area, creating new jobs and attracting tourism. The study will provide valuable insights for the implementation of sustainable practices in future urban regeneration projects.

**Key words:** Ellinikon project, sustainable urban regeneration, economic development, case study.



**FROM AUTOTROPH SYSTEMS TO CITIES. RETHINKING TERRITORIAL METABOLISM TOWARDS URBAN SUSTAINABILITY.**

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**Abstract**

The relationship between territories and energy has long been a subject of interest in urban studies. This study revisits paradigms that have historically influenced this relationship, while adopting a conceptual approach analogous to autotroph systems—self-sustaining processes capable of generating energy internally without significant reliance on external inputs.

Territorial spatial organization and administrative boundaries are typically not structured with regard to the dynamics of energy consumption and production. By reinterpreting territories through an energy-balance perspective, this paper explores the potentiality of energy autonomy through dynamic exchanges among the territorial components.

To initiate a dialogue on such a redefinition that could stimulate a transition in energy distribution, a case study linked to the ideal capacity of a territory to self-sufficiency is interrogated. This reading proposes a reinvention of territorial organization—one that evolves as a dynamic system interwoven within interconnected complex relationships.

Using the Île-de-France region in France as a case study, the research employs GIS tools to translate various types of land uses into energy-producing and energy-consuming spaces. It further identifies sub-spaces and zones at different scales that bear energy balance characteristics. This reinterpretation of the territorial limits and peripheries, lean towards a new cartography of the territory in question.

The proposed experimental approach envisions thus an energy mix analogous to land-use mixes, suggesting a transformative framework for territorial organization. Such a potential paradigm shift in a territory's metabolic processes could lead towards a framework focused on conserving energy cycles and achieving sustainability, drawing an analogy with the autotroph systems.

**Key words:** urban metabolism, energy autonomy, autotrophic systems, territorial organisation

**GOVERNANCE AND SUSTAINABILITY OF SPECIAL URBAN PLANS  
IN THESSALONIKI: PUBLIC PARTICIPATION AND URBAN  
TRANSFORMATION**

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**Abstract**

The financial crisis in Greece highlights the urgent need for reforms to promote development. A central pillar of these reforms has been the promotion of strategic investments and the introduction of innovative tools in urban planning, such as Special Urban Plans (SUPs). These plans aim to address urban challenges by offering flexibility and adaptability. However, their complexity and novelty have made it challenging to draw definitive conclusions about their impact on urban space. Are SUPs effective in fostering sustainable urban development as intended? To what extent do they engage citizens in their processes and ensure high-quality urban planning?

Thessaloniki, Greece's second-largest city, serves as an ideal case study for exploring these questions. The city faces pressing challenges, including population density, environmental degradation, and insufficient infrastructure, making SUPs a critical strategy for urban transformation.

This paper evaluates the sustainability of SUPs in Thessaloniki using a multidimensional approach that combines qualitative and quantitative analyses. It focuses on sustainable strategies by examining policies, urban interventions, and their socio-environmental impacts. The findings contribute to a deeper understanding of the effectiveness of Thessaloniki's SUPs, offering actionable insights for improving their implementation to achieve more inclusive and sustainable urban development. Evidence suggests that SUPs have the potential to foster urban resilience and enhance quality of life. However, challenges such as limited public engagement and inadequate sustainable outcomes persist, highlighting areas for improvement.

**Key words:** SUPs, Urban Sustainability, Urban planning, Socio-environmental Impact, Thessaloniki

**BOOK OF ABSTRACTS**

*2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025*

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Session:

**“Circular Economy and Sustainable Development”**

## **THE CIRCULAR ECONOMY - A RESPONSE TO CLIMATE CHANGE**

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### **Abstract**

Circular economy - an economic system aimed at eliminating waste and continuous use of resources. It includes sharing, reusing, repairing, renovating and recycling to create a closed system. All waste becomes a resource or raw material for the next process, thus contrasting with the traditional or linear economy, in which the production model is take - make - use - throw away.

Municipalities have the greatest influence on outcomes – by setting an example and shaping the environment.

Considering Latvia's unique characteristics and the role of local governments in the circular economy, their importance has been established.

This article will tell about the methodology development and results of the first Latvian Circular Economy Index. It is commendable that all Latvian municipalities have been evaluated.

Self-assessment of municipalities and population surveys are included in the methodology. The resident's survey was conducted online (CAWI) using a closed, representative respondent panel. The survey asked residents about the municipality's and their own activities in the field of circular economy.

The Circular Economy Index for municipalities, developed for the first time in Latvia, will provide an opportunity to self-assess the processes and results in the work of institutions, organizations and municipalities. It will also be possible to follow the dynamics of your performance by years or periods and compare it with the results of others. At the same time, it will be possible to receive expert recommendations on priority processes to be improved, as well as promote success stories and examples of good practice.

Based on the self-assessment and index methodology, it will be possible to better understand the role of the circular economy in the work of institutions and organizations, in the performance of municipal functions, and in cooperation with interested parties.

Recommendations for more responsible behaviour, support mechanisms and fundraising are available for municipalities.

**Key words:** Circular economy index, Municipalities, Latvia

## **INTEGRATING CIRCULAR ECONOMY INTO SUSTAINABLE DEVELOPMENT GOALS: INSIGHTS FROM LIFE CYCLE IMPACT ASSESSMENT**

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### **Abstract**

The integration of the circular economy (CE) into Sustainable Development Goals (SDGs) offers an approach to sustainable resource management and economic growth, with Life Cycle Impact Assessment (LCIA) as a tool for evaluating environmental and socio-economic outcomes. This study investigates how LCIA methodologies can drive circular economy strategies within the textile industry, addressing SDG targets such as responsible production and consumption and climate action. Textile production, which accounts for approximately 10% of global carbon emissions and 20% of industrial water pollution, presents significant opportunities for CE practices like recycling, reusing, and material innovation. Case studies from European textile manufacturers demonstrate the potential of LCIA in optimizing resource use, minimizing waste, and reducing greenhouse gas emissions by up to 50% when transitioning from virgin polyester production to closed-loop recycling systems.

LCIA software tools such as OpenLCA and GaBi were employed to assess the environmental impacts across key lifecycle stages, including raw material extraction, manufacturing, distribution, and end-of-life disposal. Results indicate that incorporating recycled fibres can lower energy consumption by 30–40%, while water usage can be reduced by as much as 70% compared to conventional production methods. Furthermore, the adoption of eco-design principles, supported by LCIA insights, showed a potential reduction in landfill waste by 25% through product lifecycle extension initiatives such as repair and reuse programs.

This research highlights the socio-economic implications of CE adoption, including job creation in recycling and upcycling sectors, which could increase by 15% in regions implementing waste management systems. Policy recommendations emphasize the importance of regulatory frameworks that incentivize sustainable practices, such as extended producer responsibility and subsidies for green technologies. The findings show the value of cross-sector collaboration, combining insights from LCIA with CE strategies to improve sustainable consumption patterns and support the transition towards a low-carbon textile industry.

**Key words:** Circular Economy, Life Cycle Impact Assessment, Resource Management, Recycling and Reuse

**STAKEHOLDER PERCEPTIONS ON BARRIERS AND DRIVERS FOR THE ENHANCEMENT OF CIRCULAR ECONOMY IN THE CONSTRUCTION SECTOR**

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**Abstract**

Circular Economy (CE) is regarded as a key strategy for achieving climate change mitigation. Applying CE principles in the construction sector is of great importance with regard to the sector's substantial CO<sub>2</sub> emissions. To achieve this goal, it is important to engage the key stakeholders and explore their views on the financial, environmental, social, and policy aspects of CE practices in this sector.

The scope of this study is to identify the perceptions of key stakeholders on the most important barriers for the adoption of CE, and on the strategies needed to transition to a CE in the construction sector. To this end, a workshop entitled “Working with stakeholders on CE practices enhancement” was organized in Brussels in June 2024, bringing together key stakeholders from the research, academic, industrial, and policy areas.

During the workshop, the stakeholders participated in small group discussions, and through a brain-storming process, they identified i) the specifications/requirements of the CE construction products, ii) the barriers against the adoption of CE practices, and iii) the drivers that would help transition towards CE. Then, the stakeholders selected and ranked the most important financial, political, environmental, social, and technological aspects for the above three topics. Based on the above process the most significant specifications/requirements, barriers, and drivers were identified.

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The findings of the above methodology revealed that the stakeholders highlight the importance of reducing the prices of CE materials and technology, the need to increase the demand for such products, and the importance of imposing regulatory and financial incentives to enhance CE in the construction sector.

**Keywords:** Circular economy, construction sector, barriers, drivers, strategies, stakeholders, perceptions

### **Acknowledgments**

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In addition, part of this research is conducted within the framework of the ongoing Ph.D. of Theoni I. Oikonomou, to be awarded by the Department of Economics and Sustainable Development of Harokopio University.

## **CIRCULARITY IN THE BUILT ENVIRONMENT: INSIGHTS FROM ALBANIA**

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### **Abstract**

The construction sector, a significant contributor to global resource depletion, waste generation, and carbon emissions, is facing a growing pressure to transition to Circular Economy (CE). This study investigates the dynamics of CE adoption in Albania's construction industry, highlighting the barriers, drivers, and stakeholder roles essential for this transformation. Positioned within the broader context of the Western Balkans, the research addresses the region's unique challenges and opportunities in aligning with global sustainability goals and European Union (EU) standards.

Using a mixed-methods approach, including a systematic literature review, policy analysis, and semi-structured interviews, the study identifies the significant challenges of waste management, recycling, and energy consumption patterns, alongside the opportunities for sustainable development within the Western Balkans. Simultaneously, it explores critical drivers such as economic incentives, advanced technologies, institutional collaboration, and public awareness campaigns that support the sector's transition toward sustainability.

**Key words:** Circular Economy, Build Environment, Construction, Albania



## **EDUCATING FOR A CIRCULAR ECONOMY: POLICY AND PRACTICE IN WESTERN BALKAN HIGHER EDUCATION**

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### **Abstract**

This paper explores the integration of Circular Economy (CE) principles into higher education systems as a pathway to fostering sustainable development, economic resilience, and climate adaptation in the Western Balkans. The region, encompassing Albania, Kosovo, Bosnia and Herzegovina, North Macedonia, Montenegro, and Serbia, faces significant environmental, economic, and societal challenges, exacerbated by limited awareness, fragmented policies, and slow adoption of sustainability practices. Higher Education Institutions (HEIs) are uniquely positioned to address these gaps by equipping students with the skills and knowledge needed for a green economy and embedding CE principles into curricula, research, and community engagement.

The paper conducts a comprehensive need analysis, focused on selected HEIs within the region, identifying barriers such as a lack of interdisciplinary approaches, educator capacity, and alignment with labour market demands. A strategic framework is proposed to integrate CE into HEIs through curriculum development, capacity building for educators, industry partnerships, and the establishment of CE hubs. The framework emphasizes interdisciplinary learning, hands-on experiences, and collaborations with societal stakeholders to foster innovation and align education with regional and global sustainability goals. To support this transition, this paper will provide policy recommendations for regional cooperation, funding for CE initiatives, public awareness campaigns, and alignment with labour market needs.

**Key words:** Circular Economy, Higher Education, Western Balkans

**TOWARD A REGENERATIVE FUTURE: CIRCULAR ECONOMY, ECOSYSTEM CONSERVATION, AND THE CO-EVOLUTION OF SOCIAL-ECOLOGICAL SYSTEMS.**

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**Abstract**

The paper focuses on circular economy and novel design methodologies for sustainable housing development and urban linkages. Its point of departure is the hypothesis that the key principle of Sustainable Development is ecosystem conservation. It will investigate methods conserving the ecosystem and biodiversity because living organisms will cease to exist without these. The engagement of community-based organisations, savings and building groups, or small-scale housing cooperatives is also essential for supporting identity formation, social cohesion, empowerment and shared ownership. In the framework of this paper, a unified theory of the built environment will be formulated. The built environment will be understood as a complex social-ecological system where multiple related metabolisms interact at different scales. Particular emphasis will be placed on analysing the methods of regenerative design, considering that a key notion in regenerative design is the co-evolutionary, partnered relationship between socio-cultural and ecological systems. Regenerative design embraces ‘place’ as the fundamental foundation for design, fostering a connection between people and the spirit of that place, which energizes them and instills a genuine motivation to nurture it. Regenerative design is based on acknowledging the complex and continually evolving interrelationship between socio-cultural and environmental systems and reorientating the understanding of the role of building within this changing context. At the core of this paper is the analysis of the distinction between green and regenerative approaches to design. A digital twin is a digital representation of a physical environment that collects real-time data. Nowadays, urban-scale digital twins are used during the decision-making process in urban planning to test scenarios concerning their impact on the circular economy and sustainability. The paper also examines how digital twin–circular economy integration makes it effective for construction to overcome circular economy barriers or challenges, reduce waste, and increase salvage value. It places particular emphasis on the following 5R principles: (1) Rethink, which targets the maximum efficiency of resource utilisation through innovation; (2) Reduce, which targets the minimum usage of resources through production and consumption; (3) Reuse, which targets the maximum usage of a product through relocation or resell; (4) Repair, which targets the maximum lifespan of a product through repair and maintenance; (5) Recycle.

**Key words:** circular economy, regenerative design, place, urban-scale digital twin, adaptive reuse

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Session:

**“Natural Disasters, Resilience and Sustainable  
Development of Places and Cities”**

## **BUILDING SUSTAINABLE SOCIAL RESILIENCE FOLLOWS A MORE HOLISTIC APPROACH**

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**Abstract**

With the adoption of the UN Sustainable Development Goals (SDGs) in 2015, firms and cities joined the commitment to the global policymakers for progress towards a more sustainable and inclusive world by 2030. Concerning that 56% of the global population lives in cities, vulnerable to climate change, 44% of the global GDP is generated in cities at risk from climate change, and \$83.5 billion in economic losses occur in Europe from climate disasters in 2023 and 50 million people impacted by climate disasters in the EU from 1980-2023, the expected progress did not turn out so well in terms of results and time. After a brief dip during the COVID-19 pandemic, global CO<sub>2</sub> emissions are again rising, reaching their highest level in 2023.

The Inner Development Goals (IDGs) represent a transformative approach to personal and societal growth, emphasising human development’s critical role in achieving sustainable global progress. The current global challenges create a complex and challenging environment for individuals, communities, and governments. Our ability to make sense of the world, make decisions, and act toward common goals becomes compromised. The concept of inner development has long existed across diverse cultures and societies, but this is the first time that this issue is seen as essential to address the increasingly urgent tasks identified in the SDGs.

The above issues were discussed with ten (10) experts from various fields and useful insights were collected. The focus group discussion lasted more than three (3) hours.

The main findings of the discussion highlighted the importance of the Inner Development Goals Framework that simplifies a complex field of human development to help us better identify, understand, communicate, develop, and integrate the inner skills needed for sustainable development, and this issue may become a unified catalyst for global change.

**Key words:** Inner Development Goals, mindfulness, Sustainable Buildings

## **THE USE OF UNMANNED SYSTEMS AND SWARM TECHNOLOGY IN CRITICAL SITUATION MANAGEMENT IN URBAN AREAS**

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**Abstract**

There are regions that have a combined maritime and territorial space, there are various risks that threaten the local society, economy and market, due to climate change, technological or natural disasters or other dangerous situations. In such cases, there is a need for technological tools to prevent, manage and reduce risks, while at the same time requiring low costs in order to be accessible to an increasing number of local communities. Thanks to the fourth industrial revolution, which includes emerging and disruptive intelligence and information technologies (artificial intelligence, Big data, the internet of things-IoT, autonomous vehicles, robots, 3D printing, 5/6G, etc.), there is now the potential to dramatically affect economic, social and environmental sustainable development. In addition, new capabilities in data collection, processing & analysis are offered, while correspondingly, capabilities in autonomous observation, surveillance and intervention systems have increased thanks to autonomous vehicles (UxVs).

The aim of this work is to highlight the value of unmanned vehicles of all types (UAV, UGV, USV, UUV), while utilizing swarm technology in emergency management in a local community that includes marine and territorial space, based on the use of renewable energy sources. The goal of such an application will be the early detection of events hazardous to the local society, economy and environment, their management with the ultimate goal of reducing the potential impacts.

**Keywords:** UxVs, swarm, emergency management, urban areas

## **QUANTIFICATION OF URBAN AND COMMUNITY RESILIENCE**

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### **Abstract**

In view that cities will continue to house the majority of the world’s population at an increasing rate in the face of climate change, this paper studies urban and community resilience by examining the response history of the mean-square displacement of the citizens of large cities and smaller communities prior to and upon historic natural hazards strike. The recorded mean-square displacements of large numbers of cellphone users from large American cities that were struck by recent hurricanes suggest that large cities of average to high population density when struck by natural hazards exhibit a remarkable inherent resilience. The recorded mean-square displacements presented in this study also validate a mechanical model for cities, previously developed by the authors that is rooted in Langevin dynamics and predicts that, following a natural hazard, large cities revert immediately to their initial steady-state behavior and resume their normal, pre-event activities.

**Keywords:** Urban Resilience, Natural Hazards, Ensemble Averages, Normal Activity

**“TURN AROUND, DON’T DROWN”; LESSONS LEARNT FROM THE  
2023 FLOOD IN MAGNESIA, GREECE**

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**Abstract**

In recent years, climate change has become more and more noticeable as weather conditions are hazardous to human life and settlements. As a result, cities and their municipal authorities need to deal with the various risks related to natural disasters that are enhanced by the pressure of urbanization. The European Union (EU) and the United Nations (UN) are leading the states to such a resilience-oriented planning policy focusing on promoting environmental, social, economic and technological sustainability in terms of preventing a disastrous effect and restoring the damages during the post-crisis period.

In this context, this paper focuses on floodings which are a type of environmental crisis that affects local economy and society. The regional unit of Magnesia has been selected as a case study as its northern part has been vastly effected by a flood during 2023 and a series of

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socio-technical problems have been emerged. Based on this case study, we have tried to identify the causes that have led to this crisis in order for an action plan to be formulated to (a) improve the resilience level of the area and (b) draw conclusions in developing ideal strategies that eliminate the effects of flooding phenomena. To gain this goals, a comprehensive analysis of the study area has been implemented; more specific, geomorphology, residential networks and urban form of settlements, technical and social infrastructure as well as environmental characteristics have been examined. Following an assessment process, based on the SWOT analysis method, an action plan has been proposed.

Finally, conclusions came to the fore including directions for spatial planning process while the role of specific planning tools, like the Special Urban Plans (SPP), has been critically appraised.

**Key words:** climate crisis, flooding risk, urban resilience, Magnesia, SWOT analysis.



**SUSTAINABLE DEVELOPMENT OF HISTORIC CITIES:  
FLOOD MANAGEMENT STRATEGIES AND RESILIENCE**

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**Abstract**

Floods are among the most catastrophic events for contemporary cities, impacting populations, economy and infrastructure while highlighting the urgent need for mitigation and preservation strategies. For historic cities with significant cultural heritage, the need for preservation is even more critical.

This paper aims to examine flood risk management strategies for historic cities, which are highly vulnerable to climatic events such as floods that are increasing in frequency and intensity due to climate change. The methodology involves the selection of case studies from various countries to evaluate strategies that cities can develop to ensure sustainable development and resilience while preserving their historic character. The research explores the use of Geographic Information Systems (GIS) as a tool for studying the urban resilience of historic urban centers, particularly for risk mapping and the evaluation of current urban policies. The overlapping of flood hazard data with vulnerability data helps identify areas at risk.

The proposed solutions advocate for holistic strategies that integrate environmental protection, local community engagement, and modern technology to enhance the resilience of historic cities to floods. The paper concludes that efficient flood risk management is not merely a geotechnical challenge but also an opportunity to promote sustainability, delivering multiple benefits for communities and their cultural heritage. The study goes beyond addressing immediate flood risks, providing valuable insights into how historic cities can adapt to climate challenges while preserving their unique character, offering a model that can inspire global solutions

**Key words:** Floods, Risk Management, Historic Cities, Cultural Heritage, Urban Resilience, Geographic Information Systems (GIS)

**THE PROTECTION AND MANAGEMENT OF COASTAL AREAS IN GREECE. EVALUATION OF RECENT LEGAL FRAMEWORK (L.5092/2024)**

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**Abstract**

The protection and management of the coast and beach as public goods derives directly from article 24 par. 1 of Greek Constitution. The State is obliged to protect the natural environment, part of which is the coasts and beaches, which belong to the public property (article 967 of the Civil Code). Also, the State should take particularly preventive or statutory measures to preserve the vulnerable ecosystem of coastal areas, to protect their natural beauty and, at the same time, to ensure their public character in a beneficial manner.

After two decades of the implementation of the previous legal framework (L. 2971/2001) regarding the protection of coastal areas, the legislator deemed it necessary to reform it completely. The main goal is to achieve a more integrated and effective framework for the protection and management of coastal environment in Greece. Thus, L. 5092/2024 was enacted in March 2024.

The main objects of the new institutional framework is to ensure, on the one hand, the free access for all citizens to the beaches with the greatest possible assurance of their common character in combination with the protection of the natural environment, and, on the other hand, to allow their exploitation by the State to strengthen the national economy with more transparent and accelerated procedures.

The new Law regulates the conditions and restrictions that can be applied to the coasts and beaches included in the network «Natura 2000» protected areas and introduce the term «trackerless beaches». Also, it establishes a transparent digital procedure for the leasing of beaches, flexible digital tools (drones and satellites) for effective controls, stricter rules and penalties for their management.

In the present article, an attempt is made for a first evaluation for the new rules which were established recently, in combination with the policies and practises that have been applied until the recent revision with L. 5092/2024.

**Key words:** coastal areas, public good, management, protection, revision, legal framework, evaluation, policies

## **THE AXIOS DELTAIC TERRITORY: ESTABLISHING RESILIENCE IN A GRADIENT OF WETNESS**

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### **Abstract**

Coastal wetlands are invaluable ecosystems that provide critical environmental, economic, and social benefits. These habitats, play essential roles in maintaining biodiversity, mitigating climate change, and safeguarding coastal communities. However, they face growing threats not only from the overexploitation due to human activities, but also from the intensification of the various climate change effects. Especially in the Mediterranean basin, which is a climate change and biodiversity hotspot, the lowlands gradually gain importance in future adaptation and mitigation processes. This paper explores the role of the deltaic zone of Axios River in Northern Greece, in climate resilience, while acknowledging the nature of this coastal landscape, as a territory in-between water and land, in a gradient of wetness. The scope of this contribution is to investigate the dual meaning of protection in coastal wetlands: environments which need to be protected and which, at the same time, protect the local communities. How can this role of the wetland as buffer against Sea Level Rise and its effects, and as a natural defense against extreme weather events become part of the future resilient deltaic character?

The intended benefits for the reader include an enhanced understanding of the multidimensional value of coastal wetlands and their critical role in climate change adaptation and mitigation. The paper provides a framework for integrating innovative approaches of wetland conservation into broader climate adaptation plans for Mediterranean coastal territories. The methodological tools involve a comprehensive review of the relevant existing literature accompanied by interpretative mapping and design exercises through scenario development for the Axios Delta complex. Key findings of this study include a new perspective for the role of coastal wetlands in the face of climate change, by identifying their territorial particularities and potentialities. The exercises aim to find new systems to ensure the long-term viability of these ecosystems and the protection of Mediterranean coastal communities that inhabit coastal territories in a gradient of wetness.

**Key words:** coastal wetlands, wetness gradient, deltaic territory, Axios River Delta, protection

## **A REVIEW OF SMART SOLUTIONS FOR SUSTAINABLE WATER MANAGEMENT WITHIN URBAN AREAS WHILE TACKLING WATER SCARCITY IN GREEK CITIES**

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### **Abstract**

Greek cities face mounting water scarcity challenges due to climate change, population growth, and inefficient resource management. This issue is further compounded by aging infrastructure and high urban water demand. Addressing water scarcity requires a transformative approach that leverages technology to optimize resource use and ensure sustainable water availability for urban populations.

This work examines the role of smart technologies in advancing sustainable urban water management in Greek cities, with a focus on initiatives that integrate Internet of Things (IoT) solutions, advanced metering infrastructure (AMI), and real-time telemetry systems. Recent funded projects have been pivotal in this transformation, including the deployment of smart household water meters and city-wide telemetry systems for real-time monitoring and control of water networks. These initiatives have demonstrated significant improvements in detecting and reducing water losses, optimizing distribution systems, and promoting efficient household water use.

Through detailed case studies, this paper highlights how these technologies have been implemented to combat water scarcity and build resilience in urban water systems. The analysis includes the socio-economic and environmental impacts of these projects, emphasizing the importance of funding mechanisms, policy frameworks, and stakeholder engagement in their success. Furthermore, recommendations are provided for scaling these solutions to other urban settings, ensuring wider adoption and impact.

The findings demonstrate that leveraging smart technologies, coupled with lessons from funded projects, provides a sustainable pathway to address water scarcity in Greek cities. This study contributes to the discourse on urban water resilience, offering actionable insights for policymakers, city planners, and water utilities seeking to create water-secure urban environments.

**Key words:** water scarcity, smart water management, IoT, telemetry systems, smart household meters, Greek cities, climate resilience

**Special session:**  
**LANDSCAPE AND URBAN SUSTAINABILITY: DISCUSSING THE  
NATURAL AND SOCIO-CULTURAL FACTORS, IN A POSITIVE OR  
NEGATIVE MOOD**

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**Content:**

We could not discuss and afford sustainability, place-centered sustainability in particular, outside the socio-cultural factors implied by it.

It is in this context of a combined cultural landscape that the natural and social approaches are intensively associated. Cultural landscape in urban or extra-urban formations presents the necessary coexistence, the necessary combination of both groups of influence: no natural ‘more than human’ landscape factor may exist outside the consequences of social and cultural impact. What kind of impact, what kind of influence, nevertheless? Material or immaterial, real or imaginary, positive or negative?

Is landscape interest associated with the ‘flourishing’ of positive cultural apperception, of the ‘emerald necklaces’ and green ‘park movement’ imagery, or with the terrifying aspect of a decaying natural or urban terrifying landscape? Did ‘Les Fleurs du Mal – The Flowers of Evil’ by Charles Baudelaire, blossom in the same urban landscape of the Parisian 19th century parks’ positive intervention? Conclusively: how can we critically comment on the negative social imaginary, or enforce the positive social correlation with natural peri-urban landscape and, especially, with urban public landscape?

**Key Words:** Cultural landscape, cultural sustainability, political sustainability, urban public space, real space social contact, virtual space guidance.

**OPEN-AIR CITIES: COMMON APPROACHES FOR BUILDING,  
LANDSCAPE AND URBAN-SCAPE DESIGN - THE CONCEPT OF  
DESIGN SCHEMATIZATION**

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**Abstract**

It is normal to present, in conferences like the one under the subject ‘Open-Air Cities’, completed design or built projects. We scarcely discuss methodologies that could offer a didactic approach for students or professional architects. It is against this approach that we shall propose a methodology, which could help designers, experienced in architectural projects, to transform their skills and compose, in a way analogous to their building-design awareness, landscape formations with intense plantation ‘green’ identity.

The concept underlying the previous didactic or auto-didactic approach has to do with the idea that we do not design and compose reality in its full detailed complexity: building reality, landscape reality or urban-scape reality. What we design and compose is a structured, ‘schematized’ interpretation of the real place formations, an ‘abstract’ schematized interpretation of it; unimportant details have been abstracted and the remaining principal important characteristics have been restructured, in a new conceivable and trustworthy to be applied form.

*Moreover, we shall insist, in our presentation, on the idea that abstract schemes, in all previous design cases, and all previous thematic and scale design approaches, may have common formal references. Building design, landscape design or urban design may be composed on a common or relative conceptual ground of abstract schematized principles, able to produce our ‘Open-Air Cities’ context of compound ‘landscape urbanism’.*

Plus a final comment: In which way urban landscape schematization may be positively transformed?

**Keywords:** Schematism, Schematization, abstraction, architectural design, urban design, landscape design, landscape urbanism, didactic methodologies, theory of knowledge, epistemics, expressive metaphor.

## **THE LIMINAL SPACE OF THE GREEN CITY**

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### **Abstract**

The modern cities, while occupying only 2-3% of the land surface, host an astonishing 55% of the world population. As IUCN states, modern cities account for a vast majority of consumption and waste production, main factors leading to the catastrophe of the environment. The lion's share of production is used to provide the big cities with even more resources, and as that need keeps growing, is leading to deforestation and expropriation of the natural environment, something that seems like the story of the death of Pan.

While inhabited, those spaces make the residents feel alone and imprisoned. A voluntary prison that seems to have no escape. Recognizing the problem, a solution that often comes up is the one of the green cities, a sustainable inhabitable place. Coming from a capitalistic perspective, whose main objective is pure profit and exploitation, this topic seems to touch the spectrum of fiction and can be considered greenwashing. The modern city keeps growing denser, while leaving no space for the inhabitants. The growth of population in those areas also leaves rural areas deserted and decadent.

In theory, a green city might prove to be a valid option, but it is of utmost importance to seek alternative ways of inhabiting spaces, focusing on less density and more means of primary production, distributed as evenly as possible. The importance of the natural environment and the connection of the people with it can prove crucial for the protection of the planet and the growing problem of alienation that the modern human keeps facing. This solution can prove helpful, not only for the environment, but also for the better habitation of people in those areas.

**Key words:** Green cities, greenwashing, environmental catastrophe, Urban revision

**LANDSCAPE AND URBAN SUSTAINABILITY. CULTURAL ROUTES FOR CULTURAL TRAVELLERS: A POSITIVE APPROACH - CASE STUDY**

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**Abstract**

The creation of Cultural Routes to enhance and promote the identity of a ‘place’ towards a sustainable development undoubtedly has multiple benefits for the local community, especially concerning tourism (i.e. environmental, economic, ecological, etc.). The progression of sustainable development goals in tourism, at present are predominantly ‘local area’ focused, whilst ‘cultural landscapes’ are usually treated in a fragmented manner (e.g. archaeological sites from public urban landscapes).

This paper attempts to investigate a modern approach to the promotion of ‘cultural landscapes’ in a pluralistic, extroverted, innovative and mainly anthropocentric manner, at a ‘supralocal’ level: The tour, which is based on the plot of an entire narrative, is formed with a network of physical and mental routes, articulating various types of ‘landscapes’. Thus, the modern traveller, has the opportunity to acquire valuable knowledge that is integrated into a broader game of browsing and gaining experiences of various cultural activities, combining creative employment with education and entertainment, from antiquity to the present day. It is argued that, following a holistic view of methodological processes (as in the case study of the Ministry of Culture), interdisciplinary collaboration, scientific documentation, natural and digital technologies correlated with material and immaterial heritage data, myths and reality, symbolic and imaginative interpretations intercross between the past the present and the future.

Socially, the ‘identity’ of Cultural routes should focus on highlighting the physiognomy of the ‘diversity’ of the urban landscape by the sense of a ‘political sustainability’. Thus, allowing to reproduce for the traveller, some kind of a ‘collective end’ - the model of ‘co-presence’. Therefore, the initiated ‘world traveller’, following the ‘footsteps’ of the mythical traveller Odysseus, will discover that what is worth in the end is ‘the journey’...

**Key words:** Cultural landscape, routes, political sustainability, interactive platform



**SUPPORTING ARCHITECTURAL EDUCATION THROUGH  
PARTICIPATORY LANDSCAPE MAPPING USING  
CROWDSOURCING AND GIS**

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**Abstract**

A web application for participatory urban landscape mapping was introduced in the educational process of the Schools of Civil Engineering and Architecture of NTUA. Using the application students were encouraged to document their perceptions of the landscapes in which they live. Student participations also included introductory lectures, independent-voluntary landscape evaluation by students, and feedback sessions together with educators. Participants created a dynamic and evolving landscape map merging spatial and qualitative data and participated in interviews and answered questionnaires to evaluate their participation.

The results investigated the application’s impact in three distinct areas. Educationally, evaluating how its modernization of teacher-student interaction enhanced architectural education and helped students embrace architectural and landscape related education. Socially, by evaluating the effect of integrating interactive digital tools that allow democratic social participation in education and whether it managed to engage students in meaningful discussions and critical thinking about urban landscape quality. Scientifically, by yielding valuable data for analyzing architectural styles, urban typologies, and public perceptions thereof, supporting further research in the interfaces of the technology of crowdsourcing, Geographic Information Systems (GIS), mobile development, and studies in the area of culture and humanities. In the later stages of the research, preliminary insights and observations were also made on matters of expanding participant inclusion to citizens and to other European countries and its inferences for future research,

By bridging academia and society, the present research improved student’s perception regarding architectural education, catalyzed scientific discussion on urban landscape quality, encouraged collective responsibility for improving public spaces and led to the observation of trends regarding the perception of architecture and landscape by the public. The presentation further summarizes the project’s achievements, methodology, and implications for architectural education and research, in the context of urban landscape sustainability and its determinant natural and socio- cultural factors.

**Key words:** Landscape, Architecture, Education, Participatory, Democratic, Crowdsourcing, Mapping

**TRIKALA CITY CENTER**

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**Abstract**

It is commonly accepted that in the contemporary city the ground and landscape in general is conceived as a thermostat. Just as the thermostat adjusts the temperature within a system by controlling the flow of heat in order to preserve the system's temperature, so the green or nature is seen as hedge against the negative environmental and aesthetical effects of the economic and cultural activities taking place within the contemporary city. The urban discontent is usually paused by enclaves of green natural pleasures.

Against that attitude and this thermostatic function, we present our project (under construction) for the transformation of the two central squares of the city of Trikala and the area in-between as a strategy of composing the public space and the urban landscape as a continuous flow not as an enclaved oasis.

That is to say, theparadoxofadeterminizedterritory. The ambition of the project is to intervene and re-shape the landscape of the city center of Trikala not by finding an ideal analogy between natural/artificial. If anything, the plan tries to acknowledge the contradiction between natural and artificial as one single formal component, immanent to the city, that is, the landscape itself.

**Key words:** public space, contemporary city, landscape, Trikala

**AN IMPORTANT URBAN RESEARCH PROPOSAL:  
ADULT EDUCATION FOR SUSTAINABILITY IN THE  
CONTEMPORARY URBAN LANDSCAPE: THE MEANING OF  
LIFELONG ACTION THROUGH SUSTAINABLE URBAN  
COMMUNITIES**

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**Abstract**

The proposed research aims to explore the ways in which Adult Education for Sustainability will be integrated into the contemporary Urban Landscape. The key question is, how an effective Formal Adult Educator Training, as well as a Non-Formal Adult Education, should be structured through organized educational programs, actions, communication policy and educational strategy to trigger a transformative way of thinking and acting, resulting in the creation of Sustainable Urban Communities and their Lifelong Action, in the urban landscape.

More specifically, in the field of Adult Education for Sustainability, the study is linked to the need to recognise the importance of the environmental and social limits within which human activity in cities needs to be confined. Regarding the second field of knowledge, the research will be focused on changing the current individual beliefs, habits and actions of citizens as units, towards a collective transformation of Lifelong Action, through organizing themselves into Sustainable Urban Communities.

The research will be conducted in the urban network of Athens as it alternates between characteristic nodes of the Attic Metro, in order to explore the needs of specific target populations and to pursue the desired outcomes.

**Key words:** Formal & Non-Formal Adult Education for Sustainability, Lifelong Action, Sustainable Urban, Adult Education Communities.

**URBAN PLANNING IN A PROCESS RE- CONSIDERATION AND RE- EXAMINATION.A CASE STUDY THE MUNICIPALITY OF LARISSA, THESSALY, GREECE.**

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**Abstract**

Urban planning is a technical and political process concerned with the use of land and design of the urban environment, including air, water, and the infrastructure passing into and out of urban areas such as transportation and distribution networks. In theory, urban planning is a process of elaborating solutions that aim both to improve or re-qualify an existing urban area, as well as to create a new urbanization in a given region. As a discipline and as a method of action, urban planning deals with the processes of production, structuring and appropriation of urban space. In this sense, its main objective is to point out what measures should be taken to improve the quality of life of the inhabitants, including matters such as transport, security, access opportunities and even interaction with the natural environment.

However, nowadays, urban planning has to deal, interact and include issues and elaborate solutions derived from other categories of planning, such as those of civil protection, climate change, accessibility and investment plans, etc.. This is a great challenge of urban planning as well as the citizens of every city involved in. Larissa realized the above “great challenge” in September 2023 when the phenomenon Daniel took place. Nowadays, the city is in the process of reconsidering its urban planning taking into consideration the different issues raised by both climate change as well as sustainability, which includes cultural, economic, environmental, political and social parameters. In this context, the paper deals with the case of Larissa in relation to the above considerations and presents areas of co-existence, complementarity and conflict among different categories of planning.

**Key words:**Climate change, Municipality of Larissa, Sustainability, Urban planning

**RE- PLANNING AND RE- DESIGNING THE LARISSA’ S LANDSCAPE  
INCORPORATING PARAMETERS OF NATURAL AND SOCIO-  
CULTURAL SUSTAINABILITY**

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**Abstract**

Urban sustainability is “an adaptive process of facilitating and maintaining a virtual cycle between ecosystem services and human well-being through concerted ecological, economic, and social actions in response to changes within and beyond the urban landscape”. Urban structures are complex systems, bringing communities and the environment in a living, continuously evolving setting. They are social, cultural and economic centres, embedded in the regions surrounding them. Despite these commonalities, each city and town in Europe is unique. They have unique features developed through history, shaped by their geography, inhabitants and socio-political systems. Consequently, the challenges faced by cities vary significantly. Some cities face ageing or shrinking populations, whereas others are growing.

Most urban structures have been inhabited over centuries and their streets, neighbourhoods and buildings reflect this heritage. The existing infrastructure partly determines how fast we can replace the building stock or retrofit the existing buildings or create new transport options. Achieving sustainability in these cases requires careful considerations. The goal towards urban sustainability and its impact on landscape needs to cater to each city’s unique set of characteristics as well as challenges, as well as issues of circularity, resilience and inclusivity. In addition, parameters of a low-carbon, green and healthy city should be also incorporated.

In this context, the paper discusses the goal of developing a sustainable urban landscape for the city of Larissa, the 5<sup>th</sup> largest Greek city elaborating ideas and highlighting factors of natural and socio- cultural content that will contribute to the above goal. As a final result a conceptual framework will be created which will help the city re-plan and re-design.

**Key words:** Landscape, Municipality of Larissa, Sustainability, Urban planning

**Special session:  
COST ACTION 22124 ECO4ALL**

**ECO4ALL FOR CONSUMER PROTECTION THROUGH CIRCULAR  
ECONOMY STRATEGIES – THE CONTRIBUTION TO  
SUSTAINABLE DEVELOPMENT**

Carrying out sustainable development goals by 2030, especially focusing on sustainable consumption, represents a collective priority in today’s society, but significant regional differences within the EU and globally. In this context, the transition to the circular economy (CE) brings a significant paradigm shift in modern sustainability strategies, especially in the area of consumer protection and the development of sustainable practices. ECO4ALL action responds to these challenges by encouraging regional and international cooperation to improve sustainable consumption and consumer protection, thereby contributing to the achievement of sustainable development goals and creating a circular economy that serves the interests of all participants in society. ECO4ALL particularly emphasizes producer responsibility in the product design and marketing stages, thereby encouraging consumer protection through the strategies of reducing, reusing, and repairing products.

The special session will focus on circular economy (CE) strategies that can improve consumer protection, reduce environmental risks, promote resource efficiency, and alleviate inefficient use. One of the key aspects of this session will be a discussion on how the proactive role of consumers can contribute to the full circularity of the process, through inclusive participation in every step of sustainable development, and advocating for stronger regulatory frameworks that encourage circular practices. ECO4ALL thereby complements existing EU policies, which are focused on the ecological and productive aspects of the circular economy, expanding the focus on social and consumer dimensions.

The key topics of the present Session are the following:

- The Role of Circular Economy in Achieving the 2030 Sustainable Development Goals
- Circular Economy Strategies for Sustainable Resource Management
- Consumer Protection through Product Lifecycle Extension through Reducing, Reusing, and Repairing
- Circular Economy as a Tool for Sustainable Consumption
- Enhancing Cross-border Cooperation for Circular Economy Success
- Policy Frameworks for Regional Development and Their Impact on Circular Economy Adoption
- The Socio-Economic Impacts of Circular Economy Practices on Consumer Rights
- Overcoming Barriers to Circular Economy Implementation in Different Regions
- Cross-sector Collaboration for Promoting Circular Economy in Consumer Markets
- Education and Awareness for Sustainable Consumption

**Acknowledgments**

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## **CIRCULAR ECONOMY AS A STRATEGIC IMPERATIVE FOR FOSTERING SUSTAINABILITY AND CONSUMER ENGAGEMENT**

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**Abstract**

In contemporary society, the idea of a circular economy plays a crucial role in achieving sustainable development goals. It promotes efficient resource use, enabling reuse and recycling instead of single-use. It is based on economic systems and business models that replace the linear model with alternative approaches such as reducing, reusing, and repairing. As consumer needs become more complex and technologies advance, it is necessary to focus on circular strategies that enable responsible resource management and strengthen consumer awareness. This paper aims to identify barriers to implementing circular strategies by analysing consumer education and the relationship between systems, needs, and opportunities, focusing on the local specificities of the countries involved in the COST Eco4All action. The research includes data from 30 countries collected through surveys. The results will be processed through statistical analyses to identify differences in barriers and opportunities between these countries, providing insights for creating more effective circular strategies at regional and national levels. The paper highlights the importance of consumers as catalysts for circular transformation, whose protection and engagement have a fundamental impact on the success of this concept.

**Keywords:** Circular economy, Customer, Strategies, Sustainable development

**Acknowledgements**

*This abstract for the special session is based upon work from COST Action CA22124 - ECO4ALL, “EU Circular Economy Network for All: Consumer Protection through reducing, reusing, repairing,” supported by COST (European Cooperation in Science and Technology—[www.cost.eu](http://www.cost.eu)).*

## **NORDIC CROSS-BORDER COOPERATION FOR CIRCULAR ECONOMY SUCCESS**

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### **Abstract**

The Nordic countries, namely Norway, Sweden, Denmark, Finland and Iceland, are at the forefront of cross-border cooperation to promote the circular economy. Their joint approach uses shared values, regional networks and policy alignment to achieve sustainable development goals and promote circular practices. This paper has examined the following key aspects of this cooperation, namely: policy coordination and frameworks; knowledge exchange and research collaboration; industry and business integration; infrastructure and waste management; consumer engagement and education; and global leadership. On the one hand, the main achievements of this cooperation have been identified, including high recycling rates and waste reduction in all five countries, as well as their leading role in the development of circular business models and technologies. On the other hand, it found challenges for Nordic cooperation, including harmonizing regulations across national borders and scaling up innovation to meet the growing demand for green products. This study concludes that Nordic cross-border cooperation is an example of regional integration in the circular economy. By combining policy harmonization, innovation, and shared resources, these countries are accelerating the transition to a sustainable future by jointly addressing challenges. Their success highlights the power of regional partnerships in addressing global environmental challenges.

**Keywords:** circular economy, Nordic countries



## **SUSTAINABILITY AND COMPETITION POLICY - VIA CONSUMER PROTECTION**

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### **Abstract**

Approaching the 2030 deadline for achieving sustainable development goals progressively intensifies the need to evaluate the relationship between sustainability objectives, competition policy, and consumer protection. Thus, the examination on the possibilities of alignment and cooperation between these three pillars towards a more sustainable, competitive, and consumer-friendly economy comes to the fore.

An analysis of the foundational principles underlying sustainability, competition, and consumer protection, reveals inherent tensions but also synergies, as an efficient economy driven by competition can either complement or conflict with broader sustainability goals and consumer protection objectives. The focus of EU institutions on environmental and competitive elements of the circular economy, with barely a mention of the social and consumer-related aspects being an expressive negative example of this interaction.

Achieving sustainability goals relies significantly on the understanding of the role of competition policy in promoting sustainability. However, a narrow focus on this aspect, without due consideration of the consumer's role, risks violating their rights, undermining as such the very core of our political systems – the protection of human rights and freedoms.

Therefore, this research analyses the current state of competition policy in Europe, assessing its compatibility with sustainability and consumer protection objectives. It explores opportunities to integrate the regulations addressing practices like abuse of dominant position, anti-competitive agreements, mergers, or state aid, and aiming for a greener and more sustainable economy - into a framework that incorporates consumer perspectives. Moreover, an analysis of potential conflicting cases of such a regulation and consumers' rights would benefit to underscore the aspects in need of further attention from the regulators in order to prevent or resolve conflicts effectively.

In conclusion, this paper contributes to the ongoing discourse on sustainability, competition, and consumer protection by providing insights into the challenges, opportunities, and policy options for achieving a harmonious balance between these imperatives in the European context.

**Key Words:** Sustainable development, consumer protection

**THE ROLE OF CIRCULAR ECONOMY IN SUSTAINABLE DEVELOPMENTS GOALS IN ALBANIA**

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**Abstract**

This article investigates the role of the circular economy in supporting Albania's Sustainable Development Goals, focusing on the challenges and opportunities in the transition towards more sustainable practices in waste management, resource efficiency, and environmental conservation. Albania's efforts to incorporate circular economy principles into national policy frameworks, such as the National Waste Management Strategy (2018-2033) and related environmental laws, aim to align the country's practices with EU standards. However, significant challenges remain, including limited recycling infrastructure, low waste separation rates, and inadequate regulatory implementation. Despite these obstacles, Albania's ongoing collaboration with international organizations, has contributed to the development of a Circular Economy Roadmap, emphasizing green procurement, producer responsibility, and public engagement. Furthermore, this article identifies key policy recommendations to overcome existing barriers and unlock the economic potential of a circular economy, which could contribute to job creation, environmental protection, and sustainable growth in Albania.

**Keywords:** Circular economy, sustainable development goals, Albania, EU integration.

## **ADVANCING CLIMATE NEUTRALITY THROUGH CIRCULAR ECONOMY SANDBOXES: A FRAMEWORK FOR INNOVATION AND REGULATION**

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### **Abstract**

Decoupling economic growth from resource use and transitioning to circular systems of production and consumption are essential to achieving climate neutrality by 2050.

The current economy favours excessive consumption and endangers natural resources. The activities of extraction, processing and disposal of materials generate various negative environmental impacts, including the increase of greenhouse gas emissions, which jeopardise the achievement of essential environmental protection goals. It is imperative to promote stricter resource efficiency policies and to advance the circular economy throughout the value chain, replacing traditional business models with circular ones.

The failure to accelerate innovation in the circular economy is more evident than ever. Innovators face the challenge of framing their innovative solutions within the relevant laws, policies, standards, norms and specifications set by regulators during the development and implementation phases.

The Circular Economy Sandbox is essential for promoting innovative experimentation by providing a flexible regulatory framework that facilitates the temporary testing of innovative products, technologies, services and business models. This mechanism allows for temporary exemptions from certain restrictive legal regulations, such as those related to spatial planning, construction, environmental protection or tax procedures, while ensuring fiscal compliance. The implementation of sandboxes thus contributes to accelerating the transition to sustainable solutions and to creating an environment conducive to innovation.

**Keywords:** circular economy, economic growth, climate neutrality

**EMPOWERING CONSUMERS FOR CIRCULAR FOOD SYSTEMS:  
INSIGHTS FROM HUNGARIAN RESEARCH ON SUSTAINABILITY  
AND CONSUMPTION PATTERNS**

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**Abstract**

The circular economy (CE) concept has emerged as a pivotal framework for fostering sustainable consumption, particularly within the food sector. In Hungary, recent studies have examined CE principles in relation to organic food purchasing behavior, consumer awareness, and segmentation, highlighting young, educated urban consumers as key drivers of circular innovation (e.g., Fogarassy et al., 2020; Berecz & Fogarassy, 2022). However, challenges persist, such as developing robust indicators for nutrient circularity and addressing gaps in bio-economy integration (e.g., Fassio & Chirilli, 2023). Research on CE in food systems often focuses on waste reduction, sustainable packaging, and supply chain optimization (e.g., Zhang et al., 2022), yet more attention is needed on empowering consumers as active participants in circular practices.

Recent findings highlight the nuanced dynamics of sustainable food consumption in Hungary, including the role of cultural capital in shaping consumer engagement. For example, Kristóf and Megyesi (2024) reveal how sustainability manifests in both "hip" and practical forms, underscoring the duality of consumer behavior in this domain. Furthermore, the integration of nature-based solutions (NBS) in urban planning, as explored by Megyesi et al. (2024), provides valuable insights into stakeholder perceptions that can inform CE strategies, especially in fostering inclusive and participatory approaches.

This presentation explores the Hungarian context through survey and interview data derived from a recently concluded H2020 project and an ongoing research initiative. These studies examine how shifts in sustainability awareness and consumption patterns can support CE transitions. We emphasize the role of consumers as proactive agents, advocating for inclusive engagement in sustainable development processes. By highlighting the social dimensions of CE, this research aligns with ECO4ALL's focus on integrating consumer participation and regulatory frameworks to advance resource efficiency and full circularity.

**Key words:** consumers' attitude; direct food purchasing; short food supply chains; local food system

**SUSTAINABILITY, CIRCULAR ECONOMY AND CREATIVE COMPUTING.**

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**Abstract**

Currently, there is an increasing concern about sustainability and robustness of complex infrastructures upon which many of our day-to-day activities depend. In the European Union, the term circular economy is a well-established element of the European Green Deal, describing a transformation towards greater sustainability and waste reduction. Many of us work in fields related to creative computing and have spent time researching the right to repair and other sustainable practices related to creative computing. Open Educational Materials will be presented that provide an opportunity for educators and learners to explore these ideas based on practical examples and accessible activities. This material is available for non-commercial re-use under the Creative Commons License. It comprises of a slide deck and supporting materials, both available for free on the website <https://costgrade.eu>. The slide deck may be used during lessons in secondary school in both formal and informal settings. Educators may also edit and re-use the material in their own teaching tools. The supporting materials file includes descriptions of each slide, and suggestions for further reading. This material was created by Grassroots of digital Europe (GRADE), a network of scientists, researchers, activists, and artists from the EU and beyond, created within the COST framework for European Cooperation in Science and Technology. GRADE Working Group WG2, Institutionalising digital grassroots, is responsible for the creation and distribution of these materials.

**Key words:** Sustainability, circular economy, creative computing, Open Educational Materials

## **LEGAL ANALYSIS OF CONSUMER RIGHTS TO PRODUCT REPAIR UNDER THE EU DIRECTIVE ON REDUCING, REUSING AND REPAIRING**

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### **Abstract**

This paper offers a comprehensive legal analysis of the time limits established for consumers' rights to claim and request product repairs. It focuses on the new EU Directive promoting product lifecycle extension through reducing, reusing, and repairing. The Directive mandates that manufacturers and sellers enable product repairs up to ten years from the date of manufacture, marking a significant advance towards sustainable consumption and enhanced consumer protection, but only for certain kinds of goods.

This paper's scientific contribution lies in its critical examination of the intersection between the newly introduced obligations under the Directive and existing consumer rights under warranties and guarantees. By analysing potential overlaps and conflicts, the paper sheds light on the legal implications and challenges of harmonising these rights within current legal frameworks in selected member states.

The critical legal questions addressed will include alignment with existing laws and answering how the directive's mandate for repair for up to ten years aligns with existing national laws on warranties and guarantees. Also, stakeholders' responsibilities will be examined regarding the analysis of the legal obligations of manufacturers and sellers under the Directive and how they interact with consumers' rights to claim defects. In conclusion, the implementation challenges will be addressed to answer the question of effective implementation of the Directive into the national legislation.

By addressing these questions, the paper aims to provide actionable recommendations to facilitate the effective implementation of the Directive. The findings contribute to the broader discourse on consumer law reform, environmental sustainability, and the integration of circular economy principles into legal systems.

**Key words:** Consumer rights, product repair, R2R Directive, product lifecycle extension, warranty, guarantee, sustainability, legal analysis.

## **ENHANCING CIRCULAR ECONOMY THROUGH NATURE-BASED SOLUTIONS IN HIGHER EDUCATION**

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### **Abstract**

Circular economy entails core sustainability concepts, such as reducing waste, preserving the environment and recycling goods in order to promote sustainable development. Nature-based Solutions (NBS) have been identified as tools for protecting biodiversity and natural resources, thus supporting healthier ecosystems and leading to sustainable development. NBS includes the concept of circular economy, as by protecting and sustainably managing natural resources, natural cycles are enhanced and promoted. Both concepts lie in the heart of the European Commission’s efforts to strengthen environmental protection and economic development at the European and global level.

Higher Education Institutions (HEIs) as primary agencies of education and training, which are to deliver and promote Sustainable Development Goals (SDGs), are called to integrate those concepts not only into their everyday campus practices but in their courses and academic curricula as well.

This paper aims to explore the level of integration of those concepts in the Greek HEIs by examining and analyzing policies, strategies and initiatives at the campus level as well as by exploring relevant university curricula. It highlights the importance of interdisciplinary cooperation and innovative learning methods in order to leverage the integration of circular economy by implementing NBS in HEIs.

**Key words:** Circular Economy, Nature-based Solutions, Higher Education Institutions, sustainable development

**ESG REPORTING IN ACCORDANCE WITH THE NEW CSRD  
DIRECTIVE - ARE WE READY FOR A PARADIGM CHANGE IN  
CORPORATE MANAGEMENT AND BUSINESS?**

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**Abstract**

ESG reporting or non-financial sustainability reporting usually involves reporting on the environmental, social and governance aspects of companies.

In January 2023, the new CSRD directive (Corporate Sustainability Reporting Directive) entered into force, which essentially changes the rules from the “old” CSRD directive and more strictly regulates the mentioned aspects of ESG reporting. The full implementation of the new CSRD directive in the EU will enter into force in January 2025 and, according to estimates, will affect approximately 55,000 companies operating in the EU internal market. The paper analyzes and questions the most significant novelties that come with the new CSRD directive, among other things, the extension of the field of application to small and medium-sized enterprises (SMEs), a clearer definition of the content of ESG reports, the introduction of the dual materiality of corporate influence and the obligation to publish a plan to reduce greenhouse emissions, the use of clearer verifiers and indicators of ESG corporate sustainability, etc. The central part of the paper questions whether domestic trading companies (especially small and medium-sized ones) are ready for the novelties brought by the new CSRD directive. It is about changing the paradigm of corporate management and business, which requires time, money and knowledge. The conclusion provides an assessment of the situation and guidelines for better implementation of the new CSRD directive in the national legal framework and in the corporate management and operations of domestic companies.

**Key words:** ESG, CSRD, non-financial reporting, circular economy, sustainability.



## **THE EU’S PROBABILISTIC DEPENDENCY STRUCTURE TOWARDS THE GOAL OF A CIRCULAR ECONOMY**

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### **Abstract**

The EU’s aim to achieve a circular economy over a linear one requires transformative actions targeting countries' policy frameworks, governance structures, and operational practices. These actions must prioritize sustainability, resource efficiency, and innovation across all sectors. Key steps include implementing regulations to support circular business models, enhancing local government capacities for waste management and recycling, and fostering public-private partnerships for sustainable development.

However, these actions depend heavily on the economic resilience of the participating countries. As demonstrated during the pandemic, a nation’s economic dependency structure plays a critical role in its ability to progress toward a sustainable and prosperous future.

This paper explores the probabilistic dependency structure of EU member states using datasets from the EUROSTAT database, focusing on material import dependency, EU self-sufficiency in raw materials, and the Eco-innovation Index provided by the European Environment Agency. To analyze these relationships, the study employs Bayesian networks, a powerful probabilistic graphical modeling tool that reveals conditional dependencies among variables.

The insights gained from this approach will shed light on the interplay between resource dependency, self-sufficiency, and eco-innovation, offering valuable implications for policymaking and institutional reforms necessary for achieving a circular economy.

**Key words:** circular economy, sustainability, EU.

**A REVIEW OF GREENWASHING AND CIRCULAR INDUSTRIAL PRACTICES FROM CONSUMER’S PERSPECTIVE**

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**Abstract**

Conscious consumers prefer green products and actively seek information about companies' circular practices. Demonstrating the role of consumers as key drivers of sustainable consumption is crucial for adequate supply chain management. Different industry branches have different potential for the application of circular processes such as reducing, reusing, and repairing. The paper is based on critical review of the relevant literature and aims to emphasize the biggest strengths and benefits for organizations from implementing circular strategies from the consumer's point of view. In this regard, effective transitioning towards sustainable supply chains involves tackling greenwashing. Therefore, it is important to understand to what extent industries are using greenwashing to mislead their stakeholders in the supply chain. It was possible to identify possible solutions to prevent greenwashing across four main dimensions: consumers, relationships between companies and suppliers, certification programs and reporting assessment; and corporate leadership. Due to significance and validity of the research, the paper highlights the impact of sustainable consumption on the development of greenwashing practices.

**Keywords:** Circular economy, Customers, Sustainable supply chains, Greenwashing

**APPLY THE PRINCIPLES OF CIRCULAR ECONOMY AND INDUSTRIAL SYMBIOSIS ON THE PRODUCTION SECTORS OF CYPRUS: THE BENEFITS FOR CONSUMERS**

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**Abstract**

The recent growth of industrial production in Cyprus resulted in an increasing stream of wastes and by-products, thus creating a significant challenge for achieving sustainable development. Industries that mainly belong to the construction sector are facing challenges concerning the efficient and environmentally friendly waste management. Furthermore, the rising prices in building materials burdening the local consumer market, affecting thus the house affordability.

Therefore, there is a need for developing new sustainable building solutions with lower cost that are in line with the efforts currently undertaken within the EU to reduce carbon emissions and improve waste management. An effective strategy that addresses these challenges is the development of industrial symbiosis schemes along local industries. This strategy is well defined by the LIAISE COST Action CA22110 “Cooperation, development and cross-border transfer of industrial symbiosis among industry and stakeholders”.

The aim of this study is to present a recently developed industrial symbiosis scheme based on a cross-sector collaboration, the overall methodological approach, the identified barriers, challenges, market drivers, and potential benefits for the consumers. This scheme supports the vision of European Union to promote the principles of circular economy across the production chain as it includes a cement industry, a quarry company, a manufacturing enterprise, and an academic and research organization. The aim of the consortium is to valorize the industrial wastes/ by-products into valuable raw materials and then to incorporate them in production processes of innovative and environment-friendly products. The re-developed products will have lower cement content, offering, thus, to the market, a solution with lower cost, higher environmental performance and lower material footprint. Finally, using industrial by-products to develop cementitious materials will promote circular economy, improve waste management in Cyprus and establish an effective symbiosis process among the local industries.

**Key words:** Industrial symbiosis, construction, innovative products, barriers, challenges, market drivers, consumer benefits

**THE CONTRIBUTION OF LOCAL GOVERNMENT ORGANIZATIONS  
AND CITIZENS TO THE ACHIEVEMENT OF THE 12<sup>TH</sup> SDG IN  
GREECE**

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**Abstract**

One of the most serious problems facing humanity today is sustainable production and consumption, as huge amounts of waste are generated: food and garden waste, construction and demolition waste, mining waste, industrial waste, liquid waste, old waste cars, batteries, plastic bags, paper, sanitary waste, old clothes and old furniture etc. The amount of waste generated is closely linked to consumption and production patterns. The degradation of the soil with the decrease of its fertility and the loss of biodiversity from overproduction, the unsustainable use of renewable and non-renewable resources, the over-consumption and the waste of food demonstrate the critical condition of our planet.

Within the framework of Goal 12, as decided in 2015 by the United Nations Special Session on Environment and Development, it is envisaged that by 2030 there will be sustainable management and adequate use of natural resources and a reduction in per capita food waste internationally, both at the level of consumers and at the level of retailers. The aim is to emphasize the prevention, reduction, recycling, and reuse of waste.

The present paper investigates the implementation and progress of the 12th Sustainable Development Goal in Greece. Emphasis is placed on the policies and actions of Local Government Organizations and the degree of response of Greek citizens to them. The aim is to compare the results that will emerge from this research with corresponding results from other countries of the European Union.

**Key words:**SDG 12, Greece, sustainable production, sustainable consumption

**Acknowledgments**

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## **EU CIRCULAR ECONOMY NETWORK FOR ALL: CONSUMER PROTECTION THROUGH REDUCING, REUSING, REPAIRING**

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### **Abstract**

Achieving the objectives of the 2030 Agenda for Sustainable Development through sustainable consumption is a key priority for modern society. However, significant regional disparities within the EU and beyond, coupled with the absence of a cohesive strategic policy framework for regional development, highlight the urgent need for enhanced regional and cross-border cooperation.

This paper will explore strategies to foster awareness, reflection, and knowledge dissemination on circular economy principles among diverse audiences, including youth, academics, young researchers, public administration staff, the business community, and civil society. By emphasizing sustainable consumption, resource conservation, and waste prevention, the paper aims to empower stakeholders and promote consumer protection. A central focus will be on encouraging manufacturers to adopt responsible practices during product design and marketing, particularly by prioritizing reducing, reusing, and repairing strategies. These efforts aim to create a circular economy that benefits consumers while contributing to sustainable development goals.

**Key words:** Circular economy, sustainable consumption, consumer protection, reducing, reusing, repairing, regional cooperation, waste prevention, sustainable development.

**BOOK OF ABSTRACTS**

*2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025*

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Session:

**“Climate Change”**

## **A REVIEW OF CLIMATE RISK ASSESSMENT METHODS FOR WATER INFRASTRUCTURE IN GREECE**

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### **Abstract**

Climate crisis is inseparably linked to water as it heightens fluctuations in the water cycle, leading to extreme weather patterns, impacting water supply and quality, and posing risks to sustainable development across the globe. Considering this, climate risk assessment in water infrastructure is a growing research field, driven by the increasing vulnerability of systems to climate-induced hazards. We need more investment in improved hydrological data, institutions and governance, education and capacity development, risk assessment and knowledge sharing (UN-Water Policy Brief on Climate Change and Water). This Review Paper analyses existing research and methodologies developed to evaluate climate risks in water infrastructure, with a focus on Greece's specific challenges and environmental contexts. The study systematically reviews key approaches, including innovative technologies, such as digital twins of water supply networks (GIS and hydraulic modelling), along with simulation scenarios. By examining existing climate risk assessment methods and recent pilot projects, this review highlights the strengths and limitations of each method, addressing gaps in data integration and predictive accuracy. Additionally, the paper identifies opportunities for future research in enhancing risk assessment models by integrating Artificial Intelligence (AI), fostering adaptive infrastructure planning, and integrating stakeholder engagement and capacity building. This comprehensive analysis aims to guide public authorities, policymakers, and market participants in selecting and improving climate risk assessment tools to support sustainable water management and water resilience.

**Key words:** Climate Risk Assessment, Water Infrastructure, Water Management, Water Resilience, Artificial Intelligence, Digital Twins

## **CLIMATE DATA-DRIVEN URBAN POLICIES: A NEW CHALLENGE FOR GREEK LOCAL AUTHORITIES**

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**Abstract**

Data has become an essential resource for economic growth, job creation, and societal advancement. This global trend offers vast potential across various sectors, including health, environmental sustainability, climate resilience, resource efficiency, energy, urban development, intelligent transport systems, smart cities and more others.

A data-driven public sector is transforming how public policies and services are designed and delivered through strategic data management, sharing, and utilization. As governments increasingly recognize data as a critical asset for creating public value, efforts have been made to bridge legacy systems and dismantle organizational, operational, and infrastructure silos, paving the way for a more data-centric public sector. Making more data accessible and optimizing its use is crucial for addressing societal, climate, and environmental challenges, ultimately fostering healthier, more prosperous, and sustainable cities.

More specifically, the availability of environmental data has the potential to improve urban governance, particularly in building resilience and facilitating climate change mitigation and adaptation. Better environmental data is essential to confront urban challenges posed by the climate crisis. Such data is crucial for improved monitoring and management of urban systems and enables thorough evaluations of policy and planning interventions.

In this paper, we explore how local authorities are adopting data-driven tools to pave the way for more effective and sustainable urban transformations. We specifically present the case of a data-sharing platform developed to assist municipalities in Thessaloniki’s metropolitan area in enhancing their policies for climate change adaptation and mitigation. This initiative, undertaken by the Major Development Agency of Thessaloniki and the Open Knowledge Foundation Greece, showcases a data-sharing platform developed in the framework of the Horizon Europe UPCAST project, which addresses components for safe, fair, and interoperable data exchange.

**Keywords:** data-driven urban policy, climate urban policy, data economy, data ecosystems, open data, open governance



## **HERitage MONitoring (HER-MON) FOS INCREASING RESILIENCE IN THE CLIMATE CHANGE ERA**

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**Abstract**

As an implementation study funded by "The Greek Green Fund," the project "HERitage MONitoring" aims to investigate whether it is possible to monitor and predict the alteration and collapse of historic buildings due to the changing environmental conditions caused by climate change. With the medium- and long-term study of the data in combination with the prevailing climatic conditions, conclusions will be drawn about the relations between them, and a system of early intervention will be proposed to deal with possible collapses and losses of essential elements of the monuments. The pilot application is in the city of Ermoupolis (Syros, Greece), where ten historic buildings from the digital database "HERMES" were selected in the first phase for monitoring. These buildings have an adequate geographical dispersion within the city and belong to different typologies and pathology phases. Buildings owned by the Municipality (or legal entities that the Municipality also participates in), the wider public sector, unknown owners, and well-known owners who gave their consent were selected. Along with the selection of buildings, the choice of parameters monitored in real-time was made. To record the values of the parameters, the basic infrastructure for the collection, transmission, storage, and visualization of data (databases, application server) was developed with the supply, installation, and trial operation of the equipment to evaluate and implement its final installation in the selected buildings. The data are collected in real-time and digital form using special sensors connected and powered by a small unit with a battery installed in the buildings. The collection of these data and their study will allow the categorization of problems in buildings according to their criticality risk. This enables targeted priority conservation and better use of human, technical and financial resources. The visualization of data in a web application allows remote access to them and thus both their study by external researchers and the information and awareness of citizens and the planning of interventions by the competent services. Finally, innovative data collection and transmission technologies should allow the system to be further exploited for use in other areas of interest (environment, health, urban mobility).

**Keywords:** Monitoring, Architecture, Heritage, Risk, Climate Change, Prevention, Sensors, LoRaWAN

## **KIFISSOS RIVER - A POSSIBLE DISASTER IN ATHENS**

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### **Abstract**

Kifissos river is the largest and most important river of the Attica basin. The wide network of streams and the continuous flow have created a catchment area, which covers about 70% of the Athens basin making it the dominant river in the wider area and the main recipient of the rainwater of the Athens basin. The intense development of the wider urban complex of Athens has led to the disappearance of many kilometres of streams, while Kifissos river as the main passage to sea and draining the 70% of the waters of the Athens basin, suffers reduction in its width, arbitrary building and pollution, as well as damaged by major hydraulic or road works. The decision of covering the river from the Three Bridges to Neo Faliro (A1 motorway /Kifissos Avenue) has no contribution of addressing the serious flood protection and environmental degradation problems of Athens basin which bound to become more severe in the future, especially after the recent fires in Parnitha and Penteli mountain.

The present paper investigates a possible disastrous flooding of Kifissos river from the area of Three Bridges and upstream. The covering of Kifissos river from the Three Bridges to its outfall at Faliro bay, does not allow any intervention to increase its drainage capacity, resulting in an increased possibility of flooding in case of extreme precipitation in the surrounding mountainous areas. The results have shown an increased possibility of flooding in a huge area at the west suburbs of Athens with high potential in human losses and properties and therefore a new facility for the floodwater diversion is imperative.

**Key words:** flooding, climate change, Kifissos river, Athens basin

**SYSTEMIC, TRANSVERSAL, DYNAMIC: AN INTEGRATED  
APPROACH TO ACHIEVE SUSTAINABILITY IN A COMPLEX  
LANDSCAPE**

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**Abstract**

As researchers interested to territorial studies, the future of our cities is one of our most important concerns. Considering the strong transformative process in which the different accelerations are accompanied by the climate crisis, we should ask ourselves a question: how can we ensure that design truly acts with a sustainable approach and strives for a sustainable future?

The experience intends to fit into the framework of those proposals that try to ground sustainability, in addition to debate about it. More precisely, the idea is to materialize a transition from a design attitude that researches connections with the Agenda 2030 to an approach that integrates the sustainable development goals to the different design phases, from the analytical-interpretative to the strategic-prefigurative one. To achieve this idea, the research proposes to explore sustainability by searching a systemic vision, to experiment sustainability by assuming a transversal behavior and to interact with sustainability by working with a dynamic attitude.

The city of Mantua has been identified as a field of application where the idea can be linked to a transition process. Since 2023, the city has been involved in the European project HyMantoValley, an initiative of a broader program aimed at creating a hydrogen valley within the limits of the province. This context becomes an opportunity to reflect on new forms of energy production and distribution and to investigate the effects on the city and the landscape caused by these new relations. The case study intends to present a possible attempt to ground the different principles proposed by United Nations in a complex landscape.

**Key words:** cities of tomorrow, transition, sustainable future, integrated approach, new energy production, complex landscape.

**BOOK OF ABSTRACTS**

*2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025*

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Session:

**“Energy Management and Sustainable Mobility”**

## **DECODING EUROPE’S ‘RENOVATION WAVE’ ENERGY STRATEGY: REAL ESTATE SHIFTS FOR SUSTAINABLE CITIES**

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### **Abstract**

The European Union’s Renovation Wave initiative, an integral pillar of the European Green Deal, endeavors to fundamentally transform Europe’s building stock in pursuit of climate neutrality, social equity, and resilient economic growth. To double the annual rate of energy renovations by 2030, the initiative addresses the pressing environmental challenges posed by buildings, which are responsible for nearly 40% of Europe’s energy consumption and 36% of its greenhouse gas emissions.

By synthesizing insights from key research and regulatory frameworks into an incisive SWOT analysis, this paper elucidates the Renovation Wave’s far-reaching implications for the real estate sector, underscoring its transformative potential and inherent complexities. The findings reveal substantial strengths, including cohesive regulatory support, a robust funding apparatus, and a strong commitment to digitalization and inclusivity, thus positioning the real estate sector as a linchpin in the EU’s green transition. Nevertheless, critical barriers - financing deficiencies, skill shortages, and marked regional disparities- pose significant constraints on the initiative’s broader efficacy. Despite these obstacles, the Renovation Wave presents unparalleled opportunities, from enhancing property values and catalyzing green job creation to fortifying climate resilience within the sector.

This study concludes that realizing the Renovation Wave’s ambitions will necessitate coordinated, strategic action among policymakers, industry stakeholders, and regional authorities. Addressing these challenges is vital to unlocking the initiative’s transformative potential, positioning the EU as a global exemplar in sustainable building practices and climate-adaptive urban development.

**Keywords:** Urban Sustainability, Sustainable Real Estate, Circular Economy, Affordable Housing, Energy and Buildings, Climate-Resilient Buildings, Environmental Resilience

## **END-USER PERCEPTIONS TOWARD THE REQUIREMENTS OF INNOVATIVE THERMAL INSULATION MATERIALS**

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**Abstract**

This study investigates end-users perceptions of innovative construction solutions, specifically thermal insulation materials. Initially, a literature review was applied to categorize insulation requirements into economic, environmental, social, and technical. Through the review, various drivers and barriers to the adoption of innovative materials within these categories were also identified.

To gather further insights, a survey targeted end-users across several European countries, particularly those participating in the SNUG European project (<https://snugproject.eu/>, Horizon Europe, 2023-2027). Conducted in March 2024, the online questionnaire received 115 responses from 12 countries, with Spain, Austria, Greece, and Portugal contributing the most responses. The respondents mainly consisted of architects, engineers, building occupants,

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and private homeowners, most of whom reported either high or average knowledge regarding insulation materials.

Survey findings revealed that the most essential criteria for insulation materials were cost efficiency, durability, energy efficiency, health impacts, the release of harmful substances, and thermal performance. Conversely, aesthetics, bio-based materials, biodegradability, and weight/density were deemed least necessary. In addition, the criteria for selecting insulation materials were ranked in terms of importance as technical, economic, environmental, and social.

Additionally, an analysis was performed to identify the differences based on the knowledge level of the participants (low, average, high). All groups rated energy efficiency and health impact highly, while weight/density and bio-based materials ranked lower in importance in all three groups. Statistically significant differences were noted, with low-knowledge participants regarding biodegradable materials and sustainability as less critical, whereas the high-knowledge group undervalued aesthetics.

The findings aim to guide building component manufacturers in developing innovative products that meet user needs and preferences.

**Keywords:** Circular economy, bioeconomy, construction sector, insulation material requirements, end-user, perceptions

### **Acknowledgments**

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## **CONSUMER PERCEPTIONS TOWARD THE USE OF BIOMETHANE – SURVEY RESULTS FROM 11 EUROPEAN COUNTRIES**

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### **Abstract**

Biomethane (bioCH<sub>4</sub>) is expected to significantly contribute to the EU's energy decarbonization efforts by reducing reliance on natural gas imports and enhancing the share of renewables across various sectors. While most EU countries have the necessary gas infrastructure and regulatory frameworks, few facilitate upgrading biogas to bioCH<sub>4</sub> for grid injection. The EU Green Deal and "Fit for 55" package present new opportunities for expanding bioCH<sub>4</sub> deployment, but effective national policies must align with industrial capacities and market conditions to foster development and investment.

The GreenMeUp Horizon project (2022–2025) aims to enhance bioCH<sub>4</sub> market uptake in Europe's energy and transport sectors by improving policies in less-developed markets. The initiative brings together the European Biogas Association, experienced countries (Germany and Italy), and target nations [Greece, Spain, Poland, Latvia, Estonia, Czechia, and the Danube Region (including parts of Hungary, Romania, and Serbia)], along with Mission Innovation Countries (USA, Canada, China, Brazil, and India) to share best practices and insights. This collaborative effort aims to inform and refine policies in target countries, ultimately fostering a robust bioCH<sub>4</sub> market.

The project has explored social perspectives in all target countries, starting with a literature analysis of existing research, which was applied to develop a theoretical model presenting the determinants of consumers' perceptions. Based on the conceptual model, a questionnaire was formulated, focusing on consumers' interpretations and perspectives on bioCH<sub>4</sub> for energy and transportation purposes. Following, a survey was performed in 11 European countries (November 2024); 200 responses were collected per country with the collaboration of a surveying company. The topics addressed included a) knowledge and awareness, b) perceptions, attitudes and behaviour towards using biomethane-based fuels, c) willingness to pay for different applications of biomethane-based fuels, and d) perceptions on local acceptance of biomethane-producing facilities.

The results of this study will enable the development of policies targeted at the market uptake of bioCH<sub>4</sub> and the creation of tools addressing citizen misconception issues.

**Keywords:** biofuels, biomethane, market uptake, societal aspects, public perceptions, survey

### **Acknowledgments**

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**THE IMPACT OF ECONOMIC GROWTH AND ENERGY  
CONSUMPTION ON ENVIRONMENTAL QUALITY**

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**Abstract**

In recent years, research interest in anthropogenic impacts on the environment has been particularly intense, as evidenced by the range of empirical research related to climate change. Climate change and especially its negative effects is a field of continuous research and study. This research examines how economic growth, consumption of energy resources and population affect the quality of the environment in the case of Greece employing appropriate econometric techniques.

Specifically, using an ARDL model, the long- and short-term effects of these variables on environmental quality, measured by carbon dioxide emissions, are examined. Carbon dioxide (CO<sub>2</sub>) is the most important anthropogenic greenhouse gas. The findings reveal that economic growth and energy consumption have a positive and significant impact on environmental degradation. These results underline the urgent need for sustainable development policies that promote economic growth while mitigating environmental damage. These policies should aim to reduce CO<sub>2</sub> emissions and focus on increasing energy efficiency.

**Key words:** climate change, energy consumption, environmental quality, ARDL

**QUANTILE CONNECTEDNESS IN RENEWABLE ENERGY COMPANIES AND RELATED COMMODITIES DURING COVID-19 OUTBREAK**

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**Abstract**

IMF indicated soaring metal prices, as cleantech firms are witnessing a meteoric rise in demand, and even dirty energy firms are changing their stance towards clean energy. Shock transmission (both positive and negative) is plausible as the world is chasing a net-zero emissions scenario. Therefore, we have investigated the top nine renewable energy companies globally with related metals (Nickel, Copper, Cobalt) from 3rd January 2017 to 3rd January 2022. This period also involves pre-Covid, Covid 1st Wave, Delta and Omicron. Our approach was QVAR, as suggested recently by Gabauer (2021), which is a logical extension of the initial connectedness approach proposed by Diebold and Yilmaz (2014). We found several outcomes. Shock transmission is happening from both cleantech and dirty energy firms to metals. Connectedness (shock transmission) is increasing in tails. Moreover, connectedness in the lower upper quantiles is asymmetric, with clean energy companies tending to transmit positive shocks to metals. Therefore, mean-based connectedness could be ruled out. Metals such as Nickel, Cobalt, and Copper emerged as the net receivers of shocks. The firms with higher market capitalization producing clean energy emerged as significant net transmitters of shocks (Enphase, Orsted and VWS). The total Connectedness Indices (TCIs) are heterogeneous over time. TCI sharply increased immediately after Covid-19 fallout and remained at a relatively higher zone than pre-Covid levels. Wind energy firms (SSE and Orsted) emerged as the net transmitter among all pairwise directional connectedness; furthestmost wind energy firms (SSE, ED and EDP) emerged as the moderate net receiver of shocks. This research provides many inputs towards the wind energy sector for researchers, practitioners and policymakers.

**Keywords:**Renewable energy, Commodities, Covid -10, Quantile connectedness

## **URBAN ENERGY TRANSITION AND BUILDING INTEGRATED PHOTOVOLTAICS**

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### **Abstract**

Urban energy transition is a critical response to the urgent challenges of climate change and urbanization. Building-Integrated Photovoltaics (BIPV) emerge as a transformative solution, integrating solar energy generation into the buildings and urban infrastructure of cities. BIPV systems not only provide renewable energy but also enhance the functional aspects of buildings, making them a key component in sustainable urban development.

BIPV technology enables the integration of photovoltaic materials into building elements, such as roofs, façades, windows, and shading devices. This integration allows buildings to generate their own electricity while serving essential structural functions, such as weather protection and thermal insulation. By utilizing available surfaces without requiring additional land, BIPV maximizes space efficiency, which is particularly crucial in densely populated urban environments. The dual functionality of BIPV systems contributes to reducing overall energy consumption and greenhouse gas emissions, aligning with global sustainability goals. The potential of BIPV is significant; in Europe, 36% of energy-related greenhouse gas (GHG) emissions and around 40% of energy use are attributable to buildings. In response to climate change there is an urgent need to curb emissions and mitigate their environmental impact. By harnessing solar energy on-site, BIPV can significantly mitigate this impact. Moreover, BIPV can enhance energy independence for urban dwellings by reducing reliance on traditional power grids and enhancing clean air and urban resilience.

Technological advancements in BIPV have led to improved efficiency and design flexibility. The development of new materials and designs has made BIPV systems lighter and more adaptable to various architectural styles, facilitating broader adoption across diverse urban contexts. Regulatory frameworks are less advancing, and further evolution is needed to support the integration of BIPV in urban planning, supported by policies promoting energy efficiency and renewable energy adoption. With the increasingly recognition of the role of BIPV as a viable solution for achieving net-zero buildings and positive energy districts, initiatives such as the European Union’s Renewable Energy Directive encourage Member States to facilitate local renewable energy projects, including BIPV installations. As cities strive to reduce their carbon footprints and enhance resilience against climate change, the widespread adoption of BIPV will be essential. In this context, BIPV’s efficiency and longevity are two critical parameters in the wider BIPV deployment and will be discussed synergistically to greenery and towards urban decarbonization.

**Key words:** Building Integrated Photovoltaics (BIPV), BIPV Longevity, Urban environments, Energy transition

The research work is implemented in the framework of H.F.R.I call “Basic research Financing (Horizontal support of all Sciences)” under the National Recovery and Resilience Plan “Greece 2.0” funded by the European Union – NextGenerationEU (H.F.R.I. Project Number: 14812).

**COGNITIVE BACKGROUND OF THE RELATIONSHIP BETWEEN  
AUTONOMOUS VEHICLES AND SUSTAINABLE MOBILITY: A CASE  
STUDY OF GREEK DRIVERS**

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**Abstract**

The research that is presented concerns the investigation of the background of cognitive familiarity, regarding the matter of the relationship between autonomous vehicles and Sustainable Mobility. Both the existing background knowledge and the gap of knowledge are approached in detail, concerning the sustainable side of the future use of autonomous driving of vehicles.

More specifically, research which targets the group of Greek drivers is used as a case study. Within the initial theoretical part of this research, the necessary review of related studies and methodologies as well, is conducted, so as to link this research topic with the much wider, existing body of research of the international scientific community. Moreover, on its main theoretical part, the conceptual definition of autonomous vehicles and sustainable mobility, as well as other relative terms that lay the initial foundations of understanding, are mentioned for deeper understanding.

Furthermore, the past and current development of some relevant proposals and applications is presented and also analyzed with the purpose of making the suggestions for their future use more understandable. The following case study is specialized in the statistical population of car drivers in the country of Greece, who are approached by a representative sample of some statistical units in the context of primary data collection.

Subsequently, based on their answers and thoughts about the topic in question, the cognitive background regarding the contribution of autonomous vehicles to sustainable mobility is delineated. Finally, specific helpful conclusions are drawn regarding the potential inclusion of autonomous vehicles, related to the sustainability, in the real road network, as well as suggestions that have to do with future research work on the topic.

**Key words:** autonomous vehicles, sustainable mobility, sustainable development.

## **ANALYZING ENERGY POVERTY IN SOUTHERN EUROPE: A DESCRIPTIVE ANALYSIS USING SUBJECTIVE INDICATORS**

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### **Abstract**

Access to sustainable and affordable energy is the fundamental principle of the 7<sup>th</sup> Sustainable Development Goal (SDG), highlighting the pivotal role of energy in driving global development. The European Union (EU) recognizes energy as an essential right for everyone, as emphasized in its energy policies. Nevertheless, despite these initiatives, energy poverty significantly impacts the EU population, hindering equal societal progress and prosperity. Although the EU focuses on cohesion among its member states, Southern European countries experience more severe energy poverty despite having milder winter conditions. Aiming to capture energy poverty occurrence in Southern European countries, this study employs statistical analysis focusing on Greece, Italy, Spain, and Portugal for 2012-2022. The outcomes reveal that Southern European countries bear a disproportionate burden, highlighting the region's vulnerability. Furthermore, significant disparities within South European countries are evident since some countries bear a disproportionate burden, highlighting regional vulnerability.

**Keywords:** Energy poverty; Descriptive analysis; Southern Europe; Vulnerability



This project is carried out within the framework of the National Recovery and Resilience Plan Greece 2.0, funded by the European Union – NextGenerationEU (Implementation body: HFRI).

**BOOK OF ABSTRACTS**

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Pre-organised Special Session:

**“Culture and Sustainable Development”**

*Organized by*

***Assoc Prof Maria Manola***

**MONASTERIES AS ELEMENTS OF CULTURE AND SUSTAINABLE DEVELOPMENT. FROM TRAVEL TEXTS TO ENTREPRENEURSHIP.**

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**Abstract**

The texts of travelers, such as the descriptions of monasteries by Cristoforo Buondelmonti in the 15th century or Tournefort in the 17th century, contain valuable information about the architecture, the daily life of monks, and the spiritual role of monasteries. Travelers from Europe were often impressed by the location of the buildings, the natural beauty of the landscapes surrounding them, and the monastic life. The architecture also aroused their interest, such as Gerola, who was fascinated by the monasteries of Tsagarola, Arcadi, Preveli, or Toplou. But the descriptions also give us information about a different aspect of the life of the monasteries, that of the development of some early form of economic activity.

This activity continues today in many of them and is an example that blends tradition with modern business strategy, which is now becoming necessary for their survival. The economic activities of the monasteries have important social implications as they contribute to sustainability by creating jobs, especially in rural and isolated areas, and often support, as their ‘raison d’être’ requires, charitable projects. Now days they are important tourist destinations, attracting visitors interested in history, nature, art and organic products and enhancing the economic sustainability of a place. The business initiatives of the monasteries serve as models of sustainable development.

The article presents Holy Monasteries through the writings of travelers and, with the help of a survey of a sample of 113 people, tries to approach the way in which Holy Monasteries bridge the past with the present and the innovative practices they engage in order to maintain a unique role in contemporary society by combining culture and economy.

**Key words:** travel texts, travelers, monasteries, entrepreneurship, sustainability, tourism

## **CULTURAL ENTREPRENEURSHIP AND SUSTAINABLE DEVELOPMENT IN LEMNOS**

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### **Abstract**

Lemnos, one of the outlying islands of Greece, occupies a special place in the national and cultural map of the country. Its geographical location in the northeastern Aegean Sea and its proximity to the border with Turkey give it strategic importance, while its rich history and cultural heritage make it an important hub between the ancient and modern world.

The present study aims to highlight the tangible and intangible cultural heritage of Lemnos, while examining the potential for enhancing cultural entrepreneurship as a key driver of sustainable development for the island. The themes explored include the importance of religious monuments, gastronomy, cultural events - such as music and dance festivals - the management of archaeological sites and the contribution of literature, through the works of Yannis Ritsos and other authors inspired by Lemnos.

As part of the study, a quantitative analysis was carried out using questionnaires distributed exclusively to residents of Lemnos. Data collection focused on recording and analyzing the views of local people on the potential and opportunities that cultural entrepreneurship provides for the sustainable development of the island. The results of the survey aim to formulate recommendations for linking local cultural heritage with economic, social and environmental sustainability, enhancing local identity and development.

**Key words:** Cultural entrepreneurship, sustainable development, Lemnos



**DAFNI MONASTERY: PILLAR OF SUSTAINABLE DEVELOPMENT  
AND CULTURAL ENTREPRENEURSHIP. ARE THERE  
POSSIBILITIES?**

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**Abstract**

Daphni is an eleventh-century monastery on the outskirts of Athens. It is considered a superb example of Middle Byzantine period architecture with sublime mosaics representing the visualization of the Christian cosmos. The monastery is inscribed on the UNESCO World Heritage Sites list and has attracted significant scholarly attention. The ravages of time and a destructive earthquake in 1999 triggered an extensive and multi-million restoration project funded by the Greek state and the European Union to preserve the building and the mosaics for future generations.

The popularity of neoclassicism in the 19th century condemned many remnants of Byzantine architectural heritage to oblivion. The concerted efforts of European artists, architects, and archaeologists eventually contributed to the study, rescue, and conservation of the most prominent religious buildings. In the 1870s, the historian Konstantinos Paparrigopoulos integrated the Byzantine Empire into Greek history. Preserving Byzantine and medieval monuments gradually became necessary to serve the wider goals of the Great Idea.

Contemporary attitudes to Byzantine monuments are less ideologically charged but the meaning and significance of the monuments to the public continues to evolve. Cultural heritage has become a cornerstone of sustainable development at a local level, which raises interesting questions regarding the enhancement of the tourist potential of the Daphni Monastery. Is the monastery's value known to the general public? What elements impress its visitors? Is public transport accessibility satisfactory? Finally, what cultural entrepreneurship opportunities does the monastery offer to assist local development?

As part of the study, Daphni Monastery visitors received questionnaires to explore their attitudes towards the monument. The survey will underpin efforts to develop the area's cultural entrepreneurship potential and to enhance Daphni Monastery's visibility and popularity as a tourist destination. The proposals include improving access, strengthening cooperation with local businesses, and promoting Daphni Monastery as an important cultural destination.

**Keywords:** Daphni Monastery, UNESCO World Heritage Site, Byzantine Empire, Education, Tourism, Sustainability

**QUALITY ASSURANCE FOR PEOPLE WITH DISABILITIES AND ITS RELATIONSHIP WITH CULTURAL ENTREPRENEURSHIP: A CASE STUDY ON THE MUSEUM OF THE LESVOS PETRIFIED FOREST**

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**Abstract**

Quality assurance for people with disabilities (PWDs) at the Museum of the Lesvos Petrified Forest is a critical issue that is directly linked to the concept of cultural equality and accessibility to culture. A museum is not just a place for storing cultural goods; it is a place of education, learning and cultural experience for all. The concept of accessibility for people with disabilities must be addressed holistically, not only at the level of physical access, but also at the level of cognitive and technological accessibility. The use of technologies such as audio devices, Braille descriptions, augmented reality (AR), or digital tools that allow visitors with disabilities to fully experience the exhibits is extremely important.

Conversely, cultural entrepreneurship focuses on the sustainable management and development of the cultural heritage with the aim of creating both economic and social value. A museum, by implementing practices that serve the needs of people with disabilities, acquires a dual role. On the one hand, it fulfills its mission to be a space open to all, and on the other hand, it offers opportunities for innovation, attracting a wider audience and increasing its attendance.

Another aspect that connects accessibility with cultural entrepreneurship is the possibility of creating new partnerships and sponsorships from organizations that promote accessibility and inclusion, thus contributing to the financial sustainability of the museum. An example is the development of special educational programs for schools that focus on the inclusion of people with disabilities, which could be funded by public or private institutions.

Can technological innovation be further developed in the context of cultural entrepreneurship, especially in museums such as the Petrified Forest?

**Key Words:** Social responsibility, quality assurance, people with disabilities, Museum of the Lesvos Petrified Forest, cultural entrepreneurship

## **ART IN EDUCATION AND LANGUAGE AS FUNDAMENTAL TOOLS OF CULTURE AND TOURISM**

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### **Abstract**

Art in Education and Language are two essential means of expression and communication closely linked to culture and tourism. The integration of these elements can generate unique experiences that enhance both cultural understanding and tourist attraction.

Art in Education serves as a medium for cultivating creativity, imagination, and social interaction. Through its application, myths, historical events, and folkloric traditions can be represented, fostering a deeper understanding of the culture and identity of a region or community. This approach enables participants to actively engage with cultural elements such as language, customs, and traditions through an immersive, experiential process.

Language, as a core element of communication, adds another layer to Art in Education, allowing participants to connect with the linguistic heritage of a place and understand its importance in shaping cultural identity.

The connection between Art in Education, language, and tourism is particularly significant. Tourist destinations that incorporate local theatrical performances, language workshops, or dramatic reenactments provide visitors with opportunities to actively engage with the cultural heritage of a region. Through such initiatives, tourists transition from being mere spectators to active participants, experiencing culture through activities that blend play with education.

Furthermore, art and language initiatives in tourism can contribute to the preservation and revitalization of endangered traditions and dialects. These programs not only raise awareness among visitors but also provide economic and social benefits to local communities.

By integrating art and language into educational tourism strategies, regions can foster meaningful connections between people and place, creating memorable experiences that emphasize cultural authenticity.

The interdisciplinary approach of combining Art in Education and Language highlights the importance of creativity and communication in shaping sustainable tourism practices. Such initiatives support cultural preservation while promoting global cultural exchange.

Ultimately, the synergy between Art in Education, Language, and Tourism offers a dynamic framework for celebrating and sharing the unique heritage of communities worldwide.

**Keywords:** Art in Education, Cultural Heritage, Language Preservation, Tourism Engagement, Experiential Learning, Sustainable Tourism

**THE ITALIAN MONUMENTS IN LEROS AS HISTORICAL RELICS  
OR LIVING PARTS OF MODERN ECONOMIC LIFE.**

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**Abstract**

The Italian monuments in Leros, although originating from a specific historical period, serve today both as historical relics and as living components of the island’s modern economic life. This dual dimension makes these monuments significant for the cultural identity and development of Leros.

As relics of the Italian occupation (1912–1943), these monuments retain their historical value, representing Italian architectural and urban planning designs. Buildings such as the Old Military Hospital and the settlements in Lakki bear the history of an era when the Italians sought to transform Leros into a strategic hub in the Aegean. This architectural heritage has been preserved and forms part of the island’s historical identity, attracting researchers, historians, and visitors interested in this period.

Beyond their historical value, the Italian monuments have emerged as living elements of Leros’s economic life. Many have been repurposed as museums, cultural spaces, or tourist attractions, linking the past with the present. Tourism centered around these monuments has boosted the local economy, as visitors contribute to local hotels, restaurants, and shops. Additionally, the maintenance and renovation of these sites have created new jobs and investment opportunities on the island.

**Keywords:** Italian monuments Leros, local economic development, tourism

**RELIGIOUS FESTIVALS AND CULTURAL ENTREPRENEURSHIP IN  
THE MONASTERIES OF LESVOS FROM THE TIME OF THE  
TRAVELLERS TO THE PRESENT DAY**

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**Abstract**

Religious festivals are important events linked to religious traditions, festivals or important events and are crucial for religious life in different countries and cultures. These festivals, while differing according to religious and cultural traditions, have common characteristics that include spirituality, worship and the connection of believers to the divine. At the same time, they offer cultural and tourism value as they attract crowds of devotees, tourists and visitors from different corners of the world.

The holy monasteries of Lesvos play an important role in the history and culture of the island, while the religious festivals associated with them have contributed to the development of cultural entrepreneurship from the time of the travelers until today. The interaction of monasteries with religious tourism and the local economy has evolved over the years, creating opportunities for small and medium sized businesses. Tourists visiting Lesvos in the 19th and 20th centuries often described the unique natural beauty of the island and its impressive monasteries. These descriptions brought to the fore the spiritual and cultural importance of monasteries, such as the Holy Monastery of Limon and the Holy Monastery of Ypsilos. The monasteries functioned not only as spiritual centres, but also as centres for the production of local products, such as olive oil and wine, offering hospitality to travellers and attracting pilgrims and visitors. This timeless function of the monasteries was an early form of religious tourism. In modern times, religious festivals around the holy monasteries remain central to the religious life of Lesvos, while at the same time they are a driving force for the local economy and cultural entrepreneurship.

**Key Words:** religion, festivals, cultural entrepreneurship, cultural entrepreneurship, outermost islands, Lesvos

**Special session:**  
**SUSTAINABLE DEVELOPMENT, SOCIAL SUSTAINABILITY AND  
SOCIAL POLICY: TRENDS, TRANSFORMATIONS AND RISING  
CHALLENGES**

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**Abstract and Topics**

Sustainable development is based on three interrelated and equally important pillars; the environmental, the economic and the social one. The environmental refers to the preservation and respect of the natural ecosystem and its functions; the economic is related to the creation of stable economic systems that ensure social justice without hindering the functioning of the free market while respecting the environment; and the social involves building a framework that promotes the well-being of the whole population with the ultimate aim of preserving social cohesion (Ekins, 2000, Burford et al 2013), while reducing social discrimination.

Social sustainability constitutes one of the main theoretical pillars of the sustainable development concept (Baker et al, 2005; Castro, 2004), although it is open to variations in its content and meaning, as there is no commonly accepted definition so far (Shirazi & Keivani, 2019). In any case, this concept refers to the need to create a society that contains all the conditions for sustainable development in terms of equality, social justice, opportunities, equal life-chances and social well-being (Nussbaum & Sen, 2002, Papadakis & Tzagkarakis 2024).

The inclusion of social sustainability in the sustainable development conceptualization is first identified in the Brundtland Report (WCED, 1987) and the Rio reports of the United Nations (UN, 1992), in which a synthesis of the ecological, economic and social dimensions of social development takes place. Hence, these three areas were called dimensions or pillars of the concept of sustainability. At the same time, these pillars are not independent of each other but are interrelated and the existence of all three is a necessary condition for forming a comprehensive content to the concept of sustainability. In any case, the concept of social sustainability is related both to environmental issues and to issues of social well-being and cohesion, while considering the contribution of the private and public sectors to the processes of achieving these objectives, i.e. improving living conditions on equal terms.

The United Nation's (UN) most recent “Agenda 2030” for Sustainable Development (“Transforming our world: the 2030 Agenda for Sustainable Development”), signed in August 2015, sets 17 global strategic goals that will balance social, economic and environmental needs and commit to the effective implementation of Sustainable Development. At the same time, in the European Union, the establishment of the European Pillar of Social Rights in 2017, sets certain objective in the course of satisfying social rights, thus making a crucial step

towards social sustainability (ETUI, 2021). Although European integration in social issues has not taken a comprehensive dimension, the European Pillar of Social Rights is particularly important because it includes the principles and necessary values in order to achieve social prosperity and social cohesion, thus social sustainability.

The economic crisis, the pandemic and the current energy crisis highlight the necessity of the welfare state in protecting citizens from the multidimensional economic and social risks that are being reproduced, multiplied or readjusted (Papadakis & Tzagkarakis 2024). At the international level, the socio-economic context is becoming more complex, with more interdependence and a speed of events that is constantly increasing (Schwab & Malleret, 2021), creating new challenges for achieving economic, environmental and social vulnerability. The permacrisis era (multiple crises- see Oyelere et al 2023), along with the Mega-Trends that are taking place and seem to gradually prevail (e.g. globalization, digital economy, digitalization, demographic and social changes, climate change, etc.- Eurofound, 2020: 3-4) have a clear impact on the structure of economy and labour market, industrial relations systems, and business models.

All the abovementioned highlight that the respective public policies need to be more prepared for phenomena that one might mistakenly consider rare and pose a series of new challenges for a true and actual sustainable development within momentous times (see Papadakis et al 2024).

Given the abovementioned, the **key topics of the present Session** are the following:

- Sustainable development and social sustainability: Theoretical Insights and Definitional Issues
- The role of the (active) Welfare State for Social Sustainability
- Social Policy and Social Substantiality
- Social sustainability challenges in Europe and Globally
- Social Sustainability within the framework of a) the UN “Agenda 2030” for Sustainable Development and b) European Pillar of Social Rights
- Perma-Crisis, Mega Trends and Social Sustainability
- The (actual and potential) role of Education, LLL, Employment, Public Health and Social Care in social sustainability
- The interrelation among social, economic and environmental sustainability.
- Social vulnerability, socio-economic inequalities, economic and employment precarity as challenges for the actual achievement of social sustainability
- Multiculturalism, refugee-migrant Crisis and the stake of migrants and refugees’ social inclusion
- Policy Learning towards social sustainability: analyzing best practices
- Social Sustainability, within the public policy complex.

**MEGATRENDS, THE NEW EUROPEAN STRATEGY ON SUSTAINABLE DEVELOPMENT AND THE ROLE OF EDUCATION, EMPLOYMENT AND RESKILLING IN SOCIAL SUSTAINABILITY.**

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**Abstract**

In the era of perma-crisis (namely the multiple and consequent crises, from the 2008 credit crunch crisis and the resulting recession under the austerity doctrine to the onset of the refugee-migrant crisis in 2015, the COVID-19 crisis, and the current energy and inflation crisis), socio-economic problems and inequalities augmented, causing further strain on social cohesion of modern societies. Additionally, the impact of the ongoing Megatrends (i.e. digital economy) is more than evident and persistent in the above-mentioned.

The concept of social sustainability is related both to environmental issues and to issues of social well-being and cohesion, while considering the contribution of the private and public sectors to the processes of achieving these objectives, i.e. improving living conditions on equal terms.

Taking all the above-mentioned into account, the present paper analyzes the role of both Employment and Education (in their capacity as key components of the Welfare State), in social sustainability. The research methodology, use, is based on literature review and secondary quantitative analysis.

Hence, the paper analyses a) the key determinants of the new European Strategy on Sustainable Development (2021-2030), b) the state of play in education and employment in the EU (emphasizing, among others, issues such as the rise of precarious employment and its correlation to social vulnerability and in-work-poverty, the association between educational capital and employability, the socio-economic inequalities' impact on education etc) and c) the ongoing transformations in the labour market, the (so-called) “future skills”, aligned with “future jobs” and the role of reskilling (via VET) in coping with the demands of the changing Labour Market. Within this context it investigates the critical dimensions of the current and future role of Employment, Education and Reskilling in sustainability and in particular in social sustainability, as well as the major policy challenges in these substantial domains of the Welfare State.

**Key Words:** Mega-Trends, European Strategy on Sustainable Development, Social Sustainability, Education, Employment, future skills and jobs, Welfare State



**THE MIGRATION-REFUGEE CRISIS AS AN ‘ASYMMETRICAL THREAT’ IN THE MEDITERRANEAN REGION: FIELD RESEARCH**

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**Abstract**

This thesis focuses on the study of the migration and refugee phenomenon in the Mediterranean, highlighting its multiple dimensions as a modern asymmetrical threat. In the first part, the key conceptual definitions are presented, while the main migratory routes in the Mediterranean are also examined.

The analysis extends to the legal framework of the European Union and the main host countries, covering a variety of agreements as well as the most recent European initiatives. Additionally, the legislative and political responses at both national and European levels are examined. This is followed by an analysis of the concept of asymmetrical threats as a form of modern warfare, as well as the links between this concept and the migration phenomenon. The thesis then examines approaches to addressing these asymmetrical threats.

First, European efforts are highlighted, followed by a focus on Greece’s response, primarily through the involvement of the Greek Armed Forces. Next, the questionnaire designed by the author is presented, along with the analysis of its results, with the final part of the thesis consisting of the conclusions and the proposals that emerged from the completion of the study.

**Key words:** Migration-Refugee Crisis, Asymmetrical Threat, Hybrid Warfare, Mediterranean Region, Greek Armed Forces

**SOCIAL SUSTAINABILITY AND SOCIAL VULNERABILITY IN  
FOCUS: THE CASE OF GREECE**

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**Abstract**

Social sustainability focuses on the various prerequisites essential for creating a prosperous and welfare-oriented society. Achieving such critical objectives requires implementing specific social policies aimed at reducing social inequality, addressing social problems, and creating better opportunities for all citizens. Therefore, establishing a sustainable, effective, and efficient welfare policy framework is crucial to tackling the challenges posed by the multiple crises that characterize our era.

Conversely, social vulnerability stands as the primary challenge to social sustainability, as its increase can lead to conditions of social disruption. The past fifteen years in Greece have been marked by turbulence and multiple crises, beginning with the debt crisis of 2010, followed by the refugee crisis in 2015, the COVID-19 pandemic in 2020, and the ongoing energy-inflation crisis, thus making difficult the increase of social sustainability even though the economy seems to be positively driven the last five years.

This study aims to analyze the dimensions of social sustainability alongside the levels of social vulnerability in order to assess Greece's current state of social sustainability. It will identify the main policy challenges that policymakers need to address and explore the social policy interventions required to promote sustainability while fostering prosperity and social welfare in the country. Greece is chosen as a case study due to its experience with prolonged crises over the past decade, the effects of which are likely to have a lasting and wide-reaching impact.

**Key words:** Social sustainability, social vulnerability

**BOOK OF ABSTRACTS**

*2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025*

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Session:

**“Education and Sustainable Development”**

**TOWARDS AN IMMERSIVE VR AND GAMIFICATED EDUCATIONAL MODEL FOR CONSTRUCTION COURSES. A VIEW ON THE BENEFITS AND DRAWBACKS**

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**Abstract**

Virtual Reality and Gamification are gradually gaining more and more influential ground as methodological tools in a huge variety of teaching approaches, which can either replace or strengthen the conventional educational models in a lot of different sectors of education. A part of such digital approaches can also be found in the training of engineers like architect or civil engineers, specifically for the courses related to the Construction.

In these methodologies a direct and remote virtual familiarization with building construction sites or even a gamificated experience of them is used by educators. The incorporation of the above different approaches is applied independently on the basis of forming a multi-channel teaching framework. Furthermore, the successful attempts and proposals of their independent implementations have also led to their joint uses as a combination of educational methodologies in the learning experience of engineers and students of engineering science. More specifically, it has to do with the simultaneous use of VR full immersion into building construction site environments, which are enriched with specific features of gamification for the educational experience with the construction site processes within them.

The use of such models requires an initial understanding of the theoretical background of the benefits and the drawbacks accordingly. The selected methodology of this study concerns a review and analysis on relative findings from theoretical and empirical studies, through the years. This resulted in specific conclusions about the different types and categories of the reported benefits and drawbacks. As well as specific guidelines that can be used for a framework of their safe and efficient application, as optimization and correction but also through limitations where necessary. The clarification of the two sides led also to some suggestions for future research regarding the adaptation of this framework by educators of engineering science.

**Key words:** virtual construction site, gamificated construction site, immersive learning.

**A REVIEW OF VR AND GAMIFICATED EDUCATIONAL  
METHODOLOGY IN VIRTUAL CONSTRUCTION FROM NON TO  
FULL IMMERSION**

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**Abstract**

VR has a significant role as a tool of educational models in digital learning. Particularly, a sub-group concerns the use of Virtual Learning Environments, depicting building construction sites remotely for the Construction courses. This concept is seen in the earliest VR editions, where a construction site is projected via basic means (screen, mouse) in Non-Immersion (the user maintains the feeling of his presence in the real space).

The necessity of more realistic stimulation and the advancement of technology led to an expanded body of cutting-edge research related to Full-Immersion in these sites with more sophisticated techniques, devices (Head Mounted Display devices), where learning becomes isolated from the real environment and is transferred into a sensory level to a 3D and 360° graphic or video, representing an assimilated building in the construction phase.

A smaller group of these tours involves Gamification simultaneously to enrich the educational procedure with benefits like user engagement and involvement. During the Gamification of these immersions, traits of the game design, (e.g. badges, score) are incorporated. More analytically the virtual construction site is projected either in a Non-Immersive or Full Immersive simulation, as a grounds for the addition of traits of Gamification.

This research addresses the historical perspective of the use of gamificated virtual tours in constructions from Non to Full Immersion. Methodologically, the authors used a review in relative applications and proposals, emphasizing in the historical continuity of their development. In conclusion, it occurs that the Full Immersion in constructions in education should not be regarded as an independent method, but as an evolution of simpler applications, with which specific traits and guidelines are aligned, and have been modified accordingly to notable gaps of the past. Finally, supplemental research is proposed regarding the comparisons between the early and modern ways of the learning process in question.

**Key words:** virtual construction site, gamificated construction site, non-immersion, full-immersion.

**SUSTAINABLE SCHOOL: ENHANCING ENVIRONMENTAL AWARENESS AND ENTREPRENEURSHIP THROUGH SCHOOL PROGRAMS AND VIRTUAL BUSINESSES. THE CASE STUDY OF THE UNIFIED SPECIAL VOCATIONAL HIGH SCHOOL OF AGIOS DIMITRIOS, ATTICA, GREECE**

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**Abstract**

Sustainable education is central to the future schools, offering students the opportunity to develop environmental awareness and entrepreneurial skills.

This subject allows for consideration of ways in which schools can support sustainability through environmental programs such as recycling, energy conservation, waste management and plant cultivation, alongside the incorporation of virtual enterprise programs. These school programs enable students to develop key entrepreneurial thinking and innovation skills, implementing ecological solutions and enhance understanding of sustainable production practices.

Through this experience, students learn to care for the environment and apply sustainable management principles, while participating in a virtual business gives them the opportunity to design and produce products with environmental value, cultivating leadership and innovation skills.

This paper analyzes the implementation of environmental education school programs in a school with students with disabilities, combined with the creation of a virtual business, with the aim of sustainable development and social inclusion.

Students, with the support of their teachers, actively participate in activities that promote recycling, waste management, energy conservation and plant cultivation. At the same time, the virtual business allows them to develop entrepreneurship skills, designing environmentally friendly products and contributing to the cultivation of environmental awareness and leadership skills. Actions are implemented through European eTwinning projects, which broaden the learning framework and strengthen cooperation with other countries. In addition, the use of a 3D printer offers students the opportunity to create original products with environmental value, cultivating sustainable production and innovation skills.

The proposed approach enhances the active participation, creativity and social integration of students, forming a school environment that meets the needs of the 21st century.

**Key words:** Sustainable school, Environmental Education, Virtual Business, eTwinning, 3D Printing, Special Education, Social Inclusion

## **THE PHILOSOPHY OF ENVIRONMENTAL EDUCATION**

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### **Abstract**

Environmental Education (EE) is a critical process that deals with the relationship between people and the natural and man-made environment. Over the years, several hypotheses have been developed to capture the essence of EE, reflecting the complex interplay between perceptions, motivations, and social goals. These cases highlight the urgent need to address environmental challenges through interdisciplinary approaches, local and global perspectives, and individual responsibility. PE serves as a catalyst to enhance environmental literacy and promote sustainable practices. It inculcates environmental awareness, critical thinking and a sense of stewardship from a young age, enabling individuals to deal effectively with environmental issues.

The objectives of Environmental Education are multi-faceted, aiming to cultivate environmental awareness, knowledge and values. It empowers individuals to make informed decisions and take responsible actions to preserve and improve the environment. PE is characterized by its problem-solving orientation, interdisciplinary approach, inclusion in society and the periodic nature of its application.

These characteristics distinguish it from traditional education and underline its holistic and dynamic nature. Strategies and standards for the integration of Environmental Education into educational systems face challenges due to the multifaceted nature of environmental problems and traditional educational structures. Different approaches, such as interdisciplinary and interdisciplinary models, offer distinct advantages and challenges, highlighting the need for flexibility and adaptation in application.

**Keys words:** Education, Enviromental, Study

**RETHINKING SCHOOL ARCHITECTURE:  
BRIDGING EDUCATIONAL SPACES AND THE URBAN FABRIC**

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**Abstract**

The architectural design of school buildings needs to accommodate a shifting spatial context, fostering an environment that promotes dialogue and social interaction among students. The alternative models for educational buildings in Europe over the past decades have a fluid spatiality, with architects focusing less on form and more on creating a communicative atmosphere that fosters interaction and togetherness. Nevertheless, in most cases, the school remains strictly demarcated—an autonomous space with no connection to the socio-spatial environment or the urban fabric.

Contemporary education is directed towards fluid and interrelated networks within the urban environment. This research explores the spatial and conceptual boundaries of secondary education schools, focusing on their interaction with the surrounding urban fabric. It examines the relationship between the school building and the city, the interplay of indoor and outdoor spaces, to create the potential for extending educational activities beyond the confines of the classroom.

The article critically analyzes the legislative framework governing school design in Greece, identifying constraints that limit architectural flexibility and innovation. These regulations often produce rigid spaces that fail to support contemporary pedagogical approaches (adaptability, interactivity, dissolution of traditional spatial limits).

By bridging insights from architecture, pedagogy, and urban planning, the research seeks to redefine these boundaries between the typical classroom, the schoolyard and public spaces, trying to answer the broader question of whether teaching and learning should remain enclosed or expand into urban contexts. Creating adaptable and inclusive school spaces enhances the educational process and students' social development, while fostering stronger connections with the urban fabric. The challenge is to use school architecture as a medium for educational and societal progress, by establishing schools as active participants in the urban environment, where learning transcends physical and conceptual boundaries.

**Key words:** school architecture, fluid networks, urban fabric, redefining the boundaries



**THE ROLE OF MUNICIPAL OPEN FREE UNIVERSITY OF  
MUNICIPALITY OF NEW FILADELFIA-NEA CHALKIDONA: A  
SOCIAL FOOTPRINT AN ACCESS TO HIGH LEVEL EDUCATION**

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**Abstract**

The institution of Municipal Free Open University (MFOU) expresses the academic idea, an innovative idea, the way to fulfil the citizens requirements of a local community, the city of Neas Filadelfias- Neas Chalkidonas to react, to learn new academic approaches. It's an idea that seeks to improve the quality of citizens life, how to react and solve daily problems through different approaches. New approaches such as the use of new digital means, to learn the history of the cultural heritage, the tradition and the history of their city. These approaches simplify the way of living of public services makes better their life. Statistically, the attendances are in growing number. For the implementation of the Municipal Free Open University (MFOU) took the approval of the Municipality of Council Board of Municipality of Neas Filadelfias-N. Chalkidonas.

The present paper investigates the way of how make better the municipality life, to develop their interests through interaction, while the academic teachers participate under the solidarity's impact as a new tool and practice to learn citizens to activate more, to think better, to acquire and obtain new knowledge and skills, to come into contact with new fields of knowledge and new scientific subjects in order to broaden their horizons. These issues are updated aiming at dealing with the modern life requirements. It's important to obtain the Scientific Committee's agreement too, as well as to receive Municipality's which is also responsible for the form of structuring of lectures that seek to cover intellectual pursuits of the era such as the digital transition to a smart green policy, the elimination of violence from schools, the reduction of marginalization, the preservation and revival of tradition, the culture of the place, as well as any action to expand and develop the various cognitive subjects of both theoretical and positive sciences.

To sum up, this interaction of this solidarity idea has positive results as the interest of citizens is constantly increasing and creates a social footprint of local action. It is understood that the (active) citizen is interested in improving the lifestyle by enriching his knowledge for dealing with and managing everyday problems-crises as has been proven.

**Key words:** use the establishment of World Cultural Foundation of Diaspora Hellenism of Municipality of New Filadelfia-N. Chalkidona, the Municipal Free Open University (MFOU), academic knowledge, new digital era

**STUDENTS AS AGENTS OF CHANGE IN URBAN STUDIES OF  
PRIMARY EDUCATION IN THE CONTEXT OF THE NEW NATIONAL  
CURRICULUM: ‘ACTIONS FOR ACTIVE CITIZENSHIP’**

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**Abstract**

The aim of this paper is to present the contribution of the Pilot Study of the new curriculum of primary education ‘Environmental Studies’ (ES) to the implementation of the new Greek National Curriculum ‘Actions for Active Citizenship’. The Pilot Implementation of the ES and its formative evaluation was implemented through educational action research and the creation of Professional Learning Communities during the school years 2021-22 and 2022-23. The main outcomes of this study were that: a) Most of the in-service teachers who were involved in the study emphasized the need of additional time in terms of teaching hours for each thematic unit in order to develop and implement action plans for the achievement of attainment targets. b) A distinction also is raised between those who developed lessons for the learning of citizenship concepts (minimal/soft citizenship education) and those who developed action plans for students’ engagements in citizenship actions (maximal/critical citizenship education).

The findings of the action research are fundamental for the overall pedagogy and the teaching strategies of the teaching of ES subject as a requirement of the implementation of the national curriculum ‘Actions for Active Citizenship’. First of all, in a sort of maximal approach of urban education, studies of the natural and social environment in the context of ES subject are combined in what J. Lemke calls an ecosocial system in which a human social community is taken together with the material (human made and natural) ecosystem that enables, supports, and constrains it. For that purpose, education for active citizenship and sustainability cannot be constrained within the teaching of a single subject but it has to be part of the school practice in a sort of a whole school approach.

Teaching practices such as place-based education, challenge based and inquiry based are valuable especially for dealing with the complexity of issues related with sustainability and citizenship. Finally, an adoption of critical, active citizenship is the fundamental requirement towards a transformative education for the purpose that educators and students will be agents of change.

**Key words:** active citizenship, national curriculum, urban education, agents of change

## **yOUR 2030 - A MULTIDISCIPLINARY EDUCATIONAL PROJECT TO PROMOTE THE THEMES OF SUSTAINABILITY**

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### **Abstract**

The yOUR2030 project originated from the awareness that the Sustainable Development Agenda, signed in September 2015 by the governments of the 193 UN member countries, is an action program that invites individuals to reflect on the relationships between personal behaviors and the resources available on our planet.

The guiding idea of the project is that the theme of sustainability should be presented as an educational subject adaptable to the characteristics of the students/audiences.

The work began in 2021 with the consideration that there is no universally recognized communication strategy deemed effective for discussing sustainability. However, there are key concepts that can be used in general terms to convey to different audiences a clear and distinctive characterization of the topic to focus attention on specific communication themes that are widely recognized as strategic. Experiences conducted with audiences of varying ages and engaged in diverse educational activities identified four "key themes" that are essential for effectively conveying the concept of sustainability across different contexts:

- The role of “OUR” in contrast to “YOUR”. This theme has immediately characterized our communicative approach. The merging of the two pronouns serves to foster attention and engenders a sense of collective responsibility toward a shared direction.
- The concept of COMMITMENT, which the pursuit of sustainability entails, and the shared understanding that seeking new forms of sustainable action, requires a redefinition of our habits and challenging development of new lifestyles.
- The value of an ARTICULATED (and complex) VISION of sustainability, wherein the term assumes varying meanings depending on the context of application. This emphasizes the uniqueness of sustainability, which cannot be reduced to the achievement of partial goals.
- The importance of TESTIMONY, linked to the promotion of innovative sustainability practices, which fosters awareness that a new dimension of sustainable living and action is achievable.

**Key words:** SDG’s 2030; Education system, vision of sustainability, sustainability practices.

**BUILDING A SUSTAINABLE FUTURE: THE INTERPLAY OF  
QUALITY EDUCATION AND TEACHER WELL-BEING IN  
SUSTAINABLE DEVELOPMENT**

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**Abstract**

The paper examines the pivotal role of education in advancing sustainable development, with a special focus on ensuring the well-being of teachers. Quality education is fundamental to achieving the United Nations’ Sustainable Development Goals (SDGs), particularly in addressing environmental, social and economic challenges. However, the paper underscores that the success of education systems in fulfilling these objectives relies significantly on the well-being of educators.

As the cornerstone of educational systems, teachers directly influence the quality of learning they deliver. Ensuring their well-being through job satisfaction, professional development, mental health support and equitable compensation is essential for empowering them. Supported teachers are better equipped to employ innovative teaching methods, create impactful learning experiences and foster the comprehensive development of students, equipping them to confront global issues like climate change, poverty and inequality.

The paper highlights that improving teacher well-being is not only advantageous for educators but also has profound benefits for students and society as a whole. By cultivating a nurturing and supportive work environment for teachers, educational institutions can generate a cascading effect that advances sustainability, equity and prosperity on a larger scale. Additionally, the paper explores how governments, schools and communities can collaborate to develop policies and initiatives that prioritize teacher support while aligning with sustainability objectives.

In conclusion, the study asserts that building a sustainable future demands a holistic approach that recognizes and invests in teachers. Pairing quality education with the well-being of educators creates a robust foundation for fostering a more inclusive, equitable and sustainable world.

**Key words:** Sustainable Development, Quality Education, Teacher Well-Being, Educational Sustainability, Professional Development, Environmental Awareness

## **EVALUATION OF SUSTAINABLE DEVELOPMENT PROGRAMMES BY SECONDARY SCHOOL TEACHERS**

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### **Abstract**

The scientific community has been sounding the alarm over the last decades about the necessity of introducing Environmental Education (EE) and Education for Sustainable Development (EfS) in secondary schools in Greece. It is also considered necessary to train teachers throughout the Greek territory on environmental and sustainable development issues. It is therefore time to take immediate action as a country and give our young people, as teachers and educators, the guarantees of how they can live sustainably. Climate change is now here, the ecological crisis is beginning to take place. We no longer have time for theories, but this is the time for all teachers to be trained in sustainable development and environmental education. During the study and writing of the literature review, a large learning knowledge gap was observed by the teachers themselves on topics related to EfS/EE. There are many times that the phenomenon of assigning courses to teachers who are not related to the subject of Environmental Education and Education for Sustainable Development has been observed. The latter, however, is due to insufficient teaching staff trained in environmental issues. However, we cannot but note at this point, as was also evident from the first thirty questionnaires given as a pilot survey in this case study, that many teachers are already starting to be trained in environmental education and sustainable development issues. This article aims to share with its readers the inventory of the attitudes, knowledge and behaviors of secondary school teachers in relation to environmental issues.

We conclude that the present research aims to "close" gaps that have been noticed in the evaluation of environmental programs in secondary education. This article, which is part of the PhD thesis, presents the first results of the research samples. The statistical program spss was used for the analysis of the latter. The results of the survey showed that teachers have a good relationship with issues related to environmental protection and coping with the environment and the zeal they show in learning about environmental education and sustainable development. In conclusion, it is observed that the respondents' years of teaching service played an important role in terms of the inductive analysis of the survey results. In conclusion, EfS/EE can offer many benefits in the field of EfS/EE.

**Keywords:** Environmental education, Sustainable development, Primary research, Secondary education, SPSS.

## **BLENDED INTENSIVE PROGRAMS: BRIDGING THEORY AND PRACTICE OF ENVIRONMENTAL EDUCATION?**

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**Abstract**

The presentation introduces the formula of Erasmus+ Blended Intensive Programs. According to the characteristics presented on the European Commission website, BIPs are “short, intensive programmes that use innovative ways of learning and teaching, including the use of online cooperation. The programmes may include challenge-based learning where transnational and transdisciplinary teams work together to tackle challenges for example those linked to the United Nations’ sustainable development goals or other societal challenges identified by regions, cities or companies. The intensive programme should have added value compared to existing courses or trainings offered by the participating HEIs and can be multiannual. By enabling new and more flexible mobility formats that combine physical mobility with a virtual part, blended intensive programmes aim at reaching all types of students from all backgrounds, study fields and cycles.”

Among selected educational results related to the application of BIPs are the following: a) acquainting students with communication challenges in the context of multimedia development in the 21st century, b) widening students’ multimedia knowledge, skills, and competencies, c) applying students’ multimedia knowledge, skills, and competencies (interviews, podcasts, audiovisual relations), d) developing students’ sensitivity and interpersonal solidarity in the context of a highly advanced technological civilization, e) facilitating dialogue among representatives of different media cultures, f) practicing the art of dialogue and combining various communication codes.

In the paper, we are going to ask about the usefulness of BIPs in environmental education. We will consider the opportunities the BIP formula offers in combining theoretical and practical aspects of developing pro-environmental attitudes among young people. In particular, we will focus on how BIPs can support the implementation of new technologies in learning processes and everyday activities regarding sustainable development and environmentally friendly way of life.

**Key words:** Erasmus+, Blended Intensive Programs, environmental education, participatory education, digital education, ecology and intercultural learning

**EUROPEAN UNION AND SUSTAINABILITY: THE MODERN  
POLITICAL DIRECTIONS AND ITS INCORPORATION IN  
EDUCATION AND THE GREEK EDUCATIONAL SYSTEM**

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**Abstract**

The subject of Sustainable Development- Sustainability is the cornerstone for the well-being of people's lives. This is explicitly mentioned in the 17 Global Goals that should be implemented from 2015 to 2030, as established by the United Nations and concerning future international development. The main pillars of this are the Economy, the Environment and the Society, with the necessary interaction and interconnection between them for the good quality of people's lives, in order to achieve continuous development and progress thanks to the spiritual evolution of individual and the rapid development of technology.

In this specific paper, given that environmental problems are increasingly getting huge at the local and global level, it is considered necessary to educate pupils as future useful citizens of society. Therefore, the basic foundation of the 17 Global Goals are the modern political directions, which the European Union has set regarding the principles of Sustainable Development and Sustainability and the way they are adopted and integrated in the field of education in a wider context. At the same time, a brief description of these is attempted to the extent that they exist in the Greek educational system and the priority, which they have been set by Greece, in terms of their integration into education.

The results that will be extracted will answer the exploratory questions to be examined regarding whether there is a clear reference to Sustainable Development in the educational material. The way of collecting the research material will include the study of the literature and its recording regarding the subject under investigation in terms of the theoretical basis, in order to confirm or refute the aforementioned research questions.

**Keywords:** European Union, Sustainability, Education, Global Goals, Greece

**BOOK OF ABSTRACTS**

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Session:

**“Alternative Tourism and Sustainable Development”**



**FOSTERING TOURISM WHILE NEUTRALIZING CULTURAL HERITAGE. THE PARADOXAL URBAN DEVELOPMENT OF TIRANE (ALBANIA).**

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**Abstract**

The relationship between cultural heritage and tourism in urban development - and even more so in sustainable development - is complex and strategic. While cultural heritage can act as a catalyst for tourism and economic development in cities, it is essential to adopt sustainable approaches to ensure that this development does not compromise the historical and cultural values of communities.

This is not the case in Tirana, as reported in the survey of human rights activist groups:

1. The demolition of large urban areas adjacent to the city center. Self-built spontaneous settlements reflecting the Mediterranean traditions of urban communities, representing critical pages of social history, such as the years after the fall of communism (Stacioni I Trenit Area).
2. The demolition of the Teatro Nazionale. An exceptional example of modern Italian architecture from the 1930s, demolished despite the efforts of citizens, activists, students, heritage specialists and intellectuals of all kinds to protect it.
3. The radical architectural interventions that formally and symbolically transformed some of the city's most historic monuments, such as the Pyramid, the Stadium and the Old Bazaar.
4. The hyper-commodification of historical sites transformed into commercial spaces, such as the medieval Tirana Castle.
5. A broad process of gentrification, perceived even in the aesthetic enhancement strategies of the facades of the Soviet buildings, visibly lacking a proper urban renewal, that is socially impacting on the already fragile tissue and capturing the cultural and financial capital of the place from its communities.
6. The use of religious buildings for touristic purposes such as Namazgja's Mosque.

Bridging the fields of cultural heritage and urban development through historical research, interviews and participant observation, the paper aims to discuss the process of turistification of the city and the paradox expressed by unsustainable strategies that threaten Albania's material and immaterial cultural heritage.

**Key words (7):** Cultural Heritage, Gentrification, Turistification, Urban Communities, Urban transformation, Historical monuments, Commodification of culture.

**SUSTAINABLE CULTURAL TOURISM IN THE GREEK ISLANDS.  
CASE STUDY: THE ISLAND OF SANTORINI**

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**Abstract**

Tourism is the primary source of Greece’s income, and its development is mainly seen on the Cycladic, Dodecanese, and Ionian islands and the island of Crete; this study is focused a) on the type of tourism that is known as Sustainable Cultural tourism, b) on how this type of tourism is promoted in Greece and c) by using the island of Santorini as a case- study for the over- tourism problem we will investigate the options of sustainable cultural tourism as an “antidote”.

The islands have been popular tourist destinations since the post-war tourism development in Greece. Crete receives the most tourists because it is a big island with many beautiful and historically significant places.

Sustainable cultural tourism is a type of tourism that is growing worldwide among tourists who want more from the destinations they visit. On the other hand, it puts local communities “at the center of the decision-making process,” as the European Union suggests. However, climatic change, globalization, and the recent pandemic have directed this growth toward sustainability since it provides alternative ways of tourism in an unstable world.

Greece is a world-renowned tourist destination that mainly promotes the sea, beaches, and ancient civilizations. Only lately have things seemed to evolve towards appreciating modern culture and intangible cultural heritage.

The development of tourism in the Greek islands is unavoidable since they have many beaches, but the islands can offer more of their culture to visitors by using ancient and modern Greek culture, intangible cultural heritage, wine-cultivating methods, and culinary habits.

Santorini successfully combines its historical and archaeological importance with the amazing caldera view, unique wine production, and volcanic ground agricultural products, which together make a substantial cultural product and can attract the “visitor’s gaze.”

**Keywords:** Sustainability, Cultural Heritage, Intangible cultural heritage, Santorini

**CORRELATION BETWEEN THE DEGREE OF PRESERVATION AND PROMOTION OF THE CULTURAL HERITAGE WITH THE LEVEL OF TOURIST ACTIVITY IN THE CITY OF LAMIA**

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**Abstract**

Lamia is the capital of Phthiotida, the 4th largest prefecture of Greece and is located in the center of the country, at the passage from its north to its south. It is a city with a rich and interesting history that begins after the Persian Wars and reaches the modern era. Its ancient castle is probably its most characteristic architectural work. Also, the city has many other monuments, such as ancient ruins, traditional and neoclassical buildings, but also a wonderful surrounding nature. Of course, during the post-war times the vast majority of the traditional buildings of the city were demolished and this had as a result an aesthetically indifferent city’s image. At the same time, the archaeological finds that are often found during excavations are not always highlighted in the best way, while the remaining traditional or neoclassical buildings are often not properly conserved. Finally, the modern city presents several urban infrastructure problems. All of the above contribute to the reduced picturesqueness and visitation of the city by Greek and foreign travelers, a percentage of whom unequivocally declare that they are not interested in seeing it. This results in its introverted character, which generally contributes to the reduced satisfaction of its residents with daily life in it. Inevitably, this situation has a negative impact on the general economic level of the capital of Phthiotida.

In the context of investigating this issue, a survey with the use of questionnaires was carried out, during the period October - November 2024, in which Lamia’s residents, Greeks from other regions and foreign citizens participated. At the same time, the processing of relevant data from ELSTAT and EUROSTAT took place. The results of the research showed the belief of the participants that Lamia suffers from insufficient care and promotion of its cultural potential as well as from urban planning and aesthetic problems of its man-made environment. Finally, given that the vast majority of Lamia’s residents responded that increasing the visitation of their city would improve their quality of life in it, some proposals were made to achieve this goal.

**Key words:** Lamia, Phthiotida, Central Greece, Cultural Heritage, Architectural Heritage, Tourism

## **CONTEMPORARY PHOTOGRAPHIC NARRATIVES AS AN EDUCATIONAL TOOL FOR THE DEVELOPMENT OF RELIGIOUS TOURISM IN GREEK URBAN AND REGIONAL AREAS**

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**Abstract**

In the rapidly evolving global landscape, visual communication has become a preeminent form of expression. Investigating the impact of alternative photographic narratives, in contrast to the antiquated pictures disseminated by religious tourist organizations, is crucial for reinterpreting religious tours in both urban and rural regions of Greece. This strategy addresses the increasing demand for educational coherence in this developing sector of tourism.

This study aims to investigate the efficacy of contemporary photographic testimonies related to holy sites in Greece as an educational tool for enhancing their associations to religious tourism. Additionally, it seeks to ascertain whether this approach, through the use of appropriate visual media, can provoke interest for its development.

Methodologically, a multifaceted research approach was adopted. Initially, questionnaires were distributed to a random sample of 134 students enrolled in tourism programs across various institutions in Greece, focusing on their perspectives of religious tourism and sacred sites in the Hellenic urban and rural areas. In the subsequent phase, an experimental group from the original random sample was exposed to compelling photographic trends depicting holy landmarks and significant centers or events in urban and regional areas. Following this, semi-structured interviews were performed with each member in this group to evaluate potential transformations.

The study's primary findings indicate a significant shift in the participants' original opinions. This alteration is an indication of fresh viewpoints that have the capacity to forge more profound connections and reshape the manner in which contemporary tourism students perceive religious heritage. Unpretentious contemporary photographic narratives have demonstrated efficacy as educational tools that motivate and equip the upcoming generation with knowledge and insights, so introducing broader travel perspectives to religious tourism in Greece.

**Key words:** Photography, religious tourism, educational tool, Greece.

## **ALTERNATIVE AND SPECIAL FORMS OF TOURISM IN THE GREEK CONTEXT, AS A MOTIVE FOR RUSSIAN SPEAKING TOURISTS TO VISITING GREECE**

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### **Abstract**

Among other motives for paying a visit in Greece, alternative forms of tourism derive as a special purpose for the implementation of a journey to the country. Greek heritage and the landscape (natural and urban) comprise an autonomous background which can successfully support a plethora of alternative and special forms of tourism. The purpose of that paper is to present and analyse various forms of special and alternative tourism in Greece and their attractiveness among Russian speaking tourists who choose Greece as their destination (actually as it was mainly happening till 2022).

Various types of special forms of tourism are discussed, among them cultural and religious-pilgrimage tourism, sailing tourism, health and educational tourism, sports tourism, tourism for the older age groups and people with disabilities and business tourism. Russian speaking tourists are keen on being involved in all those various types of activities. A key question was that if any of these types of tourism could be the only reason for visiting the country.

The main part of the research was done in 2022, involving a questionnaire which aimed finding out which categories of Russian speaking tourists come to Greece and for what purpose. As people of such an ethnicity are really connected to Greece due to religion, the survey wanted to find out whether special and alternative forms of tourism could be the sole reason for visiting Greece. Furthermore, research looked at other types of motivation such as shopping and whether they could be the prominent reason for paying a visit to the country, beyond the sea and sun attractions. Time and space redistribution of tourism in Greece remains a key target for national tourism policies. Development of special and alternative forms of tourism remain a main tool towards that direction. Development of them however, has to look at the demand side. This means that policy makers have to look at key markets and how willing they are for the adoption of such tourism products, reducing at the same time their interest on mass sea and sun products.

War in Ukraine and Sanctions which followed against Russia have eliminated the arrivals of Russian tourists in Greece. As the research was done during the period just before the sanctions' introduction, it can give us plenty conclusions concerning the motivation of Russian Speaking people for the implementation of their potential visit to Greece, in the future.

**Key words:** Special forms of Tourism, Greece, Russian Speaking Tourists, Sea and Sun Tourism

## **TIME-DRIVEN ACTIVITY-BASED COSTING & BUDGETING IN ECOTOURISM (AN ECO-TOURISTIC HOTEL IMPLEMENTATION MODEL)**

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### **Abstract**

The growth of Tourist Sector in Greece consists of well-organized hotels and apartments similar to the best of the world. Hence, the need of information about costing is essential and crucial. Especially, the Eco-Touristic enterprises that provide extra services to their customers, such as interaction activities with biotic components of the natural environments, and, activities that promote energy efficiency, water conservation, recycling.

The present research, analyses the newly method of costing accounting and budgeting, the one known as Time-Driven Activity-Based Costing and Budgeting (TDABC). This method overcomes the difficulties of implementing and maintaining conventional Activity-Based Costing and Budgeting. The theoretical model, that has been applied in a touristic enterprise, along with new technologies in computing, provides information of great detail regarding the operations, the bottlenecks, and assists costing and budgeting to take action to solve the problematic areas and feel confident for future decisions.

Time-Driven ABC & Budgeting has the following advantages. It is easier and faster to be built with great accuracy. Integrates well with data now available from ERP systems and CRM systems. It drives costs to transactions and orders using specific characteristics of particular orders, processes, suppliers, and customers. Provides visibility to process efficiencies and capacity utilization. Forecasts resource demands, allowing companies to budget for resource capacity. It is easily scalable to enterprise-wide models via enterprise-scalable applications software and database technologies. Enables fast and inexpensive model maintenance. Supplies granular information to assist users with identifying the root cause of problems. And, can be used in any industry or company with complexity in customers, products, channels, segments, and processes and large amounts of people and capital expenditures.

The method used starts with a schematic plan of the flow of costs in the hotel. It pictures the departments, the sections, the functions and the activities that take place in the company. Sets the cost objects (such as the cost of services provided) and the questions to be answered such as which services are profitable. The analysis continues with the understanding of the general ledger that determines capacity cost rate. Then, this rate is used to drive departmental resource costs to cost objects by estimating the demand for resource capacity (typically time, from which the name of the new approach was chosen) that each cost object requires. Simulates the actual processes used to perform work throughout the enterprise. Then, the cost of the processes is analysed using multiple criteria. The outcome can be used for costing and budgeting decision making and further simulation models or “what-if” scenarios.

**Key words:** Time-Driven Activity-Based Costing and Budgeting in Hotels, Time-Driven Activity-Based Costing in Tourist Sector, Eco-Tourism in Greece, Costing of Tourist Services.

**Special session:**  
**CLIMATE-RESPONSIVE DESIGN**  
**Leveraging Architecture and Urban Design for Environmental Resilience**

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**Abstract**

In the Anthropocene era, humanity is radically reshaping the planet and is now confronting increasingly severe repercussions from these actions. The undeniable influence of the built environment on climate formation places urban areas at the forefront of efforts to mitigate climate change.

Architects, urban designers and planners are intensifying their commitment to develop built environments that minimize impact on natural surroundings. They are embracing climate-responsive strategies, methods and tools that seek harmony with nature and local climates, rather than exploitation or confrontation.

Although the concept of climate-responsive design is straightforward, its execution by designers is multi-dimensional and multi-scalar. Climate-responsive design adopts an integrated approach that considers environmental, economic, social, and cultural factors. Grounded in climatology, urban morphology, and building physics, it highlights the significance of passive strategies, embraces a circular economy, and fosters the integration of innovative technologies. Its approach aims not only to curb global warming through reduced greenhouse gas emissions and align with the EU’s 2050 carbon neutrality goals, but also to enhance quality of life and promote human freedom, all within a sustainable framework.

This pre-organized session aims to broaden and deepen our understanding of how building and urban form can optimize environmental performance and urban resilience. Participants will have the opportunity to:

- Assess climate-responsive models through a comprehensive analysis of historic and contemporary case studies.
- Learn from exemplary practices in the implementation of climate-responsive frameworks.
- Explore intersections with circular economy principles, urban morphology, and smart technologies.
- Engage in discussions on emerging theories and innovative concepts addressing the climate crisis.

In conclusion, participants will engage in a critical dialogue on how architectural and urban design can innovatively address contemporary challenges, thereby shaping sustainable and resilient habitats for the generations to come.

## **INDUSTRIAL DOMAINS AS FUTURE’S RUINS: CHALLENGES AND STRATEGIES FOR SUSTAINABLE TRANSFORMATION**

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### **Abstract**

This study examines the categorisation and analysis of future ruins within industrial domains, emphasising their critical role in sustainable urban development and resilience. Industrial sectors, including manufacturing facilities, commercial spaces, and specialised infrastructures, often contribute to environmental degradation and urban decay when abandoned or underutilised. This research investigates the factors driving the transformation of these domains into urban ruins, exploring their broader implications for sustainability and socio-economic cohesion.

Drawing on global literature and case studies, the study identifies key factors contributing to the emergence of industrial ruins, such as aging infrastructure, economic shifts, and inadequate urban planning. These ruins are classified into three core categories: manufacturing sites (shipyards, storage facilities), commercial domains (office buildings, retail spaces), and special infrastructures (hospitals, military installations). Each category is analysed through illustrative examples, highlighting the environmental, cultural, and economic challenges posed by their neglect.

The research proposes an integrated framework for repurposing industrial ruins through adaptive reuse and sustainable reconstruction. Suggested strategies include incorporating renewable energy technologies, fostering circular economies, and encouraging community-driven initiatives. The findings underline the importance of addressing these challenges to curb industrial sprawl, enhance urban resilience, and support global sustainability objectives.

This study aims to equip urban planners, policymakers, and researchers with practical insights for managing industrial ruins effectively, transforming them into dynamic, productive, and environmentally responsible urban assets.

**Key words:** Industrial domains, Future ruins, Adaptive reuse, Sustainable urban development, Urban resilience, Circular economy, Environmental impact



**THE 'GREEN' DIMENSION OF THE 15-MINUTE CITY.  
THE CASE STUDY OF ATHENS MUNICIPALITY, GREECE**

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**Abstract**

Urban areas are not only major contributors to the climate change crisis but are also among the most vulnerable to its impacts. Urban planning is increasingly focused on adopting more sustainable strategies, enhancing green infrastructure, and boosting energy efficiency. Among these innovative approaches is the concept of the "15-minute city".

The present research explores the 15-minute city concept, emphasizing the significance of green spaces within its framework. Athens is chosen as a case study to assess the distribution of green spaces following the 15-minute city model. By mapping these green areas and generating 15-minute walk isochrone maps, it aims to evaluate the sufficiency of public open spaces in central Athens. The approach considers several criteria, such as building density, the size and type of green spaces, and their accessibility to residents.

The Athens core features some notable green spaces due to its hills and archeological sites, however, the availability of green areas significantly diminishes in the dense urban fabric. The rapid, uncoordinated development and insufficient urban planning in Athens have led to dense urbanization with limited green spaces, making it one of the most densely populated cities in Europe, with one of the lowest ratios of green space per capita.

First, the research paper reviews international literature on chrono-urbanism, focusing on 15-minute cities. Then, tools used included data mapping software and building zone data from the Athens Municipality. A total of 170 green and public open spaces were recorded and categorized into the following typologies: squares, parks, gardens, hills, groves, and archaeological sites. Findings show that green spaces vary within a 15-minute walk radius, with squares dominating.

Further applications of the developed methodology could include urban areas of similar densities and development patterns to identify inequalities in the distribution of green spaces and for the state to create new ones.

**Key words:** Chrono-Urbanism, 15-Minute City, Isochrones, Green Spaces, Athens

## **UNDERGROUND DWELLINGS: THE COEXISTENCE OF MAN AND NATURE BENEATH THE EARTH**

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### **Abstract**

In the light of evolving global climate change, architecture's attempts to harmonise buildings with the climate, the natural environment and the needs of users seek insights into the principles of bioclimatic design. Bioclimatic, climate sensitive design is an essential tool for meeting the challenges of sustainability, addressing climate change effects and improving the quality of life in modern societies.

This paper examines subterranean architecture, from the past to the modern era, with emphasis on habitation and the main tools being soil and topography. The examples are analyzed in terms of design principles and energy efficiency of buildings. Issues related to both traditional and contemporary cave architecture are explored, focusing on design principles and bioclimatic features that have been incorporated or can be applied to cave structures. Answers are sought through comparative analyses of literature sources, combined with a systematic evaluation of examples in terms of their typology, terrain, climate and architectural practices.

Through the exploration of the evolution and applications of subterranean architecture over the centuries, it emerges that the use of natural resources and climatic conditions in the design of housing is not just a requirement, but a strategy for the harmonious integration of buildings into the natural environment, allowing people to create housing that combines functionality, aesthetics, and ecological sensitivity. This architectural model is emerging as one of the most effective solutions to the modern challenges of climate change and energy efficiency. At the same time, it encourages the revival of traditional techniques using modern tools and technologies. Underground architecture is a prime example of preservation and enhancement of quality of life, while offering sustainable perspectives for the future.

**Key words:** Underground architectural heritage, types of subterranean architecture, energy efficiency, underground dwellings form and function, bioclimatic design

## **MNEMONIC PATHWAYS AT THE ROMAN ODEON AND ROMAN STADIUM OF PATRAS, ACHAIA, GREECE**

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### **Abstract**

Public spaces provide the potential to connect archaeological sites with urban sites, while simultaneously improving the everyday life of the residents. Functioning as meeting spaces for communication and socialization, they contribute to the well-being, education and cultural expression. The intervention in the area of Patras aims to reunite Roman Stadium and Odeon, with the purpose of creating a single cultural axis that strengthens social sustainability and cultural consciousness.

The intervention consists the undergrounding of a central road, which separates the two monuments, the creation of factual public spaces and the improve of accessibility with the use of sidewalks and pathways, the design of green space and urban equipment for recreation **and** cultural event. The vegetation will contribute the creation of pleasant environment with shaded areas. The spaces are being designed to meet the social and cultural needs, promoting collective identity and reinforcing social cohesion.

The analysis indicates that the public spaces, when thoughtfully designed to integrate cultural heritage into daily lives of residents, they function as hubs for interaction, social empowerment, and leisure. Furthermore, offer changes for educational activities, cultural and social events, adding vitality to social spaces. This places act as bridging elements between future and past enhancing cultural continuity and fostering a sense of belonging. In the case of Patras, the intervention achieves to transform the monuments into vibrant landmarks harmonized with urban sites and the needs of modern society, ensuring simultaneously the preservation of their historical significance and enhance the cultural identity of the city.

**Key words:** Use of public spaces, sustainability, Patra, architectural heritage, archaeological sites, theatre

**TOWARDS POST-GROWTH OPERATIONALIZATION:  
A BIOREGIONAL LENS OF SPATIAL PLANNING**

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**Abstract**

Seemingly unending ecological disasters, floods and forest fires, along with ever-increasing social unrest continue to shed light towards the limits of growth - not only in Greece, but throughout the globe. In an effort to mend the relationship between human existence and planetary boundaries, the post-growth paradigm advocates for decoupling from economic indices as the sole determinant of prosperity. In terms of spatial planning it calls for ensuring a degree of regional sufficiency, investing directly in social services and infrastructure, proposing absolute limits to urbanization and prioritizing socio-ecological prosperity. Like many major transitions, however, this approach is mostly confined within academic circles or small-scale projects and is far from being institutionalized. This can be ascribed to several barriers, like limited societal acceptance, lack of alternative visions beyond growth-reliance or intense bureaucratic procedures.

This paper argues that bioregionalism - the understanding of a territory through its ecological functions, geo-morphological and socio-cultural characteristics - is of utmost importance in operationalizing the post-growth agenda due to several synergistic qualities that allow for bypassing key barriers. For example, bioregionalism could enable the emergence of a territorial place-attachment, encourage transnational cooperation, as well as propose eco-social indices of prosperity against GDP. Particularly interesting for the realm of spatial planning, bioregionalism suggests a land-based approach to territorial management. Building on this idea, this paper speculates about an alternative system of territorial administration through bioregions. Responding to the pressing issues of lacking water management, these bioregions could be administrative entities that mirror the basins of major rivers in Greece. This idea is tested through a case study of the river Spercheios. Overall, such a system could empower local governance, especially in rural areas, negate paralyzing bureaucratic procedures, potentially engage disinterested citizens and allow for new spatial imaginaries to emerge.

**Key words:** Post-growth, Bioregionalism, Bioregion, Spatial Planning, Spatial Imaginary

## **CLIMATE RESPONSIVE ENVIRONMENTAL DESIGN IN ARCHITECTURE STUDIES**

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### **Abstract**

Climate responsive architectural design, dated from antiquity, attracted attention in recent years due to climate crisis, and has been described by emerging terms with subtle variations such as bioclimatic, green, sustainable and resilient architecture. In architecture studies sustainable design considerations of solar exposure, shading, daylight, airflow, thermal insulation, material properties, construction methods, are included within design studios, technology courses, histories and theories. Detailed focus on environmental strategies and efficiency calculations based on technical data and computational tools is included in postgraduate engineering studies combined with architectural design or not.

A comprehensive integration of notions, concepts, methods, and tools of environmentally conscious design is approached at the Architecture Department University of Patras with a distribution of sustainable design courses of variant complexity, in the curriculum from the first to the final years of studies. First year theory courses introduce fundamentals of climatology, solar geometry, human comfort and building physics in relation to architecture and present key concepts and terms of the contemporary sustainability discourse, either evolving or subject to critical review including urban resilience, regulations, standards, certifications, research, technology innovations etc., complemented by short exercises. Basic theory, filtered and matured through two intermediate years, is applied in fourth year design studio exploring climate influences, sustainability strategies, site-specific applications, materials, techniques and revealing possibilities and obstacles. Two elective courses, in the fourth and fifth year include environmental design evaluation methodology, qualitative and quantitative criteria, analytic tools and monitoring, and an advanced design studio project on urban redevelopment, microclimate improvement and resilience strategies for public open spaces; such specialized skills are optional but offer deeper understanding and critical insights. This approach enhances architectural education by integrating climate-sensitive design principles across all pedagogic levels. It prepares future practitioners and academics to tackle environmental challenges effectively, fostering innovative sustainable solutions in the built environment.

**Key words:** sustainable design, architectural education, design studio, design evaluation methods, pedagogic strategies

**READINGS OF THE NATURAL AND BUILT LANDSCAPE OF LAKE TRICHONIDA - A GUIDE TO DESIGN INTERVENTIONS BASED ON POINTS OF INTERFACE (Thesis project)**

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**Abstract**

Landscapes are vital intersections of natural and cultural assets, each defined by unique characteristics that shape their identity and influence human interaction. As dynamic systems, they play a crucial role in urban regeneration, fostering connections between people and place while supporting sustainable development.

The present thesis investigates the identity of the landscape in the region of Aitolokarnania, focusing on the area surrounding Lake Trichonida—a diverse landscape of significant ecological value, characterized by distinct zones that reveal the dynamic relationship between natural and human-made environments. The project aims to study and interpret the landscape’s unique characteristics through an architectural lens, promoting harmony between natural and urban dynamics, while redefining the relationship between visitors and the natural environment.

Extensive analysis and mapping was conducted to capture the area’s physical, ecological, and cultural dimensions. By layering spatial data, key distinctions and relationships within the landscape were identified, leading to the definition of two main zones. These zones informed the establishment of two axes (transects), which function as tools for systematic landscape analysis. Acting as a coordinate system, the transects integrate regional insights with local conditions, guiding a comprehensive 'reading' of the landscape at both macro and micro scales. This approach facilitates the reevaluation of spatial models, enabling the incorporation of ecological and cultural values into the design process. At the local scale, it provides a framework for proposing site-specific architectural interventions that balance ecological preservation with cultural revitalization, thereby advancing place-centered sustainability.

By employing this structured methodology, the project bridges the gap between architectural theory and practice, offering a framework for interpreting complex landscapes and integrating their unique characteristics into sustainable architectural and urban planning practices.

**Key words:** Landscape identity, spatial analysis, Lake Trichonida, urban regeneration

**A LITERATURE REVIEW ON THE INTRODUCTION AND FUTURE DOMINANCE OF THE AUTONOMOUS VEHICLES IN THE CITY WITH THE AIM OF PREPARING THE CITY FOR THE FUTURE**

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**Abstract**

In recent decades, the world has witnessed revolutionary technological advancements, with autonomous vehicles (AVs) emerging as a significant breakthrough that has attracted global attention. From AVs envision as early as the 19th century and since the development of the first self-driving vehicle in the late 20th century, AVs have promised to transform mobility, urban planning and societal behavior. Just as the introduction of automobiles over a century ago transformed urban landscapes, AVs have the potential to redefine the cities of the future and urban planners are presented with a unique opportunity to rethink urban life and city design.

Mobility is a fundamental aspect of transportation planning and a key consideration for urban planners in their decision-making processes. The transition from human-operated vehicles to autonomous systems represents a significant shift, bringing critical questions regarding sustainability, safety, equity, and the reshaping of urban spaces.

With this study from a multidisciplinary approach we try to provide a comprehensive overview of the existing literature on AVs. The primary aim is to summarize, review and synthesize current knowledge. We will refer to their technological aspects of AVs but the basic aim is to highlight the diverse impacts of AVs introduction across multiple domains. Also we examine their limitations and challenges to effectively address in next step.

The implementation of AVs presents numerous opportunities for enhancing urban sustainability. They have the potential to increase safety, climate resilience, reduce carbon emissions, parking demands, congestion, improve traffic management, facilitate shared mobility and the integration with public transportation systems, promote more efficient land use allowing urban space for repurposing for green infrastructure to foster sustainable living and environmentally sensitive urban development. Despite these promising advantages, the widespread adoption of AVs raises several questions and urban planning challenges. A key concern is e.g their potential impact on urban sprawl. Will AVs encourage people to move further from city centers, leading to increased suburbanization, or will they make urban centers more attractive by alleviating congestion and pollution? Addressing these uncertainties with this in-depth analysis is crucial for ensuring a balanced and sustainable integration of AV technology into urban environments. While this article provides a foundational understanding of the broader impacts of AVs, the next stage of research will focus on the relationship between AVs and urban land use.

**Key words:** Avs, sustainability, redesign, sprawl, impacts

## **LIVING TOGETHER: AN EXPLORATION OF CO-LIVING FROM THE NEOLITHIC ERA TO THE 21<sup>ST</sup> CENTURY**

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### **Abstract**

The economic and social conditions of each era shape all aspects of life, including housing. Nowadays, there is an increasing desire for a sense of community, with many individuals choosing co-housing over traditional private residences. To create high-quality co-housing that meets evolving needs, studying the history of this practice is essential. By understanding the past, we can design better spaces for the future.

The research examines how communities occupy space, focusing on the arrangement of houses and communal areas. It investigates the factors influencing the design and organization of these spaces and their impact on social interactions and community life. Adopting a historical approach, the study examines a variety of outstanding case studies from worldwide, spanning a period of 8,600 years (6700 BC - 1900 AD). The primary objective was to understand why communal living has been a consistent human need and how spatial design has addressed it over time. A parallel goal was to identify recurring types in spatial organization, categorizing settlements based on shared features, particularly the arrangement of dwellings and common spaces, enabling a comparative analysis.

The survey was conducted in two steps: first an extensive review of academic sources on vernacular Architecture and on contemporary collective housing theories and examples; second, the selection of case studies, the recreation of their masterplans along with diagrams and a comparison to reach conclusions.

The research results show that the design of both private and public spaces has always aimed to meet survival needs, shaped by local factors like climate, soil, and materials. Over time, social, religious, and economic influences have further shaped dwellings and settlements. Recurrent patterns in spatial organization reveal how architectural forms evolve while maintaining core principles. The traditional wisdom from these examples offers valuable insights for designing modern co-living spaces. By revisiting these principles, we can address contemporary challenges, meeting both practical and social needs.

**Key words:** vernacular Architecture, community, public space, spatial development, traditional settlements, co-housing



**Session:**  
**“Smart Cities and Sustainable Development”**

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**DIGITAL INNOVATION AND SUSTAINABLE DEVELOPMENT IN LOCAL GOVERNMENT. THE CASE OF GLYFADA MUNICIPALITY.**

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***“As contradictory as it sounds, AI can help cities become more people-centric”***

*Bruno Lanvin, President of the Smart Cities Observatory*

**Abstract**

Digital transformation is the vehicle to change how the state designs processes, implements actions, serves citizens and solves problems. Cities, the cell of human activity, utilize technology that is now an integral part of all. Digital innovation in local government can lead to the improvement of public sector services, reduction of bureaucracy, increased transparency, participation and efficiency.

Although technology is a necessary structural element for a smart city, technology is not what makes a city smart. The priority of the new digital strategy is transforming cities and communities into smart and sustainable ones in which citizens enjoy living and working. Smart, sustainable cities are a holistic approach to cities that harnesses the potential of technological development to achieve sustainable development goals.

A smart city that compromises the ability of present or future generations to meet demands by exceeding environmental constraints is not ingenious. The key functions of smart sustainable cities create local initiatives that improve the quality of life and finally this is a factor of competitiveness. The Municipality of Glyfada demonstrates successful digital innovation and sustainable development initiatives through the implementation of projects and actions providing sustainable solutions to local challenges to improve the quality of life of its residents.

**Keywords:** Information and Communication Technologies (ICTs), Digital Transformation, Digital Innovation, Digital Transformation Bible 2020-2025, Smart Sustainable Cities, Municipality of Glyfada.

**OUR CITY IS SMART. WHAT ABOUT US? - THE CASE STUDY OF  
THE MUNICIPALITY OF PERISTERI, ATTICA, GREECE**

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**Abstract**

This paper examines the relationship between urban development and sustainability within the framework of smart cities. The study begins with a literature review of the concept of smart cities and then presents examples of European cities that have adopted smart practices. The success of smart cities is highlighted as a result of the interaction between technology and citizens, emphasizing the importance of technologically literate and participatory citizens.

In the second section, the study focuses on the Municipality of Peristeri in Attica, Greece, presenting general and historical information as well as its modern infrastructure supporting its transition to a smart city. Projects and initiatives related to digital reform, mobility improvement, and environmental sustainability are analyzed.

Following this, an analysis of survey results conducted among residents of the Municipality of Peristeri is presented to assess the level of adoption of smart city practices in their daily lives. Finally, the paper concludes with key findings and suggestions for further research, highlighting the need for continuous education and awareness of citizens to maximize the benefits of technological innovations and enhance social and economic well-being.

**Keywords:** smart city, smart citizens, Municipality of Peristeri, sustainability

## **A REVIEW OF SMART CITIES’ TECHNOLOGIES IN THE GOVERNANCE AND THE EVERYDAY LIFE OF CITIZENS IN GREEK CITIES**

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### **Abstract**

In recent years, the integration of smart city technologies has transformed the governance and daily lives of citizens, enhancing urban sustainability, efficiency, and quality of life. This paper reviews the implementation and impact of smart technologies across Greek cities, focusing on how digital innovations influence urban management and citizen engagement.

Smart cities leverage Internet of Things (IoT), artificial intelligence (AI), and data analytics to optimize infrastructure, energy management, mobility, and public services. In Greece, initiatives such as digital platforms for municipal services, smart transportation systems, and environmental monitoring networks have gained traction, aiming to address challenges in urbanization, climate change, and resource efficiency.

Through an extensive literature review and case studies from cities such as Athens, Trikala, Ioannina and others, this study examines key applications of smart technologies in governance frameworks and their contribution to participatory democracy. Additionally, it explores how these advancements reshape everyday urban experiences, from improved access to public services to more sustainable mobility solutions.

The findings reveal that while significant progress has been made in integrating smart solutions, disparities exist in the adoption of technologies among cities due to varying socio-economic conditions and policy frameworks. Furthermore, the research highlights the importance of fostering citizen-centric approaches and inclusive governance to ensure equitable access and long-term sustainability of smart city initiatives.

This review provides valuable insights for policymakers, urban planners, and technology developers, emphasizing the need for strategic planning and citizen involvement to fully realize the potential of smart cities in Greece.

**Key words:** Smart Cities, Internet of Things, Digitalization, Greek Cities, Artificial Intelligence

**VIRTUAL WORLDS AND SUSTAINABLE ARCHITECTURE: NEW PATHWAYS TO SUSTAINABILITY IN THE ERA OF THE INDUSTRY**

**4.0**

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**Abstract**

In the Anthropocene era, architecture and construction confront the challenge of minimizing environmental impact, as cities and communities are tasked with addressing the pressures of the climate crisis, urban population growth, and the need for resilience. Simultaneously, the Fourth Industrial Revolution introduces new, cutting-edge tools and technologies, such as Artificial Intelligence and Virtual Reality, providing innovative solutions in architecture and urban planning.

In this research, the dynamic connection between virtual worlds and sustainable architecture is explored, illustrating through literature review how digital platforms and simulations enhance citizen engagement, transparency, and governance, while facilitating the evaluation of strategies through real-time monitoring of environmental and social indicators. Examples are examined, such as the use of blockchain for sustainable urban planning, VR-based sustainability education, and resilience through virtual crisis simulations conducted in secure cyber platforms, all tested before real-world implementation to ensure their feasibility. In parallel, the conservation and proper management of essential resources within the circular economy framework is prioritized. Finally, the challenges of energy and data are analyzed, with proposals for the seamless integration of both innovation and sustainability.

The merging of social sustainability and technological advancement is expected to reveal new viewpoints for the interaction between physical and virtual environments, leveraging the benefits of digital technologies and social participation and positioning sustainable construction as a key pillar for a fair and green future.

**Key words:** virtual reality, digital technologies, sustainable architecture, urban planning, resilience.

## **EXPLORING SOCIAL PATTERNS AND CHALLENGES IN ADOPTING SMART HOUSING SOLUTIONS: THE HUNGARIAN CONTEXT**

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### **Abstract**

Smart housing solutions, particularly those aimed at optimizing energy use, hold significant promise for enhancing energy efficiency and reducing environmental impacts. However, disparities in access, knowledge, and usage skills create pronounced social inequities in the adoption of these technologies. This research investigates the patterns of adoption, knowledge, and attitudes towards smart housing solutions, with a focus on the societal challenges and opportunities they present.

Grounded in theories such as the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), the study applies an open innovation framework to emphasize the alignment of technological advancements with societal needs. Drawing on global challenges like climate change, energy shortages, and housing crises, it highlights the role of stakeholder collaboration in fostering socially beneficial innovation.

The findings, based on a national representative survey of 1,000 individuals in Hungary, reveal significant barriers to adoption. Key determinants include financial considerations, trust in technological benefits, and demographic factors such as age and education. The research also identifies concerns about system reliability, cost, and the required knowledge for operating smart devices, alongside varying levels of information-seeking behavior among users.

By addressing these challenges, this research contributes to the discourse on sustainable housing and energy use, offering valuable insights for policymakers, technology developers, and social scientists. It underscores the importance of inclusive, adaptive strategies to bridge social inequities and enhance the societal impact of smart housing solutions.

**Keywords:** smart housing, technology adoption, social inequality, energy efficiency, sustainable housing, open innovation, smart home technology

**BOOK OF ABSTRACTS**

*2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025*

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Session:

**“The Physiognomy of cities”**

*Organized by Prof Joseph Stephanou*

## URBAN LANDSCAPES OF SUSTAINABLE CO-EXISTENCE

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### **Abstract**

Usually, the term "sustainability" is related to the development of a place, with an ultimate goal the sustainability of that particular place.

In this case, we investigate **sustainability as the ability to withstand** the changes that arise in the cities' urban fabric, due to crises, violent and uncontrollable political, social and economic events (a war, a pandemic), natural or man-made environmental impacts, without excluding the ideology of the tourism industry as a driving economic force.

These changes and their effects concern both the material and the immaterial (psychological and symbolic) dimensions of the host places, as they are practically and experientially perceived by their permanent and occasional residents. We consider that these changes are related to the **Bearing Capacity of the Places and Landscapes**, resulted either from the settlement of refugees and immigrants around a first core, or from waves of tourists in buildings of the historic center, changing the original use. Therefore, the place acquires a **transit character** –a place of **temporary residence**.

The urban areas, characterized by elements of stability, order, hierarchical organization and measure, embody the condition of their founding act and function as a "calm"& stable attractor, a border circle, the timeless limit of an archetypal urban landscape. The points of intersection, of the liminal circle, of a timeless urbanity, with the helical lines (arrivals and/or departures of immigrants, refugees, tourists), of an ephemeral residence, inside and outside the liminal circle, could illustrate the **dialectical relationship between the timeless and the ephemeral character of a place**.

These "reception enclaves" enable the exploration of spatial conditions for promoting communication and development through practices of lawfulness, justice and peace for the **sustainable coexistence of people**.

**Key words:** place, bearing capacity, attractor, timeless, ephemeral.

## **CO-CREATING PLACE IDENTITY: PARTICIPATORY WORKSHOPS FOR PLACE BRANDING ALIGNED WITH LOCAL VALUES**

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### **Abstract**

Place branding has emerged as a powerful tool for enhancing local identity and fostering sustainable urban and regional development. However, effective place branding should transcend promotional campaigns, engaging deeply with the cultural, historical, and social values of the community of the place. This research investigates a participatory approach to place branding that integrates local voices, ensuring the alignment of a place's identity with its inhabitants' perceptions and aspirations.

Our study focuses on two medium-sized cities in Greece, characterized by rich cultural heritage and a vibrant local community. The methodology combines desk research on the cities' historical and cultural assets with participatory focus group workshops involving residents, local stakeholders, and institutional representatives. Through structured dialogues, participants reflected on their emotional connection to the place and identified key elements that shape its identity. For drafting the final proposal, a strategic visioning workshop was held with local participants, showing both the prospects but also the difficulties of creating a common vision/brand for the city.

Findings reveal that integrating participatory methods in place branding not only fosters inclusivity but also strengthens the authenticity of the brand. Key outcomes include:

1. A shared understanding of the place's core identity.
2. Consensus on branding elements that resonate with cultural and historical narratives.
3. Recommendations for communication strategies that reflect community values.

This project underscores the importance of a bottom-up approach to place branding, advocating for practices that prioritize cultural sustainability and community engagement.

**Key words:** Place Branding, Community Engagement, Participatory Workshops, Cultural Identity, Sustainable Development, Local Values



## **CULTURE AND SUSTAINABLE DEVELOPMENT OF CITIES: THE PHYSIOGNOMY OF THE CITY OF LAGKADAS**

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### **Abstract**

Lagkadas, a city in Central Macedonia, exemplifies the synergy between cultural heritage and sustainable development. With a history dating back to antiquity, it boasts unique monuments such as the renowned thermal baths and vibrant traditions like Anastenaria, which solidify its regional identity.

Strategically located in a fertile basin, Lagkadas transitioned from an agricultural hub to a modern economy through industrial and artisanal growth. EU-funded projects have bolstered this transformation, focusing on sustainable natural resource management and enhancing residents' quality of life.

As a tourist destination, Lagkadas fosters a dynamic integration of culture, tradition, and development. Its innovative utilization of cultural and natural assets positions it as a leading example of sustainable urban and regional development, offering valuable insights for similar initiatives on a global scale.

**Key words:** Lagkadas, Cultural sustainability, Integrated development

## **THE FORMATION OF THE PHYSIOGNOMY OF THE ISLAND OF ZAKYNTHOS - THE OPINION OF RESIDENTS AND VISITORS**

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### **Abstract**

The present paper refers to the physiognomy of the places and is a study carried out by the Department of Economics and Sustainable Development of Harokopio University. The aim is to investigate the factors that contribute to the formation of this physiognomy and the opinion of residents and visitors on the issues in question. As a case study, the island of Zakynthos of the Region of the Ionian Islands is chosen.

In order to answer the main questions of the work and to investigate the main factors that shape the physiognomy of the island of Zakynthos a survey was carried out aimed at the residents of and visitors to the city. For the needs of the research, a questionnaire was created which included eight (8) closed-type structured response questions and two (2) open, was anonymous and distributed to Zakynthos people. The research was carried out in the months of October and November 2024. The questionnaire was addressed exclusively to adults, aged 18 to 70.

The paper concludes with interesting conclusions and proposals. An important conclusion is that in order to protect the special physiognomy of the island of Zakynthos strategies related to the more general protection of all issues related to its sustainable development should be implemented. It is proposed that both the local government, as well as the businesses of all service and production branches, work towards the protection and highlighting of the special character of the Zakynthos island.

**Key words:** Physiognomy of the places, sustainable development, the island of Zakynthos

## **THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF TRIPOLI - THE OPINION OF RESIDENTS AND VISITORS**

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### **Abstract**

The present paper refers to the physiognomy of the city of Tripoli and is a study carried out by the Department of Economics and Sustainable Development of Harokopio University. The aim is to investigate the factors that contribute to the formation of this physiognomy and the opinion of residents and visitors on the issues in question. As a case study, the city of Tripoli of the Region of Peloponnese is chosen.

In order to answer the main questions of the work and to investigate the main factors that shape the physiognomy of the city of Tripoli a survey was carried out aimed at the residents and visitors of the city. For the needs of the research, a questionnaire was created which included ten (10) closed-type structured response questions, was anonymous and distributed to 150 people. The research was carried out in the months of October and November 2024. The questionnaire was addressed exclusively to adults.

The paper concludes with interesting conclusions and proposals. An important conclusion is that in order to protect the special physiognomy of the city of Tripoli strategies related to the more general protection of all issues related to its sustainable development should be implemented. It is proposed that both the local government, as well as the businesses of all service and production branches, work towards the protection and highlighting of the special character of the city of Tripoli.

**Key words:** Physiognomy of the city, sustainable development, Tripoli

## **THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF KALLITHEA - THE OPINION OF RESIDENTS AND VISITORS**

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### **Abstract**

The present paper refers to the physiognomy of the city of Kallithea and is a study carried out by the Department of Economics and Sustainable Development of Harokopio University. The aim is to investigate the factors that contribute to the formation of this physiognomy and the opinion of residents and visitors on the issues in question. As a case study, the city of Kallithea of the Region of Attica is chosen.

In order to answer the main questions of the work and to investigate the main factors that shape the physiognomy of the city of Kallithea a survey was carried out aimed at the residents and visitors of the city. For the needs of the research, a questionnaire was created which included ten (10) closed-type structured response questions, was anonymous and distributed to 140 people. The research was carried out in the months of October and November 2024. The questionnaire was addressed exclusively to adults.

The paper concludes with interesting conclusions and proposals. An important conclusion is that in order to protect the special physiognomy of the city of Kallithea strategies related to the more general protection of all issues related to its sustainable development should be implemented. It is proposed that both the local government, as well as the businesses of all service and production branches, work towards the protection and highlighting of the special character of the city of Kallithei.

**Key words:** Physiognomy of the city, sustainable development, Kallithea

**BOOK OF ABSTRACTS**

*2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025*

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Session:

**“Digital Cities and Sustainable Development”**

**AN ONLINE PLATFORM FOR ENABLING OPEN DATA  
COLLECTION, STORAGE, ANALYSIS AND CLASSIFICATION OF  
WATER MANAGEMENT DATA FOR THE ATTICA REGION IN  
GREECE**

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**Abstract**

Water resource management is considered critical in an era where the specific resource is becoming increasingly scarce due to population growth, over-usage, changing weather patterns and climate conditions. The existence of detailed and concentrated data regarding its usage is predominantly needed in order to perform research, guide according policies and necessary planning of interventions.

The present paper aims at designing and implementing a backbone platform that may be used to gather, store, analyze, categorize and display relevant data to be used in understanding water consumption and availability patterns. The data refer to water availability in reservoirs, water production statistics, temperature and precipitation as well as supply network failures in the Attica region of Greece. To this end, it makes use of open data sources (eydap.gr, the main authority responsible for water supply in the greek capital and surrounding areas, open-meteo.com for weather and precipitation conditions, as well as 3 services for geocoding and mapping-geodata.gov.gr, openstreetmap and geoapify).

The platform is able to retrieve historical data as well as implement complex automated workflows for the daily update of these data from the data sources. It is also able to parameterize the views and display of data based on user-needed configurations, in order to support a more fine grained and tailored analysis. Clustering is performed in order to create relevant categories in data ranges as well as classify observed values. Data acquisition is performed both in a typical web-based user friendly interface as well as through offering the same functionalities through a backend REST API that may be used to programmatically interact with it and submit filtering queries. Therefore it can support researchers in finding concentrated data for their studies through a single point of access, as well as export that data for further analysis.

**Key words:** Water management, digital platform, open data, policy making

**TOWARDS A SUSTAINABLE DIGITAL TRANSFORMATION: THE ROLE OF HUMAN RESOURCES IN PUBLIC ADMINISTRATION AND CITIZEN SATISFACTION. THE CASE OF THE MUNICIPALITY OF KILLELER.**

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**Abstract**

This paper focuses on survey research using questionnaires and concerns the investigation of digital transformation in public administration, with an emphasis on the role of human resources in citizen satisfaction, as a case study of the Municipality of Kileler. Specifically, it examines how the introduction of digital tools and applications can enhance the efficiency of services, improve the quality of service and citizen satisfaction and promote participatory cooperation in decision-making processes, while simultaneously enhancing the adoption of sustainable practices in administration.

A total of 186 questionnaires were collected from the residents of the Municipality of Kileler and statistical analysis using SPSS 29.0 demonstrated that the reliability of the analysis is excellent, with a Cronbach's alpha coefficient ( $\alpha=0.897$ ).

Through the quantitative and statistical analysis of the questionnaires, the following research questions were examined: (a) How does digital transformation affect public administration? (b) What is the role of human resources in digital transformation? (c) How can digital transformation improve citizen satisfaction? and (d) What is the current state of digital infrastructure and services provided in the Municipality of Kileler?

Some of the main results of the research are summarized as follows: (a) Digital transformation is key to improving the efficiency of human resources and the quality of services in the Municipality of Kileler, while contributing to the creation of a sustainable administration system. (b) Digital applications, such as electronic protocols and automated application management, have significantly reduced bureaucratic procedures, response time to citizens' requests and the environmental footprint of the administration. (c) Human resources have satisfactorily faced the challenges of adapting to new technologies, but, through appropriate education and training, can respond even more to new requirements, implementing a more efficient, transparent and sustainable administration model, which will meet the needs and expectations of citizens.

**Key words:** Digital transformation, Public administration, Sustainability, Human resources, Municipality of Kileler.

**THE ROLE OF NEW TECHNOLOGY INTO FIGHTING AGAINST  
POVERTY AND SOCIAL ALIENATION. STUDYING THE  
INNOVATIVE DIGITAL PLATFORM USE WITHIN THE REGION OF  
CRETE**

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**Abstract**

Social cohesion along with the social integration of any individual plays a determining role in the decision making of any local and regional authority worldwide. The poverty-stricken and vulnerable individuals and groups are related to the socio-political context of any society. At the same time, these liabilities are associated with the way they are dealt with by the authorities in charge. All of the developed and developing countries shape skills strategies. These strategies affect the structure and the content of systems which aspires after establishing a more financially prosperous society.

Within this context the Hellenic Mediterranean University and in particular the Social Work Department under the auspices of the Act “Social Partnership of Crete’s Regional Authority – Decentralized Food and Essential Material Provisions, Administration Costs and Accessory Measures Provision 2018-2019” in collaboration with the Regional Authority of Crete, they are developing an innovative platform which caters for work orientation. This project aims at providing the beneficiaries of this attempt with education, training along with counseling support. This project aims to facilitate the beneficiaries’ personal and professional development along with their integration into the labour market.

The current research inquires into the platform’s efficiency in promoting and socially integrating the participants into the job market. Within this context questionnaire based researches have been conducted. The research collects data the time period from October 2022 to May 2024. The data under investigation are a priori and a posteriori the intervention has occurred. The evidence of this research is indicative of the ensuing phenomenon: the participants have the opportunity to adopt an introspective attitude, reach deductions about their personality and interests while ameliorating them. Additionally, this evidence proves that e-mentoring activation contributes to the establishment of the participants professional opportunities.

**Key words:** Poverty, social alienation, counseling support, digital platform, development



**THE DESIGN AND DEVELOPMENT OF A MOBILE APPLICATION FOR SUSTAINABLE INTERACTION WITH CULTURAL HERITAGE: THE ‘THESSALONIKI REIMAGINED’ PROJECT**

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**Abstract**

Thessaloniki, a city with a rich historical legacy and a dynamic cultural landscape, offers a unique opportunity to integrate digital innovation and sustainability in the management of cultural heritage. This proposal outlines the development of a mobile application, "Thessaloniki Reimagined," designed to facilitate the preservation, exploration, and sustainable promotion of the city's cultural assets through advanced digital technologies and environmentally conscious strategies.

The application leverages augmented reality (AR) and virtual reality (VR) to provide immersive reconstructions of iconic landmarks, such as the Rotunda and the White Tower, enabling users to interact with historical contexts dynamically. Personalized itineraries, powered by artificial intelligence, are tailored to user preferences and encourage eco-friendly transportation modes, such as walking, cycling, and public transit, in alignment with sustainable urban mobility goals.

"Thessaloniki Reimagined" also incorporates participatory and gamified elements to foster community engagement. Features such as cultural heritage quests and interactive challenges incentivize users to explore the city while contributing to a deeper understanding of its diverse history. A crowdsourcing functionality allows users to contribute stories, multimedia content, and localized knowledge, enriching the app's database and fostering a sense of collective ownership over the city's heritage.

The app is designed to align with the European Union's twin transition priorities, integrating digital transformation and green innovation. Sustainability is embedded through features such as real-time eco-impact tracking, partnerships with environmentally responsible businesses, and promotion of low-carbon tourism practices.

This initiative positions Thessaloniki as a case study for combining cultural heritage preservation with digital and ecological advancements, reflecting the principles of the New European Bauhaus and the EU's Agenda for Culture 2030. The proposed application demonstrates how cities can harness technology to enhance cultural accessibility, promote sustainable development, and support a resilient and inclusive urban identity.

**Key words:** Cultural heritage management, Digital transformation, Sustainability, Augmented reality (AR), Eco-friendly tourism

## **RECONNECTING MYSTRAS: LINKING ARTIFACTS TO HISTORY THROUGH DIGITAL NARRATIVES**

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### **Abstract**

The archaeological site of Mystras, located in western Laconia, is the best-preserved Byzantine site in Greece also known as the "Castle City of Mystras" (Ministry of Culture and Sports, 2012). Mystras, a UNESCO world cultural heritage monument since 1989, was founded in 1249 by the Frank commander William II of Villehardouin, and was initially built as a castle fortress on top of Myzithra hill, overseeing the Valley of Evrota 6km southwest of Sparta creating a control point for his regime. The city passed to Byzantine rule in 1259 and expanded outside the Acropolis eventually developing into the powerhouse of the Peloponnese, capital of the Despotate of Morea. The city flourished through a significant number of phases, different rulers and population changes, from the initial Frankish regime to Byzantine, Venetian and Ottoman rulers. The city was destroyed during the raid of Ibrahim troops in 1824 (Sinos, 2009).

Following the establishment of the Modern Greek state a significant number of people returned and lived in the ruins, salvaging all they could until 1954 when Mystras was declared a national archaeological site. Excavations and restoration work began as early as 1860, uncovering artifacts that offer valuable insights into late Byzantine life in the Peloponnese. Located within the Agios Dimitrios church complex, the Museum of Mystras showcases these findings, including unique garments, books, and more (Martiniani-Reber, 2000). This study aims to connect the museum collection with the site itself through digital storylines linking artifacts to their discovery locations, historical figures, and events. By intertwining these artifacts with their original contexts within the site, visitors gain a deeper understanding of their historical significance and the daily life they represent. A web-based experience allows visitors to explore the pebbled streets of Mystras while accessing virtual storylines that bring its Byzantine history to life. This innovative application not only enhances cultural heritage preservation but also fosters global accessibility and engagement with the site's rich history (Panagiotidis, 2023).

**Key words:** Cultural Routes, Mystras, Museum Collections

## **CREATION OF A DEVELOPMENT RIGHTS MANAGEMENT MECHANISM USING BLOCKCHAIN TECHNOLOGY**

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### **Abstract**

The **Transfer of Development Rights (TDR)** is an urban planning tool that allows the transfer of building rights from one property (where construction is restricted due to regulations, e.g., historical monuments, protected areas) to another property where increased construction is permitted.

The legal framework governing TDR in Greece is Law 4759/2020 (Government Gazette A' 245/09.12.2020) for the modernization of spatial and urban planning legislation, which provides for the establishment and operation of the **Digital Land Bank (DLB)**. The Digital Land Bank serves as a mechanism for:

- **Recording** all transferable development rights available.
- **Exchanging and transferring** development rights between property owners.
- **Transparency**, by providing access to accurate information on the availability of building rights.

In this research paper, we propose a theoretical framework for the operation of the Digital Land Bank, based on **Blockchain technology** and the use of **smart contracts**, including various mechanisms that can further enhance the effectiveness of such an application.

The use of Blockchain technology in urban planning tools like TDR through the Digital Land Bank could revolutionize the management of such development rights, generating the following benefits:

- **Transaction security:**
  - Each transfer of building rights can be recorded with an encrypted signature on the Blockchain.
  - Fraud is prevented, as every transaction is verifiable.
- **Transparency:**
  - The Digital Land Bank allows all participants (e.g., property owners, authorities) to track the path of every building right.
  - A tamper-proof system is created that records the origin and final use of each right.
- **Elimination of bureaucracy:**
  - Transfer processes become immediate and automated.
  - Delays caused by traditional registration systems are reduced.
- **Interoperability:**
  - Blockchain allows the integration of the Digital Land Bank with other systems (e.g., land registry, taxation systems).

Nevertheless, investments in technology, legal adjustments, and education are required to overcome challenges and achieve full implementation.

**Key words:** Transfer of Development Rights, TDR, Blockchain, Digital Land Bank

## **INFORMATION LITERACY FOR CULTIVATING SUSTAINABLE MINDSET**

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### **Abstract**

Sustainable thinking and information literacy (IL) are essential for developing resilient, informed citizens with a sustainability-oriented mindset. IL provides individuals with critical 21st-century skills, empowering them to sustain and enrich democratic communities.

To better understand the role of IL in fostering sustainable thinking, this paper begins with a comprehensive literature review exploring key research clusters and emerging trends at the intersection of these concepts. The findings reveal a strong correlation between IL competencies - such as information evaluation, critical thinking, and ethical information use - and the cultivation of sustainable thinking. These skills are pivotal for fostering awareness of global challenges and promoting social inclusion.

Building on this foundation, the study explores the perspectives of students from the University of West Attica (UNIWA) and the University of Bologna (UNIBO) regarding the role of IL courses in secondary education and their influence on students' thinking. This quantitative study demonstrates that such courses significantly enhance students' critical engagement with information, equipping them to navigate complex information ecosystems responsibly.

Finally, to demonstrate practical applications, the paper presents a case study of an IL course taught to students in UNIWA's Department of Archival, Library, and Information Studies (ALIS). Inspired by the United Nations' 17 Sustainable Development Goals (SDGs), the course emphasizes defining information needs; searching, accessing and evaluating information; synthesizing new content; using information ethically; and sharing knowledge. The course equips students with transferable skills while raising awareness of sustainability issues, providing a model for integrating IL into broader educational curricula.

This paper highlights the potential of IL to cultivate critically engaged, sustainability-oriented learners. It underscores how embedding IL into education can better equip individuals to address global challenges.

**Keywords:** information literacy, sustainable goals, critical thinking, resilience, University of West Attica, University of Bologna

**BOOK OF ABSTRACTS**

*2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025*

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Session:

**“Urban Environment and Sustainability”**

## **ASSESSMENT OF THE EFFECT OF GREEN ROOFS ON URBAN STORMWATER MANAGEMENT IN THESSALONIKI, GREECE**

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### **Abstract**

Related to the 17 Sustainable Development Goals for the environment, the global community has realized that urban development requires a holistic approach. With respect to the urban environment, infrastructure, public spaces, quality of life and economy are important factors to consider. Excessive urban construction has resulted in tragic consequences both on the climatic conditions (increase of temperature and surface runoff) and deterioration of air quality. This study explores the environmental impact of green roofs on urban stormwater management. Due to climate crisis, extreme weather events occur more frequently, and cities are experiencing floods, which affect not only the life of the residents, but also the economy.

Green roofs, as a Nature Based Solution (NBS), function as rooftop gardens with soil layers that absorb and store rainwater, reducing runoff and easing pressure on drainage systems during heavy rainfall. Although considered a modern solution, green roofs have ancient roots, providing aesthetic, cooling, and shading benefits across various cultures. Technological advancements have made green roofs more efficient, making them integral to sustainable urban development today. In addition to stormwater management, green roofs offer ecological and social benefits, such as improved building energy efficiency, mitigation of the urban heat island effect, air quality enhancement, noise reduction, visual appeal, and psychological benefits for urban residents. However, challenges include higher installation costs, increased water needs, and added structural load.

Thessaloniki, the largest urban center in northern Greece, faces significant flooding due to high-density development and limited open spaces. This study analyzes the layers of green roofs -drainage, insulation, planting substrates and plants- and develops an optimal configuration tailored to Thessaloniki’s environmental needs. A simulation using SWMM (Storm Water Management Model) in the study area demonstrates that while green roofs effectively reduce stormwater runoff, they do not comply as a complete solution for urban flood management.

**Key words:** Green Roofs, Stormwater Management, Urban Floods, SWMM, Thessaloniki

## **ACHIEVING URBAN SUSTAINABILITY THROUGH CIRCULARITY: THEORIES AND PRACTICES**

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### **Abstract**

Cities are crucial interfaces between natural and socioeconomic systems, hosting over half of the world's population. Their rapid growth leads to increased concentration of people, economic activities, and social interactions. This urbanization poses significant global environmental and socioeconomic challenges. Cities can play a pivotal role in addressing these challenges by adopting Sustainable Development principles and considering economic, environmental, social, and governance factors equally. However, despite global efforts to promote Sustainable Development, its implementation remains a challenge. In this context, Circular Economy has emerged as a promising approach to contribute to Sustainable Development in urban contexts. The aim of this thesis is to explore this dynamic in urban contexts by exploring the research question of this thesis: How does the Circular Economy contribute to urban sustainability and to what extent does it give equal emphasis to the environmental, economic, social and governance aspects of Sustainable Development? To answer the research question, this thesis utilized secondary data, including scientific papers, United Nations reports, and European Union documents. Initially, a literature review was conducted to gain a theoretical understanding of Sustainable Development and the Circular Economy and their connection. Furthermore, these two concepts were studied through a case study of the city of Amsterdam in order to gain empirical knowledge about the implementation of Circular Economy in urban contexts. The findings highlight that the social dimension of Sustainable Development is often neglected in favor of economic and environmental dimensions. Furthermore, the research emphasizes the importance of governance in facilitating the transition to a Circular Economy and achieving urban sustainability. This thesis contributes to the understanding of the role of the Circular Economy in achieving urban sustainability, highlighting the need for a balanced approach that addresses the economic, social and environmental dimensions of sustainability equally through effective governance modalities.

**Key words:** Sustainable Development, urban sustainability, Circular Economy, social sustainability, governance

## **Km Vert (Green Kilometer project) SYSTEM FOR URBAN REGENERATION**

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### **Abstract**

Urban abandonment is a phenomenon linked to the socio-cultural and economic changes occurring in modern cities, often leading to the degradation of disused residential and industrial areas. However, these places, initially considered unattractive, can become opportunities for urban development if regenerated, with the involvement of local communities in the process. Archaeology plays a fundamental role in this regeneration, helping to strengthen territorial and socio-cultural identity through different dimensions: socio-cultural (exchanges and migrations), historical-artistic (democratic awareness), urban (history of settlements), industrial (transformation processes), climatic (environmental changes), energy (evolution of resources), and experimental (validating archaeological interpretations). The accelerating pace of climate change and the inability of cities to adapt require urgent intervention. The "Km Verde" project responds to this need, aiming to transform an urban street into an attractive area centered on the interests of citizens. It is not just a street reorganization but a radical and innovative intervention that promotes sustainable urban regeneration capable of attracting both tourists and residents. "Km Verde" should not be seen as an isolated intervention, but as the first step in a broader, more inclusive, and dynamic urban vision intended to improve the quality of life. Furthermore, the project uses modern technologies, such as Artificial Intelligence, to develop urban solutions that interact with the socio-cultural fabric of the area, offering more targeted and effective solutions. If successfully implemented, "Km Verde" could become a model for other cities, addressing similar challenges in a context of social, economic, and environmental change.

**Key words:** Urban abandonment, Regeneration, Territorial identity, Industrial archaeology, Climate change, Km Verde, Artificial Intelligence



**THE MULTIFUNCTIONAL ROLE OF BOTANICAL GARDENS FOR  
THE SUSTAINABLE DEVELOPMENT OF CITIES: AN URBAN  
RENEWAL STUDY WITH THE CREATION OF AN ARBORETUM AT  
THE UNIVERSITY OF THESSALY IN KARDITSA, GREECE**

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**Abstract**

The innate need for contact with nature led to the creation of urban green spaces, which are however quite often degraded and encroached upon, amid bad urban building practices. The use of sustainable materials in urban renewal projects and especially wood, is a practice which in recent years shows increasing trends, even in the light of halting environmental degradation due to the use of unsustainable materials, but also in combination with a series of other goals and practices, such as those discussed in this article. Moreover, urban regeneration programs themselves have, for years, given high priority to the element of environmental footprint. Botanical gardens can play a significant role in the above mentioned initiatives, especially those located in urban areas.

The present paper investigates the historical evolution of botanical gardens as multifunctional urban green spaces. A parallel objective was to investigate the role of modern botanical gardens in the sustainable development of cities, in combating climate change and its impacts to urban areas, in protecting, restoring and promoting sustainable use of terrestrial ecosystems and in halting biodiversity loss.

As far as the practical context is concerned, this includes the regeneration procedures design of an urban green area in the city of Karditsa, that belongs to the University of Thessaly, and the enactment of a proposal regarding the creation of a model botanical garden, describing its structure and individual functions.

**Key words:** wood, sustainability, urban regeneration, arboretum

**BOOK OF ABSTRACTS**

*2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025*

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Session:

**“Industry, Services and Sustainability”**

**INTEGRATING SUPPLY CHAIN PRACTICES TO MITIGATE  
CIRCULAR ECONOMY RISKS: A QUALITATIVE STUDY OF THE  
GREEK FURNITURE SECTOR**

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**Abstract**

This study explores the intersection of Integrative supply chain (SCI) and Circular Economy (CE), aiming to assess how integrating SCI practices within CE frameworks influences organizational performance. The purpose of this study is to provide businesses with insights to facilitate a smoother transition to CE models. By leveraging integrative practices, organizations can better manage CE-related risks, optimize resource utilization, and enhance overall operational efficiency.

As organizations increasingly transition toward circular and sustainable business models, they encounter novel challenges and heightened risks, particularly within the context of Circular Economy (CE) practices. Integrative supply chain (ISC) practices are essential for managing such risks and uncertainties. Furthermore, there is limited empirical evidence regarding the effectiveness of Supply Chain Integration (SCI) in mitigating the specific risks associated with CE adoption.

Utilizing a qualitative research approach, this study focuses on selected companies within the Greek furniture sector, analyzing how these organizations implement and benefit from SCI-CE synergies. Notably, this integration enables companies to achieve cost savings and environmental gains by effectively recycling and repurposing waste materials, ultimately contributing to a more resilient and sustainable supply chain.

**Key words:** Circular Economy (CE), Supply Chain Integration (SCI), Sustainable Business Models, Risk Management, Resource Optimization

## **FROM QUANTITATIVE TO QUALITATIVE SERVICES: HOW TO PROMOTE INTEGRATED PLANNING FOR THE REVISION OF THE SERVICE PLAN OF MANTUA, MUNICIPALITY IN ITALY**

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### **Abstract**

Traditionally, Italian municipalities assessed public services through metric measurements regulated by decrees establishing urban planning standards, since 1968. However, in the 21<sup>st</sup> century a paradigm shift occurred, moving from a quantitative approach to a qualitative one in planning, focusing on services quality, citizen well-being, and urban sustainability. This change was formalized by regional laws that introduced plans, like Service Plans, and promoted experiments for more sustainable and resilient cities.

Also, the pandemic emphasized the need to reassess the urban complexity of cities to better meet community needs. In this context, proximity emerged as a key strategy to create dynamic cities with diversified functions and services available to all. This shift in urban planning calls for municipalities to revise their planning tools using a holistic and multidisciplinary approach, ensuring that cities become more responsive to evolving social and environmental challenges.

In this regard, the Municipality of Mantua has initiated, with our operative contribution and support, a process of revision through the experimentation of three iterative intervention methods:

- Re-discovering the availability of proximity services and facilities in Mantua city through critical analysis and the creation of multi-characteristic sheets to map their distribution across the territory, which is currently isolated and fragmented.
- Re-reading the traditional division of the territory into administrative units, known as neighborhoods, towards autonomous and heterogeneous units, called "urban proximity systems." They represent urban centres with specific identities and public services that ensure a new urban functionality.
- Re-thinking an urban strategy that organizes the territory along two main spines: an urban one, which fosters interactions between functions and services, and a natural one, which integrates the landscape through green connections and elements of the ecological network.

This experimental initiative demonstrates how an integrated planning approach to different elements can facilitate a polycentric urban vision, enhancing quality of life and the environment in line with sustainability and resilient principles.

**Key words:** integrated planning, qualitative services, community needs, sustainable approach, proximity urban strategy.

## **SUSTAINABLE DEVELOPMENT AND THE GREEK PHARMACEUTICAL INDUSTRY**

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### **Abstract**

The purpose of this paper is to investigate the contribution of the Greek Pharmaceutical Industry to sustainable development in Greece.

According to the United Nations (<https://unric.org/en/united-nations-sustainable-development-goals/>) the 2030 Agenda unanimously adopted in 2015 by world leaders includes the following 17 Sustainable Development Goals:

1. No poverty, 2. Zero hunger, 3. Good health and well-being, 4. Quality education, 5. Gender equality, 6. Clean water and sanitation, 7. Affordable and clean energy, 8. Decent work and economic growth 9. Industry innovation and infrastructure 10. Reduced inequalities, 11. Sustainable cities and communities 12. Responsible consumption and production, 13. Climate action, 14. Life below water, 15. Life on land, 16. Peace, Justice and strong institutions, 17. Partnerships for the goals.

In this study, the contribution of the Greek Pharmaceutical Industry to the implementation of the 17 goals of Sustainable Development was examined. For this purpose, a bibliographic study was carried out from which important conclusions are drawn regarding the role that the Greek pharmaceutical industry must play in the sustainable development in the Greek area and especially in the field of good health and well-being, in decent work and economic development, in the field of innovation, in responsible consumption and production.

In addition to the main conclusions, the paper proposes prospects for the development of the Greek Pharmaceutical Industry with a view to maximizing the contribution to Sustainable Development in Greece as well as global competitiveness. A further but equally important goal would be the development of the Greek Pharmaceutical Industry in the context of reducing the environmental footprint in the present but also the creation of favorable living conditions for future generations.

**Key words:** Greek pharmaceutical industry, sustainable development

## **INDUSTRIAL SYMBIOSIS - SITUATION IN MAURITIUS**

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### **Abstract**

Industrial symbiosis, a key area within industrial ecology, focuses on utilizing waste or by-products from one entity as resources for another, fostering both environmental and economic advantages. Central to this concept is the reuse of resources and waste minimization, driven by collaborative opportunities and synergies often facilitated by geographical proximity (Chertow, 2000). Essentially, industrial symbiosis establishes connections between companies or industrial facilities, enabling one organization's waste or by-products to serve as raw materials for another.

By integrating industrial symbiosis practices, industries can significantly reduce waste generation and lessen the need for extracting raw materials, repurposing waste from one sector as valuable inputs for another (Chertow, 2007). This approach is influenced by various factors, including cost savings, environmental benefits such as reduced greenhouse gas emissions, and addressing issues like natural resource scarcity and waste diversion from incinerators and landfills. Ultimately, industrial symbiosis leverages symbiotic collaborations and business partnerships to create closed-loop systems.

The main aim of the paper is to present the idea of industrial symbiosis and possibilities for industrial symbiosis in Mauritius. The paper analyzes the term of industrial symbiosis, opportunities and challenges for industrial symbiosis. In the third part paper studies possibilities and challenges for industrial symbiosis implementation in Mauritius and presents the cases of good practice. Based on the research results, conclusions and recommendations for further research on this important topic are given.

**Keywords:** Industry symbiosis, opportunities, challenges, Mauritius

**BOOK OF ABSTRACTS**

*2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025*

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Session:

**“Urban and Regional Sustainable Development”**

## **MANAGING AGRICULTURAL LAND AND LANDSCAPE IN THE ISLANDS: CHALLENGES AND STRATEGIES**

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**Abstract**

Agricultural land is a scarce and non-renewable natural resource, a legally protected good of national importance and a fundamental component of the productive system and sustainable development. Furthermore, the protection of agricultural land is “sine qua non” for the management and design of the rural landscape, which often forms an integral part of the cultural identity of local communities. In the islands, where the landscape scale is smaller, traditional farming practices, crops (especially local crop varieties and landraces) as well as rural infrastructure shape the rural landscape and constitute a significant part of the cultural heritage. This article examines various policy measures which promote the maintenance of agricultural activity and land use through the provision of financial incentives, along with the protection of agricultural biodiversity, encourage the continuation of farming practices to protect iconic rural landscapes as well as landscape features. The analysis of legal and policy measures taken in order to protect agricultural land from land use-changes reveals the ineffectiveness of institutional protection on the one hand and the fact that regulatory measures are solely focused on high-productivity land on the other. Particularly in the islands, the agricultural areas that meet high productivity criteria are limited, rendering them totally unprotected. There is an evident need to broaden the notion of “productivity”. Therefore, it is essential to incorporate the logic of agroecosystem services and the landscape concept into the planning and protection of agricultural land. It is argued that a conservation strategy limited to the provision of incentives is inadequate to address pressures for land use changes towards urban, tourist or commercial development. It is, thus, evident that regulatory measures are required for the effective protection and management of these areas.

**Keywords:** Agricultural Land Protection, Rural Landscape, Ecosystem Services, Common Agricultural Policy, Regulatory Measures



## **COGNITIVE URBAN MAPS AS A BINDING ELEMENT OF LOCAL IDENTITY**

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### **Abstract**

Urban communities are becoming multicultural with a variety of social groups and characteristics. In this transitional condition, with global influences, population displacement, disenchantment of history and traditions, local identity is crucial acting as a counterbalance of urban distress. The common good of being part of a local community, sharing common values and memories, strengthens the collective elements of the urban life. Most important to this sharing of common identity are all defining elements of a given place, the spatial ingredients that make this place unique and specific. This set of defining spatial elements may include buildings, natural features, monuments, landmarks, open squares, etc.

This complex pattern of urban elements is unique as every urban history and culture is also unique. The cultural imprint of every urban community creates a spatial ecosystem that is necessary for daily life. Mobility patterns, streetscapes, architectural heritage, local traditions and customs, all and many more, represent the urban condition of local identity. This complicated concept of local identity is evolving in the same way that a city is nowadays evolving. Thus, it is necessary to preserve some form of an anchoring state, a binding element that keeps an identity stability allowing change and past attachments. This crucial element is a cognitive map, a psychological process that combines spatial knowledge, personal objectives and social interaction.

This paper is investigating the role of cognitive mapping process as a binding element of local identity characteristics. It attempts to highlight that through this process it is possible to acquire urban data that construct a foundation of a sense of belonging.

**Key words:** Local Identity, Cognitive Maps, Sense of Belonging.

## **ISSUES OF DEATH AND ECOLOGY: RECONSIDERING THE ROLE OF FUTURE CEMETERIES IN THE CITY**

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### **Abstract**

Burial grounds are an integral part of every social formation and social ritual. They reflect the peculiarity of cities over time and narrate the evolution of society's attitudes towards death, since they in turn constitute 'cities' of limited size. Over the centuries from scattered burial grounds to modern organized cemeteries, burial grounds constitute vital urban cells of multiple properties. These are important free urban spaces, open to the public of the city that go beyond religious rituals and can be treated as monumental 'gaps' in which its past is inscribed. From the medieval spaces that were social and crowded spaces, a displacement of the cemeteries from the core of the city is established, with the result that they function as 'organized spaces' on its borders, leaving behind the monumental burials as 'urban fragments'. Therefore, the purpose of the paper is to explore philosophical and cultural views on death from the Middle Ages to the modern era and the influence they have had on the design of modern burial grounds. The paper will focus on the emergent urban dynamics of cemeteries, studying issues of urban integration and spatial composition in the context of a climate of gentrification and a lack of open public spaces. The above problem can be understood in the light of 'Landscape Urbanism'. According to 'Landscape Urbanism', the landscape is defined as the prism through which the modern city is interpreted and at the same time the mean through which it is shaped. It is essentially an attempt to decode the urban situation in landscape terms and manage it as an ecosystem, which is studied and planned on the basis of a spatio-temporal ecology. Through the contemporary production processes of the space, the vanguard of landscape architecture design expresses the view of a 'new urban nature' which can be identified in the modern burial grounds. In addition, both incineration and conventional burial have some adverse environmental effects, with the result that some cities are already implementing innovative design strategies aimed at urban resilience. Therefore, the re-personification of the spatial issue of death projects the future form of specific spaces through their change, shrinking and even disappearance. In general, innovative design approaches to burial sites are emerging through modern technology and architecture under the gaze of the continuous ecological needs of the space. Beyond the theoretical part, the presentation focuses on two personal design research projects that examine the above issues. The first project focuses on the ways in which the question of burial is reintegrated into the urban fabric and the daily life of the inhabitants, while the second on the process by which the dead body ceases to cause disgust and returns to the city in a 'new form', identifying public space with memory.

**Key words:** burial sites, urban voids, death, integration, landscape.

## **WITH THE GAZE OF PLACE - MULTIFUNCTIONAL COMPLEX IN DORIDA**

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### **Abstract**

This thesis concerns the creation of a multi-functional complex in the municipality of Dorida, in the prefecture of Fokida. The plot on which the intervention is taking place is located at the entrance to the settlement of Koniakos, a village located on the eastern slope of Vardousia. The landscape, the traditional architecture of the place, the traditional buildings and settlements combined with the folklore of the place led to architectural gestures that respect the heritage and the natural environment. Consequently, the traditional elements of the area are transcribed in a modern way defining a renewed local character in the area. More specifically, the complex consists of an amphitheater with a capacity of 200 people which will be a place for cultural events, conferences, etc., a refreshment room, a folklore library and a long-term residential zone. The steep slope of the ground helps to compose functions and volumes by creating platforms and bleachers for easier passage and circulation inside the complex. Therefore, the complex of functions tries to transcribe the tradition of the place in a material and immaterial way thus avoiding copying and standardization.

These gestures of utilizing the old are a key part in the sustainable development of a place and furthermore in highlighting its heritage.

**Key words:** Use of old traditional buildings, traditional architecture, Dorida, Fokida

## **MOVING FROM LOCALITY TO LOCABILITY TOWARDS SUSTAINABLE PLACE BRANDING**

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**Abstract**

The notion of *locability* is presented as an essential framework supporting sustainable place branding. Locability, the unique set of attributes of a place that makes it easily identified, visited, and ultimately experienced, encompasses physical infrastructure, digital connectivity, and cultural identity. Being a fluid concept, locability lies beyond the fixed conception of locality, by considering essentially functional and communicational qualities that endow a place with the ability to engage meaningfully with residents, visitors, and all stakeholders involved for the benefit of economic development, community well-being and sustainability.

In its next step, this study examines locability as a tool that aligns place branding with the principles of sustainable development, linking to the goals of the SDGs set up by the United Nations. Locability is the golden thread that connects the identity of a place to its sustainability initiatives. It fosters improved access to resources promoting equity and facilitating inclusion and social cohesion. Engaging with these themes and drawing on both theoretical insights and case studies, the paper shows how locability-based strategies can endorse and underpin environmental stewardship, economic resilience, and cultural preservation. This study contributes to the discourse on sustainable urban and regional development by highlighting the innovative role of communication and co-creation within the context of place branding.

**Keywords:** sustainable development, strategic communication, locality, locability, place brand management, experience

## **ANCIENT HARBOR OF LECHAION: REDEFINING THE PLACE**

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**Abstract**

Lechaion, the western port of ancient Corinth is characterized as one of the most important ports of ancient times for the Mediterranean history.

Nevertheless, the fact that in its present state, the ancient port of Lechaion comprises of a fenced space, to which the public doesn't have access, introduces the question whether it can become a "place" today, i.e. part of the social and cultural life of the city, but also an international archaeological destination, part of the network of important archaeological sites of the wider area of Corinth.

This paper aims to promote a project-oriented approach to context interpretation, place intervention and translation of its identity into an architectural proposal. Through an extensive analytical procedure, it intends to provide some initial answers to the question stated above, via a case study focused on the archaeological site of Lechaion Ancient Harbor which is, at the same time, an important water landscape ecosystem, which in now days act as a biotope.

In order to answer the question, it was considered important to search for the principles that constituted the ancient port as a "place" in the past.

Listening to the landscape, understanding the way in which it was formed and giving value to the life that appropriates it in the present are the pillars of an architecture that can regenerate a place, redefine it in the present for the future, while carrying its spirit, what makes it unique compared to any other place in the world.

This kind of approach can establish a methodological tool, as a link between the fields of architecture, nature and archaeology, which in more ways than one has a lot in common.

In a time of increased awareness on issues of sustainability and heritage, the preservation of architectural landmarks of historical significance is of major importance.

**Keywords:**Lechaion harbor, Ancient Corinth heritage, environment, place integration, Genius Loci, place identity, sensitive architecture

## **A SPATIAL ANALYSIS OF URBAN POVERTY: THE CASE OF KUSTEPE NEIGHBORHOOD**

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### **Abstract**

The term "space," although generally meaning "place," conceptually refers to a phenomenon that can continuously reproduce itself through actions. Hence, space inherently encompasses a network of social relations, ideology, collective memory, belonging, identity, and similar concepts. In urban planning, "space" is predominantly discussed in the context of "public space" and "public realm." When linked with the concept of "resilience," studies on "urban resilience" tend to focus on physical spaces, particularly with an emphasis on seismicity and disaster.

The Kuştepe neighborhood, located within the Şişli district, one of the primary service centers on the western side of the Istanbul Metropolitan Area, has become home to low-income households relocated from different sub-regions due to squatter demolitions and affected by national migration waves over time. Residents in the neighborhood face inadequate housing conditions, limited access to social services, economic opportunities, and insufficient physical infrastructure.

Kuştepe serves as a significant study area for understanding how urban poverty takes shape spatially and how impoverished neighborhoods cope with socio-economic exclusion. The lack of economic opportunities in the area, coupled with daily practices adopted or embraced by the residents, has led them to utilize shared spaces (streets, parks, neighborhood squares) more intensively. These spaces serve as public realms where social relationships develop, and collective solutions to common issues are crafted. In Kuştepe, where public spaces have gained the characteristic of common spaces, the urban poor have strengthened their social resilience against the negative impacts of urban poverty by building a sustainable system through their own organizational structures (such as regional ties, neighborly relations, and shared economic activities), despite their vulnerabilities.

This research aims to shed light on the challenges faced in a poor neighborhood lacking technical and social infrastructure, where initially socially excluded residents have transitioned towards a preferred collective existence. It explores the factors contributing to this resilience and the problems arising from it. The study also seeks to understand the sustainable system built by the urban poor in Kuştepe, as well as to propose neighborhood-scale sustainable development suggestions based on the local dynamics of Kuştepe, aiming to preserve existing values and improve the quality of life.

**Key words:** Urban Poverty, Social Resilience, Sustainability, Public Space, Commons, Neighborhood

**BOOK OF ABSTRACTS**

*2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025*

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Session:

**“Tourism, Culture and Sustainable Development of Places”**

## **SUSTAINABILITY AND CULTURAL HERITAGE: AXIOM OR OXYMORON?**

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### **Abstract**

Sustainability has become a global priority among the environmental, social and economic challenges facing us urban planners in the coming decades.

The perspective of culture and the cultural heritage's role in triggering sustainable policies is one that, more than any other, requires an informed, integrated and interscalar approach. Yet, we still encounter many difficulties in associating the two terms within effective and lasting policies and strategies. We are still too often associated with a constrained view of cultural heritage that reconciles poorly with sustainability and development.

If, instead, we address the issue of sustainability from the perspective of a complex and conscious process of building a social and cultural identity, then cultural heritage becomes a fundamental component in the definition of valorisation and development strategies that relate heritage itself and communities to the territory and its inevitable physical and functional transformations.

From this viewpoint, sustainability and cultural heritage can represent a deductive and reinforcing axiom of the same principle. Culture is thus asserted as a tool not only for economic development, but above all for promoting dialogue, respect for diversity, social inclusion and consequently cohesion in response to the need to ‘strengthen efforts to protect and preserve the world's cultural and natural heritage’.

In urban territories in constant transformation, cultural heritage becomes the element of continuity between the past and the future: it represents continuity to the past, and at the same time, the identity heritage to be passed on to future generations, in a perspective in which transformation becomes continuous evolution.

The contribution intends to explore this theme through the presentation of sustainable and inclusive experiences of regeneration and reuse of cultural heritage in Italy. These include the cases of Rome (Integrated Park of the Aurelian Walls), Bologna (City of Water) and Padua (Park of the Walls).

**Key words:** Cultural Sustainability, Cultural Heritage, Urban Regeneration.



## **THE EUROPEAN CITIES: CULTURAL CHANGE FOR SUSTAINABLE CITY SPACES**

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### **Abstract**

In contemporary urban development, the evolution of cities into sustainable, green, biophilic environments is fundamental for enhancing the well-being of residents. At the heart of this transformation lies the concept of green cities, which emphasizes the integration of eco-friendly technologies and practices while fostering community engagement and preserving cultural heritage. Depending on the theoretical orientation and the scientific perception regarding what green cities are, their definition also varies. Some theorist defines the green city as "a city that is "in balance with nature", where all forms of nature - from living organisms to their habitats - are highly significant components of the urban form and part of a green infrastructure". Green cities could be seen as a metaphor for preserving existing nature while making it usable for urban residents. The "green" in the green city concept "relates to three types of environmental foci: material (such as the use of recyclable, biodegradable, environmentally neutral materials), energy (use and production of renewable energy; reduction of fossil fuels), and pollution (does not pollute or reduces pollution)". According to the concept of "green infrastructure," the model of a green city is characterized by the minimization of the negative human impact on the environment following the principles of sustainable development of the territory.

By some authors, various notions, notably, green city, eco-city, liveable city, and the smart city should be considered as an intertwining concept to mainstream sustainable development in urban areas.

**Key words:** Cultural Development, Green Cities, Innovation, Culture Ecosystem, Urban Development.

**THE IMPACT OF HERITAGE-LED URBAN REGENERATION ON DESTINATION IDENTITY AND DESTINATION MARKETING; STAKEHOLDERS’ PERSPECTIVE; THE CASE OF THE TOBACCO WAREHOUSE IN KAVALA.**

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**Abstract**

In Greece, urban regeneration process- especially based on industrial heritage- is not a widely adopted model. Due to the legislative framework- which more often functions as a hindrance rather than an incentive- characterizing a building as a listed one restricts automatically the means of conservation, promotion, and reuse. Furthermore, special emphasis is given in the monuments of classical antiquity, as we do not locate certain legislative framework concerning recording, conservation, preservation, protection and promotion of Greece’s Industrial heritage. At the same time, there is not systematic funding related to the conservation of listed buildings or industrial facilities and machinery that have become obsolete. Therefore, conservation, preservation, protection and promotion of Industrial Heritage and listed buildings primarily concern private ownership and initiative, as a result of mobilizing specific entities and stakeholders’ interests.

In this research, we examine the role of stakeholders in heritage-led urban regeneration process but also their contribution on shaping destination identity and promoting sustainable tourism. We focus on this subject as we locate a research gap concerning the supply side (internal stakeholders) and their role in shaping destination identity. More specifically, we will focus on the case study of Kavala, a city in Northern Greece, with a significant remnant of Industrial Heritage in the contemporary urban fabric. To achieve this, we are conducting qualitative research, addressing local and regional stakeholders involved in local government, creating local culture but also the formulation, organization, and implementation of tourism policy (DMO’s). Primary data were collected through semi-structured interviews with key stakeholders, later subject in thematic analysis, while secondary data concern mainly statistics.

Our aim is to explore and understand both the motivations and objectives behind local cultural production and tourism policy formulation, as well as to examine how the Tobacco warehouses’ regeneration will affect the perceptions and intentions of the creative clusters of Kavala benefitting socially the city, simultaneously contributing to the destination identity and sustainable tourism planning.

**Keywords:** Destination identity, heritage-led regeneration, tobacco warehouses, stakeholders, sustainable tourism

## **ASSESSING THE FEASIBILITY OF PARTICIPATORY GOVERNANCE IN SUSTAINABLE TOURISM: CASE STUDY, SYROS**

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### **Abstract**

The growing demand for sustainability in tourism has created complex challenges as destinations strive to balance tourism, local community well-being, economic prosperity, and environmental preservation. Governance structures for sustainable tourism development have attracted significant scholarly attention (Adebayo, 2018; Espeso-Molinero et al., 2020; Bichler, 2021; Sentanu et al., 2023), with many researchers advocating for a democratic approach involving local community participation in decision-making processes. To achieve success, it is essential to assess both the community's willingness to participate and their technical knowledge, while also identifying weaknesses, challenges, and opportunities.

This study explores Syros residents' understanding of sustainability and their interest in participatory governance. These factors are considered essential for the effectiveness of community-based governance in sustainable tourism initiatives. Syros, with its rich cultural heritage, was chosen for its potential role in sustainable tourism. Empirical research through interviews and a targeted questionnaire revealed major barriers to effective participatory governance, including bureaucratic issues and limited understanding of sustainability's social dimension. Findings highlight the need for educational programs to improve community awareness, which could establish a foundation for meaningful community involvement in decision-making on sustainability, though practical challenges remain.

**Key words:** Sustainability, Tourism, Participatory Governance, Community involvement, Cultural heritage

**THE ECONOMIC, SOCIAL AND ENVIRONMENTAL IMPACT OF SPORTS TO TOURISM IN THE CASE OF GREECE**

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**Abstract**

Tourism as a sector is a very important one globally. Concerning Greece, it is an even more important sector since it represents a nearly 20% of its GDP. However, the recent years it is observed a reduce in per tourist income that generates the question if there is a way or an other sector that may contribute positively to the increase of this income. Moreover if this contribution can exist within the framework of sustainability and have a positive impact to its three pillars of economy, society and environment.

The present paper investigates the impact the inclusion of sports events within the touristic package has to overall tourism footprint of a region. Specifically, the main concern of the research is to highlight the close relationship between sports and tourism as well as whether there are benefits from this relationship to the investigated region or not from a sustainability perspective. Finally, the most important question this research seeks to find is if there is a significant economic impact to a regions tourism when sports events take place.

For the needs of the research a special questionnaire was formed. The replies of the accumulative 1503 respondents in 2024, show clearly that there is a great relationship between sports and tourism. Also, the multilateral impact of sports to tourism is being highlighted from the perspective of the tourist in Greece. Finally, the three major findings are that sports may be the means and the motive for a tourist to extend its vacations, to consider the overall touristic experience more attractive as well as to spend more money per day.

**Key words:** sports tourism, sustainable sports, tourist expenditure, economic impact

**DEVELOPMENT OF ALTERNATIVE FORMS OF TOURISM IN THE ISLAND REGION OF THE MUNICIPALITY OF WEST SAMOS**

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**Abstract**

This paper focuses on the development of sustainable tourism in Western Samos, analysing the natural, cultural and religious resources of the island. The aim is to propose the promotion of alternative forms of tourism that have the potential to contribute to the economic development of the region without harming the environment and the local community. The island, with its rich natural resources and its rich cultural fabric, is ideal for the development of alternative forms of tourism such as wine and religious tourism. Activities such as hiking on nature trails, visiting traditional wineries and exploring historic monasteries can attract visitors seeking authentic experiences. In order to successfully implement this plan, actions such as the creation of organised routes, training of guides and promotion of the local product are proposed. In this way, West Samos can strengthen the local economy, protect the environment and preserve its cultural heritage.

**Keywords:** sustainability, tourism, alternative tourism, religious tourism, Samos, tradition, local economy

## **THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF NAFPAKTOS**

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### **Abstract**

The present paper refers to the physiognomy of the city and is a study. The aim is to investigate the factors that contribute to the formation of this physiognomy and the opinion of residents and visitors on the issues in question. As a case study, the city of Nafpaktos of the Region of West Greece is chosen.

In order to answer the main questions of the work and to investigate the main factors that shape the physiognomy of the city of Nafpaktos a survey was carried out aimed at the residents of and visitors to the city. For the needs of the research, a questionnaire was created which included (10) closed-type structured response questions, was anonymous and distributed to 187 people. The research was carried out in the months of October and November 2024. The questionnaire was addressed exclusively to adults, aged 18 to 65

The paper concludes with interesting conclusions and proposals. An important conclusion is that in order to protect the special physiognomy of the city of Nafpaktos strategies related to the more general protection of all issues related to its sustainable development should be implemented. It is proposed that both the local government, as well as the businesses of all service and production branches, work towards the protection and highlighting of the special character of the city of Nafpaktos

**Key words:** Physiognomy of the city, sustainable development, the city Nafpaktos

**BOOK OF ABSTRACTS**

*2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025*

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Pre-organised Special Session:

**“Cities Physiognomy”**

*Organized and chaired by Joseph Stefanou & Roido Mitoula*

**THE FORMATION OF THE PHYSIOGNOMY OF THE ISLAND OF HERAKLIO. THE OPINION OF RESIDENTS AND VISITORS.**

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**Abstract**

The present paper refers to the physiognomy of the city and is a study carried out by the Department of Economics and Sustainable Development of Harokopio University. The aim is to investigate the factors that contribute to the formation of this physiognomy and the opinion of residents and visitors on the issues in question. As a case study, the city of Heraklion of the Region of Crete is chosen.

In order to answer the main questions of the work and to investigate the main factors that shape the physiognomy of the city of Heraklion a survey was carried out aimed at the residents of and visitors to the city. For the needs of the research, a questionnaire was created which included (10) closed-type structured response questions, was anonymous and distributed to 150 people. The research was carried out in the months of October and November 2023. The questionnaire was addressed exclusively to adults, aged 18 to 65

The paper concludes with interesting conclusions and proposals. An important conclusion is that in order to protect the special physiognomy of the city of Heraklion strategies related to the more general protection of all issues related to its sustainable development should be implemented. It is proposed that both the local government, as well as the businesses of all service and production branches, work towards the protection and highlighting of the special character of the city of Heraklion

**Key words:** Physiognomy of the city, sustainable development, the city Heraklion



## **THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF IOANNINA - THE OPINION OF RESIDENTS AND VISITORS**

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### **Abstract**

The present paper refers to the physiognomy of the city and is a study carried out by the Department of Economics and Sustainable Development of Harokopio University. The aim is to investigate the factors that contribute to the formation of this physiognomy and the opinion of residents and visitors on the issues in question. As a case study, the city of Ioannina of the Region Epirus is chosen.

In order to answer the main questions of the work and to investigate the main factors that shape the physiognomy of the city of Ioannina a survey was carried out aimed at the residents of and visitors to the city. For the needs of the research, a questionnaire was created which included ten (10) closed-type structured response questions, was anonymous and distributed to 150 people. The research was carried out in the months of October and November 2024. The questionnaire was addressed exclusively to adults, aged 18 to 80

The paper concludes with interesting conclusions and proposals. An important conclusion is that in order to protect the special physiognomy of the city of Ioannina strategies related to the more general protection of all issues related to its sustainable development should be implemented. It is proposed that both the local government, as well as the businesses of all service and production branches, work towards the protection and highlighting of the special character of the city Ioannina.

**Key words:** Physiognomy of the city, sustainable development, the city of Ioannina

## **THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF MONEMVASIA - THE OPINION OF RESIDENTS AND VISITORS**

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### **Abstract**

The present paper refers to the physiognomy of the city of Monemvasia and is a study carried out by the Department of Economics and Sustainable Development of Harokopio University. The aim is to investigate the factors that contribute to the formation of this physiognomy and the opinion of residents and visitors on the issues in question. As a case study, the city of Monemvasia of the Region of Peloponnese is chosen.

In order to answer the main questions of the work and to investigate the main factors that shape the physiognomy of the city of Monemvasia a survey was carried out aimed at the residents and visitors of the city. For the needs of the research, a questionnaire was created which included ten (10) closed-type structured response questions, was anonymous and distributed to 160 people. The research was carried out in the months of October and November 2024. The questionnaire was addressed exclusively to adults.

The paper concludes with interesting conclusions and proposals. An important conclusion is that in order to protect the special physiognomy of the city of Monemvasia strategies related to the more general protection of all issues related to its sustainable development should be implemented. It is proposed that both the local government, as well as the businesses of all service and production branches, work towards the protection and highlighting of the special character of the city of Monemvasia.

**Key words:** Physiognomy of the city, sustainable development, Monemvasia

**THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF  
VOLOS.THE OPINION OF RESIDENTS AND VISITORS.**

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**Abstract**

The present paper refers to the physiognomy of the city and is a study carried out by the Department of Economics and Sustainable Development of Harokopio University. The aim is to investigate the factors that contribute to the formation of this physiognomy and the opinion of residents and visitors on the issues in question. As a case study, the city of Volos is chosen.

In order to answer the main questions of the work and to investigate the main factors that shape the physiognomy of the city of Volos a survey was carried out aimed at the residents of and visitors to the city. For the needs of the research, a questionnaire was created which included ten (10) closed-type structured response questions and two (2) open type questions, was anonymous and distributed to 155 people. The research was carried out in the months of October and November 2023. The questionnaire was addressed exclusively to adults, aged 18 to 65.

The paper concludes with interesting conclusions and proposals. An important conclusion is that in order to protect the special physiognomy of the city of Volos strategies related to the more general protection of all issues related to its sustainable development should be implemented. It is proposed that both the local government, as well as the businesses of all service and production branches, work towards the protection and highlighting of the special character of the city of Volos.

**Key words:** Physiognomy of the city, sustainable development, the city of Volos.

## **ENVIRONMENTAL PROFILE A REGION KARDITSA**

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### **Abstract**

The region of Karditsa, rich in natural resources and with a strong agricultural focus, serves as an ideal case for implementing the principles of a "smart city" with a focus on sustainability. This paper explores how smart technologies can contribute to sustainable natural resource management, reduce environmental impact, and enhance residents' quality of life.

Particular attention is given to water resource management, as the area includes significant aquatic ecosystems, such as Lake Plastiras and the Smokovo Dam. The use of technologies like sensors for continuous monitoring of water quality and quantity, as well as smart irrigation systems to reduce waste and improve agricultural efficiency, is analyzed. Additionally, interventions in infrastructure are examined, including the development of green spaces and the promotion of sustainable mobility through bike paths and electric transportation solutions.

The thesis highlights the importance of local community involvement and collaboration among local authorities, businesses, and research organizations for the successful implementation of these initiatives. The proposed actions aim to strengthen the region's economic resilience, promote eco-tourism, and establish Karditsa as a model for sustainable agricultural and tourism development.

In conclusion, transforming Karditsa into a "smart" and environmentally conscious region offers significant opportunities to improve quality of life, protect the natural environment, and preserve natural resources for future generations.

**Keywords:** smart city, sustainability, natural environment, water resources, Lake Plastiras, green development, eco-tourism.

**BOOK OF ABSTRACTS**

*2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025*

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Session:

**“Entrepreneurship and Local Sustainability -  
ESG Criteria”**

## **THE APPLICATION AND EFFECTIVENESS OF ESG CRITERIA IN GREEK COMPANIES**

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**Abstract**

The application of ESG criteria in Greek companies is steadily evolving, supported by international trends and European regulatory requirements. The purpose of this research is to investigate the application of ESG criteria by Greek companies and to assess their impact on their profitability. A quantitative survey was carried out using a questionnaire to a sample of 130 employees who were employed in companies in the Attica region. According to the results, most participants consider the adoption of ESG criteria essential for the long-term sustainable development of Greek companies and believe that the incorporation of ESG criteria enhances the relationship of the company with its investors. Employees identified corporate reputation and competitive advantage as the main benefits of adopting ESG criteria. Furthermore, it was found that larger companies are more likely to integrate ESG criteria into their strategies. In conclusion, this paper highlights the growing importance of ESG criteria in shaping the future of business in Greece.

**Key words:** Greek companies, ESG criteria, economic efficiency, sustainable development

## **THE EFFECT OF ESG CRITERIA ON CONSUMER PREFERENCES REGARDING THE CHOICE OF A COMPANY’S PRODUCTS AND SERVICES**

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**Abstract**

ESG (Environmental, Social, and Governance) criteria are increasingly becoming key factors in modern business practices, influencing both the reputation of companies and the purchasing decisions of consumers. The growing emphasis on sustainability and the increasing social awareness about the issues have prompted businesses to adopt these practices to align with their costumers’ values. A practice that is now a requirement rather than just an option.

The purpose of this study was to investigate the impact of ESG criteria on consumer purchasing behavior, focusing on a sample of 141 residents from Athens, Greece. A survey was conducted using a closed-ended type questionnaire. The collected data were analyzed using One-Way ANOVA through SPSS software to determine the relationships between various demographic factors and consumer choices.

The results of the study underlined the importance of ESG factors in shaping consumer preferences, with environmental and social considerations emerging as particularly significant. Older consumers and those with higher levels of education were found to place greater importance on governance practices and social responsibility efforts by businesses. Interestingly, while income did not significantly affect consumer awareness of ESG issues, it was found to be associated with a higher willingness to pay a premium for products and services offered by companies that adhere to sustainable practices.

These findings provide valuable insights into the growing importance of ESG criteria in shaping consumer behavior, highlighting the need for businesses to be transparent and responsive to the evolving expectations of their customers. However, future research may include larger sample size to provide a deeper understanding of the factors affecting consumer attitude towards sustainability and corporate responsibility, further highlighting the importance of ESG criteria.

**Key Words:** ESG Criteria, Consumer Preferences, Corporate Practices, Sustainability

**SUSTAINABLE DEVELOPMENT AND ENTREPRENEURSHIP IN  
MOUNTAIN COMMUNITIES. METSOVO CASE STUDY**

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**Abstract**

This paper attempts to map the space of local development and entrepreneurship as well as to outline the course they have taken in the historical mountain community of "Metsovo". "Metsovo" is located in the north-western part of Greece, at an altitude of 1160 m. The paper raises questions concerning epistemological issues, focusing on the relationship between sustainable local development and entrepreneurship in this mountain community.

An attempt is made to document the longitudinal entrepreneurial activities and through this, the interdisciplinary nature of this field of knowledge is documented. The research orientations and research interests, with the help of a simple mathematical model, of sustainable local development are demonstrated. At the same time, with a field survey, the present situation of the mountain community and the future perspectives towards sustainable development and entrepreneurship are traced.

**Key words:** Metsovo, sustainable development, entrepreneurship, Mathematical model, field research, mountain communities, local development.



## **THE HUMAN SIDE OF SUSTAINABILITY: THE ROLE OF LEADERSHIP IN EMPLOYEE WELLBEING**

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### **Abstract**

Sustainable leadership, a practice that integrates environmental, social, and economic considerations into organizational decision-making, has gained significant attention in recent years. While its impact on organizational performance and societal well-being is well-documented, its influence on employee well-being remains a relatively unexplored area.

This research aims to investigate the relationship between sustainable leadership and employee well-being. By examining the specific mechanisms through which sustainable leadership practices enhance employee well-being, this study seeks to contribute to a deeper understanding of how organizations can create more positive and sustainable work environments.

Through a comprehensive literature review and empirical research, this study will explore the following key research questions:

1. How does sustainable leadership influence employee well-being?
2. What are the specific behaviors and practices of sustainable leaders that positively impact employee well-being?
3. How do employees perceive the impact of sustainable leadership on their overall well-being?

The findings of this research are expected to provide valuable insights for organizations seeking to adopt sustainable leadership practices and prioritize employee well-being. By understanding the intricate connections between sustainable leadership and employee well-being, organizations can cultivate more engaged, motivated, and resilient workforces.

**Key words:** sustainable leadership, workplace well-being, sustainable practices

**BOOK OF ABSTRACTS**

*2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025*

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Session:

**“Urban Regeneration and Environment”**

**THE IMPACT OF ENVIRONMENTAL EDUCATION ON  
SUSTAINABLE DEVELOPMENT, ENVIRONMENTAL  
CONSCIOUSNESS AND PRO-ENVIRONMENTAL BEHAVIOUR**

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**Abstract**

Human societies, throughout the world, face challenges such as climate change, biodiversity loss, pollution and resource depletion, making environmental education and awareness imperative. In this context, environmental education serves to promote an understanding of the interconnections between individuals and nature and to inspire actions, aiming on creating a sustainable future for the next generations.

The aim of this quantitative survey research is to identify whether environmental education and participation in environmental programs or actions strengthen the pro-environmental attitude and behaviour of individuals.

The sample involved 2,687 Greek consumers aged 18 to 29 years. The non-parametric Mann Whitney test to explore possible differences in the environmental consciousness of the research participants in relation to whether they have been taught environmental education at school and whether they have participated in an environmental program or action in the past. The survey participants were asked to respond regarding the frequency of specific actions and daily habits, which frame their environmental consciousness and awareness.

The results of this survey showed that the people who have been taught about environmental education at school are more likely to consider the environmental impact of the products they buy, and people who have participated in environmental programs or actions adopt more pro-environmental behaviours. Furthermore, through the multiple linear regression analysis, it was found that the participants aged 26-29 have an increased environmental consciousness compared to the participants aged 18-21. This survey adds to the existing literature on environmental education and sustainability by highlighting the importance of environmental education and participation in environmental programs or actions towards increasing environmental consciousness and awareness and building a sustainable society.

**Keywords** Environmental education, Educational environmental programs, Pro-environmental behaviour, Environmental consciousness.

## **THE ‘ELLINIKON’ RENOVATION PROJECT: BALANCING ECONOMIC DEVELOPMENT AND SOCIAL EQUITY IN ATHENS**

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### **Abstract**

Although the economic and environmental performance of construction projects has been widely investigated, little attention has been placed on their social performance, which also constitutes a critical aspect of sustainable development and project success. Likewise, in Greece the social dimension of the urban development projects has been systematically and over time underestimated compared to their economic and environmental impact.

This paper aims to assess the Athenian citizens’ perception of the social and economic impact of the Ellinikon-urban development project. Social Impact Assessment (SIA) is significant, because it can help planners, project promoters, the affected population and decision-makers to evaluate and foresee the likely social effects of any proposed project development on the human population and communities. A questionnaire containing 49 items was administered to approximately 2500 citizens in different municipalities of the province of Athens to enable a more compelling and robust interpretation of the information collected.

Overall, the results underscore the importance of the citizens’ perceptions of the social performance of construction projects which can affect their approval and successful completion. In particular, the results highlight the participants’ serious concern about the social performance of the Ellinikon urban development project, their optimism regarding the upcoming positive economic impact of the project as well as their scepticism about the impact equity. What was also analyzed were the participants’ perceptions about the fairness in the distribution of impacts among various groups in the community, the differentiation in the level of access to specific resources and the degree of participatory community involvement in the planning processes.

The results of this study could further contribute to the wider research on the concept of ‘city vulnerability’ to crises, such as the Covid 19 pandemic, as well as on the social impact estimation of big urban renovation projects, which closely relates to the sustainable management of the open urban spaces and their equal accessibility.

**Key words:** urban renovation projects; social sustainability; social equity; economic development; impact assessment; Ellinikon urban project; Athens, Greece

## **THE USE OF NEW TECHNOLOGIES IN THE PRIMARY PRODUCTION SECTOR**

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**Abstract**

The use of new technologies in the primary production sector is a crucial tool for addressing the challenges of climate change and enhancing sustainable development. The primary sector both impacts and is impacted by the climate crisis, as agricultural activities contribute to greenhouse gas emissions while simultaneously facing the consequences of climate variability. Integrating technologies such as smart agriculture, the Internet of Things (IoT), and automation enables increased productivity, improved crop resilience, and reduced environmental footprint. At the same time, issues like access to technology, data security, and the need to support small-scale farmers are critical to ensuring no one is left behind in this technological transition. In various regions of Greece, new technologies can support the production of traditional products, contributing to the local economy and environmental protection. However, their full potential requires investments, education, and comprehensive strategies tailored to local needs and characteristics.

The present paper documents the aforementioned challenges and suggests strategies to address them.

**Key words:** New technologies, primary sector, sustainable development, climate change, smart agriculture, Internet of Things (IoT), productivity, resilience, traditional products, local development, environmental footprint, small-scale farmers, education, infrastructure, data security.

**SUSTAINABLE DEVELOPMENT, HUMAN HEALTH AND QUALITY OF LIFE - CASE STUDY: REGIONAL UNIT OF PIRAEUS, GREECE**

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**Abstract**

The purpose of this paper is to investigate the effect of the urban environment on human health through the lens of the perceived quality of life of the residents. The regional unit of Piraeus Attica in Greece was chosen as a case study.

A bibliographic study was conducted on the human health burden in large urban centers as well as a practical approach - field research. For the needs of the research, a questionnaire was created, which included twenty-nine (29) closed-type structured response questions, was anonymous and distributed to 302 people. The survey was conducted in the months from March to June 2022.

The questionnaire aimed to record the opinions of the residents of the regional unit of Piraeus Attica in Greece, focusing on the perceived quality of life in the urban environment where they live, in order to identify the variables that affect the quality of life and human health in the urban environment.

The research draws interesting conclusions regarding the living conditions of the residents that have an impact on their quality of life as well as their health status. It also highlights the parameters that could be changed in the urban environment they live in to improve the perceived quality of life of the residents.

In addition to the main conclusions, the paper proposes ways to improve the environmental conditions and living conditions, in order to improve the daily life of the residents of the Regional unit of Piraeus Attica in Greece and to minimize the possible effects on their health in the context of the creative nature of the quality of life which is built on sustainable development.

**Keywords:** Piraeus Attica Regional Unit, human health, large urban centers, quality of life, sustainable development

## **CONTRIBUTION OF URBAN REGENERATION TO SUSTAINABLE DEVELOPMENT: THE CASE OF PIRAEUS**

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### **Abstract**

The following thesis, presents a proposal for a sustainable regeneration study for the area of Piraeus, more specifically the area of the B' Municipal Community of Piraeus, based on innovative, international and European standards and targets, in order to adapt to the climate crisis through prevention and resilience, an urban model of environmental and socio-economic sustainability and inclusion. The purpose of this thesis is to prove that urban regeneration has the potential to make Piraeus more sustainable. For the purpose of collecting necessary information and data, a bibliographic research was carried out, through bibliographic databases of scientific content and textbooks, in combination with personal-real time observation of the research area, S.W.O.T. analysis of the area and quantitative research questionnaire of 28 questions, in a random sample of N = 345 people. The questionnaires were used to investigate the social acceptance and knowledge of Greek citizens who have visited the Piraeus area or are residents of the area, when it comes to urban regeneration.

The bibliographic research and the S.W.O.T. analysis showed that the area has a variety of problems that require attention, but also the ability to develop and upgrade, if weaknesses and threats are addressed, which could largely be tackled by implementing sustainable urban regeneration.

The results of the questionnaires confirm that respondents perceive problems in the area and consider urban regeneration as a solution. The highest percentages showed that respondents attach greater importance to green spaces, pedestrian roads and bicycle paths and consequently to easier accessibility, greater inclusiveness and safety, but also to enhancing the green sustainable transition with sustainable projects and energy communities, while the statistical analysis showed to the majority that the views of respondents are not influenced by demographic variables. However, further investigation is needed.

**Keywords:** redevelopment, sustainability and sustainable development, urban resilience, Piraeus, urban environment, urban renewal, urban regeneration

## **IDENTIFICATION OF BOUNDARIES OF MEASUREMENTS FOR CITY ENVIRONMENTAL QUALITY**

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Cities have become the largest consumers of resources and pollution contributors due to urbanisation. In the development process, some cities have considered factors affecting environmental quality. However, measuring quality and maintaining standards have become crucial as boundaries of measurements for environmental quality are vague. This research study was focused on verifying the factors affecting city environmental quality and identifying boundaries for measuring environmental quality taking Sri Lankan cities as a case study.

Qualitative research was conducted with a semi-structured interview guide considering city environmental quality as the dependent variable. Some factors affecting the city's environmental quality were identified from the literature as, energy consumption, water consumption, materials and resources consumption, and land utilisation. Expert interviews were conducted to explore these related factors and to identify any other additional factors available. Interviews were terminated once data saturation was reached. Data analysis was conducted using thematic analysis adhering to the qualitative nature of the research.

In addition to the four factors verified, findings revealed that three factors as resilience to disasters, education, and governance play a significant role in maintaining a city's environmental quality. Dimensions contributing to these factors and their measuring indicators were derived to investigate the boundaries of measurements of these factors in cities. It was revealed that measuring boundaries can be varied as individual units (household, industrial, or commercial buildings) or city boundaries to maintain quality standards. Identified boundaries of measurements can be used for city development purposes and in the comparison of the environmental sustainability of cities.

**Keywords:** Environmental Quality, Sustainability, Indicators, Measuring Boundary, Cities, Urbanisation, Urban Development



**FROM WASTE MANAGEMENT TO CIRCULAR ECONOMY? THE  
ROLE OF ENVIRONMENTAL CONFLICTS IN POLICY MAKING IN  
ATTICA REGION**

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**Abstract**

The role of the environmental conflicts in the evolution of policy making is often neglected when analyzing public policies. Never – the-less, the emergence of the environmental issues and the new social movements around quality of life and environmental protection, lead to the birth of new logics of local government, that question the vertical exercise of power, under the general heading of governance, which are considered integral part of sustainable management. Hence although institutional actors are the protagonists in public policies, local social movements play an important indirect role in policy making, either by shaping public discourse and hence the policy agenda setting, or by becoming an unofficial veto player, that opposes to the application of policies.

The present paper investigates, the role of civil society and social movements and it's interaction with institutional policies, around waste management and circular economy, by using a thematic and regional systemic approach of the conflicts around waste management in Attica region during 2010', in order to explore and highlight a complex system of interactions that delays the progress of policies concerning the circular economy. These interactions can be modelized and can lead us to formulate a typology of actors, discourses and strategies.

The paper presents part of the outcome of the Ph.D thesis on “Environmental Conflicts and Governance in Athens’ suburban area: Macroscopic study of the environmental defence’s actors and environmental policies (2005-2014)” defended in Panteion University in December 2023. The main methodological tool is the combination of the qualitative analysis of conflicts on waste management, occurred in Attica during the period 2005-2018 and the analysis of multilevel policies (regional, national and European) during the same period.

**Key words:** environmental conflicts, waste management, circular economy, Attica, environmental movement

Pre-organised Special Session:

**“ECO4ALL FOR CONSUMER PROTECTION  
THROUGH CIRCULAR ECONOMY STRATEGIES –  
THE CONTRIBUTION TO SUSTAINABLE  
DEVELOPMENT”**

*Organized and chaired by Prof Plotnic Olesca  
(COST ACTION22124 ECO4ALL)*

## **CIRCULAR ECONOMY AND SUSTAINABLE CONSUMPTION AS LEVERAGE FOR GREEN GROWTH AND CONSUMER PROTECTION**

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### **Abstract**

The concept of circular economy (CE) is a new economic model of growth with respect for all dimensions of sustainable development. The circular economy indicators will be used to assess the green growth on the country level. We will consider how the circular economy through the green transition of producers and consumers behavior affects green growth that takes into account the environmental and social dimensions of sustainable development.

By applying adequate methods to official data, we will assess the impact of circular economy indicators on green growth on the country level. We will use the circular economy indicators and green GDP. Special emphasis will be placed on competitiveness and innovation indicators of the circular economy (gross added value, investments, employed persons, patents, etc. related to CE sectors). A comparative analysis of the countries will show the impact of the circular economy on the economic growth that respects environmental and social sustainability, and give some recommendations.

**Keywords:** green GDP, sustainable development, circular economy indicators, competitiveness, innovation, green transition, consumer protection

**Acknowledgment:** Research results are part of the CA22124 - EU Circular Economy Network for All: Consumer Protection through reducing, reusing, repairing (ECO4ALL).

## **BOOK OF ABSTRACTS**

*2nd Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 14-16, 2025*

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### **CIRCULAR ECONOMY: CONNECTING INDUSTRY WITH SOCIETY**

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#### **Abstract**

Plastics play a crucial role in industries such as household appliances, packaging, construction, electronics, and automotive due to their versatility. However, their limited recyclability presents serious environmental challenges, with large quantities ending up in landfills or incinerated. Addressing this issue, the CIRCLE research group at CICECO-University of Aveiro was established to improve the sustainability of plastics. By collaborating with local industries, CIRCLE develops innovative solutions that promote circularity and reduce environmental impacts. Over the years, the group has spearheaded several circular economy projects emphasizing sustainable consumption and the advancement of polymer recycling. These initiatives reflect CIRCLE's dedication to bridging the gap between industry and society by fostering a circular economy. This presentation highlights the milestones of these efforts, showcasing the progress and impact of CIRCLE's work in driving sustainable plastic solutions.

**Keywords:** Circular economy, industry, society

## **OVERCOMING THE BARRIERS TO CIRCULAR ECONOMY PRACTICES IN DIFFERENT REGIONS: THE CASE OF TURKEY**

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### **Abstract**

Circular economy (CE) represents a transformative approach to achieving sustainable development by prioritizing resource efficiency and waste minimization. While CE holds immense potential for environmental, economic, and social benefits, its practical implementation faces several barriers, particularly in regions with varying levels of development and infrastructure. This study aims to identify and address these barriers in Turkey, where regional disparities significantly influence CE practices.

Recent studies underline the increasing academic and policy interest in CE, reflecting its critical importance for global sustainability. However, Turkey’s regional inequalities -such as advanced recycling systems in western regions compared to infrastructural gaps in eastern areas- pose unique challenges. Key barriers include financial limitations, insufficient awareness, and a lack of technical expertise, especially in underdeveloped regions.

This research adopts a comparative perspective, beginning with an in-depth analysis of Turkey’s regional dynamics and extending to other geographies. By evaluating economic, social, technological, and regulatory challenges, this study seeks to propose actionable solutions tailored to different contexts. These solutions include fostering public-private partnerships, investing in advanced technologies, raising public awareness, and empowering local governments.

The findings aim to bridge regional gaps, providing a framework for countries facing similar challenges. This research highlights the need for meticulously conducted studies to ensure CE practices are equitably and effectively implemented across regions. Ultimately, the study contributes to the global discourse on sustainable development, offering insights for both academic and policy-making communities.

**Keywords:** Circular Economy, Regional Disparities, Turkey, Sustainability, Public-Private Partnerships, Recycling Infrastructure, Developing Countries

## **FOSTERING CIRCULAR ECONOMY PRACTICES IN ALBANIAN PUBLIC UNIVERSITIES: A PATHWAY TO SUSTAINABLE DEVELOPMENT**

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### **Abstract**

The transition to a circular economy (CE) represents a pivotal challenge and opportunity for Albania's public universities as key drivers of sustainable development. This paper explores how CE strategies can be integrated into the education, research, and operational frameworks of these institutions to promote sustainable resource management and foster inclusive participation in circular practices. By leveraging their role as educators, innovators, and community leaders, universities can align their efforts with the 2030 Sustainable Development Goals, particularly in advancing sustainable consumption and reducing environmental risks.

The study evaluates current CE-related initiatives in public universities in Albania, identifying gaps in policy, education, and practice. It highlights best practices from EU countries, emphasizing the importance of cross-border cooperation and policy frameworks that support the adoption of CE principles in higher education. Furthermore, the paper underscores the socio-economic benefits of engaging students, faculty, and local communities in sustainable development activities, fostering awareness and advocacy for stronger regulatory frameworks.

Special focus is given to the role of education and awareness campaigns in empowering students and consumers to actively contribute to sustainable resource management through reducing, reusing, and repairing. The research also examines barriers to CE implementation, such as limited funding, institutional inertia, and insufficient collaboration between academia, industry, and policymakers.

This paper concludes with actionable recommendations for integrating CE principles into university curricula, enhancing institutional operations, and building partnerships that amplify impact. By doing so, Albanian public universities can serve as models for the broader adoption of circular economy practices, catalyzing societal transformation toward sustainability.

**Keywords:** Circular Economy, Public Universities, Sustainable Development, Consumer Participation, Education and Awareness, Albania.

## **ANALYSIS OF POLICY FRAMEWORKS RELATED TO CIRCULAR ECONOMY IMPACT IN AGRICULTURE, ALBANIAN CASE**

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### **Abstract**

The transition to a circular economy (CE) is a critical pathway for achieving sustainable development, particularly in developing countries like Albania, where resource efficiency and waste management are pressing concerns. This study examines the interplay between regional development policy frameworks and the adoption of circular economy principles in Albania, analyzing it through agriculture sector. Agriculture is a vital sector in Albania, contributing significantly to GDP more than 18.5 % (INSTAT, 2023). However, the sector faces challenges such as low productivity, resource inefficiency, and environmental degradation. These issues present opportunities for circular economy (CE) practices, which focus on reducing waste, improving resource efficiency, and enhancing sustainability.

The study explores how existing policies focus subsidies to agriculture sector, institutional capacities, and economic strategies influence the implementation of CE practices. The paper highlights key barriers, including regulatory gaps, limited awareness, and infrastructure deficiencies, while also identifying opportunities such as EU integration incentives, access to green funding, and community-level initiatives. By analyzing case studies and policy approaches, the research provides actionable recommendations for aligning regional development goals with CE principles. It concludes that a more integrated policy framework, supported by robust governance and stakeholder engagement, can accelerate Albania’s transition to a circular economy, fostering economic resilience, environmental agriculture sustainability, and regional equity.

**Keywords:** Circular Economy, sustainable development, Albania.

**THE ROLE OF RENEWABLE ENERGY IN SHAPING INCOME  
(IN)EQUALITY DYNAMICS IN SOUTHEAST EUROPEAN  
COUNTRIES**

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**Abstract**

This study employs annual time series data from 2000 to 2022 to examine the correlation between renewable energy usage and inequality of income in Albania, Serbia, Croatia, Bulgaria, and Romania. These countries are economies situated in Southeastern Europe and have seen specific occurrences that constitute them particularly significant for the examination of economic expansion and stagnation periods. The ARDL limits test methodology is a suitable way for analyzing the energy-inequality relationship in countries facing both random shocks (outliers) and persistent shocks (structural breaks), which we utilize in our analyses.

An extensive corpus of research has been conducted to examine the correlation between income inequality and the consumption of renewable energy. Due to the persistent significance of renewable energy, numerous research has concentrated on the determinants influencing the adoption of renewable energy sources. The emphasis on income disparity is significant, as it has been associated with several outcomes that can affect renewable energy. Inequality has been associated with health and wellbeing, economic growth, and the environment, among other factors. The social advantages and favorable externalities of mitigating income disparity may facilitate the acceleration of renewable energy adoption; therefore, it is crucial to empirically validate the correlation between inequality and renewable energy to inform policy decisions.

The GINI coefficient serves as the dependent variable in our estimated model. The chosen independent variables are renewable energy consumption per capita, gross domestic product per capita, real gross fixed capital creation, exports, imports, and the political instability index, among others. The initial empirical results offer evidence supporting the energy-led growth hypotheses in the selected countries. Our analysis indicates that political instability impedes economic growth and development in certain countries. This discovery aligns with our previous assumptions.

**Key words:** Renewable energy, Income inequality, Southeastern European countries economic resilience, environmental agriculture sustainability, and regional equity.



**AN EXAMINATION OF ZERO WASTE MANAGEMENT IN  
UNIVERSITIES IN THE CONTEXT OF CIRCULAR ECONOMY: A  
CASE STUDY OF DUZCE UNIVERSITY**

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**Abstract**

One of the most important problems of university campuses in Turkey in terms of zero waste is that the targeted success in recycling rate, i.e. recycling behavior change, has not been achieved. After achieving success in recycling waste, the next step is to reduce waste generation and reuse. In order to achieve the goal of a sustainable campus that contributes to the circular economy and responsible production and consumption processes, it is important that all academic, administrative staff and students have environmental awareness, transfer it to behavior, and participate in activities within the framework of daily campus life and curriculum. This study attempted to contribute to increasing awareness, interest and scope of activities on circular economy, starting from the zero waste management practices of Düzce University.

**Key words:** zero waste; circular economy; waste reduction; waste behavior; Düzce

**BIBLIOMETRIC ANALYSIS OF ACADEMIC STUDIES PUBLISHED  
ON CIRCULAR ECONOMY IN TURKEY**

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**Abstract**

The aim of this study is to evaluate academic studies on circular economy in Turkey and to determine research trends. For this purpose, publications from Turkey were examined through bibliometric analysis method from WOS and SCOPUS databases without any limitation on the starting year until 2025. A total of 561 publications were reached, and it is seen that studies on circular economy increased rapidly after 2021, and the first publications were made in 2017. It is thought that this research will contribute to many different areas. Firstly, it will provide the integration of Circular Economy research topics conducted in Turkey to date. It is aimed to provide ideas for future studies while emphasizing areas of interest for secondary research. As a result, it will provide a general overview of the concept of circular economy. In order to evaluate the publications in the study, changes in the volume and number of publications, keywords, trends in subject titles, and publishing institutions were considered. Institutions and authors were mapped with social network analysis in the research. Trends in subject titles, institutions that contributed the most to the field, most frequently used keywords and authors, and the most cited in the field were visualized using the VOSviewer program.

**Keywords:** circular economy; bibliometric analysis, waste behaviour, Turkey

## **INTEGRATING CIRCULAR ECONOMY INTO SUSTAINABLE DEVELOPMENT GOALS: INSIGHTS FROM LIFE CYCLE IMPACT ASSESSMENT**

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### **Abstract**

The integration of the circular economy (CE) into Sustainable Development Goals (SDGs) offers an approach to sustainable resource management and economic growth, with Life Cycle Impact Assessment (LCIA) as a tool for evaluating environmental and socio-economic outcomes. This study investigates how LCIA methodologies can drive circular economy strategies within the textile industry, addressing SDG targets such as responsible production and consumption and climate action. Textile production, which accounts for approximately 10% of global carbon emissions and 20% of industrial water pollution, presents significant opportunities for CE practices like recycling, reusing, and material innovation. Case studies from European textile manufacturers demonstrate the potential of LCIA in optimizing resource use, minimizing waste, and reducing greenhouse gas emissions by up to 50% when transitioning from virgin polyester production to closed-loop recycling systems.

LCIA software tools such as OpenLCA and GaBi were employed to assess the environmental impacts across key lifecycle stages, including raw material extraction, manufacturing, distribution, and end-of-life disposal. Results indicate that incorporating recycled fibres can lower energy consumption by 30–40%, while water usage can be reduced by as much as 70% compared to conventional production methods. Furthermore, the adoption of eco-design principles, supported by LCIA insights, showed a potential reduction in landfill waste by 25% through product lifecycle extension initiatives such as repair and reuse programs.

This research highlights the socio-economic implications of CE adoption, including job creation in recycling and upcycling sectors, which could increase by 15% in regions implementing waste management systems. Policy recommendations emphasize the importance of regulatory frameworks that incentivize sustainable practices, such as extended producer responsibility and subsidies for green technologies. The findings show the value of cross-sector collaboration, combining insights from LCIA with CE strategies to improve sustainable consumption patterns and support the transition towards a low-carbon textile industry.

**Keywords:** circular economy, Sustainable Development Goals

**SMART CITIES AS DRIVERS OF TWIN TRANSITION - EVIDENCE FROM THE REPUBLIC OF SERBIA**

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**Abstract**

The SDG 11 - sustainable cities and communities emphasizes the importance of cities, viewing them as actors that are largely influenced by economic and population growth, modern consumption and numerous environmental challenges. In urban areas, there are numerous challenges of modern life, which also imply major changes in the model of urban development. As extremely complex systems and hubs of various activities, cities that develop as “smart” get a key place in achieving the goals of economic and sustainable development, both in developed and developing countries. Undoubtedly, smart cities have a very important role in these processes and can facilitate the twin transition to a green and digital economy. The aim of this paper is to analyse role of the smart city development in twin transition. Consequently, the paper is divided into three thematic parts. The first part refers to basics and importance of twin transition. Second part analyses how smart cities, as concept of sustainable urban development, and twin transition are interconnected and contribute to each other, while the third part is about situation and perspective of smart city development and twin transition in Serbia. Through the beginning and to a certain extent implemented digitalization in the Republic of Serbia, a strong base for the formation of smart cities was created. In certain local governments and cities, successful projects that are important links in creating resilient and smart cities are an incentive and a good example for the future. Some of these examples will be presented in the paper. In conclusion, final remarks are given. From a methodological point of view, this work presents a desk research analysis and synthesis of data from relevant sources, with the aim of a detailed presentation and drawing conclusions about the subject. The research results contribute to the understanding and perception of this important topic.

**Keywords:** smart cities, urban areas, Serbia

## **FROM POLICY TO PRACTICE: EXAMINING THE AGENCY-DRIVEN DYNAMICS OF TURKEY’S ZERO WASTE MOVEMENT AND ITS IMPACT ON RECYCLING**

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### **Abstract**

Over the past two decades, the concepts of 'sustainability transitions,' 'circular economy,' and 'transformations' have gained increasing prominence in academic literature. These transitions are complex processes that result from the dynamic interactions among various actors, including businesses, consumers, scientific communities, policymakers, social movements, and advocacy groups. At the heart of these discussions lies the idea of the socio-technical system, which highlights the intricate connections between technical elements - such as technologies and infrastructure - and non-technical factors, including regulations, organizational interests, user practices, and cultural norms. Within this framework, the role of the “agent” becomes a focal point, representing entities or individuals who drive, influence, and implement change.

In this context, the primary objective of this study is to investigate the role and influence of these agents in the adoption and spread of the Zero Waste Movement in Turkey by using Multi-Level Perspective (MLP). A secondary aim is to assess the effectiveness of the movement in enhancing waste collection and recycling rates. Launched in 2017, the Zero Waste Movement in Turkey has already demonstrated considerable success, doubling the country's recycled waste volume within just five years. Since its inception, over 140,000 institutions and businesses have embraced the zero waste management system, highlighting a significant shift towards sustainable practices at the organizational level.

This case study underscores the evolving role of government, which is no longer solely a 'pilot' with the exclusive tools and knowledge to guide society towards sustainability. Instead, the government's role is increasingly that of an enabler, facilitating broader societal transformation and encouraging diverse stakeholders to participate in the transition to sustainable practices. Sustainability transitions inherently involve making normative choices—decisions that reflect different visions of the future and strategies for achieving them. This highlights the importance of fostering public participation to ensure that these transitions are informed by broad consultation and inclusive deliberation.

The Zero Waste Movement serves as a particularly relevant case for analyzing the concept of “agency.” As the most significant environmental initiative within Turkey's waste management sector over the past three decades, it provides a unique opportunity to examine how agency can drive substantial shifts in recycling behaviors, especially at the institutional level. The movement's comprehensive approach to waste management outlines a clear set of standards, technologies, and practices that organizations need to adopt. Its far-reaching impact illustrates how targeted environmental initiatives can reshape societal and institutional practices, fostering a large-scale transformation towards sustainability.

**Key Words:** Circular Economy, Transformation, Zero Waste Movement, Multi-Level Perspective (MLP)

## **WASTE MANAGEMENT PRACTICES IN TURKEY PAST AND PRESENT**

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### **Abstract**

The United Nations accepted its agenda in 2015, which includes 17 sustainable development goals and 169 sub-goals to improve and increase the welfare of people and to protect the ecosystem where all living things live, and published it in January 2016. In order to protect nature and our health, waste management must be carried out under the necessary conditions. Environmental awareness can be developed with education and can be transferred to future generations. Recycling and reusing waste, especially plastic waste, can prevent a significant environmental problem that threatens the ecosystem. It is very important in waste management that waste is collected separately without being mixed and recycled in various industrial areas.

In the European Union, waste is mostly produced in the construction sector, while in Turkey it is formed in homes. According to the 2020 Eurostat 2020 statistics, Turkey, which ranks 11th among EU countries in terms of waste production, also lags behind EU countries in terms of the recycling rate of waste. While Turkey's municipal waste is recycled by 12.3 percent, 49.6 percent of municipal waste in the EU is recycled. Turkey is third from the bottom among 36 European countries in this field.

Although there are many regulations on waste recycling in Turkey, it is seen that there are some deficiencies in implementation. According to the 'circular economy document' published in EU countries, it is foreseen that materials to be recycled should not be buried, energy conversion should be applied to non-recyclable materials, zero percent landfill, 40 percent recycling and 60 percent energy conversion should be realized in 2025.

As in the world, some regulations have been made on waste management in Turkey. However, it is seen that Turkey has not achieved effective results in terms of waste. For this reason, it is necessary to develop the regulations and legislation in Turkey, to make them compatible with EU standards and to restructure them within the framework of the practices in EU countries.

In this study, we aimed to investigate how waste management has evolved in Turkey, how effectively it is used in the field of application and what kind of regulations should be made for improvement in waste policy.

**Key words:** circular economy, waste, regulation, applications in Turkey

**CIRCULAR ECONOMY APPLICATIONS WITHIN THE  
FRAMEWORK OF SUSTAINABILITY IN TURKEY**

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**Abstract**

Circular economy is a major focus area at the EU level and in Turkey. The understanding of the circular economy concept is still developing, and more studies are being undertaken to apprise industry players in Turkey about the applications of circular economy in the industry for maintaining ecological balance. Turkey aims to create a new production model for the circular economy based on sustainability and innovation, in which all waste generated in a production system is re-evaluated, thus saving raw material costs, while providing maximum resource and energy efficiency and environmental benefits.

Circular economy and sustainable development goals are intertwined and sustainability management and assessment encompassing economic, social, and environmental dimensions are essential focus areas. Cities and municipalities are facing many challenges such as climate change, waste, emissions, and sustainability. Thus, industry practices and public applications to achieve circular economy goals can play a major role in addressing them.

This study addresses circular economy applications through a review of the industry and public practices applied in Turkey. This study evaluates circular economy practices in Turkey within the framework of sustainability and EU practices. In this context, it offers a series of policy and strategy recommendations for the future.

The most important future steps for the development of industry practices and public applications to achieve circular economy may include focusing on recycling, reuse, refurbishment, and remanufacturing of products, components, and materials, incorporation of sustainability and circular economy issues into local policy, strategy, and goals.

**Key words:** circular economy, sustainable development, Turkey

## **ENHANCING SUSTAINABILITY WITH CIRCULAR ECONOMY PRACTICES: MULTI-CRITERIA SOLUTIONS**

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### **Abstract**

The growing adoption of Circular Economy (CE) practices by companies marks a significant shift towards enhancing sustainability, optimizing resource utilization, and minimizing waste through environmentally sound practices. This transition not only supports environmental preservation but also fosters economic development, balancing growth with ecological responsibility.

This study explores the integration of CE principles with advanced Multi-Criteria Decision-Making (MCDM) methods to address the complexities of sustainable decision-making. The Analytical Hierarchy Process (AHP) and the Comprehensive Distance-Based Ranking (COBRA) method were employed, leveraging their proven effectiveness in evaluating and selecting alternatives in complex contexts. These methodologies offer practical tools for organizations to make informed decisions that align with sustainability objectives.

The findings emphasize the critical importance of embedding CE principles into corporate strategies and utilizing sophisticated decision-making frameworks. By doing so, companies can contribute to the advancement of a sustainable and circular economy. This research provides valuable insights for both academics and practitioners, guiding the development and implementation of sustainability strategies that promote economic growth and environmental stewardship.

**Key words:** Circular Economy; Sustainability Optimization; Multi-Criteria Decision-Making (MCDM)



## **THE ROLE OF EDUCATION IN SUSTAINABLE CONSUMPTION AWARENESS AMONG ALBANIAN STUDENTS**

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### **Abstract**

Sustainable consumption education is increasing in higher education institutions (HIEs) with the most common generic form which is education for sustainable development (ESD) which is becoming integrated in curriculms of different study programs in different study levels. Traditionnaly sustainable consumption education has been part of environmental education (EE). In business studies sustainable consumption education has been part of the courses of business ethics or corporate social responsibility (CRS). Courses require an interdisciplinary approach as sustainable consumption is interdisciplinar. In developing countries such as Albania, the term sustainable consumption is confusing because of a lack of awareness on sustainable consumption that is reflected at the individual, family and community level.

The present paper investigates the different levels of awareness on sustainable consumption of Albanian students integrating the different attitudes towards reusing, reducing, reusing and reparing at the individual level, family level and community level.

This study uses mixed methods. 3 focus groups were conducted with Bachelor students from the Aleksandër Moisiu University of Durrës in order to discuss about the different levels of awareness in October 2024. At a second stage a survey was distributed to 120 students of the Aleksandër Moisiu Unviersy of Durrës in order to identify their levels of awareness and analyzed throug applying exploratory factor analysis (EFA).

The results show that the students are more aware at the individual and family level whereas there is a lack of awareness about the community level. This can be due to the fact that the lack of community awareness is a phenomena that is becoming very common in the Albanian society but this has long term impact in preparing students ready not only for the labor market but as well as responsible citizens, education on sustainable consumption can be cathalyst.

**Key words:** Sustainable consumption, reducing, reusing, reparing, community awareness

**FOSTERING CROSS-BORDER COOPERATION BETWEEN NORTH MACEDONIA AND GREECE FOR CIRCULAR ECONOMY SUCCESS: A MODEL FOR REGIONAL SUSTAINABILITY**

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**Abstract**

The circular economy offers a transformative pathway to sustainable development, particularly in regions with shared environmental and economic challenges. This paper explores the potential of cross-border cooperation between North Macedonia and Greece in advancing circular economy practices, focusing on resource efficiency, waste reduction, and sustainable consumption. Given their geographic proximity and intertwined trade and cultural ties, these nations are well-positioned to collaborate on circular economy initiatives that can drive regional development and contribute to the 2030 Sustainable Development Goals (SDGs).

The study examines existing barriers, such as regulatory misalignment, infrastructure disparities, and insufficient stakeholder engagement, which hinder effective circular economy implementation across borders. It also identifies opportunities for cooperation, including joint waste management projects, shared access to recycling technologies, and harmonized policies for product lifecycle extension.

Through policy and case analysis and stakeholder interviews, this research highlights successful collaborative efforts and offers actionable recommendations for enhancing cross-border synergies. These include the establishment of a bilateral circular economy task force, shared funding mechanisms, and the development of educational programs to raise public awareness about circular economy benefits.

The findings demonstrate how strengthened cooperation between North Macedonia and Greece can accelerate the adoption of circular economy principles, reduce environmental risks, and support economic growth. This model of regional collaboration serves as a blueprint for similar cross-border partnerships, fostering sustainable development and ecological resilience in Southeastern Europe and beyond.

**Key words:** Circular Economy, Cross-Border Cooperation, Sustainable Development Goals (SDGs), Regional Sustainability.

## **IMPLEMENTATION OF THE GLOBAL GATEWAY STRATEGY THROUGH THE NEW EU CIRCULAR ECONOMY RESOURCE CENTRE**

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### **Abstract**

Circular economy is a crucial component within European Green Deal strategy that is continuously emphasized in various policies. Parallel to this, the management technologies on economic circularity related to standardization and digitalization takes on significance. Important to note that a new initiative on the establishment of a EU Circular Economy Resource Center is in process. The initiative prioritizes knowledge, policy-making, and business features as part of the circular economy ecosystem that is necessary to study. In this context, the EU enlargement and integration policy (such as The Global Gateway) refers to these priorities; that means the circular economy can be considered as a research object within the implementation of the Global Gateway and the development of the Circular Economy Resource Center.

The paper investigates the circular economy management ecosystem in the framework of the knowledge-driven, sustainability-oriented, and technology-based policy-making. Digitalization and standardization that are important components of EU policies are discussed as new approaches in circular economy management. In the paper, the policy interoperability with non-EU countries, which are interconnected with EU through strong documentary base, are considered. Integration of partners from geographical large areas like Neighborhood countries, Asia, Africa and Latin America through EU circular economy know-how, is a completely new policy that targeted networking rather than dependence. In this paper the peculiarities of this approach also is considered as a soft policy that brings common benefit.

The achievement of this interdisciplinary research is related to conceptualization of digital transformation, international standardization, and cross-border policy-making in the circular economy within sustainable development. In general, local initiatives contributing global tendencies on sustainability through circular technologies is the main conclusion of the research.

**Key words:** The Global Gateway, circular economy, technology-based sustainability

## **CIRCULAR ECONOMY STRATEGIES FOR SUSTAINABLE RESOURCE MANAGEMENT IN THE CONSTRUCTION INDUSTRY**

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### **Abstract**

The construction industry is one of the largest consumers of natural resources, generating significant waste and contributing to environmental degradation. Circular economy (CE) strategies offer a transformative approach to sustainable resource management by closing material loops, reducing waste, and enhancing resource efficiency. This study examines the implementation of CE principles in the construction sector, focusing on design optimization, material reuse, recycling, and innovative business models. By adopting strategies such as modular construction, cradle-to-cradle design, and the use of secondary raw materials, the industry can achieve significant reductions in environmental impact. The integration of digital tools, such as Building Information Modeling (BIM), enables more effective lifecycle management and resource tracking. Several challenges are discussed, such as consumer protection in the construction industry, product lifecycle extension through reducing, reusing, and repairing, as well as socio-economic impacts of circular economy practices on consumer rights and possibilities for overcoming barriers to circular economy implementation. The findings underscore the critical role of policy frameworks, technological advancements, and cross-sectoral partnerships in driving systemic change.

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**Key words:** Circular Economy, Construction Industry, Consumer Protection, Barrier to CE implementation.

## **BOOK OF ABSTRACTS**

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*The 2nd OPEN-AIR CITIES International Conference, organized by Open-Air Cities, HAROKOPIO UNIVERSITY of Athens - Postgraduate Programme "Sustainable Development", SYROS INSTITUTE and in co-organization: EUROPEAN COOPERATION IN SCIENCE & TECHNOLOGY, Cost Action CA22124 ECO4ALL.*

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